

Building, owning & belonging



From assisting owner-driven housing reconstruction to co-production in Sri Lanka, India and beyond

The European
Union



UN HABITAT
FOR A BETTER URBAN FUTURE

STANDARD DISCLAIMER

The analysis, conclusions and recommendations of this book do not necessarily reflect the views of the European Commission or of the Secretariat of the United Nations or its Governing Council. The book is produced with data provided by the authors based on their direct involvement in housing reconstruction programmes some funded or implemented by the above agencies.

Cover illustration by Yasith Fernando (UN-Habitat Sri Lanka, 2014)

More information on the European Union is available on the internet (<http://europa.eu>).

Luxembourg: Publications Office of the European Union, 2018

Paper	ISBN 978-92-9238-428-9	doi:10.2871/832983	LK-02-16-989-EN-C
PDF	ISBN 978-92-9238-430-2	doi:10.2871/166929	LK-02-16-989-EN-N
EPUB	ISBN 978-92-9238-429-6	doi:10.2871/533959	LK-02-16-989-EN-E

© European Union, 2018

Reproduction is authorised provided the source is acknowledged.

Building, owning & belonging

From assisting owner-driven housing reconstruction to co-production in Sri Lanka, India and beyond

Editorial Board:

Jaime Royo-Olid (Chief editor)

Shailaja Fennell (Co-editor)

Lara Davis

Reinhard Skinner

Ramona Miranda

Tushani Kalugalagedera

The peer review process has involved all the main authors of the papers.

Third edition published in October 2018 by the European Union Publications Office for and on behalf of the European Union Delegation to Sri Lanka and Maldives and of the United Nations Human Settlements Programme (UN-Habitat).

The second edition was printed in August 2018 by the European Union Publications Office for and on behalf of the European Union Delegation to Sri Lanka and Maldives and the United Nations Human Settlements Programme (UN-Habitat).

The first edition was printed in draft format in 2017 for the World Reconstruction Conference (WRC3) Brussels June 6 to 8 co-organised by the World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR), the European Union, the United Nations Development Programme and the African, Caribbean and Pacific Group of States.

The publication of this book has been funded by the European Union's Development Cooperation Instrument through the Delegation of the European Union to Sri Lanka and Maldives.

Forewords

The Ambassador of the European Union to Sri Lanka and the Maldives

H. E. Tung Lai Margue



I am very pleased to introduce this book compiling lessons learnt on housing reconstruction in Sri Lanka, India and beyond. This has been a hugely important task towards which the European Union (EU) and other organisations such as the United Nations (UN) (via the UN-Habitat programme) have contributed. The book unfolds cases where people were not just passive recipients but proactive

agents of their own community rehabilitation. It builds mainly on various generations of owner-driven housing reconstruction in Sri Lanka. The intention here is to share experiences, of which some are new and others are building on old ones but somehow forgotten hence relevant to be reviewed again. We hope it will be useful for other donors, governments, practitioners, researchers and of course with people looking for inspiration for ways of improving housing interventions.

The EU takes pride in having continuously supported communities in major reconstruction efforts in the aftermath of war, tsunami and earthquakes in South Asia. This has been possible by the generous contributions of EU citizens towards international development cooperation. This book emerges more specifically from the EU's Aid to Uprooted People (AUP) regional facility which has been the main vehicle of assistance to housing in Sri Lanka since 2006. In the last 12 years, the EU has committed EUR 64 million on the highly successful homeowner-driven approach in Sri Lanka alone. I would like to congratulate the implementing organisations that have been involved in cooperating with the EU in making the best of people's contributions to their own reconstruction and development.

United Nations Under-Secretary-General and
Executive Director of the United Nations Human Settlements Programme
(UN-Habitat) Ms. Maimunah Mohd Sharif



It gives me great pleasure to introduce this publication titled *Building owning & belonging: from assisting owner-driven housing reconstruction to co-production in Sri Lanka, India and beyond*, a documentation of various approaches of and responses to homeowner-driven (HOD) housing. The foundation for this book was a conference that was held in 2014 in Colombo, which brought together multiple stakeholders and

views on the subject. This analytical publication captures the case studies, the good practices and the lessons learnt discussed by the participants at the conference. Sri Lanka has a proud history of engaging people in their own development, and the million houses programme (MHP) of the 1980s was a major source of learning. UN-Habitat, a partner in this programme, actively advocated the principles and methodology of the ‘people’s process’, applying it in diverse housing construction programmes in many countries.

This publication hence documents perspectives of the processes and the challenges faced along the way not only in Sri Lanka, but in various South Asian countries and others. But it is fitting that a review of the owner-driven approach and of the people’s process highlights Sri Lanka as the focal case study for being at its origin. UN-Habitat is grateful to our funding partners — the EU, the government of Australia, the government of Switzerland and the Government of India (GoI) — who have supported the principles of owner-driven housing in Sri Lanka in recent years.



Figure 1—Left, EU-funded model house built by the owners with locally-sourced Earth Concrete Blocks with the assistance of Habitat for Humanity Sri Lanka in Batticaloa, Sri Lanka. Right, shelter where family has been living for almost a decade. (Source: Jaime Royo-Olid, EU 2018)

Preface

Himanshu Parikh

United Nations World Habitat Award 1993. Best Practice at Habitat II (Istanbul 1996) for 'slum networking' also Global Best Practice by United Nations Centre for Human Settlements (UNCHS) (Dubai 1998) and UNCHS Award (Dubai 2006). Aga Khan Award for Architecture (1998)



According to UN-Habitat, around 1.2 billion people in the developing countries lived in inadequate housing in 2014. In the last few years, a great deal of effort has been put in by governments and international donors to change that. And yet, as per the present trends, the number of people living in inadequate housing in the slums and deprived villages of poor countries will increase to probably 2 billion in the next 25 years.

The state-led efforts to alleviate the housing problem confront two major obstacles. First, the resources mobilised by governments and made available to implementing agencies meet a tiny fraction of the needs. Resources required for housing include not just funds but also suitable land for construction, diverse and secure forms of tenure, socially purposeful tax incentives, inclusive transportation networks, transparent governance, etc. Second, most affordable housing interventions do not capitalise upon the huge latent resources that the so-called 'poor' can contribute.

Both the magnitude of needs and the wide range of benefits of participation have been extensively documented for the last four decades. As a practitioner on this field throughout this time, I have witnessed how when providing flexibility for the end users to participate in the planning and building process, or better still, if they 'own' the process, interventions respond more effectively to their needs, to their time scales and often lead to the leveraging of unexpected human and financial inputs. Yet, government's appeal for centralised forms of delivery continues to produce generic standard rubber-stamp units: houses as 'products', which are often detached from people's aspirations. These, time after time, come at the expense of developmental opportunities that can be fostered through participatory housing processes such as the owner-driven approach.

Clearly, there is a need to explore new strategies to meet basic housing needs. But along with innovation, there is also a need to better capitalise on lessons already learnt. This book acknowledges these needs and builds on four decades of owner-driven reconstruction experiences. The essays, by authors of very diverse backgrounds, account for several strategies and initiatives with varying levels of community engagement and of partnership with donors and governments. Authors evaluate alternative paradigms of participatory housing and local technologies, some found to be successful and some failing to sustain over time and scale. It is precisely the question of the long term that makes this book distinct. Articles being based on actual experiences makes the accounts all the more relevant. This book will be an invaluable guide to the academics, planners and practitioners to charter new paths or to replicate aspects that have already worked.



Figure 2—Community consultation in the framework of an EU-funded owner-driven housing reconstruction programme in Vellamullivaikal, Mullaitivu District, Sri Lanka, implemented by UN-Habitat. (Source, Jaime Royo-Olvid, EU 2016)

Background

Catching up with people's processes

The editorial board

Following the destruction of people's houses and livelihoods as a result of disaster and conflict, early recovery efforts prioritise the delivery of emergency shelters and access to essentials such as water, sanitation and food. Once survival is guaranteed, needs call for reconstructing permanent housing, restoring livelihood sources and rehabilitating communities. But, beyond post-emergency, some communities no longer manage to sustain the necessary political support towards assisting them in their full rehabilitation. This is the situation war-affected households in Sri Lanka. In 2009, some 300 000 families had lost their homes. By 2018, some 9 years after the end of the war, close to two thirds of the houses destroyed during the war have been reconstructed but a third, over 100 000 households, are still waiting for assistance.

In other contexts, the unmet demand for housing is not the result of disaster or conflict but rather of the inability of society to guaranty supply to meet the demand namely that resulting from rapid demographic flows from rural to urban areas. Sometimes, housing supply shortage is a deliberate way of keeping prices and rents up. In rural contexts, shortages of housing may be the consequence of general or historical deprivation, of bad governance, of the loss of traditional construction skills, of the consequences of climate change or of other structural and economic transformations.

Figure 3—House destroyed during the conflict in Mannar District, Sri Lanka (Source: Jaime Royo-Olid, EU 2013)



A lot has been written in recent years on how to handle the transition from shelter to more permanent housing or from the lack of dignified accommodation to making affordable housing available. And a recurrent theme has been the added value of communities' involvement in the process. Over the years, many participatory approaches have been tested and tried. This book is about these approaches. It does not put forward fundamentally new forms of participation but rather add to accounts of owner-driven reconstruction practices. This book is hence mainly about deepening on housing programmes that have used different forms of assisted or accompanied owner-driven reconstruction (ODR). Depending on the source and author, ODR is also referred to as owner-driven approach (ODA), homeowner-driven (HOD), owner-driven-programme (ODP) or even owner-driven housing (ODH).

We hope this book will help readers 'catch up' with actual (not just theoretical) practices involving notions of ownership by people and their communities: practices that have been successfully working for decades.

From contractor-led to owner-led housing

In addressing housing shortages, it is conventional for governments and donors to be seduced by contractors who offer to manage the full construction process from design to handover. These often promise to be faster and more efficient than other more decentralised solutions involving more stakeholders. However, different forms of ODR have emerged and continue to evolve as the preferred method by homeowners (or end-users) as well as by practitioners, some governments and donors involved in the process of assisting people. This book addresses why this is the case. To address this question, we need to first understand what a meaningful 'owner-led' process is and recognise what is 'better for whom.'

With regards to 'owner-led', we would like to demystify the perceived antagonism between owner-driven approaches and the involvement of contractors. Owners can, and most often do, work along with contractors. Therefore, owner-led will most likely involve contractors particularly for the most technically challenging construction components. While many homeowners provisionally and partially become builders, most construction is delivered through service providers and suppliers. Homeowners can also collaborate with developers who control most of the construction supply chain (although developers will have to accommodate the flexibility demanded by owners in order to respond to their needs if the project is to be considered owner-led). An underlying principle in owner-led approaches is hence that the client knows what she can get and that she be able to pursue her aspirations. This is something particularly



Figure 4—Ms Sinnavan Susi, homeowner from Mullaitivu district, Northern Province of Sri Lanka, explains her experience in housing reconstruction in a post-emergency setting at the conference in Colombo. (Copyright UN-Habitat 2014)

valuable and meaningful for poor communities for whom construction choices provide relatively more long-lasting implications for their future development.

With regards to ‘better for whom’ this book focuses on end-users (e.g. victims of war or disaster or simply vulnerable communities). But the role of suppliers is also addressed insofar as they are important economic actors who provide both valuable services and goods. We see cooperation between owners and contractors economically advantageous for society.

Another important introductory clarification is that owner-driven does not necessarily mean ‘self-built’. Although self-construction can reinforce ownership, it might not necessarily imply well-informed choices (e.g. a family freely building their house to their taste in a disaster-prone fashion — might be increasing their vulnerability and hence compromising their own potential development). Accordingly, the notion of ‘owning’ is proposed here as inherently related to possessing relevant knowledge to make ‘informed choices’ affecting their future. Training homeowners in self-construction remains important but is only a partial form of empowerment.

While, generally, the more involvement from the owner, the more appropriation there tends to be, it is important to consider how the qualitative dimensions of ownership

emerge: can the owners actually fully 'own' the different aspects involved in the design and implementation of the housing programme? The answer is less about property or construction and more about their ability to attain long-term aspirations.

This book therefore problematises the level and nature of engagement by owners that is needed to consider a process as owner-driven. This is intimately related to the extent to which owners are positioned or empowered with regards not only to the construction process but to their development options before, during and after construction. We make the point that ownership, in its full sense, is about communities' long-term development options and that hence needs careful examination of qualitative features of house building not as an aim in itself but as an important contribution to development. Empowerment is inherently related to the wider notion of 'habitat' involving housing in its political, socioeconomic and natural environment.

A key for convincing policymakers to use owner-driven approaches is cost savings that no contractor-led project can achieve. But homeowners, if duly informed, can bring much more than cost savings to housing reconstruction. They can facilitate more than quality control over the construction process: they are best positioned to provide creative solutions and to take certain risks no expert could ever devise, for they know best what they value, they understand best the environment in which they grew up and only they can decide how they truly want to live their lives. Ultimately, owners can direct assistance towards what is truly meaningful to them. The enactment of choice is inherently related to one's satisfaction. Under this understanding, some authors question whether expert advice should play any role. However, most accounts in this book exemplify the value of negotiation between well-informed homeowners and experts who are sensitive to people's aspirations.

In that negotiation, the skill sets that owners and experts possess in relation to house building remain important in terms of a wider developmental agenda than that of delivering a house. The construction sector is highly corrupt across the world and technical ignorance can further compromise the viability of housing. It is often the case also that residents in post-disaster contexts — despite proficiency in construction methods — are not formally accredited as mason or builders and find it difficult to be heard about their preferences in spite of their knowledge or they find it hard to establish themselves as professionals in this sector. Given the economic importance of reconstruction in the local economy and in generating livelihoods, underutilising people's construction skills may constitute a missed opportunity. Therefore, the implications of technology transfer, building standards, technical supervision of construction,



Figure 5—Somsook Boonyabancha, Secretary-General of the Asian Coalition for Housing Rights (ACHR), speaking at the Colombo conference on ‘housing reconstruction as ‘people’s process’ in practice’. (Photo: Jaime Royo-Olid, EU 2014)

professional accreditation, social perceptions of the status associated with the building professions are important aspects to be considered.

This book also addresses how to transition from government or donor-funding to when housed communities begin to re-establish relations with the local and national context. To effectively reconnect with the wider society, it is our contention that housing programmes require residents to hold manageable levels of financial debt if not to be free from debt all together. When the donor or government funds cease, communities should be financially literate and capable of managing debt incrementally as debt traps have proven particularly harmful. On this front and on wider developmental tasks, the role of female leadership has been key to success.

A key aspect in reconnecting with the context is the impact of donor- or government-led programmes on construction contractors. Eventually, local communities will have to coexist with housing market supply chains emerging (or lacking) in the post-emergency period. The transition from assistance to that market-led phase deserves more attention. This book looks into attempts to develop diversified low-cost housing supply chains, which by virtue of contributing to the local economy contribute to a more sustainable housing trajectory.

Building on a lessons-learnt conference

This book compiles papers presented at the international conference Restoring communities through ‘homeowner-driven’ reconstruction: from post-emergency to development (Colombo, 24-25 March 2014). The conference was commissioned to UN-Habitat by the Delegation of the European Union to Sri Lanka and Maldives. Apart from sharing of lessons learnt, the conference was to inform the EU’s identification and formulation of an owner-driven housing reconstruction programme in Sri Lanka for the period 2015-2019.

Sri Lanka’s housing reconstruction and the emergence of the people’s process

The housing gap in the north and east of Sri Lanka in 2015 was estimated to be above 130 000 units. This gap is defined as one house to be reconstructed for each one destroyed. The figure does not include overall housing demand resulting from other demographic changes. Reconstruction for the conflict-related housing gap was almost exclusively financed by international donors between 2005 and 2015. For instance, the north east housing reconstruction programme (NEHRP), though implemented through national institutions between 2006 and 2009, was mainly funded by the World Bank and co-funded by the EU. The NEHRP delivered 48 000 houses (of which 8 532 were funded by the EU).

The NEHRP set out the current minimum Sri Lankan rural housing standard (i.e. 550 square feet (sq. ft.) — equivalent to 51 square metres (m²) —, lockable house with latrine, kitchen and chimney). Since then, the EU has continued its support with housing reconstruction and was joined by the Swiss Agency for Development Cooperation (SDC), Australian aid — now called the Department of Foreign Affairs and Trade (DFAT) — and the GoI. The role of India is particularly important and symbolic as it has been implementing its largest ever international development cooperation project in Sri Lanka following the local owner-driven approach for an impressive 50 000 houses at once. But donors were not importing or innovating on owner-driven practices but actually building on Sri Lanka’s own legacy.

Accordingly, the conference revisited Sri Lanka’s four-decade history in owner-driven housing in its own right. The MHP of the 1980s emerged again as a major source of learning. Whilst not new even then, the MHP emphasis on people’s ownership beyond the more usual notion of ‘participation’ has been instrumental in transforming the sensibility of donors and governments in other Asian and African countries. It can be argued that the people’s process approach was tested and consolidated in Sri Lanka in the 1980s and exported abroad thereafter. Again, this is one of many participatory and owner-driven approaches but still significantly influential.

The work of architect Lalith Lankatilleke with UN-Habitat has been central in facilitating the above understanding of ownership beyond participation. Lankatilleke is

considered the conceptual father of the ‘people’s process’ approach as advocated by UN-Habitat for over 30 years in Sri Lanka, other south Asian countries and in Africa. This book honours the individuals, the organisations and, above all, the people who have made this approach a functional and successful lifetime practice.

People’s processes and owner-driven: notions beyond participation

At the 2014 conference, and on the very notion of ‘participation’, Indian and international affordable housing leader Kirtee Shah put forward that it is ‘no longer satisfactory’ and described it as ‘insufficient’. He argued that advocating for participation is in fact ‘condescending’ as it seems beneficiaries are only ‘allowed to take part’ in an action that ultimately affects them directly. In contrast, in an owner-driven approach there is no question of participation since it is inherently theirs. In owner-driven language the focus shifts from the mercy or charity of the donor or government to how well informed the owners are in handling their own processes. Ownership makes end-users accountable as opposed to distant contributors and it pushes donors and government to act as leaders as opposed to prescriptive top-down managers.

This book also involves propositions of a more philosophical stance such as by building on the, by now, classical notion of ‘housing as a verb’ as coined by John F. C. Turner in 1972. Turner claimed the importance of building as a process. Process, he posited, involves the richness of community engagement and hence Turner advocated for the notion of ‘housing’ as opposed to the delivery of ‘houses’ which is the noun of outputs or objects. By analogy to Turner, Matthew Barac suggests that there is a case for enhancing the understanding of process from ‘owner-driven’ to a notion of ‘owning as a verb’. Beyond ‘housing’, which is mainly confined to the processes associated with the house, ‘owning’ the place where one settles, or owning the process from planning, to design and to future expansions constitutes a wider qualitative notion. The processes in ‘owning’ are anchored in the permanence of land yet they also address the evolving political and socioeconomic changing context that determines a dynamic and evolving sense of ownership. These thoughts intend to set out richer underlying notions for narratives that account for the capability development of households.

Making of the book

The articles comprising this book have been updated and adapted since the 2014 conference. Some articles were not presented during the conference but have been included for their relevance to the underlying narratives. An important debate in drafting this book has been the extent to which (accompanied or assisted) owner-driven processes actually means that ‘people’s processes’ are being promoted i.e. that there is genuine ownership or is it just development jargon? It was agreed that it would be presumptuous for any donor or implementing organisation to claim that in managing development

actions they are fully led by the people they aim to benefit. There is to us always scope for furthering the level of ownership by communities. Hence the reference in this section to the ongoing, but not definitive, process of ‘catching up with people’s processes’.

While some authors, by virtue of their official position, focus on the positive outcomes achieved by their organisation, the more academic authors tend to counterbalance this by raising questions. This book hence tries to reconcile some sense of success in implementation with the required humility about how much better housing outcomes could actually be.

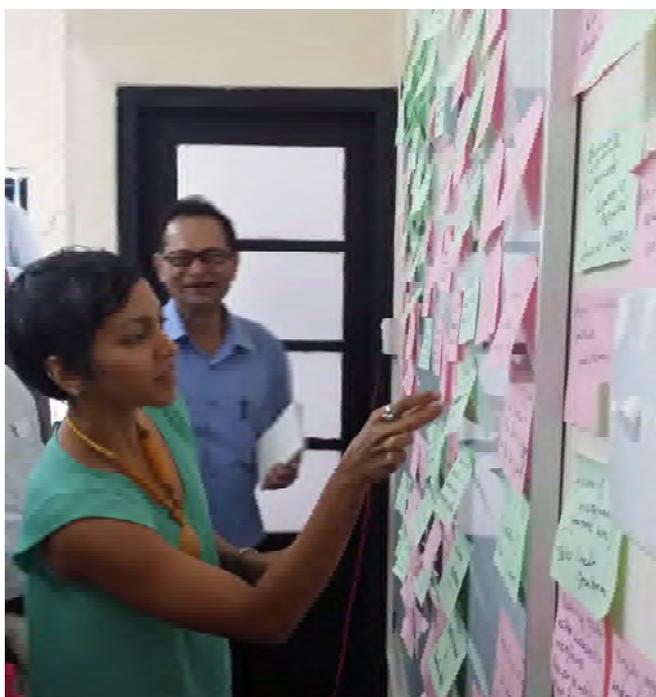


Figure 6—Mind mapping in the making of this book’s concepts with Lalith Lankatilleke and Dr Vagisha Gunasekera (Photo: Jaime Royo-Olid, EU 2014)

‘Co-production’ in the book’s title refers to communities becoming proactive producers of their own rehabilitation and development as opposed to remaining passive receivers of aid and assistance. In most cases, the book will refer to the production of construction materials and related services. But the notion of livelihood-supporting measures (or flanking measures) as practised extensively in Sri Lanka, involves any kind of activities relevant to communities’ development. This book underlines the usefulness of co-production as a target in structurally deprived areas. This is particularly motivated by the observation of war-affected areas of Sri Lanka suffering from the condition of dependency syndrome resulting from the expectation that eventually provisions would

be facilitated by either donors or the State. A word of caution is required here however insofar as conflict-affected communities have had their livelihoods destroyed by conflict and some also by the 2004 tsunami. That people expect assistance is hence legitimate. Their right for restitution, as discussed in this text in the chapter on housing policy in post-conflict rehabilitation and the right to restitution in Sri Lanka, should be honoured and there is a moral, social and political imperative to helping them. Having said that, enabling people to become proactive co-producers, is posited as being better than having a population that remains passive.

This book with regards to key previous relevant literature

This book has been produced voluntarily mainly by busy housing practitioners. It has therefore no aspirations of scholarly excellence. The book intends, however modestly, to complement valuable academic publications such as *Building Back Better: delivering people-centred housing reconstruction at scale* (Lyons, M., Schilderman, T., & Boano, C. 2010) and *Still Standing? Looking back at reconstruction and disaster risk reduction in housing* (Parker and Schilderman, 2014). Whilst literature on housing and on post-emergency reconstruction is vast, there is not so much written on housing reconstruction in the later part of the transition from post-emergency to development. Further, as posited by Parker and Schilderman in this book ⁽¹⁾, there is even less published on reconstruction's impact a few years after completion. This book does provide some insights on the impact years after completion of various reconstruction projects.

Some position statements as food for thought

One of the key speakers at the 2014 housing conference was Dr Susil Sirivardana — a key intellectual figure in Sri Lanka who was instrumental to the MHP during the 1980s. He stated that: 'owner-driven reconstruction in Sri Lanka has reached a status of irreversibility'. By 'irreversibility' we believe that he meant that it had become the undeniably preferable approach for housing reconstruction and that not using this approach means using an inferior approach in the eyes of people. This book would not be necessary if owner-driven reconstruction was more widely acknowledged as irreversible by decision makers (in the sense given above). It certainly is by those who have experienced and contrasted owner-driven and contractor-driven approaches, but not by

⁽¹⁾ See the chapter on Post-disaster reconstruction for the long term: three decades of lessons learned from South East Asia and Latin America.



Figure 7—Susil Sirivardana at the conference: Restoring communities through homeowner-driven reconstruction, Colombo, 24-25 March 2014. (Photo: Jaime Royo-Olid, EU 2014)

newcomers in the field. We wish to better inform those newcomers such that they take lessons learnt into account.

Sirivardana also called for the imperative need to facilitate ‘a healing environment’ beyond the mere reconstruction of social and economic infrastructure and beyond re-establishing functional communities. In so doing, he called for pushing beyond the notion of ‘housing’ in advocating for ‘an environment conducive to peace of mind’.

In essence, the underlying narratives of this book are discussions over the benefits of reclaiming reconstruction as a customised process that looks holistically at the habitat context and to the long-term aspirations of the communities concerned in contrast to the prevailing tendency to produce generic houses as impersonal commodities that end up costing more to governments and cause more rejection. Addressing these issues involves delicate trade-offs, or identifying synergies between households’ wants and the benefits for investing on community social infrastructure, livelihood-support measures or other forms of contextual social regeneration. There will be no universal prescriptions other than emphasising the importance of the interdependence and reciprocity between housing, community and owning; symbols and frameworks for each other.

Acknowledgements

Many people have contributed the making of this book. And all who have contributed have done it voluntarily because they believe the subject ought to be documented and shared with readers worldwide. No author was paid nor required to work on it by their hierarchies although the hierarchies generously allowed them to spend some working time on it. So, we want to thank all contributors for their vocational inputs and their respective institutions for allowing it. Nonetheless, the production of this book would not have been possible without the generous financial contributions of the EU citizens towards international development assistance that funded its printing and that has made many housing assistance projects possible.

We must thank Sri Lankan, Indian and other homeowners from whom the authors of these articles have learnt so much. Homeowners have opened their intimate lives, shared their grievances (even when risky for them) and have always been supportive of documenting the work done on housing including photographing them.

Each and every author of this book has been generous and patient by repeatedly editing their articles and peer reviewing others'. Authors have borne the demands of editors during the three and a half years it has taken to get the book published.

All major stakeholders who attended the conference in Sri Lanka in 2014 have also contributed directly or indirectly. As such we thank the National Housing Development Authority (NHDA), the Institute for Construction Training and Development (ICTAD) — now called the Construction Industry Development Authority (CIDA) — Women's Bank (Women's Coop), the district secretariats of Killinochchi, Mullaitivu and Batticaloa from Sri Lanka, the European Union Delegation to Sri Lanka and Maldives (European Commission), the SDC, Australian aid (now called DFAT), the High Commission of India to Sri Lanka, the International Federation of the Red Cross (IFRC) and their local partner the Sri Lankan Red Cross, HFHSL, Practical Action, *Arbeiter-Samariter-Bund* (ASB). Other international non-governmental organisation (INGOs) also shared their experience in complementing housing programmes with livelihood support such as ZOA, Practical Action Sri Lanka (now succeeded by Janathkshan Gte Ltd), Habitat for Humanity, World Vision Lanka as well as a plethora of community-based organisations. We benefited from the presence of regional state-of-the-art expertise from the Auroville Earth Institute, the Indian Institute of Technology (IIT Delhi), the All India Disaster Management Institute from India, Basin-South Asia network, the Heritage Foundation (Pakistan), the Building and Social Housing Foundation (BSHF) now called World Habitat, the Centre of Development Studies from the University of Cambridge (United Kingdom), the School of Architecture from the London South Bank University, *Architecture Sans Frontières*-UK and the Secretary-General of Asian Coalition for Housing Rights (ACHR) (Thailand).

Various inputs into the editing and final production

The editorial team was led by Jaime Royo-Olid. Dr Shailaja Fennell volunteered to co-edit the book helping situate the book in wider development academic debates. Lara Davis led the peer-review process with an emphasis on technical rigour. Dr Reinhard Skinner peer reviewed several articles and provided evaluation data and evidence that has substantiated many claims in the book. Ramona Miranda has led the UN-Habitat inputs all the way from the coordination of the 2014 conference to absolutely key contributions for the completion of this book. Ramona was assisted by Sadhani Rajapakse and the communications and IT teams mobilised by UN-Habitat; all deserving our gratitude. Tushani Kalugalagedera helped in rewriting and language editing several articles.

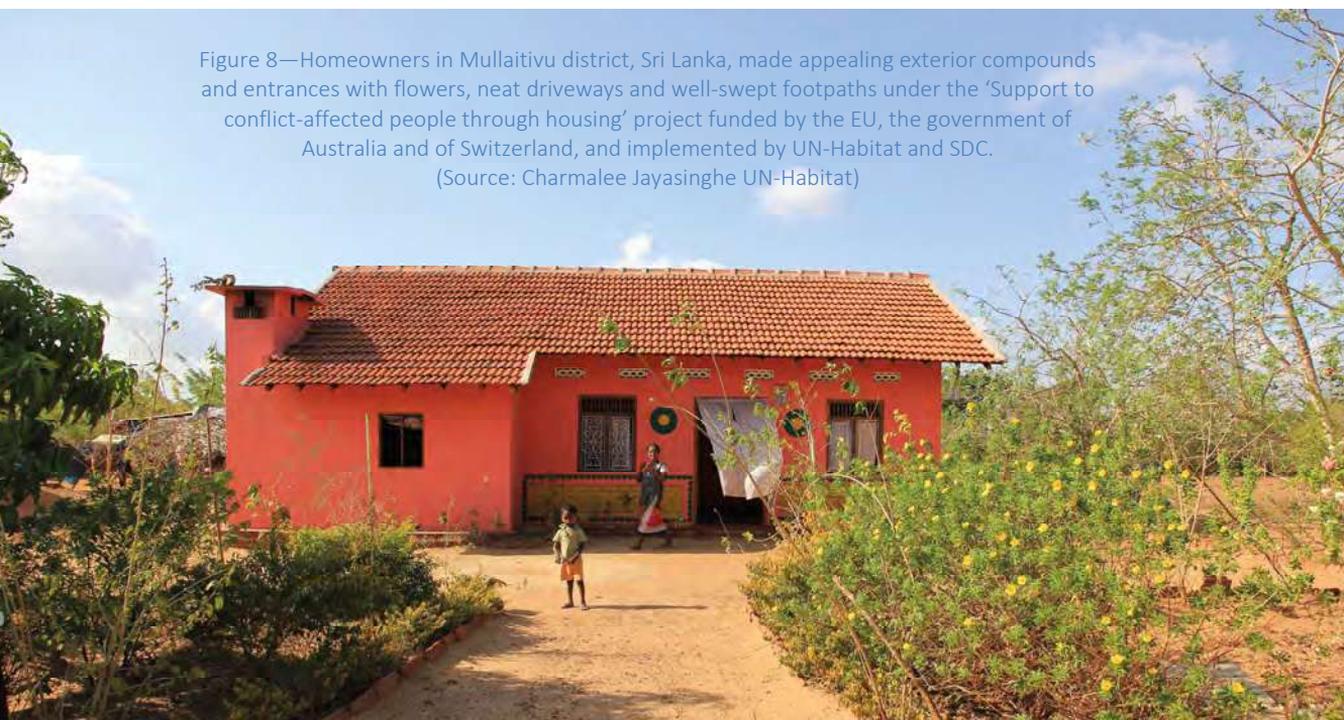
Special mention is made here of Lalith Lankatilleke, father of the ‘people’s process’ concept and who helped us build on his method to collectively conceive the book. We also thank Dr Gitani Gunasekera from the Centre for Poverty Analysis (CEPA) for her two articles based on rigorous evaluations and inputs in initial workshops in conceptualising the book. Tim Mc Nair must also be acknowledged as manager of the UN-Habitat Sri Lanka team; he was patient and generous in supporting the mobilisation of his human resources for the making of this book while leading to success a highly demanding portfolio of owner-driven housing programmes.

Photographs have been provided by the respective authors and many by Charmalee Jayasinghe of UN-Habitat. The graphics of the cover logo were produced for the conference by a volunteer, Yasith Fernando.

Finally, we would like to thank the very patient and supportive production team of the EU Publications Office, namely Vesa Valtanen who even worked from home to help us meet our printing deadlines and the official proof-reader Michelle Nugent for reviewing every word in the book and repeatedly explained EU formatting conventions.

Figure 8—Homeowners in Mullaitivu district, Sri Lanka, made appealing exterior compounds and entrances with flowers, neat driveways and well-swept footpaths under the ‘Support to conflict-affected people through housing’ project funded by the EU, the government of Australia and of Switzerland, and implemented by UN-Habitat and SDC.

(Source: Charmalee Jayasinghe UN-Habitat)



Contents

Forewords	ii
Preface	v
Background	vii
Catching up with people's processes.....	vii
Acknowledgements	xvii
Contents	xix
Abbreviations	xxi
List of Figures	xxvii
List of Tables.....	xxxiv
List of Charts.....	xxxiv
PART I - INTRODUCTION.....	1
1. From foreign blueprints to local process-based housing: Learnings from Sri Lanka's Million Houses Programme [Riall W. Nolan]	3
2. People's process: a brief history of realising better housing through the potential for ingenuity [Lalith Lankatilleke].....	13
3. Housing reconstruction for development beyond 'building back better and safer': The European Union's contribution towards co-production with war-affected communities in Sri Lanka from 2007 to 2018 [Jaime Royo-Olid]	25
PART II - EVALUATING OWNER-DRIVEN HOUSING RECONSTRUCTION	59
4. Post-disaster reconstruction for the long term: Three decades of lessons learnt from South East Asia & Latin America [Eleanor Parker, Theo Schilderman]	61
5. An evaluation of EU, Swiss and Australian-funded housing reconstruction programmes in Sri Lanka: Lessons learnt and the way forward for community-driven programmes [Reinhard Skinner, Mano Kumarasuriyar, Mario Martelli].....	83
6. Reaping the benefits of incremental owner-driven housing: Seven years after the post-tsunami reconstruction of Veerapagupathy village, Tamil Nadu, India (2005-2012) [Jaime Royo-Olid, Ludovic Jonard, Tiago Vier, Jordi Sánchez-Cuenca, Margot Ehrlich, Jerome Skinazi]	99
PART III - OWNER-DRIVEN APPROACH IN CONTEXT.....	119
7. Contextual challenges are fundamental: Sequencing four distinct phases in the rehabilitation and reconstruction of war-affected communities in Sri Lanka [Susil Sirivardana].....	121
8. Building on unstable foundations? Competing claims for land and its impact on owner-driven housing in northern Sri Lanka [Dulani Sirisena]	125
9. Making owner-driven housing work after disasters: an International Federation of the Red Cross (IFRC) perspective [Sandra 'Urzo, Ela Serdaroglu, Patrick Elliott, Ketu Khurtsia, Mukesh Singh]	135
10. Housing policy in post-conflict rehabilitation and the right to restitution: the case of Sri Lanka [Rasika Mendis].....	147
11. Owner-driven reconstruction where women are leaders: Cases from India, Sri Lanka and Indonesia [Mehul Pandya, Kshitij Gupta, Gautam Bhut, Vandana Chauhan, Khyati Halani]	159
12. Technologies of Belonging: object relations in the architecture of reconstruction [Matthew Barac]	171

13.	Government of India’s support to post-conflict housing reconstruction in Sri Lanka: a contribution towards development [Anurag Srivastava]	183
14.	Building people’s capacities and strengthening communities while rebuilding houses: The role of the facilitator in improving the delivery system and quality of the product with war victims in Sri Lanka [Kirtee Shah].....	191
15.	‘Pathways to permanence’ through accompanied homeowner-driven approach to reconstruction: Habitat for Humanity and World Vision’s programme ‘Homes not Houses’ in Sri Lanka (2016-2020) [Anjalie Page, Joeri Leysen, Desirée Bartosiak, Brian Grant, Juderaj Croos, Joseph Jeyamaran, Stanly Prashanthan Tisaveerasinghe]	205
PART IV - OWNER-DRIVEN APPROACH AND TECHNOLOGY FOR COPRODUCTION		229
16.	Challenges in introducing alternative appropriate technologies in homeowner-driven housing: UN-Habitat’s experience in post-emergency Sri Lanka [Piyal Ganepola, Indu Weerasoori].....	231
17.	Building with earth and sustainable resource management: best-practice principles for a people’s material suitable for Sri Lanka [Lara K. Davis]	247
18.	Using compressed stabilised earth blocks: State of the art and its applications to owner-driven reconstruction in Sri Lanka [Satprem Maini].....	271
19.	Where are all the masons trained in disaster-resilient technologies? Reflections from Indian experiences in capacity building of masons and building artisans [Mona Chhabra Anand, V. M. Chariar]	301
20.	Participatory quality assurance mechanisms in resettlement construction: Experiences of Practical Action Sri Lanka [Vasant Pullenayegem]	325
PART V - OWNER-DRIVEN APPROACH AND FINANCES		343
21.	Life and debt: Assessing indebtedness and socioeconomic conditions of conflict-affected housing beneficiaries in Jaffna, Kilinochchi and Mullaitivu districts [K. Romeshun, Vagisha Gunasekara, Mohammed Munas, Mira Philips]	345
22.	No silver bullet: Can financial counselling help reduce indebtedness? [Vagisha Gunasekara, Nadiya Najab, Munas Mohammed].....	355
23.	Facilitating people’s decision-making through financial counselling for housing: Experiences of the Swiss Agency for Development and Cooperation in Sri Lanka [Nimmi Ariyaratne]	363
PART VI - OWNER-DRIVEN APPROACH AND HOUSING POLICY		375
24.	Systemic interventions to support the access of rural poor to safe and sustainable housing: Awareness, action and advocacy by basin-South Asia platform for a responsive policy environment in India [Zeenat Niazi, Mona Chhabra Anand, Sireesha Patnaik]	377
25.	Enabling environment for housing in Sri Lanka: from practice to a national policy [H. M. Dayananda]	399
26.	Balancing the scale of supply and quality of outcomes in participatory low-cost urban housing: Comparing innovations in the city of Ahmedabad, India [Anthony Boanada-Fuchs]	405
27.	Reconstruction as a form of intervention: Examining the role of local institutional mechanisms in building social cohesion [Shailaja Fennell]	421
CONCLUSIONS		439
Building, owning and belonging [Jaime Royo-Oldid, Shailaja Fennell].....		441
About the authors		445

Abbreviations

A&D	<i>Architecture & Développement</i> , French-Indian non-governmental organisation (NGO)	AUP-2014	Aid to Uprooted People, EU-funded action entitled 'Developmental housing support to Sri Lankan IDPs' implemented by Habitat for Humanity and World Vision (2016-2019)
ACHR	Asian Coalition for Housing Rights		
AFHTAC	Affordable Housing Technical Assistance Centre	AusAID	Australian Agency for International Development. (note that around November 2013 AusAID was integrated into DFAT ceasing AusAID's operations as a single agency)
AHIP	affordable housing in partnership		
AHOD	accompanied homeowner driven internally displaced persons' (IDPs) commenced January 2016	AVEI	Auroville Earth Institute
AIDMI	All India Disaster Mitigation Institute	BA	Bachelor of Arts
AMC	Ahmedabad Municipal Corporation	BACIP	Building and Construction Improvement Programme
ASAG	Ahmedabad Study Action Group	BAE	Board of Architectural Education
ASB	<i>Arbeiter-Samariter-Bund</i> , German INGO responsible for implementing the AUP-2008 housing programme in Vavuniya district (Sri Lanka)	BHs	beneficiary households
		BOP	bottom of the pyramid
		BoQ	Bill of Quantity
		BSHF	Building and Social Housing Foundation now known as World Habitat
AUP	Aid to Uprooted People, facility funded by the EU's Development Cooperation Instrument (DCI) for Asia	BSUP	Basic Services for Urban Poor
		CAP	community action planning
AUP-2010	Aid to Uprooted People, EU-funded project in Sri Lanka titled 'Support to Conflict-Affected People through Housing' implemented mainly by UN-Habitat and partly by the SDC (2011 to 2013)	CAPART	Council for Advancement of People's Action & Rural Technology
		CARE	Cooperative for Assistance and Relief Everywhere
		CBO	community-based organisation
		CDC	community development councils
AUP-2012	Aid to Uprooted People, EU-funded project titled 'Improving living conditions in returnee areas of Sri Lanka through housing' implemented mainly by UN-Habitat and partly by SDC (2013-2015)	CDKN	Climate and Development Knowledge Network
		CDR	contractor-driven reconstruction
		CEJ	Centre for Environmental Justice

CEP	Community Empowerment Programme	DEC	Disaster Emergency Committee
CEPA	Centre for Poverty Analysis (is an independent, Sri Lankan think tank promoting a better understanding of poverty-related development issues)	DFAT	Australian government's Department of Foreign Affairs and Trade as of November 2013. Formerly Australian Agency for International Development.
CEPT	Centre for Environmental Planning and Technology (university in Ahmedabad)	DFID	Department for International Development
CFB	country fired brick	DN	<i>Duryog Nivaran</i> (network)
CHEC	Chinese Harbour Engineering Company	DRC	Danish Refugee Council
CHPB	Centre for Housing, Planning & Building	DRR	disaster risk reduction
CRAterre-ENSAG	Centre for Earthen architecture of the National Superior School of Architecture of Grenoble	DS	Divisional Secretariat
CRS	Catholic Relief Services	DW	Development Workshop
CSEB	compressed stabilised earth blocks	EAAE	European Association of Agricultural Economists
CSHR	Centre for the Study of Human Rights	EC	European Commission
CYTED	<i>Ciencia y Tecnología para el Desarrollo</i> (Ibero-American programme: Science and Technology for Development)	ECDPM	European Centre for Development Policy Management
DAC	Development Assistance Committee. The section of the OECD concerned with development cooperation	ETH	Swiss federal institute of technology (Zurich)
DAG	Development Alternatives Group	ETSAM	<i>Escuela Técnica Superior de Arquitectura de Madrid</i>
DAP	Donor-Assisted Programme	EU	European Union
DBS	Development Bank of Singapore	EUD	European Union Delegation to Sri Lanka and the Maldives
DCI	Development Cooperation Instrument	FGD	focus-group discussion (meeting held with 8-12 persons sharing an interest or specialised knowledge in order to engender discussion and analysis amongst them)
DCR	Development Centre for Reconstruction	FH	full house (a newly built house)
DDR	donor-driven reconstruction approach analogous to 'contractor' or 'agency-driven' in contrast to owner-driven	FHE	full-house equivalent (means by which grants for repaired houses — which are smaller — are expressed in fractions of a full house grant).
		FHH	female-headed households (where a female is the head or main breadwinner; usually means that there is no adult male in the household)

FICCI	Federation of Indian Chambers of Commerce and Industry	HfHSL	Habitat for Humanity Sri Lanka
FOSDOO	Federation of Social Development Organisations in Sri Lanka	HLP	housing, land and property
FTE	full-time-equivalent employees	HOD	homeowner-driven
FUNDASAL	<i>Fundación Salvadoreña de Desarrollo y Vivienda Mínima</i> , NGO (Salvador foundation for development and basic housing)	HOLP	housing options and loan package
GA	government agent	HP	Himachal Pradesh
GFDRR	Global Facility for Disaster Reduction and Recovery	HPN	Humanitarian Practice Network
GIZ	<i>Deutsche Gesellschaft für Internationale Zusammenarbeit</i> , (German organisation for international cooperation)	HTG	Habitat Technology Group, architecture company based in Trivandrum, Kerala
GMSL	Green Movement of Sri Lanka	HTHP	hundred thousand houses programme
GN division	<i>grama niladhari</i> division (a subunit of a divisional secretariat)	IA	implementing agencies
GO	governmental organisation	IAY	<i>Indira Awaas Yojana</i> scheme, India
Gol	Government of India	IBF	<i>Institut Belge de Formation, d'Assistance Technique et de Transfert de Technologies</i> (Belgium)
GoSL	Government of Sri Lanka	ICT	Information and communications technology
GS&MB	Geological Survey and Mining Bureau	ICTAD	Institute for Construction Training & Development, Sri Lanka
GTZ	<i>Gesellschaft für Technische Zusammenarbeit</i> (German Agency for Technical Cooperation)	IDP	internally displaced person
H&TI	housing and town improvement	IDS	Institute of Development Studies, University of Sussex
HCI	High Commission of India (the diplomatic mission of India)	IE	impact evaluations
HCS	hosting communities	IEG	Independent evaluation group of the World Bank
HF	Heritage Foundation of Pakistan	IFRC	International Federation of the Red Cross
HFA	Hyogo Framework for Action	IHDP	International Human Dimensions Programme
HfH	Habitat for Humanity (NGO)	IHP	Indian Housing Programme comprising the reconstruction of 50 000 units in Sri Lanka
HfHI	Habitat for Humanity International	IHS	Institute for Housing and Urban Development Studies of the Erasmus University Rotterdam
HFHIAP	Habitat for Humanity Independent Activities Period	IIT	Indian Institute of Technology
		INDP	International Network for Development and Peace

INGO	international non-governmental organisation	MMRDA	Mumbai Metropolitan Regional Development Authority
INHAF	India Habitat Forum	NAITA	National Apprentice and Industrial Training Authority (Sri Lanka)
INR	Indian Rupees		
IPPG	inter-disciplinary Research Programme Consortium on Improving Institutions for Pro-Poor Growth, University of Manchester	NBHs	non-beneficiary households
		NBRO	National Building Research Organisation (Sri Lankan)
IPs	implementing partners	NCAER	National Council of Applied Economic Research (New Delhi)
ISDR	International Strategy for Disaster Reduction	NCASL	National Construction Association of Sri Lanka
ISED	Institute for Social Education and Development	NCPDP	National Centre for Peoples' Action in Disaster Preparedness
IT	information technology		
ITDG	Intermediate Technology Development Group	NEHRP	north east housing reconstruction programme
JNNURM	Jawaharlal Nehru National Urban Renewal Mission	NERD	National Engineering Research and Development Centre of Sri Lanka
JRY	<i>Jawahar Rozgar Yojna</i>		
KSA	KSA Design Planning Services Pvt. Ltd. (DPS)	NGO	non-governmental organisation
LA	local authority	NHCs	non-hosting communities
LDO	land development ordinance	NHDA	National Housing Development Authority (Sri Lankan)
LKR	Sri Lankan Rupees		
LLM	Master of Laws (qualification)	NIE	New Institutional Economics
LLRC	Lessons Learnt and Reconciliation Commission	NIRD&PR	National Institute of Rural Development & <i>Panchayati Raj</i>
LRRD	Linking Relief, Rehabilitation and Development	NLC	National Land Commission
LTTE	Liberation Tigers of Tamil Eelam	NPO	non-participant observation (site visit and interview)
M&E	monitoring and evaluation	NRDC	National Engineering Research and Development Centre of Sri Lanka
MACS	mutually aided cooperative society	NREGP	National Rural Employment Guarantee Programme
MDG	millennium development goals		
MHP	Million Houses Programme of Sri Lanka launched in the 1980's	NSDC	National Skill Development Corporation
		NSDF	National Slum Dwellers' Federation
MHRD	Master of Human Rights and Democratisation	ODA	owner-driven approach
MIT	Massachusetts Institute of Technology	ODH	owner-driven housing
		ODHA	owner-driven housing assistance

ODHR	owner-driven housing reconstruction	REDRH	reconstruction of earthquake-damaged rural houses
ODI	Overseas Development Institute	REPPIA	rehabilitation of persons, property and industries authority
ODP	Owner-Driven Programme		
ODR	owner-driven reconstruction	RH	repair house (a house which has been repaired rather than newly built)
ODTF	Orissa Development Technocrats Forum, Indian NGO	RHEP	Rural Health and Environment Programme
OECD	Organisation for Economic Cooperation and Development	RHKN	Rural Housing Knowledge Network
OODA	Boyd's OODA Loop (Boyd, 1987): conceptual framework governing human behaviour in unpredictable, dynamically changing environments	RLEGP	Rural Landless Employment Guarantee Programme
OVI	objectively verifiable indicators	RVTC	Rural Vocational Training Centre (public mobile training centres travelling to villages to provide vocational training)
PACS	Poorest Area Civil Society	SCB	soil cement blocks
PASSA	Participatory Approach for Safe Shelter Awareness	SDC	Swiss Agency for Development and Cooperation
PCRP	Post-Conflict Recovery Programme	SDG	sustainable development goals
PMCs	project monitoring consultants	SDP	Slum Development Programme
Praxis	community-based organisation based in Tamil Nadu	SECI	model of knowledge dimensions: distinguishes socialisation, externalisation, combination and internalisation
PTF	presidential task force (Sri Lankan)		
PTFND&SNP	presidential task force for resettlement, development & security for the Northern Province	SEWA	Self-Employed Women's Association
PTK	<i>Puthukudiyiruppu</i> (small town in Mullaitivu District, Northern Province of Sri Lanka known for bombing attacks in 1999)	SIP	Settlement Improvement Plan
		SL	Sri Lanka
		SLIA	Sri Lanka Institute of Architects
		SLRCS	Sri Lanka Red Cross Society
		SLSI	Sri Lanka Standards Institute
RAY	<i>Rajiv Awas Yojana</i>	SMART	specific, measurable, attainable, realistic and time-bound (performance indicators)
RCC	reinforced cement concrete		
RDS	Rural Development Society (an almost universal CBO in Sri Lankan villages dedicated to village development activities)	SNP	Slum Networking Project
RECOUP	Research consortium on educational outcomes and poverty	SPARC	Society for the Promotion of Area Resource Centres
		SPSS	statistical package for the social sciences (computer statistical programme)

SRP	slum redevelopment projects	UN-Habitat	United Nations Human Settlements Programme
SSI	semi-structured interview (free-ranging individual interviews guided by a checklist of topics to be covered)	UNIFEM	United Nations Development Fund for Women (today called UN Women)
SSP	<i>Swayam Sikshan Prayog</i> (a social enterprise for women's leadership)	UPEACE	the University for Peace
SUSHI	Sustainable Urban Social Housing Initiative	UPFA	United People's Freedom Alliance (political party in Sri Lanka)
TARA	Technology & Action for Rural Advancement, a social enterprise set up in 1985 at New Delhi, India	US	United States
TDR	transferable development rights	USAID	United States Agency for International Development
THP	tsunami housing policy	VRC	Village Rehabilitation Committee
TKM	<i>TARA Karigar Mandal</i>	VSF	<i>Vastu-Shilpa</i> Foundation
ToR	terms of reference	VTC	vocational training centre
TOs	technical officers deployed in the field by the implementing partners, and responsible for providing direct technical assistance to homeowners and to monitor the construction process.	WASH	water, sanitation and hygiene
UDA	urban development authority, under the ministry of defence and urban development, Sri Lanka	WB	World Bank
UKIERI	UK-India Education and Research Initiative	WFP	World Food Programme
UNCCD	United Nations Convention to Combat Desertification	WRDS	Women's Rural Development Society (same as RDS except is run by and comprises women (Sometimes works together with RDS))
UNCHS	United Nations Centre for Human Settlements (Habitat)	WVL	World Vision Sri Lanka
UNDP	United Nations Development Programme	ZOA	NGO <i>Zuid Oost Azie</i> (Dutch for 'South-East Asia', where the Dutch relief and development NGO began its work)
UNDRO	United Nations Disaster Relief Organisation		
UNEP	United Nations Environment Programme		
UNF	United National Front (political party alliance in Sri Lanka)		

List of Figures

Figure 1	Left, EU-funded model house built by the owners with locally-sourced Earth Concrete Blocks with the assistance of Habitat for Humanity Sri Lanka in Batticaloa, Sri Lanka. Right, shelter where family has been living for almost a decade.	iv
Figure 2	Community consultation in the framework of an EU-funded owner-driven housing reconstruction programme in Vellamullivaikal, Mullaitivu District, Sri Lanka, implemented by UN-Habitat.	vi
Figure 3	House destroyed during the conflict in Mannar District, Sri Lanka	vii
Figure 4	Ms Sinnavan Susi, homeowner from Mullaitivu district, Northern Province of Sri Lanka, explains her experience in housing reconstruction in a post-emergency setting at the conference in Colombo.	ix
Figure 5	Somsook Boonyabancha, Secretary-General of the Asian Coalition for Housing Rights (ACHR), speaking at the Colombo conference on 'housing reconstruction as 'people's process' in practice'	xi
Figure 6	Mind mapping in the making of this book's concepts with Lalith Lankatilleke and Dr Vagisha Gunasekera	xiv
Figure 7	Susil Sirivardana at the conference: Restoring communities through homeowner-driven reconstruction, Colombo, 24-25 March 2014.	xvi
Figure 8	Homeowners in Mullaitivu district, Sri Lanka, made appealing exterior compounds and entrances with flowers, neat driveways and well-swept footpaths under the 'Support to conflict-affected people through housing' project funded by the EU, the government of Australia and of Switzerland, and implemented by UN-Habitat and SDC.	xviii
Figure 9	Homeowner consultation by the EU-delegation mission to UN-Habitat owner-driven reconstruction programme AUP-2010.	1
Figure 10	Houses constructed under the Million Houses Programme between 1986 and 1987, Sri Lanka. Documented by the mid-term evaluation of the programme	2
Figure 11	Incremental House built under the Million Houses Programme (MHP) with foundation ready for future expansion.	6
Figure 12	Family outside their new home in Batticaloa District, assisted by UN-Habitat and funded by the EU.	12
Figure 13	Community Action Planning (CAP) in Nepal.	19
Figure 14	Rebuilding with earthquake-resistant traditional technology (Dhaji) in Pakistan, 2007.	22
Figure 15	Community savings groups in Afghanistan, Kabul, 2005	23
Figure 16	Proud owner after official opening of his 'model house' built with Compressed Stabilised Earth Blocks and personalised veranda with the assistance of Habitat for Humanity funded by the EU.	24
Figure 17	War-affected returnee from Menik Farm welfare camp digging out his belongings from his house's garden the day of his return in Mullivaikkal village, 23 October 2012	27
Figure 18	Ms Rasathurai with her children in front of their temporary shelter, identified beneficiary of EU-funded housing programme, head of household and widowed in <i>Pudhukudiruppu</i> (PTK), <i>Sutjamthirapuram, Mullaitivu</i>	29
Figure 19	Consultation with end-user women group under the EU-funded project 'Support to Conflict-Affected People through Housing in Sri Lanka' by UN-Habitat and SDC.	30
Figure 20	EU-funded owner-driven house built with the assistance of UN-Habitat, Mannar.	31
Figure 21	Example of incremental house built under the MHP in 1986 where the owner run out of financial and material resources to complete overambitious house.	33
Figure 22	Core house financed by the Ministry of Housing with LKR 150 000 loan in Batticaloa.	34
Figure 23	Original proposal of core housing with incremental phases by Habitat for Humanity for the EU-funded programme Developmental Housing Reconstruction Support for Sri Lankan IDPs.	35

Figure 24	Houses built under the NEHRP programme led by the WB and co-funded by the EU for about EUR 2500 each. Tin sheets from former shelters are re-used as roof extensions creating verandas.....	37
Figure 25	NERHP houses in Mannar District with hip roof on the right and gable roof on the left.....	38
Figure 26	Revised design of generic house type with incremental potential by architect Amila de Mel under EU-funded project.....	40
Figure 27	Kit of cardboard models of houses with potential expansion parts for owners to visualise their options. Produced by Habitat for Humanity.....	41
Figure 28	Protrusions to facilitate future extension of external walls made of conventional country-fired brick wall. Funded by the EU and implemented by Habitat for Humanity in Batticaloa.....	42
Figure 29	EU-funded owner-driven house built with the assistance of Habitat for Humanity, Batticaloa.....	44
Figure 30	Innovative kitchen design suited to owner's choices. House built with the assistance of Habitat for Humanity, funded by the EU's AUP-2014 programme.....	45
Figure 31	EU-funded owner-driven house built with the assistance of NGOs ASB and Practical Action in Menik Farm, Vavuniya District where owners have afforded expensive wooden door and window frames.....	46
Figure 32	EU-Funded Compressed Stabilised Earth Block Production training in Batticaloa run by Habitat for Humanity and World Vision Lanka.....	48
Figure 33	Lorry transporting tiles from Colombo to the Northern province at three times the cost.....	49
Figure 34	Abandoned tiles and brick factory in Uddusudan, Mullaitivu district, Sri Lanka.....	49
Figure 35	CSEB production yard established by HfHSL and WV in Batticaloa funded by the EU.....	50
Figure 36	Compressed Stabilised Earth Block model house in Batticaloa built by Habitat for Humanity. Funded by the EU.....	51
Figure 37	Compressed Stabilised Earth Block model house in Batticaloa displaying expansion features built by Habitat for Humanity with the technical assistance of Auroville Earth Institute. Funded by the EU.....	51
Figure 38	Family posing in front of their Compressed Stabilised Earth Block model house in Batticaloa built by Habitat for Humanity with the technical assistance and design of the directors of the Auroville Earth Institute for EUR 4 000. Funded by the EU.....	52
Figure 39	Female worker at the EU-funded CSEB production plant in Batticaloa proud of contributing to the local economy and environment.....	54
Figure 40	Female worker curing compressed stabilised earth blocks in production plant in Batticaloa.....	57
Figure 41	Female workers pile CSEB after one year of functioning of production plant in Batticaloa district.....	58
Figure 42	Monitoring site visit by engineers and technical officers, model house built with ECB with the assistance of HfH and funded by the EU.....	60
Figure 43	EU-funded evaluation experts in action. Above: architect Mario Martelli during technical observations of house construction in progress in Killinochchi District. Below: Dr Skinner in focus group discussion with village community in Mulliyawalai, Mullaitivu District.....	82
Figure 44	Focus group discussion in Killinochchi, 12 September 2014.....	84
Figure 45	Single female-headed household in transitional shelter awaiting for assistance for permanent housing, September 2014.....	85
Figure 46	Case study being carried out in Killinochchi, 12 September 2014.....	88
Figure 47	Annaluxmi Ramalingam of Akkarayankulam, Killinochchi.....	89
Figure 48	Proposed type 1 house 264 sq. ft. — perspective, plan, section, elevations.....	90
Figure 49	Proposed type 2 house 276 sq. ft. with separated rest area and kitchen.....	91
Figure 50	Proposed type 3 house 361 sq. ft. — perspective, plan, section, elevations.....	92
Figure 51	Proposed variation of type 3 house 361 sq. ft. — potential internal modification, according to household preference.....	93

Figure 52	Type plan 276 sq. ft. potential incremental growth	94
Figure 53	The Interconnected Process of the HOD approach, indebtedness, dependency and low sustainability.....	96
Figure 54	The Relationships between the Community Driven Approach, indebtedness and sustainability.....	97
Figure 55	Local home-owner being trained in rat-trap brick masonry construction by HTG in Veerapagupathy village, Tamil Nadu, India.....	98
Figure 56	Members of Veerapagupathi in and around community shelter built by Oxfam after the tsunami	100
Figure 57	Logo of the Reconstruction for Development Centre	101
Figure 58	Publicity of Amma (the 'hugging mother') in post-tsunami houses reconstructed through her foundation, India.....	103
Figure 59	Training programme for baseline study organised by ISED and supported by A&D.....	104
Figure 60	Tsunami victim and social-anthropologist discussing on expectations for house reconstruction	105
Figure 61	Architecture & Développement (A&D) and the Institute for Social Education and Development (ISED) explaining to tsunami victim communities in Nasapattinam District, Tamil Nadu, the benefits of using locally-sourced granite stone for house foundation works.	106
Figure 62	Habitat Technology Group head engineer demonstrates rat-trap bond with bricks to community.....	107
Figure 63	HTG head masons and local community trainee build post-tsunami house with rat-trap bond over local granite foundation.	109
Figure 64	Preliminary consultations on the reconstruction site with community, CBOs, engineers and social anthropologist.....	110
Figure 65	House as originally built based on owner's configuration choices.	111
Figure 66	A&D's architect Tiago Vier explains the potential choices of building typology for each family.....	111
Figure 67	Four generic house types developed following consultations with future owners.	112
Figure 68	Street view in Verapagupathi in 2012 where houses have each mean expanded in personal ways.....	113
Figure 69	Above: Original house type unchanged in 2013. Exposed rat-trap bond and filler slab. Below: Same house-type after various vertical and horizontal expansions.	114
Figure 70	Abandoned post-tsunami houses allegedly due to poor thermal comfort and lack of consideration for owners' demands	115
Figure 71	Veerapagupathy village entrance shows each house has been personalised	116
Figure 72	Veerapagupathi house construction in progress. Locally-sourced granite foundation and rat-trap bond brickwork being constructed by homeowners.....	117
Figure 73	Returnee by his war-damaged house in PTK, Mullaitivu district after freed from Menik Farm camp.....	118
Figure 74	Photo album just dug out of the garden with pictures of family members lost during war, PTK, Mullaitivu district after freed from Menik Farm camp.	118
Figure 75	Female-headed household receiving EU-funded assistance from UN-Habitat after their war-damaged house was destroyed by an elephant attack, Batticaloa district.....	119
Figure 76	Village leader in Batticaloa conveys his grievances about development to local authorities and donors.....	120
Figure 77	Sandilipay DS-Jaffna	137
Figure 78	IFRC-assisted homeowners in Manthai West, District Secretariat, Mannar.....	138
Figure 79	IFRC-assisted family of Sinnathurai Vijayakumar -Uduvil DS- Jaffna	141
Figure 80	IFRC-assisted family of Sinnathurai Vijayakumar -Uduvil DS- Jaffna	141

Figure 81	Beneficiary of EU-funded housing standing in front of foundation excavation and tin shelter holding folder with log-book and documentation on construction process handled by HfH.....	146
Figure 82	Sri Lankan IDPs living in shelter 8 years after the end of the war	156
Figure 83	Village leader and school teacher who managed the reconstruction of her EU-funded house while sustaining husband with war-inflicted disabilities, in Mulliyawalai, Mullaitivu District, Sri Lanka	158
Figure 84	South African shanty town house interior.....	172
Figure 85	South African shantytown aerial view.....	174
Figure 86	South African shanty town house interior.....	175
Figure 87	Hong Kong rooftop shack house.....	176
Figure 88	Dharavi at street level. Courtesy of M M from Switzerland.....	177
Figure 89	City of the Dead roovescape	178
Figure 90	Family posing in front of their new owner-driven house in Mullaitivu District, assisted by UN-Habitat and funded by the GoI	182
Figure 91	Family members before completed owner-driven house funded by the GoI	190
Figure 92	A home for the elderly, children and specially-abled (Photo: Kirtee Shah, 2014).....	192
Figure 93	The first 1 000 houses: a tough task even for the contractor in the mine-infested fields.....	193
Figure 94	Even a 550 sq. ft. house is not big enough; most families contributed own savings for a bigger space and higher specifications.....	196
Figure 95	Now that the house is ready, it is time for the plants and the garden.....	197
Figure 96	Both off and on-site infrastructure is a task for the line agencies of the Sri Lanka government	200
Figure 97	Families (A, B and C) walk different 'pathways' towards a permanent solution. Shelter interventions provide for incremental improvements along the way. Family C has the means to quickly go back to its pre-disaster permanent housing condition.	206
Figure 98	Self-built 900 sq. ft house in Kilinochchi by HfH beneficiary homeowner beyond NERHP standards using cement sand blocks. This house symbolises the post-reconstruction aspirations of resettled communities.	207
Figure 99	Sensitisation poster on the advantages of ECBs, model house in Mullaitivu district.....	208
Figure 100	Neighbours visit the newly built CSEB model house in Batticaloa. By verifying the strength and experiencing the coolth of indoor environment most were convinced of the appropriateness of CSEB.	209
Figure 101	Joints of CSEBs prepared for future expansion. Left: for future doorway. Right: finger points sand (weak) mortar for easy extension of wall.....	210
Figure 102	Tentative proposal of a rammed-earth house with a lockable core bedroom, a kitchen, chimney and toilet, which comprises a typical module that can be repeated in different alignments in incremental stages.....	211
Figure 103	Tentative proposal of a typical rural lockable house, with a kitchen, chimney, toilet and one bedroom, which can incrementally grow with a veranda, and additional bedrooms. Cement sand blocks, sun dried brick or compressed stabilised earth blocks can be used for walling.	212
Figure 104	Tentative proposal of a house constructed with sun-dried brick with a lockable core, one bedroom, a detached toilet, and front and rear verandas. The rear veranda allows for an internal courtyard across which bedrooms could be added incrementally.....	213
Figure 105	Hydraulic CSEB machine in production yard in Batticaloa district, managed by HfH and WV and funded by the EU.....	214
Figure 106	Stock of CSEBs on the left and ECBs on the right, in production yard in Mullaitivu district, managed by HfH and WV and funded by the EU. (Source: Jaime Royo-Olid, EU 2018).....	215
Figure 107	Homeowner of model ECB house showing the filler-slab in his kitchen, in Theravil Kulam, Mullaitivu district, built with the assistance of HfH and funded by the EU.	216
Figure 108	Roof truss and internal buttressing allowing for ventilation in Theravil Kulam, Mullaitivu district, built with the assistance of HfH and funded by the EU.	217

Figure 109	Owner-driven housing plot land-use planning under ‘Homes not Houses’ programme funded by the EU.....	218
Figure 110	Owner-driven hazard mapping under ‘Homes not Houses’ programme funded by the EU.....	219
Figure 111	Flooding evacuation route sign by World Vision in project with the Disaster Management Committee.....	219
Figure 112	Homeowner of model ECB house type A, Mullaitivu district, built with the assistance of HfH and funded by the EU.....	223
Figure 113	Model ECB house type A built with the assistance of HfH and WV and funded by the EU.....	223
Figure 114	Conventional country fired-brick house type B with homeowner’s own innovation in windows with wholes cast in ferro cement for ventilation, Batticaloa district, built with the assistance of HfH and funded by the EU.....	225
Figure 115	Homeowner of model ECB house type B, Batticaloa district, built with the assistance of HfH and funded by the EU.....	225
Figure 116	Stock of CSEBs at production yard, Batticaloa district, produced by HfH and WV and funded by the EU.....	229
Figure 117	Filler-slab in kitchen, in Killinochchi district, built with the assistance of UN-Habitat and funded by the EU. Led by engineer Piyal Ganepola and implemented by engineer Joseph Jeyamaran.....	230
Figure 118	EU-funded house plan by UN-Habitat Sri Lanka, Mullaitivu district.....	230
Figure 119	Cement-block making advice and training being provided by UN-Habitat to homeowner, S. A. Kafoor in Karadikkuli, Musali DS division Mannar.....	232
Figure 120	Model house owned by Ms Vasuki built with interlocking CSEB under the IHP.....	236
Figure 121	Ms Vasuki, homeowner of a model house built with the assistance of UN-Habitat and the funding of the Indian Government.....	236
Figure 122	House built with fair-face technology which saves plaster, sand, cement, lime and labour.....	238
Figure 123	New tools in fair-face block work. Traditional mason first feels insecure until they witness the outcome.....	239
Figure 124	Experimental model U-shaped house (not replicated) built with interlocking CSEB under the IHP.....	239
Figure 125	On-site treating of plantation timber using engine oil. (Source: UN-Habitat 2014).....	240
Figure 126	EU-funded model house built by owner with the assistance UN-Habitat using interlocking CSEBs, located close to Killinochchi town. Led by engineer Joseph Jeyamaran.....	243
Figure 127	EU-funded model house built with the assistance of UN-Habitat using interlocking CSEB in Mullaitivu District.....	246
Figure 128	Uncontrolled depletion and over-quarrying, Tamanrasset, Algeria. (Photo: Lara Davis).....	248
Figure 129	CFB industry in Pondicherry, Tamil Nadu: No management of material and fuel resources.....	250
Figure 130	No resource management or rehabilitation plan before extraction in Pondicherry, India.....	251
Figure 131	Energy efficiency of CSEBs vs CFBs.....	252
Figure 132	Energy efficiency of earth: Local/on-site extraction and use.....	253
Figure 133	Carbon emissions for the manufacture of building units.....	254
Figure 134	Island case study: Mayotte.....	255
Figure 135	Housing programme launched in Mayotte (1978-1979).....	256
Figure 136	Technical report on load bearing technology for housing in Mayotte.....	257
Figure 137	Participation of local stakeholders, and study of a housing model implemented.....	258
Figure 138	Range of social housing and municipal buildings built in Mayotte (Photo: CRAterre ENSAG)....	259
Figure 139	Vernacular construction examples of local resource management in Sri Lanka.....	260
Figure 140	Sustainable CFB production. Excavation for the production of bricks, Flooding of fields and excavation converted into agricultural rice fields.....	262

Figure 141	Full resource management cycle. Closing the loop between extraction and use (natural resources, land management, housing construction, homeowner participation)	263
Figure 142	Extraction of soil for construction and reuse of excavation pits,	264
Figure 143	Three examples of resource management and land conservation at the AVEI: a. rainwater catchment systems, b. wastewater treatment system, and c. basement floor for multistorey construction	266
Figure 144	War-affected home owner works in new CSEB production plant funded by the EU implemented by Habitat for Humanity and World Vision.....	270
Figure 145	Schematic principle of CSEB	272
Figure 146	CSEBs produced by the Auram Press 3000.....	273
Figure 147	Dry Compressive Strength of various masonry blocks	274
Figure 148	CSEB production with Auram Press 3 000 in Tanzania.....	275
Figure 149	CSEB production with Auram Press 3 000 in Kutch, Gujarat, India	275
Figure 150	Mixing for a stabilised rammed earth foundation.....	276
Figure 151	Ramming stabilised rammed earth foundations	277
Figure 152	Composite plinth beam.....	278
Figure 153	Casting a composite plinth beam	278
Figure 154	Composite column 240,	279
Figure 155	Composite column 290,	279
Figure 156	Columns 240 & 290,	280
Figure 157	Composite lintel-single height,	281
Figure 158	Composite lintel-double height	282
Figure 159	Composite lintel triple height	282
Figure 160	Reinforced masonry with hollow interlocking CSEB.....	283
Figure 161	'Aum House' built in 62 hours, Gujarat, India.....	284
Figure 162	Tsunami house, Anumandhai, India. First prize of a national contest	285
Figure 163	Disaster resistant buildings, TN, India Work for UNDP, after the 2004 tsunami	285
Figure 164	Visitor's Centre, Auroville, India	286
Figure 165	Shakti Vihar school, Pondicherry, India.....	287
Figure 166	Segmental vault at Deepanam School, Auroville, India.....	288
Figure 167	Marakkanam School & Community centre, Marakkanam, India.....	288
Figure 168	Al Medy Mosque, Riyadh, Saudi Arabia	289
Figure 169	Vikas Community, Auroville, India.....	290
Figure 170	Model house, Simunye, South Africa	291
Figure 171	Primary School, Jantanagar, Nepal.....	292
Figure 172	Two million CSEB produced for the construction of 2 698 Houses in 1 year, Gujarat, India	294
Figure 173	Sri Lankan <i>Specifications for compressed stabilised earth blocks</i>	295
Figure 174	Cost assessment analysis of CSEB-business investment in Sri Lanka	296
Figure 175	CSEB production yard in Batticaloa set up by HfHSL and WVH with the technical assistance of the director of the Auroville Earth Institute.	297
Figure 176	Training of masons in CSEB construction by experts Satprem Maini and T. Ayyappan with HfH, Batticaloa district.	299
Figure 177	Masons trained in CSEB masonry construction welcome community members curious about anew appropriate material model house in Batticaloa, built with the assistance of HfH and funded by the EU.....	300
Figure 178	Influences on cognitive processes.....	309
Figure 179	The knowledge spiral	310
Figure 180	Capacity-building model of SEWA Nirman.....	312

Figure 181	The institutional architecture of TKM	317
Figure 182	Capacity building for safe construction under the REDRH project, Sikkim	319
Figure 183	Homeowners of owner-driven house built with the assistance of ASB, ZOA and Practical Action Sri Lanka and funded by the EU in Vavuniya district, Sri Lanka.....	324
Figure 184	House built with rat-trap bond masonry and tiled roof	330
Figure 185	Rat-trap bond wall masonry	330
Figure 186	Improved brick kiln in eastern province.....	332
Figure 187	Quality Assurance Guidelines and House Maintenance guide by Practical Action	333
Figure 188	Typical poster, Handbook for carpenters, Handbook for masons and Maintenance handbook produced by Practical Action.....	337
Figure 189	An improved brick kiln in Vavuniya and a trained burnt brick producer in Vavuniya showing his products	338
Figure 190	A beneficiary awareness-creation session.....	339
Figure 191	Home doors are important symbols of prosperity. Often, homeowners over-indebt themselves by buying decorative features to project high status of wealth	342
Figure 192	Joint bank account log-book of EU-funded housing programme implemented by Habitat for Humanity and World Vision in Batticaloa	343
Figure 193	Victims of financial deb are often households with several dependants. Children of EU-funded housing programme implemented by Habitat for Humanity and World Vision in Batticaloa	344
Figure 194	Financial literacy training sessions run by HfHSL, funded by the EU.	354
Figure 195	Field Log book used to follow on construction progress and expenditure.	362
Figure 196	From temporary shelter to permanent housing: child from resettled family observes progress on the house being built through owner-driven-assistance by his family next to the temporary shack they currently live in.....	364
Figure 197	Poster showing how construction costs rise as ODHA-recipient households build bigger houses, requiring them to finance a greater component of the costs (over the grant amount of LKR 550 000) with own funds.....	365
Figure 198	Main stages of the financial counselling offered to the SDC ODA housing beneficiaries	368
Figure 199	Poster displayed around village showing implications of unnecessary debt	369
Figure 200	Examples of template for calculating housing construction, repair and additional amenities expenses used by SDC.....	371
Figure 201	Government Agent of Kilinochchi (right) and District Secretary (left) comment on thermal comfort of CSEB model house built with the assistance of HfH and WV and funded by the EU.	374
Figure 202	Mason constructing IAY double-sized house with fly-ash bricks on top of laterite blocks in Banki, Cuttack district, State of Odisha, India.....	376
Figure 203	TARA Karigar Mandal (TKM) mason guild, Bundelkhand training in green construction technologies.	387
Figure 204	A typical village enterprise producing and supplying roofing tiles and providing a roofing service	388
Figure 205	An integrated rural housing delivery model innovated and piloted by DA in Bundelkhand, Central India.....	389
Figure 206	A semi-permanent house under construction in Uttarakhand.....	391
Figure 207	Traditional homes in Mayurbhanj, Orissa. Can centralised IAY lead to strengthening rather than replacing the cultural aesthetic of our folk housing?	396
Figure 208	Abandoned tile and brick factory at Uddusuddan, Mullaitivu district with enormous potential for reducing costs of construction in the North of Sri Lanka	398
Figure 209	Spatial qualities resulting from the SNP: before and after.	411
Figure 210	Market-based low-cost Housing at the south-eastern periphery of the city	413

Figure 211	Public Low-cost Housing Supply EWS BSUP	415
Figure 212	The Institutional Adequacy Framework	432
Figure 213	Baby napping in CSEB model house in thermally comfortable room, in owner-driven house built with the assistance of HfH and funding from the EU.....	440
Figure 214	House ruined by conflict in Millivaikal, Mullaitivu district, Sri Lanka	441
Figure 215	Children of homeowner in owner-driven house built with the assistance of UN-Habitat and funded by the EU.....	444

List of Tables

Table 1	Conventional contracts compared to community contracts	20
Table 2	What it takes to be a 'support professional'	21
Table 3	Projects revisited listed under case study title as defined in Schilderman and Parker 2014. (Case study findings are evaluated in more depth in the book).....	79
Table 4	Types of sustainability in the evaluated housing programmes.....	95
Table 5	Source of financing to fund house construction activities before receiving donor funding. (Source: K. Romeshun, V. Gunasekara, M. Munas 2014).....	348
Table 6	Comparison of house size among treatment and control groups.....	357
Table 7	Different levels of participations in the SNP modality.....	410
Table 8	Different levels of participations in the market-based low-cost housing modality.....	412
Table 9	Different levels of participation in the rehabilitation modality	414
Table 10	Different levels of participation the rehabilitation modality	415

List of Charts

Chart 1	Status of occupied houses in rural India (per cent)	302
Chart 2	Status of occupied houses in urban India (per cent).....	302
Chart 3	Guidance on quality of building materials and construction quality in sample of IAY houses (Source: Unnati and Knowledge Works, 2012).....	304
Chart 4	Mapping the status of current approaches to training of masons.....	306

A photograph showing a group of people in a rural setting. A man with a white beard and mustache, wearing a grey shirt, stands in the background with his hands on his hips. In the foreground, three women are seated. The woman on the left wears a green and white sari. The woman in the center wears a red and black patterned sari. The woman on the right wears a brown patterned sari. They are all looking towards the camera. The background shows a thatched roof and some greenery.

PART I

INTRODUCTION

Figure 9—Homeowner consultation by the EU-delegation mission to UN-Habitat owner-driven reconstruction programme AUP-2010 (Photo: Jaime Royo-Olvid, EU 2012)



Figure 10—Houses constructed under the Million Houses Programme between 1986 and 1987, Sri Lanka. Documented by the mid-term evaluation of the programme (Source: Dr Mano Kumarasuriyar, 1987)

1. From foreign blueprints to local process-based housing: Learnings from Sri Lanka's Million Houses Programme

Riall W. Nolan, Professor of Anthropology, Purdue University

'Don't let anyone kid you: desperation is the real mother of invention.'

Skyler

Abstract

In earlier papers (Nolan 1984, 1987, 1994), I noted the tendency of development agencies to favour quite specific general-purpose models, or blueprints, instead of looking more closely at approaches that genuinely take local conditions into consideration. In these papers, I also observed that the structure and operation of much of the development industry seemed to resist learning both about local needs, and from project results. In my 1994 paper, I used an example from Sri Lanka — the Million Houses Programme (MHP) — where, despite a local ministry's innovative (and successful) departures from mainstream donor-planning models, donors appeared slow to learn the lessons.

The MHP put in place a number of innovative and effective approaches, such as owner-led reconstruction, which went both outside and beyond the donor patterns of thinking at the time. Twenty years later, it is gratifying to see that important attributes of that programme have become usual practice in Sri Lanka and beyond. Other relevant and successful developmental features have however been lost along the way, and some of the obstacles to donor learning I described in 1994 appear to still exist today.

This paper is an edited and updated version of another, unpublished account I wrote in the late 1980s (Nolan 1988) of how the MHP began, told from the point of view of a foreign technical assistant working on it at the time. The paper highlights the tension between donor-driven models and paradigms, and local-level processes and realities. It may be of some interest as a purely historical document, but I believe its main utility lies in it as an example of the merits of locally-derived and locally-driven development processes. It is also, I believe, a testament to the ingenuity and creativity of local planners and implementers in working with — and sometimes around — an external donor bureaucracy.

Introduction

Planners and consultants are catalysts in the process of planned change, but how they do this depends on the situation. Among other things, it depends particularly on who pays their salary. As I have outlined in previous articles (Nolan 1984, 1987), development donors usually carry quite specific models around with them; whatever else their consultants do, they are expected to help implant and operationalise these models. Although due allowance is made for 'local conditions' in theory, little attention appears to be paid to this in practice.

All development projects are experiments, of course, but they rarely unfold under controlled conditions. An enormous — and fascinating — gap exists between the first public statement of a policy and its eventual translation into practice.

During the period 1982-1984, I worked as advisor to Sri Lanka's ministry of local government, housing and construction ('the ministry'). One of my tasks was to mediate in the usual way between a foreign funding bureaucracy operating according to a well-established agency paradigm, and a host country implementing bureaucracy facing certain problems not recognised by this paradigm.

The advent of the MHP forced major changes in this paradigm, bringing 'local conditions' to the fore and changing the nature of the consulting relationship. This paper discusses how this came about.

Background

The development industry's traditional approach to low-income housing — what I have called here a 'paradigm' — was mainly derived from architecture, engineering and finance, and combined innovative design within a highly-structured planning framework. Plans, typically, were made by specialists, and housing 'solutions' were combined in 'packages' and 'delivered' to 'recipients' by state agencies. In the 1980s, the Agency for International Development (United States (US)) (USAID) Housing Guaranty Programme for Sri Lanka was essentially a loan facility and was hence concerned mainly about the loan itself — its terms and conditions, the mechanisms for disbursement and recovery of payment from recipient households, and the determination of income levels (below median) to qualify for a loan in the first place. The programme was a fairly clear example of the 'blueprint' approach to development planning (Korten 1980, Moris 1981, Nolan 1984). In other respects, however, the programme showed itself to be innovative, and USAID accepted and promoted a variety of new ideas in housing planning, such as those embodied in the work of John Turner (1976) and others.

Accordingly, USAID moved away from the direct construction of large blocks of flats and other such developments, and towards various forms of self-help housing, including core housing, shell housing, and sites and services development. USAID also encouraged the preservation and rehabilitation of existing housing stock through home

improvement loans, and the upgrading of illegal squatter areas through both self-help housing loans and title transfer.

When USAID began to work with the ministry, Sri Lanka was still engaged in a massive programme of direct construction. These, in the main, were state-built apartment complexes — hugely expensive, costly to maintain, and which served largely urbanites of middle income and above. Other government housing programmes encouraged a form of self-help housing, but with materials and plans supplied by the state. In neither of these programmes was there any significant private-sector participation. Rents charged for government-owned apartments were far lower than needed to amortise and maintain the investment, and housing loans carried zero interest. In all government programmes, there were problems of rapidly escalating materials costs, blatant political patronage in the allocation of houses and flats, and loan repayment default rates approaching 90%. Such was the housing programme, which USAID ‘inherited’ in 1981.

USAID had several quite explicit policy goals as part of its new relationship with the ministry. One of these was to shift the ministry away from direct construction and towards individual-family self-help housing. Another was to cut housing subsidies by raising interest rates on housing loans. A third was to improve repayments on these loans.

In terms of both official USAID policy and the conventional wisdom of housing programmes around the world, all of this made sense. USAID faced an uphill fight, however, in its efforts to persuade the ministry to take the subsidy reduction and cost-recovery issues seriously. Sri Lanka had only recently emerged from a political era in which subsidies were a cornerstone of state policy. Other government credit programmes — in agriculture, for example — showed equally dismal rates of repayment, and few if any incentives existed to encourage government officials to crack down on defaulters. This, coupled with the intensely political nature of government-sponsored housing, made it extremely difficult for USAID to even open a policy dialogue with GoSL, let alone bring such a dialogue to a successful conclusion.

USAID faced other problems as well in the implementation of its own approach to housing. One of these arose from USAID’s obligation to assist families with incomes below the median. In a country in which statistics on income were educated guesses at best, and where there was a thriving and sophisticated informal economy, this meant that for all the considerable effort which USAID invested in uncovering income levels, the end result was simply another set of guesses.

USAID’s insistence on housing loans to individuals as the mechanism for recovering housing costs created another sort of problem. For one thing, alternative ways of recovering costs were never seriously examined. Development agencies do not, as a rule, search for pragmatic strategies to achieve their ends in a neutral fashion. Nor do they usually look first to local arrangements for solutions to problems. Instead, they bring



Figure 11—Incremental House built under the Million Houses Programme (MHP) with foundation ready for future expansion. (Source: Dr Mano Kumarasuriyar, Mid-term Evaluation 1986-87)

quite specific value judgements to bear on the choice of pathways to a goal, judgements which arise from aspects of their institutional culture.

USAID's insistence on full, individualised cost recovery contained important value assumption: that housing be made available only to those who could afford to pay for it. Paradoxically, this placed USAID in a dilemma. As the costs of building rose (by 1982, it had become difficult to build a minimum house for much less than USD 1 000), the numbers of people of below-median income able to actually afford repayments on a sum of this size began to decline. Ironically, although USAID's mandate was to help 'the poorest of the poor', it often wound up helping the richest of the poor.

This is in no way to denigrate either the intentions or the impact of USAID's programme. But it became clear, as the programme progressed, that housing was simply not reaching large numbers of poor and needy people. Given the constraints imposed by the paradigm, which underlay the programme, it was inevitable that the needs of some would simply not be met. The limits of the model had been reached; if the programme were to advance, some sort of breakthrough was necessary.

The next phase

This came suddenly and without warning. Ranasinghe Premadasa, Sri Lanka's prime minister and minister for housing, was not only an astute politician, but a person of some considerable imagination. Furthermore, he was a man who commanded obedience from his staff in all matters great and small.

Now, in December of 1982, he suddenly announced the launching of a 'Million Houses Programme'. To his astonished staff, his instructions were simple and to the point: 'you have your target, and you have the American aid money. Form a task force and figure out how to do it fast'.

In the frantic days which followed, we in the ministry grappled with a number of crucial questions. Building one million houses would require not only a major increase in the supply of building materials, but a vastly increased government staff to manage and oversee operations. How could these increases take place? Could one million Sri Lankan families — roughly one family in every three living on the island — meet affordability criteria at current house prices? How on earth would repayments be collected? And more importantly, what would happen if the money were not collected?

At this point, a curious thing happened. Quietly and without fuss, all of the expatriate advisors in the ministry were cut out of the planning committees. There were not many of us — half-a-dozen assorted specialists from Europe, the US and India — but within a week, all of us found ourselves wondering what our counterparts were up to in the next room.

This isolation lasted perhaps 2 months. At the end of this time, we were invited back — again, without fuss — into the committee rooms and conference halls. And by that time, the essential outlines of the MHP had emerged. And the principles which it embodied — although it took us some time to realise it — transformed the paradigm which had up until now defined the housing programme.

In this way, the MHP made a sharp break with previous housing programmes, and, to a considerable extent, began to chart a new and relatively unexplored area. GoSL not only gave up a considerable amount of control — in terms of what kinds of houses would be built, how, with what and by whom — it also decided to rely on local mechanisms for house designs, building, and the mobilisation of additional needed resources. More than this, it decided, in effect, to learn by doing, through a 'process' model fed by information from the field.

The MHP still faced the persistent problem of low rates of loan repayment, however. The problem was essentially what it had always been — a political one, compounded by the inability of district staff to adequately track and follow up on the growing thousands of loan recipients.

Politically, government loan programmes had always been treated to some extent as a type of patronage to be dispensed to loyal followers, and housing was no exception. 'Moving to scale' — the term used to describe the expansion of the MHP to its full required capacity — meant somehow breaking (or at least loosening) — the political bonds which linked loans to the local members of parliament and to ruling party officials. Yet even if this could be done, district staff would have to double or triple in size in order to keep pace with the expansion.

The solution to this difficult problem involved further decentralisation of the programme, and a further transfer of power to rural communities. Responsibility for both the granting and the recovery of housing loans became the responsibility of local rural credit unions. These groups, which had existed in Sri Lanka for 70 years, were controlled, to be sure, by certain vested interests within the community, but the vested interests were local ones, answerable to local constituencies, and responsible to local pressures.

In this way, a number of important issues were resolved. The volume of loans could be increased rapidly, for now, instead of 25 district offices, there were literally thousands of rural village credit unions able and willing to process loan applications. Problems of determining creditworthiness were considerably resolved, too, since credit union members had intimate knowledge of the people in their own community. And since they would only receive extra housing funds as a function of loans already repaid, they had an incentive to not only loan money to reliable persons, but to ensure that such loans were repaid promptly. Finally, the arrangement maximised another important principle of the MHP — that of transparency. To the maximum extent possible, the process of enabling villagers to obtain loans ought to be transparent — i.e. open, visible, and easily understood.

First tried on a small scale in 1985, and slowly expanded in 1986-1987, the rural credit union approach had the effect of dramatically increasing collection rates in areas where it had been fully implemented. In all such areas, recovery rates were about 50 %, and in some places, they approached 90 %.

In sum, the MHP transformed housing in Sri Lanka along several important dimensions. In analytic terms, it changed the rules and procedures for obtaining access to housing finance in Sri Lanka, as they apply to the standard concepts of gate, line and counter. It decentralised decision-making and devolved power, moving both of these down to the community level. It has redefined the role of government in housing, from that of a provider — and by implication a standard setter to that of an enabler, facilitator, and learner. It encouraged small-scale private-sector activities and strengthened local community institutions. And — perhaps most importantly — it legitimated and enhanced the role of local knowledge in the design and construction of housing.

What of the roles of the planners and consultants in all of this? In some respects, as the MHP developed, these roles changed, and planners became less influential. In other ways, however, the MHP required — and came to value — precisely the type of qualitative analysis of social data which anthropology excels at.

In a variety of ways, the MHP transferred power from government officials — and by implication, from planners and consultants — to people in the community. Affordability levels were no longer determined by consultants skilled in statistical analysis. House designs were no longer determined by architects from their offices in the capital. Standards and materials were no longer laid down by engineers. And although financial managers still worried about loan repayments, local groups now had the power to decide

on loan recipients and could exercise both judgement and pressure in encouraging repayment.

So, in some very clear ways, there was less for a planner to do under the MHP, as the kinds of knowledge necessary to plan and manage shifted from what the experts knew to what the people knew.

In other ways, however, the roles shifted rather than diminished, as different types of activities assumed importance. Within the bureaucracy, for example, concern shifted from product to process, and from teaching and informing, to learning (see, for example, Sirivardana, 1986; Sirivardana & Lankatilleke, 1987). And here was where an anthropological approach could finally come into its own. For it was precisely at the point where the MHP began to emphasise local knowledge and small-scale processes that it became important to discover what these things were, and how they might affect the operation of the programme. Ministry officials needed to understand the culture of their own bureaucracies, the better to transform them. Training programmes for district officials had to begin by understanding what these officials did in reality rather than on paper (cf. Lankatilleke 1985). Since housing was now largely controlled at the local level, officials needed to understand the processes by which ordinary people built houses.

Several remarkable case studies by Sri Lankan social scientists (Fernando, Gamage & Peiris 1987, Fernando 1987) reveal, for example, very different sorts of behaviour in different types of housing projects, and between Tamil and Sinhalese families. These findings considerably illuminate our understanding of housing as a social process, and they have found their way into aspects of policy, as the MHP 'learns by doing'. Other, similar studies were undertaken on the operation of rural credit unions.

Some final thoughts

As all planners know, foreign aid often follows an ethnocentric 'we' talk — they listen format — wherein consultants and planners supplied by donor organisations function as front-line shock troops, paving the way for predetermined policy changes in line with external models. These policy changes, furthermore, are meant to 'evolve' as the donor-host country relationship develops. As I have tried to show, this did not happen in Sri Lanka. Let me conclude this paper by offering some thoughts on the significance of this.

For one thing, I believe that the role played by personalities and by politics in development planning is vastly underestimated. The MHP could not have happened without a strong and forceful prime minister, and under him, imaginative and highly competent civil servants. Nor could it have happened, I believe, had USAID been inclined to seriously object to being cut out of the planning process at a certain point. The Sri Lankan manoeuvre was a calculated bluff, and it worked.

Secondly, the transformation of policy — and with it, of an entire planning paradigm — was accomplished through a crisis, and not through a process of evolution,

and involved a short, sharp disjuncture rather than a smooth, gradual change. In this respect, it might be compared to Thomas Kuhn's model of scientific revolutions.

Thirdly, outside technical assistance played a relatively minor role here. It was the entirely legitimate concern on the part of Sri Lankan officials that outside consultants would 'contaminate' the planning process with donor-derived agendas and requirements, at least in the early stages.

Fourth, the development industry was slow to understand the requirements of the new planning paradigm, which emphasised a series of 'soft' inputs such as social data, training programmes, monitoring and evaluation systems, and local dialogue.

Finally — and as a result of all of the above — there is the question of who learned what as a result of the change of paradigm. The ministry learned and refined its approach, based on results from the field. The same cannot be said of the development industry at the time. Although some individual staffers of international organisations came to understand the implications of the MHP for housing, to a large extent the agencies continued to ask themselves the kinds of questions posed by the logical framework of the first project paper — how many houses had been built, how much did they cost, and were the people paying their loans? Although these are legitimate questions, they are probably among the least interesting of things to look at today.

What the MHP demonstrated is that a 'blueprint' project can turn itself into a 'learning process' project in a very short time, given the right circumstances. What is less clear is whether this transformation can be achieved under less than exceptional circumstances. What is less clear still is whether the large donor agencies which provide planning and consulting services for development can accept the lessons that such a learning process approach might teach them.

The adoption of owner-driven reconstruction approaches to most post-tsunami and post-war housing reconstruction can be considered a legacy of these exceptional circumstances. Having said that, we need to constantly question whether what the development industry calls owner driven is genuinely so or simply an approximation in order to tick the box. The wave of international assistance in Sri Lanka in the aftermath of the tsunami and war led to abundant assistance and hence a return to a fully subsidised approach to assistance. As aid dries up, the return to a balanced cost-recovery approach requires careful assessment.

REFERENCES

- Fernando, S., Gamage, W. & Peiris, D. (1987). *Navagampura and Aramaya Place: Two Urban Case Studies on Support-Based Housing*. Colombo, National Housing Development Authority.
- Fernando, S. (1987). *The Rural Sub-Programme of the Million Houses Programme*. Draft mimeo.
- Korten, D. (1980). *Community Organisation and Rural Development: A Learning Process Approach*. Public Administration Review, 40, 5:480-511.
- Lankatilleke, L. (1985). *Training and Information for Institutional Development for the Implementation of the Million Houses Programme of Sri Lanka*. Development Planning Unit of the University College London, International Symposium on the Implementation of a Support Policy for Housing Provision.
- Moris, J. (1981). *Managing Induced Rural Development*. Bloomington, Indiana University Press.
- Nolan, R. (1984). *Development Anthropology and Housing: A Personal View*. Human Organisation, 43, 4:362-367.
- Nolan, R. (1988). *Blueprint and Process Planning Models: An Example from Sri Lanka*. Paper presented at the annual meeting of the Society for Applied Anthropology, Tampa, FL.
- Nolan, R. (1987). *Development and Culture: The Unexplored Dimension*. SIT News, Sept 1987.
- Sirivardana, S. (1986). *Reflections on the Implementation of the Million Houses Programme*. Habitat International, 10, 3:91-108.
- Sirivardana, S. and Lankatilleke, L. (1987). *Some Key Issues in the Participatory Planning and Management of the Urban Low-Income Housing Process*. Bangkok, Second Congress of Local Authorities for Development of Human Settlements in Asia and the Pacific.
- Turner, J.F.C. (1976). *Housing by People: Towards Autonomy in Building Environments*. New York, Pantheon.

Figure 12—Family outside their new home in Batticaloa District, assisted by UN-Habitat and funded by the EU (Source: Charmalee Jayasinghe, UN-Habitat)



2. People's process: a brief history of realising better housing through the potential for ingenuity

Lalith Lankatilleke, architect, former Senior Human Settlements Officer at UN-Habitat

Abstract

Sri Lanka's Million Houses Programme in 1984 was a departure from the government's norm of building houses 'for the poor' that instead placed its role in 'supporting people build their own houses'. This paper encapsulates this process with a particular focus on the conceptualisation of this approach as the 'people's process'. This approach reclaims the role of end users beyond mainstream notions of participation which may fall short in terms of the level of appropriation of reconstruction processes by the people who will inhabit these places. The paper then focuses on how the people's process was used after the 2004 tsunami and internationally. Working with the people's process, which can be also called 'owner-driven' approach, turns post-disaster or post-conflict housing reconstruction crisis into an opportunity in so far as it allows rebuilding shattered communities more widely and meaningfully than just houses.

Beginnings

In Sri Lanka, the Hundred Thousand Houses Programme (HTHP) was launched in 1977. Hitherto housing had been a marginalised sector of national investment and housing conditions — particularly those of the poor — had become worse over the years. The role of the department of housing had been more of enforcing regulations rather than promoting new housing development. The HTHP signalled a departure from the past and reflected the desire of the newly elected government to make housing a priority investment sector. To implement the programme, a new organisation, the NHDA, was created with wide powers.

The process of the HTHP was characterised by poor articulation of strategies and approaches due to a lack of understanding of global policy changes in the housing sector and a lack of foresight of national policymakers. However, within the HTHP there were two key sub-programmes, urban low-income housing and rural housing, which were of relatively lower importance. These two programmes, though small in scale, had in them elements of cost sharing and owner participation and demonstrated a higher potential for replication. As the feasibility of the supply-driven approach to housing came to be questioned both by policymakers and international donors, and resource provision on the levels demanded became unsustainable, there emerged a window of opportunity for

mainstreaming the positive experiences of the urban low-income housing and the rural housing sub-programmes and their more replicable approaches.

An assessment of the HTHP was undertaken by a dedicated group of professionals who had been heavily involved in it. This think tank was asked to design the next housing programme. The most glaring lesson learnt during this period was that for every house the government had built, people, more specifically the poor, had built seven houses on their own. Even the middle-income earners could not afford the HTHP houses without a big subsidy. In addition, the houses built did not reach the poor but rather the more influential, hence they did not have a significant impact on the lives of the urban poor, the rural poor or the estate workers. This realisation raised a very simple question: 'Why should the government be building houses when people are doing it better and in greater numbers?' It dawned on the think tank that if the government supports people in their efforts to house themselves, many more families can be housed for a lower cost thus transforming the lives of many more people.

Under this premise, the MHP commenced in 1984 as the prime minister at that time wanted more people reached with the resources available. Within the MHP the role of the state was redefined as one which supported people to resolve issues that they could not solve by themselves. Intervening without interfering to reach more people with less money and without losing people's drive and initiative was the key idea behind this approach. The professionals then started articulating the methods of supporting people to house themselves. Methods and means of support were designed around issues that people could not handle by themselves while the people's responsibility was to build their houses. State support hence focused on resolving land issues, regularising informal settlements, technical assistance and training, and most importantly access to a small loan without collateral.

Another important realisation in the process was that people's housing needs are varied. Based on diverse needs, an innovative tool was developed: the housing options and loan package (HOLP). This allowed people to borrow what they needed to fulfil their basic housing needs. Another realisation was that people do not build their dream house in one go and that they would therefore need to use the HOLP as and when their housing needs changed. In some cases, house construction was undertaken as and when the family could afford it, slowly, based on economic improvements and family circumstances. For instance, when they have a third child and the others are growing, the family requires another room. This flexibility in the HOLP and the support extended by the government to meet people's actual needs was a breakthrough in the sparking of people's process in housing.

During implementation of the MHP, the professionals and staff of the NHDA went through a tremendous degree of 'unlearning and relearning': unlearning what they had been taught at universities and schools and relearning from the people. This process led to some of the most innovative approaches to support people to take decisions on

their own behalf, approaches which are elaborated in the section below. The biggest challenge in this process was the transformation of professionals from being prescriptive professionals to support professionals: a change of roles.

The game of life has two rule books: the known and the unknown. One has limits and the other does not. The known is school; the unknown is the wealth of knowledge hiding in everyone's head

Lalith Lankatilleke

The people's process of housing practised in the MHP placed people at the centre of the process; i.e. at the centre of decision-making and action. The natural extension of decision-making and action was responsibility. People became responsible for their decisions and actions, which in effect transformed them from objects of development to subjects of their own development. The transformation was not confined to meeting their housing needs. It is a process which empowers people to overcome their problems with confidence and dignity.

The next programme, termed 1.5 million Housing Programme, was launched in 1991 and was based on the same principles. Political upheavals and instability in the subsequent years meant that this housing programme was not completed, and housing received lower priority in the development sector. Despite this, the fundamentals of the people's process remained in the hearts of people and professionals.

The people's process in post-disaster and post-conflict situations

The underlining principle of people's process in post-disaster and post-conflict recovery efforts is to place the affected people at the centre of recovery and rebuilding their lives. The approach of the people's process is not just people building houses and infrastructure but a process that empowers them to deal with their day-to-day problems ranging from economic difficulties and children's education to domestic violence and social conflict. It is a process of building community solidarity which can transcend differences. A process that unlocks the huge potential of all people: women, men and children, encouraging people to begin respecting differences and start working together for the common good. Community members work together to resolve disputes and conflicts internally. It is a means of peace building which many peace builders may not realise. Unfortunately, the huge potential of social capital built by bringing people together goes largely unrecognised in conventional economic theories. This complimentary resource for development, post-conflict and post-disaster reconstruction and for peace building must be recognised and promoted. Politicians around the globe look at mass mobilisation as a means of protest and agitation to further their political cause. If one would reflect on countries that have gone through war to stability, autocracy to democracy, disaster to rehabilitation, over the last four decades, very few have been built on social capital.

Following the Indian Ocean tsunami on the 26 of December 2004, many donors and international non-governmental organisations (INGOs) rushed into Sri Lanka to rebuild houses following the emergency phase. Most of the agencies adopted the conventional approach of 'let's build a standard basic house and give it to the affected'. The affected people were resigned to be passive bystanders. To make matters worse, the construction industry could not respond to this sudden surge in demand and the construction cost of a basic house escalated. Profiteering was also taking place — some unscrupulously focused on making profit with the foreign money flowing into the country for reconstruction. The reconstruction programme was slow to get started with the government depending on external agencies and those agencies looking for contractors. In the meantime, UN-Habitat adopted the people's process of rebuilding communities affected by the tsunami. With initial funding from the government of Japan, UN-Habitat placed the affected people in the centre of the process of recovery and rebuilding.

Communities in the city of Galle started rebuilding, organising themselves into community development councils (CDCs), working out their plans for their settlements, housing and recovery from the socio-physiological damage the disaster had caused. The key to generating enthusiasm among the shattered communities was the freedom to decide on how they re-plan their own settlement and the opportunity to decide on what sort of a house they wanted with the financial assistance that went into their own community account. Most families that UN-Habitat assisted were initially living in temporary housing with no security of tenure. UN-Habitat intervened to regularise tenure and the community re-planned the settlements adopting community action planning methodology. A point worth noting here is that in the post-tsunami reconstruction programmes in Sri Lanka, the families assisted by UN-Habitat were the first to complete their houses.

The Italian government then started funding UN-Habitat people's process projects. An interesting turnaround at this point was that the Italian cooperation engaged UN-Habitat to convince and convert Italian NGOs to adopt the people's process approach. This led to several successful joint projects. Breakthroughs were coming slowly and the government of the United Arab Emirates (AE) also started funding UN-Habitat for the reconstruction projects in Sri Lanka.

National Red Cross associations from all over the world were in Sri Lanka and were struggling to build houses as the cost of building a house in remote places went beyond their budgets. Their parent body, IFRC then forged a partnership with UN-Habitat to assist 17 000 affected families. The partnership thrived with many families building their houses and communities around Sri Lanka.

People's process — the approach

A clear understanding of the 'owner-driven' approach and people's process is necessary in light of current development debates: 'owner-driven' intrinsically implies that the family owning the house (or the plot) is fully responsible for the construction of the house with external support in the form of technical advice and funding. This certainly gives the family the freedom to decide on how to build the house with available resources, which they do, to meet their varied needs. For instance, in low-income communities there are many female-headed households, and the house-building process requires time to be managed between income generation, child rearing activities and building the house.

In addition, apart from the varying needs between families, the needs of the community as a whole must be taken into account. Families do not live in isolation, they live in communities, which place them in a position of responsibility to each other. By tradition and in resource-constrained societies, this responsibility is inherent. They also need services such as water, sanitation, roads, power and civic facilities. They need childcare and elderly-care support from the community. These must be addressed through a collective effort. Therefore, naturally it becomes a community approach where every family has to participate in the development of not just their own housing, but also in their settlements and their living. This extension from the individual to the community is what is articulated as the people's process of housing and settlement development.

Unlocking potential

In situations of post-disaster and post-conflict, people's ingenuity and creativity need to be directed towards the rebuilding of their lives and physical assets. Working with the people's process turns housing reconstruction into an opportunity to rebuild shattered communities and not just houses, virtually transforming a crisis into an opportunity. The process of moving from the emergency phase to recovery and reconstruction becomes seamless when people are placed at the centre of the process. Organised communities with their mutual assistance and caring for each other, helps people to overcome the psychological trauma of the disaster.

But, what are keys to unlocking this tremendous potential of the people? Firstly, organise people to gain confidence to cross the psychological threshold; secondly, empowerment through mobilisation; thirdly security, a place to call their own; fourthly some form of financial assistance to get them started, followed by technical advice to build back better. This will complete a cycle of support to the people to rebuild their lives and homes. Some aspects of the process developed with people are listed as follows.

- Community mobilisation and organisation is the first step in the process of people's development. Initially, communities need to be assisted to organise themselves to initiate collective action. Providing the communities with the

space to take action will empower them to take charge of their development process. The organisation can be elected representatives of the affected community preferably a man and a woman representing 10 to 15 families (primary groups) living nearby. Then 10 to 20 primary groups form the CDC which can ideally cover 100 to 250 families living in a physically identifiable area. Recognition of the community organisation through the registration or accreditation by the local authority is the first step to giving the organisation some form of legitimacy. Ensuring equal gender representation and representation of vulnerable families is an important consideration in the formation of community organisations. It has been demonstrated that people are highly motivated to come together for a common cause irrespective of their differences. Then, the empowerment process is internalised and people are strengthened to deal with their situation and develop a critical understanding and consciousness to overcome their problems. Most importantly, it gives a powerful 'voice' to hitherto marginalised people.

- Community mapping is an exercise where the community identifies assets they have within the settlement and within their city and represent it on a map. The process allows the community to realise what they have and what they do not have in terms of physical and social infrastructure. In addition, they will assess the vulnerability of their settlement to floods and other disasters. Tenure status for people living in informal settlements is an important consideration which they must assess to look for better options. The next step is to prepare the community profile and individual family profiles to complete the community-mapping exercise.
- Community action planning (CAP): communities can develop their own plan, taking informed decisions on; e.g. what they need immediately, how to make the best use of external assistance, how to organise themselves, how to plan and reorganise the settlement, how to build the houses. CAP is a framework for the community to sit together, identify their needs, negotiate with each other and prioritise the needs to be addressed and prepare a plan to address them considering all options within a given resources framework. Together they can understand their present situation and work out means of overcoming their problems. The objective is to achieve a qualitative difference in their lives, ensuring safety and security for the future. The role of the facilitator is critical in this process as this person has to refrain from interfering or making value judgements over people's choices but has, nonetheless, to clearly articulate objective trade-offs of the different decisions that the community is making so that people can make informed choices. Finally, CAP has to be presented to the entire community for their inputs and to reach consensus. The poor are rich in ideas: allow them to blossom!



Figure 13—Community Action Planning (CAP) in Nepal (Source: UN-Habitat Nepal)

- Community land regularisation: informal settlements typically do not have proper plot boundaries, access roads, community facilities, provision for infrastructure, etc. The regularisation of the settlement is done by the community, firstly by agreeing through consensus plot sizes, road and foot path widths areas for infrastructure and public spaces. These agreements are reached through a short workshop utilising the Community map. Then the plan is physically set out on the ground by the community with pegs demarcating the boundaries. This process of planning is very different to that of planners' drawings boxes on paper and trying to set it out on the ground. The vital lesson in this process is that people's conception of space and the use of land is very different to those of professional planners. This people's process of planning allows people to realise their needs physically.
- Community contracting: a community contract is a contract awarded to the community organisation by a government agency or an NGO to carry out physical works that have been identified in the CAP. The work usually covers construction of houses and community infrastructure. If infrastructure or housing is built through conventional contracts the community benefits only from the output of the contract and not from the process of construction. Awarding the contract to the community has the advantages outlined in the table below.

Table 1—Conventional contracts compared to community contracts

	Conventional contracts	Community contracts
Planning	Outside professionals	Community
Design	Outside professionals	Local engineer with community
Physical Works	Outside contractor	Community
Works	Machine intensive	Labour intensive
Investment	Goes out of the community	Stays within the community
Quality of work	Chances of being inferior	Good — it is their own
Profit margin	High	Low
Feeling of ownership	None	Very high

UN-Habitat’s experience of implementing community contracts has proven that there is a high degree of transparency and accountability there when compared to conventional contracts.

- Community banking is a means for the poor to save collectively and borrow funds for their needs. They are organised mainly by women who form saving groups and five to ten groups within a community then form a branch. Members then have access to credit for their immediate emergency needs and business needs. The major difference between savings and credit programmes organised by NGOs and community banking is that in the latter the members decide and manage their own bank. Experience over the last two and half decades show that the communities manage savings and credit better than external NGOs. Through this process of economic empowerment of women, they are able to break away from the cycle of poverty and achieve tremendous life improvements. Women are highly motivated to take leadership and organise themselves to build social capital which goes beyond the financial benefits. Issues regarding identity, literacy, domestic violence and drugs have been successfully addressed by communities with the social capital they have built.
- Community monitoring: traditionally monitoring is the preserve of the professionals for ensuring quality outputs on targeted time schedules and has little to do with the ultimate satisfaction of the beneficiaries. Community monitoring is a system where communities monitor themselves for progress of work, quality and accountability. It is a process where members of the community get involved in ensuring that their own efforts are realised to provide the best output, since they own it. The system allows the external funding agency to assess beneficiary satisfaction of the intended objective.

The role of the professional

The MHP helped develop methods on ‘how to get people into the centre of the decision-making process’, and the unlearning and relearning process. Professionals started

transcending from being a ‘prescriptive’ professional to a ‘support’ professional. The role of the prescriptive professional vis-à-vis the support professional is compared in the following table:

Table 2—What it takes to be a ‘support professional’

Prescriptive professional	Support professional
Uses data exclusively from socioeconomic surveys to decide on solutions	Designs methods for communities to gather data for their own use
Tells people what they should have	Listens to people on what they need
Prescribes solutions unilaterally	Extracts solutions collectively
Prescribes standards	Realisation of standards
Predetermines options	Allows people to think of options
Does not think of trade-offs	Articulates trade-offs

Key principles

In the application of the people’s process in post-conflict and post-disaster reconstruction following key principles have to be observed.

- Respect the primacy of the needs of the people.
- Recognise people’s organisations and their capacities and strengthen mutual respect and dialogue.
- Design reconstruction investment to directly go to the hands of the people.
- Support by the authorities is essential for people to take recovery into their own hands.
- Ensure security, protection and the right to a ‘place to live’.
- Responsibility for recovery rests with the affected people.
- Cultivate a spirit of community solidarity and peace building.
- Devolve decision-making to the point of action.
- Generate a process that would allow every family in need to rebuild their lives and a basic home which can be improved incrementally.

International adoption of the people’s process

The ideas and methods of the people’s process spread internationally with UN-Habitat’s promotion aided by experienced professionals and INGOs. UN-Habitat’s terminology for the support approach was ‘enabling policies’. The UN resolution for ‘Shelter for All’ by the Year 2000 advocated enabling policies for developing countries to achieve this goal. Further, UN-Habitat started practising community-based methods (as described above) as standard practices in all its programmes. The impact of the MHP can be underlined in its adaptation in some of the major national housing programmes in countries such as Namibia (Build Together Programme, 1992), South Africa (Housing Subsidy Programme, 1995), Bangladesh (Urban Poverty Alleviation Programme, 2000), and Afghanistan



Figure 14 Rebuilding with earthquake-resistant traditional technology (Dhaji) in Pakistan, 2007
(Source: UN-Habitat)

(National Solidarity Programme, 2002). UN-Habitat alone carries out 70 % of its work through the people's process in all its fields of activity.

While the people's process was adopted to suit the different contexts of these countries, the philosophy, underlying principles and methods remained the same. One of the main impediments in the adaptation of the people's process had been the bureaucrats and the technocrats who are comfortable doing things the way they are used to, which is working according to rules and tradition. However, the people's process requires an attitudinal change from being prescriptive to supportive. The change can be achieved through actual demonstration and conviction comes through first-hand experience.

An eminent example of the potential of the people's process is the internationally-acclaimed success of the reconstruction programme following the 2005 devastating earthquake in Pakistan, where over 600 000 houses were destroyed. The government of Pakistan embarked on a massive reconstruction programme adopting the



Figure 15—Community savings groups in Afghanistan, Kabul, 2005, (Source: UN-Habitat)

people's process uniformly for the entire programme. Over 550 000 earthquake-resistant houses were rebuilt in 5 years directly by the affected people.

The people's process should not be a means to an end of building infrastructure and housing. Unfortunately, many professionals in the business of development take it as a means of building infrastructure and housing quickly. The people's process can trigger many other outcomes when approached holistically. For instance, it gives the opportunity for women or marginalised groups to take a lead role in the activities of the CDCs. It also creates the opportunity for women to acquire construction skills such as masonry and carpentry. The resulting empowerment of women is one of the key social outcomes of the process that has been witnessed in all the programmes by UN-Habitat across many countries, even in conservative countries such as Afghanistan.

An important factor that needs to be recognised is that when housing and infrastructure contracts are awarded to communities, a major portion of the money remains with the people. It provides opportunities for the skilled to be employed and semi-skilled to become skilled, giving them future employment opportunities. In addition, many small local entrepreneurs start making components or housing material; for example: bricks, blocks, doors and windows. Even supply chains of local material can get stimulated. All these activities that are not so apparent since they are small contribute tremendously to the local economy. In other words, money going into the hands of the people for reconstruction brings them out of a shattered state of calamity and puts them gradually onto a path of recovery and development.



Figure 16—Proud owner after official opening of his 'model house' built with Compressed Stabilised Earth Blocks and personalised veranda with the assistance of Habitat for Humanity funded by the EU. (Source: Jaime Royo-Olvid, EU 2018)

3. Housing reconstruction for development beyond 'building back better and safer': The European Union's contribution towards co-production with war-affected communities in Sri Lanka from 2007 to 2018

Jaime Royo-Olid, Infrastructure and Reconstruction Programme Manager, Delegation of the European Union to Sri Lanka and the Maldives

Abstract

Following war destruction, ensuring survival through temporary shelter is priority. As urgent needs get covered, the focus shifts towards facilitating enduring well-being. With longer-term recovery objectives becoming more abstract, assistance tends to be withdrawn compromising the transition from post-emergency to development. Yet, this transition phase is key for setting up development processes beyond reconstruction.

This paper discusses three dilemmas in housing reconstruction and ways in which they have been addressed by the European Union as donor committed to delivering longer-term development outcomes to war-affected communities in North and East Sri Lanka. First, how can communities 'own' the reconstruction process and outcomes in meaningful ways to them given donors' restrictions in the handling of public funds? Second, quantity Vs quality: given scarce funds, is it better to serve more people with less funds or fewer people with more? And third, how much should be diverted from immediate reconstruction outputs to longer-term outcomes such as reconstituting local supply chains? The paper argues that addressing these questions can help turn apparent trade-offs into complements.

The account builds on the author's experience working for the European Union Delegation to Sri Lanka between 2012 to 2018 involving the project cycle management of four owner-driven housing reconstruction programmes. Two programmes were implemented by UN-Habitat with the Swiss Agency for Development Cooperation, another one by *Arbeiter Samariter Bund* with *Zuid Oost Azie* and Practical Action, and one ongoing in 2018 by Habitat for Humanity with World Vision. It also builds on lessons learnt from an EU-funded programme implemented with the World Bank and the Government between 2007-2009. The EU subsidised mostly conditional cash grants with EUR 64 million. Four independent evaluations confirmed 20 000 homes rebuilt 'better' and 'safer' but even beyond by supporting livelihoods. The article also builds on 12 five-day fieldwork missions and some hundred semi-structured interviews of homeowners, experts and local authorities. The EU is engaged in 2018 in promoting co-production of owner-driven incremental housing (550 Sq. feet) at about EUR 4500 per unit, with locally-sourced compressed stabilised earth blocks (CSEBs). This is half the cost of contractor-led houses.

Introduction

Sri Lanka's 26-year long civil war ended in 2009 having traumatised entire communities, destroyed both economic and social infrastructure including some 200 000 houses and resulting in 600 000 internally displaced people (IDPs) (UNHCR, 2011). Many IDPs were brought to Menik Farm — a 'welfare camp' in Vavuniya North — gradually released until end 2012. Some returned to surviving families, but others did it with little to hold on to. Some landless tried their luck in cities. Returnees who owned land found either ruins or severely damaged houses, at best displaying traces of gun shots and bombs. Their farms were either infested with land mines or overgrown by jungle. Along also came elephants capable of breaking through a house's brick wall to grab a share of stored grain.

In October 2012, we — staff of the Delegation of the European Union (EUD) to Sri Lanka — met the last people having left *Menik Farm*. They were digging out their belongings from their gardens in *Mullivaikkal* village, close to *Puthukudiyiruppu* (known as PTK) one of the last strongholds of the militant organisation Liberation Tigers of Tamil *Eelam* (LTTE). Restoring their livelihoods required starting from scratch.

The Government of Sri Lanka (GoSL) had invested significantly on economic infrastructure in war-affected areas since 2010 (i.e. roads, electricity and railways). This, however, was insufficient to enable returnees to overcome poverty traps. Nonetheless, in 2013, President Rajapaksa's Government declared the end of the emergency phase and most humanitarian agencies left Sri Lanka. To contribute to bridging the gap between emergency aid and long-term development became all the more relevant, the EU decided to continue financing ^(?) housing reconstruction for Sri Lankan IDPs.

Between 2006 and 2015, the EU had subsidised owner-driven housing to build over 20 000 units. The World Bank had funded another 37 000 houses and various other donors 10 000. And in 2012, the GoSL approved an additional 50 000 owner-driven houses programme subsidised by the Government of India (GoI). Throughout, the GoSL assisted donors with the selection of recipients of housing grants and Local Authorities (LAs) were accommodative and expedited land titles effectively contributing towards speedy resettlement.

But, in 2013, according to Basil Rajapaksa — then Minister of Economic Development and brother of the President — international aid and GoSL's concessions were causing jealousy. For the Minister, bringing housing reconstruction assistance to an end would reduce emerging tension across the country. While there was a strong case for reconstructing 150 000 houses more, the EU-funded programme which could at best cover 2 % of these needs, was to be the very last to be endorsed by the Rajapaksa Government.

^(?) See European Commission Implementing Decision for 'Developmental housing reconstruction support to Sri Lankan IDPs' https://ec.europa.eu/europeaid/sites/devco/files/annex5-ad-aup-sri-lanka-20141126_en.pdf



Figure 17—War-affected returnee from *Menik Farm* welfare camp digging out his belongings from his house's garden the day of his return in *Mullivaikkal* village, 23 October 2012 (Photo: Jaime Royo-Olid, EU)

1. Communities 'owning' reconstruction in a meaningful way to them

Reconstruction and rehabilitation of communities, to be effective require establishing relationships of trust between those who extend the assistance and the communities concerned. Communities require perceiving donors as genuinely caring about their needs and ready to engage with local complexities. And donors, in turn, need the cooperation of communities and perceive that their grievances are honest. In Sri Lanka, international donors stood in a better position to be trusted than national agencies because of the prevailing tensions between war-affected communities and the dominant military and government who had recently defeated them through military intervention. Recognising its advantage as intermediary for promoting peace, the EU subsidised livelihoods development with some EUR 600 million between 2006 and 2018. In addition, recognising the importance of homes as a platform for development, the EU also provided grants specifically for owner-driven housing reconstruction with EUR 64 million complemented with grants from the governments of Switzerland and Australia.

To convert funding into interventions, the Delegation of the EU to Sri Lanka, based in Colombo (in the South-West), was responsible for identifying specific needs and formulating projects. But, ideally, should not affected communities be deciding how to handle, distribute and allocate funds for their own development? How could foreign donors know what war victims needed when they can barely interact? Further, donors face strict requirements on how funds are to be used meaning intervention proposals must tightly fit the institutional mandate and handling standards. Substantiating a proposal to be approved by the EU headquarters ⁽³⁾ in Brussels and then endorsed by the GoSL therefore involved trade-offs. In the absence of relevant census data or other reliable surveys, we based our case on UN-Habitat's reports and on a few dozen meaningful consultations with war-affected people. Unanimously, all IDP communities and LAs we interviewed across the North and East persistently ranked housing assistance as first demand. But, was that a good idea simply because people asked for it?

Based on decades of evidence from Africa and Latin-America, Salas Serrano (1998) explains there is no worse house than one simply presented without the involvement of the owner. This evidence does not oppose subsidising housing, well on the contrary. Rather, it contends ownership of the many decisions in the making of a house matter more than it is normally acknowledged. When people determine how their house is made, invest labour (some call it 'sweat equity') or financial resources, the result is not only more likely to be endearing or grounded on their lifestyle, but people are more likely to feel attached to the results. Cooperation among community members in the process can also build social cohesion.

⁽³⁾ The European Commission's Directorate General for International Cooperation and Development known as DG DEVCO.



Figure 18—Ms Rasathurai with her children in front of their temporary shelter, identified beneficiary of EU-funded housing programme, head of household and widowed in *Pudhukudiruppu* (PTK), *Sutjamthirapuram*, *Mullaitivu* (Photo: Jaime Royo Olid, EU 2016)

A lot has been written on the importance of better linking grassroots demands with the supply of donor funding. On this front, in the last two decades, ‘unconditional cash transfers’ have attracted attention by successfully boosting people’s autonomy. Despite promising results, however, few international donors and governments are open to handing over public funds in this way. Owner-driven housing, as implemented in Sri Lanka, involves the allocation of grants transferred to homeowners in stages *conditional* to progress in constructing the house and to respecting building standards. This form of owner-driven housing is therefore a ‘conditional cash transfer’. To ensure desired outcomes be achieved, implementing agencies regularly encourage and advise owners in the process of managing the reconstruction process, facilitate capacity building on skills such as on construction and livelihoods advancement. This is why, this form of owner-driven housing reconstruction (i.e. led by the end-user) in Sri Lanka is referred to as ‘assisted’ or ‘aided’ (i.e. by a donor through an implementing agency).

Achieving a balanced relationship between assistance (e.g. encouraging homeowners) and owner’s leadership (e.g. taking control of the reconstruction process) is key for homeowners finding meaning in the housing process. Sometimes, a process may be called owner-driven, yet the homeowners just followed prescribed generic tasks (e.g. purchase of materials but not much else). Other times, owner-driven processes involve

owners determining most aspects from design to execution. Therefore, the extent to and terms in which donors *control* or *let-go* and whether this enhances or limits the legitimate and viable wants of homeowners is determinant for the outcomes. But owners' autonomy is not only facilitated by donors or implementing agencies granting flexibility. Autonomy in reconstruction requires 'informed choices'. And an informed choice may require considering practices or technologies people may not know and therefore that they do not, *a priori*, desire.

Thirty years of owner-driven housing reconstruction in Sri Lanka demonstrate that conditional cash transfers have been more efficient (i.e. cost less) than contractor-led housing and more effective (i.e. lower drop-out rates) than any other approach to housing facilitation. This does not mean people doing whatever they please. But rather, it calls for turning end users into pro-active actors as opposed to passive receivers. When a donor considers offering a 'better' alternative to what people *a priori* want, allowing end-users to choose the solution they value will affect their perception of achievement. Hence, alternatives to what people aspire for should be *promoted* rather than imposed. In that sense, promoting alternatives, such as the use of appropriate technologies, may become a project on its own right.

Figure 19—Consultation with end-user women group under the EU-funded project 'Support to Conflict-Affected People through Housing in Sri Lanka' by UN-Habitat and SDC.
(Photo: Jaime Royo Olid, EU 2012)



Creating the conditions for communities ‘owning’ reconstruction in a meaningful way to them therefore resonates with the main propositions of eminent development economist Amartya Sen (1987, 1999). For Sen, the essence of development lies precisely in people achieving their aspirations. And what people value may differ from what others do. Developing communities’ valued ‘capabilities’ (i.e. expanding the set of things or ‘functionings’ people wish and can reasonably do) while involved in the already arduous task of reconstruction may seem competing priorities. Yet, the reconstruction process involves large investments of capital and effort which offer many opportunities from learning by doing ⁽⁴⁾ to generating construction-related income activities. Receiving an already built house may seem appealing (and may be justifiable). But having learned from the process may not only be useful for expanding the house in the future but also to ensure the house conforms to the owners’ aspirations. The burden of providing inputs to construction can become challenging if it competes with the household’s livelihood (e.g. they may already be over-stretched in terms of labour to make a living). So, self-building has its limitations and ownership of the reconstruction process should rather mean a sense of control.

Figure 20—EU-funded owner-driven house built with the assistance of UN-Habitat, Mannar.
(Photo: Jaime Royo-Olid, EU 2014)



2. Investing on quantity vs quality

Formulating the last housing reconstruction programme in 2013 raised the question of whether it was possible to meaningfully reach out those left unattended. The EU allocated EUR 14 million. Given that political dialogue between the EU and the Rajapaksa Government was limited by unresolved human rights issues concerning war-affected people, there was then no conducive conditions for funding a policy-level intervention. We hence opted for a project approach and estimated that, to positively impact people's lives and to ensure we rebuilt better than what they previously had, we could effectively reach out between 2 000 to 3 500 households. Attending to more people implied not allocating sufficiently to complete a house to the expected minimum standard as explained later. The question then became one of how many households does a donor *not* attend to in order to better help those attended? And, what is the fairest way (if fair at all) to decide who is in and who is left out? To rethink the quantity vs quality dilemma in 2013, the EU revisited how this had been addressed by Sri Lanka's former Prime Minister and Minister of Housing Ranasinghe Premadasa in the 1980s. Premadasa also had insufficient funds to help too many households.

Looking back at Sri Lanka's Million Houses Programme

Acknowledging that the GoSL could not afford to build houses for everybody and that informal construction output outpaced formal supply, the Sri Lanka's Million Houses Programme (MHP) ⁽⁵⁾ entrusted partial financial assistance to households, providing indicative guidelines for construction but not interfering and letting them manage. The MHP combined government subsidies for vulnerable families to build a house-core and soft loans to facilitate extensions at their own pace. The incremental approach reduced pressure over supplies and services and hence on prices. The MHP became an international reference for housing facilitation and informed the emergence of owner-driven housing (then called 'people's processes').

But the MHP did not target post-disaster contexts. After war, the scope for self-help is limited by the struggle for survival. Also, nowadays, informal credit lenders in Sri Lanka often charge exploitative absurd monthly interest rates of up to 30 % limiting the viability of debt and compromising people's integrity. Since there was no perspective of further subsidies for war-affected IDPs, the EUD found the MHP experience relevant. The learnings from the approach to the challenge in the 1980s ⁽⁶⁾ could help transitioning from a context with assistance to one without.

⁽⁵⁾ Various articles in this book remind us how, see chapters 1 by Riall Nolan's and 2 by Lalith Lankatilleke.

⁽⁶⁾ See chapter 4 by Skinner et al.



Figure 21—Example of incremental house built under the MHP in 1986 where the owner run out of financial and material resources to complete overambitious house.

(Source: Dr Mano Kumarasuriyar, 1987)

Sizing the houses to assist all in a selected village

The MHP's incremental core-house approach of combining grants and loans was considered by the EUD. This approach was intended to provide more affordable housing solutions in the fast approaching context without donors. In fact, an approach similar to the MHP's is currently implemented by the Ministry of Housing for non-war-affected vulnerable households (see next figure). The EUD, therefore, suggested aligning to this approach not only to reach out to more people but to reduce tensions over differential treatment between Government and EU-funded projects. It was also a way to exemplify how to minimise the burden of debt by spreading it over time through incremental housing.



Figure 22—Core house financed by the Ministry of Housing with LKR 150 000 loan in Batticaloa
(Photo: Jaime Royo Olid, EU 2017)

Supporting fewer villages and fully results in better social cohesion

Between 2010 and 2015, the EU and the governments of Australia and Switzerland funded two owner-driven housing reconstruction programmes implemented by UN-Habitat and the Swiss Agency for Development Cooperation (SDC). Phase I delivered 4 759 houses (2010 to 2013) and Phase II delivered 4 571 (2013 to 2015). We observed that SDC, who developed whole villages as opposed to assisting only the most vulnerable households in more villages, led to better social cohesion and fewer households dropped out of the reconstruction process. Accordingly, the EUD asked various villages if they were ready to share the grants among more households to leave nobody behind. The answer was unanimously positive. Therefore, the EUD proposed allocating grants and house sizes ⁽⁷⁾ between 385 to 650 sq. ft accounting for differentiated needs and capacity to expand. With EUR 14 million, some 3 400 core houses with grants varying from LKR 200 000 to 650 000 could be built.

⁽⁷⁾ *ibid.*



OPTION C
COMPRESSED STABILIZED EARTH BLOCKS WITH PALMYRAH STRIPS



AUP2014, EuropeAID/136-513/DD/ACT/LK-Habitat for Humanity

Figure 23—Original proposal of core housing with incremental phases by Habitat for Humanity for the EU-funded programme Developmental Housing Reconstruction Support for Sri Lankan IDPs (Source: Habitat for Humanity International, 2015)

The importance of people's expected housing standards

But the EUD's proposal of differentiated grants was short-lived. Following the election of president Maithripala Sirisena in 2015, the new government committed to resume housing reconstruction in stark contrast to the previous. The new GoSL launched several owner-driven reconstruction programmes, one to build 16 000 houses based on the North East Housing Reconstruction Programme (NEHRP) standard (i.e. full houses of 550 sq. ft). The EU-funded programme was no longer the last but a small one among several. This obliged the EU to align not to the Ministry of Housing's approach but to that of the new Ministry of Resettlement. This was necessary to avoid inequality across reconstruction programmes and to prevent tensions based on perceived unjust allocations in reconstruction. The NEHRP standard was the benchmark expectation for people. But how had these standards emerged?

In the aftermath of the 2004 Indian Ocean tsunami, the unprecedented global response — referred to by some as the 'golden tsunami' — caused absorption challenges. Some donors and implementing agencies found themselves competing for beneficiaries. Under such circumstances, many communities were hesitant to invest on their needs. The risk of investments detracting aid diverted communities' determination from self-reliance towards attracting aid. This, by no means, questions the legitimacy of victims' claims for assistance. But, it is important to consider the effects of a dependency syndrome.

Another problem was coordination. Both after the tsunami and war, most international organisations worked with the consent but not necessarily under the supervision of relevant line ministries. In some cases, this facilitated technical experimentation with house-types and some resulted in failures. As a reaction, the GoSL decided to set uniform housing reconstruction standards. These were consolidated through the NEHRP targeting war-affected communities and built under the owner-driven approach between 2006-2009. It is important to note here that these standards, despite rigorously adhered to, have to date not been legally binding.

The NEHRP was the first major owner-driven war-related housing reconstruction programme in Sri Lanka. It was implemented by the government with the financial support of the World Bank who funded 37 500 houses and the EU funding some 8 500. The NEHRP committee set out the minimum standard as a lockable 550 sq. ft. house with a pitched tiled roof, latrine and a kitchen with a chimney. Since then, war-affected households and LAs perceive anything below as substandard. This size is some 50 to 60 % higher than the minimum standard social house-type in public schemes in India. So, do high standards come at the expense of unattended households?

The NEHRP was cost-efficient in delivering houses costing around LKR 350 000 (some EUR 2 500). Practitioners in Sri Lanka argue that providing a lower grant to build a core-house (instead of a full 550 sq. ft. house) would have resulted in families stuck with unfinished houses for a long time. This would have led more people abandoning partially-



Figure 24—Houses built under the NEHRP programme led by the WB and co-funded by the EU for about EUR 2500 each. Tin sheets from former shelters are re-used as roof extensions creating verandas. (Photo: Jaime Royo-Olid, EU 2012)

built houses causing wastage and frustration. A house completed to the expected standard results in an important social, functional and psychological outcome. This adds to the argument for ‘building back better’ as advocated by Lyons and Schilderman (2010) and Kennedy *et al* (2008). For homeowners, completeness boosts fulfilment and social recognition. So, we could argue there are ‘economies to completion’. War-affected people are also significantly more vulnerable and hence there is an even stronger case for ‘building back better’ to at least a full house NEHRP standard.

Allocating the standard same size for all has pros and cons. For instance, single woman-headed households, in comparison to large families, are often considered receiving in excess with a full 550 sq. ft. two-bedroom house. But UN-Habitat argued that single women tend to be more vulnerable and a free room can be a key source of rent or company. This approach favours reducing vulnerability of few *vis-à-vis* the number of people, but it is widely accepted by communities. There is also the threat that partial, core or incomplete houses constitute to future expected housing allocations. But, is a house really ever completed?



Figure 25—NERHP houses in Mannar District with hip roof on the right and gable roof on the left
(Photo: Jaime Royo-Olid, EU 2013)

3. Focusing on the short vs the long-term

In 2014, five years after the end of the war, housing reconstruction was no longer urgent for survival since people had had to find whatever forms of subsistence. Rather, it was a matter of dignified living and providing a basis for their development. So, how much funding that would be allocated for quick reconstruction outputs could more effectively be directed to longer-term issues? Are capacity-building in incremental housing, financial literacy and the production and use of locally-sourced construction materials worth the sacrifice of building more houses outright?

The apparent desire to expand houses beyond standard

In North and East Sri Lanka, we observed that most post-war houses eventually expanded with whatever modest means at reach. For instance, most NERHP houses have been subject to individualisation efforts be it with functional extensions or decorative add-ons.

There are decades worth of international research and documentation on the benefits of incremental housing ⁽⁸⁾ including in Sri Lanka. Certain house designs are more conducive of house expansions than others. The most evident feature is that most households seek for a comfortable veranda where to stand outdoors while shaded. Many such extensions are unsafe or flimsy though. Eave extensions (roofs beyond the supporting wall) may require bending down, expose hazardous sharp metal edges or make indoor spaces dark — something locals do not necessarily mind. And loosely tightened tin sheets (from their former temporary shelters) constitute a hazard should they be blown off by strong winds. But, regardless of how precarious these might be, people keep adding and adding to their houses.

⁽⁸⁾ See MIT's Special Interest Group on Urban Settlements (SIGUS) website on incremental housing <http://web.mit.edu/incrementalhousing/index.html>

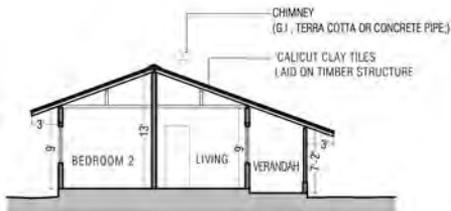
Many NERHP houses were built with hip roofs (i.e. four triangular roof slopes) perceived as a symbol of wealth and well-suited for winds and rainfall from any direction. But hip roofs limit house expansions and are costlier to build. In contrast, the gable roof (i.e. two rectangular roof planes) allows for longitudinal extensions and for more spacious indoor mezzanines for storing grain. However, it is important to consider gable walls exposure to rain, the cost of building them with masonry and their risk of collapse ⁽⁹⁾ in case of earthquakes or strong winds. Hip *versus* gable roof choice, therefore, involves trade-offs between the symbolic, costs, safety and technical issues. Consulted homeowners prioritised the symbolic value of hip roofs (in line with first dilemma on meaningful ownership). However, their choice would change when informed about the potential for expansion of gabled-houses and when sensitised about the implications of excess debt to fund a more expensive roof (third dilemma on short *versus* long-term).

Housing life-cycle management beyond reconstruction

Houses tend to be represented as isolated objects, drawn through plans and sections in a generic plot with no context. Depicted as final and static objects, they generally do not account for potential changes over time. John F. C. Turner's (1972) notion of 'housing as a verb' changed the emphasis from house as object to evolving process. However, this process tends to be perceived as finishing with construction to standard. Yet, in so far as houses are continuously beautified and expanded over the years, the process goes beyond reconstruction and should therefore be considered involving its full lifecycle. Accordingly, the process of undertaking future expansions became central to the EUD's formulation of a 'developmental' housing programme.

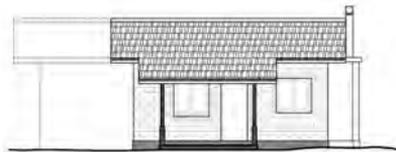
The lifecycle of a house needs to be considered when assisting homeowners build their houses. Even designing generic house-types needs to account for peoples' potential preferences not only today but also allow for changes in the future. People should be able to choose a house-type best suited to the uniqueness of their site and that can accommodate later adaptations to their evolving specific needs. Also, before adapting the house-type to the final personal design, it is important to spend time on the site, to consider with the owner where best to place the house within the plot taking in consideration the scope for expansion and potential disaster risk reduction measures. It might be advisable to push the house to a side or even to a corner — even if it looks weird today. Considerations may range from symbolic *Vastu* arrangements, to benefiting from shade for thermal comfort, growing trees, permitting home gardening, rain water harvesting or any other investment the homeowner might wish. This planning exercise must take place *in situ*, with the homeowners and prompting relevant questions on possible alternative options.

⁽⁹⁾ I was informed about this by Jim Kendall, consultant to Habitat for Humanity, in 2017.



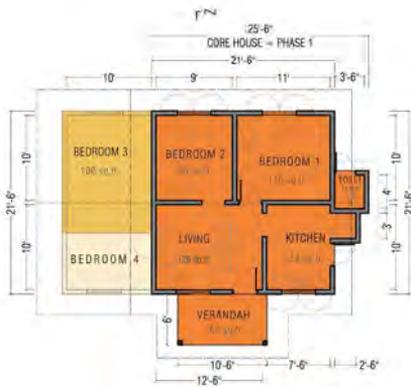
SECTION Z-Z

Scale - 1/8" = 1'-0"



FRONT ELEVATION

Scale - 1/8" = 1'-0"



GROUND FLOOR PLAN

Scale - 1/8" = 1'-0"

FLOOR AREA SCHEDULE

	DESCRIPTION	PLINTH AREA
CONSTRUCTION LEVEL 1	550 sq.ft. PLINTH AREA LOCKABLE HOUSE	550 sq.ft.
INCREMENTAL GROWTH OPTIONS	RENDERING, FLOORING AND DOOR FOR 2ND BED ROOM OF CONSTRUCTION LEVEL 1	550 sq.ft.
INCREMENTAL GROWTH OPTIONS	ADDITIONAL ROOM (3RD ROOM) OF 150 sq.ft. PLINTH AREA	700 sq.ft.
INCREMENTAL GROWTH OPTIONS	RENDERING, FLOORING AND OPENINGS FOR ADDITIONAL ROOM	700 sq.ft.
INCREMENTAL GROWTH OPTIONS	ADDITIONAL ROOM (4TH ROOM) OF 75 sq.ft. PLINTH AREA	775 sq.ft.

Figure 26—Revised design of generic house type with incremental potential by architect Amila de Mel under EU-funded project (Source: Habitat for Humanity International, 2016)

Drawings such as the above illustrate possible future house expansions for homeowners to visualise them. Operations manuals should invest in illustrating alternative house growth patterns and offer menus of potential options for different expansions. These menus will evolve as the project managers learn from homeowners.



Figure 27—Kit of cardboard models of houses with potential expansion parts for owners to visualise their options. Produced by Habitat for Humanity (Source: Jaime Royo-Oluid, EU 2016)

Expanding or adapting a house is not only a spatial process. A useful metaphor is thinking of a house as an ‘expandable storage for value’. Through incremental growth, houses can not only increase in size but also in other forms of value (be it symbolic, productive, environmental, etc...). This feature is not always proportional to its size. A smaller house may be cheaper to maintain and hence more ‘valuable’ for a single-person household. The adequacy of spatial design plays an important role and needs to be sensitive to people’s culture. Accordingly, designs resulting from engagement with homeowners are more likely to embody these different forms of value.

On the monetary front, houses that expand may also generate new sources of income for the household such as through additional productive work space. Under customary tenure and formal laws in the North of Sri Lanka, houses are not very liquid assets. Nonetheless, they still function as potential collateral in the sense that they reassure the money lenders. However, de Soto’s (2000) claim over the wealth potential of activating ‘dead capital’ through the formalisation of housing property rights needs to be considered with caution here. As pointed out by housing and land tenure expert Geoffrey Payne (2009), there is little evidence sustaining de Soto’s claim of economic transformation by using houses as collateral. Further, credit is easily misused. With moderation, it can help households borrow and invest. In excess, it can destroy them as discussed below.

Can more subsidy prevent homeowners' over-indebtedness?

In 2012 the Government of India (GoI) confirmed a 50 000 houses programme for war-affected returnees⁽¹⁰⁾ in North and East Sri Lanka. Before rolling out the programme, the High Commission of India in Sri Lanka tested the construction of a thousand houses through a contractor-led approach. Costs per house amounted to over LKR 1 million, which was then almost double the cost a standard owner-driven house. Also, end users' acceptance of contractor-led houses was substantially lower. Contractors could not afford personalised solutions to meet basic customisation demands. This confirmed, in the eyes of the GoI, the validity of the Sri Lankan assisted owner-driven approach which the World Bank (Jha et al., 2010) describes as the most empowering and dignified approach for responding and rebuilding post-disaster.



Figure 28—Protrusions to facilitate future extension of external walls made of conventional country-fired brick wall. Funded by the EU and implemented by Habitat for Humanity in Batticaloa (Source: Jaime Royo-Oluid, EU 2017)

⁽¹⁰⁾ See Kirtee Shah's and Anurag Srivastava's articles.

After discarding the contractor-led approach, the GoI and the EU aligned their respective grant contributions to households with a view to preventing competition between their schemes. This was a lesson learnt from post-tsunami reconstruction. Further, to contain inflation given the scale of the interventions, grants were limited to LKR 550 000 which in 2013 was sufficient to build the minimum standard NEHRP house subject to some efforts in achieving cost-efficiency. Many households managed to keep it under LKR 550 000 up to 2016.

The Sri Lankan Centre for Poverty Analysis (CEPA) however, posits that this LKR 550 000 amount rapidly became insufficient to complete a NEHRP standard house ⁽¹¹⁾. Construction costs practically doubled over a decade pushing households to contribute more than expected in the form of labour or additional funds to cover the gap. Contributing towards reconstruction results in more appropriation and ownership, a core positive aspect of owner-driven approach. But too much contribution can also compete with households' usual income sources¹². CEPA suggests that an 'insufficient grant' contributed to excess debt. And excess debt, in turn, led to problems including exploitation of the debtor, anxiety, alcoholism, compromised nutrition or even suicide.

Increasing grant amounts alone, however, would not have fixed the debt problem. Inflation sometimes requires increasing the subsidy, but the donor also needs to make sure that robust cost-efficiency mechanisms are being implemented and that constraints to supply removed. There are additional aspects to be considered:

First, indebting oneself to improve a house is a traditional pattern in Sri Lanka independently of income and resources at hand. This is motivated by the opportunity of 'once in a lifetime investment'. A house constitutes the main medium to become part of a higher social status for once and for all. Households are therefore ready to sacrifice a lot for it. For instance, for many families, the house will determine the likelihood of finding a 'suitable' spouse for their descendants. Other families see a large house as their opportunity to keep their family united and preventing members from leaving particularly useful for old age. Most debt we observed was either required for building houses beyond the minimum NEHRP standard or accrued for other non-essential purposes. Preventing excess debt requires sensitisation on various fronts such as on financial literacy including basic accounting, family planning or managing incremental housing options realistically.

Second, increasing the grant per household would have required the reduction of families benefiting from assistance and hence leaving more unattended (i.e. the dilemma of quantity *versus* quality described before). And unattended families are even more vulnerable to excess debt.

⁽¹¹⁾ See two articles in this book: Life and Debt and No Silver Bullet

⁽¹²⁾ See Skinner et al's article: An Evaluation of EU, Swiss and Australian Funded Housing Reconstruction Programmes in Sri Lanka: Lessons Learnt and the Way Forward for Community Driven Programmes.

Third, in a highly inelastic market with a pronounced shortage of suppliers, the effect of increasing subsidy amounts may result mostly in inflation and not necessarily in increased supply. When suppliers know how much cash families have at their disposal, they increase prices accordingly. Inflation would then exclude other families from affording a house. These may include people who aim at doing this with their own savings. Therefore, instead of topping up grants for construction, the EU found the provision of subsidies for various forms of livelihood support involving community infrastructure and financial literacy more effective in improving communities' resilience to financial adversity.

Figure 29—EU-funded owner-driven house built with the assistance of Habitat for Humanity, Batticaloa.
(Photo: Jaime Royo-Olid, EU 2017)





Figure 30—Innovative kitchen design suited to owner’s choices. House built with the assistance of Habitat for Humanity, funded by the EU's AUP-2014 programme.
(Photo: Jaime Royo-Olid, EU 2017)

Investing on preventing the inflation of construction costs

To prevent escalating costs, the EUD supported and encouraged UN-Habitat in introducing cost-effective construction methods¹³ since 2012. Methods such as fair-faced block work that eliminates the need to plaster walls, rat-trap bond and filler slab result in substantial savings. Some of these were long advocated and used by exemplary Laurie Baker in Kerala. Better materials management can reduce wastage, bulk procurement can help negotiate cheaper prices for groups of buyers, etc. But, when costs are saved, homeowners have more to spend. Many would build house extensions resulting in 600 or even 900 sq. ft. houses. Others would buy more expensive wooden front doors, considered symbols of prosperity.

¹³ See the resulting article by Ganepola P. and Weerasoori on Challenges in Introducing Alternative Appropriate Technologies in Home Owner Driven Housing.



Figure 31—EU-funded owner-driven house built with the assistance of NGOs ASB and Practical Action in Menik Farm, Vavuniya District where owners have afforded expensive wooden door and window frames. (Photo: Jaime Royo-Olid, EU 2013)

In the absence of technical and financial advice¹⁴, households tend to indebted themselves. CEPA's studies on owner driven households' indebtedness constitute an invaluable warning and calls for not undermining the consequences of owners contributing too much towards reconstruction. But we must also recognise the multidimensional relationship between debt and subsidies. Indebtedness is also about knowledge, it is culturally entrenched and must be addressed in more ways than subsidies. Furthermore, it is important to consider the words of Tim McNair, UN-Habitat's Colombo office housing programme manager between 2012-2016, that a little debt or credit can be useful. It can help families face the post-aid context when there will be no more subsidies. It is a matter of making sure they learn how to keep debt at manageable levels while serving purposes useful to them.

¹⁴ See the article Facilitating People's Decision Making through Financial Counselling for Housing: Experiences of the Swiss Agency for Development and Cooperation in Sri Lanka

Complementing housing reconstruction with livelihood support measures

Between 2009 and 2013, the EU provided an EUR 10 million grant to the NGO *Arbeiter Samariter Bund* (ASB) and Practical Action for the owner driven reconstruction of 2 794 houses in Vavuniya North. This programme was complemented by livelihood support measures (also called ‘flanking measures’) implemented by the NGOs *Zuid Oost Azie* (ZOA) and the Federation of Social Development Organisations (FOSDOO). ‘Flanking measures’ have become characteristic of housing reconstruction in Sri Lanka ever since. Despite the insistence of practitioners and academics in that habitat interventions should be holistic, when it comes to actual reconstruction it remains difficult to overcome professional silos (e.g. some funds being allocated to shelter only, others only to water and sanitation, and so on). In spite of the obvious, it is still worth insisting in that livelihood support measures enhance the effectiveness of these housing interventions (i.e. it contributes towards a liveable habitat as opposed to only houses).

Livelihood support measures range from water wells, community roads or community buildings, to various forms of capacity building or small income generation activities necessary for houses not to become ‘livelihood traps’ (i.e. houses unviable to live in). The allocation of funds from construction to flanking measures tends to be perceived as a trade-off between quality and quantity (i.e. either fewer houses benefiting more or more houses benefiting less). But in practice, we have observed that investing only on ‘brick and mortar’ (i.e. on construction only) might get more houses started, but in the process, more home owners give up or reject the house after living in it for a while¹⁵. If donors, governments or communities are not convinced about holistic habitat approaches, they will at least find use in allocating a share of funds for reducing the likelihood of drop outs via livelihood support measures. The EU has operated with a minimum of 10 % of funds for such measures in Sri Lanka. Whether there is a case for optimality at all, we do not know, but it would be interesting to analyse projects with different shares and compare and contrast the outcomes.

From capacity building on self-construction to co-production and SME creation

While owner-driven reconstruction is more efficient and effective than contractor-led housing reconstruction in Sri Lanka, it remains unclear what the impact of owner-driven approaches is on local construction supply chains. Does owner-driven reconstruction put some developers out of business? Or does it contribute to local markets by having trained people in construction? Are more people ready to become builders, masons or carpenters after receiving construction training? Should donors continue promoting

¹⁵ See chapter 14 by Kirtee Shah. Capacitating people and strengthening communities while building houses with war victims in Sri Lanka.



Figure 32—EU-Funded Compressed Stabilised Earth Block Production training in Batticaloa run by Habitat for Humanity and World Vision Lanka (Photo: Jaime Royo-Olid, EU 2017)

owner-driven housing reconstruction six years after the end of the war? Or should donors and government divert funding to make sure there be a functioning supply chains that can deliver in the absence of subsidies?

In assisted owner-driven reconstruction, one typical livelihood support measure is training households in self-construction. However, an EU-funded evaluation¹⁶ and Chhabra Anand and Chariar’s article¹⁷ point out that only a few of the beneficiaries trained keep up in the mid-term with construction activities as a form of income generation. There are important sociological reasons for the vanishing of construction workers such as not being socially appealing. Furthermore, knowing how to build does not necessarily mean people know how to use the skill as a source of income or as a business. There is a need for more than training in construction and focusing on local business creation.

Where we anticipate that construction demand will be long-lasting, investments on local construction supply chains can lead to significant savings in delivering the expected housing stock. For instance, if roof tiles were to be produced in North Sri Lanka

¹⁶ See the article by Skinner et al in *An Evaluation of EU, Swiss and Australian Funded Housing Reconstruction Programmes in Sri Lanka: Lessons Learnt and the Way Forward for Community Driven Programmes*.

¹⁷ See chapter 15. Where are all the masons trained in disaster resilient technologies? Reflections from Indian experiences in capacity building of masons and building artisans.

(e.g. by re-opening the Pandara Vannikam tile factory), the local economy would save more than half the cost of tiles through reduced transportation from the South West of the country (Maïni and Davis, 2017). Accordingly, when considering developmental opportunities in reconstruction, assistance could better target local cooperatives or businesses. Where labour is scarce, the prospect of generating profits is key to retaining local qualified professionals. In this respect, the size of production plants or cooperatives matters. Salas Serrano (2000) explains, for instance, how larger ventures will better capitalise on economies of scale, bulk procurement and be more resilient to shocks. A problem, however, is that the public sector and NGOs are the main drivers of low-cost construction techniques but are seldom effective in profit-making ventures that would sustain them in the long-run. Therefore, these ventures rarely survive beyond the duration of projects.



Figure 33—Lorry transporting tiles from Colombo to the Northern province at three times the cost. (Source: Jaime Royo-Olid, EU 2018)

Figure 34—Abandoned tiles and brick factory in Uddusudan, Mullaitivu district, Sri Lanka (Source: Jaime Royo-Olid, EU 2018)



Adding to the complexity, the construction sector is typically characterised by well-established power relations dominated by construction barons (e.g. intermediary suppliers of cement, sand and steel) committed to keeping their share of supply. In promoting Compressed Stabilised Earth Blocks (CSEB) in Batticaloa under the EU-funded programme, the local country-fired brick manufacturers reached out to parliamentarians in Colombo requesting CSEB production be stopped. Promoting alternatives to oligopolies with locally-sourced production may require strong political support. International donors such as the EU can play a catalytical role in this.

The potential for CSEB is described in chapters 16 and 17 by Mäini and Davis, directors of the Auroville Earth Institute. CSEB production, would imply more than 90 % of construction costs be spent on local resources, 45 % of which for local labour (both block production and masonry construction) with only 5 % cement necessary for stabilisation. This is half to a third the cement required for the conventional sand-cement blocks. CSEB is 13 times less energy intensive than fired-burnt bricks (Davis and Mäini, 2017). Further, under appropriate conditions and due proximity to quarries, CSEB can be cheaper than sand cement blocks. But even they were not cheaper, there would be an economic case for subsidising locally-sourced production given that funds spent to import cement and steel are lost to the national economy altogether. But before that becomes viable, the local production of CSEB needs to be well-accepted politically and by people. This is why the EU committed to producing high quality model CSEB houses.

Figure 35—CSEB production yard established by HfHSL and WV in Baticaloa funded by the EU
(Source: Jaime Royo-Olid, EU 2017)



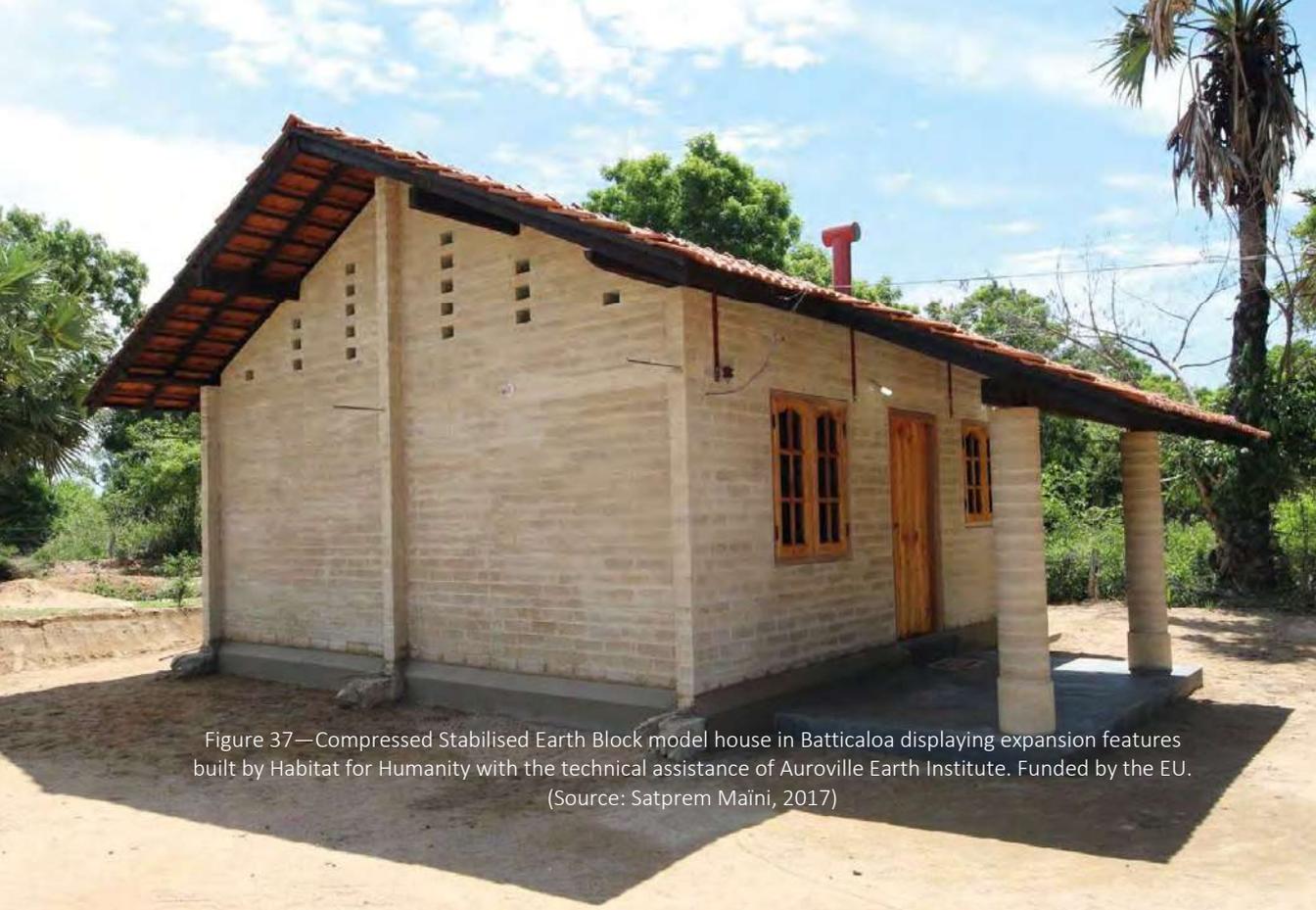


Figure 37—Compressed Stabilised Earth Block model house in Batticaloa displaying expansion features built by Habitat for Humanity with the technical assistance of Auroville Earth Institute. Funded by the EU. (Source: Satprem Maini, 2017)



Figure 36—Compressed Stabilised Earth Block model house in Batticaloa built by Habitat for Humanity. Funded by the EU. (Source: Jaime Royo-Olid, EU 2018)

Figure 38—Family posing in front of their Compressed Stabilised Earth Block model house in Batticaloa built by Habitat for Humanity with the technical assistance and design of the directors of the Auroville Earth Institute for EUR 4 000. Funded by the EU. (Source: Satprem Maïni, 2017)



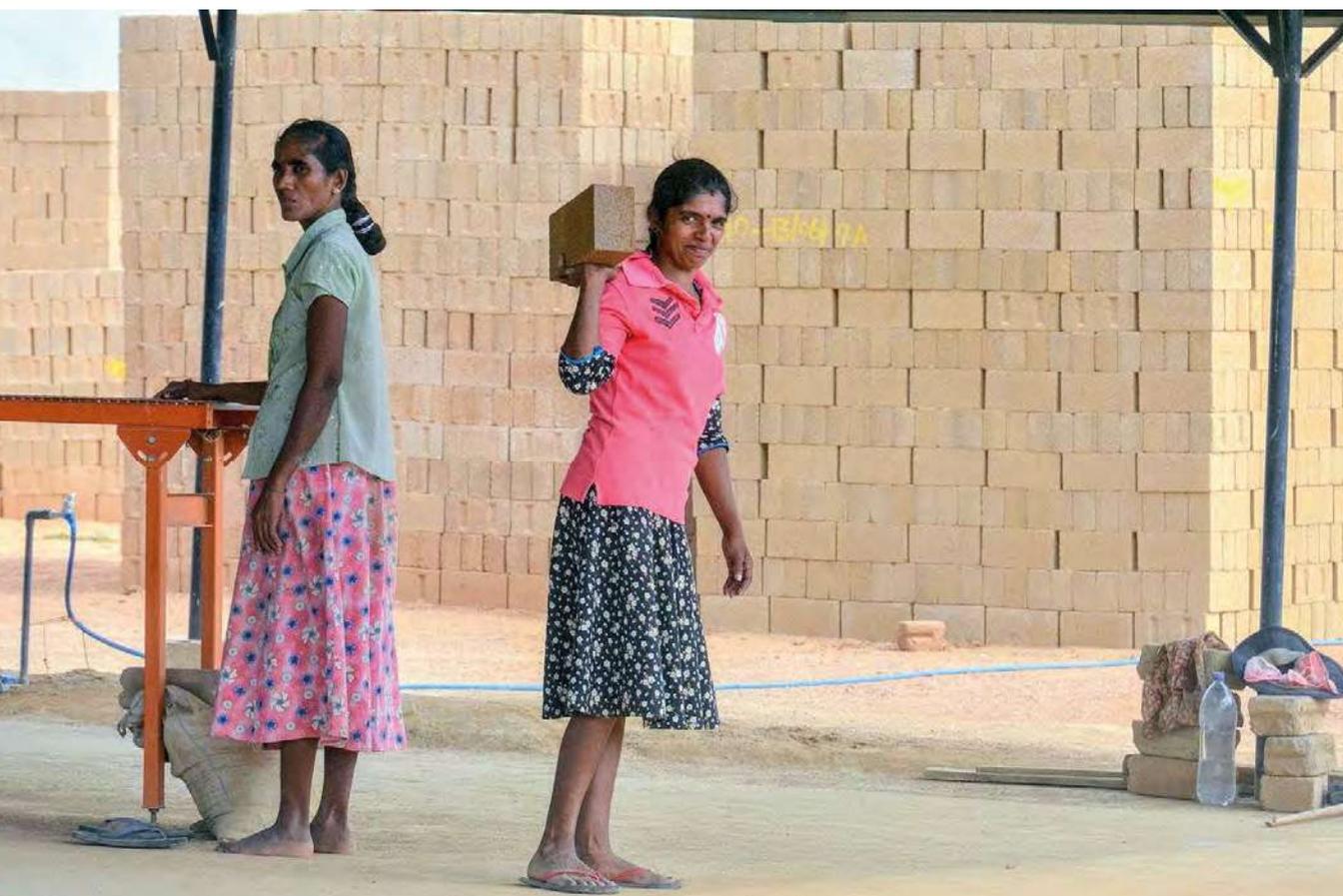


In Spring 2017, Habitat for Humanity and World Vision commenced a production plant of CSEB in Batticaloa and Earth Cement Blocks (ECB) in Kilinochchi. The generation of viable local income opportunities is convincing locals to adopt these alternative materials. However, competing with conventional and widespread sand-cement blocks and country-fired brick producers will be tuff since they assertively defend their market share.

Supply chain interventions for low-cost construction have been the subject of extensive scrutiny in Latin America³⁸ in the past forty years. But has anyone really studied the supply chain for building in war-affected Sri Lanka in view of delivering affordable housing not just considering projects but the economy? Why do this now? Because donor aid or government assistance will eventually run out and there needs to be a locally-sustained provision of affordable housing in place. And reconstruction constitutes an opportunity to get started. To be convincing, the EU had to build on practices with a long-standing track-record of successful delivery such as the Auroville Earth Institute in India.

Further, markets in general do not deliver affordable housing. Therefore, public policies ought to at least attempt to stimulate supply. Materials that contribute to local livelihoods creation and to the domestic economy seem grossly underutilised. Contractors in war-affected Sri Lanka deliver NERHP standard houses at more than LKR 1 million, almost double the cost of assisted owner-driven housing.

Figure 39—Female worker at the EU-funded CSEB production plant in Batticaloa proud of contributing to the local economy and environment (Source: Jaime Royo-Olid, EU 2017)



Conclusions

Each reconstruction context is unique. Further, circumstances evolve and recovery requires adaptations and upgradations to changing challenges. Nonetheless, successful local precedents and well-established practices from elsewhere can be useful sources of learning as long as local specificities are accounted for. This article has described three dilemmas which can be found in many reconstruction settings, but which can only be addressed with locally-grounded solutions and in a particular moment of reconstruction.

These dilemmas are usually perceived as trade-offs. For instance: donor control is perceived as competing with people's ownership; More investments on livelihoods being at the expense of the number of houses built; or investing on capacity building at the expense of more immediate outputs. Yet, the article makes the case that these are not necessarily trade-offs but can be used in synergic ways. For instance: donor conditionality to cash grants for reconstruction, if promoting informed choices and building on people's aspirations, can enhance ownership, meaningfulness, empowerment and even reduce risks; Investments in livelihood support measures can reduce the number of drop-outs and hence improve overall efficiency (costs) and effectiveness (impact); and that if reconstruction is considered as an opportunity for entrepreneurship, investments dedicated to entrepreneurship instead of construction can further revert back into the local economy and even boost immediate and long-term reconstruction supply. Addressing these dilemmas is required to building back better.

At the time of publishing this article, the Ministry of Resettlement is planning to create 300 CSEB production units building on the EU-funded project implemented by Habitat for Humanity and World Vision and previous learnings from UN-Habitat and ASB. This would result in the upscaling of a technology that uses half to a third of cement and contributes to the local economy with funds that would otherwise have gone for imports. The thermal comfort of houses built with CSEB is improved and the environmental impact of block making will involve 13 times less CO₂ emissions (Davis and Maini, 2017). This would account as beyond building back better.

Having said the above, households who have gone through the pains of reconstruction with their own hands will not necessarily be construction sector entrepreneurs by choice. They might gladly work in other professions or take a factory or services job at reasonable wages if they were available. So, we should not romanticise the idea of the "poor as entrepreneurs" or of rural communities as co-producers. Industrial policy could really help development in war-affected areas of Sri Lanka. Producing locally-sourced CSEB is a good start but not enough. War-affected rural returnees are as entitled as any urban citizens to receiving structural forms of state support and quality services. But in the absence of basic provision, it is better if reconstruction is at least used as an opportunity to help them help themselves out.

Bibliography

- Buckley R. M. and Kalarickal J. (eds) (2006). *Thirty years of World Bank Shelter Lending: What have we learned?* The World Bank Group, Washington DC.
- Charlesworth E. and Ahmed I. (2015). *Sustainable Housing Reconstruction: Designing resilient housing after natural disasters*. Routledge, London & New York.
- Davies L. K. and Maini S. (2017). *Feasibility Report for Compressed Stabilised Earth Block (CSEB) Production & Use in the North & East of Sri Lanka*. EU Publications Office. <https://publications.europa.eu/s/gmLN>
- de Soto H. (2000), *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, Basic Books, New York.
- Jha A. K., Barenstein J. D., Phelps P. M. and Sena S. (2010). *Safer Homes, Stronger Communities: A Handbook for Reconstruction after Natural Disasters*. Global Facility for Disaster Reduction and Recovery (GFDRR). The World Bank. Washington DC.
- Kennedy J., Ashmore J., Babister E. and Kelman I. (2008). *The Meaning of 'Build Back Better': Evidence from post-tsunami Aceh and Sri Lanka*. Journal of Contingencies and Crisis Management. Vol. 16.
- Lizarralde G. (2015). *The Invisible houses: rethinking and designing low-cost housing in developing countries*. Routledge. New York & London.
- Barenstein, J. D., and Iyengar, S. (2010). *India: From a culture of housing to a philosophy of reconstruction*. In Lyons, M., Schilderman, T. and Boano, C. (eds.) (2010). *Building Back Better: Delivering People-Centred Reconstruction to Scale*. Rugby: Practical Action Publication, pp. 163-188.
- Payne G. (ed) (2002). *Land, Rights & Innovation: Improving tenure security for the urban poor*. ITDG Publishing.
- Payne G. Durand-Lasserve A. and Rakodi C. (2009). *The limits of land titling and home ownership*. Environment & Urbanization. International Institute for Environment and Development (IIED). 443 Vol 21(2).
- Plesner U. (2012). *In Situ: an architectural memoir from Sri Lanka*. Nayarana Press, Gylling.
- Salas Serrano J. (1998). *Contra el Hambre de Vivienda: Soluciones tecnológicas Latinoamericanas*. Escala. Tecnologías para vivienda de interés social. CYTED. Madrid.
- Salas Serrano, J. (2000). *La Industrialización Posible de la vivienda Latinoamericana*. Escala. Tecnologías para vivienda de interés social. CYTED. Madrid.
- Schilderman T. and Parker E. (eds.) (2014). *Still Standing: Looking back at reconstruction and disaster reduction in Housing*. Practical Action Publishing Ltd. Rugby, UK.
- Sen A. (1987). *Commodities and Capabilities*. Oxford India Paperbacks.
- Sen A. (1999). *Development as Freedom*. Oxford: Oxford University Press.
- Skinner R. et al (2017). *Evaluation of the EU-funded housing reconstruction programmes in Sri Lanka (Aid to Uprooted People AUP-2010 and AUP-2012) Mission 3*. Available at: <https://publications.europa.eu/en/publication-detail/-/publication/dbe69ba0-4c1f-11e7-aea8-01aa75ed71a1>
- Stulz R. and Mukerji K. (1993). *Appropriate Building Materials: A catalogue of Potential Solutions (Third revised edition)*. SKAT & Practical Action Publishing. Gallen, Switzerland.
- Turner, J.F.C., Fichter, R. (1972). *Freedom to build: dweller control of the housing process*. Macmillan, NY.
- UNHCR (2011). *Update on Protection Developments: The Search for Durable Solutions*. Sri Lanka IDP Protection Working Group, September 2011, Colombo.



Figure 40—Female worker curing compressed stabilised earth blocks in production plant in Batticaloa
(Source: Jaime Royo-Olvid, EU 2017)



Figure 41—Female workers pile CSEB after one year of functioning of production plant in Batticaloa district
(Source: Jaime Royo-Olid, EU 2018)



PART II
EVALUATING
OWNER-DRIVEN
HOUSING
RECONSTRUCTION



Figure 42—Monitoring site visit by engineers and technical officers, model house built with ECB with the assistance of HfH and funded by the EU (Source: Jaime Royo-Olid, EU 2018)

4. Post-disaster reconstruction for the long term:

Three decades of lessons learnt from South East Asia & Latin America

Eleanor Parker, Principal Lecturer, Coventry University Centre for Disaster Management and Hazards Research, UK

Theo Schilderman, Senior Researcher, Building and Social Housing Foundation (BSHF), UK

Abstract

What we know about the impact of reconstruction on people's houses, livelihoods and resilience stems largely from end-of-project reports and evaluations. Reconstruction agencies or researchers rarely return to project sites for a longitudinal impact assessment. In 2013, BSHF coordinated research aiming to fill that gap. Partners in its World Habitat Awards programme returned to reconstruction projects which they had undertaken 4 to 35 years ago to assess their impact in terms of five broad themes: user satisfaction; beneficiary selection; replication; technical performance and livelihoods development.

Ten projects from Latin America and Asia were assessed. Some were rural; others covered both rural and urban reconstruction, though none took place in large cities. This paper emphasises key findings from the review and focuses particularly on lessons learned about the process of community engagement and how reconstruction projects can effectively support disaster-affected communities through reconstruction to long-term resilience and sustainability.

All projects reviewed demonstrated elements of long-term sustainability, however many challenges were faced; mobilising rural and urban communities with differing needs and commitments, political instability and conflict, prescriptive government requirements and processes, personal financial constraints and access to loans and the post reconstruction funding vacuum that often curtails initially effective projects. A key finding for continued resilience after reconstruction is a continued presence of an agency to support ongoing capacity and develop and maintain buildings, facilities and infrastructure. The support and development of strong community cohesion, knowledge and skills will allow a 'voice' with agencies and local government in order to continue to influence the development process and seek assistance in further developing and diversifying livelihoods.

Introduction

According to the International Disaster Database (EM-DAT) Centre for Research on the Epidemiology of Disasters (CRED), disasters are on the increase worldwide, both in magnitude and in number, and so too their impact. Whilst trends show a decrease in mortality, more and more are surviving the impacts of disaster and so forced to engage in the recovery process. Disaster can set development back years (Benson & Clay 2003; The World Bank's Independent Evaluation Group (IEG), 2006), and tends to affect the poor and vulnerable more than the wealthy. Yet, it is often also development 'gone wrong' that generates the vulnerabilities that can turn hazards into disasters (Wijkman and Timberlake, 1984; Grunewald et al., 2000). Disasters and development are intimately linked. Can the reconstruction and recovery that happen after disasters strike make a change to the development of the vulnerable? Whether reconstruction can help to make the affected — and not just their houses — more resilient in the long run was a key question in our research.

Much of the impact of recovery and reconstruction on people's livelihoods and resilience can only be truly understood in the longer term. Yet, agencies rarely return and independent research into longitudinal impact is sorely under-funded. What we think we know about impact comes mainly from project evaluations and end-of-project reports. We undertook a literature review of 99 documents that assessed reconstruction: only 15 of those studies were done more than 5 years after project completion. If we intend to develop recovery and reconstruction work to maximise development and the reduction of vulnerabilities of the poor and marginalised, we need to learn more lessons from the past. That is why the BSHF, Coventry University, and their southern partners undertook this research.

BSHF was established to identify innovative housing solutions with a proven track record and to disseminate these to a wider public. One of the tools it uses for that is a competition: The World Habitat Awards. The best submissions each year are gathered in a database, and some of these are on reconstruction and disaster mitigation. This database also provides us with sufficient information about the end-of-project state of each project. Seven of the implementing agencies contacted were happy to participate and three offered to investigate additional projects, sometimes in different countries. In total 10 case studies were reviewed: five in Latin America (i.e. Guatemala, El Salvador, Honduras, Nicaragua and Peru), and five in South and South-East Asia (i.e. Pakistan, India, Sri Lanka, Indonesia, and ongoing reconstruction and disaster mitigation activities in Vietnam), with post project periods ranging from 4-35 years (See Table 1 at end for the full list of projects and agencies). As a result of the selection process, it can be said that the projects revisited are good-practice examples of reconstruction.

Neither BSHF nor its partners had ample funding to do this research. We therefore could not undertake an extensive quantitative approach, e.g. sending out teams to

interview hundreds of households, but instead opted for a more qualitative method. We selected relatively small numbers of beneficiaries (or sometimes their descendants), taking care to interview both men and women of different age groups, and in focus groups, as well as local builders and authorities and other agencies with an interest in the reconstruction. As far as possible, we used triangulation to verify the information provided. This allowed us to assess how a project had performed and changed over time, and what impact it had on its beneficiaries.

We discussed possible themes and questions first with the research partners, and subsequently with around 150 members of the broader reconstruction community, in lively discussions at a United Kingdom Shelter Forum in Oxford and the international Shelter Centre in Geneva. This involved five broad themes of investigation.

- Beneficiary targeting: particularly exploring why some people do not occupy or abandon their houses. Do projects reach the right people, and are the solutions on offer appropriate to them?
- User satisfaction: as that contributes to the ownership and sustainability of the types of houses built.
- Replication: by individuals and agencies, a stronger indicator of appropriateness and sustainability.
- Technical performance: resilience of houses to subsequent disasters, the weather and external factors.
- Livelihoods: had projects managed to improve the wider socioeconomic context of people and not just their houses?

A couple of general considerations stand out from doing longitudinal research into projects after differing time spans. The key is perhaps that opinions, performance and impact are not static; they vary with time and a number of factors influence them. So, we should be cautious about interpreting evaluations done at early stages after project completion. Over time, in reconstruction as well as in regular housing, a number of weaknesses in design or implementation become manifest (e.g. leaks, cracks, design faults) that reduce user satisfaction. Changes in the wider context (e.g. a heightening of standards perhaps coupled with a growth in income and advertising), may make users aspire to different, larger, more modern houses. A lot then depends on the beneficiaries themselves. If they assume sufficient ownership, and have the means, both in skills and funds, they can overcome unsatisfactory situations: improve poor designs, fix construction defects, or even completely alter their houses (Guzmán, 2010; Duyne, 2013)

Distinguishing resilience and sustainability

It is not the intention of this paper to develop an extended analysis of the concept of resilience, as academics and agencies continue to review its definition and application

(Manyena, 2006; Alexander, 2013). However, in the context of this evaluation it is important to outline the view of resilience applied, its relationship to sustainability and the role of community-based and participatory approaches in its development.

Here resilience is viewed as a process, whereby those exposed to risks are able to use existing capacities (e.g. knowledge and resources as the basis for developing or changing local processes and practices) in such a way as to reduce risk. Synthesising Mayunga's (2007) capitals-based approach with popular community theory (e.g. Day, 2006) allows us to evaluate how reconstruction projects can work effectively within the social context. Project approaches and outputs should take account of trust, cultural rules and norms; work to develop social relationships thus extending community networks to maximise inclusivity, diversity and equality. A strong sense of 'community' results in communicative and collective action (Sommerville, 2011). The social capital provided by such networks has a strong multiplier effect on communities' access to natural, physical and economic resources and importantly human capital.

Human capital is viewed here as being not just diversity of skills and knowledge within and beyond the locale but capacities for learning, metacognition and self-regulation (Ford & Schmidt, 2001). The element meaning reflection and identification of needs and opportunities for further knowledge acquisition, a key driver of adaptive capacity (Smit & Wandell, 2006; Cutter et al., 2008). For those living under uncertainty, so likely to be impacted by previously unexperienced hazards and threats as a result of climate change or conflict, bridging between community networks, agencies, government and scientific and technical specialists allows knowledge transfer. Done effectively and in perpetuity (Bankoff, 2001; Mercer, 2010) resilience is further enhanced.

Sustainable development is viewed here as the process by which sustainability is attained (Blewitt 2006). Processes such as reconstruction and subsequent 'life' activities consume natural resources; links between their use, degradation of the environment and negative impacts on natural processes are well established (Brudtland). Sustainable development is a relational concept referring to a series of practices and processes that ensure 'development' does not exceed the carrying capacity of the environment. It seeks to attain a balance between social, political, economic and environmental aspects: protecting the natural environment, promoting social equity and an appropriate degree of economic equality. Ratner (2004) suggested that it requires a 'dialogue of value' as perspectives, aims and ambitions of stakeholders in such a complex system will vary. Aligned to this and the previous discussion of resilience discussion previously, Banerjee (2003) asserts that local values, knowledge and practice are key to sustainability. Sustainability issues and practices must be defined in the local context in order to enable effective communication, social learning and emergent leadership (Cairns, 2004) but must consider wider influences and consequences both spatially and temporally to ensure a sustainable society.

All this demands a sophisticated and flexible partnering approach. Participatory

approaches influenced by Freire (1970), which shy away from a dominance of externally imposed education, opt for a two-way process which values local experiential knowledge, critical reflection and conscientisation. This means that those who engage, identify and analyse their social, political and economic context and move to communicative and organised action for change find their ‘voice’. Some communities may have a sophisticated and comprehensive understanding of the context in which they live, meaning that they are able to identify state and control factors influencing their vulnerability, risks and capacities. Others may be disconnected or disrupted perhaps through displacement or rapid urbanisation and so are much less able to evaluate context, identify priorities, make decisions and undertake collective action.

As a result of the diverse characteristics and capacities of communities, the nature and degree of input and facilitation from agencies involved in reconstruction must vary responsively between, through and beyond projects. Participation, or perhaps more accurately partnership, becomes a learning and empowering instrument (Ozerdem and Bower, 2010). Projects that actively consider such factors and relationships are more likely to facilitate individuals and communities in being proactive and self-mobilising rather than reactive and directed or worse, passive in reconstruction efforts. Aligned sentiments have been advocated in the people’s housing process (Lankatilleke, 2009) whereby beneficiaries are empowered to meet their own needs and aspirations through the application of local skills and knowledge; agencies facilitate informed decision-making and capacity building so as to ensure effective reconstruction.

‘Looking back’ themes

This section seeks to undertake a review and synthesis of the project’s findings under the predefined research themes.

Beneficiary targeting

We extend the traditional view of beneficiary targeting — how beneficiaries are initially selected — to include an evaluation of whether the original beneficiaries continued to ‘benefit’ after project completion. Who should and does benefit from housing reconstruction projects? In many cases, including a number in this review, it is impossible to reach all those in need in a particular community, so it is necessary to prioritise some beneficiaries at the expense of others. This can be detrimental to community cohesion, where there may be a perception that the ‘wrong’ people have benefited. Sometimes a significant amount of resources is available post disaster and it may be possible to raise the standard of living of the poorest above others in the community, in terms of tangible assets; is this fair?

It became clear that an abiding principle in beneficiary targeting in the early days of a reconstruction project is to include the community in the development of a beneficiary

selection criteria, and the selection process and for that process to be made transparent. In order to assess long-term benefit, the review sought to identify the proportion of families still living in their properties and to distinguish alteration out of necessity (dealt with in the user-satisfaction section) from extension and adaptation driven by development and aspiration.

By far the majority of the cases reviewed showed homes were still inhabited by the original beneficiaries (or their relatives). Qualitative responses confirmed that in the majority of cases occupants were not trapped in their homes as a result of financial constraints. In the Guatemala project after the 1976 earthquake, where the original beneficiaries have passed away, the houses are inhabited by the next generation. Compounds have been personalised and extended for livelihoods and to accommodate married children. This is probably a good indication the initial project was successful.

In the *La Betania*, Honduras project implemented by EcoViDe after Hurricane Mitch in 1998, beneficiaries were willing to relocate to a new satellite town less at risk of flooding. As the years passed this new community has become integrated into local transport networks, resulting in sustainable long-term benefit for them. This development (although not as extensive as originally anticipated) negated the need to travel far from home in search of opportunity and contributed to the local community thriving *in situ*.

In the case of Peru, beneficiaries who were only a selection of the public, worked well together in mutual aid and even built a community centre on their own. This collaboration did not extend to the wider community. Once reconstruction was completed no further work was undertaken or replicated across the neighbourhood. Perhaps there is scope to rethink beneficiary targeting; to consider the community as a whole to be the beneficiary. This requires a wider cross section of the community to be involved in the project, to ensure a more holistic approach with an enhanced focus on construction not just of housing for some but of integrated assets and infrastructure for the collective.

User satisfaction

The case studies sought to identify how satisfied the users were with the housing project in 2013; some years after reconstruction was completed. It focused primarily on the householders' view of the effectiveness of their reconstructed house in accommodating beneficiaries' needs and expectations. It became clear that consideration of user satisfaction in isolation from the other themes considered here is impossible. User satisfaction is heavily influenced by livelihood factors and technical performance and a more detailed analysis is provided in those sections below. It is also important to note that overall satisfaction does not preclude dissatisfaction with some aspects of the project. Although the level of satisfaction varied across the projects, in most cases user satisfaction was high. Many project teams reported that householder satisfaction

changed over time, not just as a result of performance of the building, but for example as a result of changes in personal circumstances, expectations and trends. With that in mind the following section broadly identifies current factors in user satisfaction articulated in the case studies.

Perhaps most fundamentally beneficiaries appreciated a house that served basic needs and requirements without extension or modification. Poor design, e.g. failing to accommodate a prayer room; or poor materials, e.g. a flat concrete roof that failed to regulate internal thermal comfort, were notable points of dissatisfaction. Houses that could be adapted and extended — adaptation out of choice rather than need, assuming that the householder had the skills and access to the resources to do so — often added to the users' level of satisfaction. Plot size and correct positioning of the house on the plot was a key factor in enabling extension. In many case studies, reconstructed houses were desirable and in demand. Again, there were exceptions, in some cases materials (e.g. adobe) or/and design and finish (e.g. non-plastered brick) had or came to have connotations of 'poor man's housing' and so these reconstructed houses were relatively devalued compared to others.

The nature and extent of engagement with communities by project teams varied, although the great majority were participatory. Some encouraged community-led design and implementation (e.g. in *Gandhi Nu Gam* in Gujarat, India; and in Vietnam) with access to specialist technical guidance, others offered choice within prescribed limits. For example, meeting the desires of residents to have unique elements for their house (e.g. roof style, doors, windows, room partitions) and/or to accommodate slightly different functions (e.g. a front bedroom adapted to allow home enterprise or space for a second storey).

Where houses were well constructed via owner-led construction or otherwise, householders were particularly happy if maintenance costs and requirements were reduced. Several case studies illustrated benefits for women where time saved led to improved opportunities for livelihood development and gender equality.

In several cases reviewed, projects sought to target those who owned land and had evidence of land tenure, as this meant reconstruction could begin more swiftly, although this was not exclusively the case. Some agencies went to considerable lengths to secure land tenure for beneficiaries. In several cases prior to the disaster tenure was uncertain. Where beneficiaries did not own land or lacked evidence of ownership, agencies either used the time spent securing land tenure to co-produce housing design and develop capacities or endeavoured to support householders secure tenure during and after reconstruction. In the case of El Salvador (See Table 1), where occasionally tenure could not immediately be secured, an option was offered of having a movable steel-framed house.

Beneficiaries explicitly noted satisfaction when layout and design of the settlement, which is often dictated by socio-cultural norms had been carefully considered. Their

previous settlement had often developed organically over a long period of time, so formal, regimented layouts often felt alien. In such situations residents also noted that the removal of some or all of the original vegetation in order to reconstruct significantly impacted their satisfaction. Trees and tall shrubs offer thermal regulation through the provision of micro climate, and shade and air quality control, resources for food, timber and mulch for gardens and smallholdings, and significantly they may be of great cultural and social importance, for example, offering a location for meetings and worship. Project incorporating social space and amenity were praised. Lack of provision of social space — be it small, shared courtyards that offer privacy for women from the wider community or larger communal areas — impacted not only the normal daily routine but also the social cohesion of communities. In several cases, where resources allowed, communities (with or without external assistance) constructed their own shared amenities (e.g. Perú, Gujarat and Honduras in Table 1). If one is of the view that a core outcome of housing reconstruction is safer, more resilient communities, then providing spaces and places for social interaction is essential.

Many beneficiaries commented that their reconstructed house now gave them a great sense of safety should another hazard event occur. For some, safety of the houses was not proven by laboratory testing or recurrence of hazard. In others it was, though perhaps not of the same magnitude. Such householders knew that their home offered protection, and this meant that the psychological impact of exposure was less; as expressed by a beneficiary in Peru who is a night watchman: 'I feel at ease and safe. I go to work without worries, because I know that, if there is a strong quake, it will not kill my children, because the materials used are light. My wife and children also feel safe. If there is a tremor, they stay inside and go back to sleep once it has passed.'

Reconstruction that failed to take account of other local hazards, ground conditions and topography at the settlement site was criticised. There are examples of agencies showing a preference for flat areas for the relocation of earthquake-affected populations, as was seen on flood plains in Tamil Nadu, India and also in Aceh, Indonesia following the 2004 tsunami. Such locations were found to be poorly drained and prone to flooding, therefore exposing populations to another hazard and the long-term environmental health impacts of damp homes, seasonal standing flood water and water-borne disease.

Projects which took an integrated approach, or where integration of services occurred relatively soon after housing reconstruction, had higher levels of satisfaction. The provision of water, sanitation, energy and transport are all key services essential to effective settlements and are often needed even to build them. Provision of training, capacities for repair and advice for maintenance were often required when introducing new service technologies, for example maintenance of solar lighting or composting toilets, but were not always sustained so facilities fell into disrepair and disuse. Householders were more satisfied if the location was well connected and offered easy access to neighbouring settlements, urban centres and other places that supported

existing livelihoods, access to health services, education or provided alternative employment (Honduras).

Choosing technology and technical performance

Technical performance can be examined in two ways: performance during recurrent hazards, and performance in terms of durability and structural integrity over time. Of course, the technical performance of buildings can only be assessed if given an adequate time interval after completion — and this is where traditional evaluations and end-of-project reports often fall short (Schilderman & Parker 2014). The choice of technology often has knock-on effects in terms of long-term risk and sustainability.

Unfortunately, despite good intentions, the rush to reconstruct often results in poor choices of technology. The push for permanent housing might also negate the integration of disaster-resilient technology. A survey by the organisation Development Workshop (DW) after Typhoon Pablo (Mindanao Island, December 2012) showed that reconstruction work by other agencies had not integrated basic cyclone-resistant features into new houses. Da Silva (2010) noted the same with respect to earthquake resistance in post-tsunami reconstruction in Aceh. Often modern or popular technology is chosen for reconstruction; but warnings about the negative impacts of ‘West is best’ approaches (Bankoff, 2001) and benefits for careful integration of local and scientific risk reduction interventions (Kelman et al., 2012) now abound and can be applied to reconstruction.

Modern or popular construction methods are often assumed, incorrectly, to be more resilient to hazards; but it is the quality of materials used and their correct application which are key. The presence and enforcement of appropriate building codes is a requirement to ensure resilient and durable reconstruction. There are examples where alternative materials to those commonly used should be considered, e.g. pre-tsunami houses in Aceh were commonly constructed from charcoal-fired bricks. Here the high demand for wood had a significant environmental impact and was therefore not a sustainable option. Similarly, the traditional wooden construction in northern Pakistan was no longer sustainable as a result of extensive deforestation.

Immediately post disaster, vernacular technologies were often unfairly blamed for high levels of casualties and damage. In other cases, poor construction approaches had degraded the resilience of vernacular housing; local knowledge of resilient elements having been eroded over time. Many *quincha* houses in Perú and *dhajji dewari* houses in Pakistan, both timber frame technologies, have a proven record of earthquake resistance. For centuries people in Guatemala have built with adobe made from local soils. The destruction in the 1976 earthquake was, somewhat unfairly, blamed on the adobe houses and the heavy roofs covered by fired clay roof tiles. Despite government objections, Caritas Switzerland decided to dedicate part of its aid to support the reconstruction using local materials in an effort to propagate sustainable local solutions. A priest agreed to

have an adobe house built as a demonstration home for the rest of the parish. The house was used as a training ground for a small group of masons and from this beginning eventually 39 local groups constructed 150 improved adobe houses.

In some cases, vernacular materials and technologies were adapted with expert input for additional resilience, durability and interior comfort. In Perú, Practical Action implemented improved *quincha* technologies in their reconstruction project after the 2007 earthquake. Simple steps such as the use of a waterproof membrane and wood-preserving treatments of the wood frame enhanced long-term performance. However, despite the success of the approach, improved *quincha* building codes have not been adopted, and the state has not accepted the technology into its two main housing-finance schemes that people can now access. Since 2007, locals who did access some of that money have extended their houses using other technologies but interestingly choose to sleep in the *quincha* core.

The Aga Khan Development Network implemented the Building and Construction Improvement Programme (BACIP) in 1997, in a particularly earthquake-prone region of northern Pakistan and described it as 'more about building resilient communities and capacities than reconstruction'. Over 90 % of the 150 000 houses in the area exposed to seismic risk were non-engineered and even in moderate quakes damage resulted from the failure of unreinforced mud-bonded stone walls. Despite the existence of building codes, they were not widely used in self build. BACIP sought primarily to improve housing per se (an integrated approach tackling conservation of heat, air pollution and seismic vulnerability). As a result of participatory action research BACIP had identified over 60 different housing-related issues that could be addressed, and it installed demonstration projects to show communities how improvements could be made. BACIP did not directly construct or retrofit houses; they facilitated local construction-based enterprises and trained artisans in the resilient techniques. As other organisations have done (Practical Action and DW) BACIP have captured locally appropriate construction methods in building guidelines. BACIP have gone further to ensure they conformed to national building codes, have been tested in laboratories, are endorsed by the Pakistan Engineering Council, are accessible to the local community and are soon to be legislated for in the local area. Economic constraints may be significant; work in Vietnam showed that safer building may add 10-25 % to construction costs. This may require access to small-scale credit, now also provided in Vietnam.

An important observation of the review is that agencies should resist an initial desire from stakeholders to abandon vernacular buildings and use the opportunity post disaster to 'modernise'. A range of technological options should be evaluated based on a logical selection process, and with due consideration given to cost, replicability and long-term sustainability. The review shows that several communities who initially favoured the use of modern technology eventually chose vernacular or adapted methods once the benefits in terms of access to materials, cost, comfort and safety were made clear via the

participatory process and demonstration using example houses.

In order to ensure long-term resilience and sustainability factors which should be considered when selecting technology should include but not be limited to the following.

- Local resource availability and sustainability: e.g. excessive use of timber in traditional construction in northern Pakistan had resulted in resource scarcity and environmental damage. In Aceh post tsunami there was a local scarcity of good quality timber post disaster. That said, agencies should avoid immediately jumping to options that require shipping in materials long distance — a full analysis of local and regional materials and supply is needed. Resource production as a source of livelihood should be encouraged in the wider area in the short and long term.
- Affordability: too many technologies are not replicated, not repaired or they are poorly maintained because beneficiaries cannot do so without aid. This increases vulnerability in the longer term. Introducing new or adapted technologies with high initial costs for materials and labour are off-putting for local communities and means that the use of a resilient and otherwise sustainable technology is unlikely to persist post project.
- Labour availability: it cannot always be assumed that rural communities are sufficiently unconstrained so as to allow them to commit completely to self-build reconstruction. It is also possible to motivate and support urban communities to make a contribution to self-build efforts. Maximising engagement in the construction phase encourages pride and ownership and allows capacities to be developed for repair and maintenance later on.
- Training provision and quality monitoring for communities in (adapted) resilient technologies.
- Where substantial changes are made to how people traditionally build their houses, agencies should consider their long-term presence to see those changes adopted in construction 'culture' with continued support for materials production and supply (El Salvador) and advice (Vietnam).

Replication and an enabling environment

Agencies in these projects have often gone to great lengths to ensure that the houses constructed are resilient to hazards, have an improved internal environment, give due consideration to potential environmental impact and are locally appropriate. They are often better than the remaining building stock and so one would hope that these improved technologies would be replicated in extensions, ongoing reconstruction and in new construction. This is the theme with the most variable results in our review. Some demonstrated replication by other agencies during the extended reconstruction phase but little replication by local people once agencies moved on. Practical Action's project in Sri Lanka post tsunami introduced rat-trap bond-brick construction, proven to be cost

saving in terms of material requirements. Evaluation showed that whilst another reconstruction agency had adopted the approach, the capacity of local people to use this introduced technology was not sustained despite an intensive training programme. Initial costs, i.e. the cost for the skeleton structure of the house where a family can reside (rather than total cost), was a determining factor in choice of technology. Whilst the cost of materials for rat-trap technology might be 20 % less than a full brick wall, because of the fact that it is reported to be labour intensive (labour costs in Sri Lanka are high, and tends to increase in post-crisis reconstruction), rat-trap methods were not viewed as cost-effective technology when choosing methods for extensions and new builds.

A minority of case studies were able to demonstrate that an enabling environment existed or came to exist (via lobbying for modifications to building codes, etc.) e.g. BACIP and DW; whereby local people actively chose to construct extensions and new buildings using advocated methods. It is noteworthy that both agencies retain a presence in the area after the initial disaster reconstruction phase.

In other case study locations local people were selective about the elements they replicated. In Maharashtra, India after the earthquake, 90 % of homeowners surveyed built an extension to the core house; no extensions walls used the safer building practices of the core houses. However, all extensions avoided building roofs out of reinforced concrete. One powerful lesson has been learned — badly built reinforced concrete roofs or concrete roofs self-built without specialist knowledge contribute to the risks associated with a seismic event and are dangerous (Duyne Barenstein, 2013).

In El Salvador, the project by the NGO called *Fundación Salvadoreña de Desarrollo y Vivienda Mínima* (FUNDASAL) led to a different sort of replication: a reproduction of the process. Mayors in other areas had learnt from the systems of mutual aid implemented by FUNDASAL and applied it to their own projects. Communities worked with neighbouring communities at a grass-roots level, which built up into a social structure across the region and a state-wide organisation which could influence policy. The mayors of the communities played a key role in these projects; many of them were visionaries strengthening the ability of communities to act. From the synthesis of results, we can define a series of factors that are likely to enable replication in extensions and new construction.

- Householders (of both self-build and contract-built houses), were involved in design and training, were aware of the benefits of the technology and the risks posed by other approaches.
- Wider community became aware of the approach and were likely to consider it as an option.
- The technology needs to have not become stigmatised — ‘a poor man’s option’.
- Initial costs need to be comparable to other technology options and it must be financially viable for a significant majority of the population. Technologies that are excluded from government finance schemes for example are little replicated.

- The skills of masons, carpenters and labourers are maintained through the opportunity to continue to construct using the technology — if skills are not used they are quickly lost.
- Training opportunities exist to ensure a supply of skilled workers — on a small scale through local apprenticeships or in a more structured way via regional or national training programmes.
- Regional and national training programmes require governmental support, the incorporation of technology into building codes and the production of guidance and training curricula.

Reconstructing communities — resilience, livelihoods and sustainability

During the course of evaluating the results of individual project reviews, it became apparent that the mindset and approach of the stakeholders from the inception of the project has a significant impact on its long-term success. If viewed as simply the provision of permanent shelter, then the buildings are likely to be the only long-standing legacy of the project. If viewed as an opportunity to provide homes in an environment where communities and livelihoods can be (re)established and developed, then the potential for sustainability is multiplied. Only by viewing a reconstructed or resettled community as a complex adaptive system, evaluated through a ‘political-ecology’ perspective, can this be achieved (Lewis and Kelman, 2010; Cutter et al. 2008). A narrow focus on ‘the house’ cannot achieve this.

Nowadays it is recognised that relocation can have severe consequences on affected communities, their livelihoods and well-being, and accordingly should be avoided (Jha et al. 2010). However, in some circumstances resettlement is required by a government and/or deemed necessary to significantly reduce the risk face by communities. Resettlement of populations post disaster presents particular challenges. However, this review has demonstrated that if the principles of people-centred reconstruction were to be applied and extended, then resettled populations could flourish and become sustainable. Factors that contribute significantly to relocation success are: relocation near to previous site, to allow a community to fully contribute to decision-making and construction and enabling livelihood activities to continue unhindered (e.g. Dwayne, Gujarat); good transport to new livelihood opportunities in the case of distant relocation (e.g. Honduras); the potential to restore and diversify livelihood opportunities on the new site (e.g. Gandhi Nu Gam, Gujarat); and good multi-hazard disaster risk reduction (e.g. some cases of resettled populations who were subsequently affected by floods because of insufficient risk assessment).

Participatory process and social capital

The reviewed projects articulated successes based on both formal (structured)

participatory process and informal participation (with and without the facilitation of agencies). Cyclone reconstruction in Vietnam, described a detailed partnership process of housing design and settlement layout that was agreed with the agency and subsequently drawn up. Upon the agencies' return, the community had revised the design, shifting from a layout with separate areas for houses and gardens/livestock to one where space was left for new houses as families matured and their children married. The new design was accommodated.

Whilst the term participatory process is commonly used, full engagement, open discussion, and co-production of design and implementation are complex and challenging. *Vastu-Shilpa* Foundation (VSF) instigated a project after the 2001 Gujarat earthquake for the devastated village of Ludiya. The new village, *Ghandi Nu Gam*, was defined some distance away. The agency persuaded the community of *Ludiya* that concrete housing blocks — viewed as modern and progressive — were not as appropriate in the seismically prone desert environment as the traditional circular mud-and-pole *bhungas* that had withstood the 2001 earthquake with significantly less damage than the more modern, rectangular concrete buildings.

Negotiations with the Muslim community led to an exchange of land with the Harijan community, allowing previously segregated families to live together in one area. Using maps and models, the community chose a site within the area available and selected their neighbours. Thereafter the community went to the site and verified the model layout and marked out the plots and compounds with cornerstones. Even before construction began, people began moving their possessions and material they intended to reuse, from the damaged houses to the new plots. Demonstrating even in the planning stage, a transfer of belonging is possible. Two mosques and temples have been renovated/rebuilt by the villagers, using their own initiative and effort, and there is increased cooperation between people of different faiths.

Another excellent example, amongst many, of an approach to reconstruction that has developed resilience through social capital was EcoViDe's project in La Betania, Honduras after Hurricane Mitch in 1998. The original settlement of Betania was prone to flooding and slope instability. During the 18-month period in which suitable land was secured and land tenure assured, EcoViDe worked with affected communities, facilitating the development of a 'grass-roots' community organisation who were involved in the designing the settlement plan and house design. The resettlement site was some 30 kilometres away from old Betania, so a daily commute was not cost-effective. An additional opportunity was seized to develop community cohesion. During the self-build phase of the project, people stayed on-site during the week developing skills, working hard producing materials and building and forging friendships that are maintained today. The grass-roots organisation grew and developed — managing work groups, social issues and monitoring quality. The community organisation has evolved, maximising the benefits of its links with agencies and public-sector organisations, and is now the

democratically elected community Codel voicing local resident's' social interests to the administration. Being amongst the most active in the municipality and driving development, they seek to become *patronatos* — official representatives to the local government, legally constituted with bargaining power with local and national government.

Improving quality of life and health

Many agencies sought not only to ensure that structures were resilient, but several adopted or adapted technology so as to improve the interior conditions e.g. thermal comfort and energy efficiency of homes. Reconstructed homes by BACIP were shown to save up to 60 % fuel wood as a result of improved thermal efficiency. Clear benefits from reduced expenditure on fuel wood means more disposable income for families. Homeowners commented on the observed health benefits of kitchen ventilation incorporated into Practical Action's houses in Sri Lanka, as did those in Pakistan and those who benefited from smokeless stoves in VSF's Gujarat project and Practical Action's Peru project. Decreased respiratory illness reduces healthcare costs, lost days working and frees up days spent caring for the young and elderly.

Practical Action's project in Sri Lanka was one of many to incorporate discussion of improved toilet facilities in their participatory workshops. Gender perspectives were found to be important for siting kitchens and toilets; in one community, men were expressing a preference for a removed, detached toilet block, but women prefer having a unit close to or attached to the house. In some rural locations pre-disaster, outside kitchens and detached toilets were the norm, and whilst some people were happy to have a reconstructed home that incorporated a kitchen with associated chimney and an attached toilet unit, others maintained a desire for the more traditional layout. The same agency took the opportunity, with varying levels of success, to introduce composting toilets in some communities with high water table issues with varying levels of success.

In cases such as Peru and Honduras, women reported important savings in time and costs from having improved water supplies, which enabled them to get more involved in other activities, including small enterprises. Many beneficiaries reported that their new, durable, well-constructed homes needed less cleaning and less maintenance than their original houses, again freeing up time to spend on livelihood activities.

Accommodating and facilitating livelihoods

Livelihood activities can only be accommodated if an assessment of pre-disaster livelihood activity is undertaken. For some families, their home-supported livelihood activity might require space for a shop, a workshop, or require a space for a craft-based activity or service provision e.g. tailoring or a nursery. Their reconstructed house should accommodate or have scope to accommodate such activities via adaptability of design, a

sufficiently spacious plot and correct positioning of a house on the plot. For others, their home must be sited and have infrastructure and transport that allows access to the fields they farm, the boats used for fishing, the market for selling and buying, or jobs in the local town.

During reconstruction, livelihood improvement opportunities may be grasped. Many case studies used the construction process as an opportunity to develop capacity within the construction sector, with varying degrees of sustained success. In the VSF resettlement project in Ghandi Nu Gam, villagers chose to build on either side of the road to maximise opportunity from passing trade and increasing national tourism. The project also took the opportunity to construct a small reservoir to improve agricultural productivity in this arid region. Community-designed compounds allowed fathers and sons to come together as neighbours to support the family's mechanical or carpentry workshops. Some 10 years on there are indications that the traditional low-status role of women is changing. Women are active partners in the economic base of the family; due to their handicraft skills and as the primary earner, their status, dignity and self-esteem have all increased.

In both the La Betania and Ghandi Nu Gam projects the agencies were aware of the wider dynamics of economic development in the region — for La Betania, that the site near the growing industrial area would provide jobs for the community and in Ghandi Nu Gam, that the increasing tourist trade provided opportunity for personal enterprise such as accommodation and handicrafts.

The role of agencies and government

Where reconstruction was driven by development agencies, higher levels of sustainable development and resilience appear to have been achieved. As outlined above, BACIP had a historical presence in northern Pakistan prior to the 2001 earthquake; they maintain a presence today, providing training on resilient construction, guidance and support on government finance systems. This is also true of DW in Vietnam and in El Salvador, FUNDASAL has maintained its building-materials centre in the region and has a continuous presence through other development work. A finding from this research is that, if innovation is to become truly embedded or transitional change is to happen, agencies need to be present much longer than they are in a conventional reconstruction project, or this role needs to be assumed by local partners and/or government at project end. Capacity building may need to extend to them too.

The government influences the reconstruction environment both positively and negatively. In numerous cases government-imposed constraints on plot size, eligibility for financial assistance, materials and supply amongst other things that proved challenging in the short and long term. After the 1993 Maharashtra earthquake in India, government implemented a disaster risk reduction (DRR) programme where entitlement to housing was based on three categories of ownership of agricultural land (Duyne Barenstein,

2013). This meant that wealthier families received considerably bigger houses and homestead plots than poorer families, notwithstanding the size of the previous house, the size of the family group or home-based livelihood activities which were critical to poorer family's livelihoods. Some artisans not involved in agriculture received plots too small to pursue their artisanal activity. Financing programmes are clearly crucial to ODR. However, the systems can often be complex and exclude some groups.

Weak governance and corruption protract and compromise the potential effectiveness of reconstruction projects as agencies try to negotiate systems and processes. In the extreme case of Guatemala, the ensuing conflict undid much of the community cohesion work achieved by agencies, forcing some families to flee violence and persecution. Many of the community leaders who had led the housing movement unfairly became suspects and their lives were endangered. In the case of Demetrio, he sold the adobe house he had built and fled with his family to the capital city. In urban exile, he and his family lived marginally; he could not apply for any job and ate from a garbage dump to survive. He had lost everything. However, the peace agreement of the 1990s brought changes to conditions in the country. He and his family returned to the village to begin afresh, building a new, resilient adobe house using the original techniques.

A well-established DRR strategy which is mainstreamed¹⁹ by all stakeholders across all sectors means awareness is higher and support is in place, such as in the implementation of the national programme for community-based disaster risk management course (CBDRM) in Vietnam, even so, vulnerable people are still affected by multiple disasters and changes in climate, policies and the economy. DW began a programme to raise awareness of and capacity in cyclone-resistant construction in 1989, which continues today, as damaging cyclones hit Vietnam annually. They have observed that outside their projects, materials used are more durable than before, families take out formal or family loans, but construction methods are still poor so the poorest families who have invested more have more to lose. DW have worked with local authorities and families to instigate a cultural shift, from a repeating cycle of cyclone damage followed by reconstruction to the construction of cyclone-resilient housing where post-cyclone repairs are minimal, and savings made there can be reinvested to help people escape from poverty. The agency performed a technical advisory role to support communities in ODR and to influence wider government policy.

Conclusion

It is important that as we conclude we are not unfair to reconstruction projects reviewed here or others. Some have had quite specific goals and were conceived by varied and

¹⁹ To mainstream in development means to become more broadly accepted, shared or used in practice.

distinct agencies. But equally it is important that agencies do not succumb to the pressure to build before adequately understanding the local context and carefully defining project objectives with the community. Unlike relief and, to some extent, recovery, which focus on immediate and short-term needs, reconstruction must have long-term resilience and sustainability as its goal. Yes, we must aim to build back better, not just to construct appropriate, safer, more resilient houses, but to recognise the window of opportunity after a disaster to make the most of funds available and to improve the quality of the natural and built environment, access to services and diversity of livelihoods. It is important to remember that building back better is relative — better than what? In order to build back better, agencies must have an understanding of conditions pre-disaster, and a view that extends beyond housing per se, which reflects the informed needs and desires of the beneficiary and wider community.

The participatory process must start early, moving on from the emergency needs assessment to a process where agencies engage with beneficiaries to define preconditions including livelihood activities, existing knowledge, resources and skills. It is an opportunity missed if local skills and knowledge are not utilised and enhanced and adapted through effective knowledge transfer between local people and external experts with technical expertise. Identifying artisans and skilled craftspeople and engaging them as trainers has obvious long-term benefits to the economy. Co-production of housing design, choice of technology and settlement layout helps to manage beneficiaries' expectations and ensures their needs are met.

It is true to say that reconstruction (in the original location) and resettlement (relocation of communities to a new location) are quite distinct, the latter being more complex; the projects by agencies reviewed here used comparable approaches in both contexts to achieve sustainable outcomes.

Mass reconstruction projects utilising kits of parts may allow hundreds of houses to be built quickly, but they omit the majority of the activities that seed a resilient and sustainable community, and the design and layout often works against long-term development at such sites. Such houses often turn out to be 'long-term' transitional shelters — houses where people stay only until they can attain some alternative housing elsewhere. The extent of reconstruction required after wide-area disasters means partnering with beneficiary communities for design and construction, and perhaps scaling up of local production of materials and capacity building of the local labour pool can be a challenge; however, the long-term benefits of this option over mass DDR housing are inescapable.

Table 3—Projects revisited listed under case study title as defined in Schilderman and Parker 2014. (Case study findings are evaluated in more depth in the book).

Disaster or Risk Zone	Project	Agency	Case Study Authors
Gilgit-Baltistan region of Pakistan high earthquake risk zone projects since 1996.	A market-based programme to improve housing in the mountains of northern Pakistan — addressing seismic vulnerability	BACIP	Khan, N. A. & Parrack, C.
2001 Earthquake in Kutchch, Gujarat, India	India: Gandhi Nu Gam, an example of holistic and integrated reconstruction	Vastu-Shilpa Foundation and Manav Sadhna, non-profit organisations	Pandya, Y., Bista, P., Chandel, A. S., & Mangwani, N.
2004 tsunami Sri Lanka	Challenges for sustainability: introducing new construction technologies in post-tsunami Sri Lanka	Practical Action Sri Lanka	Parker, E., Asoka Ajantha, A., Pullenayegem, V., & Kamalaraj, S.
Cyclone exposed zones in Vietnam projects since 1989.	Reconstruction in Vietnam: Examples of the experience of DW France in Vietnam	DW France.	MacLellan, M., Blackett, M., Guillaume Chantry, G., & Norton, J.
2004 tsunami Aceh Indonesia	Integrated people-driven reconstruction in Indonesia	Urban Poor Linkage (Uplink) Indonesia	Meilani, A., Hafidz, W., & King, A.
1976 Guatemala earthquake	Guatemala: knowledge in the hands of people	Caritas Swiss & Caritas Guatemala	Rhyner, K.
	Honduras: La Betania, resettlement of a flooded neighbourhood		Rhyner, K.
1998 Hurricane Mitch Nicaragua	Nicaragua: reconstruction with local resources in an isolated region	Sofonios Nicaragua (SofonNic) & Casa De Los Tres Mundos (La Casa)	Rhyner, K.
2001 earthquakes El Salvador	A roof for La Paz: reconstruction and development in El Salvador after the 2001 earthquakes	FUNDASAL	Blanco, C., Rivera, A., Martinez, J., & Moring, J-M.
2007 earthquake Ica, Peru	Peru: building on the vernacular	Practical Action Peru	Schilderman, T. & Watanabe, M.

Acknowledgments

Our thanks go especially to all partners in the Global South who revisited projects, collected data and joined us for discussions that enriched us all.

References

Links to descriptors of each of the World Habitat Award short list projects who contributed to this project can be found here <http://www.bshf.org/home.cfm> (and follow the link to 'Looking back at reconstruction').

Adger (2003). *Building resilience to promote sustainability*. International Human Dimensions Programme (IHDP) Update 2. pp. 1-3.

Alexander, D. E. (2013). *Resilience and disaster risk reduction: an etymological journey*. *Natural Hazards and Earth System Science*. 13: 2707-2716.

Banerjee, S. B. (2003). *Who sustains whose development? Sustainable development and the reinvention of nature*. *Organisation Studies*, 24 (1) 143-180.

Bankoff, G. (2001). *Rendering the world unsafe: Vulnerability as a Western Discourse*. *Disaster Journal*. 25: 19-35.

Benson, C. & Clay, E. (2003). *Economic and Financial Impacts of Natural Disasters; An Assessment of their Effects and Options for Mitigation: A Synthesis Report*. Overseas Development Institute.

Blewitt, J. (2014). *Understanding Sustainable Development* (2nd Ed). Earthscan.

Cairns, J. (2004). *Future of life on Earth*. *Ethics in Science and Environmental Politics* Vol. 4. Available online.

Cutter, S., Barnes, L., Berry, M., Burton, C., Evans E. (2008). *A place-based model for understanding community resilience to natural disasters*. *Global Environmental Change* 18 (2008) 598-606.

Da Silva, J. (2010). *Lessons from Aceh. Key Considerations in Post-Disaster Reconstruction*. Practical Action Publishing.

Day, G. (2006). *Community and everyday life*. New York, Routledge.

Duyne Barenstein, J. (2013). *Communities' perspectives on housing reconstruction in Gujarat following the earthquake of 2001*. In Duyne Barenstein and Leemann (eds.) *Post-disaster Reconstruction and Change — Communities' Perspectives*, pp. 215-239.

Duyne Barenstein, J. and S. Iyengar, S. (2010). *India: From a culture of housing to a philosophy of reconstruction*. In: Lyons, M. and Schilderman, T., (eds.) (2010). *Building Back Better: Delivering People-Centred Reconstruction to Scale*. Rugby: Practical Action Publication, pp. 163-188.

Ford, J, K. & Schmidt, A, M. (2000). *Emergency response training: strategies for enhancing real-world performance*. *Journal of Hazardous Materials*. 28; 75(2-3): 195-215.

Freire, (2006). *Pedagogy of the Oppressed*. (30th Anniversary Edition). Continuum International Publishing. New York.

Grunewald, F., de Geoffroy, V. and Lister, S. (2000). *NGO Responses to Hurricane Mitch: Evaluations for Accountability and Learning*. HPN Paper 34, Overseas Development Institute, London.

Guzmán Negrón, E. (2010). *The long-term impact of short-term reconstruction work*. In Lyons M. and Schilderman, T. (eds.) *Building Back Better: Delivering people-centred housing reconstruction at scale*. Rugby: Practical Action Publication, pp. 307-343.

The World Bank's Independent Evaluation Group (IEG) (2006). *Hazard of Nature, Risks to Development: An IEG evaluation of World Bank Assistance for natural disasters*. The World Bank, Washington DC.

Jha, A., Duyne Barenstein, J., Phelps, P., Pittet, D. & Sena, S. (2010). *Safer homes, stronger communities. A handbook for post-disaster reconstruction*. The World Bank, Washington DC.

Kelman, I., Mercer, J., and Gaillard, J. (2012). *Indigenous knowledge and disaster risk reduction*. *Geography* Vol. 97.

Lankatilleke, L. (2010). *The Peoples Process: Viability of an International Approach*. In Lyons & Schilderman. *Build Back Better: delivering people-centred housing reconstruction at scale*. Rugby: Practical Action Publishing.

Lewis, J. and Kelman I. (2010). *Places, people and perpetuity: Community capacities in ecologies of catastrophe*. *ACME: An International E-Journal for Critical Geographies*, 9 (2), 191-220.

Manyena, S, B. (2006). *The concept of resilience revisited*. *Disasters*. 30(4): 433-50.

Mayunga, J, S. (2007). *Understanding and applying the concept of community disaster resilience*. Draft Paper available online.

Mercer, J. (2011). *Knowledge and disaster risk reduction*. In Wisner, B., Gaillard, J.C. and Kelman, I., editors, *Handbook of hazards and disaster risk reduction*. London: Routledge, pp. 89-100.

Mercer, J., Kelman, I., Taranis, L. and Suchet-Pearson, S., (2010). *Framework for integrating indigenous and scientific knowledge for disaster risk reduction*. *Disasters*, 34(1). 214-239.

Ozderem, A. & Bower, R. (eds.) (2010). *Participatory Research Methodologies: Development and Post-Disaster and Conflict Reconstruction*. Ashgate.

Ratner, B. (2004). *Sustainability' as a Dialogue of Values: Challenges to the Sociology of Development*. *Sociological Inquiry*. 74, 1, 50-69.

Schilderman T., & Parker, E. (eds.) (2014). *Still Standing? Looking back at reconstruction and disaster risk reduction in housing*. Practical Action Publishing.

Schilderman, T. (1993). *Disasters and Development: A case study from Peru*. *Journal of International Development* 5(4): 415-423.

Smit, B. Wandel J. (2006). *Adaptation, adaptive capacity and vulnerability*. *Global environmental change*, 16, (3); 282-292.

Sommerville, P. (2011). *Understanding Community: Politics, Policy and Practice*. Policy Press.

Wijkman, A. and Timberlake, I. (1984). *Natural Disasters: Acts of God or Acts of Man?* Earthscan, London.

Bibliography

Lyons, M., Schilderman, T., and Boano, C. (2010). *Building Back Better: Delivering People-Centred Housing Reconstruction at Scale*. Rugby: Practical Action Publishing.



Figure 43—EU-funded evaluation experts in action. Above: architect Mario Martelli during technical observations of house construction in progress in Killinochchi District. Below: Dr Skinner in focus group discussion with village community in Mulliyawalai, Mullaitivu District (Photos: Jaime Royo-Olvid, EU 2014)



5. An evaluation of EU, Swiss and Australian-funded housing reconstruction programmes in Sri Lanka: Lessons learnt and the way forward for community-driven programmes

Reinhard Skinner, PhD, sociologist and independent consultant

Mano Kumarasuriyar, PhD, architect and independent consultant

Mario Martelli, architect, independent consultant

Introduction

This article is based on the findings of three evaluations carried out by the authors of housing reconstruction programmes in Sri Lanka. This involved two missions, first in September 2014 the final evaluation of the 'Support to conflict-affected people through housing' programme (also known as AUP-2010) implemented from January 2010 to March 2014; and second in March-April 2016 the final evaluation of AUP-2010 and the mid-term evaluation of the programme 'Improving living conditions in returnee areas of Sri Lanka through housing' (or AUP-2012) implemented between January 2013 and was completed in June 2015. This article broadly summarised the author's publication Skinner et al., (2017).

Both programmes were funded by the EU's Aid to Uprooted People (AUP), regional facility under the Development Cooperation Instrument (DCI) for Asia with EUR 24 million, the then Australian Agency for International Development (AusAID now part of the Department of Foreign Affairs and Trade (DFAT)) with EUR 5.7 million and the SDC with EUR 5.5 million. In both programmes implementation was mainly undertaken by UN-Habitat and a smaller component by the Swiss Agency for Development Cooperation (SDC) acting both as donor and implementing partner.

The programmes used individual grants and technical assistance in a home owner-driven (HOD) reconstruction process with 'flanking measures' (i.e. minor allocations to livelihood support ranging from securing land tenure and community infrastructure to skills training for community building). The AUP-2010 targeted Sri Lanka's northern districts of Kilinochchi, Mullaitivu, Mannar and Vavuniya. AUP-2012 covered the first three as well as the eastern district of Batticaloa. By the end of the two programmes 37 435 individuals had benefitted from improved housing; this figure rises to 96 789 if infrastructure, training, land title regularisation and temporary employment are included (Skinner et al., 2015: 171 and 2016: 93).



Figure 44—Focus group discussion in Kilinochchi, 12 September 2014 (Photo: Mano Kumarasuriyar)

The methodology adopted for the study comprised documentary analysis, two household surveys totalling 964 beneficiaries and non-beneficiaries, 19 focus-group discussions, 50 semi-structured interviews, 36 case studies of households and 47 non-participant observations as an audit of the design and construction processes. This article summarises these evaluations, draws out the main successes and shortcomings of the two programmes and makes recommendations for future housing reconstruction programmes.

Beneficiary selection

AUP-2010, launched immediately after the end of the war in 2009, depended on local-level government officials for the identification and prioritisation of the most vulnerable among the target groups because of the urgency in resettling those languishing in refugee camps. Candidates were expected to submit several identification documents such as land deeds, national identification certificates and a recommendation letter from the GN (*gramasevaka niladhari* — head of the village). How many of these were required was at the discretion of the local official responsible for the selection.

The AUP-2012, on the other hand, attempted to introduce transparency and objectivity in the selection process through a scoring system borrowed from the Indian

Housing Programme (IHP). However, the new scoring system met with much criticism from the target community, both those who had been accepted and those who had not. Community sentiment expressed in many of the focus-group discussions was that all displaced people had the same right to benefit from the programme.

The scoring system discriminated against some of the most vulnerable such as those who had lost several family members in the war as they scored lower on the family size criterion.

Another anomaly is the non-acceptance of women over 18 as dependents when considering household size. Regional tradition holds that unemployed females, irrespective of age, are considered dependents until they leave home after marriage. The full evaluation report (Skinner et al., 2017) describes other contested features of the scoring system.

Figure 45—Single female-headed household in transitional shelter awaiting for assistance for permanent housing, September 2014 (Source: Mario Martelli)



Dependency

Lyons (2009, 395) compared owner-driven-programme (ODP) and donor-assisted-programme (DAP) approaches to post-tsunami housing in Sri Lanka and concluded that the latter produced dependency amongst beneficiaries.

... the DAP fostered a culture of dependency ... arising from long periods in transitional shelters with no active role for beneficiaries to play in the development of their own futures. In contrast, the ODP fostered (re)development of a cooperative local social fabric and institutions ... and created opportunity for integrated development (Cernea, 1997, 2000) ... and enhanced resilience of individuals and communities (Schilderman, 2004).

The AUP programmes adopted the ODP approach but ironically seem to have created the dependency of the DAP approach. The AUP programmes, except where implemented by the SDC, have not significantly promoted a cooperative social fabric or institutions nor created sufficient opportunities for integrated development. They have done the following:

- Bypassed existing CBOs in favour of village rehabilitation committees (VRCs) created specifically for the housing programmes which cannot be registered officially so do not represent an institutional future for communities' development.
- Implemented a settlement-improvement planning process whereby communities list their priorities but leave most unaddressed. Weak organisational structures mean communities are left with a list of priorities they do not know how to deal with. Focus groups reported they looked for external assistance to satisfy unmet needs.
- Adopted a sectoral approach too focused on housing rather than an integrated approach which would better develop resilience within communities ⁽²⁰⁾. Beneficiaries worry that they have insufficient income to cover daily expenses or repay the debts many had incurred as part of the housing process.

Indebtedness

High level of indebtedness ⁽²¹⁾ amongst AUP beneficiary households is of great concern as it increases households' vulnerability to economic shocks. Debts to such levels can be attributed to strong demand for loans to top up the grant assistance provided by the housing programmes and an even stronger and aggressive supply source in the districts where the AUP and other housing programmes are operational.

⁽²⁰⁾ This sectoral approach was a response to conditions made by the EU which required the programmes to prioritise housing. There are 'flanking measures' (e.g. community infrastructure) in the programmes but they have been small compared to those made in housing.

⁽²¹⁾ 68 % and 83 % in the two AUP programmes respectively phases I and II (Skinner et al., 2017).

On the demand side, beneficiaries tended to increase expenditure on construction by modifying overall dimensions and/or upgrading floor, window and door materials well beyond what had been provided for within the AUP grant. Such expenses could only be met through borrowing. The obvious benefits of moving from a refugee camp environment to a higher-quality residential environment have stimulated such extravagances with insufficient regard to long-term consequences. Income to repay debts is restricted by wage earners in beneficiary households by their having to devote their time and efforts to the construction of their houses and thereby forego casual earning opportunities. On the supply side, commercial banks, traders in construction materials and moneylenders have all found the housing programmes to be a huge boon to their businesses. A Central Bank of Sri Lanka study ⁽²²⁾ confirms a phenomenal growth in banking and lending businesses during the period the housing programmes have been implemented in the Northern and Eastern provinces.

It is recommended that financial literacy training be built into donor-funded, 'owner-driven' housing programmes. Furthermore, the government and the banking sector should facilitate the release of non-exploitative and collateral-free housing loans to beneficiaries in order to prevent moneylenders from exploiting them.

Livelihoods and training

When they were uprooted many people lost their livelihoods and the assets they had accumulated over generations. Having settled back on their own land with almost nothing but the housing assistance from the AUP programmes, they struggle to start afresh. Most are totally dependent on casual daily wages, when available, for their day-to-day living expenses. Under such circumstances, a grant for the construction of a full house to replace the house lost in the war or to repair a partially damaged house is received with immense gratitude. However, the housing programmes may also cause substantial financial stress on beneficiaries: the time and effort that beneficiaries contribute towards house construction prevent them from engaging in casual wage labour, which in turn pushes them into indebtedness, as mentioned above. When house construction has been completed they are free to engage in gainful employment but then a significant proportion of the income earned goes towards paying off debts.

⁽²²⁾ See Financial Times Sri Lanka (2015). North beats Western Province in banking density. 6 Jan 2015
<http://www.ft.lk/front-page/north-beats-western-province-in-banking-density/44-380193>



Figure 46—Case study being carried out in Kilinochchi, 12 September 2014 (Photo: the authors)

Since the commencement of the two AUP programmes, there has been a strong effort to provide training in masonry, carpentry and other vocations to members of beneficiary households. However, the serious shortage of skilled labour in the target villages, on the one hand, and the fact that households are struggling to make ends meet, on the other, suggests that the skills-training programmes being implemented have fallen short of expectations. In order that future housing programmes mitigate the stressful financial experiences of the target groups, adequate and appropriate consideration needs to be given to the livelihoods of beneficiaries drawn into the programmes. Skills acquired and/or household/community-based enterprises established would then ensure that the housing programme goes well beyond mere provision of a shelter.

The participatory process

In both the AUP-2010 and AUP-2012 programmes the evaluations found significant beneficiary participation in (i) the design and construction of their houses, (ii) the voluntary construction of other houses in the village and (iii) the overall planning and implementation of the programmes or community infrastructure.

The grant of 550 000 LKR towards a 550 sq. ft. house was intended to be complemented by a beneficiary labour contribution of up to 120 000 LKR. However, not

all were in a position to provide labour, such as disabled and aged beneficiaries who had no family members. In such instances, the VRC played a significant role in coordinating voluntary inputs from other village members.

Approximately 75 % of beneficiaries in both the AUP-2010 and AUP-2012 programmes considered their overall participation was 'great' or were highly satisfied with their involvement.



Figure 47—Annaluxmi Ramalingam of Akkarayankulam, Kilinochchi. (Photo: the authors)

Incremental housing

For future housing programmes to meet the remaining reconstruction needs²³ and to reach the maximum number of households, housing costs need to be reduced. The authors recommend reducing the amount of housing grants. Smaller grants would mean that they do not cover the costs of a complete house but only the initial construction of an expandable or 'incremental' house, as shown in the plans below. Three alternative house types are presented. The plans shown here are in no way prescriptive. We propose these designs to stimulate discussion in Sri Lanka on appropriate incremental house designs which will consider building regulations and cultural determinants such as *Vashtu Sasthram* which establishes auspicious and inauspicious features of a house. The 264 sq. ft. type plan consists of one bedroom, a living room, a kitchen with chimney and attached, an external toilet.

(²³) It has been estimated that when both the EU- and the Indian-Government-funded housing programmes have ended, there will remain at least 40 000 houses in need of repair or rebuilding.

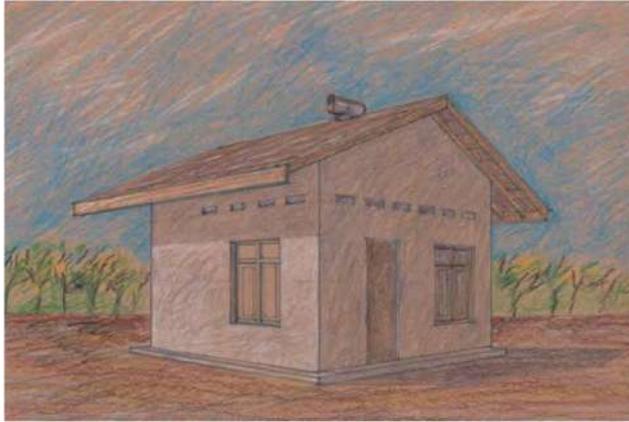


Figure 48—Proposed type 1 house 264 sq. ft. — perspective, plan, section, elevations.
(Source: by Mario Martelli in Skinner et al., 2017 p.195)

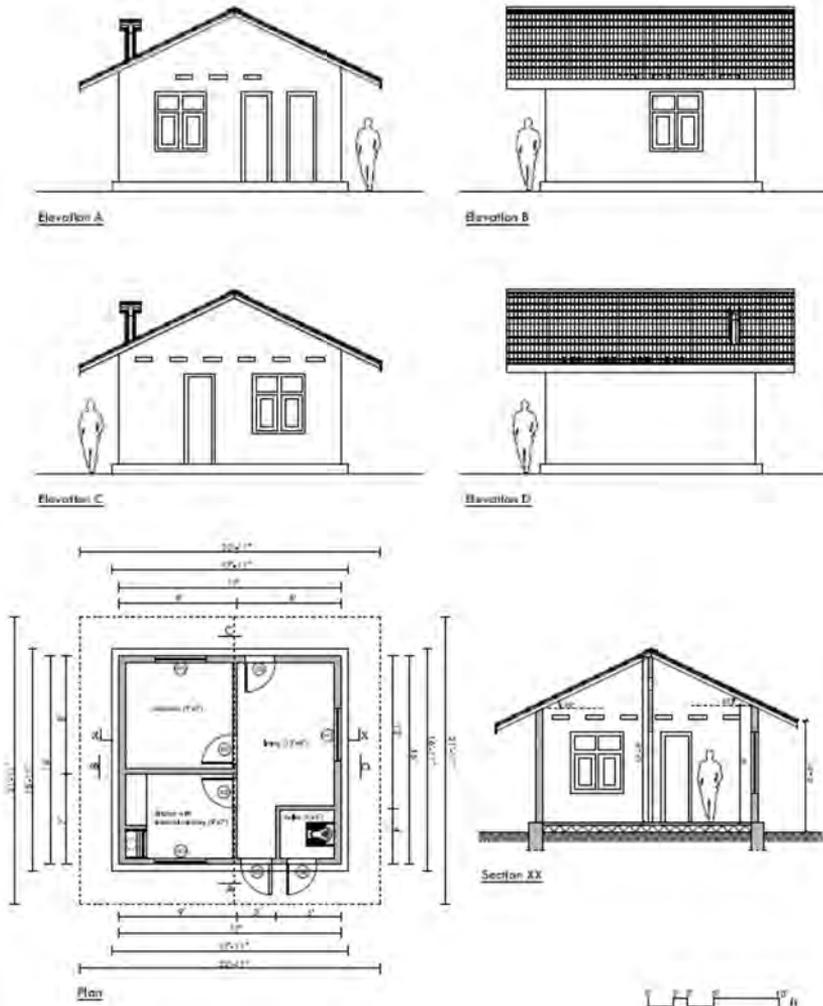
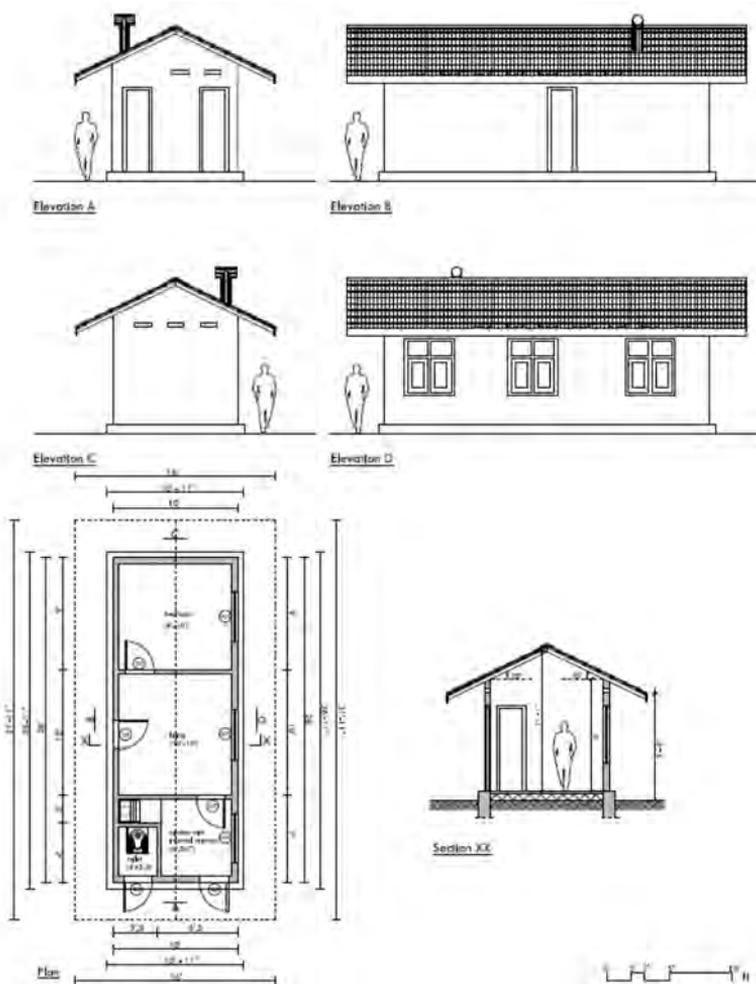




Figure 49—Proposed type 2 house 276 sq. ft. with separated rest area and kitchen – perspective, plan, section, elevations.
(Source: by Mario Martelli in Skinner et al., 2017 p.196)



The 361 sq. ft. type plan can flexibly incorporate beneficiary preferences such as closing the veranda for more storage space or leaving it open as an external roofed space for livelihood purposes (as shown below).

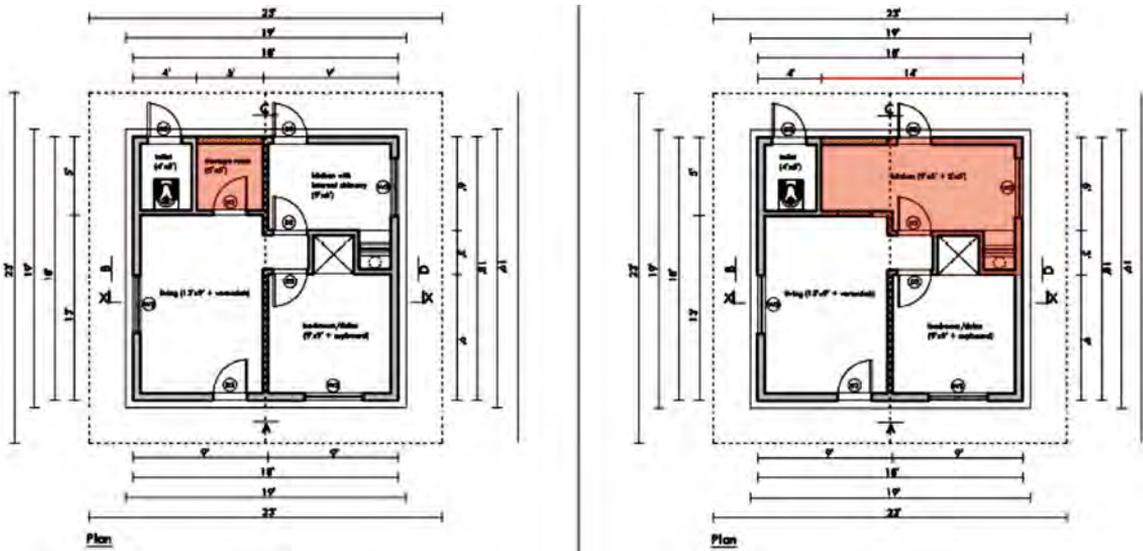


Figure 51—Proposed variation of type 3 house 361 sq. ft. – potential internal modification, according to household preference (Source: by Mario Martelli in Skinner et al., 2017 p.198)

Both the 264 sq. ft. and 276 sq. ft. type plans would cost some 350 000 LKR, and the 361 sq. ft. plan around 450 000 LKR ⁽²⁴⁾. This compares with the AUP-2012 grants of 550 000 LKR. The 276 sq. ft. type plan can be expanded to 451 sq. ft. (one more room and a veranda) as shown below.

⁽²⁴⁾ Further cost reductions are possible through family member labour contributions, use of local resources (trees, sand) or bulk purchasing and recycling of materials.

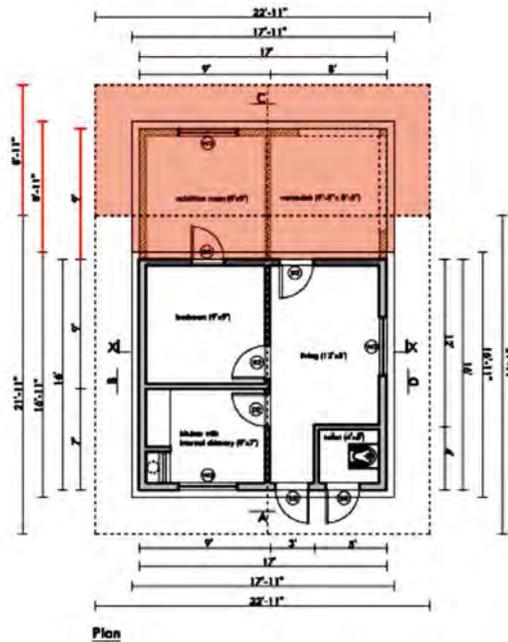


Figure 52—Type plan 276 sq. ft. potential incremental growth
(Source: by Mario Martelli in Skinner et al., 2017 p.199)

Sustainability

We identify five types of sustainability ⁽²⁵⁾:

- (1) financial (attained through funding in the short term and affected by income and debt in the long run);
- (2) institutional (delivery of benefits and maintenance is taken up by government);
- (3) environmental (natural resources are managed so they continue to be available to produce benefits);
- (4) technical (continued availability of technical skills);
- (5) social (benefits are 'owned' by beneficiaries).

The following figure shows how these types of sustainability apply to the AUP programmes:

⁽²⁵⁾ Sources: WASH, LinkedIn online, numerous discussants; Roberts & Williams, 2008.

Table 4—Types of sustainability in the evaluated housing programmes (Source: the authors)

Sustainability type	Applicability of type to AUP-2010 and AUP-2012
Financial	Homeowners value their new houses and are likely to maintain them, though not the community facilities, as far as low incomes and indebtedness allow.
Institutional	Sustainability of community assets, such as roads and pre-schools, is in doubt as local authorities struggle with limited financial resources ⁽²⁶⁾ .
Environmental	The programmes are environmentally sustainable. One-time damaging sand quarrying and illegal logging in Kilinochchi are under control.
Technical	The construction technology is replicable using local skills. Homeowners can build for themselves or others in the village or outside. However, the main demand for their service is limited to the life of the programme ⁽²⁷⁾ .
Social	Homeowners expect the maintenance of community facilities to be carried out by government, donor programmes or NGOs. VRCs will have little role in sustaining programme benefits. They were established solely for the programme and lack legal recognition.

Sustainability has been insufficiently developed in the programmes and it is likely to be limited.

Conclusions and recommendations

There are many positive features of the AUP programmes such as the following.

- (1) High beneficiary satisfaction (66.9 % of beneficiaries of AUP-2010 and 87.6 % of AUP-2012 felt their living conditions had improved greatly through the programme).
- (2) A high level of homeowner participation, especially in construction.
- (3) Women's participation, especially in the implementation and management of the construction process and leadership of the VRCs.
- (4) Social relations between community members have been improved according to more than 75 % of AUP-2010 beneficiaries and 90 % of AUP-2012 beneficiaries.

⁽²⁶⁾ It is intended that community infrastructure be handed over to district councils, divisional secretariats, zonal education offices and communities who have few financial resources.

⁽²⁷⁾ The mid-term evaluation also concluded that 'most of the beneficiaries will not use their basic construction skills after their house is completed, as they will attend their main livelihood activities, such as fishing and agricultural work' (Meindertsma et al., 2012: 57-58)

However, the HOD model has failed to overcome, and might have in certain cases exacerbated problems of unsustainable indebtedness, dependency, low sustainability of community and possibly of individual assets. Homeowners focus on individual advancement and, together with unmanageable debts and weak CBOs, this may lead to low sustainability. The following figure presents this graphically.

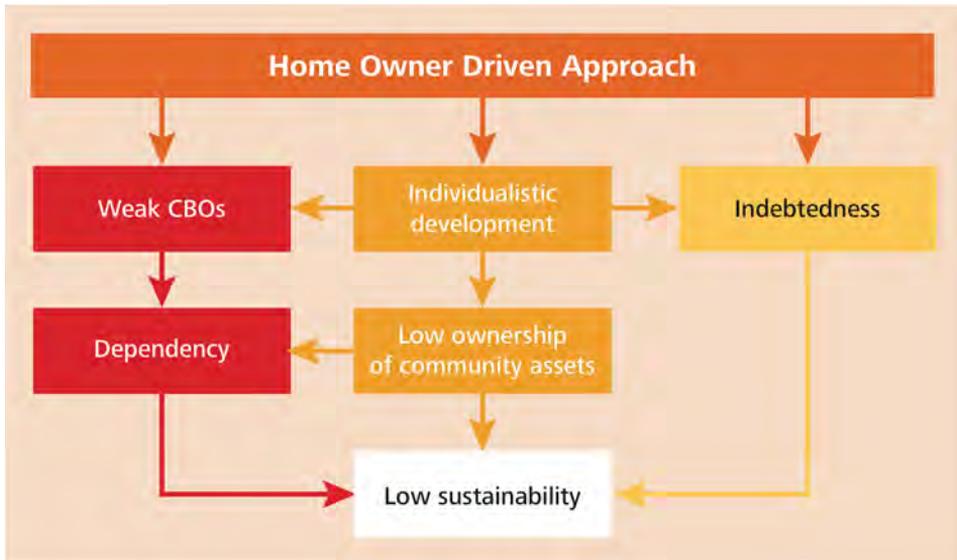


Figure 53—The Interconnected Process of the HOD approach, indebtedness, dependency and low sustainability (Source: Skinner et al. 2017. p.71)

The authors recommend a community-focussed integrated rural settlement development approach which combines housing assistance with significant livelihoods and micro-enterprise components. Livelihood training leads to greater earning potential, relieving the pressure to incur debt while strengthening existing (legally recognised) CBOs is a step towards community ownership and maintenance. Another aim of the integrated, community-driven approach is to allow all families to benefit and not only some. This requires a combination of lower-cost construction for the poorest, incremental housing and lower-cost alternative materials. If this is coupled with part-granting (rather than full grants as at present) the savings could be invested instead in livelihoods programmes. In this way we believe that future housing reconstruction programmes can build on the strengths and successes of these two excellent programmes and take full advantage of the lessons they have produced to provide decent housing, standards of living and sustainable futures for rural uprooted people in Sri Lanka. The following figure depicts the logic behind this.



Figure 54 The Relationships between the Community Driven Approach, indebtedness and sustainability (Source: Skinner et al. 2017. p.71)

References

- Cernea, M. M. (1997). *The Risks and Reconstruction Model for Resettling Displaced Populations*. World Development, 25(10), 1569-1587.
- Lyons, M. (2009). *Building Back Better: The Large-Scale Impact of Small-Scale Approaches to Reconstruction*. World Development, 37:2, 385-398.
- Meindertsmas, J.D. and C. Nixon (2012). *Mid-Term Evaluation of the Programme 'Support to Conflict-Affected People through Housing in Sri Lanka'*, August.
- Roberts & Williams (2008). *Sustainability of Services for Young Children and Their Families: What Works?* Australian Research Alliance for Children and Youth, West Perth. Available from: <https://www.aracy.org.au/>
- Romeshun, K. V. Gunasekera and M. Munas (2014). *Life and Debt. Assessing Indebtedness and Socio-Economic Conditions of Conflict-Affected Housing Beneficiaries in Jaffna, Kilinochchi and Mullaitivu Districts*. Colombo: CEPA. Study Series, No.7.
- Schilderman, T. (2004). *Adapting Traditional Shelter for Disaster Mitigation and Reconstruction: Experiences with Community-Based Approaches*. Building Research and Information. 32(5), 414-426
- Skinner, R., Kumarasuriyar, M. and Martelli, M. (2015). *Evaluation of the EU-funded Housing Reconstruction Programmes in Sri Lanka Implemented by UN-Habitat*. IBF Intl Consulting, STEM-VCR and BAa Consultants.
- Skinner, R., Kumarasuriyar, M. and Martelli, M. (2017). *Evaluation of the EU-Funded Housing Reconstruction Programmes in Sri Lanka under the EU's Regional Facility – Aid to Uprooted People (AUP) 2012 and 2014*. Publication's Office of the European Union. Available from: <https://publications.europa.eu/en/publication-detail/-/publication/dbe69ba0-4c1f-11e7-aea8-01aa75ed71a1>
- WASH Alliance International (2016). *Financial, Institutional, Environmental, Technological and Social (FIETS) Sustainability Approach and Principles*. Available from: <https://wash-alliance.org/our-approach/sustainability>



Figure 55—Local home-owner being trained in rat-trap brick masonry construction by HTG in Veerapagupathy village, Tamil Nadu, India (Source: Jaime Royo-Olvid, 2005)

6. Reaping the benefits of incremental owner-driven housing: Seven years after the post-tsunami reconstruction of Veerapagupathy village, Tamil Nadu, India (2005-2012)

Jaime Royo-Olid, Ludovic Jonard, Tiago Vier and Jordi Sánchez-Cuenca, volunteer architects; Margot Ehrlich, volunteer social anthropologist and Jerome Skinazi, project officer, all working for *Architecture & Développement* in 2005-2006

Abstract

This article describes how a “reconstruction for development” programme, led by the non-governmental organisation *Architecture & Développement*, built around a partnership of French and Indian organisations supported a holistic approach to post-tsunami incremental housing in coastal Tamil Nadu, India. The programme focused on establishing gender-sensitive baselines and on awareness raising on intermediate technologies to prepare the grounds for owner-driven interventions favouring the use of locally-sourced materials and cost-effective construction methods. This project involved 57 families constituting most of Veerapagupathi village which had been wiped out by the 2004 tsunami. Seven years after reconstruction, about half the houses had been expanded incrementally. The construction skills that homeowners acquired during reconstruction permitted numerous house extensions and in at least two cases had constituted a source of income since reconstruction. Most house extensions required additional funding which was provided for from owner’s income. The original house designs proved to be instrumental in accommodating these extensions. Only a few houses remained as originally built. This case study illustrates ways in which capacity building in reconstruction skills can benefit homeowners in the long-run and how preparing house designs to accommodate future incremental growth offers opportunities for development years after reconstruction has been completed. The project was identified as best practice in post-tsunami reconstruction by UNDP India in 2008.

Introduction

By 4 January 2005, only ten days after the tsunami, the Indian state of Tamil Nadu had already issued a framework agreement permitting NGOs to partner with the State to facilitate people’s permanent relocation. This partnering was prompt and successful in the provision of shelter and sanitation facilities but slower and limited in the reconstruction of permanent habitat. The politics of resettlement added to the pre-

existing tensions around power relations between land owners and lower caste communities such as Dalits ⁽²⁸⁾.

Further, in the area of Kanyakumari, the south most tip of India, two opposing lobbies quickly mobilised their resources to advance their own development plans: one sector favouring the mining of thorium as an alternative nuclear energy fuel and another sector favouring the development of seaside tourism. The tsunami had wiped out entire settlements of communities along the coast some encroaching on public land and others rightfully living there. The tourism sector had rebuilt and beautified the beaches around Kaniyakumari in less than half a year after the tsunami and the mining sector had accelerated thorium extraction efforts. The State also reinforced the implementation of a coastal buffer zone. And for both industrial lobbies, facilitating the resettlement of communities further inland became a priority. This might explain the rapidity with which many communities found alternative land to resettle relatively rapidly. These lands were either sponsored by private donors or facilitated by the State. The allocation of land, even if further inland, was convenient for communities that were not directly involved in

Figure 56—Members of Veerapagupathi in and around community shelter built by Oxfam after the tsunami
(Source: Jaime Royo-Olid, August 2005)



⁽²⁸⁾ Newspaper Le Monde: Les femmes et les basses castes laissées-pour-compte de l'aide aux victimes du tsunami. Also the Development Planning Unit's July 2005 report on post-tsunami recovery underlined the exclusion of Dalits in the process.

fisheries, since for them proximity to the sea was not so important. But certain fishing communities saw this as a form of eviction in disguise causing unrest and violent opposition. After the post-emergency phase, once development agencies took over, usual challenges in securing land-tenure had been resolved in spite of the magnitude of operations.

The programme the authors of this paper volunteered for had to be sensitive to the local politics to stand a chance of reaching the most vulnerable people. Therefore, it was considered wise to link international donor finance and expertise with a multidisciplinary partnership of well-established local grassroots organisations. This materialised in the establishment of a Reconstruction for Development Centre (RDC), coordinated by the French-Indian NGO *Architecture & Développement* (A&D) and the Centre for Education and Documentation (CED) Bangalore. A&D and CED were on a partnership established thanks to a European Union-funded programme called *Be!Sharp* ⁽²⁹⁾. The RDC also involved two other French and nine other Indian organisations ⁽³⁰⁾.



Figure 57—Logo of the Reconstruction for Development Centre
(Source: Jaime Royo-Olud, project report 2005)

The reconstruction for development programme itself was mainly funded by the *Fondation de France* and the French Red Cross including some contribution from the RDC members. The programme was conceived along three lines: 1) a general capacity-building component to creating habitat holistically; 2) technical assistance for building specific

⁽²⁹⁾ Be!Sharp stood for project titled Built environment and Sustainable Habitat Partnership funded by the EU-India Economic Cross Cultural Programme – a programme dedicated to Media, Culture, Enterprise & University networking between Europe and India.

⁽³⁰⁾ French NGOs: Association pour le Développement Economique Régional (ADER), Handicap International (HI). Indian organisations: Youth for Unity and Voluntary Action (YUVA), Housing and Land Rights Network (HLRN), Tamil Agricultural Labourers Movement (TAMLM), Institute for Social Education and Development (ISED), National Centre for Labour (NCL), Habitat Technology Group (HTG), Biotech, Energy Conservation Society, College of Engineering: Consultancy Cell.

buildings through an owner-driven reconstruction approach; and 3) pilot reconstruction projects such as Veerapagupathi, which is the main one described in this article.

Carefully building partnerships to ensure local acceptance and use of well-established expertise

The areas of intervention, along the coast of South India, were home to four main distinct community ideological tendencies: the Gandhian or *Sarvodaya*, Marxist, religious and eclectic. ⁽³¹⁾ Around Kanyakumari we found a plethora of affiliations to diverse Hindu gurus but none as prominent as *Sri Mata Amritandanandamayi* ('Amma' or the 'hugging mother'). Amma's organisation was channelling a charitable contribution of USD 25 million for tsunami reconstruction, a clear local alternative to the State and overshadowing Community Based Organisations (CBOs). The RDC had to be aware of the implications of partnering with different organisations in view of not only ensuring acceptance by end-users but also to ensure coherence with local development politics. After careful deliberation, the RDC came together as a partnership of grassroots NGOs of a Marxist orientation such as Praxis and ISED (the Institute for Social Education and Development). These had the most support among the communities concerned in so far as they had tens of thousands of members since the 1970's and were based on collective rights movements rather than on charitable groups associated via spiritual dogma. ISED acted as a labourers' union and Praxis focused mainly in creating solidarity groups. These organisations had long defended farmers and fishermen's community rights and promoted land reform that took account of their grievances.

Of the RDC's participant organisations, the Orissa Development Technocrats Forum (ODTF) and Habitat Technology Group (HTG) provided technical assistance. ODTF was a 'spin-off' of UNDP super cyclone team with strong experience in housing post-disaster reconstruction. HTG was registered as a charitable society committed to green and humane architecture. It had been founded by architect Gopalan Nair Shankar who had trained under eminent architect Laurie Baker. Laurence Wilfred Laurie Baker, born in Britain but established in India, mainstreamed the use of local construction materials to achieve both cost-efficiency and low environmental impact in Kerala. We benefited from Laurie Baker's construction guides thanks to the Centre of Science and Technology for Rural Development (COSTFORD) established in Trivandrum which he had co-founded back in 1984. HTG had, by the early 2000's, promoted thousands of low-cost houses in Kerala and Tamil Nadu using COSTFORD technologies. In Nagapattinam, closer to Chennai, architectural practice ARTES (Centre for Human Settlements), partnered with the commercial giant Tata, which participated on a not-for-profit basis.

⁽³¹⁾ Gudakesh, Development Ideologies of NGOs, Development Alternatives, 1 January 1995.



Figure 58—Publicity of Amma (the ‘hugging mother’) in post-tsunami houses reconstructed through her foundation, India (Source: Jaime Royo Olid 2012)

Ensuring acceptance of project design can be a project on its own right

By July 2005, ISED and Architecture & Development-India (A&D’s local chapter) had organised a series of training workshops used to establish a ‘baseline study’ involving women from a dozen fishing villages. These fora focused on women’s understanding of what constitutes a good habitat, considering the particularities of their livelihoods, rights and aspirations. A two-day workshop on ‘what constitutes an adequate living environment’ became a reference for later assessment of progress, as carried out by both providers and end-users.

When it came to proposing building types and implementing their construction, the RDC saw its task as offering tailored solutions to households' needs in contrast to the standardised models of housing made available by other agencies. The technical specifications set out by the government in early 2005 implying a minimum of Indian Rupees (INR) 150,000 (about EUR 2,600) per house made the standard model widely unaffordable. Therefore, the ODTF building on its expertise proposed cost-estimates for less at various reconstruction sites. And HTG were originally able to build houses for less than INR 100,000 in Veerapagupathi. Apart from costs, it was proposed using locally-sourced materials so that a greater share of expenditures would go into the local economy as opposed to imported materials. Further, through the use of appropriate construction techniques, reconstruction could also be suited to the climate while saving material. Later, cost increased substantially. Government's standard houses became more than INR 220,000 but some NGOs' including our consortium managed with some INR 165,000.

Figure 59—Training programme for baseline study organised by ISED and supported by A&D
(Source: Jaime Royo Olid, 2005)



One of the main factors differentiating the cost were the construction methods proposed as normative for post-tsunami reconstruction by institutions. The most significant unnecessary cost pertained to reinforced concrete slab houses, which in effect, failed to reflect the diversity of intermediate technologies more adequate to particular villages. In this spirit, the RDC set out to mediate between the inaccessibility of certain standards and the availability of technologies to users and of know-how by reproducing cartoons (e.g. Laurie Baker's construction illustrations), posters and diversified packages of instructional material.

A&D was the technical lead NGO. It was committed to preventing any experimentation upon people. Although we were to use alternative construction methods, these were well-established. No one likes uncertainty nor too much innovation

Figure 60—Tsunami victim and social-anthropologist discussing on expectations for house reconstruction
(Photo: Jaime Royo-Olid, 2005)



when it comes to one's own housing, the most important life investment for most people. Architect Ludovic Jonard, founder and director of A&D, had already facilitated appropriate technology transfers in many villages in India and in Morocco. And as per his experience, the key of acceptance involved taking the necessary time to inform homeowners about the advantages and demonstrating the robustness of real-life examples. In India, cinema and theatre were useful means to reach out to rural communities. Therefore, performance and projections of films were instrumental for engaging communities with alternative modes of development. Long before reconstruction started, A&D ran multiple sessions in community centres explaining the difference between relying on local construction supply chains and on importing materials would generate local jobs and that in turn would benefit them. Visuals, music, and performance helped people of different ages to rapidly understand the benefits of favouring the local economy. Communities remained sceptical, however, about the durability of alternative construction techniques until they tested them themselves.



Figure 61—*Architecture & Développement* (A&D) and the Institute for Social Education and Development (ISED) explaining to tsunami victim communities in Nasapattinam District, Tamil Nadu, the benefits of using locally-sourced granite stone for house foundation works.

(Source: Tiago Vier, 2005)



Figure 62—Habitat Technology Group head engineer demonstrates rat-trap bond with bricks to community.
(Source: Jaime Royo Olid 2005)

Taking time to explain appropriate construction techniques: rat-trap bond and filler slab

As with choice of materials, construction methods also require acceptance and A&D used scenic gatherings such as community demonstration sessions as a vehicle for sensitisation. Two technologies were found to provide best value for money: rat-trap bond and filler-slab. Engineer Naveem from HTG had already supervised the construction of some 5,000 low-cost houses using rat-trap bond in Kerala.

Rat-trap-bond had been mainstreamed by Laurie Baker since the 1980s. It was therefore not an innovative technique though new to many people. This technique consists in rotating bricks by 90° around its longitudinal axis. By leaving a gap (the size of a rat-trap) walls are lighter (less dense) hence thermally cooler and up to 30% of material and costs can be saved. The gaps also allow to cast steel-reinforced cement columns through the wall gaps when necessary, making houses more resistant to earthquakes while preserving the uninterrupted aesthetics of the brick wall surfaces.

Filler-slabs use the structural properties of undulating Mangalore tiles with thin steel reinforcements to cast a concrete slab as thin as 14 inches. Filler-slabs produce lightweight flat roofs that are water proof and resistant enough to further build an additional floor on top. But would anyone trust that a wall and a roof with 'gaps' will be better than the conventional all-solid elements? Were the advocates of this technologies not just trying to fool the beneficiaries?

Local community masons were trained in both rat-trap bond and filler slabs. Despite all efforts, a couple of home-owners still decided to fill the rat-trap gaps with cement. While they had been advised against it, it was important that they be free to do it (within reason) at their own cost. Later, one of these owners admitted he realised it was unnecessary to fill the gaps. Both he and the community got proof of concept. A few built in standard brick bonds. Again, owner-driven reconstruction to be owned required them being convinced.



Figure 63—HTG head masons and local community trainee build post-tsunami house with rat-trap bond over local granite foundation. (Photo: Jaime Royo Olid, 2005)

Customising houses through owner's informed choices

In parallel to sensitising the community of intermediate technologies, we prepared the grounds for their members to convey their preferences on house designs. It is important to note that, while participatory, the sessions on house design choices were not free from conflict. On occasion, engineers refused to join, either because of caste tensions (though this was denied) or some recalcitrance on either side. Local engineers' reluctance perhaps derived from their opinion that some applicants were not legitimate in seeking aid. Of perhaps eighty families who presented themselves for assistance, some thirty or so might not have suffered directly from the tsunami. On the other hand, many were either multi-dimensionally poor already or became poor as consequence of the wider economic damage caused by the disaster. The notion of tsunami 'victim' was therefore contested and ultimately social cohesion and fairness had to be considered on a case by case basis. On a more positive note, the participation of women conveying their ideas was significant. The preparatory workshops that had focused on women, had helped build their trust and confidence in expressing their ideas. Other households had choices decided upon by the village-chief on their behalf.



Figure 64—Preliminary consultations on the reconstruction site with community, CBOs, engineers and social anthropologist
(Source: Jaime Royo-Olvid 2005)

Funding being limited, people had to prioritise what to build with the grant money and what they would leave out. Following a detailed costing exercise with the engineers and consultations with the community, some unexpected choices were made. For instance, some families considered building a staircase more valuable than a latrine. This was a way they could easily access the roof where they would protect their fish while sun-drying. The source of livelihood being their priority, they explained they would later invest themselves in building a latrine. Families with young daughters preferred latrines attached to the core house for safety reasons. Non-fishing households with sons preferred latrines separated from the core house. And households who aspired to own a little shop preferred extra foundations on which they could later build their shop front. The location of the kitchen also varied. Some would simply cook outdoors, others wanted to locate it according to *Vastu* principles. There is no way any designer could have ever guessed the range of choices that people made. The key was to keep one's ears open, because people knew many things we the 'experts' simply could not know.



Figure 65—House as originally built based on owner's configuration choices.
(Source: Jaime Royo Olid 2012)

Figure 66—A&D's architect Tiago Vier explains the potential choices of building typology for each family
(Photo: Jaime Royo-Olid, 2005)



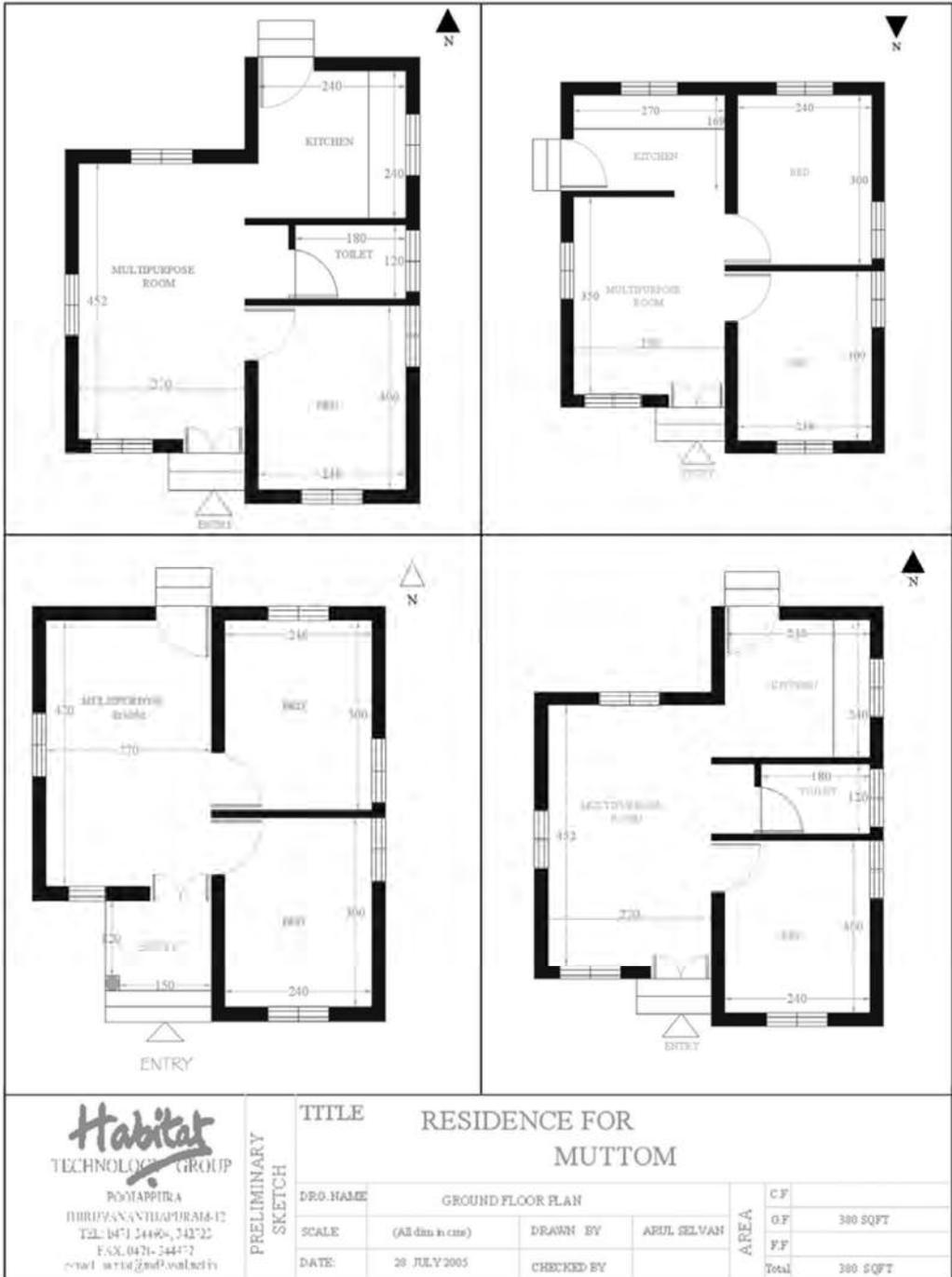


Figure 67—Four generic house types developed following consultations with future owners. (Source: Habitat Technology Group 2005)



Figure 68—Street view in Verapagupathi in 2012 where houses have each mean expanded in personal ways
(Source: Jaime Royo-Olid)

The exposed brick house below shows a house-type in 2012 unchanged since 2005. The white house, in contrast, shows the same house-type after various vertical and horizontal expansions as well as beautification. Some house expansions in Veerapagupathy can be attributed to the skills acquired during reconstruction. Other expansions simply reflect the household's wealth for different reasons. It is important not to exaggerate the extent to which construction skills can generate income. Nonetheless, an underlying lesson is that a participatory architectural design process can embrace the potential for development by first building on owners' preferences, ideally resulting from people's informed choices and by facilitating alternative paths of incremental growth.

Figure 69—Above: Original house type unchanged in 2013. Exposed rat-trap bond and filler slab. Below: Same house-type after various vertical and horizontal expansions. (Photos: Jaime Royo-Olid, 2012)



In 2013, Veerapagupathy village home owners qualified their houses as thermally comfortable, something that could be attributed to the shade provided by palm trees that were deliberately preserved during construction and to the relatively low-thermal inertia of rat-trap bond and filler-slab construction. The lighter the structure, the less heat would accumulate and less would radiate during early night hours. In contrast, some two hundred metres from Veerapagupathy village another housing scheme lays vacant. Locals argued that the houses were so hot it was too uncomfortable to sleep indoors. This was the result of using more massive reinforced concrete roof slabs and not using shading. Each of these house units was larger and probably double to triple the investment cost of those in Veerapagupathy but had none of the features that had humanised the housing process. They were all identical, generic and thus uninhabited.

Figure 70—Abandoned post-tsunami houses allegedly due to poor thermal comfort and lack of consideration for owners' demands (Photo: Jaime Royo-Olvid, 2012)



Conclusions

UNDP India (2008) described the Veerapagupathy housing scheme as a best-practice in post-tsunami reconstruction for its cost-efficiency and use of appropriate materials as an effective means “to empower the local community”. Additionally, an evaluation by Nomadeis (Dangaix and Sellier, 2012) qualified the sensitisation of homeowners as exemplary and underlined that 80% of the project investments benefited the local economy. In our view, another important feature is the extent to which houses spatial configurations allowed for incremental expansions despite the small size of the plots.

The wider than usual ‘reconstruction for development’ approach shows how balancing public support with communities’ self-help and, where appropriate, local private interests can be beneficial. The closer in time to a disaster, the more important public support is. But as times passes, and public aid vanishes, it is useful to put more emphasis on the self-reliance of communities and on the capabilities of local governing structures. The success of Veerapagupathy village and the failure of the nearby scheme illustrate these differences. While reconstruction is unlikely to become a long-term livelihood source, it can nonetheless contribute to local economic recovery in the mid-term. Hence, as inflation of materials rises, it is worth investing on locally-sourced material production that can ease rising costs, generate local employment and reduce dependency on imports.

Figure 71—Veerapagupathy village entrance shows each house has been personalised (Source: Jaime Royo-Olid, 2012)



Bibliography

Baker, L. (1988, 1993, 2014). *Laurie Baker's Brickwork*. Published by the Centre of Science and Technology for Rural Development (COSTFOR), Trivandrum.

Buckley, R. M. and Kalarickal, J. (eds) (2006). *Thirty years of World Bank Shelter Lending: What have we learned?* The World Bank Group, Washington DC.

Dangaix, D. and Sellier, D. (2012) *Bâti vernaculaire et développement urbain durable: Rapport Final Mai 2012*. Report produced by Nomadéis, Arene Île de France.

Royo-Olid, J. (2006). *Developmental Approaches to Humane Habitat: from basic needs to capabilities*. MPhil dissertation in Development Studies, University of Cambridge, UK.

Royo-Olid, J. (2005). *Be!Sharp Monthly Report N°1, Exchange programme for young professionals between EU and India. Architecture & Développement*.

Salas Serrano, J. (2000). *La Industrialización Posible de la vivienda Latinoamericana*. Escala. *Tecnologías para vivienda de interés social*. CYTED. Madrid.

UNDP India (2008). *Tsunami: Lessons for Habitat Development*. New Delhi, pp. 59-62.

Figure 72—Veerapagupathi house construction in progress. Locally-sourced granite foundation and rat-trap bond brickwork being constructed by homeowners. (Source: Jaime Royo Olid, 2005)



Figure 73—Returnee by his war-damaged house in PTK, Mullaitivu district after freed from Menik Farm camp. (Source: Jaime Royo-Olid, EU 2012)



Figure 74—Photo album just dug out of the garden with pictures of family members lost during war, PTK, Mullaitivu district after freed from Menik Farm camp. (Source: Jaime Royo-Olid, EU 2012)



PART III

OWNER-DRIVEN APPROACH IN CONTEXT

Figure 75—Female-headed household receiving EU-funded assistance from UN-Habitat after their war-damaged house was destroyed by an elephant attack, Batticaloa district.
(Photo: Jaime Royo-Olid, EU 2013)

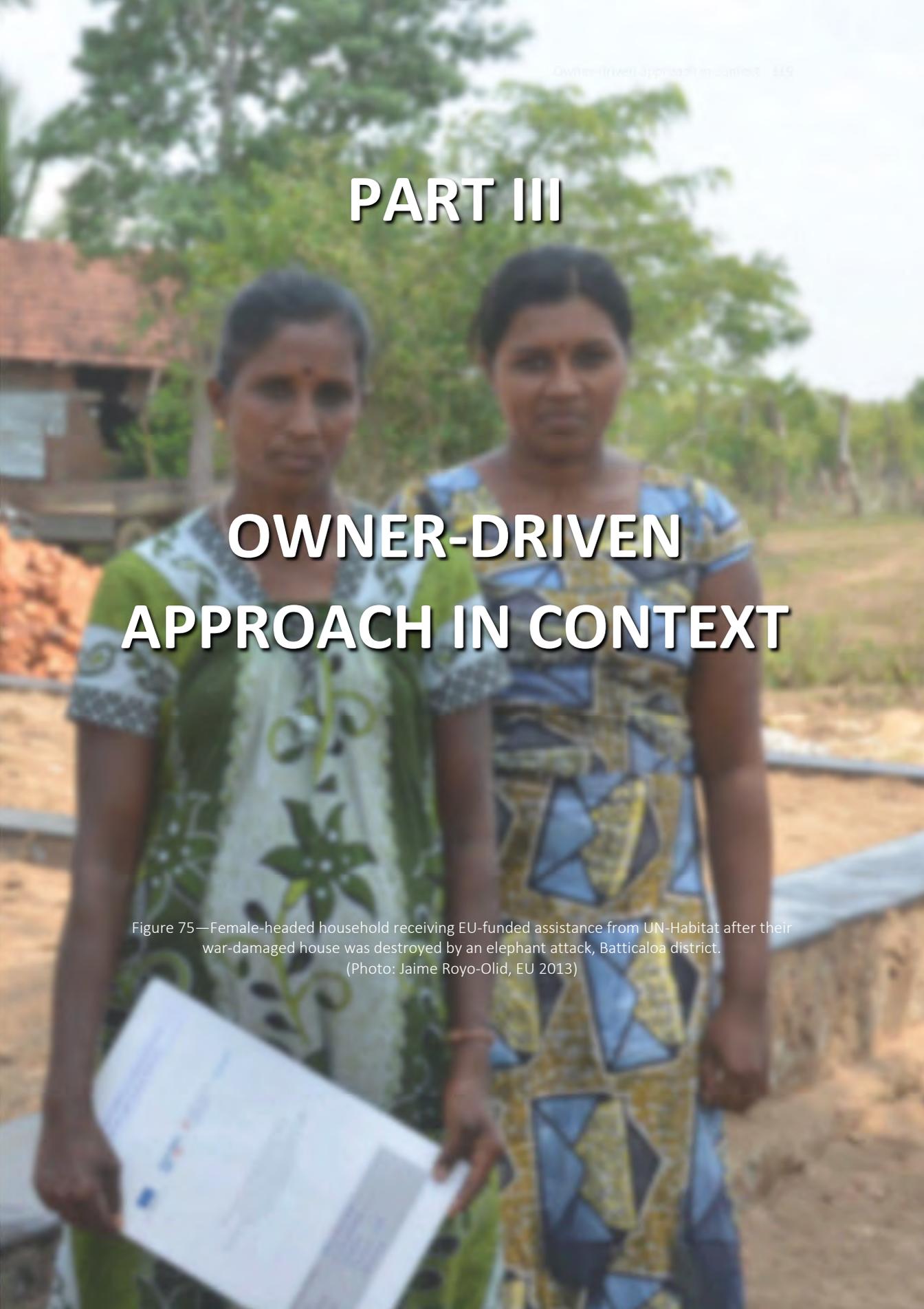




Figure 76—Village leader in Batticaloa conveys his grievances about development to local authorities and donors (Source: Jaime Royo-Olvid, EU 2012)

7. Contextual challenges are fundamental:

Sequencing four distinct phases in the rehabilitation and reconstruction of war-affected communities in Sri Lanka

Susil Sirivardana, former Chairperson of the Housing Authority of Sri Lanka and writer

Abstract

This paper describes the particular context in which the response to post-disaster housing reconstruction after a military-conflict situation in Sri Lanka's Northern Province took place. It argues that understanding the challenges specific to that context is fundamental to appropriately respond to people's needs. It identifies four main phases in the housing reconstruction process: healing and empathising, understanding unusual challenges, investigating and assessing the community (especially with regard to economic aspects), and finally, social mobilisation. During this process, the role of the community worker changes to become a change agent as well as a mobiliser dealing with the traumatised communities' immediate humanitarian needs first. The identification of challenges faced by the particular communities and their struggle in managing their financial resources and the economic activity are then assessed in sequence. Only once a basic level of economic and psychological stability is achieved can the building of permanent houses be embarked upon through social mobilisation. This paper addresses the above phases while highlighting the need to work in a complementary manner with political imperatives.

Introduction

Context is fundamental when building in post-disaster housing after a military-conflict situation. This paper is derived specifically from the context of the north of Sri Lanka and refers mainly to the real wretched of the earth: people who have been excluded both by the state and by the middle classes, including those in their own community. Thus, they suffer from a double repudiation, both from within and from outside. There is a cross-cutting nature in working in these contexts between government and non-government entities. Phasing this process of working in such an environment — an excluded environment — can be conceptualised in four main phases: healing and empathising, understanding unusual challenges, investigating and assessing the community especially with regard to economic aspects, and social mobilisation.

Phase I — Healing and empathising

The first is a healing and empathising phase. It has nothing to do with housing. Therefore, those working in the housing sector must be honest enough to shed their housing agendas and become simple human beings in order to engage in a process of healing and empathising. Regarding the context in question one is dealing with a category of people whose exclusion, suffering and devastation are extreme and extraordinary. They are victims of a process of total destruction. Not only of physical destruction which is visual and easily seen. They have experienced a much deeper level of destruction, a psychological one — a destruction of their humanity. This is experienced to such a degree that those working with widowed women in the north describe them as only having one option, to commit suicide — as many of them had empathised with the Liberation Tigers of Tamil *Eelam* (LTTE) and now find it difficult to face society and their peers. They experience so much guilt and fear that they do not go out and do not allow their daughters out of the house nor to be seen by other villagers. The latter is a sign of the extent to which people in the north have been psychologically ravaged and injured. For those people living in the south they read of programmes building state-of-the-art hospitals, the revival of banks and microcredit, and see lorry loads carrying motorcycles, three-wheelers and tractors to the north. However, appearances are deceptive as such programmes are targeted at other groups in society and rarely impact the lives of the most excluded and marginalised.

Thus, the community worker is working with communities traumatised to extreme levels. It is proposed that in such a context, the community worker has to 'feel' rather than 'know' (i.e. it is not knowledge but feeling that matters). This requires a mindset attuned to the particular context, situation and period of work in which he or she is working with these communities. What is that mindset? One of a generalist barefoot health worker. Not the mindset of a community housing worker. The latter will come later. In such an environment, psychiatric guidance is essential and should be obtained from wherever it is available, be it from the state, universities with psychiatric departments, etc. Thus, guidance should be drawn from whoever or whatever is available to help orient and talk to these communities. It is argued that at this initial phase the role the community worker has to take on is that of a guide and a companion. A preference for women workers should also be encouraged given their inherent capacity to empathise. This initial phase of the programme requires total financing to be undertaken by outside entities, be it state or non-state sources. Expectation of funding and resources from a community with this level of suffering is not realistic. In addition, this first phase of the process will take a long time and is unpredictable.

Phase II — Understanding challenges

The second phase involves understanding the very unusual challenges present within the community given the particular context. It is a phase carried out by the person who is working with the communities. He or she has to understand this unique anti-development context and come to terms with this new situation as an individual and internalise it. As this is an unusual context to work in, the process of understanding this new context requires the community worker to shed a lot of baggage and preconceived ideas that may have been acquired from previous practice, training, and experiences. This includes setting aside the concept of 'owner-driven housing' during this phase, as owner-driven housing is not relevant at this stage yet. What is needed is a deep interest in all aspects of basic needs as the beneficiaries are excluded communities. It is proposed that gradually the person working with the community becomes a guide and companion and progresses to becoming a motivator, a believer and a mobiliser. This phase needs to be totally financed by either state or non-state sources.

Phase III — Assessing financial capacity

The third phase is that of investigating and assessing the community with a focus on financial aspects. By this stage the community worker is at ease with the community and thus can assess the potential, the context, the resources and the extent of economic activity. Economic activity is the first thing that families in these communities think about. Therefore, the community worker has to try to understand this, along with other factors such as the climate, water resources, agriculture (especially in rural areas), forestry, and other environmental aspects and assess future potential. Often, in such a context, the environment has been devastated and there is ecological damage of an extreme nature. The community worker should also assess the potential of establishing women-led savings for small groups and place an emphasis on traditional knowledge. Of course, in this context these women who have been psychologically traumatised will not immediately be able to summon those resources of traditional knowledge. Thus, the community worker has to change from becoming a mobiliser to a change agent.

Phase IV — Social mobilisation

The last phase is social mobilisation involving economic activity, community savings accumulation, and conscientisation using rigorous approaches developed in South Asia⁽³²⁾. During this phase owner-driven housing becomes relevant because once the community has reached some stability, its members begin to think in their customary

⁽³²⁾ Pro Poor Growth and Governance in South-Decentralisation and Participatory Development, edited by Ponna Wignaraja and Susil Sirivardana, SAGE India, 2004.

manner. After the psychological trauma has been, to some extent, resolved, they can begin to think about appropriate housing. The levels of economic stability reached by families by this point in time will also enable them to contribute financially and in terms of other resources, towards building their own houses. Personal involvement and ownership of the housing process will lead to varied houses as they will not be confined to the rigidities of government.

However, such phasing out of the process is not typically the government's approach and is not in line with political thinking. Thus, in order to successfully carry out the process, political imperatives need to be recognised. Conventional thinking and approaches also need to be recognised. Therefore, there is a need to compromise. Purity cannot be maintained when it comes to sustaining the paradigm. What is a possible paradigm? Directly, it would come in the form of temporary shelter. Political grandstanding — in the form of going and giving things, getting publicity etc — may need to be accepted in the short term. Perhaps even be directed to shed light on issues concerning temporary shelter, water supply and money for livelihoods. It is important to not stop this process as it risks exclusion from the entire housing process.

The question then arises as to the situation after 1.5 years or 2 years. Where have the excluded been living during this time? In this particular context of the north of Sri Lanka, one of the first things the excluded families did once they returned to the land was to build their temporary shelters. Evidence of this can be seen very clearly when visiting the north. They built their temporary shelters using their own expertise and knowledge systems. In many cases, what resulted were temporary mud houses with, if provided (as they were in the north), tin sheet roofs. These temporary shelters are functional. Until the owner-driven housing stage arrives, these families are able to cope in these temporary shelters. Again, this is due to the fact that economic well-being is a priority. Previous experience has shown that no poor family will state that housing is their number one priority and working the fields and getting an income is secondary. It is always the other way around. Economic security and stability is always the first priority. Only after they have built themselves up to a certain economic level, do they then start to think about better quality housing. That is the natural order, the organic process. However, this is not the way governments and non-government entities have worked. Housing has always taken precedence — however, this again may be due to the fact that often the communities they have worked with have not always been the most vulnerable, the most excluded, the 'wretched of the earth'.

Thus, the co-existence of somewhat radical ideas with the status quo ideas of conventional governments is imperative. Owner-driven housing has been done, is being done, in the north and it has succeeded. However, in an ideal situation, the correct way to work with the people in such a context would be the phasing of the sequencing; prioritising of their immediate needs, achieving a level of psychological and economic stability and then implementing owner-driven housing initiatives.

8. Building on unstable foundations? Competing claims for land and its impact on owner-driven housing in northern Sri Lanka

Dulani Sirisena, Programme Manager, Australian High Commission, Colombo

Abstract

In the aftermath of the war, providing permanent housing assistance to vulnerable beneficiaries has been a balancing act between a humanitarian imperative and the need to tackle complex underlying issues such as land tenure security. Land ownership is closely tied to the war and ethno-political conflict in Sri Lanka. Due to the importance of land at the individual, familial and community level, resolving issues around ownership, control of and access to land are important factors in pushing forward a transition to sustainable peace. Disputes related to land ownership, possession and use in the Northern Province in turn generate other disputes which continue to disturb the peace and create a hindrance to normalcy in these areas. This situation is compounded by the fact that the legal and policy framework governing land is complex, multi-layered and complicated to navigate. This article is based on findings of a research study undertaken by the author in June 2016. It explores the potential for competing claims and conflicts over land in relation to permanent housing projects in the Killinochchi and Mullaitivu districts. Measures taken by these projects to address land ownership issues for project implementation purposes, and their potential to lead to competing claims and conflicts at the community level are also explored.

Introduction

Economic development in the Northern Province is underpinned by the availability of and access to land necessary to access permanent housing for communities displaced by the war. Over three decades of conflict, more than 600 000 people were displaced (UNHCR, 2011) and an estimated 106 000 (UN-Habitat Sri Lanka, 2012) houses were rendered uninhabitable in the north. The districts of Kilinochchi and Mullaitivu were the worst affected and were those from which almost all residents were displaced in late 2008 and early 2009.

Seven years after the end of the war, permanent housing remains one of the highest priorities for war-affected communities. Large amounts of funds have already been invested or committed by both the Government of Sri Lanka (GoSL) and foreign donors for this purpose. The implementation of these projects has been challenged by various factors including complex land issues. In some instances, research has shown that up to 80 % of housing-project beneficiaries did not have clear proof of ownership to the land on which houses were proposed to be built (UN-Habitat, 2011). This issue has been

compounded by complexities around laws and mechanisms related to establishing land ownership.

The constitutional and legislative governing state land in the Northern Province

In the Northern Province, land can be divided into state land and private land. The land laws and inheritance laws in Sri Lanka that govern these originate from both personal and state laws. Mostly state land has been used for housing development programmes in the north as most of the land in the former Vanni ⁽³³⁾ areas are state owned. While a large body of laws exist related to land, this article focuses on those applicable to state land in the Northern Province.

The right to land or property is not specifically guaranteed through the 1978 Constitution of Sri Lanka. However, it does contain provisions in its fundamental rights chapter that relate to land issues including freedom of movement, choice of residence, equality before the law and other rights ⁽³⁴⁾. In addition, the 13th amendment to the constitution provides a framework for land policy though it is not fully implemented. The amendment has a component on land which devolves certain powers to the Provincial Councils. Some of these include rights over land, land tenure, transfer and alienation of land, land use, land settlement and land improvement ⁽³⁵⁾. However, land powers largely remain with the central government and therefore are required to be alienated by the president based on the advice of Provincial Councils. This shows the key role the central government continues to play in this area.

The 13th amendment also provides for the establishment of the National Land Commission (NLC) that formulates national policy for state land ⁽³⁶⁾. To date this has not been established, resulting in the fact that Sri Lanka does not have a comprehensive national policy on land.

When examining the Sri Lankan legal framework for land and property rights, it becomes clear that it consists of a mix of statutory law, Roman Dutch law and principles of English common law. While there are several laws that are applicable both to state and private land, as this article mainly focusses on state land the three key pieces of legislation that will be discussed are the Land Development Ordinance No 19 of 1935 (as amended), the Land Grants Special Provisions Act No 43 of 1979 and the State Lands Ordinance Act No 8 of 1947 (as amended). Under the Land Development Ordinance (LDO) state land vested with the land commissioner's department can be granted to certain families who settled on the land before 15 June 1995. Exceptions are made for special relocations or

⁽³³⁾ Former LTTE-controlled areas, including Killinochchi and Mullaitivu districts and parts of Vavuniya North and Mannar.

⁽³⁴⁾ Articles 12 and 14 (1) (h).

⁽³⁵⁾ Provincial council list, ninth schedule, thirteenth amendment to the constitution.

⁽³⁶⁾ Appendix II — Land and land settlement — thirteenth amendment to the constitution.

resettlement programmes. The LDO provides that state land alienated under a permit/grant upon the owner's demise passes to the spouse. The permit/grant holder can also nominate other parties. Preference is given to males over females, and the eldest in a group of potential successors. Joint ownership is not recognised.

The land grants special provisions act involves state land which is vested with the land reform commission. As stated by Goonesekere (2006), this allows the president to grant agricultural or estate land to any landless Sri Lankan citizen. This transfer is subject to conditions and the conditions are also transferred to any future successors inheriting the land. Upon the death of the grantee, the land can either pass to a spouse or close relative. Where there is more than one potential successor the eldest is favoured. This land can only be disposed of with prior written consent of the land commissioner.

The state lands ordinance allows the provision of land through permits and leases. Only the president of the republic can divest such land. When land is vested in local authorities by the State, these authorities have the power of making permits or leases. Joint ownership is possible and both the wife and husband can be jointly provided a permit or lease.

It is important to note based on this review of applicable legislation that issues around succession and joint ownership play a key part in adding another layer of complexity to land tenure issues post-war. Due to the original permit holders being dead or missing, widows for example are unable to claim ownership due to the lack of joint ownership of land. Certain discriminatory and arbitrary provisions in the vast amount of laws in Sri Lanka that deal with land create many disputes and issues between people around the country and especially in war-affected areas.

The impact of the war on land issues in the north

Land related issues have always been complex and time consuming to resolve. In a situation where Sri Lanka's Northern Province has been ravaged by successive waves of war, establishing land ownership after several years of forced displacement has become even more complex. Mass displacement of civilians, challenges to government administration, the involvement of a variety of armed and political actors, land policies implemented by the LTTE and the destruction of land records are the main contributing factors.

Since the commencement of the war in 1983, many northern landowners and residents left these areas either to migrate or to move to safer locations within the country. Following the last stages of fighting in late 2008/early 2009 it is estimated that 284 000 people were displaced from the Vanni region ⁽³⁷⁾. This population exodus left vast areas of land available for occupation by unauthorised persons.

⁽³⁷⁾ Report of the Lessons Learnt and Reconciliation Commission, 2011.

When many of these displaced people returned at the end of the war in 2009, large areas of land had been de-mined and cleared for resettlement. However, the situation these displaced people returned to was less than ideal. The United Nations Office in Sri Lanka, in its *Strategic context assessment* (2014), documented that 34 % of people in the Northern Province experienced a loss of land due to the war. In such a situation land ownership became hard to prove as most often key legal documents were lost or destroyed. This was compounded by the fact that land registries were damaged in the war and some records were unavailable. Irregular transfer of permits/grants or the lack of documentation were all issues faced by returnees.

Gender dynamics have also played a significant role in the challenges that individuals face in owning, controlling and accessing land. Due to the impact of the war, a significant number of female-headed households are now forced to deal with land ownership issues, an area they have not had prior experience in.

While realities on the ground changed post war, social norms and perceptions did not change as quickly, with the role of the woman still expected to be in the home. The majority of lands still belong to male members of the household and ownership documents are in the name of the male ⁽³⁸⁾. This created various issues for women when claiming ownership of land belonging to fathers or husbands killed or missing following the war. A former staff member of an implementing agency working on housing commented that this was a significant issue when working with female-headed households in the Jaffna and Killinochchi districts. Most women found it difficult to secure death certificates or other forms of documentation to contest other claimants, including for example their husband's family, leaving them even more vulnerable than men to issues of competing claims ⁽³⁹⁾. Most permanent housing construction agencies set up joint-ownership mechanisms for housing grants to involve women in decision-making. However, land ownership documents were still mostly in the male's name ⁽⁴⁰⁾. Due to social norms, it was observed that mostly men travelled to meet officials in order to report land issues, obtain documents and request loans, even in cases where the land was written in the woman's name as is the case for dowry land (Fonseka and Raheem, 2011).

It has also been observed that many women are unaware of their right to own, control, use, manage and access land. They are also unaware of what constitutes a legal document or even the need for it and the process to obtain such documentation ⁽⁴¹⁾. There is often an assumption among women that these are not required. This has a specific implication on permanent housing programmes as these involve a large number

⁽³⁸⁾ Interview with permanent housing project manager, June 2016.

⁽³⁹⁾ Interview with former staff, housing construction agency, June 2016.

⁽⁴⁰⁾ Interview with permanent housing project manager, June 2016.

⁽⁴¹⁾ Interview with a technical expert supporting the Ministry of Justice in its roll out of Special Land Mediation Boards, June 2016.

of female-headed households. Given the large numbers of female-headed households in the north it is important that policymakers, donors and housing construction agencies pay special attention to this issue and ensure women's needs are acknowledged and considered when formulating policies and redress mechanisms that aim to address land ownership issues in the Northern Province.

Post-war permanent housing projects and establishing land ownership

Several programmes have been implemented across the province to provide permanent housing to displaced populations who returned to their areas of origin. The first flagship programme was the NEHRP, which started in 2007, was led by the Sri Lankan Government but co-funded by the World Bank and the EU. Building on this programme, other foreign donors such as the Australian government and the Swiss joined forces with the EU in additional housing programmes between 2011 to 2015. In 2012, the government of India became the major contributor to the implementation of permanent housing projects in the Northern Province.

Many of the larger permanent housing programmes followed an 'owner-driven' approach. In this approach, the beneficiary or the homeowner is heavily involved in the decision-making and reconstruction process for their own house. A key criterion for the selection of beneficiaries under the owner-driven approach is that they 'possess a formal right to the land on which the construction of their house is proposed' (UN-Habitat Sri Lanka 2010). However, the loss of property documents posed a significant challenge for the implementation of these projects. In such instances alternate methods to prove ownership were required.

Permanent housing construction agencies have used varied mechanisms and approaches to establish land ownership for the purpose of permanent housing projects. Some worked only with beneficiaries who possessed verified legal documentation proving ownership to their land. Others invested a significant amount of funds and technical assistance working with government officers to survey land and redraw boundaries based on legal ownership prior to housing construction. While the latter approach ensured that land disputes did not occur, this slowed implementation considerably and limited the number of beneficiaries that could be assisted using available funding.

Given that the majority of beneficiaries had lost legal documentation for their land during the war, most permanent housing construction agencies opted for a system where the relevant divisional secretariat (DS) as 'custodians of state land' under the state land and land development ordinances⁽⁴²⁾, issued letters confirming land ownership. Based on information by *grama niladharis* (village administrators) and verification by the

⁽⁴²⁾ State Land Ordinance No 8 of 1947 and Land Development Ordinance No 19 of 1935.

land officer, the DS issued attestation letters stating that ‘action will be taken to issue the permit for the land for the person in question.’ These were verified where possible by holding village-level meetings where the community would vouch for the claimant and these documents were deemed sufficient to prove land ownership for project purposes.

When examining the rationale for following this approach, it is evident that the humanitarian and political imperative of providing permanent housing for the displaced, on both the part of the government as well as development agencies, trumped the need for durable solutions on land ownership. In order to expedite the process this system of issuing DS letters was established in consultation with the land commissioner, land officers and the DS. It was recognised that this was an interim solution, and a few assumptions had been made. However, these assumptions carried certain risks. One was that since the majority of land in the Killinochchi district was permit land and since the DS was responsible for issuing LDO permits, that having the DS issue this letter provided some level of security. The assumption was that having the DS issue this letter was as good as any guarantee that a permit will be subsequently issued. However, the administrative process around issuing permits (either annual permits or LDO permits) was more time consuming. These could at times be resolved through land *kachcheris* ⁽⁴³⁾ but if subsequently there was a competing claim on the land this would be harder to obtain. The second assumption was that since the majority of the land in this area was permit land, if any issues arose, alternative land could be easily granted by the government. This however did not take in to account the fact that the beneficiary may not be willing to move to an alternate location, e.g. if these were lands that their families had occupied for a long period and they have ties to the village and broader community in the current area. It also did not take into consideration beneficiary-livelihoods options, which may not be available to the same degree in the new location. The third assumption was that the process was sound since the GN vouches for the applicant and confirms that they have occupied this land. This however would not always be a robust assumption as GNs could change or be affected by the war themselves.

Fonseka and Raheem (2011) state that the use of the DS letter raises several issues. Firstly, it is not a legally binding document and therefore does not prove ownership of the particular plot of land. This then raises concerns over the sustainability of the permanent structure built on the premise of such a letter. They go on to observe that this practice of providing letters was carried out by DS officers across the Vanni in the post-war period in order to address housing demands and land claims. It is their expert opinion that while the letters may serve as evidence of long-term occupation, they cannot replace standard documentation of ownership as provided by existing legislation.

⁽⁴³⁾ Land *kachcheris* are meetings held in a prescribed manner for the purpose of alienating Crown land.

The fact that these DS letters are interim documents and not legally binding, could open a large number of project beneficiaries up to the potential risk of competing claims if these documents are not regularised in a systematic manner. While some beneficiaries might be able to achieve this subsequently, it is not guaranteed and could potentially take a long time and a high cost without proper legal or administrative assistance. No follow-up tracking system has been established to track if the regularisation of documentation has taken place subsequent to the end of projects.

Given these complexities, the attention paid by foreign donors to resolving land issues in a sustainable manner prior to commencing some of these permanent housing programmes may be inadequate. This is of great concern as evidence is emerging from the Northern Province of competing claims for land where two or more actors claim ownership of the same property.

Competing claims for land: the impact on tenure of permanent housing projects

The issue of competing claims over land is a result of more than one individual claiming ownership and control over a particular plot of land. While there has not been an extensive number of such incidents recorded yet, compared to the volume of permanent houses built, some incidents of competing claims have been reported. In 2014, a case of secondary occupation was reported from the Kandavalai DS division in Killinochchi district where six persons had encroached on a plot of 8-acre (32 375 m²) land which was alienated to another person under an annual permit. This land had been occupied by one of his descendants and had been abandoned during the war. The present occupants had been living there for some time when the original owner had returned post war and demanded the return of the land. (UN-Habitat, 2014)

Several cases also came to light during interviews with housing reconstruction project managers and staff. One such case was reported from Killinochchi district, where a 20-acre (80 937 m²) plot of permit land was occupied by four families listed as potential project beneficiaries. DS letters had been provided to confirm land ownership but partway through housing construction, a former resident of Killinochchi, now residing in Canada, returned to claim ownership of the same land. This dispute was subsequently resolved amicably with the Canadian owner agreeing to release part of this land to the current occupants, on the condition that construction is halted ⁽⁴⁴⁾. A similar case was reported from Oddusuddan in Mullaitivu district where a person living in Australia claimed ownership of a land plot allocated for housing reconstruction. As this dispute could not be easily resolved, construction on this site was stopped ⁽⁴⁵⁾. Two additional cases were also reported from Mamakandal in Mullaitivu district. In both instances

⁽⁴⁴⁾ Interview with housing construction project officer, June 2016.

⁽⁴⁵⁾ Interview with housing construction project officer, June 2016.

people had been encroaching on land where the original residents were abroad. Having built temporary shacks on these lands, these occupants claimed housing assistance and had been provided DS letters attesting to the fact that they had been long-term residents. However, as the original owners from abroad returned to claim ownership, housing construction had to be stopped after the first tranche payment ⁽⁴⁶⁾. A similar incident was also reported from Marusamodai DS division in Mullaitivu district where an entire village was eligible and selected for a permanent housing project but was later rejected due to disputes over land ownership.

These examples highlight the potential risk of using interim measures to prove land ownership in such a complex post-war context as that of the Northern Province. Wassel (2009) observes that due to the humanitarian imperative of providing houses for displaced people, housing, land and property rights are not often given as much importance due to their complexity and the tendency of agencies to focus on immediate needs. This seems to be applicable to the Sri Lankan context, where urgency to provide permanent housing solutions to internally displaced people took a higher priority than resolving long-standing and complex land issues.

Moore (2008) observes that there is a general lack of clarity regarding the number and scope of issues related to internally displaced persons (IDP)/refugee return and resolution of land and property issues in the Northern Province. Some see major problems and high numbers of cases. Others do not believe issues are as significant, and that there are a smaller number of cases. The lack of a systematic and credible inventory of such issues, and the lack of a system to track the regularisation of land documents following the use of interim mechanisms has also hampered effective decision-making on implementation strategies.

Conclusion

The issue of land ownership in the Northern Province is complex and highly politicised and has the potential to create new tensions among individuals and communities if not addressed in a comprehensive and durable manner. The construction of permanent houses under such circumstances has the potential to exacerbate existing or even create new tensions if not implemented in a conflict sensitive manner.

However, it must also be recognised that these development projects were implemented in an extremely challenging context — mass displacement from the former Vanni areas following the end of the war in 2009 left the GoSL with few alternatives but to provide immediate assistance to nearly 300 000 displaced people with the support of foreign donors. Resettlement was a high priority and the government was also required to respond to considerable international pressure. The imperative to provide

⁽⁴⁶⁾ Interview with housing construction project officer, June 2016.

humanitarian and development assistance needed to be weighed against longer-term more comprehensive solutions and this was a delicate balancing act.

It is in this context that the government and donor agencies engaged in permanent housing construction for the displaced. A policy decision was made very early on by the then Rajapaksa government that permanent housing should be prioritised over temporary shelters, based on lessons learned during the 2004 tsunami reconstruction programmes. Based on this policy advice, housing construction agencies were faced with the challenge of implementing large-scale permanent housing programmes in the north where complex land issues post war were a common feature. In order to address these issues while implementing housing programmes, agencies followed various strategies.

The most widely used mechanism for housing constructed on state land was that of providing letters by the DS to confirm land ownership and state that action will be taken to issue the permit for the land for the person in question. However, no follow-up mechanisms were available to verify whether these letters were eventually converted to legally binding documents such as land permits.

Evidence emerging from the field suggests that this interim mechanism to address land tenure issues for the purpose of housing-construction projects is insufficient, and some cases of competing claims have already emerged where the DS-letter system has been used. This warrants further investigation as there is a potential for more widespread issues of secondary occupation and competing claims for land to emerge with time.

A lesson from this experience for future permanent-housing programmes is the need to invest sufficient time and resources to find longer-term solutions to land ownership issues prior to investing millions of dollars in housing construction. Though the imperative to provide permanent housing to as many beneficiaries as possible, weighed against the long time periods required to resolve land-tenure issues presents a moral dilemma for development actors, not paying sufficient attention to this issue at the outset carries far greater risks for vulnerable beneficiaries. The reputational risk to donors and the risk to the sustainability of these large-scale development projects could also be significant. Addressing these issues at the outset would be very relevant to new investment by donors in this area.

This could begin with more comprehensive reporting where implementing partners provide more information and a greater focus on land-tenure issues. A better understanding of the issues would assist donors to focus more attention on solutions. Additionally, future programmes should look into establishing tracking mechanisms or tracer studies throughout the lifetime of the programme and beyond in order to follow up on the regularisation of the interim documents for land ownership provided through projects. Organisations such as the Legal Aid Commission could be linked in to provide longer-term support on regularising documentation.

In addition to this, linking project beneficiaries into broader programmes implemented by the GoSL could help mitigate future conflicts. The latest such initiative

by the ministry of justice is the piloting of special land mediation boards in Jaffna and Killinochchi districts, with a broader nationwide roll out planned for the future. The boards would aim to resolve community-level land disputes or refer them for legal recourse where necessary. Though implementation has been slower than expected and fraught with challenges, this mechanism has the potential to address community-level disputes related to competing claims for land and secondary occupation. It is important that lessons are learned from the roll-out in pilot districts and incorporated into the broader roll-out, in order to ensure that the mechanism is effective, well-resourced and well capacitated for continued use.

References

- Fonseka, B. and Raheem M. (2011). *Land in the Northern Province: Post War Politics, Policy and Practices*. Centre for Policy Alternatives, December 2011.
- Fonseka, B. and Raheem M. (2011). *A short Guide to Regulating the Activities Regarding Management of Lands in the Northern & Eastern Provinces: Circular — Issues & Implications*, Centre for Policy Alternatives, September 2011.
- Fonseka, B. (2010), *Commentary on Returns, Resettlement and Land Issues in the North of Sri Lanka*, Centre for Policy Alternatives, September, Colombo.
- Goonesekere, R. K. W. (2006). *Select Laws on State Lands*, Law & Society Trust, Colombo.
- Moore, C. W. (2008). *Consultancy Report for the Asia Foundation Sri Lanka*, Colorado, December 2008.
- UN-Habitat Sri Lanka (2010). *Support to Conflict Affected People through Housing: Mid Term Progress Report*. August 2010, Colombo.
- UN-Habitat Sri Lanka (2014). *Report on Land Matters: First Quarter 2014*. Colombo.
- UNHCR (2011). *Update on Protection Developments: The Search for Durable Solutions*. Sri Lanka IDP Protection Working Group, September 2011, Colombo.
- Wassel, T. (2009). *Protecting Housing Rights for IDPs in Sri Lanka*, Forced Migration Review, Vol. 33, September 2009.

9. Making owner-driven housing work after disasters: an International Federation of the Red Cross (IFRC) perspective

Sandra 'Urzo, Architect, Senior Officer-Shelter and Settlements Department, IFRC Geneva
Ela Serdaroglu, Urban Planner and Shelter Lead for the IFRC in Geneva
With contributions from Patrick Elliott, Keti Khurtsia and Mukesh Singh, from IFRC

Abstract

Called in different ways such as homeowner-driven (HOD), owner-driven housing reconstruction (ODHR), community-driven or assisted self-help, participatory methods in post-disaster reconstruction have long been regarded by aid organisations as paving the way to success almost 'by default'. The scale and frequency of disasters globally, since the Indian Ocean tsunami in 2004, after which the owner-driven methodology was widely used, suggest that this approach will continue to be applied in post-disaster contexts. Owner-driven approaches have proven to increase self-reliance and promote social cohesion, key pillars for sustainable habitat solutions. Ensuring that people whose homes and communities are being rebuilt take the lead in this process remains quintessential.

Yet, while there is consensus among stakeholders around the validity of ODHR, there is less unanimity on how the various 'ingredients' of this approach should coexist and how donors, implementing agencies, authorities, communities and homeowners should take the housing process beyond the physical construction of four walls and a roof.

To start with, there is the dilemma of striking a balance between the urge to build fast — within pre-established deadlines — and the need to set the conditions for families to manage the building process themselves. This is followed by questions on how to better reconcile mass production of (completed) houses while allowing tailored designs and incremental improvement. Or whether it is possible to enable durable livelihoods while social-economic systems are still disrupted. Or how the 'hardware' component of construction should be leveraged by a 'software' component of participatory settlement design, combined with risk-aware and sustainable planning in communities and neighbourhoods. All of these need to be factored to ensure success of ODHR programmes being rolled out.

This paper, informed by recent national society and IFRC housing reconstruction programmes in Sri Lanka, Haiti and the Philippines, highlights real and missed opportunities of ODHR, while suggesting ways to ensure the realisation of profound effects it can have on the lives of people assisted.

Introduction

More than a decade has passed since the Indian Ocean tsunami struck on 26 December 2004 and its aftermath led to unprecedented reconstruction efforts across a number of south and south east Asian countries simultaneously. Sri Lanka, India and Indonesia in particular not only had to rebuild towns, neighbourhoods and individual houses, but also seek measures to protect the coastlines, to construct resilient infrastructure, to devise early warning systems and to use the reconstruction efforts to 'build back safer' as all affected areas were prone to multiple types of disasters such as earthquakes, floods and storms. For communities living in areas that were identified as being at risk, poor quality of construction, lack of awareness and information, inadequate housing and safety measures put lives and livelihoods at extreme risk during recurrent hazard events. The overall development of these areas is also hindered as cyclic disasters continued to strike.

Over the past decade, governments and aid agencies have been using the 'momentum' of disasters and crises to encourage safer construction practices and capacity building that would lay the foundations of more resilient communities for the future. Mainly after the tsunami-ODHR programmes, IFRC has both institutionalised it within the Red Cross membership and, as Global Shelter Cluster lead, promoted it as the 'go-to' response option to cater to large-scale housing needs after disasters. With different modalities, and to different degrees, reconstruction in Haiti, in Chile and recovery after the typhoons in the Philippines in the recent years have used owner-driven housing reconstruction to allow people to play a central role in the process.

In Sri Lanka especially, the ODHR approach has been gaining prominence over the so-called 'contractor', 'agency' or 'donor-driven reconstruction' approach (DDR). Following the tsunami, both approaches were implemented extensively in the country. While new housing schemes in relocation areas mostly used the latter, using contractors to build standard houses, reconstruction *in situ* mostly took place according to the ODHR models. This approach came forward as the preferred option for people to overcome trauma and restart their lives and generally led to a higher degree of success, empowerment and beneficiary satisfaction. Capitalising on the success and building on the lessons learnt from numerous ODHR tsunami projects, the model has been replicated in the post-conflict regions to provide thousands of families with a house of their own in the east and the north. Currently, the Sri Lankan Red Cross Society (SLRCS) and the IFRC are jointly implementing a programme to build 20 000 houses in the north of the country under the Post-Conflict Recovery Programme (PCRP) of the SLRCS and as part of the IHP.



Figure 77—Sandilipay DS-Jaffna (Photo: Mariyaseelan Jeyaseelan, IFRC 2016)

Common challenges of ODHR approach

Beyond housing reconstruction and financial assistance, the ODHR approach also typically offers a multi-layered support and monitoring system. This technical guidance builds on a regulatory framework, facilitates the understanding and enforcement of building codes and of safe practices and the access to quality materials. Groups that may find it challenging to manage the construction process by themselves benefit from additional support mechanisms. These involve the most vulnerable groups such as widows, female-child- or single-parent-headed households and the elderly. ODHR grants are ideally linked to housing, water and sanitation and livelihoods, to generate local employment, build capacity in the construction sector, nurture a holistic approach and as a result allow people to build progressively according to their needs and preferences. These ‘ingredients’ for ODHR success can be synthesised in government-led policy guidance, financial assistance and technical expertise by aid agencies (or partners), continuous dialogue among all stakeholders and strong community participation at all stages.



Figure 78—IFRC-assisted homeowners in Manthai West, District Secretariat, Mannar (Photo: S Anthony, IFRC 2016)

While encouraging results and ‘best practices’ have been captured in numerous case studies and reports translated into guidelines, there are still important challenges for the implementation of ODHR that have not adequately been addressed. For example, often imposed tight deadlines contradict the logic of allowing incremental construction or of tailoring designs to fit the needs and preferences of households. Often, incorporating cultural practices and traditional beliefs such as respecting the ‘auspicious days for starting construction’ in Sri Lanka becomes a challenge for the implementing agencies to fit into the schedule ⁽⁴⁷⁾. Another issue is that in some instances, there is poor understanding of what decision-making at household and community level means. An ODHR approach should not require beneficiaries to provide construction labour, but it should require that they manage the reconstruction process with the technical assistance offered. The essence and the strength of the ODHR lies in the fact that it is ‘homeowner-

⁽⁴⁷⁾ In Colombia a flood-resistant housing project using bamboo construction was delayed by the fact that people would only cut bamboo in the moments of the full moon, as a traditional belief to limit the risk of bamboo-eating insects. This was, of course, difficult to explain and report back to donors, in this case to the European Commission Humanitarian Aid department’s Disaster Preparedness Programme (DIPECHO), as a ‘valid reason’ for delays.

managed' and it does not necessarily need to be 'homeowner-built'. Programme designs that regard the ODHR approach as a way to push the families to physically repair or rebuild their own houses sometimes fail to recognise the challenges faced by various households in meeting this demand and undermine the principle of mobilising and empowering communities for lasting change. Finally, as part of the programme design, implementing agencies such as the IFRC and SLRCS provide 'access to technical support', but this component is not always adequately resourced in the programme, with too-tight budgets, infeasible caseloads, etc... threatening the quality, frequency or duration of the technical support, as well as compromising the 'software side' (training, awareness, income generation, social mobilisation for further projects) of the interventions.

The concepts that should be further debated, along with some of the suggestions for solutions that are envisaged can be articulated as follows.

- **Finished house:** There are challenges that are inherent to the ODHR approach that have to do with the concept of a 'finished house' and with the parameters set at the stage of programme design. Typically, programmes aim to build complete houses while people wish, for instance, to make last-minute changes to the building plans, enlarge foundations to be able to fulfil their 'dream house' or do not follow government guidelines for a minimum house, etc. to meet the individual needs or preferences of the family. As a result, almost all ODHR programmes end up with a certain number of 'unfinished' houses.

In order to manage the discrepancy between the programme requirements and the implementation issues to this effect, clear criteria on the requisites of a 'finished house', along with continuous dialogue and monitoring are needed. All parties will need to agree on what is an acceptable level of 'dropout' and occupancy rate, the minimum level at which the house still can be considered an important asset for the family (even though they might be 'unfinished' according to the programme definition) and accepted reason for delays, unoccupied or incomplete houses. As implementing agencies⁽⁴⁸⁾ we ought to understand the legitimate reasons for not finishing a house and analyse these with the parameters set from the onset. Cases of ill-health that cause the inability to continue merit a different approach from a household's wish to accomplishing their 'dream house' which will take a lifetime of savings and progressive construction, incompatible with the deadline of the programme.

⁽⁴⁸⁾ It is increasingly felt that so-called 'implementing agencies' should rather be called 'facilitating agencies', to better reflect their task of social, financial and technical facilitation role.

- **Indebtedness:** Agencies should play an enabling role in relation to the way people are accepting in incurring debts as a means to top up conditional cash grants to complete their houses. Debt, loans and collateral need to be managed carefully and linked to overall financial/legal risk management. There has been a recent SDC study: *Life and debt: an assessment of indebtedness and socio-economic conditions of housing beneficiaries in Jaffna, Kilinochchi and Mullaitivu* ⁽⁴⁹⁾, where it was highlighted that a majority of households studied had a ‘debt problem’, owing largely to the construction of their houses.

The burden of such risk should not be left solely to be borne by the homeowners and thus certain responsibilities fall to the agencies as well to allow risk-informed choice. Beneficiaries of programmes should be well informed around the use of the grants and the impacts of debt, so they can make informed and responsible decisions. Community mobilisers should be used actively in this regard. In addition, agencies themselves should have a better understanding of the level and impact of indebtedness in general and the culture of debt in the specific environment where the programmes are being implemented. The SDC survey further points out a ‘noticeable lack of financial literacy among housing beneficiaries’. Their recommendations include implementing financial-literacy initiatives alongside debt-management steps throughout the construction process to prevent beneficiaries from falling into a cycle of debt. In line with this recommendation, agencies should consider augmenting the software side of their ODHR programmes by providing training and support to the beneficiaries to improve their financial literacy.

- **Equity:** Who gets what under the same ODHR scheme? The equity issue is yet another challenging aspect of good ODHR programmes. When designing conditional grant schemes for a large-scale reconstruction programme in different contexts/regions there is the challenge of ensuring that people can use the financial support and technical expertise to build their homes to the agreed standards. This does not mean that the ‘package’ offered ⁽⁵⁰⁾ should be identical as long as the functional value is the same, and that people’s purchasing power for labour and materials is the same. In the Philippines, where reconstruction efforts following Typhoon Haiyan were dispersed over five islands, monetary power hugely differs from rural Palawan to urban neighbourhoods of Cebu or Tacloban city. If overlooked, these differences would ultimately create inequity and tensions among communities.

⁽⁴⁹⁾ See chapter 22 titled *life and debt*, and the full study from <http://www.cepa.lk/uploads/0d6e1cc768f1d5f53cdc8ee970a71672-2014-Romeshun-Life-and-Debt.pdf>

⁽⁵⁰⁾ the ODHR assistance can comprise cash/materials/goods/trainings/technical advice/monitoring.



Figure 79—IFRC-assisted family of Sinnathurai Vijayakumar -Uduvil DS- Jaffna (Photo: IFRC 2016)

- **Quality:** A recurrent dilemma is represented by the choice between 'guaranteeing quality materials' vs 'letting people decide the quality'. The compromise often results in hybrid solutions: providing good quality materials from outside the affected areas (such as corrugated galvanised iron (CGI) sheets in the Philippines or Haiti) as the ones on the market are of poor quality, but advising them on the minimum standards for cyclone safety by the introduction, for instance, of hurricane straps to tie roofs to the main structure. It can be argued that such approach sounds vaguely 'paternalistic' ('we know what is best for you') or at minimum contradicts the principle by which people take informed decisions, and ultimately are able to decide for themselves. On the positive side, providing households with unavailable materials that may become very expensive or create a price hike guarantees that the financial burden lies with the aid agency/government purchasing the materials, not with the people.
- **Materials and labour:** The shortage of materials and qualified labour seems to be a constant phenomenon that appears when the pressure to produce housing units outnumbers the capacity to build them. For example, after the tsunami, Sri Lanka needed to repair or rebuild 100 000 houses that were affected by the disaster, whereas the annual production capacity of the construction sector in the country was at the time, 8 000. A simple calculation would show that at that capacity, it would take in excess of 12 years to rebuild what was lost, even if no other house was built in the rest of the country in that period.

In such situations, with proactive and creative thinking, other solutions can be envisaged which not only create new skills but also analyse the existing ones. Most of the time agencies seem to underestimate that, with leadership and vision, reconstruction efforts can boost the local economy, promote entrepreneurship and expand the construction industry, further contributing to the overall recovery of the affected regions and countries. Experience from Chile, where the government schemes supported both public enterprises and private construction companies, show that the 2010 earthquake and tsunami boosted the national economy. Sri Lanka's construction industry at the moment appears to be flourishing and yet the parallels are difficult to find in terms of manpower (construction managers, masons, electricians plumbers) enrolled in companies building for the top-end real-estate business versus the publicly contracted enterprises and the labour building 50 000 houses of the post-conflict housing programme in the north. More could be done to prevent inflation of the materials' market, facilitate bulk purchase among larger groups and encourage housing cooperative schemes or public/private partnerships. Similarly, more should and could be done on the side of risk management on the

quality of materials, workmanship and inflation, so as not to place all the risk on the shoulders of the beneficiaries but to manage it together as true partners.

- **Community involvement and awareness:** The principle of owning the reconstruction process needs to be further applied to groups of families deciding on community development plans. Such development plans can address settlement matters and give voice to community-run projects (small infrastructure, contingency plans for emergencies, etc.). Yet, the settlement component is often neglected by ODHR programmes, due to lack of funding and long-term vision or simply prioritising individual well-being over social cohesion.

So, what can be done to support participatory processes in contexts of extreme vulnerability where needs are vast but resources are scarce? This issue is especially important and relevant when there is no active presence to promote better practices at settlement level and mitigation actions against future risks ⁽⁵¹⁾.

The answer to this question from the IFRC side has come in the recent years in the form of a **participatory approach for safe shelter awareness (PASSA)**. This aims to raise the awareness of the ‘everyday vulnerable’ of the ‘every day risk’ related to their built environment and foster locally appropriate safe shelter and settlement practices. It offers a simple process, facilitated by the Red Cross and with technical assistance, through which communities can build upon their own insight, skills and leadership to attain improved living conditions and safer habitats. Using a step-by-step approach, similar to Community Action Planning (CAP), PASSA is increasingly used within recovery and DRR efforts in the Philippines, Haiti, Bangladesh, Timor-Leste and in Sri Lanka. The community plans address the myriad of problems that include — but are not limited to — spatial and environmental planning, local building culture, partnerships between local authorities, communities and supporting organisations to prepare for, cope with and recover from disasters. Good examples can be found of using PASSA in relocation sites to create the conditions for making informed choices, social/community engagement and actions such as efficient energy use, collective waste disposal, purchase of goods, rainwater harvesting and improvement of infrastructure. In the future, given the current tendency of aid agencies to use cash-based programming to allow individuals to purchase goods or services, in the aftermath of disasters, such grants could become conditional on implementing community-driven plans.

⁽⁵¹⁾ Not understanding the safety features under an ODHR programme has led to decisions that undermined the stability of the structures (example in Haiti where people sold timber pieces that served as house reinforcements and hurricane straps).

- **Housing, land and property (HLP) rights:** In recent years agencies have been advocating at the global level for a broader understanding of housing, land and property issues during disaster response. In particular, policy dialogues are ongoing to overcome the ‘ownership condition’ as a prerequisite for eligibility for reconstruction grants.

What can be done in situations where people have lost demarcation of land? What happens if people get permission to build on land of family or friends without formal ownership (who is entitled to rebuild on whose land)? Should agencies only help those who already have access to property, while excluding landless and more vulnerable populations (migrant workers, renters)? Does doing so not openly conflict with the humanitarian imperative to target the most needy and vulnerable? These are all HLP-related dilemmas and questions agencies struggle with when embarking upon ODHR programmes. Programmatic solutions to some of these issues include looking at and where possible, acknowledging different overlapping systems that establish property rights; recognising the concept of ‘secure enough’ tenure for households to enter an ODHR programme; community land-mapping initiatives. However, in most programmes, the challenge to assist the vulnerable groups with no access to land remains unsolved and calls for more innovative and inclusive approaches, as well as significant advocacy measures.

- **ODHR for non-owners:** A last point, linking partly back to the HLP discussion above, advocates for a less simplistic adoption of ODHR. At the moment, most ODHR programmes regard the approach only as a means to replace a lost asset (idea of building ‘a house for a house’). However, in many contexts, especially in the urban areas where land is scarce and tenure status more complex, there is a less of a ‘clean-cut’ between owners, renters, single and multi-storey occupancy, necessitating the agencies to think ‘outside the box’, outside the ‘one-roof housing schemes’, looking at more challenging aspects of how ODHR can adapt its principles to effectively fit these situations. This may include promoting collective solutions (two-storey, twin houses), rental arrangements, land leases, housing cooperatives and social entrepreneurship.

Conclusions

It is crucial to emphasise the central role of community organisations in social development, not only limited to post-disaster and post-crisis recovery. This means that aid agencies and their counterparts play a paramount role in facilitating and coordinating the efforts of civil society groups and developing a process of community-based settlement planning, improving public utilities, facilities, and the surrounding environment.

Through ODHR, holistic development plans that take into account social and economic factors as well as physical improvements can be created along with community management systems which are transparent and sustainable in the long run. New roles for educational institutions, vocational training centres and universities should be identified so that they can fully participate in community development and research, and create new skills that can meet the demands of the construction industry and materials market.

The IFRC will continue to distil and synthesise new knowledge from each country where ODHR has been implemented successfully so that it can be made widely available to other communities and the public.

Response to disasters will continue to be demand-driven, rather than supply or donor driven, as it supports communities who are ready to implement improvement projects and allows a greater variety of responses, tailored to each community's needs, priorities and possibilities (for instance communities choose how to use a subsidy provided to implement community plans through PASSA).

Through ODHR the IFRC will continue to promote more than physical upgrading or reconstruction; as communities design and manage their own housing construction process, this helps stimulate deeper but less tangible changes in social structures, managerial systems and self-esteem, much needed to heal the losses after disaster and cope with traumatised populations in post-conflict areas.

Global effort in the field of secure tenure will seek a more flexible (and less risk-adverse approach) — and this could be done through a variety of means such as allowing cooperative land purchase, long-term lease contracts, land swaps or user rights.



Figure 81—Beneficiary of EU-funded housing standing in front of foundation excavation and tin shelter holding folder with log-book and documentation on construction process handled by HfH. (Source: Jaime Royo-Olvid, 2018)

10. Housing policy in post-conflict rehabilitation and the right to restitution: the case of Sri Lanka ⁽⁵²⁾

Ms Rasika Mendis, Attorney at Law, Sri Lanka

Abstract

The topic of housing reconstruction continues to be integral to post-war discussions on rehabilitation, development and reconciliation. A large portion of the returnee population in the north and east of Sri Lanka are yet to be restored to normalcy 6 years since the conflict ended. Durable solutions for displacement have been at the centre of post-conflict dialogue, including the restoration of permanent housing on a 'pro-poor' basis, or with priority for the poorest of the poor and vulnerable among the displaced. Programmatic interventions on the ground however have failed to reach a large number of those who are eligible for pro-poor housing restoration. Strategic guidance at the policy level has been piecemeal at most, and inadequate to meet the requirements of a progressive housing restitution strategy that has the potential to meet the outstanding housing need. In the meantime, successive governments have implemented large-scale development projects in the north and east, while post-conflict housing restoration remains under-funded and dependent on donor handouts.

This paper examines the legal concept of 'restitution' as providing a basis on which to structure post-conflict housing restoration and development policy. Restitution refers to a legal remedy to redress 'loss' that has been suffered by an individual with the aim of placing the individual suffering loss in a pre-loss condition. In international law, restitution is associated with the laws of reparations, where there have been gross violations of human rights and humanitarian law. The concept is relevant to housing policy that is conducive to post-conflict reconciliation and the holistic integration of affected populations in rehabilitation and development.

⁽⁵²⁾ This paper was presented at the conference 'Restoring communities through homeowner driven reconstruction: from post-emergency to development', 24-25 March 2014, Sri Lanka, organised by UN-Habitat and convened by the EU; some of its contents appeared in the journal article Mendis, R. N. (2012). The right to adequate housing in the Vanni: A question of relevant policy? LST Review Volume 22, Issue 297, July 2012.

Introduction

Six years following the end of the conflict in 2009, the outstanding requirement for permanent housing is approximately 59 588 houses. This is in addition to an outstanding need for approximately 40 000 houses in the Eastern Province, where hostilities ended prior to May 2009 ⁽⁵³⁾. Throughout the duration of the conflict and following the tsunami natural disaster of December 2004 (hereinafter referred to as ‘the tsunami’), a large mix of agencies, both government and non-governmental-constructed humanitarian shelter and pro-poor, low-income housing, primarily with donor funding, but also with monies sourced from government revenue and private initiative.

Despite extensive learning, housing reconstruction in the aftermath of conflict has been without clear policy guidance and strategy and, as during the conflict, heavily reliant on donor funding. The Lessons Learnt and Reconciliation Commission (LLRC) report, formulated in 2011, notes the dire need for permanent housing as a fundamental component of post-war rehabilitation and reconciliation ⁽⁵⁴⁾. The report calls for the mobilisation of both national and international resources to meet the large shortfall in funds. Notably, the LLRC report devotes an entire chapter to ‘restitution and compensatory relief’. The report first points to a lacuna in the post-conflict policy framework; that ‘Sri Lanka has no officially declared policy on return and resettlement of displaced persons and restitution of their land’. The report does not refer to housing restitution specifically; there is substantial policy precedent however that can inform a progressive policy for housing restitution.

The end of the conflict and the humanitarian crisis that ensued during the war saw a gradual reduction in committed funding by donors. The IHP launched in 2010 and commenced implementation in 2012 with a commitment to build 50 000 houses ⁽⁵⁵⁾. The project has greatly reduced the burden on government and non-governmental agencies to meet the outstanding gap in permanent housing, which at the time amounted to 160 000 houses.

⁽⁵³⁾ 160 000 was estimated based on houses stock that remain partially and fully damaged at 2012 end. This does not include the housing requirement of landless persons and extended families returning to the north after protracted displacement. The total outstanding need, after deducting the houses already completed and being built, is approximately 59 600 houses as at April 2015 (estimates of UN-Habitat, Sri Lanka).

⁽⁵⁴⁾ Government of Sri Lanka (Nov. 2011). Report of the Lessons Learnt and Reconciliation Commission. Paragraph 9.165, p. 365.

⁽⁵⁵⁾ The Gol committed funding to 50 000 permanent houses at a cost of USD 270 million in grants, of which 1 000 houses were piloted in the districts of the North. The remaining 49 000 houses would be distributed among the districts of Uva, central, north and east provinces, of which 43 000 were built on the owner-driven housing model, and 6 000 houses on the agency driven (or donor-driven) model.

Post-return assistance was prioritised among those displaced in the last stages of the war between April 2008 and May 2009, amounting to approximately 300 000 persons, on the assumption that those displaced prior to this timeframe had already received some form of assistance ⁽⁵⁶⁾. Large-scale investment and infrastructure projects implemented by the GOSL have not had the influence or effect of redressing the adverse housing conditions to which post-conflict returnees have been subject to in the aftermath of war.

What informs post-conflict policy for housing restitution?

Theoretical foundations — the right to restitution

The concept of restitution, and housing land and property restitution in particular, has received international attention as an independent human right in the recent past. The rationale for articulating housing and property restitution as a human right is that housing restitution, especially in contexts of post-conflict rehabilitation, is not only about a physical building. Rather, it is about restoring a person's dignity following displacement and redressing the inevitable violation of human rights during displacement. Hence, a process of housing restitution envisages durable solutions to displacement, and rights-based development, implemented in a manner that is relevant to the context and to the needs of returnees. There is a vital need for a process that is 'people based', and takes into consideration the specific challenges of achieving normalcy and dignity. The right to restitution is articulated in terms of other human rights that are intrinsic to its realisation. They are, the right to non-discrimination, the right to equality between men and women, the right to be protected from displacement, the right to privacy and respect for the home, the right to peaceful enjoyment of possessions, the right to adequate housing, and the right to freedom of movement ⁽⁵⁷⁾. The human right to adequate housing is especially relevant, and requires governments to understand what 'adequacy' entails in a given context ⁽⁵⁸⁾.

In 2005 the United Nations formulated the 'Principles on housing and property restitution for refugees and displaced persons', better known as the 'Pinheiro Principles'. These principles outline certain rights-based standards and pre-requisites that are

⁽⁵⁶⁾ Those displaced prior to April 2008 comprise — those displaced from the Vanni region between June 2006 and April 2008 — 44 000; persons displaced from high security zones in the north — 70 000; those in protracted displacement (predominantly Muslims evicted by the LTTE in 1990) — 60 000, and those displaced during the hostilities in the east prior to July 2006 — approximately 300 000. The numbers who have returned to the north and the east however, are yet to be reconciled between different agencies and the ministry of resettlement.

⁽⁵⁷⁾ United Nations (2005), United Nations principles on housing and property restitution for refugees and displaced persons, Document No E/CN4/Sub.2/2005/17

⁽⁵⁸⁾ *Ibid*; see also — United Nations (1991). *The Right to Adequate Housing*. General Comment No 4 to the ICESCR.

indispensable to a programme of housing and property restitution. Principle 2 outlines the scope of the right to restitution:

‘All refugees and displaced persons have the right to be restored to them any house, land and/or property of which they were arbitrarily or unlawfully deprived, or to be compensated for any housing, land and/or property that is factually impossible to restore as determined by an independent, impartial tribunal’.

The principles stipulate that — ‘States must demonstrably prioritise the right to restitution as the preferred remedy for displacement and as a key element to restorative justice.’ They further stress on the need for ‘adequate consultation and participation in decision-making’ on the part of displaced persons (principles 14), and thereby require transparency and accountability within its rights-based framework. The envisaged participation is to be a meaningful consultation of affected persons and communities, with good representation of potentially vulnerable groups such as women, indigenous persons, the disabled, and children.

Policy precedent

The legal and institutional infrastructure in Sri Lanka is well suited for the implementation of a democratic and transparent programme of housing restitution. A number of programmes and institutional developments implemented by the government during the conflict have contributed to better defined criteria and standards for housing reconstruction. Notably, the Rehabilitation of Persons, Property and Industries Authority (REPPIA) was established in 1987 to assist persons affected by ‘riot or civil unrest’, and the NEHRP initiated in 2005 with funding from the World Bank. REPPIA implemented the Unified Assistance Scheme (UAS)⁽⁵⁹⁾, for ‘low-income housing’, and defined pro-poor eligibility criteria. The scheme introduced the ‘owner-driven housing’ model to conflict-affected contexts⁽⁶⁰⁾. Hence, commencing from the late 1980s the government implemented a policy of rehabilitating low-income conflict-affected housing, with loan grants for those who fell outside the low-income category.

⁽⁵⁹⁾ A maximum grant of LKR 75 000 to effect either repairs or to rebuild a permanent structure (paid in a total sum of LKR 100 000, comprising an additional LKR 25 000 livelihood allowance).

⁽⁶⁰⁾ See Mendis R. N., (2009). *Recommendations for a national policy on housing, land and property restitution in Sri Lanka*. UNHCR, UNOPS and COHRE.

NEHRP introduced, for the first time, a specific standard for housing reconstruction, namely the ‘core house’ (referred to as the NEHRP standard) ⁽⁶¹⁾. The core house is a permanent structure of 500 sq. ft., with one completed room and an additional room that is roofed, implemented on the owner-driven model where the beneficiary is expected to complete (plaster and build additions to) with his/her own resources.

The aftermath of the tsunami saw a consolidation of housing standards. The first-ever explicit policy for the housing restitution of displaced persons was formulated following the tsunami, namely the tsunami housing policy (THP). The THP introduced the policy positions of — ‘building back better’ and a ‘house for a house’. The former required that all agencies keep to the basic minimum standard irrespective of whether the original house was of a lesser standard, and the latter directed that every house damaged or destroyed be replaced with a new house.

The priorities of the THP shaped the programmatic detail of post-conflict housing restitution, establishing the 500 sq. ft. house as the basic minimum for post-displacement reconstruction. In contrast to the post-conflict context however, the aftermath of the tsunami brought in a flood of donor funding with which a variety of housing standards were constructed, the costs ranging from LKR 80 000 to LKR 1 000 000. Implementing agencies constructed houses according to the ‘donor-driven model’ — where houses are constructed and completed without the input of the beneficiaries. Implementing agencies were reluctant to commit to the NEHRP standard, which they felt did not fall within their definition of a ‘permanent house’, and referred to the NEHRP core house as ‘transitional’ or ‘semi-permanent’ shelter.

Consequently, the ‘tsunami housing programme’ generated an unhealthy ‘dependency’ among displaced persons, who look to external agencies to provide their every need, and a sense of entitlement to high housing restoration standards. Managing these expectations up to date has been challenging; beneficiaries opt to live for years on end in temporary shelters (intended to last a maximum of 6 months to 1 year) in the hope of receiving a house of more than 500 sq. ft., or a house subsidised by the Government of India of a markedly higher standard ⁽⁶²⁾. Even though resources for housing restitution are limited, and the chances of receiving such a house are not always programmatically or financially feasible.

Non-governmental agencies are currently exploring the concept of ‘incremental housing’ (of a smaller area than the Indian Housing), which have the potential of being incrementally developed by the beneficiary to a 500 sq. ft. house. Pertinent questions in

⁽⁶¹⁾ Defined in Circular No NEHRP/I (2004) as ‘a house with a minimum area of 400 sq. ft., a secured room, and an additional room, subject to beneficiary input on the design and any extension to be supplemented with the beneficiary’s own funds’. The minimum area was later increased to 500 sq. ft. and the cost of a NEHRP house was gradually increased from the initial LKR 250 000 to LKR 500 000 in the latter stages of the war.

⁽⁶²⁾ The housing standard used by the IHP is 550 sq. ft., utilises durable construction material, and has a kitchen and a toilet.

this regard are, whether more financially efficient housing models can be ‘sold’ to expectant beneficiaries as acceptable housing options? Can housing restitution be informed by the policy precedents of the past, such as ‘build back better’ and ‘a house for a house’? What is a viable approach to defining criteria by which alternative housing models may be allocated to different households?

Issues impeding a rights-based housing policy

The three areas outlined below are based on learning from the past and have a bearing on a policy process that is more ‘people centred’, and efficient to address a sustainable and holistic process of housing restitution.

Durable solutions and progressive policy formulation

The central challenge to housing reconstruction is the shortfall of funds, including donor funding. If not for the IHP the situation would be dire. The financial outlay to meet the outstanding housing need would require a concerted multi-stakeholder commitment, involving the government, the private sector, the donor community and the beneficiaries themselves. However, a lack of funding does not justify the absence of a concerted policy and a plan to meet the housing shortfall. The policy position regarding the unmet need for housing restitution in the north and east remains unclear. A policy process is a first step in the way forward for the timely and efficient restitution of housing and cannot be defined and directed predominantly by the availability of funds.

The new draft ‘framework for a resettlement policy’ by the ministry of resettlement⁽⁶³⁾ outlines a broad policy framework towards the goal of, among other things, to ‘ensure a well-coordinated and holistic approach to issues and challenges faced by displaced persons’. It makes reference to ‘durable solutions’, a term which entered the discourse on displacement following the tsunami, together with emphasis on ‘core minimum standards’ (among others)⁽⁶⁴⁾. Without specific reference to issues on the ground however, it is difficult to envisage the scope of durable solutions to be addressed by the policy, and to define a realistic system of benchmarking for their effective implementation⁽⁶⁵⁾.

Progressive policy formulation requires buy-in from the community, where policy issues are articulated at the ground level and beneficiaries are constructively

⁽⁶³⁾ Ministry of resettlement, framework for resettlement policy, revised draft as at November 2013.

⁽⁶⁴⁾ A number of initiatives that have attempted to identify durable solutions for displacement in Sri Lanka — notably, the conference organized by the UNHCR and the then ministry of human rights in 2007.

⁽⁶⁵⁾ ‘Durable solutions’ refers to one of three modalities as solutions to displacement: restitution in the area of original residence (return); restitution in an alternative location negotiated with the displaced person (relocation); and restitution in the location of displacement (local integration); see Inter-Agency Standing Committee (IASC), (2010) *Durable solutions for internally displaced persons*. The Brookings Institution, University of Bern Project on Internal Displacement.

engaged in a process of understanding what their alternatives are. For instance, the 'house for a house' policy precedent of the past, may not be relevant where some flexibility is required to accommodate extended families who return after protracted displacement and are in need of housing restitution (or compensation).

Housing standards — does equitable housing reconstruction require a standard for all?

Since the last stages of the conflict, and soon after, implementing agencies were compelled to build cost-effective houses of a smaller dimensions than the NEHRP standard. The Early recovery group for permanent housing ⁽⁶⁶⁾ put forward innovative alternatives in order to reach a larger population with timely and permanent solutions to their lack of housing. A 250 sq. ft. structure with a 500 sq. ft. foundation was one such alternative and was referred to as the 'new core house'.

All housing schemes in the past adopted pro-poor selection criteria that included the monthly income of the beneficiary household ⁽⁶⁷⁾. In view that the owner-driven model (also implemented by the IHP) requires the beneficiaries to contribute to the reconstruction process by way of labour and materials ⁽⁶⁸⁾, there are concerns as to whether housing beneficiaries are in fact the poorest of the poor (and the destitute). The success of the programme would depend on whether the beneficiary in fact has the capacity and ability to contribute. Hence, the utilisation of one housing standard for all types of poor households may prove unduly burdensome for selected beneficiaries (especially if they are in fact the poorest of the poor). A housing programme that addresses pro-poor needs necessarily requires a re-visitation of the housing standards that have been used in the past, and the viability of the 'one-size-fits-all' approach to housing reconstruction.

In 2011, REPIIA constructed 222 'low budget houses' in the Maritemepattu DS division in Mullaitivu ⁽⁶⁹⁾. These houses were intended for single member families who are especially vulnerable. The individuals were reportedly content with their permanent housing solution, indicating the viability of more cost-effective, but adequate alternatives for households with different needs. Hence, the 250 sq. ft. core house, may be sufficient

⁽⁶⁶⁾ The Early Recovery Group on Permanent Housing — an inter-agency committee that was convened for the coordination of activities (while recognizing that the overall responsibility for coordinating early recovery for the north rests with the GoSL).

⁽⁶⁷⁾ A low income household has been defined as household with a monthly income of less than LKR 2500 (as at 2012).

⁽⁶⁸⁾ The implementation agency's role is to procure the building materials, assist with technical guidance and to monitor the progress, thereby vesting the actual ownership of the housing programme on the beneficiary community.

⁽⁶⁹⁾ The construction of 222 houses were with full payment of LKR 75 000 per household for the construction of 100 houses, and a part payment per household for the construction of 122 houses. See; Mendis, R. (2012). *The Right to Adequate Housing in the Vanni: A question of relevant policy?* LST Review Volume 22 Issue 297 July 2012, page 9-10 and 20.

for a family of just one or two members, but may not be sufficient as the standard minimum for all post-conflict housing restoration. Similarly, it may be necessary to reconsider the NEHRP standard, or the Indian house standard, as the maximum standard for families with larger numbers. Alternatives that include low-interest loan schemes together with technical facilitation may be a more realistic option for large families, such as families that have extended during displacement.

Whether or not these several options may be used to meet the demands of post-conflict housing restitution, requires a clear formulation of policy and programmatic guidelines and, most importantly, criteria to define and determine what the standards of 'adequacy' entail for the different needs of returnee families. The prudent policy approach of the past to prioritise and benefit low-income households may have little value if it is unable to also address those particular vulnerabilities of persons disadvantaged and made destitute by conflict, which impedes their re-integration and development, in a timely and efficient manner.

Assessment of vulnerability

As discussed above, all housing policies and programmes in the past have focused almost exclusively on poverty stricken, vulnerable and destitute families, all falling within a stipulated 'low-income' category. At the village selection level, priority has been given to villages with a higher percentage of families identified as 'vulnerable'. Vulnerability is assessed at the household level based on selection criteria that include — the numbers of dependents, whether the household is headed by a woman, the incidence of disability, the ages of dependents, and the number of orphaned children who live with a family. The likelihood of being prioritised is greater where there are a larger number of vulnerable family members. Hence, a two-member family has a lesser chance of being selected, though in reality, they are no less vulnerable or may even be more so.

The stipulation of an income threshold however, presents certain difficulties, in that a monthly income threshold of LKR 2 500 or less (approximately USD 19), is considerably low and would have the effect of excluding a large number of households who are only marginally richer, but may be equally vulnerable to impoverishment and other deprivations. A more progressive approach would be to assess the capacity of a household to sustain its income-generating potential and overcome vulnerability to impoverishment among other risks and challenges.

In addition to the categorisation of 'vulnerability' based on pro-poor selection criteria (listed above), other 'vulnerabilities' associated with displaced persons include: vulnerability to debt and impoverishment (especially among female-headed households), the inability to sustain income-generating livelihoods, insufficient access to services and a general powerlessness to negotiate and redress their grievances. Unless the nature and extent of vulnerability is investigated empirically however, a holistic integration of these persons in post-conflict development is bound to be compromised.

It is necessary to explore other ‘enablers’ of the owner-driven housing model, in consideration of identified vulnerabilities. Potential enablers may include supplementary forms of assistance, such as social welfare support, disability support and child support, to name a few. Vulnerable families currently receive very little welfare assistance, which is insufficient to address even the most basic household requirements ⁽⁷⁰⁾. A restitution programme that is relevant needs to be demonstrably sensitive to perceptions of communities and individuals of their own vulnerability, and the enablers that would help them overcome their vulnerable circumstances.

Implementing agencies can only do so much; they operate on a fixed budget per house and must rely on the efforts of local and provincial authorities to address post-conflict vulnerability. Without consistent institutional intervention and policy guidance on the part of government, it is unlikely that measures to address vulnerability would be sustainable in the long term. The lack of a proper solution to vulnerability is counter-productive to pro-poor selection criteria, where housing reconstruction increases the burden of a beneficiary family already made vulnerable by conflict.

Institutional capacity

The issue of institutional capacity links closely to the policy issues highlighted above. A plethora of institutions have dealt with internal displacement, return and post-return rehabilitation throughout the duration of the conflict and post-tsunami recovery. There are currently a number of central ministries and local-level institutions in charge of returning and reintegrating displaced persons to their lands and houses ⁽⁷¹⁾. The need for an institutional structure specifically mandated to address displacement has been at the forefront of discussions on durable solutions and restitution. The mandate of REPPIA is a useful guide in this regard. REPPIA was established by legislation, namely the REPPIA Act, No 29 of 1987, which provides a clear point of reference for persons (and other institutions) to hold REPPIA accountable to its mandate ⁽⁷²⁾. The REPPIA act outlines process and procedure to be adopted when addressing the rehabilitation needs of properties (including housing) and industries affected by conflict, but its scope has reduced over time mainly due to funding constraints. It is noteworthy that the LLRC

⁽⁷⁰⁾ In Manthai West, families identified as vulnerable (female-headed families in particular), are entitled to assistance of LKR 250 per month; see Mendis, R.N. (2012) page 14.

⁽⁷¹⁾ Notably among these institutions are the ministry of resettlement, the land commissioner general’s department, a well-networked system of local government offices at the district and village level, and offices of the provincial councils, who in turn are mandated to administer different aspect of the return process.

⁽⁷²⁾ The functions of the REPPIA included: ‘(a) to assist in the rehabilitation of affected persons by way of an outright grant or any such other means as REPPIA may deem necessary; (b) to assist the owner of any affected property to repair and restore such property either by way of an outright grant or subject to such reasonable conditions as may be agreed upon by REPPIA and such owner for securing the repayment of any expenditure incurred out of the fund for the purpose of such repair and restoration ... ‘See section 4 of The Rehabilitation of Persons, Properties and Industries Authority Act, No 29 of 1987.

identifies REPPIA as the ‘specialised institution responsible for implementing government’s policy on compensatory relief for the person/s who suffered loss/damage due to terrorist violence and operations of the government security forces ...’; hence there is a need to consider its current capacity, or the required expertise of a similar institution. This is especially important, considering long-term restitution and rehabilitation needs, as highlighted in the LLRC report.

It is pertinent to consider in addition whether policy decisions entered into by central-level institutions are shaped by dialogue at the field level, and the level of autonomy and decision-making authority that is vested in local and provincial-level agencies working in relation to housing, land and property restitution. With respect to land restitution for instance, there is an evident disconnect between central and provincial land administration.



Figure 82—Sri Lankan IDPs living in shelter 8 years after the end of the war
(Source: Jaime Royo-Olid, EU 2017)

The overt reliance on the non-governmental sector is a matter of concern, especially for the long term. National institutions such as the National Housing Development Authority (NHDA), with considerable experience in housing-construction implementation, have a limited role in post-conflict housing reconstruction ⁽⁷³⁾. This is not to negate the useful contribution of non-governmental agencies in meeting the current outstanding demand for housing. However, given that housing restitution is potentially a long-term project, it is necessary to promote and develop national institutions as being able to systematically and professionally address the demands of post-conflict restitution and engage in the sustainable implementation of national-level policy.

Conclusion and recommendations: a way forward

It is necessary to develop a post-conflict housing restitution policy that can absorb the learning of the past in a 'relevant' manner. There has been little national-level engagement with the grass roots and affected communities on key issues that require policy direction. Housing and property restitution require political commitment, and a targeted and strategic programme of implementation. The following recommendations have been identified as key to a people-centred process of policy-making and strategy for housing restitution.

- Mobilise discussion and dialogue involving housing beneficiaries (or those without solutions for housing restitution) and ascertain their views of 'adequate housing' and a realistic process of 'housing restitution'.
- Build on past initiatives to contextualise flexible housing standards that are 'adequate', which may be used to address a range of housing needs among beneficiaries.
- Empirically assess specific vulnerabilities and risks of social exclusion, impoverishment and all forms of deprivation, among other issues that impede effective housing restitution.
- Identify the specific features of an enabling environment that are indispensable to the realistic and successful implementation of owner-driven housing programmes (e.g. issues of land regularisation, capacity to mobilise savings, access to services and market-based opportunities).
- Assess the ambit of institutional capacity and intervention that is required for a long-term process of housing restitution with the view to addressing institutional gaps in policy formulation.
- Establish benchmarks and indicators to measure the progress of the housing reconstruction process against a predetermined timeline and with reference to durable solutions to displacement.

⁽⁷³⁾ Interviews with officers of the NHDA indicate that they have the required expertise and experience to execute large-scale housing projects if they are granted the funding.



Figure 83—Village leader and school teacher who managed the reconstruction of her EU-funded house while sustaining husband with war-inflicted disabilities, in Mulliyawalai, Mullaitivu District, Sri Lanka (Source: Jaime Royo-Olid, EU 2016)

11. Owner-driven reconstruction where women are leaders: Cases from India, Sri Lanka and Indonesia

Mehul Pandya, Kshitij Gupta, Gautam Bhut, Vandana Chauhan and Khyati Halani
of All India Disaster Mitigation Institute (AIDMI)

Abstract

Though most of owner-driven reconstruction in the end falls on women's shoulders, they are seldom accorded leadership positions in these processes. This is odd. This paper draws from some of the key reconstruction processes in Asia and reviews the owner-driven reconstruction process in the 2001 Gujarat Earthquake in India, the 2004 tsunami in India, Sri Lanka, and Indonesia and offers directions that were relevant to the reconstruction in Cyclone-Phailin affected communities in Odisha, India and for those affected by Cyclone Haiyan in the Philippines, including ongoing reconstruction efforts in Sri Lanka. The paper discusses exclusion of women from owner-driven reconstruction processes and draws experiences and insights from the work of Disaster Emergency Committee (DEC); International Strategy for Disaster Reduction (ISDR); *Duryog Nivaran* (DN); the EU and Department for International Development (DFID). This paper addresses issues of accountability, local action, and governance in owner-driven reconstruction. In the end, this paper points to the direction of designing climate-smart owner-driven reconstruction in ongoing recoveries post-Phailin and Haiyan by drawing from the work of the climate and development knowledge network (CDKN) in Asia. This paper gives examples of projects and initiatives where women are leaders in reconstruction process and where, in the end, they 'own' what is rebuilt.

Introduction

Disasters in Asia and the vulnerability of women

According to Climate and development knowledge network (2012), the Asia region is highly prone to and affected by the impacts of natural disasters. Even without taking climate change into account, disaster risk will continue to increase in many countries as more vulnerable people and assets are exposed to climate extremes. This is a concern addressed at the discussion on post-Hyogo framework for action (HFA) beyond 2015. Natural disasters affected the poor and powerless the most; and among those affected by natural disasters in Asia, women often find themselves affected more in terms of both frequently and severity. As a result, in many ways natural disasters pose a serious threat to women's socioeconomic and political development in Asia.

A review of census information on the effects of natural disasters across 141 countries by WHO (2011) showed that although disasters create hardships for everyone, on average they kill more women than men, or kill women at a younger age than men. Women represented an estimated 61 % of fatalities in Myanmar/Burma Cyclone Nagris in 2008, 70 % after the Indian Ocean Tsunami in Banda Aceh and 91 % after Cyclone Gorky in Bangladesh in 1991 (World Bank, 2012). In the case of the 2004 Indian Ocean tsunami, some of the causes of this terrible pattern were similar across the region; many women died because they stayed behind to look after their children and relatives; men more often than women can swim; and men more often than women can climb trees (AIDMI, 2005). The 2004 Indian Ocean tsunami killed 40 000 to 45 000 more women than men ⁽⁷⁴⁾. A study shows that women are 14 times more likely to die than men during a disaster (Peterson, 2006).

What is owner-driven reconstruction?

In the context for housing and community reconstruction in a post-disaster situation, the concept of owner-driven reconstruction is broadly defined as process where conditional financial assistance is given, accompanied by regulations and technical support aimed at ensuring that houses are built back better (World Bank, 2010).

Being a participatory and empowering process, the approach does require management of various aspects of the reconstruction process by the beneficiary but does not necessarily require that the affected person provide labour in construction. While owner-driven reconstruction approaches are mainly applied to housing reconstruction, more and more examples of owner-driven-reconstruction approaches being used for community-level infrastructure and livelihood recovery are emerging from the region.

The owner-driven-reconstruction approach offers several benefits such as greater participation of the people affected, greater ownership of end results, community empowerment, self-reliance and greater satisfaction, including quickness and cost-effectiveness. But it is not completely risk free; it requires close monitoring of the use made of finance, construction quality and the impact on the livelihoods of the participating households, including changes in government reconstruction policies and plans. Owner-driven housing reconstruction programmes have also shown earlier occupancy and higher occupancy rates compared to other approaches such as donor driven.

⁽⁷⁴⁾ See: The tsunami evaluation coalition, the Boxing Day tsunami in numbers, states and facts, <https://www.alnap.org/system/files/content/resource/files/main/tsunami-stats-facts.pdf>

Underlying principles

For any owner-driven programme to be successful it is necessary that it addresses the pre-existing vulnerabilities of the population and that it reduces future risks. Similarly, owner-driven reconstruction requires adequate regulatory framework, enforcement of building codes, access to quality materials, and technical guidance to ensure the safety of the homes being reconstructed, including mechanisms for vulnerable groups such as widows, families headed by single women, and the elderly (GFDRR, 2012). Fundamental principles of owner-driven housing reconstruction as described in the IFRC's owner-driven housing reconstruction guidelines (Cordero and Segal, 2010) has identified 10 core principles for guiding owner-driven housing reconstruction. These are as follows.

- (1) Participatory process of decision-making.
- (2) Appropriate technical support.
- (3) Appropriate financial assistance.
- (4) Government recognition of owner-driven housing reconstruction policy advocacy.
- (5) Disaster-risk reduction by understanding risk and building safer environments.
- (6) Participation and technical support requirement of regular access to families.
- (7) Reconstruction extends beyond housing.
- (8) Addressing security of tenure-related vulnerabilities.
- (9) Informed decision-making by all parties.
- (10) Responsible resettlement.

What it takes to engender relief and reconstruction: six principles (GDN, 2005)

- (1) Think big: gender equality and risk-reduction principles must guide all aspects of disaster mitigation, response and reconstruction. The 'window of opportunity' for change and political organisation closes very quickly.
- (2) Get the facts: gender analysis is not optional or divisive but imperative to direct aid and any plan for full and equitable recovery. Nothing in disaster work is 'gender neutral'.
- (3) Work with women at the grass roots: women's community organisations have insight, information, experience, networks, and resources vital to increasing disaster resilience. Work with and develop the capacities of existing women's groups.
- (4) Resist stereotypes: base all initiatives on knowledge of difference and specific cultural, economic, political, and sexual contexts, not on false generalities.
- (5) Take a human rights approach: democratic and participatory initiatives serve women and girls best. Women and men alike must be assured of the conditions of life needed to enjoy their fundamental human rights, as well as to simply survive. Girls and women in crisis are at increased risk.
- (6) Respect and develop the capacities of women: avoid overburdening women with already-heavy workloads and family responsibilities which are likely to increase.

Application of owner-driven reconstruction

Owner-driven housing reconstruction programmes have been successfully implemented in a number of disaster events in Asia. The most noteworthy examples include housing-reconstruction programmes in Gujarat after the 2001 earthquake, after the 2005 Pakistan earthquake and owner-driven reconstruction approaches post 2004 Indian Ocean tsunami in India, Sri Lanka and Thailand, including Indonesia. More recently, the owner-driven housing reconstruction approach has been used in the Koshi River floods of 2008 in Bihar, India by the government of Bihar with financial assistance from the World Bank and GFDRR, where the programme as of September 2012, issued funds for more than 46 000 families (GFDRR, 2012). The approach was even used for reconstructing houses in Haiti after the 12 January 2010 earthquake.

Thus, in last decade or so this approach has almost become a standard method for housing reconstruction in the region with institutions such as the World Bank, ADB and UN-Habitat, including IFRC advocating its use and application in various disaster settings. The approach has been particularly popular with women and their organisations as it promotes the participation and leadership of women in recovery and reconstruction; in shelter reconstruction and beyond into community-level reconstruction activities.

In India

The Government of India has capitalised on the broad reach and strong leadership of women's organisations following the earthquakes in Latur and Gujarat and the east Indian tsunami (IRP, UNDP, ISDR, 2010) for recovery and reconstruction. For example, in the 1993 Latur earthquake in Maharashtra, India, *Swayam Sikshan Prayog* (SSP); an organisation with social enterprise and a firm belief in women's leadership was appointed as a community-participation consultant to the government of Maharashtra. SSP trained and support grass-roots women's collectives as official communication assistants to inform house owners on entitlements and procedures, monitor the repair and strengthening of houses and provide feedback to government officials on the progress in construction, including reporting of corrupt practices of government engineers (source: Practical Action) (IRP, UNDP, ISDR, 2010). This crucial role played by women in the Latur earthquake encouraged many agencies, including the government to redefine what role can women play in the owner-driven reconstruction processes beyond supporting their male counterparts in shelter reconstruction shoulder-by-shoulder.

In response to the 2001 Gujarat earthquake, the Self-Employed Women's Association (SEWA), a trade union, launched *naya ghar* (new house) a rural housing programme in the severely affected districts of Kutch, Patan and Surendrenagar. The programme, led by women, attempted to teach the community to adopt safe and scientific building practices, mobilise the community workers for reconstruction of earthquake-affected houses and to generate alternative livelihoods through

reconstruction activity. To achieve this goal, a list of semi-skilled masons (men and women) was prepared and were then trained in earthquake-resistant construction. Under this programme, the Mahila Housing SEWA Trust (MHT) constructed 5 017 permanent shelters, 511 semi-permanent shelters, and 3 122 toilets ⁽⁷⁵⁾.

A study by Dwayne Barenstein (2008) in the 2001-earthquake-affected areas of Gujarat and the 2004-Indian-Ocean-tsunami-affected areas of Tamil Nadu in India revealed that while in Gujarat about 87 % of the reconstruction (over 197 000 fully damaged houses) was owner-driven and achieved the highest level of satisfaction among people in terms of speed and cost-effectiveness, reconstruction in Tamil Nadu pursued a top-down approach and was mainly contractor-driven, which led to socio-culturally and environmentally insensitive housing reconstruction. The study concluded that Gujarat's experience proved that with adequate financial and technical support and other enabling conditions (e.g. good supervision, massive training of local masons, and subsidised construction materials) it is possible to build back better using local skills and capacities.

Based on the success of a pilot owner-driven reconstruction initiative supported by the government of Bihar and UNDP in Koshi-flood-affected areas of Bihar, the government of Bihar has up-scaled this pilot to build 100 000 houses in the worst flood-affected districts of Madhepura, Saharsa and Supaul under its new Kosi reconstruction and rehabilitation scheme with the World Bank commitment of USD 220 million (UNDP India, n.d.). In response to the Uttarakhand disaster in India, the World Bank and the Asian Development Bank approved a loan of USD 450 million for post-disaster reconstruction and rehabilitation. The World-Bank-funded housing component of the project will encompass two types of houses — prefabricated houses and owner-driven houses (built by the owners themselves after receiving money for the construction) — where all beneficiaries have been given a choice to either opt for a prefabricated house or an owner-driven construction model (Upadhyay, 2013).

In Sri Lanka

The Sri Lankan government's decision to introduce a coastal buffer zone made it necessary to implement two distinct programmes. 'Donor-driven' housing for families who had been living within the buffer zone removed people from their localities with little consultation, making integration into their new neighbourhoods difficult. However, 'HOD' housing, for partially and fully damaged houses outside the buffer zone, ensured that people remain in their familiar neighbourhoods and would be responsible for rebuilding their homes. UN-Habitat (2011) was one of the main advocates of the HOD process.

⁽⁷⁵⁾ See Mahila Housing SEWA Trust <http://mahilahousingtrust.org/#Affordable>

A study from Sri Lanka ⁽⁷⁶⁾ in response to the massive reconstruction programme implemented in Sri Lanka following the Indian Ocean tsunami found that the owner-driven approach has a number of advantages over the donor-driven approach. The study confirmed that dwellers in owner-driven-housing-programme housing were more satisfied than the dwellers in donor-driven-housing-programme housing and that the owner-driven housing programme was more successful than that of the donor-driven programme from the dwellers' point of view. According to the research, the owner-driven housing programme has been superior in quality/durability, space availability, flexibility, land size, location and overall facilities provided e.g. electricity and water, sanitation and hygiene (WASH) facilities.

AIDMI's work with support from the United Nations Development Fund for Women (then UNIFEM, now called UN Women) in Sri Lanka following the 2004 Indian Ocean tsunami shows that it is crucial to engage women and their organisations in owner-driven reconstruction for holistic recovery. In Sri Lanka, UNIFEM mobilised women's networks to identify the needs and concerns of women survivors to ensure that a gender perspective be incorporated in reconstruction processes (AIDMI, 2005). UNIFEM supported the efforts of 18 local partners in sustainable recovery focusing on women's needs and successfully influenced the reconstruction process. This was the largest and first-ever direct investment in women's organisation by the UN system in recent humanitarian action: it strengthened the 14 women's groups to recover and reach out to each other in the reconstruction process.

The IHP funded by the GoI (2012-2015: with a target of reconstruction and repair of 43 000) was implemented in the Northern and Eastern Provinces of Sri Lanka where UN-Habitat was responsible for supporting the reconstruction or repair of 16 800 houses in the districts of Jaffna, Killinochchi and Mullaitivu ⁽⁷⁷⁾. UN-Habitat helped women from Sri Lanka's conflict-affected Northern Province to break traditional barriers by moving into previously male-dominated occupations in the construction sector by engaging them in vocational-skills-training programmes in masonry and carpentry. The access to training and equal opportunities provided through initiatives such as this enabled young women to train and work alongside their male counterparts UN-Habitat (2013). In Sri Lanka, the EU provided EUR 23.6 million for a period of 5 years (2011-2015) for owner-driven housing through a partnership with UN-Habitat; by 2015 the EU funded the reconstruction of about 10 000 houses in north Sri Lanka and 10 000 in east Sri Lanka ⁽⁷⁸⁾.

⁽⁷⁶⁾ Ratnayake R.M.G.D. and Raufdeen Rameezdeen (n.d.). *Post disaster Housing Reconstruction: Comparative Study of Donor Driven vs. Owner Driven Approach*. Sri Lanka: Moratuwa.

<http://www.recoveryplatform.org/assets/publication/sri%20lanka%20comparision%20of%20owner%20driven%20and%20donor%20driven%20shelter.pdf>

⁽⁷⁷⁾ UN-Habitat's Indian Housing Project, see

http://www.fukuoka.unhabitat.org/projects/sri_lanka/detail17_en.html

⁽⁷⁸⁾ See <http://unhabitat.lk/projects/>

In Indonesia

Following the December 26 earthquake in Banda Aceh, many agencies initiated owner-driven housing recovery programmes by providing cash transfers, materials, training and technical expertise to the affected households. A report by da Silva (2010) noted that while this worked out in some communities, in several communities the reconstruction process was delayed and led to poor-quality construction as agencies had underestimated the lack of materials and skills available locally. Though some of these issues were resolved by facilitating the necessary training, supervision and quality control, underlying tensions from the conflict and the growing number of agencies adopting contractor-driven approaches made it more difficult to engage people in owner-driven reconstruction. However, owner-driven approaches in Aceh helped to jump-start the early recovery process; reconstruction started quickly and avoided lengthy procurement processes.

Similarly, evidence from the 2006 Yogyakarta earthquake shows that a programme called the Community Empowerment Programme (CEP), instituted by the national government to empower people to reconstruct their own houses using resistant design and materials, trained over 1 100 people who then trained others within their clusters which accelerated the speed of the reconstruction process and reduced labour costs significantly (IRP, 2010). UNIFEM's work in Indonesia, where it supported reconstruction of *balai inong* (a traditional gathering place for women) by women themselves, shows that one way of engaging them in recovery early is to rebuild women's community gathering spaces, which enables them to collectively identify common recovery issues, potential solutions, and the means to carry them out (IRP, 2010).

Key factors contributing to the exclusion of women

Reconstruction offers unique challenges and opportunities for building back better. These challenges and opportunities could be effectively used to reduce socioeconomic inequalities and reduce risk. But often recovery and reconstruction initiatives miss out on opportunities to address the root causes of vulnerability, especially that of women. The exclusion of women from the owner-driven-reconstruction process can be attributed to the following key factors.

Ownership of house and land

First and most importantly, since the women do not 'own' the house or asset that is lost in the event of a disaster they are not recognised as 'owners' or even 'joint owners' in the loss and damage list of the authorities or the civil society organisations. This results in their exclusion from the list of victims liable for compensation. For example, none of the initial post-tsunami national- and sector-based assessments conducted in Sri Lanka employed gender analysis (Ariyabandu, 2005) and the state policy of joint ownership of

permanent housing in Tamil Nadu overlooked the case of single women (unmarried/divorced/widows) (Nanban Trust, Oxfam, Chaman Pincha, 2008). A rapid assessment in Sri Lanka after the tsunami showed that 60 % of land in Batticaloa was owned by women due to the customary laws practised in the Eastern Province where land ownership went from mother to daughter. However, the state policy on land allocation only recognised the male head of a household as the legitimate owner of land (IRP, 2010). Even more recently, neither state-led assessments in Assam nor after the Bihar floods in India took any special care to collect gender-disaggregated data. As a result, greater obstacles are faced when women and their organisations try to influence reconstruction processes.

Control over resources

Second, reconstruction outcomes for women are largely influenced or determined by their levels of inclusion in the early stages of reconstruction policy-making and planning, including the nature of damage and loss assessments carried out and the efforts to mobilise their participation in decision-making at various levels. When the compensation goes to men, and not to women, how the money is used is decided by men, who often (but not always) invest more in the status and structure of the shelter or asset and less on the physical and social services or the upcoming livelihood opportunities. Though reconstruction activities are largely dominated by males, experience shows that resources that women control are widely used by women and lead to better outcomes for children and the family. In most cases where women were directly provided financial assistance, the money was spent on family needs and repaying debt (SNEHA Nagapattinam, 2008).

Disproportionate allocation of reconstruction resources

Third, the reconstruction process becomes predominated by the 'shelter' and 'construction' aspects, with large amounts of money involved in the abovementioned aspects and less on the reconstruction of livelihoods and income, social protection and social services and with little focus on opportunities. This is very important because to a woman a house is not only a shelter but also a place to work, store, and make a living. In this way, the opportunities of making women's voices count in the reconstruction process and upcoming social and economic structures are missed. In spite of this realisation it is commonly found in reconstruction budgets that more resources are made available for shelter and construction and less for social and economic structures where women can play a dominating role. As a result, the capacities of women to manage reconstruction are undermined.

Because of these three main reasons the owner-driven reconstruction does indeed reconstruct the shelter or the village or roads or schools, but the women do not become the 'owner' of these reconstruction processes or the products.

Cross-cutting issues

In the context of owner-driven reconstruction it is also important to consider some cross-cutting issues which are important to women. Suitable use of cash transfers, livelihoods strategies and provision of water and sanitation along with housing reconstruction can improve the effectiveness of the overall reconstruction process leading to better results and satisfaction among women.

Cash transfers

Cash transfers can keep community members (including women as house recipients) employed during the recovery phase. The AIDMI experience of reaching out to over 26 000 beneficiaries through cash transfers in India shows that cash transfers can effectively be used as an entry point for the active participation of women in later states of reconstruction. Assurance of income for meeting day-to-day household needs through cash transfers during reconstruction can cover the cost of participation for households. For this reason, we saw a number of agencies implementing cash-grant and cash-transfer programmes following the tsunami in Sri Lanka during the owner-driven reconstruction with technical inputs and support. A similar combination of technical assistance and cash grants was used effectively for the transitional-shelter program organised by the IFRC in Yogyakarta after the earthquake in 2006.

Livelihoods

Shelter reconstruction strategies should be designed to create local working opportunities, provide skills and vocational training and promote the use of locally available material and labour. Housing needs to be reconstructed in a way that supports women's and men's livelihoods (Ramalingam and Pavanello, 2008). Women's informal roles in terms of small income earning, subsistence production and in unpaid household responsibilities are often not recognised or poorly understood (Rex and Trohanis, 2011). For example, following the tsunami, within the fishing sector, it was the men who fished who got the assistance, rather than the women who traded fish (ALNAP and ProVention Consortium, 2008). Also, agencies must recognise that delays in housing delays the economic recovery of women as for many women the house is also a place for work. During reconstruction, opportunities for involving women in construction are largely missed; very low levels of effort are made to build women's capacities and skills in masonry. AIDMI's flood-related-review work with Save the Children in Bihar, Odisha, and

West Bengal showed that when women's livelihoods recover, the education and nutrition level of their children start improving.

Water and sanitation

Suitable provision of water and sanitation services in and around households is important for women as they are more directly impacted. For example, collecting water from distant sources may reduce their income and make them vulnerable to abuse or violence. Because women are the main users, providers, and managers of water and the guardians of household hygiene, their involvement and opinion on water and sanitation matters the most. Yet for many years, reconstruction efforts at both household and community levels neglected women's central role in water and sanitation.

Guidelines for gender-responsive reconstruction

The following set of guidelines is empirically based, reflecting the findings of international disaster researchers, first-hand reports from field workers, and narrative accounts by disaster survivors. They have been adapted from a compilation developed by the All India Disaster Management Institute (IRP, 2010).

- Safe and secure shelter is vital for women as much of their daily life revolves around the household. As home-based workers, household managers, and family caregivers, women must be centrally involved in the design, siting, construction, and retrofitting of local housing and community facilities.
- As 'temporary' shelter is often long-lasting, make women's safety a priority in the social organisation of temporary camps, e.g. through adequate lighting, on-site security, provisions to protect privacy, etc.
- Provide space and services in temporary accommodation for the care of post-operative and newly disabled survivors and their caregivers.
- Increase housing security for women by including them in the deeds.
- In determining priorities for occupancy of new housing, target highly vulnerable women such as single mothers, widows, those living below the poverty line and unemployed, socially marginalised, etc.
- Provide women fair access to construction-related employment. Include employment-relevant job training. Seek out women with technical qualifications for training on projects, e.g. as engineers overseeing housing construction.
- Contract with women-owned businesses and solicit the participation of women professionals in the construction industry and related fields.
- Partner with women's grass-roots organisations to evaluate and monitor the process of housing reconstruction in every affected city, town, and village.
- Promote the participation of women across caste and class in decisions about community relocation, the siting of new settlements, the design of new structures, and construction of new community facilities.

- Collaborate with local women in planning housing-design innovations which may reduce or simplify women's work load or otherwise improve living and working conditions for women and their families.

Conclusion

The immense contributions women make to recovery too often go unrecognised, while the marginalisation of their skills and knowledge limits their opportunities to play a greater role in building back better (IRP, 2010). There is no alternative to the centrality of women in owner-driven reconstruction for better results; results that contribute constructively to the achievement of the millennium development goals and the Hyogo framework for action. It is proven that countries that invest in promoting the social and economic status of women tend to have lower poverty rates. For example, an extra year of secondary schooling for girls can increase their future wages by 10 to 20 % (Rex and Trohanis, 2011) and such empowerment can effectively reduce vulnerability to future shocks. Mainstreaming gender into reconstruction provides for faster and deeper recovery, in addition to the benefits gained in promoting gender equality and addressing gender-based vulnerabilities (WBI, 2009; IRP, n.d.).

References

- AIDMI (2005). *Tsunami gender and recovery*. October 12. The tsunami evaluation coalition, the Boxing Day tsunami in numbers, states and facts. <https://www.alnap.org/system/files/content/resource/files/main/tsunami-stats-facts.pdf>
- AIDMI (2005). *Tsunami, gender and recovery*. southasiadisasters.net, Issue No 6, <https://www.gdnonline.org/resources/tsunami%20-genderandrecovery.pdf>
- ALNAP and ProVention Consortium (2008). *Responding to Earthquake, 2008: Learning from earthquake relief and recovery operations*. Available at: <http://www.alnap.org/resources/lessons.aspx>
- Ariyabandu, M. M. (2005). *Tsunami gender and recovery*. October 12. The Haag ALNAP Biannual, AIDMI.
- Climate and development knowledge network (2012). *Managing climate extremes and disasters in the agriculture sector: Lessons from the IPCC SREX report*. Available online at www.cdkn.org/srex
- Cordero, C. and Segal, P. (2010). *Owner-driven housing reconstruction guidelines*. IFRC, Geneva. <http://www.ifrc.org/PageFiles/95526/publications/E.02.06.%20DHR%20Guidelines.pdf>
- da Silva, J. (2010). *Lessons from Aceh: key considerations in post-disaster reconstruction*. Arup. Practical Action Publishing Group. UK: Warwickshire. <https://www.dec.org.uk/sites/default/files/pdf/lessons-from-aceh.pdf>
- Duyne Barenstein, J. (2008). *From Gujarat to Tamil Nadu: Owner-driven vs. contractor-driven housing reconstruction in India*. Switzerland: Geneva. <http://www.irbnet.de/daten/iconda/CIB11511.pdf>
- GDN (2005). *Gender equality in disasters: six principles for engendered relief and reconstruction*. <http://www.unisdr.org/2005/wcdr/preparatory-process/inputs/gender-broadsheet.pdf>
- GFDRR (2012). *Enhancing safety and improving living conditions for 100,000 vulnerable families*. https://www.gfdr.org/sites/default/files/publication/Project_Highlights_Owner-Driven_Housing_Reconstruction_0.pdf

- GFDRR (2012). *Owner driven housing reconstruction Bihar Kosi flood recovery project*.
<https://reliefweb.int/report/india/india-bihar-kosi-flood-recovery-project-owner-driven-housing-reconstruction>
- IRP (n.d.). *Why gender issues in recovery are important?*. Knowledge for recovery series info kit 1.
http://www.recoveryplatform.org/assets/tools_guidelines/Why%20gender.pdf
- IRP, UNDP, ISDR (2010). *Guidance note on recovery gender*. Japan: Kobe.
http://www.preventionweb.net/files/16775_16775guidancenoteonrecoverygender1.pdf
- Mahila Housing SEWA Trust <http://mahilahousingtrust.org/#Affordable>
- Nanban Trust, Oxfam, Chaman Pincha (2008). *Indian Ocean Tsunami through the gender lens: insights from Tamil Nadu, India*.
http://www.gdnonline.org/resources/Pincha_IndianOceanTsunamiThroughtheGender%20Lens.pdf
- Peterson, K. (2011, c. 2006). *Reaching out to women when disaster strikes: Soroptimist White Paper*. Updated May 2011, <http://www.soroptimist.org/whitepapers/WhitePaperDocs/WPReachingWomenDisaster.pdf>
- Ramalingam B. and Pavanello S. (2008). *Cyclone Nargis: lessons for operational agencies*. ALNAP.
<https://www.alnap.org/help-library/cyclone-nargis-lessons-for-operational-agencies>
- Ratnayake R.M.G.D. and Raufdeen Rameezdeen (n.d.). *Post disaster Housing Reconstruction: Comparative Study of Donor Driven vs. Owner Driven Approach*. Sri Lanka: Moratuwa.
<http://www.recoveryplatform.org/assets/publication/sri%20lanka%20comparision%20of%20owner%20driven%20and%20donor%20driven%20shelter.pdf>
- Rex, H. C., and Trohanis, Z. (2011). *Integrating gender issues in recovery and reconstruction planning*. The World Bank. Available at: <http://documents.worldbank.org/curated/en/638991468245419005/Integrating-gender-issues-in-recovery-and-reconstruction-planning>
- SNEHA Nagapattinam (2008). *Voices of the marginalized: a success story of the Karaikal Federation*. Nagapattinam. Retrieved from: *IRP. 2010 Guidance note on recovery: gender*. Japan: Kobe.
http://www.preventionweb.net/files/16775_16775guidancenoteonrecoverygender1.pdf
- UN-Habitat (2011). *Turning around the tsunami UN-Habitat working in partnership with Sri Lanka*. Kenya: Nairobi. <https://unhabitat.org/books/turning-around-the-tsunami/>
- UN-Habitat (2013). *Breaking Traditional Barriers: Women Train as Masons and Carpenters in Sri Lanka's Northern Province*. 20 September. Available at:
http://www.fukuoka.unhabitat.org/info/news/20130924_en.html
- UNDP India (n.d.). *My Home, My Way: UNDP Helps Disaster Victims Build Back Better*. Available from:
http://www.in.undp.org/content/india/en/home/climate-and-disaster-resilience/successstories/my_home_my_way_undphelpsdisastervictimsbuiltbackbetter.html
- Upadhyay, K. (2013). *\$450 million loan for Uttarakhand: World Bank approves aid for post-disaster reconstruction and rehabilitation*. The Hindu. Nov. 9, Dehradun, India. <http://www.thehindu.com/todays-paper/tp-national/450-million-loan-for-uttarakhand/article5331972.ece>
- WHO (2011). *Gender, climate change and health*.
<http://www.who.int/globalchange/GenderClimateChangeHealthfinal.pdf>
- World Bank (2010). *Safer homes, stronger communities: a handbook for reconstructing after natural disasters*. US: Washington DC. Accessible from
<https://www.gfdr.org/sites/gfdr/files/publication/SaferHomesStrongerCommunitites.pdf>
- World Bank (2012). *Gender and disaster risk management — guidance notes 65841*. In *Operationalizing the World Development Report 2012 on Gender Equality*.
http://reliefweb.int/sites/reliefweb.int/files/resources/F_R_450.pdf

12. Technologies of Belonging: object relations in the architecture of reconstruction

Matthew Barac, PhD, Architect, Reader in Architecture and Postgraduate Course Leader at the Sir John Cass School of Art, Architecture & Design, London Metropolitan University.

The challenge for reconstruction practice in Sri Lanka, as well as for the wider debate concerning the people's process and its theorisation as an approach to housing efforts following disaster, conflict, or in conditions of severe development need, is not restricted to procedural and practical tasks but also concerns the analytical dimensions of the problem: the reflective task of 'taking stock' that invites us to learn lessons from recent experience in Sri Lanka ⁽⁷⁹⁾. Publications such as this one are surely the right place to address the methodologies, implications, interpretations and concepts that characterise the field, and it is in relation to these considerations that this chapter aims to contribute. While scholarly and institutional attention has been given to the practice of owner-driven reconstruction, its implications — as both human experience and as a phenomenon with social facets — are often deferred as a luxury that can be ill-afforded in the times of need that characterise the debate. And yet without proper consideration of the meaning of reconstruction, of its character as an intellectual formulation and as a process that matters in ordinary ways to ordinary people, we will surely fail in our efforts to face up to the cultural questions embedded in the topic.

This chapter suggests that framing the challenge of reconstruction in relation to the full depth of the problems and challenges it presents to us can be useful. By referring to depth, I mean to indicate that I am seeing reconstruction not only according to practical but also symbolic challenges: as problems for interpretation. This may sound somewhat theoretical given the practical obstacles that reconstruction inevitably has to address. And yet when we visit and look at the concrete reality of the domestic environments of those some refer to as the dispossessed — in particular, when we consider how people who have very little, and whose home is perhaps barely even there, constitute not only a place of their own but something of a world for themselves — we are reminded of the tendency we all have to bring order to our surroundings (Pérez Gómez, 1985). We see in the typical home, even a shack or a temporary shelter within which a bedside table or salvaged cabinet acts as a centrepiece to the room, holding family photographs, keepsakes and treasured objects, a world realised by means of spatial practices.

⁽⁷⁹⁾ The task of 'taking stock' was set out by Jean-Gustave Fourez of the EU delegation to Sri Lanka, as a key goal for the 2014 UN conference on housing reconstruction in Colombo that inspired this publication.



Figure 84—South African shanty town house interior. (Photo: Ronnie Levitan, 1993)

The line of reasoning developed in this chapter seeks, initially, to account for the personal, household spaces that people make. I will then go on to rehearse an argument for the relevance of place-making in the context of reconstruction according to the fundamental problem of meaningfulness. This part of the discussion will offer a synopsis of the mode of interpretative methodology that underpins my research in this area, and it will refer — albeit in passing — to the geographical spread of examples to which the chapter’s primary formulation refers. And in the final part of the argument, I will reflect on the concept of ownership: a concept at the heart of this debate — a debate concerned with the notion of owning the reconstruction process. My suggestion here is that our design capabilities, as architects or other experts who work in the built-environment professions and seek to improve the lot of those often referred to as the beneficiaries of reconstruction, are not as finely tuned as they should be if we are to optimise the capacity of all those involved in the co-production of a richer, safer, more meaningful environment: to ‘build back better’ (Kennedy et al, 2012). I will refer in this final section to the phrase ‘owning is a verb’ in order to trigger recognition of the simple yet powerful formulation coined by John F. C. Turner almost 40 years ago when he argued that housing should be considered not as an object — as a ‘noun’ — but as a process involving things that people do: ‘as a verb’ (Turner and Fichter, 1972).

A place-making programme

If I were to describe the space depicted in Ronnie Levitan's photograph of a South African shantytown interior (figure above) I might use the word 'design'. The design of the room, if we can call it a room, has been implemented by one of its inhabitants — quite possibly by the young woman seen in the image. Many who have seen this photograph have come forward with positive comments; instead of saying things like 'what an awful scene of poverty' they use words like 'glorious', 'vivacious' and — more than any other word — 'poignant'. The interior poignantly illustrates how a household living in what might be described as an absence of architecture, and under conditions that we would typically refer to as informal or even disorderly, has marked out, established, and created a domestic space that is almost a diagram of orderliness (Barac, 2007). This has been achieved through what Jonathan Hill describes as an 'architecture of occupation' rather than through expert provision (Hill, 1998). Note how the kitchenware is neatly stacked, how the wallpaper, made of branded soap label overruns, brings a continuity and finish to the room. A roof-light over the display cabinet brings sunshine into the back of the shack over the food preparation workspace, and this woman — this 'architect' — stands in front of a yellow curtain that demarcates the threshold between private and public, further reinforcing the impression that this is not an alienating makeshift hovel, but a home that belongs to someone and to which, through their belongings, the owners have exerted a heartfelt claim. The way that these interiors depict and differentiate the inside a city from its outside is captured by contrast with an overview photograph of a shantytown environment taken by David Southwood (figure below). What is perhaps notable is the contrast between, on the one hand, an ordered interior world that is cared for and can be appreciated and, on the other, an exterior that may well be, in many cases, characterised by disorder or by a lack of care.

These interior and exterior photographs document the living conditions of people who have been, historically, living in comparative poverty in South Africa. The South African situation, with its legacy of racist governance, documents internal displacement not due to war but through an institutionalised form of violence summarised by the instrument of the group areas act under which the apartheid-era minority government used legislation to claim desirable areas of land for exclusively white use, forcing out dark-skinned people. In many instances across the country, trucks would arrive in established communities to carry people away to new locations with whatever belongings they could gather. Women and men would pack the home into boxes to carry with them to the next place where they would have to make it all over again. Through an architecture of occupation, they would do their best to reconstruct the place of belonging that had been — in this historical case — forcibly taken away (Trotter, n.d.).



Figure 85—South African shantytown aerial view. (Photo: David Southwood, 2004)

So, under apartheid non-white South Africans were, in their own country, always in transit, and in this particular context as in others we can think of the display cabinets and interior design configurations almost as luggage: as spatial expressions of home that are made to be portable, even though the cultural programme that lies at the heart of these displays is — and this is a key thread in my argument — a place-making programme.

The domestic interior quite clearly offers a scenography of aspiration and respectability for many, whether living in poverty or destitution following displacement or disaster, who have had their hopes thwarted by circumstance (Bara, 2014). These are people who may have little but retain their determination to lead a dignified life, a purpose expressed in a material culture of intention that communicates a desire for social upliftment. To an extent, the images and objects of the domestic interior define an interface between the private and public world and act as connectors between these worlds.



Figure 86—South African shanty town house interior. (Photo: Ronnie Levitan, 1984)

In Levitan's image of another shantytown interior (figure above) the internal surface of the room is effectively wallpapered with a range of images — from magazines with titles such as *True love*, featuring photographs of glamorous and arguably liberated black women such as pop singer Grace Jones. The wall can be read as a kind of mirror of aspirations. It offers the promise of linking the two women in this room, both of them domestic servants who were still living — at the time Levitan took this particular photograph — under racist laws, to ideas of fulfilment and freedom that were clearly beyond their grasp. As such, the interior both expresses and frames the orientation that holds sway in this home. Despite the rudimentary character of the construction (you can see drooping cardboard insulating the ceiling) the visual culture of the interior acts as an explicit manifestation of an urban imaginary located far beyond, and disconnected from, the realities of South African township life.



Figure 87—Hong Kong rooftop shack house. (Photographed by Christopher De Wolf, 2011)

Cities the world over and particularly in the global south, from unevenly wealthy Mumbai to sprawling Mexico City, provide evidence of a diversity of slum environments; rooftop and high-rise poverty housing in a city such as Hong Kong (figure above) is sometimes informal and sometimes simply insecure (Chui, 2008). Cities, especially dense cities such as this one breed anonymity and isolation, and the interior schemes and configurations of objects and images comprise, one might argue, a defensive response to the atomising intensity of urban life; private worlds are asserted as a measure for preserving one’s identity and constructing a sense of wholeness. The best-known or perhaps most infamous slum in the world is Dharavi (figure below); this fame is exactly because of the complexity and conflict over claims on what has become desirable Mumbai real estate — claims to who owns not just the land but the homes. As in Hong Kong, space in Dharavi is very much at a premium, and the ways in which personal objects and household identifiers are used to demarcate space have to do with reiterating a claim to dignity, or a commitment to the shared territories associated with family life or collective endeavour.



Figure 88—Dharavi at street level. Courtesy of M M from Switzerland (Dharavi_DSC3254) [CC BY-SA 2.0 (<http://creativecommons.org/licenses/by-sa/2.0>)], via Wikimedia Commons

A final example of the effort people invest to make a home in often precarious circumstances is that provided by the inhabitants of the City of the Dead, in Cairo (Khalifa, 2011). This neighbourhood is a cemetery quarter that has, over time, been occupied not only by those acting as caretakers for the deceased but by informal settlers who — while generally respecting the history and purpose of the burial grounds — have made their homes in and around the tombs (figure below). When I visited with research colleagues in 2010, a father was living in one such dwelling with his two sons, daughter-in-law, and grandson. As well as the home, the building accommodates a brush-making workshop for the younger son, a 24-year-old man, who is proud of his recently born first child.

The relevant aspect of what one can see and appreciate, in such life stories and photographs, is the narrative of people who have very little or who have lost, or had taken away from them, most of what they had. In their efforts to exercise some control over the limited space available to them — typically an interior space, but quite often just a cabinet or an arrangement of objects — they build what we can think of as a place of their own: a personal space that calls to mind Anshuma Gokhale's memorable phrase 'a tiny whole world' (Gokhale, 2014). This world can be thought of, following anthropologist Daniel Miller, as a cosmology in miniature; a speculative configuration that uses the personal imaginary as its frame of reference (Miller, 2001). The configuration of personal

objects expresses a structure of relationships — not ‘one to one’ relationships but connections between things, and between self and world. As such it is quite categorically an expression of identity. Identity, in this sense, is embedded in the act of taking control of a representational schema which positions, locates, and configures objects that, in real and in symbolic terms, belong to that householder (Altman and Low, 1992). And it is in the connectedness of these objects — to one another, to personal space, and to the world ‘out there’ — that belonging becomes manifest: belonging as both object relations and as a technology of ownership.



Figure 89—City of the Dead roofscape (Photographed by the author, 2010)

Owning is a verb

So, these spatial situations — these tiny worlds and cosmological configurations — speak of the ways in which ordinary people express their identities and claim places through processes of occupation. Yet, my reason for sharing them is not simply to celebrate the creativity of those surviving adversity. Rather, I wish to reconsider the terms under which we attempt to address the task of reconstruction: terms such as ‘home’ and ‘owner’, and — following from this — to ask what we can learn about the relationship between place-making and identity. These concerns may seem rather philosophical and removed from the challenges of putting the world back together after conflict or disaster. But I want to argue for the relevance of reflective inquiry (Lyons, 2009), and to do so I turn to an essay by philosopher Martin Heidegger in order to make a twofold point. Published in 1954,

Heidegger's essay 'Building dwelling thinking' motivates its argument in response to the housing shortage of the day — a crisis which led to the mass production of 'lodgings' that, although 'easy to keep (and) attractively cheap', did little to satisfy the existential need people have for a home ⁽⁸⁰⁾. He went on to talk about this existential need in philosophical terms, revisiting and rehabilitating the concept of dwelling. The first part of my point concerns that which drove Heidegger to frame his response to the post-war housing crisis in this way. Now, Heidegger was not a housing expert, but his contribution to the question of housing ended up being profound because he was neither obliged nor inclined to overlook fundamental issues that the experts naturally took for granted.

And, secondly, nowhere is this need more pronounced than in communities devastated by conflict or disaster. And yet, despite acknowledgment that victims, survivors and refugees require a nurturing environment in which to rebuild their lives, conventional responses to the challenge of rebuilding communities rank practical aspects of the task above its cultural dimensions.

Building back better reminds us that for reconstruction to be effective it must be meaningful. Now this word 'meaningful' is one that most of us struggle with — not just most who work in or study the shelter sector, but most people in general. What, after all, does meaning mean? How can we measure it? What does it cost and how long does it take? Everyone agrees that practice should be geared towards meeting the human needs of those wracked by devastation rather than simply keeping them alive. However, implementing agencies and field officers — although well-equipped to deliver services and shelter — often seem unsure as to how best to help.

Given orientation and momentum by the building back better slogan and discourse, the question of how best to help people is one that spans across reconstruction debate, and yet the very nature of what 'better' means remains controversial. Some advocate for replacing better with 'safer' because the former 'can have multiple interpretations' (Kennedy et al, 2008). In relation to the argument for philosophical reflection that underpins this chapter, what 'better' offers is the opportunity for beneficiaries to make their own ethical decision on what matters, and thereby establish a heartfelt claim on their dwelling, rather than complying with guidance on safety. In this multiple sense, 'better' is always subjective (and therefore difficult to quantify and manage) but determined through debate and consensus.

We have explored the interlocking of practical and symbolic dimensions of dwelling in relation to the context of owner-driven reconstruction. As we move towards drawing conclusions, I would like to reflect upon two keywords in order to elucidate gaps and alignments between their meanings: 'home' and 'owner'. Home is, of course, a place

⁽⁸⁰⁾ Essay first available in English translation by A. Hofstadter, Heidegger, M. (1971) *Poetry language thought*. New York: Harper & Row. pp. 143-61.

of shelter — of refuge and of safety — but it is also, importantly, a site of memory and meaning (Heathcote, 2012). With regard to who we are, as owners — as those able to assert ownership — it is worth considering how people go about establishing a claim upon a place, and what that claim means to them. We use the word ‘appropriate’ to describe the moment when people no longer keep a place or thing at a distance. Rather, they take it up. They give themselves to it and bring it close to their hearts. It becomes not ‘the town’ but ‘my town’; not ‘the home’ but ‘my home’; as you may recall from the Antoine de Saint-Exupéry (1995, c. 1943) childhood classic — not ‘the fox’ but ‘my fox’ (by which he means ‘my friend’). This proximity offers a level of certainty, familiarity, and warmth. To paraphrase Miller: as objects give us comfort, places give us anchoring (Miller, 2008).

The anchor that a place offers is what we do not have in conditions of transitional settlement and shelter, and the need for a sense of where the ground is a priority. While some authors have argued — following Turner’s (1972) conceptualisation of housing as a verb — that reconstruction practice ‘must be considered to be a series of actions for fulfilling certain needs’, such needs are rarely certain (1980).

Of course, I am not suggesting that when people are in desperate circumstances the priorities should be anything other than food, shelter, medical assistance and security; of course they should. And I am not suggesting that sending in technical staff to deal with the technical challenges of reconstruction is not a logical course of action; of course it is. However, if our goal is to restore communities and our aspiration to solve problems associated with humanitarian crises, we should not pretend that these goals and aspirations can be addressed if we misinterpret the problems in the first place. So it is important to engage with the challenge of thinking through the depth of the task before us, and to acknowledge that the more accurately we diagnose the problem, the more likely it is that the design of our solutions — of our owner-driven and better-built-back housing — will be surgically precise, finely tuned, cost effective and culturally appropriate. As we approach the close of this chapter, it is to the challenge of interpretation that I want to turn. I am drawing here on several authors, including the anthropologist Daniel Miller whose book *The comfort of things* (2008) is instructive. Each home is, in the end, a society of its own. And a community — even a coherent and non-urban community — is constituted as what Miller describes as a ‘diverse collection of societies, each to be respected as a cosmological order in its own right’ (Miller, 2008). For those building back, it is important that the object relations of domestic life are accommodated in the project of remaking of the home so as to reconstruct the living environment as an authentic dwelling; the keepsakes, mementoes, trinkets and belongings that have been saved or repaired are far from superficial. They may, indeed, be the only things left to connect those who have survived or been displaced by events experienced as a rupture in continuity over which they had no control.

Shelter processes, understood as place-making, offer opportunities to build not only on practical but also symbolic dimensions of ownership. What spatial practice offers

is a way of remaking the connections ripped apart by conflict or disaster. This repair of continuity is most profoundly experienced as claiming place: as the process of making a place one's own. Place-making connections occur at many levels including connections between the material culture of personal accumulation and the physical and social structure of the wider built environment. The multi-level, layered character of this dynamic points to the relevance of philosophy as a mode of reflection able to navigate between discourses. In our efforts to implement reconstruction in ways that are not only effective but also meaningful — in ways that are 'better' — it is therefore worth reminding ourselves of the philosophical character of the transaction between identity and place captured by the concept of ownership: a reciprocity that implies both claiming place and being claimed by it. This reminder suggests a reorientation of the notion of ownership in the context of debate about owner-driven reconstruction — that the ownership embedded in the term 'owner-driven' should move from being envisaged as the adoption of a set of practically defined and rationally agreed principles to an expression of who the beneficiaries are and of their place in the world.

References

- Altman, I. and S. Low, eds (1992). *Place attachment*. London: Plenum Press.
- Barac, M (2014). *Spatial Misreading: South Africa's Urban Future Seen from Within a Township Shack*. In N. Elleh (ed.). *Reading the Architecture of the Underprivileged Classes*. Farnham: Ashgate.
- Barac, M. (2007). *Ronnie Levitan's shots of township life reveal a vivid and richly ingenious internal world.*, *Architectural Review*, 221 (1324): 98.
- Cociña Varas, C. and C. Boano (2013). *Housing and Reconstruction in Chile, 2010-2012: Institutional and Social Transformation in Post-disaster Contexts*. *International Journal of Architectural Research*, 7(3): 57-79.
- De Saint Exupery, A. (1995, c. 1943). *The little prince*. London: Wordsworth Editions.
- Gokhale, A. (2014). *A tiny whole world: sustainable design lessons from the architecture of underprivileged classes*. In N. Elleh (ed.). *Reading the architecture of the underprivileged classes*. Farnham: Ashgate.
- Heathcote, E. (2012). *The meaning of home*. London: Francis Lincoln.
- Hill, J (1998). *Occupying architecture: between the architect and the user*. Routledge, London.
- Kennedy, J., Ashmore, J., Babister, E. and Kelman, I. (2008). *The meaning of 'build back better': Evidence From Post-Tsunami Aceh and Sri Lanka*. *Journal of Contingencies and Crisis Management* 16(1): 24-36;
- Khalifa, M.A. (2011). *Redefining slums in Egypt: unplanned vs unsafe areas*. In *Habitat International*, 35:40-49.
- Lyons, N. (2009) *Handbook of reflection and reflective inquiry: mapping a way of knowing for professional reflective inquiry* (New York, Dordrecht, Heidelberg & London: Springer).
- Miller, D. (2008). *The comfort of things*. Cambridge: Polity.
- Miller, D., ed. (2001). *Home possessions: material culture behind closed doors*. Oxford and New York, Berg.
- Pérez Gómez, A. (1985). *Architecture and the crisis of modern science*. Cambridge, MA: MIT Press.
- Trotter, H. (n.d.). *Trauma and Memory: The impact of apartheid-era forced removals on coloured identity in Cape Town*. In M. Adhikari (ed.). *Burdened by Race: Coloured Identities in Southern Africa*. Cape Town: UCT Press, 2009: 49-78.
- Turner, J.F.C. (1972). *Housing as a verb*. In eds Turner, J.F.C. and Fichter, R. *Freedom to build: dweller control of the housing process*. New York, NY: The Macmillan Company.
- Turner, J.F.C., (1980). *Housing: its part in another development*. In ed. Safran, L. *Housing: process and physical form*. Philadelphia, PA: Aga Khan Award for Architecture, pp. 8-19.

Figure 90—Family posing in front of their new owner-driven house in Mullaitivu District, assisted by UN-Habitat and funded by the GoI (Source: Charmalee Jayasinghe, UN-Habitat 2015)



13. Government of India's support to post-conflict housing reconstruction in Sri Lanka: a contribution towards development

Anurag Srivastava, former Political First Secretary at the High Commission of India to Sri Lanka, later Director of Finance, Ministry of External Affairs, Government of India

Genesis

Post-conflict northern Sri Lanka in 2010 presented a situation where it was estimated that about 250 000 IDPs were looking to move back to their original places of habitation, which had been completely or partially destroyed as a result of the war ⁽⁸¹⁾. Together with livelihood generation, housing was identified as the most pressing need in order to restore a sense of normalcy in the conflict-affected areas. And it was estimated that the requirement in the Northern Province alone was for about 125 000 housing units. Accordingly, the GoI announced its commitment ⁽⁸²⁾ towards the reconstruction of 50 000 houses taking into account not only the pressing need to resettle these many IDPs in their original areas of habitation but also to regenerate their livelihoods. This announcement was made in response to a request by the then president of the Government of Sri Lanka (GoSL), Mahinda Rajapaksa, during his state visit to India in June 2010. It was an impromptu decision arrived at in discussions between the two delegations. As the decision was not premeditated, work on conceptualising and formulating the project commenced only subsequently. This paper discusses the GoI's approach during the conception, formulation and implementation phases of India's housing project for Sri Lankan IDPs and its contribution to development in Sri Lanka.

⁽⁸¹⁾ At the end of the conflict in May 2009, an estimated 300 000 people had to move to government-run IDP camps. While many of them moved out of the camps by mid-2010, they were unable to reoccupy their houses as they were either fully or partly damaged due to the war. Most of the IDPs were living either with host families or in transitional shelters. Reconstruction and repair of damaged houses was, therefore, an important requirement in the overall process of resettlement of the IDPs.

⁽⁸²⁾ This commitment was reflected in the joint declaration issued at the end of the visit on 9 June 2010: 'Both leaders announced a major initiative to undertake a programme of construction of 50 000 houses for IDPs in the Northern and Eastern Provinces. The president of Sri Lanka warmly welcomed the offer of Indian support for this programme.'

Project conception phase

Though India has had a long history of providing development assistance to other nations ⁽⁸³⁾, it was apparent before long that the intended 50 000 houses project for Sri Lanka would be unprecedented in size and scale. An additional challenge became evident at the project-formulation stage: the project had to fall within the contours of India's philosophy for development partnership characterised by a demand-driven, consultative model of engagement based on the priorities identified by the partner countries ⁽⁸⁴⁾. Further into the project-formulation stage, operational modalities such as selection of implementation partners, procurement and implementation processes had to comply with standards of fairness, equity and transparency as per GoI's financial rules, accountability and transparency standards in accordance with national laws, even though the project was being executed outside India. The project proposal also had to clear a stringent appraisal process, which evaluated the project in terms of feasibility of the proposed implementation modality, cost-benefit analysis, financial risk, etc. While this was the broader philosophy and prerequisites guiding the project design, it also had to be tailored to the local context.

The project also had to complement the numerous initiatives India had already taken to support the immediate humanitarian needs and requirements of IDPs. These included, inter alia, supply of family packs, setting up of emergency medical units, shelter assistance by way of providing roofing sheets and bags of cement, demining assistance, supply of agricultural starter packs, seeds, tractors and implements, etc. Significant interventions had also been initiated in the areas of infrastructure development in Northern Province through a line of credit for restoration of railway lines and assistance for the rehabilitation of Kankesanthurai harbour and Palaly Airport, repair and construction of hospitals and schools, setting up of vocational training centres and construction of a cultural centre in Jaffna.

In preliminary consultations with the GoSL soon after the announcement in June 2010, a clear preference was expressed for involving beneficiaries in the project to the extent possible. Looking back, the following broad understanding on the way forward emerged within a few weeks.

⁽⁸³⁾ Given the exponential increase in the number of and quantum of India's aid commitments, the ministry of external affairs (MEA) created the development partnership administration (DPA) in January 2012 to effectively handle projects through the stages of concept, launch, execution and completion. DPA is a multi-division department within the MEA functioning as an aid-delivering agency. The formulation and implementation of the housing project coincided with the setting up of DPA.

⁽⁸⁴⁾ India does not see itself as a traditional donor and would like to characterise its overseas development assistance as 'development partnership' rather than aid as it is in the framework of sharing development experiences.

- More than one reconstruction approach needed to meet the immense challenge of dealing with a diverse population; the project would need to employ a judicious mix of owner-driven and agency-driven models.
- Bulk housing would be created based on an owner-driven model where conditional cash transfers would be made directly to beneficiaries and agencies would carry out community mobilisation and provide technical assistance to the homeowners.
- The owner-driven model would offer both tangible and intangible benefits in terms of community participation, better occupancy rates, sustainability of the assets created, use of local material, lower costs and savings, quick economic regeneration of incomes and livelihoods ⁽⁸⁵⁾, etc.
- The involvement of local agencies familiar with local conditions would be key in implementing the project.
- Owner-driven model may be proven and time-tested; however well-defined mechanisms for beneficiary selection, community mobilisation, provision of technical assistance, material procurement, skill development, etc... needed to be developed. The size and scale of the project was too big to fail. It was important to get it right at first while incorporating appropriate mechanisms of monitoring and oversight in order to undertake course corrections as required.

Project formulation and appraisal phase

Project formulation prompted a deeper exploration into the local context, in terms of possibilities it presented and the constraints it had in store. Design questions had to be correctly framed and, more importantly, the right answers had to be found. Some of the questions confronting the project were as follows.

- What are the objectives of the project?
- What would be the nature of housing to be provided? Would it be limited to a 'core' house or fully finished structure? (India had already assisted with semi-permanent shelters by providing roofing sheets and bags of cement).
- What should be the quantum of financial assistance for a house? Should assistance be provided based on damage and loss assessment or an assessment of needs? Would locally available knowledge and resources suffice for the project to develop adequate and affordable housing solutions or was there a need for the project to explore, introduce and transfer technologies that would perhaps be more affordable, sustainable and acceptable to the community?
- What would be the structure and delivery mechanism of the financial, material and technical support being provided by India? Were all three needed? Would a direct cash approach work?

⁽⁸⁵⁾ A housing intervention of this magnitude was expected to help kick-start the local economy through infusion of much-needed funds. It would assist livelihood restoration by providing wage employment to the beneficiaries and their families, as well as to workers hired for the project (an estimated one-fifth of the cash assistance to beneficiaries in this project was expected to go towards labour charges).

- What should be the proportion of agency/contractor and owner-driven models in the mix? Can a contractor-driven *in situ* reconstruction substitute for an owner-driven model?
- What kind of implementation structures were required under both models? What kind of agencies would be best suited in the role of project monitoring consultants (PMC) and implementing agencies (IA)?
- What would be the basis of choosing implementing agencies? Would they be Indian, local or international organisations for implementation?
- What should be the project monitoring and evaluation mechanism?

Towards this end, extensive consultations were held with humanitarian agencies, NGOs, housing experts, functionaries from the Sri Lankan government, local authorities, potential beneficiaries and other stakeholders. The objective was to distil experiences and lessons learnt from other programmes and examine how these could be used to better design this project. This phase also involved consultations with internal stakeholders followed by consensus building among key actors.

In retrospect, the choice of the owner-driven model as the reconstruction approach for the bulk of the houses was the logical default option. The right answers are sometimes obvious in hindsight. But real life does not afford the luxury of clear 20/20 vision going ahead. In fact, determination of reconstruction approaches was not a straightforward process. It would be the theatre of the lives of the beneficiary families as they moved from being IDP to homeowners. The project also recognised the need to ensure that housing reconstruction was seen as a process and far more than as an outcome in the form of a physical product. In the consultations it was obvious that owner-driven reconstruction in terms of conditional financial assistance with technical support and supervision was the ‘conventional wisdom’ in the humanitarian field. Evidently, there had been almost universal acceptance for some years now that involving people in building their homes, particularly in post-conflict situations, by giving them technical and financial support leads to housing outcomes which are more in tune with their needs than those identified by outside agencies ⁽⁸⁶⁾.

The project took into cognisance the great importance of a dwelling unit in a person’s life and that houses built with assistance from the GoI were more than just a structure of bricks and mortar.

⁽⁸⁶⁾ Experts feel that engaging families and communities in the rebuilding process, if done properly and sensitively, not only enhances ownership but also helps people overcome trauma, discover confidence and self-esteem, rebuild social relations, reinvent social capital and get started on overall rehabilitation. In fact, recent global learning in managing post-disaster housing reconstruction around the world supports the owner-driven approach.

The GoI had successfully supported a HOD housing reconstruction programme after the Gujarat earthquake where close to 200 000 housing units were rebuilt (possibly, one of the biggest housing reconstruction programmes undertaken in terms of units and geographical area). Sri Lanka had just completed the World Bank-funded NEHRP programme ⁽⁸⁷⁾, which was another owner-driven reconstruction project undertaken in the same locations where the GoI project was venturing into.

In our consultations, we focussed not only on the advantages but also on challenges and shortcomings of various approaches. The success of the owner-driven model hinged on good overseeing, adequate skills training, a mechanism to regulate prices, access to building material, an effective delivery mechanism for cash disbursement, preventing financial and resource leakages and corruption and, most importantly, the selection of the right beneficiary. Inadequate focus on one or more of these parameters could derail the most well-intentioned intervention. We were also conscious that owner-driven reconstruction would not address the needs of some groups such as tenants and the landless. Non-standardised methods of technical assistance and payments had to be devised to consider the differing reconstruction capabilities of beneficiaries such as female-headed or elderly-headed households.

There were also concerns among internal stakeholders that the owner-driven model may suffer due to a lack of matching funds from owners which may lead to delayed outcomes. There was a strong constituency which believed that the quickest and most effective way to rebuild houses was to employ professional construction companies and, therefore, we should not place all our eggs in the owner-driven basket. Further, project design should lend the necessary flexibility to involve agencies/contractors, if required, during the process of implementation. In fact, it was felt that this risk could be minimised by setting aside a chunk from the 50 000-house total for agency-driven *in situ* construction.

Following consultations with internal and external stakeholders, it was felt that the contractor-driven model provides for timely delivery, a certain predictability of costs and output and simpler, relatively hassle-free project administration and management. However, it did not allow for owner participation, design or implementation flexibility and laid the onus of poor product quality or slippages in delivery squarely on the donor, the GoI in this case. Further, the topography, spatial distribution of potential work sites and

⁽⁸⁷⁾ The World Bank states that owner-driven reconstruction is the most empowering, dignified, sustainable and cost-effective reconstruction approach in Jha A. K., Dwayne Barenstein J., Phelps P. M. and Sena S. (2010). *Safer Homes, Stronger Communities: A Handbook for Reconstruction after Natural Disasters*. Global Facility for Disaster Reduction and Recovery (GFDRR). The World Bank. Washington DC.

in-built infrastructure constraints made a conventional builder-contractor model unviable simply on account of the cumbersome logistics involved. Most importantly, the cost of a finished house worked out to be twice the costs as estimated under the owner-driven model⁽⁸⁸⁾. In addition, these were communities that had strong traditions of building homes, of industry and of thrift and there was a clear preference for the community to be involved in building their own homes.

As the owner/beneficiary-driven model had clear advantages over the contractor-driven model it was felt that while employing a mix of the two, the bulk would come from the owner-driven model. Employing a mix of the two models — owner-driven and agency-driven — would spread the benefits of the project widely, address the needs of vulnerable sections of society, while taking care of some of the short comings of the owner-driven model.

Taking this into account, the owner-driven reconstruction and repairs, while catering to the bulk of the beneficiaries, was not the only component of the housing project. A pilot project (under phase I of the project) for 1 000 houses through the contractor-driven model to provide for cluster housing for landless beneficiaries on land provided by the GoSL was launched in April 2011. A provision of about 2 000 houses was also set aside to be taken up under phase III of the project through agency-driven *in situ* construction for most vulnerable section of beneficiaries who were unable and unwilling to construct under phase II (owner-driven model). The project also planned to provide for contractor-driven housing for 4 000 estate workers in Central and Uva Provinces.

Following these consultations and internal discussions, the key project parameters put forth for appraisal and approval were as follows.

- The project is to be under full grant assistance of the GoI with a total outlay of INR 1 319 crores (1 crore = 10 000 000), (approximately USD 260 million or LKR 29.4 billion). The project will primarily be implemented under the owner-driven model wherein the beneficiaries will undertake the reconstruction of their houses with the necessary technical assistance and support provided to them by implementing agencies experienced in owner-driven reconstruction.
- The project will include three components
 - (a) Reconstruction of 38 000 houses under the owner-driven model for IDPs.
 - (b) Repairs of 5 000 houses under the owner-driven model for IDPs.
 - (c) Construction of 6 000 houses by agencies for vulnerable sections of IDPs in the Northern and Eastern Provinces and for Indian origin Tamils (IOTs) in the Central and Uva Provinces.
- A cash grant of LKR 550 000 (approximately INR 230 000) to be provided for construction of a new house in instalments linked to progress in construction. A cash

⁽⁸⁸⁾ Based on a detailed project report for construction through a builder-contractor that had been prepared earlier.

grant of up to LKR 250 000 (approximately INR 104 000) to be provided for repair of housing units based on actual assessment of damage.

- Beneficiaries under the project will be selected through a transparent and norm-based process on the basis of clearly defined and objective criteria. These beneficiaries will undertake the construction/repair of their houses with necessary technical assistance and support provided by implementing agencies (IAs).
- In order to meet our desired objectives and planned targets, and also to widen the range of available options, it may be prudent to choose more than one IA to execute the project through an open, transparent, norm-based selection procedure using the expression of interest route.
- Timely transfer of grant funds directly into the accounts of the beneficiaries is not only critical to the success of the project but also an essential element of financial control. Funds will be released directly by the HCI into the bank accounts of beneficiaries, based on the certification of progress of work.
- Project to be completed in 3 years.

Some innovative and unprecedented elements were built into the project design, both to meet the requirements of the project as well as to address the concerns of financial authorities. Direct benefit cash transfers in a situation where accountability of the beneficiary could not be enforced was a cause of some concern. It was with some effort that the HCI managed to convince our financial authorities on the low probability of default risks in a project of this kind and the measures incorporated in the project design to minimise them such as careful selection and vetting of beneficiaries. The HCI presented empirical evidence to substantiate the view that potential defaults would be insignificant in comparison to the magnitude of the project.

The GoI's potential partnership with international organisations and NGOs to implement the project was another unprecedented element. One challenge this partnership presented was in terms of the modality of flow of funds to the beneficiaries. Our financial authorities did not favour the parking of funds with the IAs due to the opportunity loss that such parking would have entailed (in terms of interest earnings) as well as the possibility that some of the agencies may not be amenable to providing bank guarantees or other forms of security for such parking of funds. Therefore, a full-fledged payment unit under the HCI in Colombo had to be set up to undertake this activity.

Project launch and implementation

Thus, a pilot project (under phase I) using the agency-driven model for construction of 1 000 houses on land provided by the GoSL in the Northern Province was launched in April 2011 in order to garner useful information on critical project parameters and validate the proposed modalities of implementation. For instance, a major finding was that the contractor-driven approach had generally been found to be 2-3 times more expensive than owner-driven approaches.

The second phase of the project for construction and repair of 43 000 housing units was launched in Northern Province, on the occasion of Gandhi Jayanti on 2 October 2012; the project was launched in Eastern Province in May 2013. The project targeted to complete 10 000 houses in its first year of operation and commence 15 000 new houses by March 2014. These targets have been successfully achieved with the efforts of the implementing agencies, guided and supported by a competent team at HCI, Colombo. The design parameters were effectively validated on the ground in the implementation stage.

The third phase of the housing project was expected to commence soon thereafter. In this phase, about 2 000 houses were to be directly built by construction agencies for people from most vulnerable sections of IDPs in the Northern and Eastern provinces who were unable to build their own houses and 4 000 houses for Indian-origin workers in tea estates in the Central and Uva Provinces.

The experience of conceptualising, designing, launching and implementing a large housing project in a post-conflict situation outside the country in fulfilment of India's development partnership goals has been an intensely satisfying experience. Particularly in so far as we believe this programme has delivered substantial improvements to the lives of many.

Figure 91—Family members before completed owner-driven house funded by the GoI (Source: UN-Habitat 2015)



14. Building people's capacities and strengthening communities while rebuilding houses: The role of the facilitator in improving the delivery system and quality of the product with war victims in Sri Lanka

Kirtee Shah, Advisor and Member of the Gol's Project Monitoring Committee of the Indian Housing Project (IHP) in Sri Lanka.

The Context

The Gol, in a gesture of goodwill to a friendly neighbour recovering from trauma of a prolonged war, provided financial assistance and organisational support to construct 50 000 houses for the IDPs and other war victims of Indian origin in Sri Lanka. The housing programme implemented through the High Commission of India (HCI) to Sri Lanka in Colombo has been an important step and a critical input in the process of rehabilitation of families who emerging from a 25 years long-drawn-out civil war that subjected them to multiple displacements, violence, destruction, death, human rights violations, alleged war crimes and crippling socioeconomic dislocations. The Gol's contribution to the programme was about USD 260 million. The houses were constructed in the Northern and the Eastern Provinces of Sri Lanka, the worst affected areas of the war.

Sri Lanka, an island in the Indian Ocean, 28 km off the south-eastern coast of India, is about the size of Ireland and in 2013 had a population of 20.48 million. Sri Lanka is ethnically, linguistically and religiously diverse. The Sinhalese make up 75 % of the population (2012 census) and are concentrated in the densely populated south-west and central parts of the Island. The Sri Lanka Tamils live predominantly in the northeast of the island forming the largest minority group at 11.2 % of the population. There are also Indian Tamils who form a distinct ethnic group which comprises 4.2 % of the population.



Figure 92—A home for the elderly, children and specially-abled (Photo: Kirtee Shah, 2014)

The Sri Lankan civil war was a tragedy for the country. The intermittent insurgency against the government that began in 1983 by the Liberation Tigers of Tamil *Elam* (LTTE, also known as the Tamil Tigers separatist militant organisation), escalated into a full-scale war to create an independent Tamil state called Tamil *Elam* in the north and the east of the island. After a prolonged campaign, the Sri Lankan army defeated the Tamil Tigers in May 2009, bringing the civil war to an end. The LTTE was wiped out, the Sri Lankan government re-established control over the entire island (LTTE had controlled most of the north and half of the eastern coastline from around 2002 to 2008) and the Tamil National Alliance ⁽⁸⁹⁾ dropped the demand for a separate state. The war caused much hardship to the population including between 80 000 and 100 000 people killed. It caused immense damage to the environment and heavy losses to certain sectors of the economy. Despite certain economies of war that benefited some, the estimated

⁽⁸⁹⁾ The Tamil National Alliance represents the country's Tamil minority. It was formed in October 2001 by a group of moderate Tamil nationalist parties and former militant groups.



Figure 93—The first 1 000 houses: a tough task even for the contractor in the mine-infested fields (Photo: Kirtee Shah)

economic cost of the war was estimated at USD 200 billion ⁽⁹⁰⁾, almost five times the gross domestic product (GDP) of Sri Lanka in 2009.

The conclusion of the armed conflict saw the emergence of a major humanitarian challenge for the Indian government too, with nearly 300 000 Tamil civilians housed in camps for IDPs. In June 2009, the prime minister of India, Dr Manmohan Singh, announced a grant of INR 5 billion (USD 75.6 million at August 2015 exchange rate) for relief and rehabilitation in Sri Lanka and worked to put in place a significant programme of assistance to help these IDPs return to normal life, while consistently advocating the need for them to be resettled to their original habitations as early as possible. India's immediate humanitarian assistance to IDPs included a supply of 250 000 family relief packs; establishment of an emergency medical unit which treated over 50 000 IDPs; supply of over 1 000 000 roofing sheets, 400 000 bags of cement for constructing temporary shelters, provision of 95 000 starter packs of agricultural implements and 10 000 bicycles to IDPs and returnees in the Northern Province. The housing programme formed part of the assistance package by GoI to the war-torn island nation.

⁽⁹⁰⁾ According to India's former National Security Adviser and Foreign Secretary, Shivshankar Menon, see <http://www.newindianexpress.com/world/2016/dec/13/sri-lankas-internal-war-cost-us-200-billion-1548433.html>

Main features of the Gol-aided housing programme

The following are the special features of the post-disaster-recovery housing programme:

Large scale: Direct assistance to 50 000 IDPs households and other war-affected families i.e. between 200 000 and 250 000 people. (The total population of Sri Lanka is over 20 million, the Tamils form 15.4 % of the total population and the estimated number of IDPs at the end of the war was 300 000).

Substantial investment: USD 270 million in construction of houses alone (INR 17 930 million and LKR 37 800 million at the exchange rate of 31 August 2015).

Emergency situation: The assistance follows a bloody and long civil war. It is meant for the people who have suffered heavily due to forced displacements and other reasons. The contribution is towards long-term rehabilitation; it covers a large section of the affected population. The action is where the war took place; the Eastern and the Northern provinces of the island which were physically devastated by bombing and left unsafe with mines. The housing is a critical, expensive and energy-intensive component (in delivery) of the rehabilitation process.

Constructed houses: The assistance from the Gol is not in money form (the conventional country-to-country aid) — with no direct people contact; wherein the final beneficiary is not a party to the deal, does not know about the project and does not participate. This assistance is not in cash, it is in kind, in the form of constructed houses, one each for the 50 000 families, being constructed over a large number of rural locations in the Northern and the Eastern Provinces of Sri Lanka. Each family is a direct participant.

Self-built houses, the owner-driven model: Houses are not constructed by the contractors and handed over to the beneficiaries to occupy. Of the 50 000 houses, 45 000 are being constructed by the beneficiary families themselves. With each family constructing its own house, it is called an 'owner-driven' housing programme.

The pilot project: The first 1 000 houses, under a pilot project, were constructed on 25 sites in five districts of the Northern Province and were constructed by the contractors while the 'owner-driven' concept was debated and finalised at various levels and related systems were put in place. These houses were completed in July 2012 and occupied soon after.

Cost and bank transfers: Each family is the 'owner' of the house. The estimated cost of a house — LKR 550 000 — is being transferred by the HCI in Colombo to the bank account

of the 'owner' family electronically. Special bank accounts have been opened for the purpose.

Institutional innovation: Community facilitating agencies (implementing agencies). In constructing houses the owners/families/communities have not been left to fend for themselves. Three international public service agencies with substantial experience in post-disaster reconstruction housing in Sri Lanka (UN-Habitat; the Federation of the International Red Cross Society with its local counterpart and Habitat for Humanity) and the GoSL's National Housing Development Agency (NHDA) were engaged by the GoI on a professional basis to help the house-building families in their work and to provide technical and organisational assistance in constructing houses. Their job was not to construct on behalf of the owners but to facilitate, guide and support, when necessary. They also undertook the following: identification of beneficiaries from the list prepared by the government agencies; assistance in obtaining proper land plots or land titles from the authorities; procurement of building materials; hiring of skilled labour; technical guidance in the selection of designs from the given options, modification in design for individual need, cost estimation, finance management, cost control, accounts keeping, quality supervision, and stage (e.g. completion) certification. These are some of the main functions of the facilitating agencies. This arrangement has accounted for good-quality construction, timely completion, cost saving, safe and timely transfer of funds to the family, efficient activity coordination and project monitoring, while improving the overall quality of beneficiary/client participation and satisfaction.

Land and land title: Land for construction houses, if lost during the war (e.g. taken over, occupied, built on, etc.), was given by the GoSL either in the original settlement or nearby with the participation of the family in the decision-making. Legal title is ensured.

Design Changes: Each family was given the choice to select a design from several options. The owner was free to make changes in the design of the house or even to add construction area (additional cost, over and above the prescribed budget of LKR 550 000, is to be borne by the owner family).

Repairs: The original estimate of 5 000 houses under the repairs category (based on the early and not-so-accurate damage assessment) was reduced to just 1 000 cases in response to fresh evidence and area presence. The budget for this category of intervention was less than half that of the new construction, LKR 250 000.



Figure 94—Even a 550 sq. ft. house is not big enough; most families contributed own savings for a bigger space and higher specifications (Photo: Kirtee Shah)

House size: Compared to most disaster reconstruction programmes, the house size provided is reasonably large: 550 sq. ft. It includes a hall, kitchen, two bedrooms and a sanitation unit consisting of a bathroom and a toilet with a waste disposal facility (septic tank). The size of the house is a policy decision by the GoSL since the post-tsunami reconstruction days and rests on the consideration that a reasonable sized and good-quality house is essential not only for good living but also for the 'dignity' of the family, and that disaster-reconstruction housing is an opportunity to give people a good foundation to build their lives afresh. The size of a typical house constructed under the government-sponsored rehabilitation programme for the victims of the earthquake of January 2001 in Gujarat, India, for instance, is between 250 and 280 sq. ft. Over 300 000 such houses were constructed.



Figure 95—Now that the house is ready, it is time for the plants and the garden (Photo: Kirtee Shah)

The development vision: The owner-driven approach has loftier objectives than just the reduction in cost of construction through the owner’s unskilled self-help labour contribution. The participatory/consultative approach is meant to see them as owners and clients (as against receivers of the dole/subsidy) and give them decision-making power and also control on the resources. Though it remains to be established empirically, it has been found, in case after case, that the system (the owner constructing his/her own house) and the arrangement (the beneficiary/client family as a decision-maker) has not only improved house construction but played a significant role in restoring their confidence and self-belief and given them a sense of dignity into the bargain. Both the individual and the community have benefitted. The emphasis of the project, on the process as much as the product, has created fertile ground for other socioeconomic development inputs.

Progress

Construction work on the owner-driven segment started in October 2012. The pace of construction was quite impressive despite the sites were dispersed in the interior of the country side; building materials and construction skills were in short supply (owing to

large-scale reconstruction of public and private assets and facilities besides the physical and social infrastructure); people were emerging from the shock and trauma of a major and prolonged conflict; the social environment still suffered from leftovers of the trust deficit and fear psychosis; the individual and the state economy was shattered and in the rebuilding phase, and the houses were being constructed by the owners themselves (not by the outside contractors) — who had other equally important commitments. The 3-year completion target was almost met with most houses completed between December 2015 to March 2016. In May 2015, the last project monitoring committee meeting date, the progress card read as follows: 42 000 units had started a received the first instalment (of the four-stage payment schedule given); 38 000 units got two instalments), 32 500 got three instalments and 27 500 got four. Some 2 450 houses, besides the 4 000 units to be constructed in the Uva and the Central Provinces for the plantation workers, remained to be started.

All these make this a large-scale, people-centred initiative of sensitive giving and dignified receiving, if one wishes to see it that way. It has made the project a confidence-restoring and community-building humanitarian effort for the people beaten and brutalised by a prolonged and violent civil war. The assistance from a neighbouring country is a critical first step in the long-term rehabilitation. And being done in a sensitive, dignified, capacity-building and empowering manner has set the tone and offers an opportunity to build further on the social and economic recovery, reconciliation and peace building.

Challenges

Integration of provision of physical infrastructure and social facilities with construction of houses: not only houses but housing.

The Gol project was confined to the construction of houses alone. Physical infrastructure (roads, electricity, water, transport, etc.) and social amenities (school, dispensary, community centre, etc.) did not form part of the Gol responsibility. As the sites of the new settlements were in distant places and the existing facilities and services had been damaged or destroyed, normal life was difficult without key physical and social infrastructure.

Not that there were no plans or budget for the repair or construction of such infrastructure. Responsibility for providing it rested with the various departments and agencies of the GoSL. However, in the areas which were cut off for a long time from the mainstream administration and where prejudices and antagonism persisted despite the closure of the conflict, a formal and stronger coordination mechanism, between the two partner governments, that ensured timely planning and implementation of the infrastructure provision would have been a better arrangement. Giving additional

responsibility to the facilitating agencies to report on the progress on infrastructure development on and around the sites and, better still, to organise the communities/neighbourhoods to follow up with the authorities was suggested. To the credit of the local government agencies responsible for infrastructure, it must be said that despite the organisational constraints and site-specific difficulties, occupation of the completed houses was not delayed nor were there many instances of community complaints on this count.

Livelihood and income

Houses and infrastructure restored, the major problem facing the resettled families/communities was ensuring a sustainable livelihood, income and employment. Returning from long displacement, having lost tools, economic assets, and social contacts and often at unfamiliar locations, the economic rehabilitation is the toughest challenge facing the communities and the government. Most of the settlers had small land plots ($\frac{1}{4}$ to $\frac{1}{2}$ acre or 1000 to 2000 m²), the agricultural pursuit does not pay adequately, and the agricultural labour is often not sustained. Much work is required in making people employable, earning a liveable income and building the region's economy.

Most post-disaster-recovery programmes demand integration of economic and social rehabilitation in parallel with housing and settlement reconstruction. It seldom happens. The Sri Lankan case is even stronger with the prolonged war having destroyed the local economy. The Gol's assistance package included programmes and activities for economic development (i.e. entrepreneurship development, industrial plot development, vocational training, etc.) but these were not linked to the specific sites of housing project. In the housing project context, however, suggestions were made for professionally conducting needs assessment, special economic planning for the region and multi-stockholding partnerships between the government, industry, business, relevant institutions, NGOs and communities. Availability of means of livelihood and reasonable income is a precondition for houses and the settlements remaining occupied.

Need for ideas and action for trauma care, reconciliation and peace-making

Though the war has ended, the root causes of the conflict are not necessarily gone. The minority Tamil community continues to feel discriminated against. In fact, the 'victor' and the 'vanquished' perceptions look well entrenched with the nature of the outcome of the war and that seems to bury the latent distrust and discomfort between the two main community groups under the carpet of normalcy. Though the war is over, the social environment is anything but normal. Trauma care, confidence building and peace-making are as important, if not more, than building houses and settlement development, but for understandable reasons did not form part of the Gol's housing effort.



Figure 96—Both off and on-site infrastructure is a task for the line agencies of the Sri Lanka government (Photo: Kirtee Shah)

Challenge of making the housing participatory and the project genuinely owner driven

There is not only perception gap but also qualitative difference between the top-down and the bottom-up owner-driven approach. Whatever the intentions and the assumptions of the project planners and authorities, if the communities do not see it the way it should be seen (that they are much more than receivers of assistance, the subject of the development effort) the effort could fall between the two proverbial stools — neither externally controlled, nor internally owned. The participatory way of working is not easy compared to external players making the decisions for the beneficiaries/communities. Serious effort is needed to bridge this perception gap. Not only the field staff but also the officials of the facilitating agencies have made efforts on this. Converting communities into the clients and the owners is not easy. It has required conscious and consistent effort. Though, on the face of it the results have looked satisfactory, the matter is subject of serious inquiry.

The government and the 'people's process'

Though the professionals with social background, experience of participatory practice, commitment to 'people processes' and orientation to seeing housing in a wider development context had a role to play in shaping this massive project (most of the

facilitating agencies have a humanitarian-assistance background) in an owner-driven or community-managed fashion, sensitivity, understanding and trust displayed by the officers and agencies of the GoI in this way of doing things has been a decisive factor.

The author of this paper was involved in the project for over 4 years. Invited by the GoI ministry of external affairs to advise on the implementation strategy, he advocated the case for an owner-driven approach. All of the following argued the case for the decentralised owner-driven approach: the fact that Sri Lanka had tried such an approach earlier during the post-tsunami reconstruction; Sri Lanka had agencies with the relevant experience to undertake this responsibility; the 'risk' factor was known; the dispersed sites and the large scale of the project made it a logical way of going about this task and the elevated cost associated with the 1 000-house pilot project which had used commercial contractors to construct houses (it cost almost twice as much and took much longer to complete construction). The IHC in Colombo, in charge of implementation, was convinced about the approach and wanted to go that way and this weighed in favour of the owner-driven approach.

Certainly, there were apprehensions, doubts, fears and question marks, especially as the project was in a foreign country and the implementation responsibility rested directly with the IHC there (the transfer of funds is directly from the HCI office to the beneficiary). The contracting system allowed for transfer of responsibility for the field performance and the output. This also reduced accountability risks (who is responsible if the house remains incomplete? Or, what if the beneficiary runs away with the money given for construction?). Trusting people; poor people, people in distress, and that too with government money, is not always easy. That ordinary people can build houses on their own does not go well with the official project planners and the decision-makers. Keeping the contractors out of a large-scale investment has its dynamics too. Risks are not difficult to find and project in a non-conventional way of doing things, especially when the parties concerned at both ends — contributor and receiver — are national governments. The real credit for the adopted 'owner-driven' approach (which involves transferring funds to the beneficiaries and assisting them to construct the houses on their own, with an objective not only of transferring risk, but also to give them an opportunity to stand on their own feet) goes to the governments concerned and the officers in charge of decision-making. But for their vision, ability to see positives and value in the approach and willingness to take some calculated risks, advocacy or no advocacy, the people-centred approach would not have been possible.

Outcome — better houses, happy and motivated communities

There is much that is positive and commendable if seen only as a project to construct houses. The houses are of good quality, big and comfortable. And some of the beneficiaries have put in their own savings and borrowings to make them even bigger and

better. The houses have been constructed in time. Construction costs have been reasonable. Beneficiaries have shouldered responsibility as managers of the grant assistance and the construction process well. Leakages and corruption are not even mentioned. And everyone involved in the act — the GoSL, the Gol, the facilitating agencies, the beneficiaries — is happy with the result, the outcome. That is rarely the case with such housing projects.

That the process, the way of working, the owner-driven approach, has motivated the communities is evident from the fact that the beneficiaries, the home builders, are willingly absorbing the cost escalation caused due to regular inflation. The subsidy amount was fixed some 4 years ago and has not been changed at all over the project period. On that count, there have been no demonstrations, not even presentations, to increase the subsidy amount. People are heard to say that ‘they are building their own houses, building their own future, with the help of Gol, GoSL and others. Why should they demand more? Why should they not contribute a little?’. It is a clear sign of ‘ownership’, doing one’s own work, solving one’s own problems, a responsible partnership.

There is little doubt that this positive environment is the result of trusting people with the resources and letting them make decisions for themselves — be that design, size, materials, time of construction or the contribution of extra money. While the project is reaching its final stage, there is unmistakable evidence that the people are responding by assuming responsibility, showing enterprise, working hard and putting their own savings into making their houses ‘bigger and better’. And they are proud of what they are doing.

A page from this writer’s report to the project monitoring committee (set up by the Gol) summarises the tale better:

‘The client satisfaction level is high. Not only the usual complaints are conspicuous by absence (a prominent feature in most such public housing projects) and not only they do not grumble or complain about the cost escalation, their confidence and satisfaction level is visibly high.’

‘To a question on her views on corruption in the project, in a long interview, the lady of the house told me with confidence that the system left no scope for corruption at all. She explained that considering that the full amount of Gol subsidy was directly deposited in her bank account electronically; that she was not required to push any paper or file; and that she herself made payments to the masons and the labour, there was no chance or scope for corruption.’

‘This community trust is a huge plus for the project. The owner building his/her own home concept contributes to it. But the real deliverer is the working of the systems and the sub-systems Efficient and transparent transfer of funds electronically to the beneficiary families is one such sub-system. The point is this: that the positive outcome witnessed till date is not only because of the owner-

driven method of working. It is also because of proper systems, procedures and individuals being in the place.’

Systems

A small part of what one calls the ‘system’ is money reaching the home builder in time, in proper instalments, without bureaucratic delay or corruption in addition to a high-level of motivation of the family. These are critical, if less valued, aspects of such programmes. The 50 000-houses project in Sri Lanka provides us with some interesting feedback too. There, the money was transferred into each family’s bank account electronically in three instalments. The banks informed the beneficiaries of the transfer by phone. The fact that even a cheque is not to be collected and deposited saves the family the time and trouble. More importantly, it eliminated the possibility of the cheque issuer asking for a bribe.

The motivational part is even more inspiring. There, the home builders said that it was not that they were working on a Gol housing project, it is that Gol is assisting them in constructing their own houses. Coming from the people, the homeowners themselves, it is not semantics, it is ‘ownership’: that ‘we are doing our own work’ and the spirit that ‘we are solving our own problems’ is the essence of the success. Trusting people with money does not come easy to anyone, less so to the governments, bound as they are with systems and procedures. Creating that environment of trust, certainly with the required systems of checks, balances and accountability, often accounts for the positive environment and contributes to the motivational factor. This spirit and environment is visible throughout the project.

Evaluation and documentation

The Gol 50 000-houses project in Sri Lanka was special in many ways. The nature of assistance (not money, but constructed houses), the size of the undertaking (50 000 houses spread over dispersed locations in the intense war zone), the size of financial assistance (over INR 1 500 crore or USD 260 million), the number of direct beneficiaries (over 200 000 war-weary and distressed people) and, more than anything else, the mode of implementation (in an owner-driven manner) made this a very special project. It is a model of neighbour assistance in a post-disaster scenario. The full story of the engagement deserves to be told to all the stakeholders.

The more compelling reason to document this highly successful project, both the process and the outcome, is its participatory, owner-driven approach to planning and implementation. The owner building his/her own house meant the Gol transferring the fund to the owner, trusting him/her for its judicious use, encouraging and supporting him/her through facilitators and using the opportunity for social mobilisation and individual capacity building. As a massive post-disaster rehabilitation effort this project, which has produced good-quality houses at a fast pace and within the cost limit, has set

new benchmarks. The institutional innovations, organisational arrangements and administrative systems, processes and procedures all deserve narrating. India, and the rest of the world which is subject to frequent natural and man-made disasters, have much to learn from this project. An evaluative documentation of the project processes and innovations will be a unique public asset and a meaningful contribution to the global knowledge pool on post-disaster reconstruction and rehabilitation.

Learning from the project: an organisational model for the *Indira Awas Yojana*

The 'owner-driven' approach in post-disaster reconstruction projects has yielded positive outcomes in recent years. Housing reconstruction following the earthquake in Gujarat is an encouraging case. It is now established that the 'owner-driven' approach speeds up the process, reduces cost, improves quality, enhances community ownership, reduces scope for complaints and conflict, facilitates community inputs, improves project performance on the social front, and leads to improved cooperation between members of a community and among communities during and after the project, if done properly. The method of doing it, however, is important. The owner-driven resettlement and community-participation approach need facilitative policies, conducive organisational arrangements, flexibility in approach, enterprise in problem solving, skilled staff, flexible time frames and preparedness for experiential learning.

The project has much to offer in delivery-system building to a similar but enormously large-scale Gol project: *the Indira Awas Yojana* (IAY) project. Under that project some 30 million rural houses have been constructed, over the last three decades for the rural poor in Indian villages. The main similarities between the 50 000-houses project in Sri Lanka and IAY are three. One, both are rural. Two, both are fully subsidised. And three, both are owner built. Yet, while the Sri Lankan project has shown positive outcomes on all fronts — product quality, beneficiary participation and resultant motivation and ownership — the IAY is a case for concern and worry on all of those aspects — poor quality of houses, low motivation on the part of the beneficiaries and no ownership. The efforts are being made to develop a delivery system for the IAY keeping the Sri Lankan model in mind. Introduction of the facilitating agency in an appropriate and affordable form is being seriously examined.

15. 'Pathways to permanence' through accompanied homeowner-driven approach to reconstruction: Habitat for Humanity and World Vision's programme 'Homes not Houses' in Sri Lanka (2016-2020)

Anjalie Page, former Project Director at Habitat for Humanity Sri Lanka (HfHSL)

Joeri Leysen, former Programme Support Manager, HfHSL

With contributions from Desirée Bartosiak, consultant to Habitat for Humanity International (HfHI)

Brian Grant, Chief of Party, 'Homes not Houses' project, HfHI

Juderaj Croos, Joseph Jeyamaran and Stanly Prashanthan Tissaveerasinghe, HfHSL managers of the 'Homes not Houses' project.

Abstract

The need for housing in Sri Lanka is staggering. Poverty has prevented many from building their own house and disasters such as the 2004 Asian tsunami, recurrent floods and the three-decade-long civil conflict have caused a huge need for low-cost housing reconstruction. In addressing these needs, HfHSL has, over the years, adopted a number of housing development models with varying levels of success in terms of beneficiary acceptance and occupancy. This paper describes how building on lessons learned from implementation during the last two decades, HfHSL has identified key areas for consideration when designing a programme through the accompanied homeowner-driven approach (AHOD) to housing-reconstruction. The following principles are being implemented under the EU-funded project 'Homes not houses: building a sustainable future together' that involves the assisted home owner driven reconstruction of some 2 400 houses:

- (1) Respond to homeowners cultural and social needs by ensuring end-users be meaningfully involved in housing designs and community-led solutions.
- (2) Allow for incremental home improvements: family size and income can change and there might be a need to expand, improve or adapt the house in the future.
- (3) Promote self-reliance as opposed to propagating a culture of dependency: housing interventions should engage families as pro-active agents of the reconstruction process as soon as possible to prevent over-dependence on external aid.
- (4) Plan for exit: agencies should transition as soon as possible from the role of 'provider' (which occurs especially in a relief context post-disaster) to 'enabler' (where they are seen as partners, but the communities drive the reconstruction process).

Strength, stability and self-reliance through shelter

Pathways to permanence (Flores and Meaney, 2016) is a strategy formulated by HfH that details the continuum taking disaster-affected families to a permanent and durable solution (see figure below). It is the process of reducing vulnerability and supporting disaster-affected families and communities using holistic programme interventions that enable incremental progress towards the achievement of permanent, durable solutions. While developed predominantly for shelter solutions, this strategy extends beyond in post-disaster aid. The strategy purports that programme design begins with the goal of supporting families towards permanence and sustainability, and that programme interventions should evolve. The key concepts of this strategy include the following.

- (1) The recognition of the existence of multiple paths to permanent and durable solutions and of the different circumstances, contexts, needs, capacities and means of each family. Interventions should therefore consider these variables and support different paths.
- (2) The incremental approach to reconstruction.
- (3) Empowering communities by developing housing support services and implementing livelihood and market-development interventions.
- (4) Using holistic programme interventions that are not limited to the reconstruction of houses but also include measures that promote social and economic development, and become a platform for health, water, sanitation, livelihoods, protection, education and other post-disaster assistance.

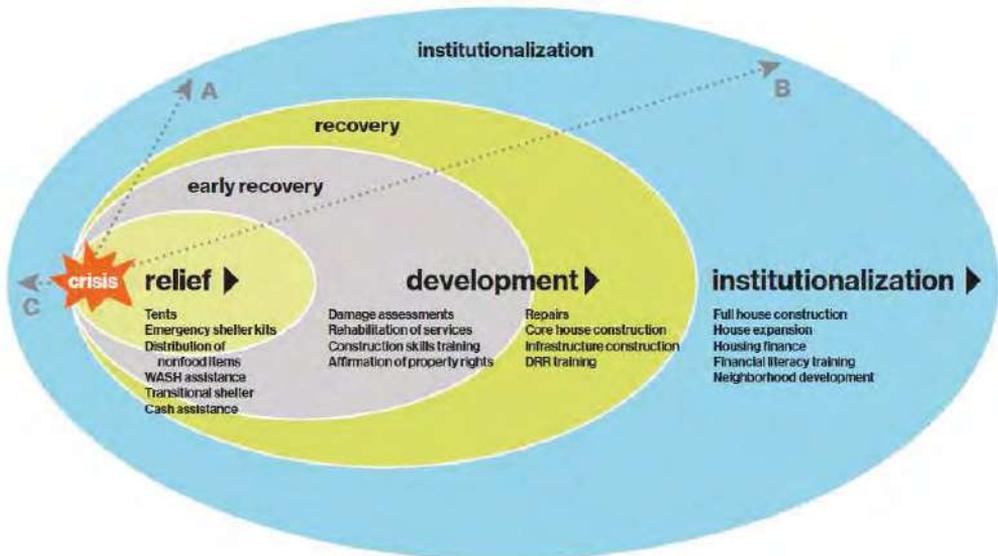


Figure 97—Families (A, B and C) walk different ‘pathways’ towards a permanent solution. Shelter interventions provide for incremental improvements along the way. Family C has the means to quickly go back to its pre-disaster permanent housing condition.

(Source: HFHI, Flores and Meaney, 2016)

The *Pathways to permanence* strategy is reflected in HfH’s current project titled ‘Homes not Houses: building a sustainable future together’ (2016-2020), funded by the EU and implemented by HfHSL and World Vision Lanka. The project also draws on the concept of linking relief, rehabilitation and development (LRRD) (EC, 2001) and past experience. This project is providing a more ‘developmental’ housing-reconstruction support to internally-displaced people (IDPs) in the conflict-affected north and east of Sri Lanka. The main tenets of the project are as follows.

Tenet 1—Respond to homeowner, cultural and social needs in home designs

Most houses provided through previous reconstruction programmes in the north and east of Sri Lanka followed a standardised size and almost a single design – based on the NEHRP standard of 550 sq. ft – with the size being equal regardless of the family composition. Through interviews conducted while designing the current project, HfHSL found that potential beneficiaries who were not familiar with previous housing construction programmes, had different house designs in mind. Our proposed designs therefore respond to each household’s cultural practices and religious beliefs. This allows the traditions, culture and creativity of the communities to be encouraged and rediscovered, hence empowering these communities.

Figure 98—Self-built 900 sq. ft house in Kilinochchi by HfH beneficiary homeowner beyond NERHP standards using cement sand blocks. This house symbolises the post-reconstruction aspirations of resettled communities. (Source: Jaime Royo-Olid, EU 2017)



In contexts of high demand for construction materials and an increase in costs, ‘one-size-fits-all’ approaches tend to be imposed. A generic house design often fail to respond to the specific characteristic of each site. Further, cement sand blocks (CSBs) have become the almost exclusively used material in the construction of almost all reconstructed houses despite they were not traditionally used in these areas before the civil conflict. As a result, houses are generic and most look alike. The personalisation of houses tends to be misleadingly considered as an unaffordable luxury.

The current EU-funded project strategically promotes the adoption of appropriate technologies, owner-led house designs and incremental-improvement phases. The project will also increase the technical capacity of homeowners and encourage the production of and construction with locally-sourced materials. Appropriate technologies offered as possible alternatives to cement sand blocks and country-fired bricks include: CSEBs, ECBs, earth plastering, rat-trap bond and filler slab roofing.

At first, most interviewed families, especially those aware of the technical standards in previous housing-reconstruction programmes, were resistant to adopting new technologies and materials, stemming from a lack of knowledge and familiarity. Following the construction of various model houses as encouraged by the EU Delegation to Sri Lanka, showcasing the robustness of these techniques, first by UN-Habitat between 2013 and 2014 and then by HfHSL in 2017 (see figures below) led to a rapid change in acceptance by those who experienced, touched and tested the strength of the blocks.



Figure 99—Sensitisation poster on the advantages of ECBs, model house in Mullaitivu district
(Source: Jaime Royo-Olid, EU 2018)



Figure 100—Neighbours visit the newly built CSEB model house in Batticaloa. By verifying the strength and experiencing the coolth of indoor environment most were convinced of the appropriateness of CSEB. (Source: Satprem Maïni, 2017)

Tenet 2—Allow for incremental home improvements

Incremental construction, as a concept, was introduced to Sri Lanka in 1984, via the GoSL MHP, and the approach was praised for its community-centric and participatory framework. The MHP programme became an example for other organisations such as HfHSL to build and improve on. Building a ‘core house’ that expands comes from that period. A core house is a small house that provides basic but sufficient space and amenities to live as a seed for a bigger house in the future. An advantage of the core house lies in its cost-effectiveness, allowing more families to be served with a basic housing solution within funding limitations. The design of core houses allows for and encourages expansion when families are ready, as their members increase, and financial ability grows. The responsibility for the upgrade, extension and expansion of the core house lies with the homeowners, building self-reliance and motivating them to seek for ways to strengthen their earning capacity.

Originally, HfHSL developed a range of architectural design options (see figures below) for core incremental housing as a viable model when subsidies would run out. Designs incorporated traditional, pre-conflict features of houses in the north and east of Sri Lanka, such as the use of external spaces, typical of the traditional way of life (Anjalendran et al., 2016). Responding to intense heat, designs included spatial configurations facilitating cross-ventilation. The potential for incremental growth is made possible by removing barriers to further construction and expansion. This should enable families to ‘afford investments’ in their homes without pushing homeowners into unmanageable debt.



Figure 101—Joints of CSEBs prepared for future expansion. Left: for future doorway. Right: finger points sand (weak) mortar for easy extension of wall.

Core incremental design options included an using a typical module that can be repeated in different alignments in stages, half walls of masonry with a wooden screen to be gradually replaced by masonry walls according to the family’s capacity, and an asymmetric roof to allow for a loft, which could be used for added storage, especially for agricultural communities.

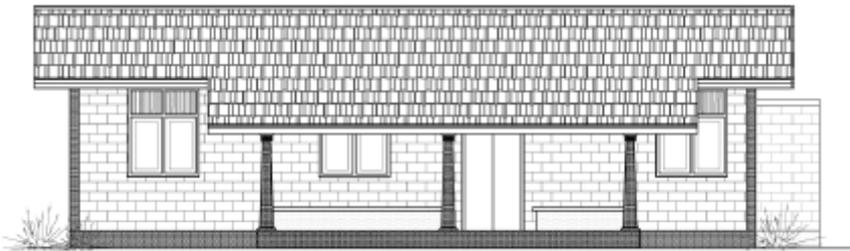


Figure 102—Tentative proposal of a rammed-earth house with a lockable core bedroom, a kitchen, chimney and toilet, which comprises a typical module that can be repeated in different alignments in incremental stages. (Source: HFHSL)

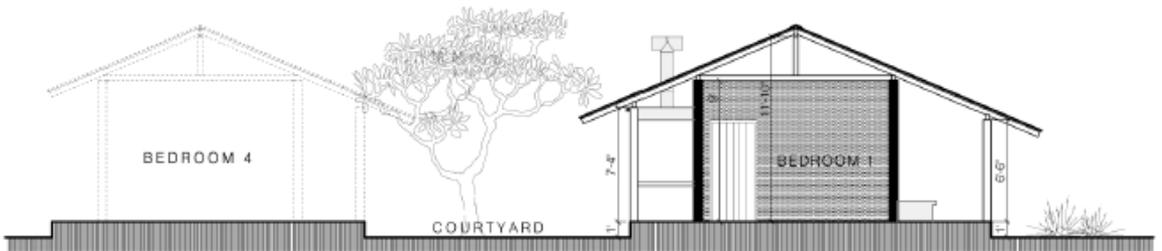
These core incremental housing designs, while relevant, and building on the independent evaluation contracted by the EU (see chapter 5), were later abandoned. The new Government appointed in 2015 committed to delivering housing reconstruction for all unattended families and requested that the NEHRP standard remained untouched.



Figure 103—Tentative proposal of a typical rural lockable house, with a kitchen, chimney, toilet and one bedroom, which can incrementally grow with a veranda, and additional bedrooms. Cement sand blocks, sun dried brick or compressed stabilised earth blocks can be used for walling. (Source: HFHSL)



FRONT ELEVATION



SECTION

Figure 104—Tentative proposal of a house constructed with sun-dried brick with a lockable core, one bedroom, a detached toilet, and front and rear verandas. The rear veranda allows for an internal courtyard across which bedrooms could be added incrementally. (Source: HFHSL)

Tenet 3—Promoting self-reliance vs a culture of dependency

Communities' reliance on donor funding, the changed expectations, together with limited self-reliant livelihood and community-development efforts have also contributed to a culture of dependency (Skinner et al., 2015). Families are therefore being encouraged to adapt their incremental design choices according to the budget for future growth, their loan potential and other factors. The house designs will therefore continue to evolve over the course of the project and beyond. In addition, HfHSL and WV are promoting the production and use of locally-sourced and produced appropriate material such as CSEB, earth cement blocks (ECB) and mud concrete blocks (MCB) later renamed to modern construction block, not only to diversify the range of options to owners but also to contribute to the local economy. The use of these materials will feed back into local employment while families become more conscious about the impact of construction on the environment. It also opens up a market for the production of these materials within the local community. With the involvement of experts and the transfer of knowledge to communities, local enterprises will produce these to scale. As demand is met by producers in the local community, the use of these materials would thereby result in revenues being distributed locally in the target villages. After a year of testing CSEB has proven to be most cost-effective and hence ECB and MCB production is unlikely to scale up now.

Figure 105—Hydraulic CSEB machine in production yard in Batticaloa district, managed by HfH and WV and funded by the EU. (Source: Jaime Royo-Olvid, EU 2018)





Figure 106—Stock of CSEBs on the left and ECBs on the right, in production yard in Mullaitivu district, managed by HfH and WV and funded by the EU. (Source: Jaime Royo-Olvid, EU 2018)



Figure 107—Homeowner of model ECB house showing the filler-slab in his kitchen, in Theravil Kulam, Mullaitivu district, built with the assistance of HfH and funded by the EU.
(Source: Jaime Royo-Olid, EU 2018)



Figure 108—Roof truss and internal buttressing allowing for ventilation in Theravil Kulam, Mullaitivu district, built with the assistance of HfH and funded by the EU. (Source: Jaime Royo-Olid, EU 2018)

Tenet 4—Plan for exit

The integration of flanking measures (or livelihood support measures) alongside housing support is vital to ensuring the sustainability of the activities (Meindertsmas and Nixon, 2012). To build local capacity, raise awareness of locally-sourced and produced materials and environmentally-friendly technology, increase construction-related skills, and create job- and market-development opportunities, ample training is being provided to technical assistants, local artisans, construction workers and potential producers. This is a key housing support service to help families on their pathway to permanence by strengthening skills and empowerment through knowledge and application. Vocational training is being conducted in construction, construction-related services and appropriate building materials and methods. To increase efficiency and ensure standards, all skilled trades workers and unskilled construction workers receive extensive training in basic techniques that ensure the quality of construction. They benefit in particular from training and mentoring from experts in CSEB production and masonry. In addition, some homeowners have been selected for more in-depth training in construction and related disaster-risk reduction, alternative technologies and maintenance. Such capacity building provides accreditation to some of the skilled workers and enable most of the unskilled

labourers to be upgraded to skilled workers. For those who successfully finish the course, they have the opportunity to become apprentices, hired by a family, at the building site. Not only will they have continual employment but also on-the-job training that hones their skills, thereby contributing to the skilled-labour pool in the targeted rural villages. Further support will be given towards the formation of small-to-medium-sized enterprises to produce alternative construction materials locally.

The use of the *Pathways to permanence* strategy within the current project allows for a myriad of options of housing design, size, and construction materials and techniques. Additionally, training by experts and provision of livelihood-support strategies and stakeholder workshops enables families to acquire shelter incrementally, building their homes step by step as their families grow and as their limited finances allow. For future generations, this promotes a culture of saving and investing within their means, expanding when possible, in the absence of external funding. In addition, the development of the local labour pool and the use of locally produced material multiply the potential for incremental improvements by beneficiaries. Such decent, affordable incremental housing opens the door to better health, access to education, stronger communities and strengthened economies. Through shelter, Habitat for Humanity builds strength, stability and self-reliance.



Figure 109—Owner-driven housing plot land-use planning under ‘Homes not Houses’ programme funded by the EU (Source: HfHSL, 2016)



Figure 110—Owner-driven hazard mapping under ‘Homes not Houses’ programme funded by the EU (Source: HfHSL, 2016)



Figure 111—Flooding evacuation route sign by World Vision in project with the Disaster Management Committee (Photo: Jaime Royo-Oluid, EU 2018).

Accompanied homeowner-driven approach

The United Nations Disaster Relief Organisation (UNDRO) argued that ‘the key to success ultimately lies in the participation of the local community — the survivors — in reconstruction’ (UNDRO, 1982: p.55). While participatory approaches have been embraced by many governmental and non-governmental organisations since the declaration by UNDRO, some have argued the impact in practice is weak (Duyne Barenstein, 2012). But how genuinely participatory interventions are remains a question. True participation and empowerment are seen when people have control over the process and over the required resources, allowing the community to take ownership of the situation in which they are and focus on their development (Da Silva, 2010).

The importance of the participatory approach is underlined in HfH’s and WV’s implementation of this 3.5-year EU-funded housing project that aims to help conflict-torn people in the Northern and Eastern Provinces. The soundness of the approach is evidenced in HFHSL’s own experience in rebuilding homes and communities following the 2004 Indian Ocean tsunami. By the end of its 5-year disaster response programme in 2010, HFH Sri Lanka had helped over 3 000 families build, rehabilitate or repair their homes, with the active participation of the community. For its commitment to a genuinely participatory approach to shelter assistance, HFH Sri Lanka received an award from the Fritz Institute.

In implementing the project, ‘Homes not Houses: Building a sustainable future together’, together with World Vision Lanka, HFH Sri Lanka are bridging the gap between relief, rehabilitation and development to build resilient and secure communities in the target areas.

In a context where there is significant need for decent housing, high vulnerability of the communities, a risk of over-reliance on aid and changing and expanding expectations of aid, the current project employs participatory approaches to increase families’ engagement, ownership, and acceptance of the project as well as the sustainability of its housing solutions. Central to this is the use of the accompanied homeowner-driven (AHOD) approach to construction.

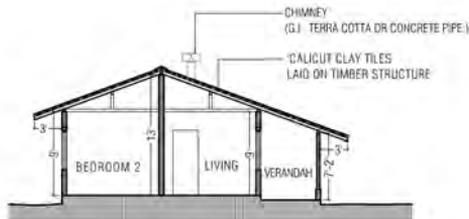
The ODA is recognised in the World Bank’s *Safer homes, stronger communities: a handbook for reconstruction after natural disaster* as the most empowering and dignified approach for responding and rebuilding post-disaster (Jha et al., 2010). Here, beneficiaries are responsible for the complete construction of their houses, with an external agency providing technical support and funding. Funding is transferred to the families, who can control how this is spent, according to clear guidelines. This approach has been found to lead to the highest levels of families’ satisfaction, to a better quality of construction, to a faster and more cost-effective reconstruction approach and to an enhanced capacity of communities to build disaster-resilient houses (Duyne Barenstein, 2012).

Through other post-disaster housing programmes (Catholic Relief Services (CRS), 2012; Ratnayake and Rameezdeen, 2010) and HFH Sri Lanka's own experience, the value of the ODA method has been established as an efficient manner of construction with beneficiaries taking on responsibility for the completion of their homes. The ODA has empowered families in the post-civil conflict Northern and Eastern Provinces of Sri Lanka with a higher level of house acceptance and occupancy being observed with families and communities utilising this approach. However, the approach has some risks. Factors such as the large size of the houses that are constructed in an environment of rising prices together with unwise financial decisions made by families, have contributed in part to indebtedness in some beneficiary families.

The importance of this holistic approach and community involvement in this process was highlighted by Skinner et al. (2015) in their evaluation of previous post-conflict EU-funded housing programmes in Sri Lanka. The focus on housing alone and the lack of community involvement was found to contribute to indebtedness, a dependency culture and a lack of sustainability within the community (Skinner et al., 2015).

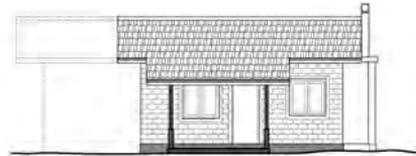
Habitat for Humanity's experience shows that without this kind of support, families may be hampered in effectively taking ownership and successfully managing the construction of their homes. The challenges faced by the families — often complex and intertwined — include weak construction services in the area, a lack of technical knowledge of alternative technologies and materials, a lack of housing alternatives, the prohibitive cost of construction materials and labour, a lack of savings and financial literacy, predatory lending and prohibitive interest, and natural disasters and climate change. However, given the possibility of facing these issues together with local communities, local authorities and the implementing agencies, families will be able to gradually address issues and find solutions, using their own creativity and preferences, growing from the supportive and concrete assistance provided.

Close collaboration and guidance is provided to ensure families make appropriate and wise choices for housing that are not based only on personal preferences but are also coherent with their family needs, livelihood potential and aspirations, credit they can bear (and potential to access an appropriate loan) and the conditions of their land. Housing beneficiaries are being trained in the selection criteria for adequate and quality construction service providers, and taught about standards of quality for the selection of their skilled and unskilled labour, and the signs of poor quality or technical threats to the house.



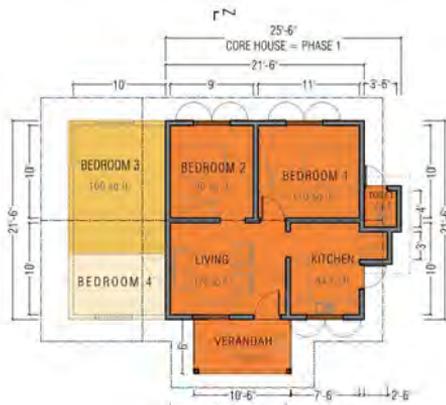
SECTION Z-Z

Scale - 1/8" = 1'-0" (1:24)



FRONT ELEVATION

Scale - 1/8" = 1'-0" (1:24)



GROUND FLOOR PLAN

Scale - 1/8" = 1'-0" (1:24)

FLOOR AREA SCHEDULE		
	DESCRIPTION	PLINTH AREA
CONSTRUCTION LEVEL 1	550 sq.ft. PLINTH AREA LOCKABLE HOUSE	550 sq.ft.
INCREMENTAL GROWTH OPTIONS	RENDERING, FLOORING AND DOOR FOR 2ND BED ROOM OF CONSTRUCTION LEVEL 1	550 sq.ft.
INCREMENTAL GROWTH OPTIONS	ADDITIONAL ROOM (3RD ROOM) OF 150 sq.ft. PLINTH AREA	700 sq.ft.
INCREMENTAL GROWTH OPTIONS	RENDERING, FLOORING AND OPENINGS FOR ADDITIONAL ROOM	700 sq.ft.
INCREMENTAL GROWTH OPTIONS	ADDITIONAL ROOM (4TH ROOM) OF 75 sq.ft. PLINTH AREA	775 sq.ft.

THIS PROJECT IS FUNDED BY:



Project : Homes not Houses

Locations : Batticaloa, Killinochchi, Mullaitivu

Type A

SHEET CONTENTS :

PERSPECTIVE VIEW
SECTION
FRONT ELEVATION
PLAN
INCREMENTAL ENHANCEMENT

Figure 112—Homeowner of model ECB house type A, Mullaitivu district, built with the assistance of HfH and funded by the EU. (Source: Jaime Royo-Olid, EU 2018)

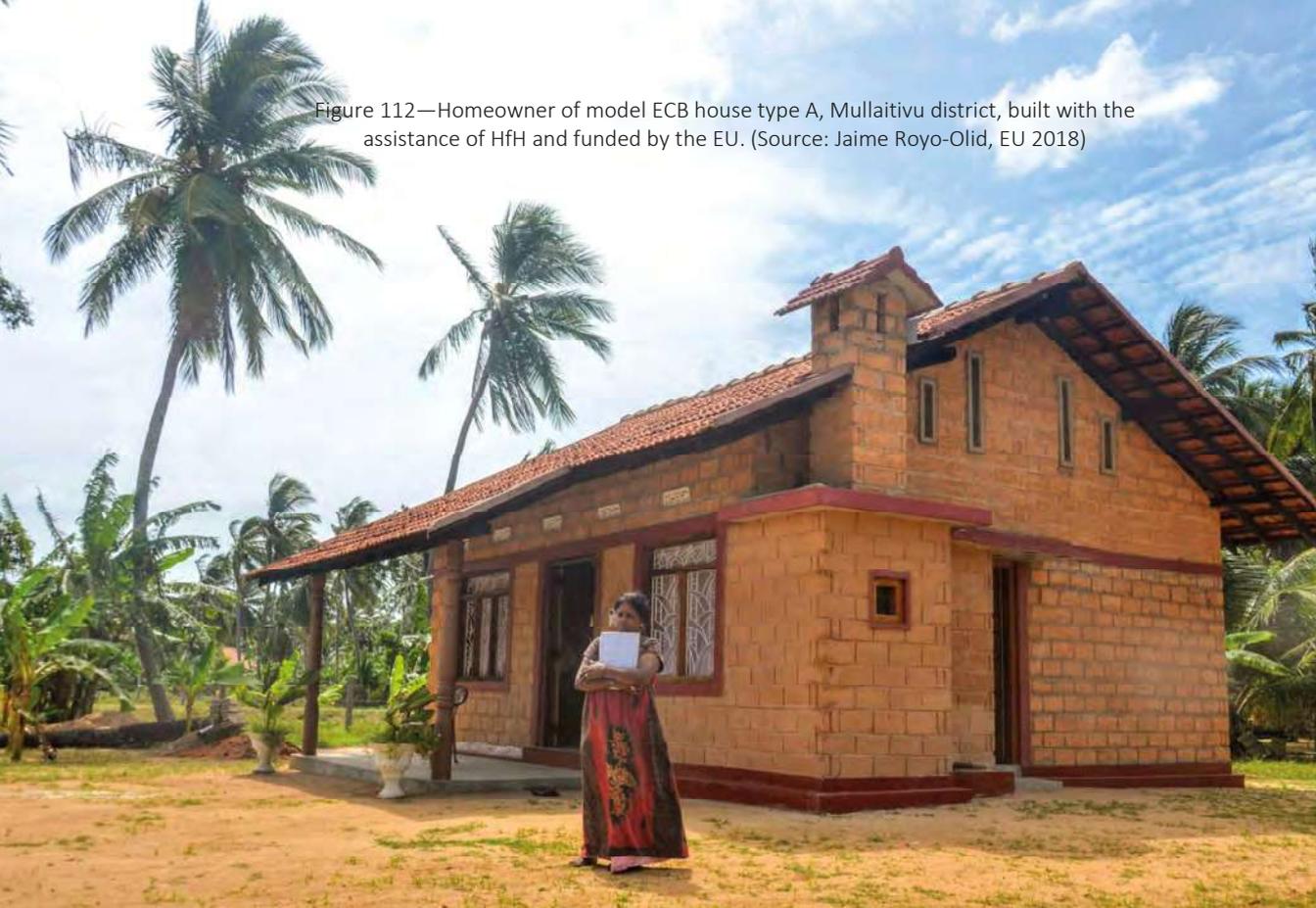
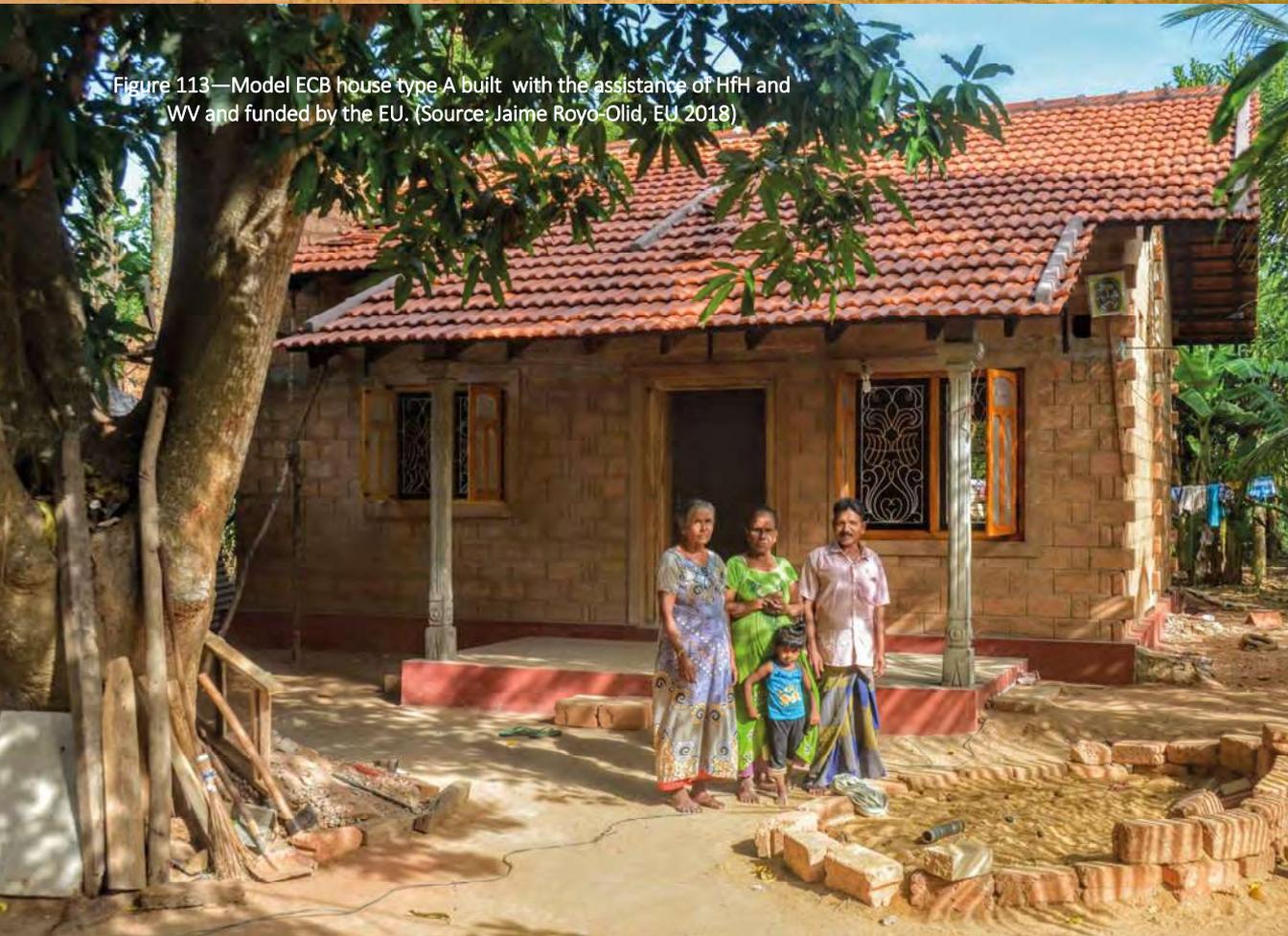


Figure 113—Model ECB house type A built with the assistance of HfH and WV and funded by the EU. (Source: Jaime Royo-Olid, EU 2018)





FLOOR AREA SCHEDULE		
	DESCRIPTION	PLINTH AREA
CONSTRUCTION LEVEL 1	550 sq ft. PLINTH AREA LOCKABLE HOUSE	550 sq ft.
INCREMENTAL GROWTH OPTIONS	RENDERING, FLOORING AND DOOR FOR 2ND BED ROOM OF CONSTRUCTION LEVEL 1	550 sq ft.
INCREMENTAL GROWTH OPTIONS	ADDITIONAL UTILITY & ROOM (3RD ROOM) OF 165 sq ft. PLINTH AREA	715 sq ft.
INCREMENTAL GROWTH OPTIONS	RENDERING, FLOORING AND OPENINGS FOR ADDITIONAL ROOM	715 sq ft.
INCREMENTAL GROWTH OPTIONS	ADDITIONAL ROOM (4TH ROOM) OF 120 sq ft. PLINTH AREA	835 sq ft.
INCREMENTAL GROWTH OPTIONS	ADDITIONAL SHOP OF 83 sq ft. PLINTH AREA	918 sq ft.

THIS PROJECT IS FUNDED BY:



Project : Homes not Houses

Locations : Batticaloa, Killinochchi, Mullaitivu

Type B

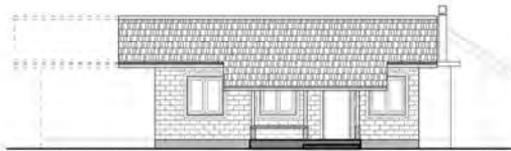
SHEET CONTENTS :

PERSPECTIVE VIEW
SECTION
FRONT ELEVATION
PLAN
INCREMENTAL ENHANCEMENT

Figure 115—Homeowner of model ECB house type B, Batticaloa district, built with the assistance of HfH and funded by the EU. (Source: Jaime Royo-Oluid, EU 2018)

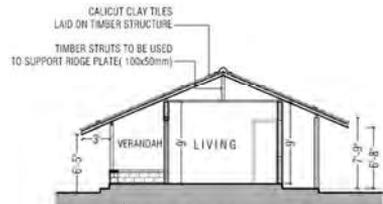


Figure 114—Conventional country fired-brick house type B with homeowner's own innovation in windows with wholes cast in ferro cement for ventilation, Batticaloa district, built with the assistance of HfH and funded by the EU. (Source: Jaime Royo-Oluid, EU 2018)



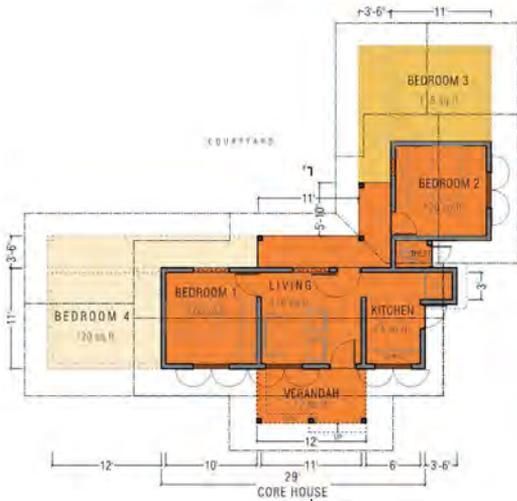
SECTION Z-Z

Scale: 1/8" = 1'-0"



FRONT ELEVATION

Scale: 1/8" = 1'-0"



GROUND FLOOR PLAN

Scale: 1/8" = 1'-0"

FLOOR AREA SCHEDULE

	DESCRIPTION	PLINTH AREA
CONSTRUCTION LEVEL 1	550 sq ft. PLINTH AREA LOCKABLE HOUSE	550 sq ft.
INCREMENTAL GROWTH OPTIONS	RENDERING, FLOORING AND DOOR FOR 2ND BED ROOM OF CONSTRUCTION LEVEL 1	550 sq ft.
INCREMENTAL GROWTH OPTIONS	ADDITIONAL ROOM (3RD ROOM) OF 165 sq ft. PLINTH AREA	715 sq ft.
INCREMENTAL GROWTH OPTIONS	RENDERING, FLOORING AND OPENINGS FOR ADDITIONAL ROOM	715 sq ft.
INCREMENTAL GROWTH OPTIONS	ADDITIONAL ROOM (4TH ROOM) OF 215 sq ft. PLINTH AREA	930 sq ft.

THIS PROJECT IS FUNDED BY:



Project : Homes not Houses

Locations : Batticaloa, Killinochchi, Mullaitivu

Type C

SHEET CONTENTS :

PERSPECTIVE VIEW
SECTION
FRONT ELEVATION
PLAN
INCREMENTAL ENHANCEMENT

Households are also accompanied by HFH Sri Lanka technical officers in the process and equipped with skills to supervise the masons and other workers, and monitor quality. Flanking activities including the provision of livelihood grants, vocational training, financial-literacy training and the strengthening of local CBOs, is integrated fully with the housing reconstruction process, in the same communities and the same families. A land-use plan and economic analysis are developed with each family which guides support. The enhancements are needed to overcome the limitations experienced in some of the past housing programmes, and to address in particular the case of very vulnerable families. As with the ODA, family contributions or 'sweat equity' (which can be financial, or material and labour contributions) are an important part of the process, but these are limited to what is feasible for families without threatening their livelihoods.

Families receive support in managing their income and debt and are given financial-literacy training to equip them to make smart decisions to ensure resilience to debt. To inculcate the habit of saving, beneficiaries are assisted to join savings groups. Families are provided with opportunities to improve their income through training in livelihood options. Further support such as bulk procurement of construction materials ensure families receive the more competitive prices.

Not only will the families be equipped, but the supply pool of construction labour will also be built up. Tradespeople and unskilled construction workers engaged for the EU-funded project receive extensive training to ensure that standards of construction safety and quality are met. This interaction would also enable HFH Sri Lanka become familiar with the workers in the area to better assist families in making their choices as well as help families improve their supervision of these contractors.

As with the traditional ODA, qualified technical officers will provide guidance during the construction, ensure compliance with national standards, and coordinate with the relevant local and national authorities. Payments to beneficiary families are directly credited into their bank accounts (if families do not have an existing account, they are assisted to open one), according to a contractually pre-established schedule.

The implementation of the AHOD approach for the 'Homes not Houses' project ensures that beneficiaries are genuine partners in the reconstruction process, contributing to and driving housing design, selection of materials and labour, construction, community development, and market development. The methodology allows for more than the basic need for shelter to be addressed; when families are in the driver's seat and have the support of the implementing agencies, they are able to take an pro-active role in rebuilding their homes and lives. This strengthens families and communities and promotes a high level of satisfaction by building houses that reflect their needs and aspirations. In addition, the focus on building up the local labour pool contributes to the restoration of local economy and livelihoods. Through (more than) shelter, we empower.

References

- Anjalendran, C., Robson, D., Sansoni, D., and Ondaatje, M. (2016). *The Architectural Heritage of Sri Lanka: Measured drawings from the Anjalendran studio*. London: Talisman/Laurence King.
- CRS (2012). *Managing Post-disaster Reconstruction Projects*. Available from <http://www.crs.org/our-work-overseas/research-publications/managing-post-disaster-reconstruction-projects> [accessed 25.04.2016]
- da Silva, J. (2010). *Lessons from Aceh: key considerations in post-disaster reconstruction*. ARUP and Disasters Emergency Committee. Available from <https://www.dec.org.uk/sites/default/files/pdf/lessons-from-aceh.pdf> [accessed 25.04.2016]
- Duyne Barenstein, J. (2012). *The role of communities in post-disaster reconstruction. A call for owner-driven approaches*. Tafter Journal, Esperienze e Strumenti per cultura e territorio No 51: Settembre 2012.
- European Commission (2001). *Communication from the Commission to the Council and the European Parliament — Linking Relief, Rehabilitation and Development — An Assessment, COM(2001) 153 final*. Available from <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52001DC0153> [Accessed 27.04.2016]
- Flores, M. C. and Meaney, M. C. (2016). *Habitat for Humanity's Disaster Risk Reduction and Response: Pathways to Permanence*. Available from <http://my.habitat.org/kc/download-detail/3e643/Disaster-Risk-Reduction-and-Response—Program-Strategy-Pathways-to-Permanence> [Accessed 28.04.2016]
- Jha, A., Duyne Barenstein, J., Phelps, P., Pittet, D. and Sena, S. (2010). *Safer Homes, Stronger Communities. A Handbook for Reconstruction after Natural Disasters*. Washington DC: The World Bank and the GFDRR
- Meindertsmas, J. D. and Nixon, C. (2012). *Mid-Term Evaluation (Contract DCI-ASIE/2011/279-236) of the programme 'Support to Conflict-Affected People through Housing in Sri Lanka' (Contract DCI-ASIE/2010/256-210)*, August. Colombo: Evaluation commissioned by the European Union Delegation to Sri Lanka and the Maldives.
- Ratnayake, R. M. G. and Rameezdeen, R. (2010). *Post disaster Housing Reconstruction: Comparative Study of Donor Driven vs Owner-Driven Approach*. International Journal of Disaster Resilience in the Built Environment, 1(2), 173-191
- Skinner, R., Kumarasuriyar, M. and Martelli, M. (2015). *Evaluation of the EU-funded housing reconstruction programmes in Sri Lanka implemented by UN-Habitat (Contract DCI-ASIE/2010/256-210 and Contract DCI-ASIE/2012/296-666)*, January. Colombo: Evaluation commissioned by the European Union Delegation to Sri Lanka and the Maldives.
- Skinner, R., Kumarasuriyar, M. and Martelli, M. (2015). *Evaluation of the EU-funded housing reconstruction programmes in Sri Lanka implemented by UN-Habitat*. January
- UNDRO (1982). *Shelter after Disaster: guidelines for assistance*. New York: UNDRO



PART IV OWNER-DRIVEN APPROACH AND TECHNOLOGY FOR COPRODUCTION

Figure 116—Stock of CSEBs at production yard, Batticaloa district, produced by HfH and WV and funded by the EU. (Source: Jaime Royo-Olid, EU 2018)

Figure 118—EU-funded house plan by UN-Habitat Sri Lanka, Mullaitivu district (Source: Jaime Royo-Olid, EU 2012)

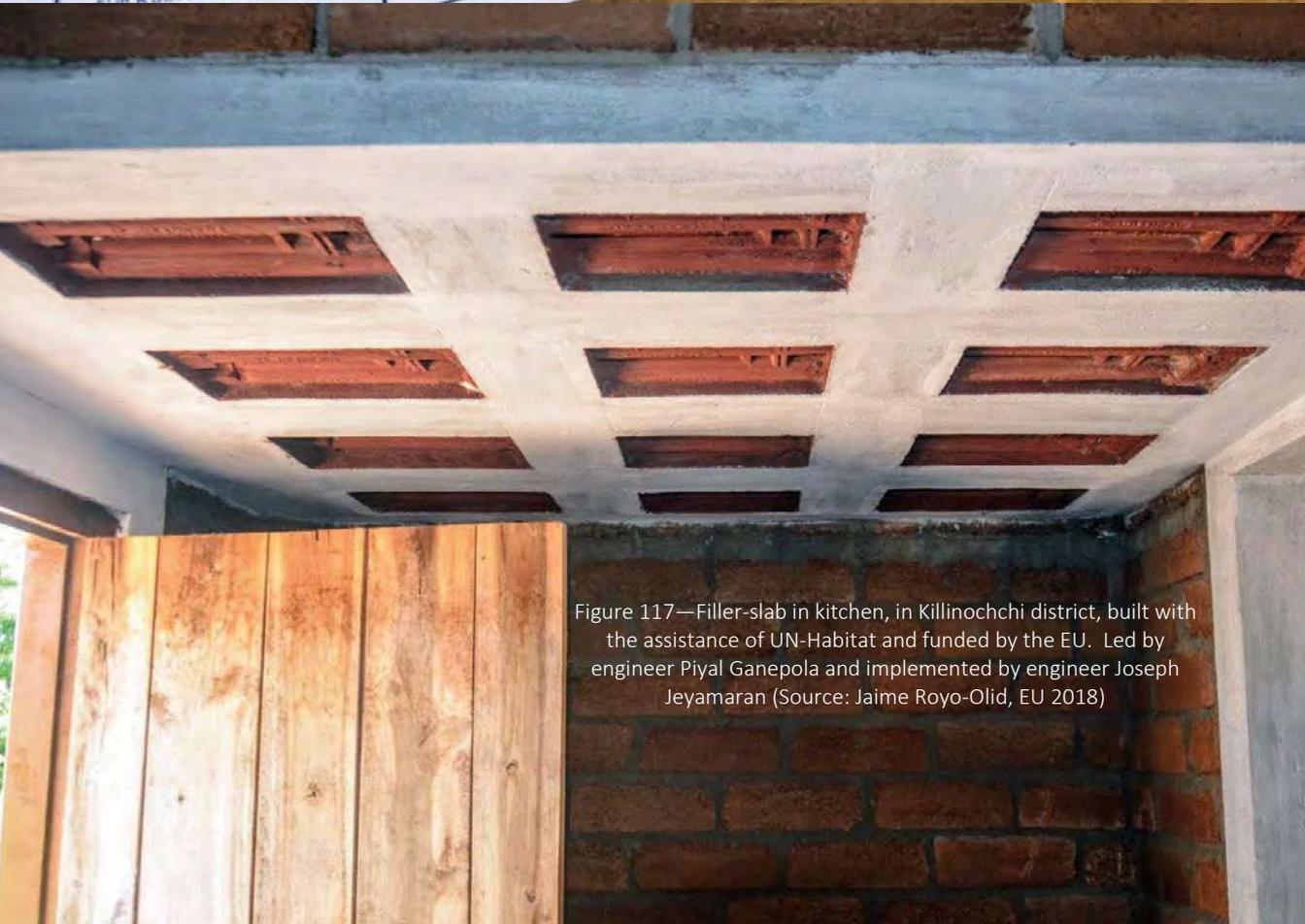
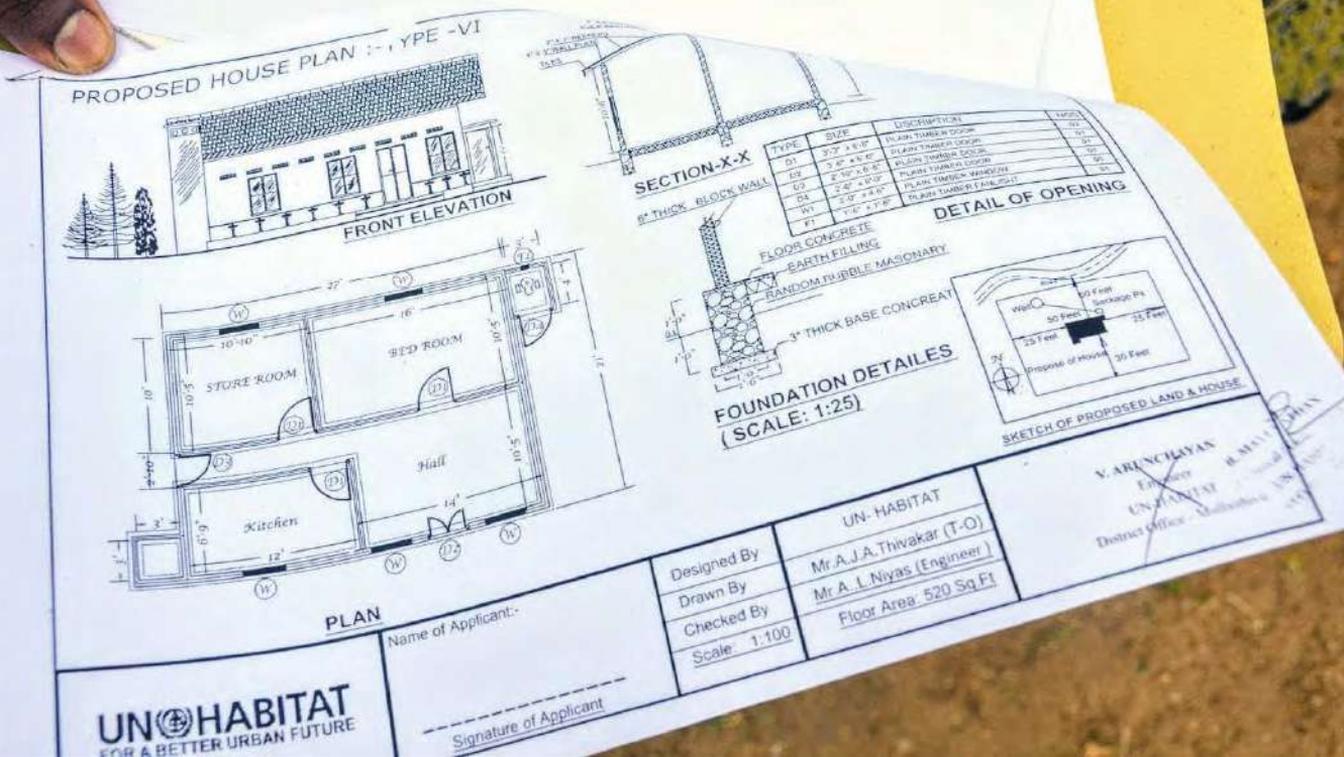


Figure 117—Filler-slab in kitchen, in Killinochchi district, built with the assistance of UN-Habitat and funded by the EU. Led by engineer Piyal Ganepola and implemented by engineer Joseph Jeyamaran (Source: Jaime Royo-Olid, EU 2018)

16. Challenges in introducing alternative appropriate technologies in homeowner-driven housing: UN-Habitat's experience in post-emergency Sri Lanka

Piyal Ganepola, Deputy Project Manager, UN-Habitat Sri Lanka

Indu Weerasoori, DRR Project Manager, UN-Habitat Sri Lanka

Abstract

A major challenge to sustaining reconstruction is rapid cost escalations resulting from the high demand for materials and labour in the affected areas. In the absence of sustained aid, it becomes necessary to introduce more cost-effective technologies to substitute those that have become unaffordable. Diversifying locally-sourced construction technologies may also better contribute to the local economy, environment and livelihoods. Over-extraction of resources for construction should be seen as a threat to the sustainability of livelihoods depending on local resources and hence reducing negative environmental impacts is imperative.

In the HOD approach, tension arises when promoting alternative or appropriate technologies since the intervention of experts such as architects and engineers in the planning, design and construction of an owner-led house is bound to satisfy the willingness to accept and capacity to manage these by owners. Only guidance is expected from professionals, whereas the introduction of alternative technologies often also demands persuasion. This paper examines this special scenario in terms of the contradiction between the bottom-up approach of HOD construction versus the top-down nature of introducing alternative or appropriate technologies, as well as challenges that may be faced by the agencies driving such projects.

Background

UN-Habitat Sri Lanka has implemented several post-tsunami and post-conflict housing projects since 2005 through the HOD approach. With the experience thus gained, UN-Habitat is by now more convinced that the HOD approach is the most appropriate approach, compared to the donor-driven or other contractor-implemented approaches in post-disaster and post-conflict housing reconstruction. It offers the benefit of value for money for both the beneficiary and the donor.

In 2012, UN-Habitat's scale of operations in post-conflict housing-reconstruction projects in the north and east of Sri Lanka tripled with the commencement of the housing project funded by the GoI, implemented concurrently with two projects funded by the EU. This has created an unprecedented demand for resources, resulting in issues such as

scarcity of important construction materials (such as river sand and timber) and shortage of skilled craftspeople (masons and carpenters) to meet the demand. It has also created inflation of the construction cost during the project period, making it difficult for the beneficiaries to meet the minimum specifications stipulated by donors within the housing grant allocated to the beneficiaries. In addition, issues such as over-extraction of sand from rivers and illicit felling of jungle timber for construction have caused more harm to an environment, which is already devastated by conflict. This situation has demanded that UN-Habitat explore cost-effective, alternative technologies requiring less skills to construct, less use of sand and alternatives to construction timber. The technologies sought were to be eco-friendly, using local resources and low in construction, operational and maintenance costs. Introducing alternative technologies to ongoing projects in late 2012 was a new concept to UN-Habitat.



Figure 119—Cement-block making advice and training being provided by UN-Habitat to homeowner, S. A. Kafoor in Karadikkuli, Musali DS division Mannar.
(Copyright: Ms Ubaitullah, UN-Habitat, 2013)

This paper illustrates the challenges experienced in incorporating alternative technologies in UN-Habitat HOD projects during the last one and half years and those gathered through the long association with participatory development by the co-authors.

Alternative technology in owner-driven housing

The term 'alternative technology' generally refers to technologies that have low environmental impact and are more resource efficient than traditional technologies. In the context of UN-Habitat implemented projects in northern and eastern Sri Lanka, both these aspects — reducing negative environmental impacts caused by over-extraction of natural resources and improving resource efficiency, particularly by reducing the skilled-labour requirement — have provided a strong justification for introducing alternative technology. Skilled labour can to be reduced by adopting technologies which are conducive to self-building practices, through training the members of beneficiary families.

The validity of a particular type of alternative technology, in terms of its environmental and resource efficiency, may vary with the specific local context. Therefore, not all 'alternative technologies' are universally valid and the appropriateness of a particular technology in a given locality should be carefully examined. (For example, precast concrete door/window frames will become valid as an alternative technology when it can substitute forest timber to prevent the ongoing depletion of forests for the supply of construction timber. Otherwise concrete products constituting cement and emitting large volumes of CO² are not generally considered eco-friendly. Here, the relative benefit is considered).

Affordability too — meaning the particular technology is affordable to be accommodated within: (a) the budgetary allocations of the project, and (b) the affordability to the beneficiaries to construct (direct cost) and maintain in the long run (indirect cost) are also important considerations in selecting a technology. Apart from the above-described technical considerations, the appropriateness of a particular technology very much depends on its social acceptance.

An additional advantage offered by alternative technologies is the possibility of linking them with livelihoods. The beneficiaries who are trained in new building technologies and the production of associated building materials can benefit from the existence of new livelihood opportunities.

Homeowner-driven approach

The HOD in housing reconstruction refers to a process that relies on the beneficiary family to take charge of the planning and construction of their own house. The beneficiary receives a financial grant from a donor (directly or through an agent nominated by the donor). The owner will then undertake construction of his/her own house, utilising the funds provided within an agreed duration and complying with specified minimum standards. For example, such minimum standards may include: floor area, number of rooms, level of finishing, safety measures, and fittings and fixtures. Usually, the donor-

appointed agent or implementing partner (such as UN-Habitat) undertakes to guide and monitor the work performed by the beneficiary, including the disbursement of funds in instalments based on the construction milestones. In addition, the same agent may be entrusted with the task of providing technical advisory services to the beneficiaries. This technical advisory service essentially refrains from undertaking any construction work, but allows the owner-beneficiary to undertake the task of construction under its technical guidance. It may also facilitate the community to undertake collective activities related to construction (such as bulk purchases).

In the HOD approach, the designers (architects and engineers) play a less assertive role in decision-making than in other approaches to housing reconstruction.

The HOD approach has many advantages in post-disaster housing over other approaches, such as the donor-driven approach or state-driven approach, where planning, design and construction are undertaken by external professional bodies (architects, engineers and contractors). The advantages offered by the HOD approach include beneficiaries' freedom to make decisions in planning and construction (under guidance). This results in houses which meet their needs, priorities, aspirations and tastes — while instilling a sense of ownership, empowering and building the confidence of people affected by conflicts or disasters.

The implementation modality

Management of HOD projects is a relatively new concept in the construction-management scenario. Introducing alternative technology to an HOD project is still a vague subject, not identified within construction-management systems. In conventional construction-management systems, there are specified positions to lead the various professional divisions, including architecture, engineering, finance, monitoring, etc.; but this is not the case for alternative technology.

It is unrealistic to assume that the entire management system, including the heads of architecture or engineering, are equally concerned about the environment and resource efficiency, or possess expertise in alternative technologies. Thus, within an HOD project, a 'champion' should evolve naturally or be appointed by the management to take the lead in introducing alternative technologies. Ideally, the champion should have good knowledge about the geographic area of the project and the socio-cultural background and should speak the language of the people. She or he should also possess a sound knowledge and experience in technologies (both conventional and alternative), and have the strength to face challenges. It is advantageous that the champion possess awareness about local activists and organisations working with alternative technologies, as their support will be needed in drawing specific expertise to the project. This person has a massive task of convincing management, technical staff and communities of the benefits accrued through such technologies. The champion will identify a line of champions at

different levels within the operational structure of the project, to support her/him in performing this role. These co-champions, too, need to have communication skills and interest and commitment to propagate alternative technologies.

An analysis of prevailing construction technologies and practices, to assess the environmental impacts and resource inefficiencies, is important to decide the areas where changes or new technologies are justifiable. It may sometimes be possible to improve prevailing technologies in order to improve resource efficiency. This may be more acceptable to the people than introducing entirely new technologies. When introducing new technologies, sometimes it may be necessary to adapt the technologies to suit the local context.

What is most needed for successful introduction of alternative technology is the patience of management (including the donors), as it may take time to change mind-sets, acquire the new skills and change the systems of relevant stakeholders (e.g. beneficiaries, local craftspeople, management, project technical staff and authorities responsible for development approvals).

Effective communication is essential to take new technologies to stakeholders. Oral, visual and printed media (e.g. in the form of community meetings, individual family consultations, video clips, Power Point presentations, brochures and banners) can be used to make people aware of technologies and the benefits offered. Trust and confidence in new technologies will only be improved when people see its applications, and this takes time.

A strategy used by UN-Habitat to establish trust and confidence was the construction of model houses for families willing to adopt new technologies. Model houses allowed to showcase to other stakeholders the reliability of technologies used, while offering on-the-job training opportunities. To improve skills and confidence, UN-Habitat provided local masons with training on site and at special training institutes such as the National Engineering Research and Development Centre of Sri Lanka (NERD) and the National Apprentice and Industrial Training Authority (NAITA), as well as exposure visits to houses built with new technologies. Technologies introduced involved:

Compressed stabilised earth blocks.

- (1) Fair-faced cement block walls.
- (2) On-site timber treatment.
- (3) Pre-cast concrete door/window frames.
- (4) Recycled/salvaged building materials.
- (5) Disaster-risk-reduction elements.
- (6) Low-cost smoke-free chimney.
- (7) Twin pit latrine
- (8) Rain water harvesting.
- (9) Ground water recharging.
- (10) Home gardening

Figure 120—Model house owned by Ms Vasuki built with interlocking CSEB under the IHP
(Source: UN-Habitat, 2014)



Figure 121—Ms Vasuki, homeowner of a model house built with the assistance of UN-Habitat and the funding of the Indian Government (Source: Charmalee Jayasinghe, UN-Habitat)



Challenges

Despite many advantages, the HOD approach is relatively less flexible to incorporate alternative technologies. The factors responsible for challenges emanate from: the nature of the approach itself, conventional practices instilled within local craftspeople, conservative technical teams, management attitudes, the required material not being available locally, lack of national standards, local authorities not accommodating alternative construction technologies, objections from the formal construction industry and external factors. Such challenges as those that can be anticipated in a typical HOD post-conflict reconstruction project are described below. Understanding these challenges will enable the agency implementing a project to plan mitigating measures in advance.

Freedom of choice does not support alternative technologies

In other implementation approaches, such as the donor-driven or state-driven approaches, where the design, technology and construction are selected and executed by architects, engineers and contractors, the beneficiary would only see the final product. The technologies incorporated in the product are either not visible, or even if visible, the beneficiaries do not have the choice of the technology.

But the HOD approach offers the beneficiaries the choice of selecting the technology. The justifications for introducing alternative technologies, i.e. reasons of environmental and resource efficiency, are not necessarily apparent to the beneficiaries and are of less importance to them in the short term. One point that may attract the beneficiaries is the low direct cost of construction that such technologies may offer. But again, without evidence of prior local applications, that too is not readily convincing.

'Safe mode' attitude of beneficiaries

When it comes to housing, people generally do not wish to take risks on their once-in-a-lifetime investment and therefore often follow conventional practices. Often, their most trusted advisor is the local mason. The local mason, who may possess a strong insight about the local context and practical experience in traditional technologies, usually lacks a scientific or professional background to impart the latest developments and concepts in the construction industry. This phenomenon may result in over-designed, costly products, causing wastage in resources, sometimes causing costly damage to the environment, while posing resistance to the introduction of new technologies.

Symbols of prestige

Traditionally, some features of houses are symbolic of social prestige. For example, a house with a hipped roof (as compared to a gable roof) or a house with neatly plastered and painted walls (as compared to fair-face walls) are indications of respect and wealth

in Sri Lanka. Therefore, new technologies differing from such features may not be readily acceptable to beneficiaries with a traditional mindset.

Socio-cultural and astrological taboos

The house in traditional Sri Lankan societies is considered an object with spiritual power, which can influence the lives of its inhabitants. Therefore, the house plan, orientation, dimensions, layout arrangement, materials and even timing of important construction milestones are controlled by religious or astrological prescriptions to a varying degree, differing among communities. For example, in Hindu communities, the species of timber for different components of the house are prescribed. Introducing technologies that ignore such prescriptions will not achieve results. This limitation is particularly valid for HOD projects where the choice of selection lies with the beneficiary.

Limited availability of materials and lack of credit

The beneficiaries in an HOD project receive their grant entitlement in instalments on reaching construction milestones. Sometimes these payments are delayed. In reaching these milestones they may need to purchase building materials in advance. It is common that the village hardware vendors offer materials on credit, based on an understanding with villagers well known to them, pending settlement on receipt of the next grant instalment. However, the local vendors only deal with formal construction materials, not with special materials that will be required by some alternative technologies such as stabilised earth blocks, pre-cast concrete frames, etc. Even if it is arranged by the agency to import these from other areas, vendors of such special materials are unable to provide credit facilities to individual beneficiaries in an HOD project. Both these factors make beneficiaries reluctant to choose such technologies.



Figure 122—House built with fair-face technology which saves plaster, sand, cement, lime and labour (Source: UN-Habitat 2014)



Figure 123—New tools in fair-face block work. Traditional mason first feels insecure until they witness the outcome. (Source: UN-Habitat 2014)



Figure 124—Experimental model U-shaped house (not replicated) built with interlocking CSEB under the IHP (Source: UN-Habitat, 2014)



Figure 125—On-site treating of plantation timber using engine oil. (Source: UN-Habitat 2014)

Attitudes of traditional artisans

Local artisans engaged in construction are not aware of alternative technologies. These artisans are the most trusted technical personnel in construction in the eyes of the beneficiaries. Sometimes even when the beneficiary accepts a certain technology, the local mason is able to change the beneficiary's mind by virtue of the 'expert' position the mason holds in the eye of the beneficiary. Particularly when self-building technologies are introduced, the job security of the traditional mason is threatened, and as a result they may spread adverse publicity against these technologies among beneficiary communities.

On the other hand, some alternative technologies such as fair-face block work involve new tools and improved construction methods. Some village masons, owing to their egos, may disagree with learning to practice and accept such tools or construction methods, thereby presenting another challenge to the adoption of alternative technologies.

'Why kill myself?' attitude of the technical community

In an HOD project, the project technical community (including community mobilisers) of the agency providing technical advice to the beneficiaries play a vital role in imparting the technical know-how among the beneficiary community and the local craftspeople. When introducing alternative technologies, promotional activities conducted by trained technical staff is very important. However, convincing the technical staff and putting them to effectively campaign for the adoption of alternative technologies has not always been an easy task, especially when they have been accustomed to the practice of

conventional technologies in the past. Not all technical staff are willing to make the effort needed to convince the beneficiaries about the benefits of alternative technologies. The reasons may be either a natural reluctance to do things differently, a lack of technical competence, a lack of confidence in the technology introduced or unwillingness to undertake the extra work and responsibility.

Technical staff too busy to conduct communication effectively

Communication between the beneficiaries, masons and carpenters and the project technical community (including the community mobilisers) should be direct and very effective to change the mindset of the former group to accept the technologies. Mass meetings are not good enough to instil the message across at the required depth demanded to understand new technologies. Extensive consultations with individual families, with proper understanding of their mindset, are important, but when the technical staff has to devote more time in administrative work demanded by the project management, consultation of beneficiaries may get neglected.

Management concerns over additional interventions

In the earlier HOD projects, the role of the field technical staff was limited to monitoring progress and releasing funds to the beneficiaries at corresponding construction milestones. Sometimes the technical staff may have assisted the beneficiaries to work out the house plan, but the technology used was conventional and was within the capacity of the local mason and the carpenter. Thus, the management of projects was much simpler than the HOD projects of recent times in which alternative technologies are undertaken as an additional task. This involves many additional interventions, involving the deployment of experts in the respective technologies, communication of the new technologies to thousands of beneficiaries, the training of in-house technical staff and the training of beneficiaries and local craftspeople. These interventions require additional human resources, time and budgetary provisions. The benefit of cost reduction through the introduction of alternative technologies will go to the beneficiaries, but not to the project or the donor. Thus, management of current HOD projects with alternative technology interventions has become a more complicated and costly task than the initial projects. Therefore, within a project's management structure, there could be reluctance to introduce alternative technologies.

Management restrictions are particularly valid in HOD projects, where the introduction of alternative technologies comes as a late addition to overcome crisis situations not initially anticipated. The time schedule of such a project does not allocate the extra time needed for the introduction of new technologies. Thus, project management is often under pressure for timely completion, resulting in compromising on activities in introducing alternative technologies.





Figure 126—EU-funded model house built by owner with the assistance UN-Habitat using interlocking CSEBs, located close to Killinnochi town. Led by engineer Joseph Jeyamaran. (Photo: Jaime Royo-Olid, EU 2016)

Lack of national standards

Construction quality and safety in a country is ensured by the national standards for materials, products and processes. In Sri Lanka, the Sri Lanka Standards Institute (SLSI) and the ICTAD are the regulatory authorities responsible for formulating national standards for the construction industry (i.e. building codes). National standards are available for many conventional construction materials, products and processes, but for alternative technologies these standards are rare. This may lead the engineer who designs structural components of a house (i.e. using a technology not covered by the SLSI or ICTAD) to take an undue professional risk. This is a general drawback for popularising alternative technologies which is not limited to HOD projects.

Non-acceptance by the local authorities

Building approval by the local authority (LA) is an important requirement in the legalisation of newly constructed houses. LA building-approval processes, governed by the two statutes, housing and town improvement (H&TI) ordinance and the urban development (UDA) act, permits only 'permanent building materials' to be used in construction. This also causes an obstruction to some alternative technologies which utilise newly identified materials with superior characteristics, though are not formally identified as permanent building materials. However, this too is a cross-cutting issue not limited to the HOD approach.

Lack of support from the formal construction sector

The HOD approach itself does not offer much commercial opportunity to the construction-contracting sector, as the beneficiaries themselves undertake construction, employing local artisans. Alternative technologies further restrict the involvement of the formal contracting sector and sometimes even the formal building material production sector. This confrontation between the two approaches erupts from time to time.

For example, on one occasion (where the author was managing a project), the political authority had taken a bold decision to do away with the HOD approach, on seeing the inability to involve contractors in the project.

External challenges

The challenges faced by alternative technologies are sometimes completely external and difficult to predict in advance. One intervention, in which UN-Habitat tried to promote stabilised earth blocks in an area where good soils were available, did not work out as planned, as the earth suppliers to ongoing road projects in the area (having a monopoly on the supply of earth) had artificially increased the prices exorbitantly. With the high prices of earth, the price advantage of stabilised earth blocks diminished, and as a result the technology could not be introduced.

Conclusion

The HOD approach in post-conflict housing reconstruction is considered to be the best approach in present times mainly due to the freedom it offers beneficiaries to make decisions in planning and construction. The HOD approach limits the ability of architects and engineers to make all the decisions related to the planning, design and construction of a house, which eventually becomes the home of a family. This approach limits those professionals' intervention in a restrictive way: to provide technical guidance to the family.

The necessity to introduce alternative technologies in an HOD project will arise when the cost inflation of conventional technologies does not allow the beneficiary families to complete their houses within the budget allocated to them by the project. Other factors, such as prevention of damage to the environment and the efficiency of resource utilisation, are external to the family.

In introducing alternative technologies, expert intervention is inevitable. Given the existence of this very special scenario, e.g. the contradiction between the bottom-up nature of the HOD approach and the top-down nature demanded to introduce alternative technologies, this paper examined the challenges experienced by the implementers who are engaged in promoting alternative technologies.

It is concluded that the factors responsible for challenge emanate from a multitude of sources: the nature of the approach itself, traditional practices instilled within the local craftspeople, a conservatively thinking technical community, management attitudes, local unavailability of alternative materials, a lack of national standards, a lack of acceptance by local authorities, objections from the formal construction industry, external factors, etc.

The most prominent of these challenges is the changing of mind-sets and the process of trust-building with beneficiaries, local craftspeople and the other relevant stakeholders, from traditional practices to the alternatives.

The technical community within a project will be the key campaigners for the new technologies introduced. Changing the mindset of this technical community from the conventional technologies they are accustomed to will in itself be challenging. Exposure and training will be necessary to establish their confidence in new technologies. Incentives in the form of career/training opportunities based on their commitment, too, will encourage them.

Introducing alternative technologies is thus a time-consuming task, which sometimes even extends beyond a project period. From a national point of view, though a project may yield limited results through such efforts, those efforts will not go to waste in the long run. The spill-over benefits will bring about a shift of the local construction industry, from harmful, inefficient conventions to eco-friendly, efficient alternatives.

UN-Habitat, with its mandate to promote socially and environmentally sustainable towns and cities, with the goal of providing adequate shelter for all, has undertaken the challenge of fulfilling the permanent shelter needs of IDPs in Sri Lanka, together with a paradigm shift in the technology in order to be more environmentally responsive.

Acknowledgements

The co-authors wish to thank UN-Habitat and the organisers of the conference Restoring communities through HOD reconstruction: from post-emergency to development for the opportunity given to us to write this paper and present it in the conference. We also express our sincere gratitude to Ms Aziza Yoozuf and Mr S. Arumainathan, whose guidance helped us a lot. Our sincere thanks also go to Mr M. S. M. Aleem, the other engineers and the rest of the technical staff, including community mobilisers of UN-Habitat who contributed through providing valuable information.

Figure 127—EU-funded model house built with the assistance of UN-Habitat using interlocking CSEB in Mullaitivu District (Photo: Jaime Royo-Olid, EU 2016).



17. Building with earth and sustainable resource

management: best-practice principles for a people's material suitable for Sri Lanka

Lara K. Davis, Architect, Masonry Specialist, Co-Director of the Auroville Earth Institute (AVEI), Unesco Chair for Earthen Architecture

Introduction

Reflecting on the success and promise of owner-driven or 'people's processes' in housing-reconstruction in north and north-east Sri Lanka, there remain several challenges to meet the demand for housing and other livelihood needs of stakeholders. Among those identified at the 2014 conference on 'Restoring communities through homeowner-driven reconstruction' are the following: (1) to better balance investments in housing reconstruction with broader development needs; (2) to advocate for more ecologically sustainable building technologies; (3) to secure stronger supply chains for affordable resources for construction; (4) to increase the percentage of investment share in the local economy and livelihoods of people; and (5) to improve the financial literacy and security of stakeholders.

This paper argues for the use of earth substrate (as opposed to top-soil or sand cement blocks) for building material to address some of the above challenges with a focus on resource availability. The paper presents best-practice principles in sustainable development with earth as a building material. These evaluate the entire context of natural resource and land-management concerns. The paper includes case-study examples of local-resource management with earth relevant to the context of reconstruction in Sri Lanka. The aim is to demonstrate the essential link between the natural and the socio-economic resources of communities, and to show that by investing in sustainable construction with locally-sourced materials, the logical outcome is a greater investment in local livelihoods.

Natural-resource management

Scarcity & over-quarrying

Unsustainable development practices are one of the greatest challenges globally today in resource-constrained contexts, and this includes reconstruction in Sri Lanka (Ganepola, 2017). All materials from the natural environment can be extracted exploitatively, leading to uncontrolled depletion of natural resources (see figure below). This is particularly a risk in post-disaster and post-conflict contexts, in which sudden, high-volume demand, weak



Figure 128—Uncontrolled depletion and over-quarrying, Tamanrasset, Algeria. (Photo: Lara Davis)

supply chains and unstable market forces make it difficult to mobilise mass quantities of resources for reconstruction efforts.

There is a direct link between ecological sustainability, resource security and the impact on people's livelihoods. Unplanned quarrying patterns can lead to environmental stress, material shortage and scarcity. Increasing scarcity, in turn, can lead to rapid inflation of material prices and even less sustainable quarrying patterns (e.g. illegal materials trade), which impact affordability, accessibility and livelihoods. Unstable resource availability in the market also tends to cause a loss of livelihoods.

In one example in Tamil Nadu, the singular emphasis on concrete and country fired brick technologies for *pukka* housing (a Tamil slang term meaning 'what is desired') has led to a heavy reliance on cement and sand for construction. As a result, sand shortages have become commonplace and are accompanied by high inflation of sand prices in the market (approximately 200 % in 3 years). This has ultimately led to an illegal sand trade and consequently a state-wide ban on the transportation of sand. Some companies have even begun to illegally quarry sand from sea; this is a completely unacceptable practice for construction, which has dramatically reduced the quality and

lifetime of local buildings and infrastructure. This limited-supply/high-demand-driven inflation disproportionately affects those most in need of 'affordable' housing and those with livelihoods in the construction sector.

In another example from the country fired brick (CFB) industry in Tamil Nadu and Pondicherry, material and fuel resources are very poorly managed for the production of CFBs. This is foremost because this industry is a heavy consumer of valuable and scarce resources (e.g. topsoil and wood), and secondly because of challenges arising from market-force dynamics.

On account of the unavailability of pure clay deposits and quarries in this area, topsoil is stripped to produce CFB. Such use of agricultural soils for development purposes is a highly unsustainable and poor land-management practice. Agricultural soils are among the world's most significant, non-renewable geo-resources, with 24 billion metric tons of fertile soil disappearing each year (UNCCD, 2013). The use of agricultural soils for development purposes is one of the major factors in loss of arable soils and desertification globally. In the Indian sub-continent, this trend is more pronounced than elsewhere in the world (USDA-NRCS).

Additionally, wood is burned in large quantities for firing CFB, contributing to chronic pressure of deforestation. In the past, 100 metric tons of wood were burnt to produce 100 000 fired bricks; however, presently, only 50 metric tons of wood are burnt to produce 100 000 fired bricks (see figure below) (AVEI, 2013). This is partly due to reforms in kiln-firing methods, and partly to supply and demand related constraints.

The over-extraction of these geo-resources has a long-term and progressive impact on the climate and people's livelihoods. We have seen already that with scarcity of these raw materials comes fluctuating market rates of building materials. People who are vulnerable to poverty, conflict, and displacement are also highly vulnerable to resource scarcity, climate change and natural disaster. Resource loss such as soil depletion, erosion and desertification result in compromised food security, and '74 % of the poor (42 % of the very and 32 % of the moderately poor) are directly affected by land degradation globally' (UNCCD, 2013). Resource scarcity impacts food security, water security (Abayawardana, 2002) and other matters critical for livelihoods including building materials (e.g. forested areas for timber, rivers for sands, farmland for fired brick, etc.).

In Sri Lanka, cement is mainly imported and river sand which is suitable for construction is scarce. There has also been progressive deforestation of jungles for timber in recent years (Gates, 1999). Stakeholders in reconstruction in the north and north-east such as S. Sivakunalan (2014) found that, 'It is difficult to get the raw materials. Sand and other raw materials have gone up in price.' The resulting inflation has made these basic construction materials unaffordable for vulnerable people. As a consequence, stakeholders are taking out higher loans from banks and shouldering the burden of



Figure 129—CFB industry in Pondicherry, Tamil Nadu: No management of material and fuel resources (Photo: Satprem Maini)

financial debt. The availability of resources affects the ability to rebuild, the cost of rebuilding and the livelihoods of people which can be sustained through reconstruction.

There is an urgent need for sustainable, resource-conscious planning for reconstruction efforts for the:

- efficient and economical use of locally-available resources to meet housing demand;
- use of building technologies which judiciously utilise those local resources;
- strengthened local supply chains from quarry to factory to house;
- prevention of over-quarrying, scarcity, market instability and environmental threats.

Soil as a building material

It stands to reason that the building technology advocated by implementing agencies for reconstruction plays a critical role in resource consumption insofar as the dominant technology determines which resources are most in demand for construction. Although a wide range of potential building systems have been considered for post-tsunami and post-conflict reconstruction efforts in Sri Lanka, it is safe to say that most buildings have been built with concrete block (Wijeratne, 2008) (UNHSP, 2012) (UNHSP, 2013). Counter to this mainstream current of housing, earthen building technologies are highly favourable from the standpoint of affordable local materials. Soil is the cheapest and most abundant material worldwide (i.e. a wide range of locally available soils can be adapted

for construction purposes). This makes it affordable and accessible for stakeholders and vulnerable populations in post-conflict contexts like in north and north-east Sri Lanka.



Figure 130—No resource management or rehabilitation plan before extraction in Pondicherry, India (Photo: Satprem Maini)

While in Sri Lanka soil prices can be artificially inflated by contracting companies (partially due to increased demand from large road-building projects) and while there are many central-government restrictions in the transportation of soils, on-site extraction is very much accessible to local stakeholders.

Yet even earth can be unsustainably exploited as a building material. If there is no resource management or rehabilitation plan before extraction, earth — like any other material — can be mined in such a manner that excavation pits become sources of land degradation. Unplanned quarrying can contribute to deforestation, soil erosion and loss of soil fertility, landslides and waste dumps, like the examples shown here from the Pondicherry area (see figure above) or in the forested areas of Mullaitivu, Sri Lanka. Extreme mismanagement of resources can create ecological disasters, such as at these large quarries which either have no rehabilitation plans or no governmental oversight to

enforce rehabilitation by contracted excavation companies. Best-practice management of earth resources will be addressed in detail in the following sections.

Benefits & energy efficiency of earthen construction

Raw earth as building material requires little energy for extraction and production, has the lowest environmental impact of any material and is 100 % recyclable. Earthen construction mitigates deforestation (e.g. it does not require firing) and does not require agricultural soils that are precious for food production. It also minimises usage of sand, requiring little to none at all for blocks if a good soil is selected, much less sand for earthen mortars than conventional cement sand mortars and no sand for plastering (i.e. CSEB walls can be left exposed or painted with earth paints).

Modern stabilised earth technologies require only a fraction of the carbon emissions and embodied energy of conventional building ones. CSEBs, the eco-friendly alternative to CFBs, is composed of a mix of soil, sand and water, which is stabilised with ~ 5 % cement and compressed manually. When CSEB is produced from soil excavated on-site, its embodied energy is 10.7 times less than CFB, and its carbon emissions are 12.5 times less than CFB (see figure below). This is partially due to the fact that wood combustion in CFB production accounts for 79.2 metric tons of CO₂ for every 50 metric

Figure 131—Energy efficiency of CSEBs vs CFBs (Photo credits: Satprem Maini)

ENERGY EFFICIENCY OF CSEB vs COUNTRY FIRED BRICK

Embodied energy per m ³ material		Carbon emission per m ³ of material	
➤ CSEB	= 572 MJ per m ³	➤ CSEB	= 51.5 Kg CO ₂ /m ³
➤ Wire cut bricks	= 2,247 MJ per m ³	➤ Wire cut bricks	= 202 Kg CO ₂ /m ³
➤ CFB	= 6,122 MJ per m ³	➤ CFB	= 643 Kg CO ₂ /m ³

10.7 TIMES LESS EMBODIED ENERGY THAN COUNTRY FIRED BRICKS

12.5 TIMES LESS EMISSIONS THAN COUNTRY FIRED BRICKS

Wood combustion:

- ⇒ Burning 1 kg of wood emits 1.6 kg of CO₂
- ⇒ Burning 50 Tons of wood emits 79.2 tons of CO₂



tons of wood burned. Comparing the emissions of all available masonry blocks and bricks on the market, CSEB ranks as the least carbon emitting of them all (see figure below).

One of the great benefits of earthen construction, however, is its potential for local extraction and use. Earth can be locally mined from soil on the construction site to reduce transportation fuel, associated costs and the environmental impact of building (see figure below).

By using abundantly available local materials, local value chains can be established to link material resources and human resources. CSEB can generate closed loops in local resource management, which invest in local economies, value added chains, employment and livelihoods. Small on-site excavations can supplement primary supply/demand chains (e.g. quarries) and reduce the use of imported industrial materials for conventional building methods, which contribute heavily to the import market and relatively little to the local economy. As a labour-intensive construction method, approximately 60 % of construction cost is invested into livelihoods, as opposed to industrial materials and technologies which tend to contribute closer to 40 %. Therefore, the share of CSEB’s contribution to the local economy is remarkably high.

Figure 132—Energy efficiency of earth: Local/on-site extraction and use (Photo: Lara Davis)

ENERGY EFFICIENCY OF CSEB

TRANSPORTATION OF MATERIALS					
Items	Details	Country	KgCO ₂	Energy Quantity / Unit	
Diesel consumption for truck on site (8 m ³ / 12Tons)	For moving materials on site ~500 m = 15 litres / day 8h	India	4.967	KgCO ₂ /hour	67.13 MJ/h
Diesel consumption for truck on road (8 m ³ / 12Tons)	For road driving with 12 Tons = 3 Km / litre	India	0.883	KgCO ₂ /Km	11.93 MJ/Km
Diesel consumption for excavator	JCB excavator = 6 Litres / hour	India	15.895	KgCO ₂ /hour	214.80 MJ/h

LOCAL/ ON-SITE EXTRACTION & USE:

- ⇒ Reduces carbon footprint
- ⇒ Reduces transport costs
- ⇒ Increases accessibility for low income tenants
- ⇒ Invests in local economies and value chains
- ⇒ Produces employment & livelihoods



Because soil can be excavated in a decentralised manner from small quarries on-site, it is also possible to sustainably manage resources, by reducing pressure on large-scale quarries and opportunistically improving the land ecology around the building site (see 'The Auroville Earth Institute's approach') ⁽⁹¹⁾.

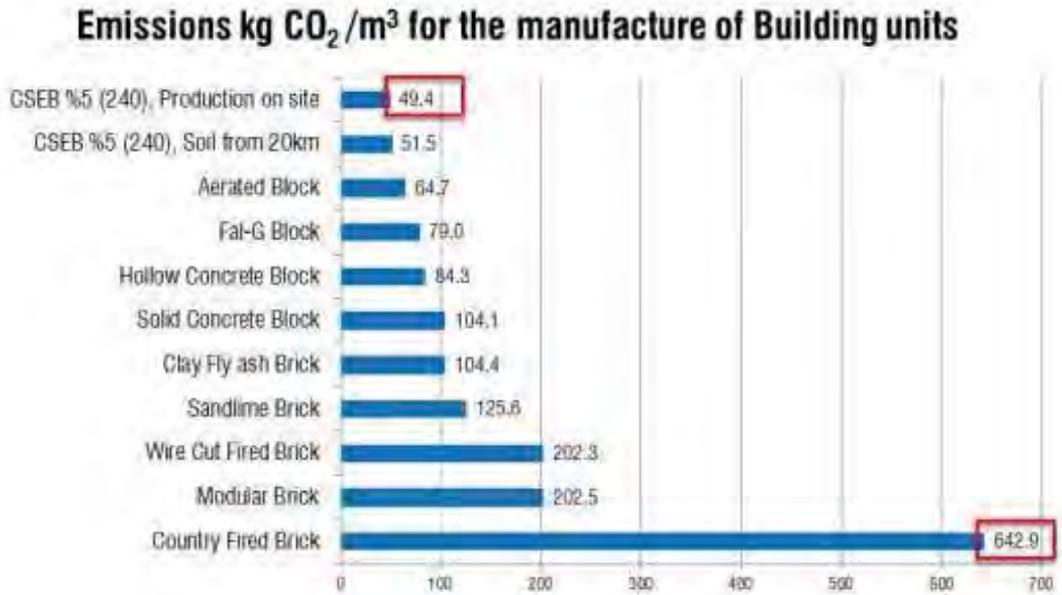


Figure 133—Carbon emissions for the manufacture of building units (Photo: Satprem Maïni)

⁽⁹¹⁾ For more information see <http://www.earth-auroville.com/>

Examples of sustainable construction & land management practices

Island context case study — Mayotte

One example of local resource management with earth and CSEB which is relevant to the context of Sri Lanka is the housing programme launched in Mayotte (1978-1979). This case study demonstrates a successful strategy for use of limited resources in island contexts. Islands are particularly interesting case studies to evaluate sustainable resource management for construction because there are often a limited number and quantity of natural resources available on the island and because the import and transportation of materials is often prohibitively expensive (particularly for economically vulnerable populations). Accordingly, the objectives of the Mayotte housing programme were to improve the housing stock of the island's precarious traditional housing with self-help building capacity, local craft and maximum use of locally available resources as a governing principle (see figure below) (the International Centre for Earthen architecture of the National Superior School of Architecture of Grenoble (CRATERRE-ENSAG), 2010, p.1).

Figure 134—Island case study: Mayotte (Photos: CRATERRE ENSAG)



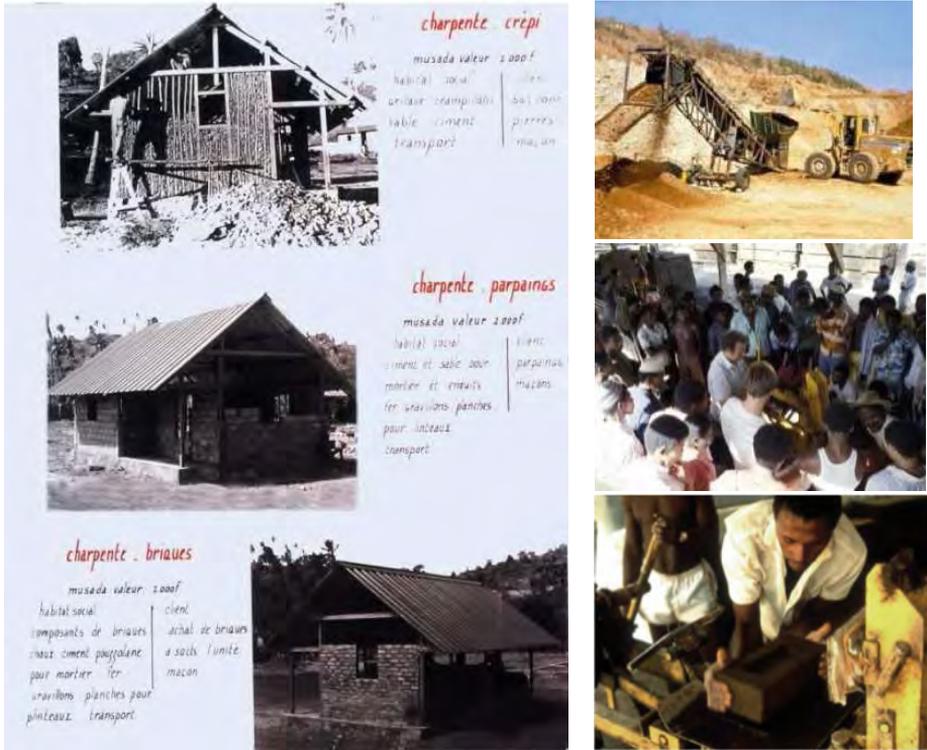


Figure 135—Housing programme launched in Mayotte (1978-1979) (Source: CRATERRE ENSAG)

The programme selected construction technologies which could flexibly adapt to the locally available materials, existing human skills and economic constraints, and which could be used to address local needs and aspirations, including improved living standards and livelihoods. CSEB was selected as the primary building material (see figure above). As an integrated development model, the housing programme in Mayotte demonstrated that investment in certain essential areas is requisite for a stable construction economy with earthen building materials (CRATERRE ENSAG, 2010), including the following.

- Ethnological housing surveys (evaluating cultures, habits, customs, needs and means).
- Surveys of available raw building materials.
- Techno-economic feasibility studies.
- Research and development for improvement of raw materials.
- Operational structures with frameworks for action.
- Cooperative structures.
- Training programmes addressing local know-how.
- Structured financing programmes (including in-kind contribution such as labour).
- Context-specific regulations and quality standards.
- Immediate practical building models



Figure 136—Technical report on load bearing technology for housing in Mayotte (Source: CRATERRE ENSAG)

A wide range of social housing, civic and municipal buildings were built in Mayotte, which gave a broader relevance and increased the potential for uptake of this technology for affordable housing (see figures below). According to a survey from 2000, after 20 years of development, a total of ~ 12 500 houses had been built with this technology in Mayotte.

Figure 137—Participation of local stakeholders, and study of a housing model implemented
(Photo: CRAterre ENSAG & Taxil)



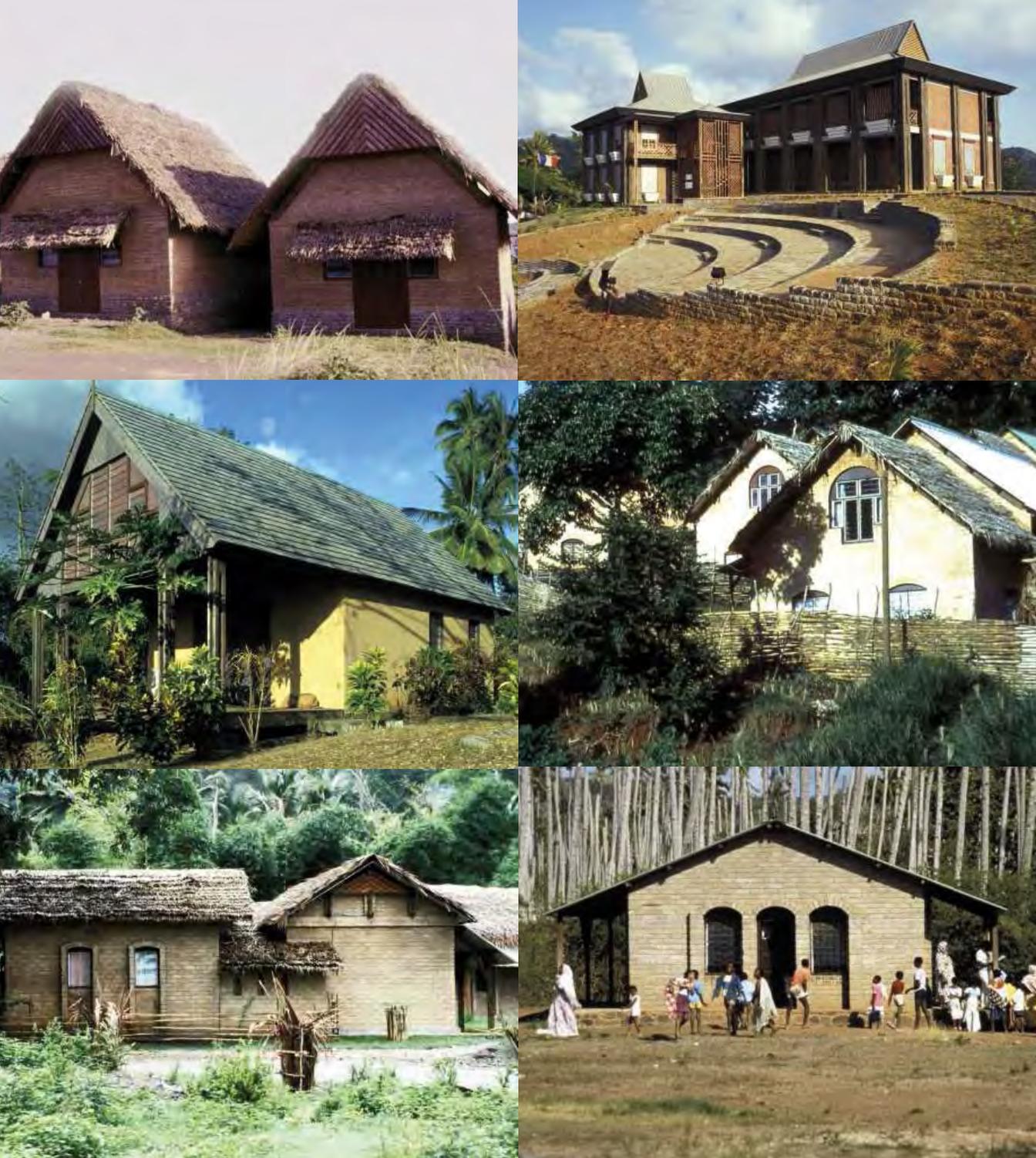


Figure 138—Range of social housing and municipal buildings built in Mayotte
(Photo: CRAterre ENSAG)

Sri Lankan vernacular examples of proper management of earth resources

Examples of sustainably integrated development planning in island contexts can also be found in Sri Lanka. Vernacular building traditions in general demonstrate exemplary patterns of sustainable, local resource management, and there are many such examples in traditional construction in Sri Lanka.

According to Dr Ranjith Dayaratne, vernacular local resource management in Sri Lanka has included principles of simplicity and thrift, the renewable use of natural materials, the use of raw earth as a primary building material (wattle & daub, mud, cow dung, with lime plasters) (see figures below) and supplementary use of timber (including use of all products with attention to cultivation and reuse). Further, rural settlement patterns around artificial lakes have increased water security while making excavated material available for use in construction. Social and cultural ceremonies have also ensured traditions of building maintenance. (Dayaratne, 2010, p.23-24)



Figure 139—Vernacular construction examples of local resource management in Sri Lanka
(Photo: unknown))

Six different earthen techniques were used in vernacular Sri Lankan construction: wattle and daub (*varichchi*), cob (*undi*), adobe (*mordegall*), rammed earth (*thappa bammi*), stone walling in mud (*sakka bammi*) and laterite block construction (*cabook*) (de Vos, 1977) (de Vos, 1983). While there are a number of very valid and important factors that make the social acceptance of earthen technologies a challenge in rural areas, particularly for HOD housing programmes (Ganepola, 2017), there is nevertheless a strong link between modern earth technologies and traditional knowledge in Sri Lanka.

Yet, even as early as 1977, Ashley de Vos has been pointing out that banking institutions have no policies on vernacular earth-based building materials for housing loans, often discriminating against them on account of their categorisation as ‘impermanent’ (de Vos, 1977, p.3-4). CSEB is now generally considered to be in the category of ‘permanent’ building materials in Sri Lanka, and the publication of modern building codes for CSEB in Sri Lanka has assisted in mainstreaming this technology (Sri Lanka Standards Institution, 2009).

Learning from the vernacular

These same principles of ‘simplicity and thrift’ can be used to develop more sustainable, contemporary land practices which best utilise resources — even for conventional construction methods. Revisiting the example of CFB production in Pondicherry, it is evident that there are traditional land practices which can ensure more sustainable resource management and livelihoods for conventional CFB production. After topsoil is excavated for the production of fired bricks, fields can be flooded and the excavation can be converted into rice paddies — which aids to more quickly replenish topsoil (see Figure 84 below).

Land management practices such as these (in which long-term economic and resource stability take precedence over short-term economic gain) can ensure that resources are not depleted — that livelihoods are sustained. They can improve the resilience of people to the many factors affecting vulnerable populations: poverty, conflict, displacement, resource scarcity, climate change and natural disaster.



Figure 140—Sustainable CFB production. Excavation for the production of bricks, Flooding of fields and excavation converted into agricultural rice fields. (Photo: Satprem Maini)

The Auroville Earth Institute's approach to earth resource management & land conservation

Earthen buildings and infrastructure can be designed together with sustainable land-management practices to respond sensitively to the local conditions. Rather than adopting only a strategy of 'reduced environmental impact' of buildings, the aim can be a net gain for the health and resilience of the local ecology (and by association the local economy).

At the AVEI, soil excavation is a planned part of sustainable land management practice. We encourage best practice in building with earth, which takes the following parameters into consideration.

- (1) Site plans are designed in accordance with climatic aspects and natural resource availability.
- (2) Soil needs are defined for the project in advance.
- (3) It is determined if the overall development plan can benefit from the presence of an excavation.
- (4) The suitability of soil from the site is evaluated.
- (5) Attempts are made to match the soil requirement for building with the available resources.
- (6) A rehabilitation plan for the quarry is defined according to the broader development needs.
- (7) Excavations are planned according to requirements for block production.
- (8) Topsoil is conserved for later use in the landscape.
- (9) After construction, quarries are transformed into planned, sustainable landscape features.

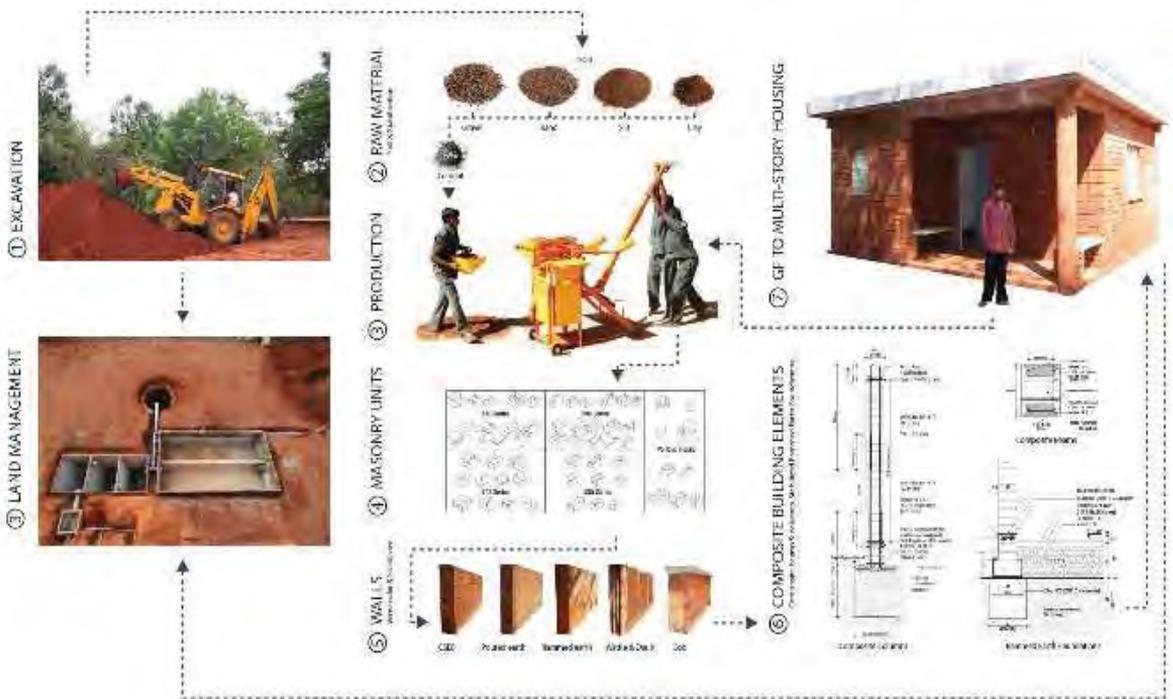


Figure 141—Full resource management cycle. Closing the loop between extraction and use (natural resources, land management, housing construction, homeowner participation) (Photo: Lara Davis)

Best practice in sustainable development with earth as a building material evaluates the entire context of natural resource and land management concerns, to close the loop between resource extraction and use (see figure below). Excavated soil can be used to provide earth for construction purposes, while the excavation itself can be used to address a wider range of concerns related to development needs and ecological resilience. For example, excavation pits can be transformed into rainwater harvesting or percolation systems, biological wastewater treatment systems, or even basement floors for increased density multi-storey construction.

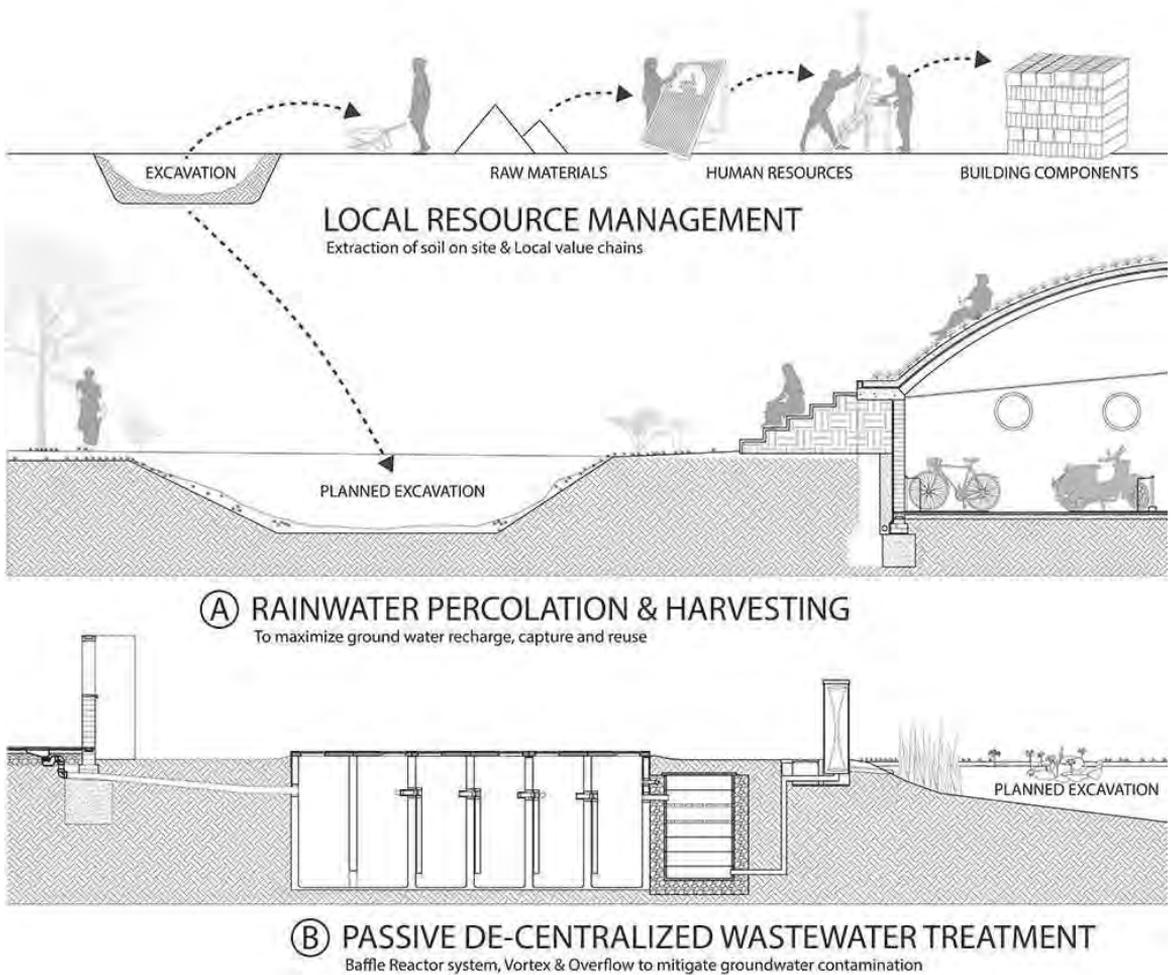


Figure 142—Extraction of soil for construction and reuse of excavation pits, (Source: AVEI School)

Soil excavations can be used for rainwater harvesting and percolation systems in arid, water-scarce or flood-prone regions (e.g. in the north and the north-east of Sri Lanka), to increase water security and to answer to the problem of reduced water table capacity and seawater intrusion in coastal areas. Roof rainwater can be harvested in underground tanks and used for toilets, construction needs and green spaces. Surface rainwater can be harvested in landscaped percolation pits to maximise recharge of the water table. Large rainwater-harvesting bodies can be used to store overflow of rainwater-harvesting systems, like those in vernacular village-dwelling patterns in Sri Lanka. Such ponds can be linked to livelihood development — used for small fisheries and to control mosquito populations. Soil excavations can also be used for sanitation infrastructure (e.g. biological wastewater treatment or baffle reactor systems) (see figures below) to address challenges of sanitation and to reduce groundwater and pond contamination from septic systems, which affect fisheries and other livelihoods. Soil excavations can also be used as the basement floor for high density, multi-storey constructions (see figures below), as increased-density and shared-owner models are one strategy to reduce construction and infrastructure costs.



⇒ ~60 m³ of earth used for building

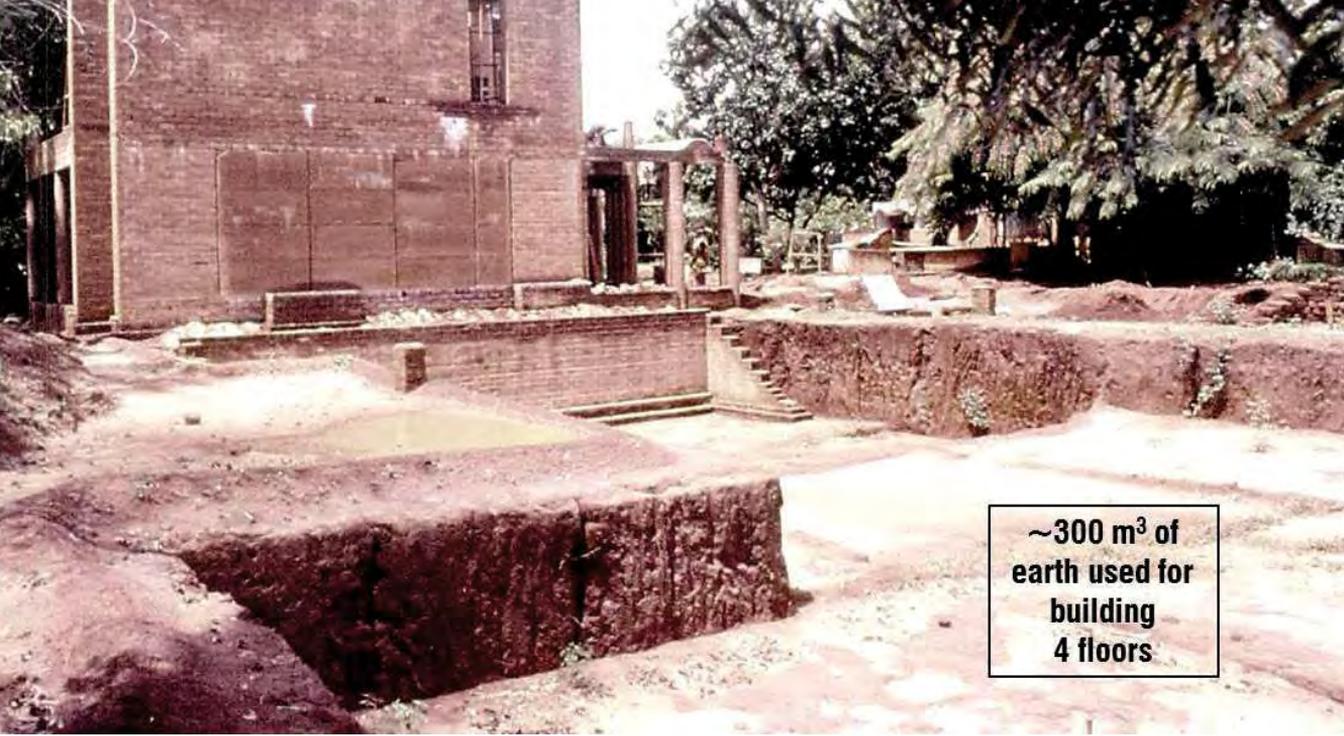


Figure 143—Three examples of resource management and land conservation at the AVEI: a. rainwater catchment systems, b. wastewater treatment system, and c. basement floor for multistorey construction. (Photo: Satprem Maini)



Conclusion

Closing the loop between extraction and use

Through various examples, this paper has attempted to demonstrate how sustainable development with earth as a building material, in particular CSEBs, can invest in livelihoods and improve the local ecology without over-exploiting natural materials.

When looking at case studies of construction with conventional building techniques (e.g. concrete block or fired brick), it is clear that the economics of the raw materials present a real challenge in Sri Lanka. The high demand and low availability of resources for people has been linked directly to sharp resource inflation. Additionally, by promoting concrete block technology, a high percentage of invested funds go towards imported materials, rather than being invested in the local economy.

One of the best ways to assist stakeholders to manage the rising cost of raw materials and indebtedness is to advocate more for techniques which utilise local materials and contribution most to the local economy. Existing local industries, such as CFBs, should be supported where they exist; however, modern earthen construction (techniques such as CSEB) can be very useful supplementing technologies.

Other cases presented, including the housing programme in Mayotte, examples of vernacular Sri Lankan construction and examples from the AVEI, demonstrate that it is possible to pair sustainable local resource management and sustainable local livelihood production through the use of earth as a building material.

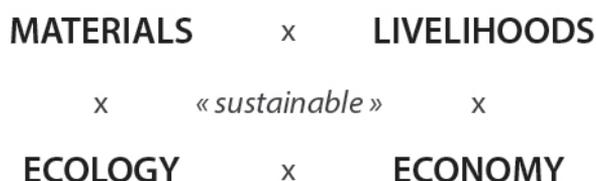
However, these examples provoke important strategic questions: Should central or local governance be responsible for regulating resources (i.e. in a top-down control model)? Or is it possible, with guidance from experts and implementing partners, that the 'people's process' might also play a role in developing effective, intelligent and self-governing methods for the management and use of local natural resources? Can people be at the centre of the construction processes *and* resource management, to overcome the hurdles of modern financial institutions and market forces (e.g. supply and demand) in the building industry?

Lalith Lankatilleke has made a convincing argument for this. In the past, 'people had established certain norms, standards and a mutual understanding of the community to create these settlements.' In the present, '... examples have also demonstrated that people, though poor, have the ability to mobilise resources to add to their house,' (Lankatilleke, 2010, p.63 & p.68). In other words, people are resourceful and have access to resources.

The complex traditional systems of work organisation in pre-colonial India and Sri Lanka carefully regulated the patronage of workers, the quality of work and rates and compensation. These guild systems ensured that prices were moderate, market forces were equitable and that local builders and craftspeople were protected from the

competition of cheap imported goods (Coomaraswamy, 1909, p.37-42). Informal cooperative systems (e.g. like the women's cooperative bank) could be used as a model for a 'people's approach' to materials and resource management, to link people to a local supply chain with a capacity for communal savings. Even bulk purchasing power can give agency and leverage to a community with the will to build something.

However, even if such a radical step cannot be taken, it is still crucial for housing-reconstruction programmes (especially HOD programmes) to acknowledge the essential links between the natural resources and social resources of communities, sustainable ecologies and economies, and sustainable materials use and livelihood production.



Acknowledgements

My sincere thanks go to Satprem Maini; key associates from the restoring communities through HOD-reconstruction conference, especially Jaime Royo-Olid, Kirtee Shah, Shailaja Fennell, Sandra d'Urzo, Ravin Ponniah and Matthew Barac; UN-Habitat and all the organisers; and all people whose important work has been referenced in this article.

References

- Abayawardana, S., & Hussain, I. (2002). *Water, health and poverty linkages: A case study from Sri Lanka*.
- Satprem M., Varun T., AVEI (2009/2013). *Embodied energy of various materials and technologies, Calculations*. (Data on CFB, Pondicherry, India). Auroville, India: AVEI.
- Coomaraswamy, A. K., & Moore, A. C. (1909). *The Indian Craftsman*. Probsthain & Company.
- CRATerre ENSAG (n.d.). *World Project Case Studies: Mayotte as a Development Model — 20 years of Experience with CSEB for Social Housing*. Online at http://www.earth-auroville.com/mayotte_as_development_model_en.php (accessed 05/03/2015).
- Dayaratne, R. (2010). *Reinventing traditional technologies for sustainability: contemporary earth architecture of Sri Lanka*. *Journal of Green building*. 5(4), 23-33.
- de Vos, A. (1977). *Mud as a perfectly viable building material*. The Sri Lanka Institute of Architects Seminar 'The Architect in National Development', October 1977.
- de Vos, A. (1983). *A survey of the painted mud viharas of Sri Lanka*. International Symposium and Training Workshop on the Conservation of Adobe, Lima, Peru, 10-22 September 1983.

- Ganepola, P. and Weerasoori, I. (2017). *Challenges in Introducing Alternative Technologies in Home Owner Driven Housing*. In *Building, Owning and Belonging: From Assisting Owner Driven Housing Reconstruction to co-production in Sri Lanka, India and Beyond*. European Union, UN-Habitat.
- Gates, P. (1999). *Down to earth building alternatives in Sri Lanka*.
- Lankatilleke, L. (2010). *The people's process: The viability of an international approach*. Building Back Better, 63. Ed. Lyons and Schilderman.
- Maini, S. (2000). *Développement de la filière terre au Sri Lanka: workshop et conférence*. Rapport de mission du 6 au 10 septembre 2000. Colombo, Sri Lanka.
- S. Sivakunalan (stakeholder from Akkaraayankulam Centre, Killinochchi) (2014). *Restoring communities through homeowner-driven reconstruction: from post-emergency to development*. 24th & 25th March 2014, Cinnamon Lakeside Hotel. Colombo: United Nations Human Settlements Programme (UN-Habitat).
- Sri Lanka Standards Institution (2009). *Sri Lanka standard, 1 328: 1. Specification for compressed stabilised earth blocks: part 1: requirements*. Colombo: Sri Lanka Standards Institution.
- Sri Lanka Standards Institution (2009). *Sri Lanka standard, 1 328: 2. Specification for compressed stabilised earth blocks: part 2: test methods*. Colombo: Sri Lanka Standards Institution.
- Sri Lanka Standards Institution (2009). *Sri Lanka standard, 1 328: 3. Specification for compressed stabilised earth blocks: part 3: guidelines on production, design and construction*. Colombo.
- Taxil, G., & Misse, A. (1999). *Mayotte: filière blocs de terre comprimée. Typologie des éléments et systèmes constructifs*. CRATerre-EAG.
- United Nations Convention to Combat Desertification (UNCCD, 2013) *Desertification Land Degradation & Drought (DLDD) — Some Global Facts & Figures*. Online at <https://sustainabledevelopment.un.org/content/documents/1803tstissuesdldd.pdf> (last accessed 08/07/2018).
- United Nations Human Settlements Programme (2012). *Indian housing project: construction guide 01*. Colombo: United Nations Human Settlements Programme (UN-Habitat).
- United Nations Human Settlements Programme (2013). *A home of our own: rebuilding houses in the North of Sri Lanka*. Nairobi: United Nations Human Settlements Programme (UN-Habitat).
- USDA (1999) *Risk of Human Induced Desertification map*. US Department of Agriculture, Natural Resources Conservation Service, Soil Survey Division, World Soil Resources. Washington, DC Online at http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/use/?cid=nrcs142p2_054004 (accessed 01/03/2015).
- Wijeratne, A., Ed. Namal Ralapanawe and Kruse, C.. (2008). *Towards sustainability: building practices in post-tsunami housing programmes in eastern Sri Lanka*. Tsunami Housing Support Project, and Deutsche Gesellschaft für Technische Zusammenarbeit Colombo: Karunaratne & Sons.



Figure 144—War-affected home owner works in new CSEB production plant funded by the EU implemented by Habitat for Humanity and World Vision (Photo: Jaime Royo-Olid, EU 2017)

18. Using compressed stabilised earth blocks: State of the art and its applications to owner-driven reconstruction in Sri Lanka

Satprem Maïni, architect, director of the Auroville Earth Institute (AVEI)

Introduction

This paper provides a basic introduction to the technology of compressed stabilised earth blocks (CSEBs). It aims to demonstrate the state of the art and the acceptance of this material and technique by governments and communities, and to show how CSEBs can be used to build economic, eco-friendly and sustainable habitats.

CSEB is a contemporary earth-construction technology which has been extensively researched, developed and implemented worldwide since the 1950s. The AVEI has emerged as a global leader in the research, promotion and dissemination of earthen building technologies, with a focus on CSEB.

There are many examples of community-led construction initiatives with CSEB technology, such as the reconstruction of the district of Kutch, Gujarat, India, which was severely affected by the 2001 earthquake, and the reconstruction of the east coast of Sri Lanka after the 2004 tsunami. This paper will present several of these cases, showing examples from the AVEI, to investigate how this material and technique may be appropriate for the development of the north and east Sri Lanka.

What is CSEB?

Technical characteristics

CSEBs are composed of a mix of soil, sand and a stabiliser (which is often 5 % cement). The mix is compressed, either with a manual or motorised press, and then cured for 28 days until the blocks come to full strength. CSEBs are not fired, thus they save tremendously on embodied energy and carbon emissions. This technology can be used to produce blocks for masonry walls, columns, composite elements and arches, vaults and domes. CSEB is a fully load-bearing structural material and has been used for buildings of up to four floors in Auroville, Tamil Nadu, India.

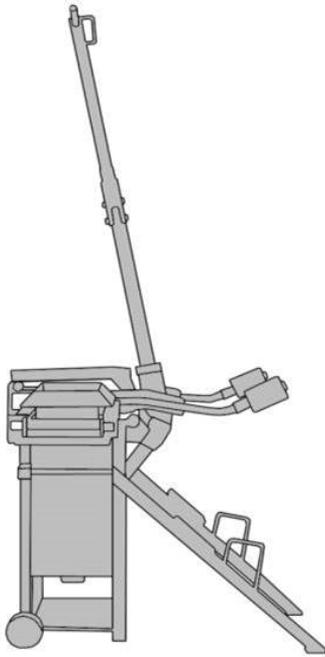
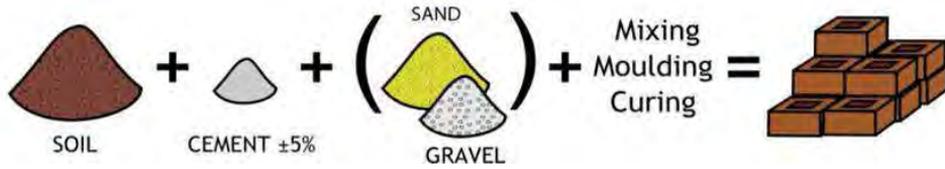


Figure 145—Schematic principle of CSEB
(Source: Satprem Maïni)

The AVEI has developed a full range of equipment to build with earth, called the Auram equipment. The Auram Press 3 000 is a manual machine with 18 interchangeable moulds, which allow for the production of about 70 different types of blocks. Research and development of block types has included solid blocks and hollow blocks for load-bearing masonry, hollow interlocking blocks for disaster resistance, special U-blocks for ring beams, round blocks for columns, *hourdi* blocks for floors, and a wide range of other special blocks.



Figure 146—CSEBs produced by the Auram Press 3000 (Photo: Lara Davis)

Strength of CSEBs

CSEBs are comparatively stronger than most load-bearing masonry blocks available on the market and can be used for multi-floor, load-bearing buildings and large-span structures. They have been used to build multi-storey buildings and large-span vaults (10.35 m span).

Crushing strength of CSEBs

The strength of CSEBs varies with the soil quality, the press characteristics, the percentage of cement stabilisation and the quality of workmanship in block production. It is essential that blocks are well cured for the full duration of 28 days after production (when cement stabilised). One can expect the following results for good quality blocks produced with the Auram Press 3 000 using a typical red soil found in Auroville.

- Dry crushing strength: 7-8 MPa.
- Wet crushing strength: 3-4 MPa (after 24-hour immersion).

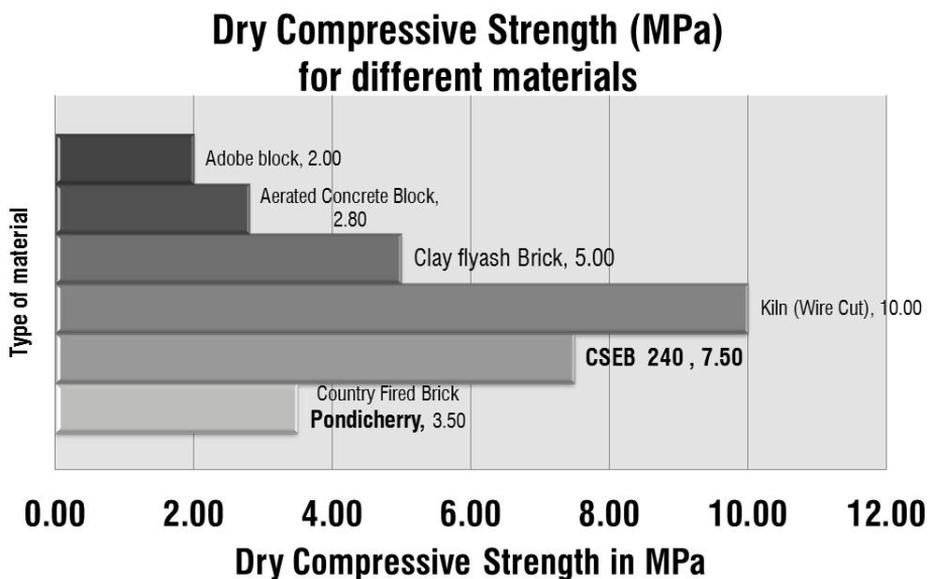


Figure 147—Dry Compressive Strength of various masonry blocks (Photo: Satprem Maïni)

Water resistance of CSEB

As CSEBs are stabilised with cement or lime, they are water resistant: the addition of only 5 % cement allows the blocks to maintain their resistance over time when exposed to rain. At the AVEI one sample block is displayed which has been immersed in water since 5 April 1995. After 20 years submerged in water this block is still in excellent condition.

A technology investing in livelihoods

CSEBs have the advantage that they can be produced locally — with local materials and local labour — in most parts of the world. This production can be led by people to aid in the endogenous development of their villages. As a labour-intensive technology, CSEB production creates jobs, allowing unskilled or unemployed people to learn a marketable skill, to gain employment and to actively participate in the construction of their houses and communities. As labour accounts for at least 40 to 45 % of the cost of the block and ~ 65 % of the cost of a CSEB building, a greater proportion of the cost of construction is invested into people’s livelihoods (as opposed to big building industries and import markets).



Figure 148—CSEB production with Auram Press 3 000 in Tanzania (Photo: Alberto Navarro)



Figure 149—CSEB production with Auram Press 3 000 in Kutch, Gujarat, India (Photo: Satprem Maïni)

Technologies with CSEB

Appropriate stabilised earth building techniques

The AVEI has developed a wide range of techniques based on CSEB and other stabilised earth technologies, including stabilised rammed earth foundations, composite basement and plinth beam, composite columns and composite beams and lintels. This research aims to make extensive use of raw earth as the main building material, thereby utilising a local resource for technologies that are cost-effective, energy saving, eco-friendly and sustainable. The main research and development is focused on minimising the use of steel, cement and reinforced cement concrete (RCC).

Stabilised rammed earth foundations

For this foundation technique, soil is excavated from a trench, mixed with sand and stabilised with an average of 5 % cement. The foundations are then rammed by hand directly into the trench excavation.



Figure 150—Mixing for a stabilised rammed earth foundation



Figure 151—Ramming stabilised rammed earth foundations (Photo: Satprem Maïni)

Composite basement and plinth beam

Stepped basements are built with CSEBs which have been stabilised with 5 % cement, and a plinth beam is cast into a U-shaped CSEB. This composite plinth beam acts additionally as a damp-proof course to prevent water from being drawn up into the masonry.



Figure 152—Composite plinth beam (Photo: Satprem Mañi)



Figure 153—Casting a composite plinth beam (Photo: Satprem Mañi)

Composite columns

Round, hollow CSEBs are reinforced with steel and cement concrete. Reinforcements vary with the column height and load on the columns, but the rod diameter cannot exceed 10 mm for the blocks 290 and 12 mm for the blocks 240.



Figure 154—Composite column 240, (Photo: Satprem Maini)



Figure 155—Composite column 290, (Photo: Satprem Maini)



Figure 156—Columns 240 & 290, (Photo: Satprem Māni)

Composite beams and lintels

U-shaped CSEBs are reinforced with steel cement concrete. Reinforcements vary with the span. The bottom part of the beam is precast in a reversed position on the ground. Once cured, it is lifted and the middle and top parts are built onto it *in situ*. The blocks are used as a lost shuttering, but they also aid in the compressive strength of the beam.



Figure 157—Composite lintel-single height, (Photo: Satprem Mañi)



Figure 158—Composite lintel-double height, (Photo: Satprem Maini)



Figure 159—Composite lintel triple height, (Photo: Satprem Maini)

Disaster resistance

The AVEI has also developed technologies for disaster resistance, based on reinforced masonry with hollow interlocking CSEBs. Masonry is reinforced at critical junctions in the building with vertical bars and reinforced-concrete cores, as well as at critical levels of the building with horizontally reinforced ring beams

Earthquake-resistant buildings

The technology developed by the AVEI has been used extensively in Gujarat after the 2001 Kutch Earthquake, where several thousand houses were built for post-earthquake rehabilitation. The technology has been approved by the government of Gujarat for the rehabilitation after the earthquake and by the government of Iran for the rehabilitation after the 2004 earthquake of Bam, Iran. Both countries have allowed buildings up to two floors with this building system.

The 'Aum House', built in Gujarat after the earthquake of 2001, was precast in Auroville in about 3 weeks, moved in trucks to Gujarat over 2 500 km and built in 62 hours with a 20-person team. The construction of this house was the starting point of rehabilitation efforts with CSEB after the earthquake.



Figure 160—Reinforced masonry with hollow interlocking CSEB (Photo: Satprem Maïni)



Figure 161—‘Aum House’ built in 62 hours, Gujarat, India (Photo: Satprem Maini)

Tsunami-resistant buildings

The technology developed by the AVEI for earthquake resistance has been further adapted for tsunami-resistant buildings. The technology has been approved by the government of Tamil Nadu for the rehabilitation of the zones affected by the 2004 tsunami.



Figure 162—Tsunami house, Anumandhai, India. First prize of a national contest (Photo: Satprem Maini)



Figure 163—Disaster resistant buildings, TN, India Work for UNDP, after the 2004 tsunami (Photo: Satprem Maini)

Various applications

Public buildings

CSEBs have been used on all continents since the 1950s. This versatile technology can be adapted to a wide range of climatic and cultural contexts to build all types of buildings, including public buildings (e.g. community centres, schools, multipurpose halls) and housing (e.g. from single-family dwellings to multi-storey apartment buildings). The following examples have been built by the AVEI.

Visitors centre, Auroville (approx. 1 200 m²)

The Auroville visitor centre was built (1989-1992) as a demonstration of appropriate building technologies and CSEB technology. It is covered with 22 domes on pendentives, which were built using the Nubian vaulting technique. The building was granted the '1992 Hassan Fathy international award for architecture for the poor'.



Figure 164—Visitor's Centre, Auroville, India (Photo credits: Satprem Maini)

Shakti Vihar school, Pondicherry (approx. 2 200 m²)

This school was built (1992-1994) in Pondicherry for the NGO Volontariat, which works for the poorest of the poor in Pondicherry. This day and night school was built for 700 children and is presently being used for the education of ~ 2 000 children.



Figure 165—Shakti Vihar school, Pondicherry, India (Photo: Satprem Maïni)

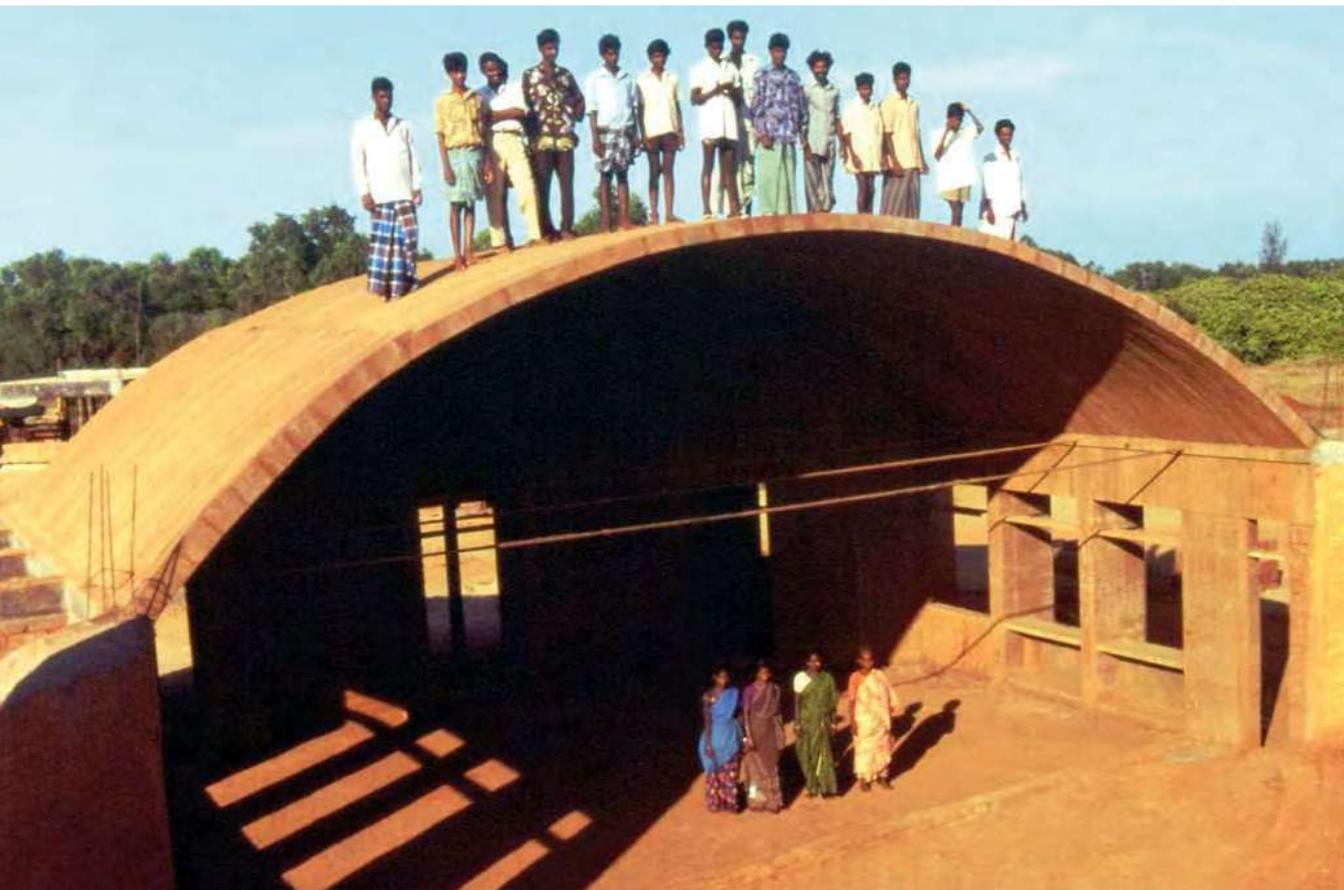
Marakkanam school and community centre

This school and community centre were built for the International Network for Development and Peace (INDP) in 2005 and 2006, with CSEB walls and a large central dome.



Figure 167—Marakkanam School & Community centre, Marakkanam, India (Photo: Satprem Māini)

Figure 166—Segmental vault at Deepanam School, Auroville, India (Photo: Satprem Māini)



Segmental vault at Deepanam School, Auroville

Deepanam School was built by the AVEI in Auroville in 1995. It is comprised of six classrooms, various multipurpose rooms and a large auditorium covered by a vault with a 10.35 m span, 2.25 m rise and varying thickness from 14-17.7 cm. This vault of ~ 30 metric tons was built in 3 weeks by four masons without any formwork and using the free-spanning technique developed by the AVEI.

Al Medy Mosque, Riyadh, Saudi Arabia

This mosque was built in the heart of Riyadh for the Arriyadh development authority in 2004. The mosque of 457 m² with a minaret of 18.05 m was built in 7 weeks. About 160 000 CSEBs were laid by ~ 75 masons and ~ 150 workers. It was granted the '2010 award for urban heritage', Al-Turath Foundation, Saudi Arabia, and was the finalist for the Aga Khan award for architecture (2007).

Figure 168—Al Medy Mosque, Riyadh, Saudi Arabia (Photo: Satprem Maini)



Apartment buildings

Vikas community — 13 apartments on four floors

The Vikas community was built by the AVEI in Auroville (1991-1998). The third building of Vikas was built with four floors (basement floor plus three floors). The uniqueness of the building lies in its impressive height (as a fully load-bearing structure with no reinforced frame or columns) and also in the co-planning of the landscape and building for best-practice resource management. Soil taken from the basement excavation was used to build four floors, and the landscape was developed for rainwater harvesting and water-table recharge. Vikas was the finalist for the '2000 world habitat award' (BSHF, United Kingdom).

Figure 169—Vikas Community, Auroville, India (Photo: Satprem Maini)



Rural community development
Village development in South Africa

A development project was set up in South Africa by Anyway Solutions to build a village of 4 000 houses with community participation. The AVEI trained a South African team to build the first model house of 32 m². All components were prefabricated by people trained by Anyway Solutions and the house was built in 12 days with four masons and eight workers who were undergoing training.



Figure 170—Model house, Simunye, South Africa (Photo: Local South African participant)

Jantanagar primary school in Nepal

The NGO 'BASE' from Nepal set up a project of school buildings to be built with community participation. The first school was built in Jantanagar with village participation. The AVEI designed a disaster-resistant and climate-responsive building, and trained a technician and an engineer from Nepal in Auroville, who then returned to the village to train villagers and masons. Precasting was accomplished in 2-3 months and the school of 100 m² was built in 20 days with 13 paid masons and about 50 villagers. After this, the local NGO and the trained masons built 3 or 4 more schools in other villages, with also village participation.



Figure 171—Primary School, Jantanagar, Nepal (Photo: Sonam Wangchuk)

Case study on community-driven reconstruction: Gujarat rehabilitation

Following the massive earthquake which devastated huge areas of Gujarat in January 2001, the AVEI was approached by NGOs and one governmental organisation (GO) to assist in the rehabilitation work of the affected areas. Seventy-five Auram Presses 3 000 with interlocking moulds were supplied to various NGOs.

After the construction of the demonstration house 'Aum House' in Khavda (see section above on disaster resistance), the AVEI conducted several training courses and assisted a number of NGOs to build several thousand earthquake-resistant houses. Training courses were conducted for the Housing and Urban Development Corporation, Go undertaking (HUDCO), Kutch Nav Nirman Abhiyan and the Catholic Relief Services (CRS).

The AVEI provided the greatest assistance to the CRS, which went on to produce more than 8 million interlocking CSEBs with the participation of about 2000 people. In one year, they build 2 698 houses in 39 villages.

CRS set up an appropriate intervention programme, which included the following.

- (1) A detailed survey and analysis of the conditions in 39 villages.
- (2) Efforts to bring awareness to people on the importance on quality building.
- (3) Efforts to bring awareness to people on alternative construction methods for earthquake resistance, with slide shows in the villages, demonstrating the comparative strength of materials, etc.
- (4) An initial proposal of 4-5 model houses.
- (5) Constant feedback on model houses, which resulted in the development of about 40 different house types.
- (6) Training for block making and for masonry construction.
- (7) Regular evaluation and guidance by the AVEI.

This approach resulted in the people's acceptance of hollow interlocking CSEB technology and also acceptance by the government of Gujarat with the publication of CSEB standards.

There was regular monitoring and quality control by CRS, the AVEI and the government. The whole rehabilitation programme was a success. However, the CRS did not set up a 'post-rehabilitation mechanism', which would have allowed people to establish sustainable livelihoods and profit further from what they learned. Unfortunately, due to internal management disputes, people who were trained and who used the machines were not given the tools to continue building in their villages.

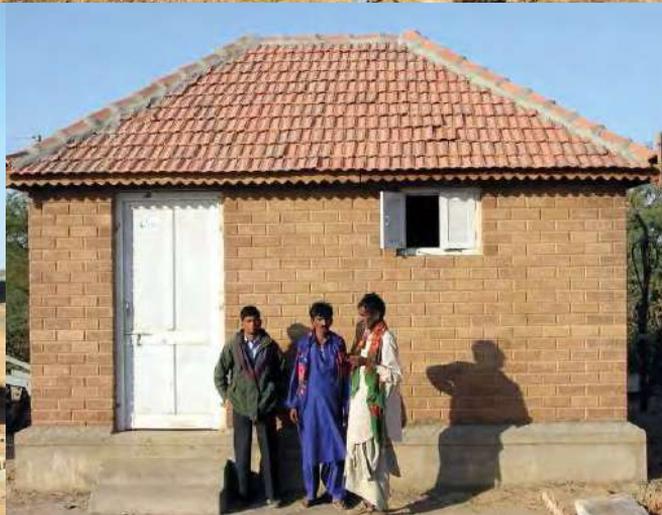


Figure 172—Two million CSEB produced for the construction of 2 698 Houses in 1 year, Gujarat, India (Photo: CRS)

Acceptability of CSEBs in Sri Lanka

CSEB technology has been used and accepted in Sri Lanka for quite a number of years. A lot of research has been done at the University of Moratuwa, led by Dr Asoka Perera. Some projects were built for rehabilitation after the 2004 tsunami; however, from a technical standpoint, CSEB technology was not very successful in this case. This was mainly due to the fact that NGOs could not afford to take the necessary time to learn the technology properly, and various NGO even built counter examples to best-practice construction with CSEB. However, one company in Colombo, 'OS Bricks (Pvt Ltd) (Terra bricks)', began at this time to sell blocks which were produced initially by the Auram Press 3 000. Now they have developed their own hydraulic press and their market is flourishing.

CSEB technology was officially accepted by the GoSL in 2009, and a building standard in three parts was published: Sri Lankan standards '1 382, Part 1, 2, 3' on 'Specification for compressed stabilised earth blocks'.

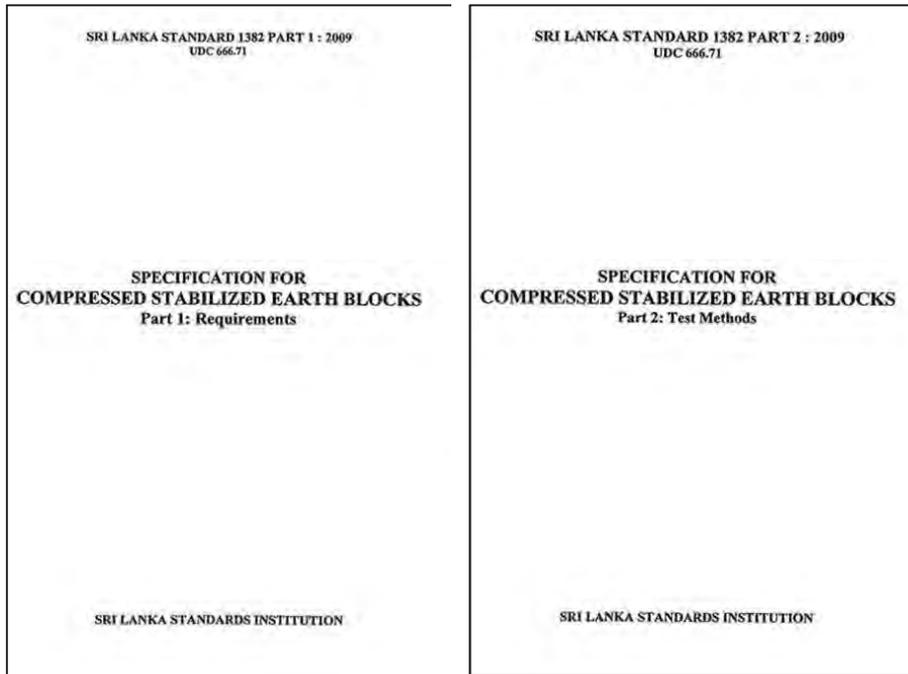


Figure 173—Sri Lankan *Specifications for compressed stabilised earth blocks*
(Photo: Sri Lanka Standards Institution)

Economic feasibility in Sri Lanka

The production of CSEBs can be a profitable business if the proper tools are provided for people to predictably assess their start-up costs, recurring expenses and profit margin. The AVEI has developed a user-friendly tool to evaluate the economic feasibility of CSEBs, which can be used by people to establish small businesses. This tool shows that with an investment of approximately 6 lakhs LKR (1 lakh = 100 000), a business can be set up to generate a comfortable income.

ECONOMIC TOOL FOR CSEB PRODUCTION

This programme allows you to design a production unit and calculate the economics of this unit (costs of production, prediction over 5 years, etc.). Follow the steps 1 to 7; fill your value in the grey cells and click on the next cell to go on. Help is available throughout the whole file. Click on the blue "i" (on the right) if needed.

1. Currency

Choose your country: Currency: Sri Lankan rupee Symbol: Rs.
 Other currency

2. Setup of the unit of production

Blockyard Infrastructure:

Source of land:
 Free land
 Rented land
 Purchased land

Infrastructure:
 Shelter: 300,000 Rs.
 Watchman cabin: 20,000 Rs.
 Others: 0 Rs.
Infrastructure Cost: 220,000 Rs.
 Lifetime: 3 Years

Water Supply:
 Borewell installation
 Connection to public network:
 Connection setup cost: 5,000 Rs.
 Subscription/Year: 0 Rs./Year
 Cost / m³: 18.00 Rs./m³

Total cost for the Blockyard setup: 725,000 Rs. 2.25 Lakhs Rs.

Figure 174—Cost assessment analysis of CSEB-business investment in Sri Lanka
 (Photo: Auroville Earth Institute)

In a the 'feasibility report for compressed stabilised earth block (CSEB) production and use in the north and east of Sri Lanka'⁽⁹²⁾ commissioned by the EU-Delegation to Sri Lanka to Habitat for Humanity, we identified that CSEB production is particularly suitable for the east of Sri Lanka. A production plant was set up there in 2017 including an automated CSEB machine and two manual ones. Habitat for Humanity intends to scale up production and build some 900 CSEB owner-driven houses in the east and North. In the feasibility

⁽⁹²⁾ See <https://publications.europa.eu/en/publication-detail/-/publication/184b5e07-1851-11e8-ac73-01aa75ed71a1>

report we had originally identified Earth Concrete Blocks (ECB) as an option. But changes in national law restricting access to earth from forest land made this alternative more expensive and hence less viable than CSEB production.

Conclusion

CSEB technology is one of the most promising options for owner-driven housing reconstruction in the north and north east regions of Sri Lanka, for the reasons that CSEB is a time-tested and fully researched technology, which has been implemented successfully all over the world. CSEBs have been formally recognised by many countries and standards in Sri Lanka and abroad have been published to streamline its acceptance and proper use. CSEBs are durable, eco-friendly and extremely adaptable to the materials and building types of different locations. CSEBs can be produced locally with locally-source materials, and people can easily learn how to produce and build with CSEBs and develop livelihoods.

ACKNOWLEDGEMENTS

Warm thanks go to Ms Lara Davis, Co-Director of the AVEI for her assistance in writing this paper, Jaime Royo-Olid from the European Commission working at Delegation of the European Union to Sri Lanka, UN-Habitat and all the conference organisers and to HfHSL and WVJ for committing to scale up CSEB production in Sri Lanka under the EU-funded programme 'Homes not Houses: building a sustainable future together'.

Figure 175—CSEB production yard in Batticaloa set up by HfHSL and WVJ with the technical assistance of the director of the Auroville Earth Institute. (Source: Jaime Royo-Olid, EU 2018)







Figure 176—Training of masons in CSEB construction by experts Satprem Maïni and T. Ayyappan with HfH, Batticaloa district. (Source: Jaime Royo-Olvid, EU 2017)



Figure 177—Masons trained in CSEB masonry construction welcome community members curious about anew appropriate material model house in Batticaloa, built with the assistance of HfH and funded by the EU (Source: Satprem Maini, 2017)

19. Where are all the masons trained in disaster-resilient technologies? Reflections from Indian experiences in capacity building of masons and building artisans

Mona Chhabra Anand, PhD, Indian Institute of Technology (IIT) Delhi

V. M. Chariar, PhD, Professor, Centre for Rural Development and Technology, IIT Delhi

Abstract

Masons have been hailed as the ‘real agents of change’, the architect, engineer and contractor rolled into one, when it comes to any change in construction practice at the grass roots. This recognition has also attracted sizeable investment from funding agencies as well as state and national government in India. Despite this investment, a large proportion of the recent housing stock in the country continues to be of questionable quality as far as disaster resilience is concerned. This paper explores the limitations in the current approach to capacity building of masons and establishes links with the mandate and responsibility of other actors in this arena for promoting disaster resilience.

The paper argues for a ‘learning loop’ based systems approach over a one-dimensional ‘activity oriented’ approach. The paper proposes a model that considers several factors in relation to the life cycle of the capacity building input such as history of technical solutions in the context, migration, gender roles and age of the masons. The paper draws from the experiences of two masons’ groups in India and one state-led effort to propose an approach for the GoI towards a holistic and long-lasting capacity-development investment.

Background

Rising demand for skilled manpower for meeting the housing demand in India

The housing shortage in India in 2012 was estimated to be around 40 million in rural areas (Ministry of Rural Development, Government of India, 2011). Of this, about 4.15 million households are estimated to be houseless, 20.21 million have temporary houses, 11.30 million live in congested spaces and 7.47 million have houses that need replacement. Similarly, the urban housing shortage in India was estimated at 18.78 million (Ministry of Housing and Urban Poverty Alleviation, Government of India, 2011). Out of this shortage, 3.26 million houses were non-serviceable and needed to be replaced. Around 15 million households were living in congested spaces and another 0.53 million households were devoid of adequate shelter and thus require housing.

Census of India (2011) also indicated an interesting trend. As the graphs below illustrate, the stock of ‘liveable’ houses increased by 1.4 % in rural India and by 4.3 % in urban India. Similarly, the number of ‘good’ houses increased by 2.9 % in rural areas and by 4.5 % in urban areas. While demographic differences between urban and rural areas may be a factor, the marginal improvement in rural housing stock, as compared to urban, needs to be researched further. It is also important to note that this classification of quality of houses takes into consideration the type of material used and the overall quality of the house. Both factors are subject to two important conditions: affordability for the homeowner and the quality of workmanship.

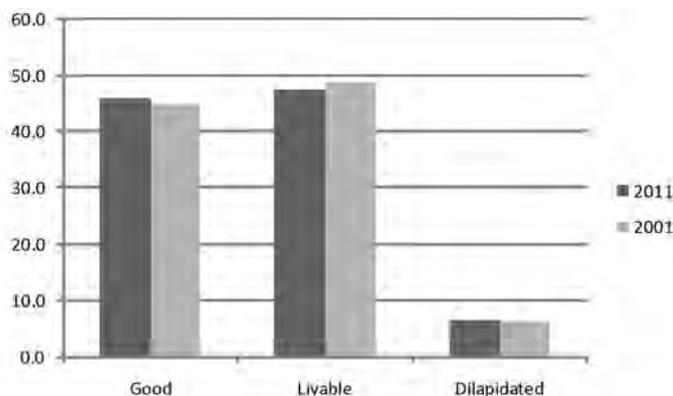


Chart 1—Status of occupied houses in rural India (per cent)
 (Source: Office of the Registrar and Census Commissioner, 2011)

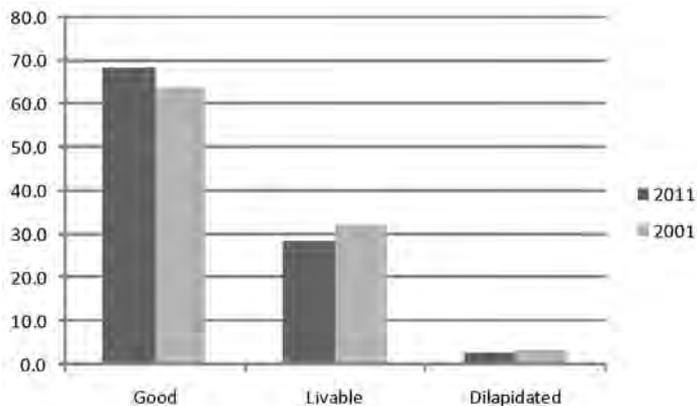


Chart 2—Status of occupied houses in urban India (per cent)

It is evident from the above analysis that the demand for trained manpower for construction of new buildings and repair/maintenance of old buildings is very high even if we focus on the housing sector alone.

Supply for skilled manpower: issue of manpower or skills or both?

The planning commission of India has projected that the construction sector will require another 47 million people in the workforce over the next decade (Federation of Indian Chambers of Commerce and Industry (FICCI) 2010:13). As per the *Report of government's working group on construction* for the eleventh 5-year plan (2007-2012), India had around 31 million persons in the construction sector. Among them, almost 82.45 % are unskilled workers. More than 80 % of the construction workforce in the country has an educational qualification of matriculation or below. Most of the construction workers move up the value chain through their own on-the-job learning, as they assist those supposed to be more skilled. However, the biggest catch in this trend is the correctness of practice and technical competence of the 'skilled' workers who serve as role models for those less skilled. This informally developed skill of unorganised sector workers has a significant adverse impact on the quality of construction (Seeds Technical Services Pvt Ltd, 2012).

It is evident that there is massive requirement for trained and skilled professionals to meet the housing demand, in addition to the construction of other structures such as commercial and office buildings, infrastructure, etc. Considering that over 90 % of the housing requirement is for the poor, both in rural as well as urban areas, and assuming that the majority of the skilled (read 'higher wage') workforce would prefer to engage in higher paying works such as infrastructure, it is clear that the need for a trained workforce in large numbers at the ground level is very critical.

Understanding the role of the mason, the 'creator' of housing

A study by the New Delhi National Council of Applied Economic Research (NCAER) extensively notes that in some pockets of rural India, skilled construction labour is either non-existent or expensive. Also the skills of the labour available are primitive, as they have no formal training and processes to provide any sort of formal training to these rural workforces is unclear (NCAER, 2009). According to the same report, in most of the constructions in rural India, invariably the mason himself (or herself in few cases) takes up the role of handling the whole construction including design, choice of materials, structural safety elements, etc.

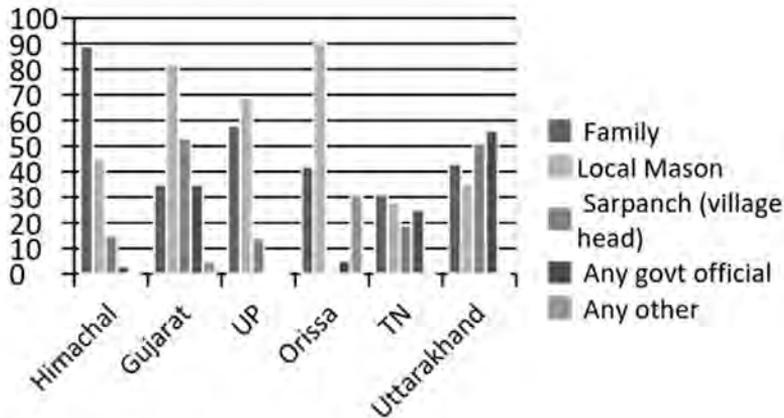


Chart 3—Guidance on quality of building materials and construction quality in sample of IAY houses (Source: Unnati and Knowledge Works, 2012)

According to a study by Unnati and Knowledge Works, a clear majority of households availing of state support for housing under the *Indira Awaas Yojana* (IAY) scheme for the rural poor depend on the advice of the local mason for assessing the quality of building materials and construction. In many of these cases, other actors such as family members, village leaders and government officials also influence decision-making. Even in those states where the release of funding instalments/material supply is contingent on the progress and quality of construction, as is the case in Tamil Nadu, the mason does play a critical role in key decisions during the construction process. With such influencing power, it is critical that masons are adequately competent to guide homeowners for quality and safety (Unnati and Knowledge Works, 2012).

The current status of training construction workers in India — focus on Disaster Risk Resilience

As an initiative to cater to this need for skill development, the eleventh 5-year plan favoured the creation of a comprehensive national skill development mission. As a result, a ‘coordinated action on skill development’ with a three-tier institutional structure consisting of (i) the prime minister’s national council, (ii) a national skill development coordination board, and (iii) a national skill development corporation (NSDC) was created in early 2008. As per the prime minister’s National Council on Skill Development, the vision is to ‘create’ 500 million skilled people by 2022 (Planning Commission, Government of India). This institutional structure proposed for this purpose would test and certify the existing skills of the persons in addition to providing skill training. Most of the target is envisaged to be met by vocational training initiatives of the 17 central government ministries, while the rest are to be met by private-public partnerships, private initiatives and international collaborations (FICCI). In addition, the national policy on skill development was formulated in 2009 by the ministry of labour & employment. Further,

in the 2013/14 budget, INR 100 million was allocated for a skill development scheme along with a 17 % increase in the allocation for the human resources ministry (Pande, 2013). As part of the national skill development mission, important entities such as the ministry of human resource development, the construction industry development council and private companies such as Larsen & Turbo have been identified specifically to provide skill training in the construction sector (Srinivasan, 2013). This is however general training that is conducted with a view to getting youth 'job ready' or promoting a certain product/correct use of a certain product as is seen in training, for instance, conducted by cement manufacturers.

However, according to a study on the capacity of vocational-training institutes in India, it was found that the total existing training capacity for construction skills, in general, was just around 0.3 million per year, that is 3 million people by 2022, which is less than half of the demand of 7.3 million in the sector. This was in addition to the upgrade of the minimally educated workforce of 38 million in the sector (Hajela, 2012). Further, the complexity of the 'human' side of the capacity-building story warrants attention. Almost 93 % of the workforce in the country belong to the informal sector who are generally not exposed to any formal training (Government of India, 2012). Additionally, the opportunity cost of skilling, in the form of loss of employment and wages for the duration of the skill training programme, is also an issue (Srinivasan, 2013).

If this is the state of general skills in construction, evidence of specialised skills in disaster-resilient construction is even more elusive. As per a study by Seeds and Himachal Pradesh state disaster management authority, at the national level, about five government institutions, three corporate bodies and four NGOs are actively engaged in the training of masons with a focus on disaster resilience. Of these, about six have an active strategy/mandate of providing market linkages to their trainees. The rest are contributing from a technical end, by way of curriculum development, conducting training and certification (Seeds Technical Services Pvt Ltd, 2012).

A short survey of predominant approaches to the capacity building of masons was conducted with 10 respondents working in an NGO, state government and a UN setup. Each of the respondents had the experience of being involved in at least 10 training programmes, some had even engaged in up to 50 training programmes in the last 10 years. Key highlights of the survey are given below.

With 100 % respondents reporting the need to change the current approach to the training of masons, there is a need to revisit the basics.

Chart 4—Mapping the status of current approaches to training of masons
(Primary survey by Mona Chhabra and V. M. Chariar)

a. Post training outcomes — work opportunities



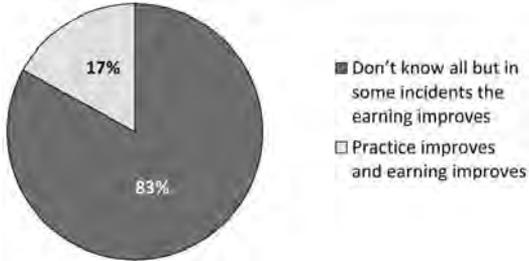
In the large majority of cases, there is no linkage provided by the training agency so that trained workers can be directly given the opportunity to apply newly acquired knowledge and skills. In about 17 % of cases trainees are absorbed in agency/partner projects.

b. Assessment of trainees



About half of the respondents provide participation certificates to the trainees. Of the rest, 33 % carry out informal assessment and then award certificates. Only 17 % conduct formal assessments and certification recognised by an accreditation body.

c. Post training outcomes — increase in incomes



In the large majority of cases agencies conducting the training did not know the exact impact of the new skills on the incomes of the trainees.

d. Satisfaction of the agency with current approach to training



One hundred per cent of all the respondents reported dissatisfaction with the current approach to training.

Capacity building of masons and the creation of a more resilient built environment

About capacity building

The term 'capacity development' has come a long way conceptually from its early understanding in the late eighties to now. Its earliest versions during the 1950s and 1970s were seen in the form of institutional strengthening exercises, it then evolved in relation to development management focused on service-delivery systems within the public sector to reach target groups during the 1970s (Lusthaus, Adrien, & Perstinger, 1999). The concept of 'people-centred development' was widely promoted by way of United Nations Development Programme (UNDP) human development report of 1990 and thereafter widely discussed in conferences such as the Earth summit in 1992, the international conference on population and development in 1994, and the summit for social development of 1995.

However, several authors have observed that most capacity-development literature lacks an explicit connection with social change. In fact, Aragon observes a continued prevalence of linear tendencies in capacity development. (Aragon, 2013). Baser and Morgan (2008: 49) however also note that current thinking about capacity issues has improved, in that it 'gives more attention to context by relating any interventions, internal or external, to the history, structure and pattern of the context'. Nonetheless, they also observe that the 'system blindness to people' continues to look at only parts of these systems yet making judgments about the whole (Baser & Morgan, 2008).

Hence there is a growing body of literature that questions current approaches to capacity building as linear, external input based, well-defined and structured responses to the 'capacity gaps' that exist in a highly complex and layered social development contexts.

There is a need to invest more energy and effort in linking capacity-building efforts with complex local realities and releasing the capacity-building energy into this complexity, bolstered with a mechanism and framework that nourishes progress, effectiveness and immediate absorption or utilisation of the enhanced capacity. This cannot be done without catalysing an organic environment for learning that relates to the complex environment of which this is a part. How do we create a context where everyone works in a win-win framework but yet delivers a common social good?

Focus on the methodological gap and the complex nature of risk knowledge

The common social good, for the purpose of this paper, is considered to be the creation of durable housing stock that is resilient to prevalent disaster risk and in this way reduces the vulnerability of the poor. Given the fact that masons and building artisans are keys to achieving quality and durable housing stock in India, their own knowledge, skills and capacity to deliver this social good has to be upgraded. The question is how.

This is a pertinent question since the construction of a 'home' involves an investment of time, money and emotions at a visible level; underneath are invisible layers of how the homeowner himself/herself perceives disaster risk and whether it is worth their additional investment. In addition, the interest, understanding and seriousness of the techno-legal regime and the broader governance system to risk resilience are other important factors that have a bearing on how houses are constructed, particularly those that are supported by government funding.

The nature of risk itself often depends on a wide variety of contributory pre-disaster factors that have a role in preventing/reducing the impact of risk; these may also help in minimising adverse impact of post-disaster consequences at the recovery stage (von Lubitz & Beakley, in press (citing Lagadec, 1993; Rosenthal et al., 2001)). Hence the energy and resources invested in knowledge and skill upgrade of masons and building artisans is an important node in the overall approach to creating a risk-resilient physical environment for the country.

Knowledge is broadly categorised in two ways: tacit and explicit. Tacit knowledge comprises all that is internalised, something that we know and is therefore part of 'knowledge', while explicit knowledge is that which can be codified and transferred/acquired through communication. Construction, being a skill, requires more emphasis on tacit knowledge. According to Peter Drucker, a skill 'could not be explained in words, whether spoken or written. It could only be demonstrated ... the only way to learn a *techné* [skill, in Greek] was through apprenticeship and experience.' (Drucker, 1993, p. 24) Tacit knowledge cannot be communicated through manuals or theories; it is best communicated through experience. Tacit knowledge has been valued as one of the most critical factors that have influenced the durability of historical buildings that were constructed by teams of artisans who assisted and learnt under their masters as they went about the construction of the building. Often during the construction period a bright apprentice would graduate from trainee to master to take on more apprentices, and a technique would be transferred in this way through generations (Sharma, 2013).

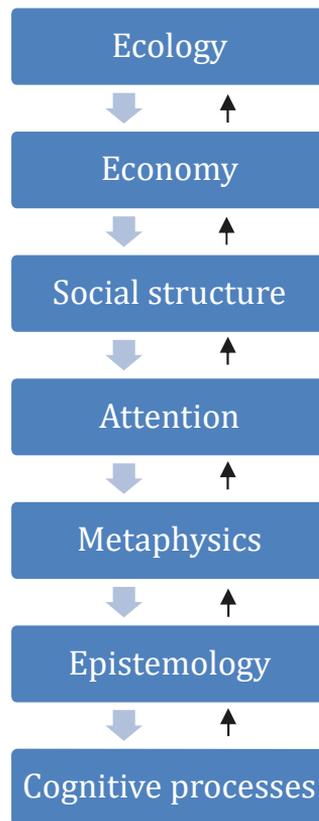


Figure 178—Influences on cognitive processes (Source: Nisbett, 2003, p. 33)

Thus, sharing of tacit knowledge between individuals requires a simultaneous processing of information, while explicit knowledge is created sequentially.

Moreover, research shows that tacit knowledge or the cognitive process of learning is an outcome of interplay between several factors, ranging from the ecological context that influences the economic and social contexts which further have a bearing on the ‘folk metaphysics’ and tacit epistemology. All these factors affect the way tacit knowledge is developed in a context or society (Nisbett, 2003, p. 33).

Knowledge creation and transfer action is thus the process of converting available tacit knowledge to explicit knowledge and vice versa so that the context can be influenced for further development. The challenge lies in the ‘how’ of these processes as far as large-scale, sustainable change is concerned.

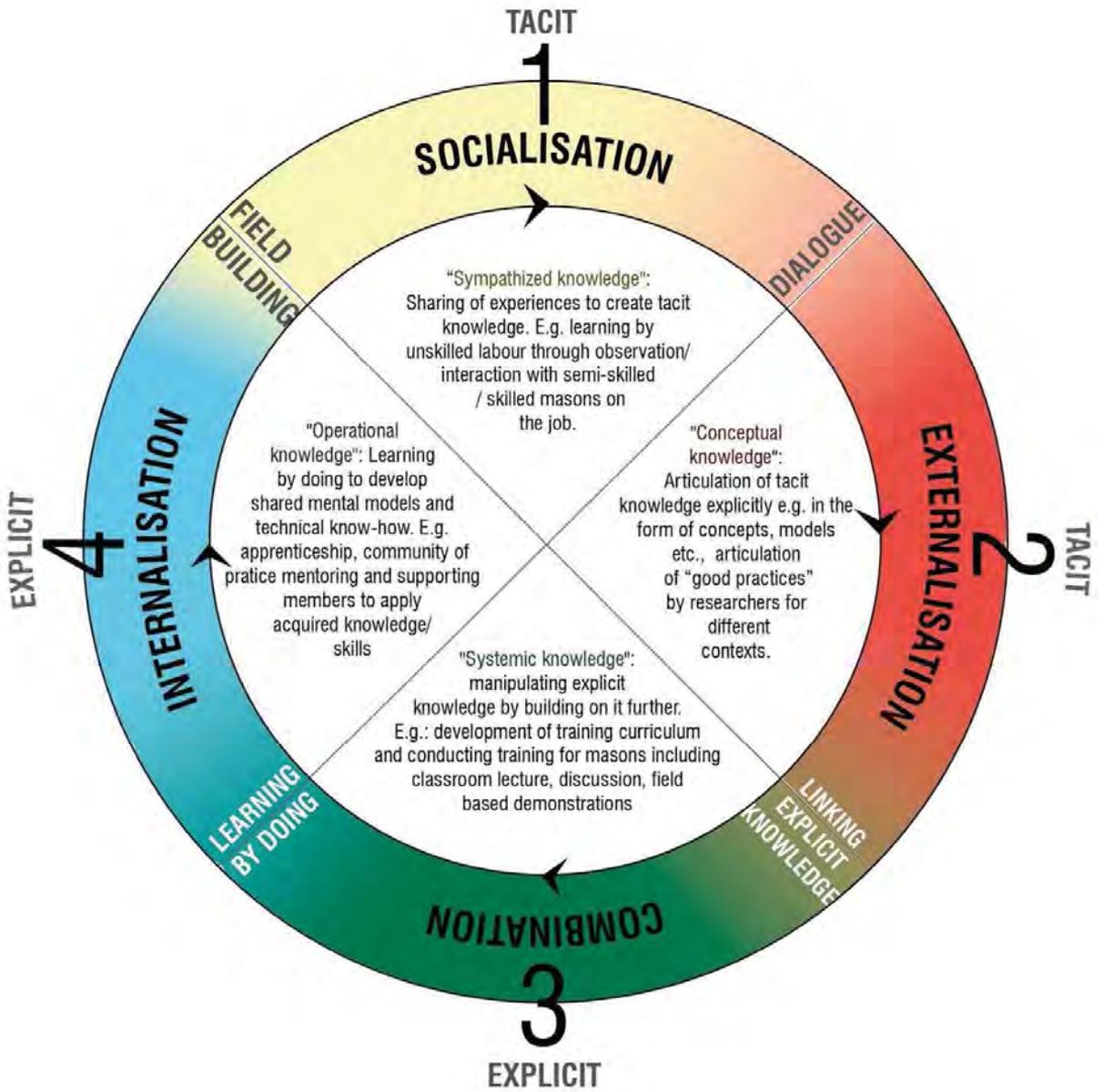


Figure 179—The knowledge spiral (source: adapted from Nonaka & Takeuchi, 1995)

Several models have been developed for articulating the interplay between these processes. One of the most commonly followed models for learning and change has been developed by Ikujiro Nonaka and Hirotaka Takeuchi (1995) in their book *The knowledge-creating company*. The Nonaka and Takeuchi model or the SECI model for knowledge development for individual, group and organisational learning visualises knowledge spirals moving between the transformation of tacit knowledge into explicit knowledge and then back again. The transformation between tacit and explicit knowledge is explained to occur in four steps (Nonaka & Takeuchi, 1995): socialisation, externalisation, combination, internalisation as articulated in the figure above.

When viewed against the SECI model, the current approaches to training are mostly hovering in the zone of 'Externalisation', where technical research effort is invested in creating the 'good practices', the 'content' and the 'how to' for safer construction. When this is taken into the field, a lot of the evidence also exists in the 'combination' zone, where a mix of classroom-based and field demonstration trainings are being conducted. Thus, tacit knowledge is being converted to explicit in the current approach. However, the loop remains open as the conversion of explicit knowledge to tacit is not achieved in the current approach to training of building artisans in India.

There are some recent experiences in the NGO community that have attempted to close this loop although their entry point has primarily been livelihoods and welfare issues of building artisans. Two such cases are presented below:

Case Example 1: SEWA Nirman construction workers company Ltd

SEWA Nirman construction workers company Ltd is a private, public limited construction workers company, by and for construction workers, where labourers, masons and other construction workers are all shareholders. The company was established in April 2008 by the members of the SEWA in Gujarat. The company works in various domains of construction, including the capacity building of construction workers, establishing, reinforcing backward and forward linkages for skilled human resources, the creation of livelihood opportunities for masons individually or jointly, establishing and running a tool and equipment library for the construction workers, as well as undertaking production, distribution and the sale of low-cost building materials. Since its inception in 2008, SEWA Nirman has trained over 1 000 masons through different capacity-building programmes. Of these masons, 400 have been provided with work opportunities through the company and have increased their income by 150 % in the last 5 years.

Genesis of the initiative

The company has its genesis in SEWA's reconstruction work after the 2001 earthquake in Gujarat. To meet the demand of the thousands of houses that needed to be rebuilt, many

of which belonged to their own members, SEWA organised training programmes for many masons to undertake quality construction. The larger reconstruction process also required trained masons, carpenters and other artisans to work on different sites. Hence trained masons found a ready market for their skills. Keen to undertake more work but unsure of the dealings of the outside world, SEWA masons were keen to organise themselves in some way so that they could leverage on each other’s strengths. With less than 5 % of masons in Gujarat going through any standard training at that time, and with upward-looking prospects of the construction industry, demand for skilled masons was anticipated. With this vision, SEWA Nirman was set up. Over the years, masons trained by SEWA have earned the distinction of providing quality construction. These artisans also formed a group that is now registered as a vendor with the state government to supply prefabricated toilets.

Evolution of the capacity-building model

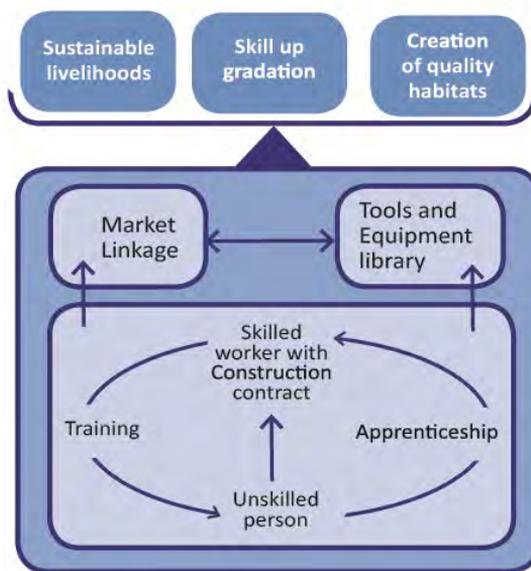


Figure 180—Capacity-building model of SEWA Nirman. (source: articulation by authors)

SEWA undertook a massive programme of ‘on-the-job’ training in construction for the beneficiaries, who were expected to contribute to the reconstruction process by way of their own labour. Simultaneously, a deep enquiry into the structural failure of houses due to the earthquake revealed the limitations in the prevalent construction practices; these were related to inappropriate choice of construction technology as well as poor

execution. As a collaborative effort between Swiss Red Cross, SKAT Consulting, Swiss Solidarity and field-based SEWA construction engineers, a 'Basic Construction Training Manual' for trainers was developed. Series of trainings for masons, with a view to knowledge upgrade and skill improvement, were conducted with a balanced focus on the fundamentals as well as new technical knowledge. Trainings in masonry techniques were carried out in three phases at the district level itself. Nearly 200 women from the Anternesh, Bakutra and Gadsai villages attended a six-month long workshop that acquainted them with the basics of carpentry, bar bending, tiling and plastering. Additionally, trainings were carried out to produce building materials such as earth blocks to generate local livelihoods as well as to cut down transportation cost of materials during subsequent phases of reconstruction.

Trained members were encouraged to organise themselves as groups for income generation. The first group was formed by 15 women from Bakutra. These women were taken to a building material production centre in Madhya Pradesh for an exposure visit. Today, SEWA has a trained workforce of nearly 1 400 masons whose lives and livelihoods have been directly impacted. Initially, SEWA Nirman provided work to the masons in the company. Over the years, this has evolved to a self-sustaining model in which masons are able to secure work independently also. The strength of the collective has provided them the wherewithal to undertake material as well as labour contracts, through which, besides labour, masons also procure materials directly on behalf of the clients and use them in construction.

SEWA Nirman also runs a library of tools and equipment, from which members can borrow essential tools and equipment required for quality construction (e.g. such as shuttering, plates, etc.). This has been an important step in sustaining and further enhancing the capacity of members. The figure above captures the capacity-building model of SEWA Nirman.

Key factors for success and sustainability

A gender-sensitive approach: SEWA Nirman predominantly caters to the interests of women, although it has male members also. The company, by virtue of being managed by women, has a visibly gender-sensitive approach to construction services. Trained women have earned the reputation of being skilled workers within their own neighbourhood, giving them a distinct edge over other male masons who were traditionally invited from outside the villages to undertake construction.

Construction has traditionally been a male-dominated trade. However, women masons have found a lot of acceptance in the construction market locally, as people in the region value the training imparted by SEWA Nirman. The added advantage of being a women gives them an edge over male masons in the design of houses that naturally take care of the needs of the whole family, rather than pure functionality and cost factors.

Given the interest of women to work as close as possible to home, especially as they age, skills in the production of building materials (e.g. primarily earth blocks and reinforced concrete door/window frames) have helped them stay in business as well as fulfil their home responsibilities effectively. Additional items such as grain storage structures (locally known as *kothis*) are also being produced by women masons and sold locally.

Trainee-sensitive methodology: Of a typical batch of trainees, women, who comprise about 50 % of the batch, are generally illiterate, without having undergone any form of formal schooling. Training is mostly conducted as a balanced mix of theory and practical sessions. Theory sessions are conducted through technical experts who initially even came from private companies such as Mahinda & Mahindra. Increasingly, SEWA's own trained masons are now coming back as resource persons to conduct training. Knowledge is shared through pictorial modules that require minimal dependence on the written word.

Evolving and expanding the 'community' of trained masons and artisans: Not only are the members emotionally involved and functionally engaged with each other, but also linked economically, as they borrow tools and equipment from the library and contribute to the finances of the company.

Apprenticeship-based pedagogy: The 3-4-day classroom module is followed by training of at least 15 days' duration in the field, mostly on sites where the resource persons are themselves working or managing. Continued engagement with the same resource person in the field serves as a connect between classroom theory and practical field experience. The master mason and the apprentice together work on specific tasks on-site, calculating sizes of different elements, solving problems, etc. The apprentices are also exposed to different situations where they see the master trainer manage the clients, negotiate contracts, manage unskilled labour, etc. This entire experience provides much more than just technical knowledge; soft life skills such as negotiation, basic mathematics, use of a calculator, etc. are also acquired by the trainees.

The trainees are not charged for the training nor are they provided any stipend for attending the training. The field work is also not paid for. This forces the trainees to learn with seriousness and attention, and encourages the field trainers to deeply engage with the trainees for as long as it takes for them to master the skill being imparted.

TARA Karigar Mandal

TARA Karigar Mandal (TKM) is an offshoot of decades of work by DAG to engage with masons on issues of sustainable habitat development in the Bundelkhand region of central India. It was evident in these years that there was a need to build the capacity of building artisans for the efficient delivery of 'green' habitat services in Bundelkhand, as well as to add value to the existing livelihoods of building artisans. The opportunity for the official formation of TKM came in the form of DA's project on sustainable civil society

initiatives to address global environmental challenges supported by the Swiss Agency for Development and Cooperation (SDC).

To date, about 130 masons from villages of Bundelkhand have been trained directly under masons' training programmes and have further received practical learning on a variety of sustainable, cost-effective building practices. Building artisans of the TKM are now earning in the range of INR 300-450 per day through eco-construction, as compared to an earlier salary of INR 150-200. TKM building artisans now have about 20 days of regular work in a month, an increase of approximately 40 %. About 10 of these masons are already working as contractors and execute construction contracts with a turnover of about INR 15 lakhs per year. The group manages its administration independently, including financial tracking, quality control, negotiation with clients, and review of ongoing activities. The group has a president and secretary who are elected annually to lead the process of administration. In these early years, 11 building artisans have graduated as supervisors and 20 as master trainers.

The genesis

As a group of artisans that is generating business of over INR 10 million per year, TKM is just over 7 years old. Prior to the formation of TKM, building artisans in rural Bundelkhand suffered low and irregular earnings. This was due to the limited skills of the masons affecting their ability to offer value-based solutions, as well as the tremendous development deficit in the state that simply affected the availability of work opportunities. As the relationship of the local artisans grew with DA and the building centres, it was evident that there was a need to create a platform where masons could enhance their skills and come together as a collective and to move up the value chain from their current life of drudgery as individual workers dependent on ad hoc work orders. Thus TKM was born.

In the past year alone, TKM artisans have serviced the construction needs of several families, civil society institutions and government departments. Trained masons have also provided trainer services in government projects in all districts of Madhya Pradesh as well as other NGO projects in the north and south of India.

Evolution of the capacity-building model

Institutional bearings: Under the project supported by the SDC, DA identified skilled eco-artisans as key for promoting eco-construction in the region, however it was realised that individual artisans would not be able to impact the building materials market in the manner and at the scale desired. The project, therefore, helped organise the building artisans into common interest groups (CIGs) covering 10 villages in two blocks of Tikamgarh district. These CIGs were federated into the TKM at the district level. The CIG structure at the village level helps to organise building artisans for skill upgrading and for

service delivery. Regular meetings and discussions are arranged among building artisans for information sharing. Anyone, irrespective of caste, gender, class, religion or political orientation, who does masonry work for a livelihood and has been associated with any of the CIGs for at least 6 months, can become a permanent member by paying a membership fee of INR 500 initially and INR 300 annually. This is regarded as owner equity. At the outset, knowledge dialogues were conducted amongst artisans by way of focus-group discussions (FGDs) in the selected target villages. The knowledge dialogues resulted in a deeper understanding of the need for eco-friendly construction, in the context of changing climate in the region and its impact on the livelihoods of artisans. Masons could analyse the connection of their livelihoods with 'green buildings' and how this itself could become their strongest niche for increased incomes. As part of this exercise, they themselves also identified additional skills and knowledge that they required. Additionally, tools required for improved service definition and delivery were also identified, such as a comparative catalogue on eco-technologies. The masons also requested facilitative assistance to develop strategies to tap the market of public buildings, as well as sensitisation of government engineering staff. Such intense dialogues between the tacit knowledge of the masons and explicit knowledge of NGO staff helped develop a realistic articulation of the actual areas of work for promoting eco habitat with masons as a strong pillar of the strategy. In parallel, programmes were carried out at a large scale through radio broadcasts, wall paintings, etc. to make rural families as well as masons in general aware of the importance of eco-construction.

Skill enhancement: During the knowledge dialogues, artisans identified both technical and soft skills that they needed to acquire. A series of training programmes, ranging from 7 to 15 days, were conducted as a combination of practical and theoretical exercises including on-the-job training on IAY houses. Training on soft skills for construction management, quality assurance, negotiation and contracting was also imparted to the building artisans. In addition, support was provided by the building centre for quality management, reading drawings and basic maths skills. Training programmes were converted into modules and manuals for subsequent replication of these techniques by the masons themselves. These were all prepared in the vernacular and were used by master building artisans to conduct training across 17 districts of Madhya Pradesh. Added training on setting up eco-friendly ventures has provided the artisans deeper insight into running a business.

Key factors for success and sustainability

Niche identity as an eco-habitat services provider: TKM identifies itself as a promoter of eco-friendly construction material and green building technology in both rural and urban areas. TKM has defined its direction and is gaining momentum to achieve new heights. Given the continued policy response to the green building movement in MP, the niche identity of TKM masons holds a strong business potential.

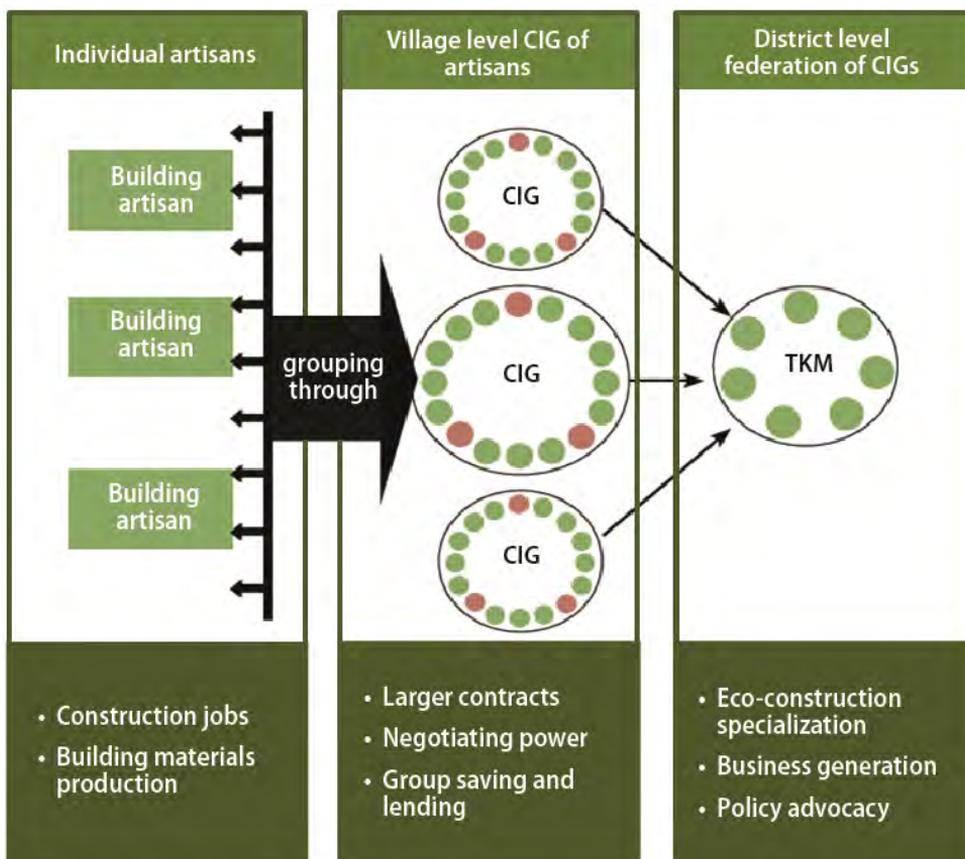


Figure 181—The institutional architecture of TKM (source: adapted from DA, 2011)

Institutional strengthening: Registered as a mutually aided cooperative society (MACS) with Madhya Pradesh state government, the format of the Mandal has potential advantages. The TKM structure and its governance systems have enabled the Mandal to receive grants as well as to collect fees and a share of profit from the works of its members. Thus, the Mandal has been able to develop a small kitty of funds that is now available to its members to initiate new activities and procure equipment which is available for rent amongst the members.

Although it may be too soon to evaluate the sustainability of TKM, it is expected that, through this association, the artisans of the area will be able to respond to the needs and conditions of the rural people in the context of changing climate. TKM has also started to work for the welfare of artisans and their families. Some important areas for the future include work ethics and quality control in construction works, training and certification, collective negotiating power for better, sustained livelihoods and accrued social benefits for the member masons.

The green social enterprise model: Since it is registered as a MACS, TKM not only works as a service provider, but also as a business enterprise owner. A business plan has been developed and artisans are being oriented towards group economics along with the growth in individual incomes. Standard internal and external contract templates have been developed for taking up private works in the villages. TKM has set up books of accounts and quarterly profit-loss statements, and balance sheets are being generated. Additionally, the DA project designed a carbon-footprint assessment tool seen as a potential support to design carbon financing.

As far as small units for producing eco-materials are concerned, there are collectively defined rules for supporting members' production enterprises. These include signing of memoranda of understanding and terms of references with TKM as the parent body, for instance for covering insurance of the equipment, initial payments and total loan support, repayment terms, quality management and enterprise support fee (0.5 % of profits) to TKM, transparency in accounting and reporting procedures.

The emerging need for trained masons for reconstruction in Sikkim

The north eastern hilly state of Sikkim in India experienced an earthquake of intensity 6.8 R on 18 September 2011. The damage was amplified due to a combination of precipitous terrain, weak geology, fragile ecology and heavy rainfall. Sikkim government has initiated the reconstruction of earthquake damaged rural houses (REDRH) project to reconstruct 7 972 houses with a 'HOD' approach. A type design has been provided for a house of 605 sq. ft. with RCC-framed structure construction with an assistance grant of INR 0.49 million per household in the form of cash and material assistance. There is an elaborate institutional arrangement to oversee construction with 'zero tolerance' for corruption of any form. However, one of the biggest challenges for the government was the implementation of RCC construction in an area that has reported less than 10 % houses with RCC construction. Clearly, skills for RCC construction have not been applied in the area in the past (Office of the Registrar and Census Commissioner, 2011).

As a step towards ensuring quality, the state government has provided orientation to all the government engineers to oversee construction. In addition, a masons' handbook has been provided at each site and to every mason involved in the project. Given the close linkage between the institutional framework and the community, virtually every house is being closely monitored. During the course of the project, it has been realised by the government that all of these efforts require deeper engagement with the masons, as they are the main, continuous node for quality implementation.

Although the state government had planned for regular training of the masons and engineers, a need was felt to broad base the training and capacity building, to make technical guidance and knowledge available to all masons at all times. In collaboration with the Rural Housing Knowledge Network (RHKN) of Gol, being implemented by the IIT,

and Jay Pee Cements, the institutional cement supplier in the state, Sikkim government initiated the following activities to minimise poor quality of construction.

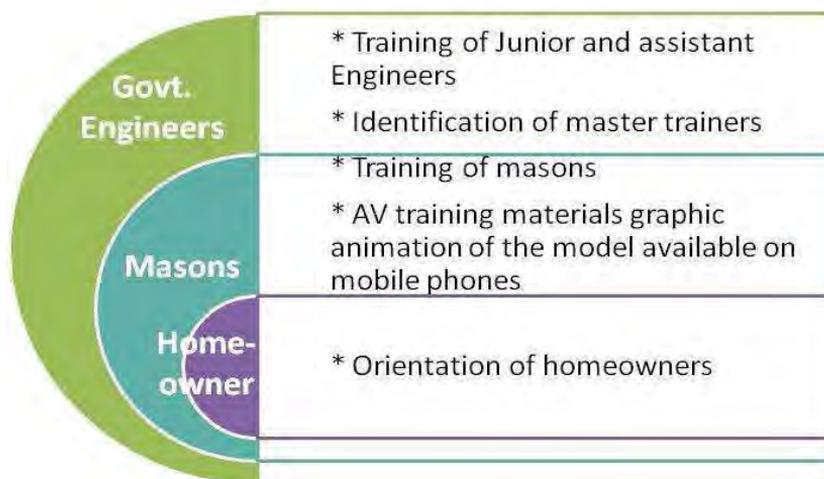


Figure 182—Capacity building for safe construction under the REDRH project, Sikkim
(Source: Articulation by Authors)

- (i) Development of audiovisual training modules on each component of RCC construction: It was realised that although the handbook was very well illustrated, illiteracy of the masons was a barrier for them to clearly understand what must be done and how. In addition, finer details such as quality of materials, etc. were being missed due to the literacy barrier. As part of the collaboration, detailed audiovisual modules have been developed covering basic information on-site layout, good and bad construction materials, and use of common tools and procedures essential for best-practice RCC construction (e.g. water-cement ratio, mortar mixing, concrete mixing, etc.). Technical details on the cranking of steel bars, lapping of reinforcement, placing of reinforcement for the RCC element, shuttering, etc. have also been developed as separate modules in the vernacular. This is also helpful for those masons who are above 40 years of age and need visual aids but have not been able to afford them. These modules are being made available through each supervising engineer, *panchayat* office, block office, etc. for easy access by masons based on their convenience. These are also useful as training materials for regular training programmes planned under the project.

- (ii) Pan-state training of government engineers: Under the collaboration, the government has also initiated a process to train all government engineers (about 200 junior and assistant engineers) on RCC construction of REDRH houses. This was a critical step, as much of the engineering staff engaged in the project are fresh out of college and have little field experience. In addition, many of them are transferred between blocks and districts. As a result, the experience and orientation acquired in one location was often transferred to another, leaving a void in the original location. This led to the idea of pan-state training of all junior and assistant engineers, to leave no scope for sub-optimal monitoring.
- (iii) Graphic animation of the construction process: IIT Delhi is also developing a computer-based animation of the construction process with tips for each step of the process. This module can be loaded on any mobile phone and played as a quick reference even on-site.
- (iv) Nurturing master trainers at block level: Of all the masons and engineers directly trained under the collaboration, master trainers are being identified in each district and block. These master trainers will also have access to all knowledge resources for dissemination and further training as required.

While it may be too soon to draw conclusions about the effectiveness of this effort, results on the ground are very encouraging. In an area where there has been little history of RCC technology, large-scale construction of RCC-framed houses requires training, capacity building and hand holding of a similar scale. The REDRH project has a fairly result-focused yet flexible approach and has therefore modified the implementation strategy accordingly. It is hoped that this step would help mitigate issues of construction quality in the short term and ensure that future practice of RCC construction, which is bound to become mainstream in rural Sikkim, is along the lines of correct practice.

Conclusion and recommendations

It is evident that masons are indeed a key player for promoting safety and resilience in the built environment. In India, as with other countries in south Asia, housing continues to be a major challenge for the government as far as the poorest are concerned. With limited technical skills acquired on the job, masons are not able to fulfil their expected role in the creation of safe, sustainable and adequate housing for the masses. The current approach to capacity building of masons has serious limitations in the 'activity based', one-time nature of efforts. Governments and other agencies with a mandate to train building artisans could consider the following recommendations.

- (i) Viewing masons training as a part of the larger housing 'system'.

It is clear that masons play a major role in the ultimate quality of houses on the ground. The introduction of any new technologies or elements for safety, sustainability, etc. requires that masons partake in technology dissemination itself, so that correct practice is taken to the grass roots and not only to the technical solution or technology.

(ii) Working on tacit knowledge upgrade and transfer along with explicit knowledge.

We need to move away from current approaches that are structured around processes and tools for 'knowledge transfer'. We need to devise holistic programmes that build on the local knowledge and traditional wisdom available in the context, to processes of gathering tacit knowledge. Along with modern and scientific explicit knowledge, it is important that new/upgraded knowledge is woven back into the tacit knowledge cognitive processes, so that mainstreaming does not remain an 'end-of-project' activity.

(iii) Recognising and accounting for social and economic barriers to skilling.

Social and economic barriers that may come in the way of knowledge upgrade and subsequent application need to be recognised. Women masons who may not be able to move out of the house for medium/longer-term duration can be equipped with skills in the production of building materials in the house itself. In this way, they will be able to fulfil their gender roles without compromising on their professional and human potential. Further, innovative techniques for knowledge upgrade may be useful for masons who have a literacy barrier or even physical barrier such as failing eyesight. Modern IT-based tools such as graphic animations in the vernacular may be of use in such situations.

(iv) Facilitating capacity building for artisans, by artisans: reinvigorating apprenticeship.

Social and economic barriers that may come in the way of knowledge upgrade and subsequent application need to be recognised. Women masons who may not be able to move out of the house for medium/longer-term duration can be equipped with skills for producing building materials within their homesteads. In this way, they will be able to fulfil their gender roles without compromising on their professional and human prospects. Thus, it is important to follow up and review the capacity-building approach and strategy on its interrelationship with masons' social and family lives. Further, a large proportion of the masons being trained currently comprises people nearing 40 or above. Such persons may also require suitable training tools that help overcome barriers to learning such as literacy.

(v) Creation of an enabling, empowering environment for masons to move from strength to strength.

The actual value of training input lies in its application. It is thus imperative that other stakeholders involved in rural housing also work in parallel to support the creation of a safe and sustainable housing stock. This includes the policy environment, the techno-legal

regime, the institutional machinery for implementation, the financial support entities as well as homeowners themselves. The whole cannot be achieved without its parts and the sum of the parts is greater than the whole!

Acknowledgments

The authors express their gratitude to the scores of masons they have interacted with across India in the last year through the RHKN for sharing their successes and aspirations. We are grateful to government of Sikkim, SEWA Nirman and TKM for generously sharing their experiences. RHKN, Unnati, Knowledge Works, DA and basin-South Asia have been a constant source of encouragement and support; we express our heartfelt gratitude to them. We are thankful to the respondents of the primary survey for contributing to this paper. Finally, we thank UN-Habitat international conference (Restoring communities through homeowner-driven reconstruction: from post-emergency to development) for providing the opportunity to present this research.

References

- Aragon, O. (2013). *Capacity building in complex environments — Seeking meaningful methodology for social change*. Doctoral dissertation, Institute of Development Studies, University of Sussex.
- Baser, H., & Morgan, P. (2008). *Capacity, Change and Performance Study Report. ECDPM Discussion Paper 59B*. Maastricht: ECDPM.
- Clarke, P., & Oswald, K. (2010). *Introduction: Why Reflect Collectively on Capacities for Change?* Institute of Development Studies (IDS), University of Sussex, Bulletin, Vol. 41, 1-12.
- Development Alternatives Group. (2011). *Low Carbon Pathways — Tara Karigar Mandal*. New Delhi: DAG.
- Drucker, P. (1993). *Post-Capitalist Society*. New York: Harper Collins.
- FICCI. (n.d.). *Skills Development: Sector Profile*. Retrieved 13 February 2014, from http://www.ficci.com/sector/74/Project_docs/SectorProfile.pdf
- Government of India. (2012, February). *Report of the Committee on Unorganised Sector Statistics*. Retrieved 13 February 2014, from National Statistical Commission. Available from: <https://www.lmis.gov.in/sites/default/files/NSC-report-unorg-sector-statistics.pdf>
- Hajela, R. (2012, November). *Shortage of Skilled Workers: A Paradox of the Indian Economy*, SKOPE Research Paper No 111. SKOPE.
- Lusthaus, C., Adrien, M., & Perstinger, M. (1999). *Capacity Development: Definitions, Issues and Implications for Planning, Monitoring and Evaluation*. Universalia Occasional Paper.
- Ministry of Housing and Urban Poverty Alleviation, Government of India. (2011). *Report of the Working Group on Urban Housing in the 12th Five Year Plan*. New Delhi: Government of India.
- Ministry of Rural Development, Government of India. (2011). *Report of the Working Group on Rural Housing for 12th Five Year Plan*. Dew Delhi: Government of India.
- Morgan, P. (1997). *The Design and Use of Capacity Development Indicators*. Gatineau: CIDA.

- NCAER. (2009). *Roof above the Head: A Qualitative Assessment of Rural Housing in India*. New Delhi: NCAER.
- Nisbett, R. (2003). *The Geography of Thought*. New York: The Free press.
- Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. New York: Oxford University Press.
- Office of the Registrar and Census Commissioner. (2011). *Census Report 2011*. New Delhi: Gol.
- Pande, S. (2013, March 31). *A cut below*. Business Today.
- Planning Commission, Government of India. (n.d.). *Enhancing Skills and Faster Generation of Employment*. Retrieved 13 February 2014, from Approach to 12th Five Year Plan: http://12thplan.gov.in/12fyp_docs/9.pdf
- Seeds Technical Services Pvt Ltd (2012). *Evolving Strategy for capacity building of masons, carpenters and wire benders at panchayat level for safe construction*. Shimla: HP State Disaster Management Authority.
- Sharma, R. (2013, 23 September). *Karigar Vidya — Parasparata, Samriddhi Evam Saundarya Drishti ka Samay Siddha Srot*. (M. C. Anand, Interviewer)
- Srinivasan, S. (2013). *Skill Development Initiatives in India*. ISAS Special Report No 15. ISAS.
- Unnati and Knowledge Works. (2012). *Disaster Resilience of Indira Awaas Yojana Houses — Pilot Study in six states*. Ahmedabad: Unnati.
- von Lubitz, D. K., & Beakley, J. E. (in press). *'All Hazards Approach' to Network — Centric Disaster Management: The Role of Information and Knowledge Management, and Boyd's OODA Loop in Disaster Leadership*. London: Disasters: The Journal of Disaster Studies, Policy and Management.

Figure 183—Homeowners of owner-driven house built with the assistance of ASB, ZOA and Practical Action Sri Lanka and funded by the EU in Vavuniya district, Sri Lanka (Source, ASB 2013)



20. Participatory quality assurance mechanisms in resettlement construction: Experiences of Practical Action Sri Lanka

Vasant Pullenayegem, Housing Consultant, Practical Action Sri Lanka

Abstract

Practical Action Sri Lanka (now Janathkshan Gte Ltd) engaged in ensuring quality in the post-tsunami construction of houses in the Southern, Eastern and Northern Provinces. The shortage of qualified personnel for reconstruction prompted working with and training of unskilled masons and carpenters. Practical Action also promoted DRR strategies and the adoption of design elements suited to local tropical climate, with the goal of 'building back better'. One way of promoting this was publishing quality control knowledge material in Sinhala, Tamil and English while developing training programmes for stakeholders involved in participatory processes in development practice from 2005 to 2007. In the Southern and Eastern Provinces over 150 houses were constructed using a tested cavity wall construction (rat-trap bond) with kiln-fired bricks, as well as a smoke-free kitchen incorporating a chimney designed in a participatory manner to dispel smoke by stack effect. Subsequently, the EU-sponsored housing programme (2009-2013) to construct over 2 700 houses in Vavuniya was implemented by the INGO ASB, with Practical Action facilitating training in quality construction standards. This component was for technical personnel, masons and carpenters, as well as beneficiaries. The training content included participatory design development and quality assurance from foundation to superstructure and to house finishes. Problems encountered and lessons learned included a poor response from local residents to the call for training masons and beneficiaries, unfamiliarity with elements and resulting hesitation to adopt DRR methods in house construction, as well as only a few beneficiaries sharing in the actual construction of their houses apart from supervising the masons and carpenters. These challenges were overcome by adopting appropriate strategies to assure the adoption of quality standards in the reconstruction process.

Background

Sri Lanka has experienced the damaging effects of both natural and conflict-related disasters, with the tsunami of 2004, as well as the displacement of large numbers of persons due to the island's three decades long civil conflict. Practical Action Sri Lanka has acquired expertise over the last 30 years in participatory processes, appropriate technologies that are context specific, help in disaster mitigation and disaster recovery. In the field of post-disaster housing reconstruction, Practical Action/Janathakshan considers the concept of resilience in rebuilt structures of primary importance with a view 'to address the ability of affected communities to recover following the impact of a disastrous event and return to the pattern of life which they had before the disaster' (Amaratunga and Haigh, 2006)¹. Practical Action/Janathakshan also firmly believes that disaster mitigation is a vital concern in the construction of houses for people who are vulnerable to future disasters.

Mitigation is the first step towards a comprehensive approach to managing disasters. Disaster mitigation is defined as sustained actions to reduce or eliminate the impacts and risks associated with natural and human-caused disasters.

UN-Habitat (2010)

All key partners involved in reconstruction need to be aware of the need to mitigate future disaster risks and have an outline knowledge of how particular structural features can help to make buildings safer against particular disasters.

IFRC and Practical Action (2010)

Participatory Quality Assurance — The Approach

Quality of construction is a key factor in determining whether a building will withstand disasters. Most often, quality control in the construction of houses for beneficiaries suffers because of poor supervision by technical personnel, and lack of knowledge of basic construction standards among beneficiaries. This increases the vulnerability of beneficiaries to the future recurrence of disasters.

To ensure that DRR elements were incorporated into post-disaster house construction; quality assurance of construction processes is of primary concern. Therefore, Practical Action included awareness creation and training for all stakeholders (technical personnel, masons, carpenters and material suppliers, as well as beneficiaries) as an essential component to its reconstruction programmes.

Disaster rehabilitation and development tend to be perceived by professionals as two separate areas in which different kinds of 'expertise' are required. [...] For disaster-prone communities these two things are inextricably linked.

Ruskulis and Schilderman (2005)

Participatory practices exist since decades and, throughout the world, these methods are commonly accepted to be an important component of successful development programmes.

IFRC and Practical Action (2010)

Practical Action/Janathkshan takes the view that people living in post-disaster houses and their surrounding community should be at the centre of all processes concerning the construction of their homes; from design through to completion. Such processes should extend to community participation in the maintenance of their homes and surroundings after occupation.

We have learnt that participatory processes both get things done in the immediate phase of construction and build capital over the long term. [...] Over the long term we now know that participatory processes develop more sustainable solutions.

Michal Lyons, Theo Schilderman and Camillo Boano (2010)

Practical Action/Janathakshan is guided by the principle that beneficiaries must be consulted at the earliest stage when their house designs are being prepared. Too often, this does not happen, because implementing agencies tend to employ contractors to build houses, using designs developed in drawing offices without consulting potential occupants and ascertaining their specific needs.

Contractors prefer to build as many houses as possible on large sites, using uniform designs, citing economies of scale. The circumstances and needs of individual households, though, vary and not every household is served well. ... There is a general lack of user participation at all stages of projects or programmes; as a result designs can be inappropriate, and residents do not feel real ownership.

Lyons, Schilderman and Boano (2010)

Another important aspect of building houses for beneficiaries is the importance of assuring that the home has a healthy interior and external environment. In line with this thinking, Practical Action Sri Lanka's housing team researched and developed energy efficient, low-maintenance house designs, with a simple design for a hearth and chimney that keeps kitchens relatively smoke-free.

The 'quality' of a house depends on it satisfying the varied need of its occupants. Ethnic, religious and cultural diversity were taken into consideration by developing several basic house plans after consulting with beneficiary groups. For example: some occupants would add shrine rooms to the house plan while others requested for a design which provided adequate privacy. Women have particular concerns regarding appropriate housing such as family health and welfare, privacy and other cultural considerations. For the aforementioned reasons, Practical Action endeavoured to ensure that women in beneficiary communities were included in all stages of housing design and construction processes.

When women are closely linked in housing and settlement development, this can also better ensure that their needs in settlement and housing design and planning are addressed. These needs can include a housing layout that accommodates provisions for safe food preparation and childcare, ... and sufficient privacy when using toilets and dedicated meeting places for women.

Ruskulis and Schilderman (2005)

Capacity building of all stakeholders including beneficiaries involved local-level learning by means of appropriate, interactive training workshops for technical personnel and awareness-creation sessions for beneficiary communities, including women.

Local-level learning should involve staff of the reconstruction agency that has decided to work in the location, representatives of the target group, and potential other partners, including the local authority.

IFRC and Practical Action (2010)

Practical Action served as an implementing agency in the post-tsunami reconstruction programme, and served as a partner to train staff of the implementing agency in the EU-sponsored programme for constructing houses for conflict-affected persons in Vavuniya. The participatory approach adopted in Practical Action's post-tsunami reconstruction work was further refined and adjusted when working with conflict-affected communities in Vavuniya. In both programmes, the incorporation of DRR elements and the use of quality materials and quality construction standards entailed preparing and publishing training material as well as conducting training workshops and awareness-creation sessions among a cross section of stakeholders.

Quality assurance in post-tsunami reconstruction

In early 2005, during the initial reconstruction phase, it became clear that the immense scope of constructing houses for displaced families would require large numbers of adequately skilled masons and carpenters as well as quality basic building materials to ensure that implementing agencies would build back better. Practical Action's caseload of approximately 150 houses was modest. It sought the assistance of vocational training institutions in the South and East to train masons in rat-trap bond masonry.



Figure 184—House built with rat-trap bond masonry and tiled roof
(Source: Vasant Pullenayegem)



Figure 185—Rat-trap bond wall masonry
(Photo: Vasant Pullenayegem)

Rat-trap bond masonry was a building technology which had previously been used in England and had subsequently been replicated successfully in South India by British architect Laurie Baker. This masonry incorporates the use of a 9-inch-wide cavity wall using standard kiln-fired bricks without the use of surface plaster rendering, making it more cost effective than plastered 9 inch brick walls using standard masonry bonds. Kiln-fired non-permeable clay bricks were used for masonry walls to ensure structural resilience instead of the more popular and less expensive but permeable concrete blocks. In addition, the building technology reduced heat transfer from the external to the interior making it suitable for tropical climates. A group of 35 masons from Nikaweratiya in North Central Sri Lanka, trained in this technology, served as trainers in the training programmes to construct houses for displaced families in the Southern and Eastern Provinces.

Apart from training masons in rat-trap bond masonry, it became clear that masons and carpenters, as well as steel fitters and plumbers, needed to be given a basic training on quality standards of construction in their respective fields. Therefore, by the end of 2005, Practical Action had produced two illustrated sets of process guidelines on building construction basics in the Sinhala, Tamil and English languages. These were used in training workshops conducted by Practical Action as well as by several other organisations engaged in post-tsunami reconstruction. These guidelines were used in training over 600 Local Authority Technical officers in tsunami-affected districts, enabling them to check on the quality of post-tsunami houses under a *Gesellschaft für Technische Zusammenarbeit*- (GTZ the German Agency for Technical Cooperation) sponsored programme. Subsequently, Practical Action also published a set of guidelines on basic house maintenance which was distributed among occupants of houses constructed by Practical Action and then disseminated in a DVD format among many agencies engaged in the post-tsunami rebuilding process.



Figure 186—Improved brick kiln in eastern province (Source: Practical Action)

Another concern was the non-availability of quality kiln-fired clay brick in the areas near where construction was undertaken. Practical Action assisted three small-scale brick producers in the Southern Province to construct affordable kilns using paddy husk as fuel. With some modifications in the kiln design, two more improved kilns using paddy husk as fuel were built in the Eastern Province, which operated profitably and produced bricks of a superior quality. A qualified academic, who was commissioned to conduct research on the kilns, gave suggestions to improve kiln performance by 30 % and further modifications were made accordingly and a third kiln was constructed, and subsequently two more in Vavuniya.



Figure 187—Quality Assurance Guidelines and House Maintenance guide by Practical Action

A noteworthy aspect of the productive adoption of beneficiary participation was to engage them at the stage of house design and layout development. The project managers overseeing the construction programme used their technical knowledge and social mobilisation skills effectively at initial meetings with a cross section of members of beneficiary communities including women. Using a rapid needs assessment method, each family represented at the meeting was encouraged to make a sketch of the type of house plan they would prefer according to their cultural preferences and needs. The sketches were subsequently analysed, and AutoCAD drawings of four types of house layouts were prepared that conformed to the needs of each ethnic group and the requirements set by governmental authorities. Finally, beneficiaries would confirm acceptance of the designs they preferred. This methodology resulted in high user satisfaction among occupants of the houses. A post occupation survey conducted in 2013 of random householders who received houses constructed by Practical Action indicated that all who were interviewed expressed satisfaction with the design and layout of their respective houses — Still Standing? (Schilderman and Parker, 2014). Noticeably, women in the beneficiary households were key providers of information required to develop house designs to meet the needs of the ethnic groups that constituted each community. Awareness-creation sessions arranged with beneficiaries (including women) equipped them to monitor the quality of building materials used, ensure use of proper construction methods, and ensure the inclusion of DRR elements in the construction of their homes.

The inclusion of Social Mobilisers in the training workshops for Engineers and Technical Officers resulted in beneficiaries being repeatedly reminded of the need to adhere to the required construction standards.

CONSTRUCTION OF HOUSES, CAPACITY BUILDING & KNOWLEDGE SHARING — POST-TSUNAMI PROGRAMME

Practical Action

- Over 150 houses constructed.
- Over 300 masons and carpenters were trained during 2005 and 2006. At five workshops 100 masons were trained in rat-trap bond masonry.
- Over 400 persons were employed in the construction of houses built by Practical Action.
- French Red Cross replicated rat-trap bond technology in constructing 129 houses in the East.
- Practical Action shared its expertise with many organisations: ILO, UNOPS, GTZ, World Vision, FORUT, GOAL International, CARE International, OXFAM, and Wherever the Need among others.

Quality assurance in post-conflict reconstruction in Vavuniya

The implementing agency, ASB, was tasked with constructing more than 2 700 houses over a three-year period in the Vavuniya District in the Northern Province. Practical Action served as its partner organisation to provide technical support and training to technical personnel, construction tradespeople, beneficiaries and beneficiary communities to ensure appropriateness in design and quality of construction of houses. In this programme houses were built using concrete blocks (due to budgetary constraints). Practical Action was represented by an experienced Social Scientist, and two trained instructors in masonry and carpentry, as well as a Housing Consultant under the oversight of a Project Manager. Mutual support between ASB and Practical Action contributed largely to what was achieved.

The experience and expertise gained by engaging in post-tsunami reconstruction served Practical Action well when performing its supportive role in providing the training component for the housing program in Vavuniya. Further refinements were made in the participatory processes used to build capacities and create awareness among all stakeholders, including; beneficiaries, technical personnel, social mobilisers, community-based organisation leaders, and construction personnel (masons and carpenters). Some refinements adopted were: the inclusion of social mobilisers in technical training workshops for Engineers and Technical Officers to reinforce quality construction standards among beneficiaries, regular feedback reports on quality of construction of houses at all key stages of construction, and instruction of beneficiaries (including women) in house maintenance. In the post-tsunami programme, beneficiaries were issued with the house maintenance document without discussing its contents, but in the

Vavuniya project its contents were discussed with beneficiaries. Social mobilisers serving ASB were trained by Practical Action's Social Scientist to form CBOs to have local oversight of construction work and ensure quality in construction of houses.

The first step in the quality assurance programme was to conduct a five-day workshop with the implementing agency's engineers and technical officers. The workshop adopting modern interactive teaching approaches, including role-play and discussion of problems that could be anticipated during construction of houses. The workshop included instruction on the incorporation of several disaster-mitigating elements in house construction, required by the NEHRP⁷ and the EU. These included, the provision of a continuous RCC lintel on all load-bearing walls and anchoring of wall plates to riser bars in concrete piers at all corners and junctions of building walls. Tiled roofs were required to be provided with RCC bands at specified centres to prevent tiles being dislodged by heavy wind. Practical Action added a further safety requirement; the provision of a RCC plinth beam in locations where the soil at any site was clayey, expansive and volatile. The importance of adhering closely to these DRR features when supervising a house construction was impressed on all participants. In addition, instruction was given on how they could convince masons and carpenters as well as beneficiaries of the need to adhere to these DRR standards. Guidelines were given to enable participants to determine how the quality of basic building materials (masonry blocks, sand, aggregate, cement, and timber) can be assessed in practical ways on-site. This in turn resulted in suppliers of building materials being made aware of the need to supply quality building materials when substandard materials were rejected. Trainees at the workshop were instructed on how to conduct rapid needs assessments to determine basic designs for houses that meet community needs as was done in the post-tsunami reconstruction process. Part of the workshop also included trainees having to develop a basic set of alternative house designs to match beneficiary needs.

Regular visits were made to the construction sites by Practical Action's Housing Consultant. The Consultant developed a comprehensive checklist which he used during site visits as a quality assurance tool. After each visit, he would submit a report on each house he inspected, detailing the required corrective action by ASB's technical personnel. Photographs showing construction errors were also included in these reports.

As in the post-tsunami programme, the house owners' role in quality assurance went beyond the design and planning stage and included responsibilities during the construction stage. Awareness sessions conducted with beneficiary groups (for both, men and women) showed how they could determine the quality of basic building materials and reject substandard materials. The importance of ensuring that all DRR elements in house construction were incorporated to reliably withstand high winds and floods was explained. Except for a few construction tradespeople, beneficiaries were initially unfamiliar with basic construction standards. The leader of each CBO was required to be present at all awareness sessions. Women especially responded positively to instruction

given on choosing building materials of acceptable quality and following proper construction methods. These awareness sessions equipped beneficiaries to ensure that masons and carpenters followed proper methods of construction when building their houses.

Practical Action also produced quality assurance material targeting different audiences (beneficiaries, masons, carpenters, brick producers and ASB's technical personnel) during the first year of the Vavuniya programme. A series (12) of illustrated colour posters in the Tamil language outlining key steps and fundamentals in construction from foundations through to superstructure and finishes were displayed at all ASB site offices and used in stakeholder (beneficiary, masons) training. Separate illustrated handbooks were produced in the Tamil language for masons, carpenters and basic house maintenance as well as an illustrated handbook on the construction and operation of an affordable brick kiln.



வட-கிழக்கு வீட்டுத்திட்டம் -
சசக வேலைக்கான தொழிறுட்ப வழிகாட்டி



மேசன் வேலைக்கான
தொழிறுட்ப வழிகாட்டி

Figure 188—Typical poster, Handbook for carpenters, Handbook for masons and Maintenance handbook produced by Practical Action. (Source: Practical Action)

As part of the programme's efforts to ensure production of quality kiln-fired clay bricks, two small-scale brick producers were trained to construct and operate brick kilns profitably. The illustrated handbook showing the step-by-step process of constructing and operating an affordable brick kiln proved to be helpful to both brick producers in improving the quality of bricks they manufactured. These kilns produced above average quality bricks that found a ready market locally, with significant increase in profits over previous sales.



Figure 189—An improved brick kiln in Vavuniya and a trained burnt brick producer in Vavuniya showing his products (Source: Practical Action)

During the second and third phases of the project, interim training workshops were deemed necessary to be conducted to instruct newly recruited technical officers because of a frequent turnover of Technical Officers attracted by higher salaries to other agencies engaged in post-conflict housing programmes in the North. The content of the interim workshops was updated to include issues that became apparent in the first phase that merited adoption of corrective measures. At the interim workshops, 48 engineers and technical officers received training or re-training through workshop participation and field visits to construction sites led by Practical Action's Housing Consultant.



Figure 190—A beneficiary awareness-creation session (Source: Practical Action)

At the final review workshop for technical personnel, Engineers and senior Technical Officers were each issued with a copy of an illustrated handbook: ‘How to make your house safe from disasters’, developed by the Disaster Management Centre (2012) in collaboration with UNDP, ASB, EU-ACAP, Australian aid and Practical Action. Two members of Practical Action’s housing team, who were also members of the Technical Advisory Committee, contributed their expertise to the contents of this handbook and facilitated the inclusion of the illustrations in the publication.

Conclusion

Several challenges were encountered during the course of both programmes and lessons learnt on how best to approach participatory quality assurance in house construction.

- Not all members of ASB’s technical staff in the Vavuniya project manifested the desired attitude regarding the use of DRR elements in construction, because they were unaccustomed to such practices. Some local masons and carpenters too, for similar reason, were reluctant to incorporate DRR elements in their work, and had to be compelled to do so. Through workshops and on-site application many local masons and carpenters gained awareness of the importance of incorporating DRR elements in construction. Many of these construction tradespeople found

employment in the larger IHP in the north that followed the EU-sponsored Vavuniya housing project. UN-Habitat was one of the implementing organisations, that constructed a large number of houses in the IHP used the DRR elements that ASB and Practical Action used in the EU-sponsored housing project in Vavuniya.

- Very few people in the local communities enrolled in the training courses conducted for masons and carpenters because most employable youth preferred to enrol in computer related courses and other popular courses conducted by vocational training institutions. Masonry and carpentry as professions were not considered lucrative. However, Practical Action's expertise in producing and using instructive illustrated publications in awareness-creation initiatives among all stakeholders, and use of contextually appropriate participatory approaches to housing resettlement, contributed significantly towards assuring improved quality in construction in the post-tsunami and post-conflict housing programmes despite the low response to training.
- In the housing programmes for tsunami-affected and conflict-affected persons, more females than males attended training and awareness sessions. This was primarily because male members of households were daily wage earners who were gainfully occupied elsewhere, and attending such sessions would mean a loss of income. In addition, training and awareness sessions were sometimes postponed and delayed due to community members being required to attend meetings organised by the local authorities without sufficient prior notice. The programmes therefore had to work around these situations — rescheduling training and awareness sessions as well as encouraging women to take on more responsibility in the process.
- Notably, very few beneficiaries were willing to actively share in construction work though many were keen to supervise construction work on their sites. This was true in the post-tsunami as well as the post-conflict housing projects. However, the females in beneficiary households made good use of the training received by ensuring the use of materials of good quality and proper construction processes in building their houses.

All the quality assurance methods adopted in the post-tsunami and post-conflict programmes met with a satisfactory measure of success. In 2008 Practical Action's post-tsunami Building Back Better programme was shortlisted amongst the finalists in the BSHF 2008 World Habitat Awards competition. In 2012, UN-Habitat requested Janthakshan Gte Ltd to conduct three workshops to provide training to 53 Technical Officers and Engineers serving in UN-Habitat's IHP. Continued replication of the quality assurance approach adopted by Practical Action in its post-tsunami and post-conflict (Vavuniya) programmes is evidence of its success.

References

- Amaratunga, D. and Haigh, R. (2006). Infrastructure life cycles and disaster mitigation.
- UN-Habitat (2010). *Sustainable relief in Post-crisis situations Transforming Disaster into Opportunities for sustainable development in human settlements*. Draft paper. Available at www.unhabitat.org/downloads/docs/1273_55315_wuf-draft.doc
- International Federation of Red Cross and Red Crescent Societies (IFRC) and Practical Action (2010). People-centred reconstruction (PCR).
- Lyons, M., Schilderman, T., and Boano, C. (2010). *Building Back Better: Delivering People-Centred Housing Reconstruction at Scale*. Rugby: Practical Action Publishing.
- Ruskulis, O. and Schilderman T. (2005). *Building bridges with the grass roots - scaling up through knowledge sharing*.
- Jayasingham, T. (2004). *Environmental Management Framework — North East Housing reconstruction programme*.
- Schilderman T., & Parker, E. (eds.) (2014). *Still Standing? Looking back at reconstruction and disaster risk reduction in housing*. Practical Action Publishing.
- Disaster Management Centre (2012). How to make your house safe from natural disasters.
- Save the Children United Kingdom (2010). At the Crossroads: Humanitarianism for the Next Decade. p. 17.
- National Housing Development Authority & Ministry of Housing and Construction (2005). *Tsunami Disaster Housing Programme: Guidelines for Housing Development in Coastal Sri Lanka*.
- Miranda, S. (n.d). *Owner-Driven Housing Construction Strategy*. North East Housing Reconstruction Programme.
- Society of Structural Engineers, Sri Lanka (2005). *Guidelines for Buildings at Risk from Natural Disasters*.



Figure 191—Home doors are important symbols of prosperity. Often, homeowners over-indebt themselves by buying decorative features to project high status of wealth. (Photo: Jaime Royo-Olid, EU 2018)



PART V OWNER-DRIVEN APPROACH AND FINANCES

Date	Description	Withdrawal	Deposit	Balance
18.10.16	MISC		350.00	350.00
20.10.16	MISC	350.00		0.00
24.10.16	MISC		110,000.00	110,000.00
28.10.16	INT		52.74	110,052.74
31.10.16	CASH	60,000.00		50,052.74
31.10.16	MISC			50,042.74
16.11.16	CASH	35,000.00		15,042.74
16.11.16	MISC	20.00		15,022.74
22.11.16	INT		15.10	15,037.84
22.12.16	INT		15.10	15,236.69
27.01.17	INT		15,274.13	15,274.13
23.02.17	INT		135,274.13	135,274.13
03.03.17	STO		135,274.13	135,274.13
31.03.17	CASH	100,000.00		35,274.13
31.03.17	INT		654.93	35,929.06
31.03.17	MISC	10.00		35,919.06
19.04.17	CASH	80,000.00		75,919.06

Figure 192 Joint bank account log-book of EU-funded housing programme implemented by Habitat for Humanity and World Vision in Batticaloa (Photo: Jaime Royo-Olud, EU 2017)

Figure 193—Victims of financial deb are often households with several dependants. Children of EU-funded housing programme implemented by Habitat for Humanity and World Vision in Batticaloa (Photo: Jaime Royo-Olid, EU 2017)



21. Life and debt: Assessing indebtedness and socioeconomic conditions of conflict-affected housing beneficiaries in Jaffna, Kilinochchi and Mullaitivu districts

K. Romeshun, Senior researcher at CEPA ⁽⁹³⁾

Vagisha Gunasekara, PhD, Senior researcher at CEPA

Mohammed Munas, Senior Research Professional at CEPA

Mira Philips, Research assistant at CEPA

Abstract

The Owner-Driven Housing Assistance (ODHA) scheme is a donor and government supported initiative to help construct housing for those returning to their areas of residence at the end of the conflict in 2009. While the ODHA is a commendable initiative for rebuilding the lives of those displaced by war, available evidence indicates an increase in debts among the beneficiaries of such housing schemes and their vulnerability to livelihood insecurities after resettlement. The question that this paper sought to answer was whether the ODHA programme is the cause or catalyst for beneficiary indebtedness. The conclusions of this paper, based on the findings of ODHA beneficiaries in the Northern Sri Lankan districts of Mullaitivu, Kilinochchi and Jaffna, are that the cause of indebtedness among beneficiaries is not the programme itself but an inadequate understanding of the social, economic and cultural contexts that define the lives of beneficiaries. This paper illustrates how post-conflict participatory development projects such as the ODHA scheme can further perpetuate the vulnerability of conflict-affected populations unless donors and policymakers have a holistic understanding of the varying contexts that define the experiences of development beneficiaries.

Introduction to the study

The ODHA scheme, which was implemented to facilitate housing reconstruction in Sri Lanka, adheres to a participatory model of development, with each beneficiary family contributing funds and labour towards the reconstruction of their house. Such participatory models emphasise solutions that are inclusive, people centred and ‘creat[e] spaces for the less vocal and powerful to exercise their voices and begin to gain more choices [...]’ (Cornwall 2003: 1 325). However, there has been limited knowledge regarding how beneficiaries finance their contribution and what the long and short-term impacts this financing will have on their socioeconomic life.

⁽⁹³⁾ The Centre for Poverty Analysis (CEPA) see <http://www.cepa.lk/>

The prevalence and impact of debt in post-war contexts remain under-studied. This paper aims to fill that gap in knowledge by focusing on debt amongst surveyed households in the Sri Lankan Northern districts of Mullaitivu, Kilinochchi and Jaffna, which were a part of the ODHA programme. It was hoped that by examining indebtedness in these areas, an understanding of the nature of the relationship between ODHA programmes and indebtedness could be achieved. Specifically, this research on which this paper is based, sought to explore the socioeconomic impacts of increased debt amongst housing beneficiaries, the reasons that drive beneficiaries to borrow funds for housing, and finally, the underlying explanations for why some beneficiaries experience increased vulnerability more than others.

Given the study's research questions, the methodology included three components: a quantitative survey of 347 households in the Districts of Jaffna, Killinochchi and Mullaitivu, followed by a qualitative study to further understand and triangulate the information gathered from the quantitative survey. This was a 'cross-sectional' study, which obtained a snapshot of the ground at the time of data collection, and thus does not make conclusions about the long-term results of ODHA programmes.

Findings

Is there a debt problem?

According to donor organisations, the ODHA grant amount (LKR 550 000) for housing construction is a reasonably sufficient amount to erect the type of house prescribed to the beneficiaries. Why is it that households that have begun or completed construction have high lives of debt?

A 2012 study on food security in the North and East of Sri Lanka finds ⁽⁹⁴⁾ that ongoing post-conflict resettlement and rehabilitation processes are sources of stress for many recent returnee families in the North. They report that households are unable to generate sufficient income to cover the cost of reconstruction of their houses while simultaneously trying to secure livelihoods and generate a stable income. This poses insurmountable challenges to manage basic daily living expenses, resulting in high levels of borrowing and indebtedness among households. While recent evaluations of the housing programmes ⁽⁹⁵⁾ indicate that houses using the ODHA approach are built on time and to a high standard, with high beneficiary satisfaction, the indebtedness of the beneficiaries during the course of the housing programme is still a cause for concern.

⁽⁹⁴⁾ Food Security in the Northern and Eastern Provinces of Sri Lanka — A comprehensive food security assessment report 2012, Ministry of Economic Development, Hector Kobbekaduwa Agrarian Research and Training Institute, World Food Programme, funded by USAid and GIZ

⁽⁹⁵⁾ AETS and CARDNO (2012). *Mid-term Evaluation of the Programme — Support to Conflict-Affected People through Housing in Sri Lanka & Final Evaluation of the Reconstruction and Rehabilitation Programme for North Sri Lanka.*

Relationship between indebtedness and other factors

The full sample average of debt in all three locations is LKR 152 489. Jaffna has a higher average debt (LKR 224 700) than Kilinochchi (LKR 142, 536) and Mullaitivu (LKR 117, 250). One explanation for this may be because Jaffna was not the epicentre of violence during the civil war, and a relative sense of 'normalcy' existed there even prior to 2009. Empirical data suggests that there has been a large influx of lending institutions in the North, which is an incentive for people to borrow more, and puts them at a high risk for indebtedness since their capacity to save is limited.

While households with at least one disabled member appear to have similar level of debt in comparison to the sample average (LKR 150 317), female-headed households seem to have lower (approximately LKR 25 000) levels of debt compared to the rest of the sample, with an average amount of LKR 127, 863 in debt. This may be due to the fact that female-headed households neither have the required collateral to obtain loans, nor a consistent income stream to ensure timely repayment to banks

Data gathered from the research areas indicate a strong relationship between the type of livelihood and household indebtedness, which intuitively carries validity in that a household is more likely to borrow in the absence of a consistent income stream. Households that primarily engage in public-sector work borrow higher amounts, but as stated before, this cannot be categorised as a 'debt problem' since their consistent income generation means they are more likely to repay. Further, they may be borrowing for investment as opposed to consumption, unlike the rest of the population. In contrast, the indebtedness of households engaged in casual labour is noteworthy and a matter of concern as not only do they borrow more often, but they also seem to face difficulties in repaying the loans.

Factors causing housing beneficiaries to borrow funds for construction

Although households borrowed for a combination of reasons (food, health, repayment of debts etc.) both housing construction and livelihoods factored heavily into these combinations, with 48 % of the households borrowing funds solely for the construction of their houses, whereas 19.2 % and 8.1 % said they borrowed solely for livelihood purposes and a combination of construction and livelihood respectively. Thus, houses and livelihoods seem to be top priorities among borrowers.

Beneficiaries borrow irrespective of their socioeconomic conditions, though socioeconomic status does have an impact on how much they borrow. Low-income families and families with widows and disabled members tend to borrow less compared to those families with stable income sources. When the debt-free households and those that did not borrow for housing were excluded from the analysis, 248 households reported to have borrowed for housing purposes. Housing-related debt ranged from being 0.3 % of total household debt to 100 % among beneficiaries that had already begun

construction, with 141 households reporting that all of their debt was due to housing. On average, 88 % of household debt appears to be for housing construction.

Around 18 % of the households that had started building reported that they had started construction work even before they received funds. These households include those building as per the required standard and others who are not following the standards. The reported spending ranged from a low of LKR 13 000 to a high of LKR 200 000, with an average of around LKR 71 000. The funds had been used for the foundation stage, for purchasing of building material and paying for workers. Households use a variety of sources to fund construction activity, prior to receiving a grant, with pawning being the dominant source of financing in these cases (see table below).

Table 5—Source of financing to fund house construction activities before receiving donor funding.
(Source: K. Romeshun, V. Gunasekara, M. Munas 2014)

Source	Source of Financing	
	No	%
Pawning	33	41 %
Informal Borrowings	16	20 %
Own Funds earned during the period	14	18 %
Loan — Formal	12	15 %
Own Funds, savings	4	5 %
Selling Movable and Immovable Assets	1	1 %
Total	80	

In owner-driven housing projects, donors prescribe the minimum standards for a house that beneficiaries should comply with. However, there is in-built flexibility which provides an ‘option’ for the recipients to deviate while keeping to the minimum standards. Households that have received assistance to build houses are building bigger houses compared to the houses that they lived in prior to displacement. Larger houses are built by male-headed households, household heads with increased educational attainment and those engaged in business, trade or own agricultural pursuits. Younger household heads were more likely to build houses according to donor specifications.

Increased costs of housing construction fall into ‘avoidable’ and ‘unavoidable costs’. The costs incurred by the housing beneficiaries to increase the floor area and to make aesthetic and other structural changes can be categorised as ‘avoidable costs’. ‘Unavoidable costs’ include the costs of labour required to build larger houses, the escalation of the price of building material, lack of water for construction activities, and the deteriorating quality of roads which makes transporting materials more difficult.

Households have financed additional costs using a variety of methods, with pawning of jewelry as the most common means of raising funds. This is indicative of the

fact that obtaining housing loans is difficult due to the amount of documentation required, whereas there are less bureaucratic procedures involved in pawning.

About five percent of the households reported that construction was delayed or not progressing due to variety of reasons. The reasons included: land issues where cases have been filed after construction of the house had commenced; the difficulty experienced by female-headed households to manage the construction process; family break-ups; and the use of funds for purposes such as travel to other countries; some beneficiaries found it difficult to continue with building of houses that exceeded the prescribed ODHA size of 23 ft. by 21.5 ft.

Social, cultural and economic factors influencing housing construction

Vaasthusastra (the science of architecture) dictates the structure and location of the house and its inner rooms, which if not built according to astrological calculations, is believed to affect the prosperity and luck of the incumbents. As such, any deviation from *vaasthu* rules can bring misfortune and bad luck (Subramaniam 2003: 170). Though ODHA regulations set the standard measurement for a house at 23 ft. by 21.5 ft., according to astrological calculations, 23 is not deemed a 'lucky' number; therefore, a *vaasthu* expert, who is consulted prior to building a house, would typically advise the household members to opt for longer houses (at least 27 ft.), which undoubtedly has cost implications. During field interviews, the team observed an additional concrete slab in the shrine room, a very common *vassthu*-related feature that also drives up the construction cost

A large brick house is considered an indicator of social mobility with the beneficiaries associating the structure of the house, especially the roof, with elevated social status. The gable-roofed house, proposed by the donor, is linked to low social and economic status. In responding to requests by Technical Officers of the implementing agency to construct a gable roof instead of a hip-end roof as a cost cutting measure, Kalaivani, a 38-year-old widow in Mullaitivu queried: 'Do you want others to identify my house as a widow's house?'. Her reference to widowhood is a telling statement, not only of the link she makes between a house and the economic status of its incumbents, but also the economic and social situations of widows.

The cost difference between constructing a hip-end roof and gable roof is highly contested. Respondents that constructed the hip-end roof reported a marginal increase in cost to justify their choice while those who chose the gable roof stated that the difference is significant. The cost of constructing a hip-end roof reported by respondents varies from LKR. 200 000 to LKR. 250 000, whereas the cost of a gable roof ranges from LKR 140 000 to LKR 170 000. The choice to construct hip-end roof will thus often lead to households borrowing.

Other reasons for indebtedness

While several representatives from implementing agencies suspected that some recipients use the housing grant to settle previous debt, there is insufficient evidence to indicate that this is in fact occurring. Conversely, there is strong evidence to support the lack of sustainable livelihoods as a factor driving up the indebtedness in the areas studied. The average household expenditure (LKR 17 785) is lower than the average household income (LKR 19 700). However, this income is insufficient to supplement the additional expenses of construction, and families are thus left with no other option but to borrow money, which compromises their longer-term household financial sustainability.

Poor financial literacy also poses a major issue for households that take loans. Over half of the households surveyed were not aware of the interest rate of their loans and whether the loan that they had taken was subject to varying interest rates. Moreover, the households that had already begun construction reported that money related issues caused anxiety as they did not understand the lingo used by financial experts. Conversely, Head of households who had passed the Ordinary Level Examination indicated that they were more comfortable in joining conversations related to finance and they also reported that they were able to repay more regularly since they planned their expenditure.

As pawning gold is the most common collateral for loans, most borrowers tended to pay only the interest on the loan that was sufficient to retain the gold for another year; the capital of the loan was often unpaid. In the Northern part of Sri Lanka, gold is not just a symbol of economic value, but of social and cultural value as well. Thus, people expected to recover the gold from the bank at some point in the future when their economic situation improved; they decided to give up gold only under extremely critical financial distress.

Analysis of debt's impact on socioeconomic beneficiaries' short-term well-being

A permanent house provides a sense of independence and stability for families who have experienced multiple displacements. It also represents physical safety, particularly to those who are vulnerable such as female-headed households. Although seen as contributing to indebtedness, owners see the permanent house as being less expensive to maintain in comparison to a house with palmyrah leaves for the roof, which needs to be changed every year.

The process of owner-driven housing also seems to strengthen ties within families. For example, the involvement of children in making decisions with regard to construction activities (i.e. painting the house) is indicative of familial cohesion. In general, the communities were satisfied with donor assistance, which, in many ways, is a catalyst to construct a brick house.

When we got housing we felt happy. But now, we are not happy as much as we were before, because we struggle to complete this house. If I build a house, children will be living a peaceful life and will be happy in future. If they did not give 550 000.00 grant

we would never have been able to build a house. It is a big support. Children are saying that they are going to plant flowers and paint the house. We (my neighbour (widow) and I) completed work quickly according their instruction. (Karthika, Mullaitivu, Female, 43)

However, in light of the support for housing construction and ensuing increased levels of debts, it is important to understand both the short-term and the long-term vulnerabilities due to possible indebtedness for the purpose of developing solutions. For instance, women are found to experience more stress from their debt than men. Since debt has an impact on health, family life and job performance, it is necessary to also study debt from a social angle (Dunn & Mizaie 2012).

Impacts of the ODHA schemes on beneficiary households

The findings shows that housing construction significantly affected beneficiaries' food consumption patterns. Families reported that construction had led to a decrease in the consumption of fruits and proteins such as dried fish, fish, meat, eggs and milk. This is also confirmed in the coping strategies adopted by the households that have commenced construction of the house. In comparison to families who are yet to commence construction of their house, households that had begun building confirmed that they have moved towards much less expensive food items, limited portion sizes, reduced dietary diversity, eat fewer meals a day with elders eating less quantities of food so as to provide for the younger members of the family. Additionally, providing meals to the construction workers made them even more vulnerable, since many had to borrow to feed the workers while struggling to feed their own children. During food shortages, some households adopt severe coping strategies such as skipping meals, combining meals — lunch and dinner, consuming leftovers from dinner for breakfast and prioritising the children and elderly. Under extreme circumstances, as Priya, a 37-year-old female noted:

‘We borrow food items from the shops, we have around 10000/= debt from grocery shop. If debt increases without repay they do not give things for debt. At such time we reduce our meal times’.

However, it would be unfair to attribute the changes in the beneficiaries' food insecurity purely to housing construction. Though housing construction could be understood as a catalyst, the lack of livelihood opportunities invariably affects households' vulnerability, driving them into a downward spiral. The marked decrease in donor assistance (possibly due to Sri Lanka's elevation to a Middle-Income Country), particularly the cessation of the World Food Programme's (WFP) dry rations programme, seems to have impacted families struggling to revive their livelihoods. The 'timing' of the housing programme also seems to play a role in beneficiaries' well-being. The housing programme commenced soon after the termination of WFP initiative. As such, a counter factor maybe that the observed food insecurity may not have existed had the WFP programme operated in parallel with the housing programme. Discussions with key

performance indicators (KPIs) also indicated that as a result of donor dependency individuals expect things to be handed out to them free of charge.

Meeting the expenditure for education is also a major challenge for these households due to increasing household expenditure. Despite the vulnerability and the impact of conflict affectedness, households prioritise education related expenses, because they view it as a way out of poverty. However, due to their limited income, they often have to look to alternative strategies for meeting expenses, such as borrowing money and seeking-in-kind donations from social networks.

Another impact of the exposure to severe conflict is that families incur higher health expenditure in relation to other comparable families that have not experienced war first-hand. Physical and mental conditions such as trauma, shrapnel wounds and disability need frequent medical treatment. Households have to borrow funds to meet such expenses. Critical and perhaps more specialised medical treatment requires travelling to distant, but well-equipped hospitals which in turn incurs high costs. As stated by many, families forego some of the crucial and necessary health expenditure as a result of excessive borrowing. However, foregoing necessary health expenditure may not be purely due to the housing construction, but rather to a combination of factors such as impact of the conflict and insufficient income.

Conclusion and policy recommendations

The recommendations (for government authorities and donors) that are stemming from this study include technical approaches to solving issues related to the indebtedness of housing beneficiaries, context-specific approaches in addressing most vulnerable groups and a prescriptive policy measure that goes beyond housing reconstruction and applies to post-war development in general:

Technical Recommendations

- Encourage implementing agencies to discuss with beneficiaries ways in which additional costs of housing construction could be reduced;
- Advocate the construction of houses with room for expansion at a later time period;
- Allow the option of 'joint-housing'.

Context-specific Recommendations

- Launch mandatory financial literacy and grant management programmes (in partnership with local banks) throughout the process of housing construction as prerequisites for receiving the grant instalments;
- Tailor owner-driven housing assistance to households that are deemed 'more vulnerable' in comparison to others (i.e. female-headed households and households with one or more disabled members);
- Revisit the definition of 'female-headed households' for the purpose of efficiency in the owner-driven housing process.

Overarching Recommendation for Post-war Stability

- Consult government (both national and local), private sector and other development organisations about creating sustainable livelihoods, an initiative that should move in parallel to the construction process.

At a conceptual level, this study contributes to the discourse on participatory development interventions in post-war settings. This study implicates the importance of understanding the interconnectedness of post-war contextual challenges that demand holistic solutions which facilitate a sustainable post-war rehabilitation environment for the affected. While participatory development interventions ('people's processes') such as ODHA are undoubtedly a preferred alternative to strictly donor-driven, top-down decision-making, balancing human aspirations (and resultant negative externalities — i.e. debt) and ensuring economic, political and social security for those recuperating from the wounds of war is a difficult tightrope walk for governments, donors, and other authorities that are assisting post-war reconstruction efforts. This study, while acknowledging that creating a stable and enabling environment for resettled families is a herculean task in a post-war setting, concludes by emphasising the importance of sustainable economic growth in the affected areas. The failure to create consistent income-generation opportunities in post-war areas may leave an already vulnerable population in dire circumstances under which their health and well-being are under tremendous strain.

Acknowledgements

The co-authors wish to thank the SDC for commissioning the study on which the above paper is written. This study is drawn from the study initially carried out by CEPA *Life and Debt: Assessing Indebtedness and Socio-economic Conditions of Conflict Affected Housing Beneficiaries in Jaffna, Kilinochchi and Mullativu Districts*. By Romeshun, K., Gunasekara, Vagisha and Munas, Mohamed. June 2014; Study Series No. 7, 2014. (ISBN: 978-955-1040-77-2)



Figure 194—Financial literacy training sessions run by HfHSL, funded by the EU.
(Source: HfHSL 2017)

22. No silver bullet: Can financial counselling help reduce indebtedness?

Vagisha Gunasekara, PhD, Senior researcher at CEPA ⁽⁹⁶⁾

Nadhiya Najab, Research professional, at CEPA

Munas Mohammed, Senior research professional at CEPA

Introduction to the study

Indebtedness in relation to housing programmes in the post-war north and east is a significant concern. A study conducted by the CEPA in 2014 found that approximately 85 % of housing beneficiaries of the SDC supported owner-driven house reconstruction programme in the North had unmanageable debt and over 50 % of them lacked knowledge about managing finances. But this has to do mainly with the absence of an equitable and non-exploitative financing modality and other reasons rather than the fact that it was owner-driven. As a response to this evidence, the SDC implemented a financial counselling module, specific to the housing process, as a way of maintaining low housing-related debt levels. The study method of the latter consists of a quantitative survey of 205 households in the Districts of Jaffna and Kilinochchi, followed by a qualitative study to further understand and triangulate the information gathered by the quantitative survey.

The conceptualisation of financial counselling

The financial counselling intervention was a three-pronged response to contain indebtedness. The SDC has identified that optimising the construction process by way of reducing construction costs, building houses according to a pre-determined size and features and raising awareness about financial decision-making (relevant to housing) as key to mitigating indebtedness and beneficiaries received advice on all three aspects as part of financial counselling. The main intended outcome of financial counselling is to minimise the amount/level of own financial contribution which is expected from the beneficiaries in addition to the upper limit of the grant set by the Sri Lankan government (LKR 550 000 for a 550 square-foot house). However, to complete the house, all beneficiaries are expected to contribute at least LKR 270 000 of their own funds towards the house construction.

There were also time constraints faced by the implementing organisation. Given the firm deadline for the SDC to phase out of Sri Lanka by the end of 2015, there was mounting pressure to complete all SDC housing programmes within the allocated period

⁽⁹⁶⁾ The Centre for Poverty Analysis (CEPA) see <http://www.cepa.lk/>

of 8 months. As such, the ‘theory of change’ of this programme posited that by shaping beneficiaries’ decision-making on house size and features, and advising them not to borrow funds at high interest rates, indebtedness due to construction-related expenses could be minimised and beneficiaries’ houses would be completed within 8 months.

Findings

General perceptions on financial counselling

First, the general sentiment among beneficiaries was that the SDC financial counselling advice helped them complete the houses successfully and in a timely manner. Much praise was attributed to the Technical Officers (TO) and the community mobilisers. TOs’ close attention to technicalities of the construction process, advice and emphasis on quality of construction and materials, multiple visits to monitor the progress and constant encouragement to complete the house (within the allocated time period) was deeply appreciated by the communities. TOs’ role was at times perceived as ‘policing’ as there was anxiety that the TOs would not release grant instalments if they were not satisfied with the progress in housing construction.

Implementing the financial counselling module was found useful by SDC staff for project planning and implementation purposes as the process of financial counselling helped them identify relatively more vulnerable households, which in turn led them to tailor the housing support according to beneficiaries’ context. While this may seem like a positive outcome of the process of financial counselling, it raises concerns about why the implementing organisation did not have a mechanism to identify vulnerable households previously. The identification of vulnerable households, particularly in a war-affected community should be a priority for any humanitarian or development organisation; and a process to do so must stand alone and precede all other interventions.

Did financial counselling contain indebtedness *vis-à-vis* shaping beneficiaries’ preferences on house size and features?

Financial counselling did not have the intended effect on beneficiaries’ choices on the size and features of houses. The two study samples (‘treatment group’ — one which included beneficiaries that received financial counselling and the ‘control group’ that composed of beneficiaries that did not) were evenly split between those who built houses that are bigger, and those who built standard houses. Similarly, there is no evidence to suggest that financial counselling shaped beneficiaries’ choices about housing features. For example, only about one third of beneficiaries who received financial counselling constructed a gable roof, which was the prescribed option. The proportion of people who built houses with roofs other than the standard was higher among those who did not receive financial counselling, but this difference is not statistically significant. Table 1 presents a few key findings related to house size and features of the treatment and control groups.

Table 6—Comparison of house size among treatment and control groups

Treatment: received financial counselling		Control: did not receive financial counselling	
Number of households = 135		Number of households = 75	
Average house size = 536 sq. ft.		Average house size = 543 sq. ft.	
56 % of the group built a standard size house Avg. house size = 473 sq.ft	44 % of the group did not build a standard size house Avg. house size = 616 sq.ft.	50 % of the group built a standard size house Avg. house size = 471 sq.ft.	50 % of the group did not build a standard size house Avg. house size = 616 sq.ft.
54 % in this group-built houses with a standard foundation (23 ft. by 21.5 ft.). Others built houses with a larger foundation.		59 % in this group-built houses with a standard foundation. Others built houses with a larger foundation.	
32 % in this group-built houses with a gable-style roof (prescribed). Others built houses with a hip-end roof.		37 % in this group-built houses with gable-style roof (prescribed). Others built houses with a hip-end roof.	

While the quantitative statistical analysis indicates no significant difference in house size among housing beneficiaries that received financial counselling and those that did not, testimonies from respondents in the qualitative component of this study indicate that financial counselling has had its intended effect in convincing certain households to construct according to the SDC standard sizes and features in many instances.

Did financial counselling help contain construction costs?

Given that a significant number of households in both groups did not adhere to the standard size and features, it is unlikely that financial counselling would succeed in containing construction costs. The average cost of building a standard size house was LKR 819 615, whereas the average cost of building a slightly larger structure was LKR 1 090 760. Those who received financial counselling, and built a standard house, spent an average of LKR 829 426, whereas beneficiaries who did not receive financial counselling but built standard houses spent an average of LKR 795 162 on construction. Even households that adhered to the standard sizes and features had difficulty in staying within the budget allocated for construction for each stage. This could be attributed to a number of unavoidable costs such as the impact of inflation on building material, increasing labour costs due to the shortage of construction labour that were beyond the beneficiaries' control and should be factored into budgeting for housing programmes in

the future. It is also important to note that the presence of such large-scale housing projects affect local market dynamics that may cause temporary spikes in the price of construction-related goods and services.

There are other costs, which are avoidable, but important enough that they cannot be ignored simply because they may be incomprehensible for implementers, who are mostly outsiders that lack the awareness of and the sensitivity towards the local context. During qualitative data collection, most respondents stated that building a house is a 'once in a lifetime opportunity' and that they wanted a solid structure made out of good quality material. In some instances, their choices to use better quality material drove up housing costs — such as using Palmyrah instead of coconut wood because Palmyrah is more durable. In the short-run, such decisions might be perceived as not-so-sound financial decisions by the implementers, but in the long run, it is in fact the better option. Such evidence nudges those in local and international development circles not to undermine people's indigenous knowledge and experience in building houses.

As such, the quantitative data of this study does not indicate a statistically significant relationship between financial counselling and construction costs. Only female-headed households, that were likely to have been closely monitored by TOs, completed houses within the estimated construction budget.

Did financial counselling help contain indebtedness?

In line with the findings on the ineffectiveness of financial counselling on house size and features, the survey found that an overwhelming proportion of respondents, regardless of whether they participated in financial counselling, borrowed funds for housing. On average, households that did not receive financial counselling have slightly higher amounts of debt (LKR 171 264), borrowed at slightly higher interest rates (12.05 %), in comparison to the households in the treatment group in which the average loan amount was LKR 159 712 and the average interest rate was 8.20 %. The slightly lower average loan amount of those in the treatment group may be that they have had more time to save or accumulate (in other ways) relatively more funds for housing in comparison to their counterparts in the control group that started construction much earlier. According to the survey data, households that received financial counselling had more financial assets in comparison to those that did not, whereas the latter had relatively more physical assets. It is possible that the longer time gap between resettlement and housing may have allowed households to save (albeit meagre) sums of money to invest in housing.

An important observation of this study is abundance of formal credit offered by banks, finance companies and microfinance institutions that have recently entered the Northern market. Offering attractively packaged loans, these institutions entice people to borrow without much hassle. Even though borrowers are well aware of high interest rates associated with such institutions, they choose easy 'access to credit' over financial costs. High interest borrowing from finance companies and banks is also related to the difficulties that beneficiaries face in obtaining housing loans from formal banking

institutions. Requirements of a standard loan application, such as getting two signatories/guarantors, showing sufficient collateral and a steady stream of income, were not feasible for most beneficiaries, who are trying to adjust to life after war.

Considering the plight of these communities that are now trying to establish stability in their lives after enduring nearly 30 years of war, it is surprising that no interest-free or low-interest housing loans are offered. The indebtedness of housing beneficiaries in war-affected areas as observed in this study urges the state and other non-state actors working in the area of post-war reconstruction to revisit the notion of 'access to credit'. The increasing financialisation⁽⁹⁷⁾ of development and the plethora of credit initiatives that accompany this phenomenon often fail to interpret 'access to credit' within a frame of justice. This results in standard credit interventions for livelihoods development, without much emphasis on market access for this new group of producers and entrepreneurs who have had to acquire new skills and start-over their lives. These interventions are conducted in a context of full-fledged neoliberal expansion, where financial institutions from Colombo proliferate without much government regulation in the Northern Province with the motive of capitalising on the untapped market.

Through financial counselling the SDC discourages beneficiaries from borrowing at high interest rates, their options of financing house construction are few given their low and inconsistent income streams. The desperate situation of people in war-affected areas pushes them to borrow despite their awareness of interest rates and consequences of defaulting on loans. The overall consensus among beneficiaries is that house construction left them with no option but to borrow.

The double burden of owner-built housing

The study found that the expectation of households' own contribution, both in terms of funds as well as labour invariably puts a double burden on the housing beneficiaries. While some beneficiaries preferred hired labour, others who contributed their own labour stated there is an opportunity cost of LKR 993 for each day that they spent on construction work.

As shown by previous studies (Romeshun et al. 2014), data from this study also indicates a strong relationship between the type of livelihood and household indebtedness, which intuitively carries validity in that a household is more likely to borrow in the absence of a consistent income stream. Over half of the respondents in this study stated that they engage in some form of casual labour (i.e. agricultural, fishing or non-agricultural casual labour) and their average monthly income was roughly LKR 18 000 per

⁽⁹⁷⁾ There is no consensus on the definition of 'financialisation' but broadly it refer to the process by which financial products increase in size and influence namely in areas such as housing.

month, which is less than half of the national average household income (LKR 46 000 ⁽⁹⁸⁾) and lower than the average monthly household income for the Northern Province (LKR 24 000 ⁽⁹⁹⁾). Households that depend on earnings from casual labour typically borrow for everyday consumption and they also tend to face difficulties in repaying the loans.

Conclusion and recommendations

The finding that financial counselling has not made a difference in addressing housing beneficiaries' indebtedness — underlines the reality that well-intentioned interventions such as the SDC initiative can do little to address circumstances that are deeply linked to the broader structural issues of the political economy of the North. In other words, the indebtedness of housing beneficiaries as observed by the SDC and other implementing agencies is intrinsically linked to the broader political economy of the North, which characterises big infrastructure, the ravages of the market logic, faltering incomes and the expansion of rural debt.

The government's reconstruction strategy for the North so far has been to rebuild infrastructure. Banks and financial companies were encouraged to provide credit, taking advantage of the expanded market of consumers. Furthermore, the reopening of the A9 highway resulted in retail businesses flooding the Northern market with consumer goods that are seen as novelties by Northern consumers. The heavy focus on large infrastructure has invariably taken away the importance of developing and roads to remote villages, providing small harbours for fishermen or digging wells and repairing irrigation tanks. The temptation caused by a plethora of consumer goods (i.e. household and kitchen appliances, motorbikes, etc.) with the opening up the Northern market has clearly made the population in the North go through a binge of consumption. The aggressive marketing campaigns of retailers offering instalment plans has lured individuals into a consumerist lifestyle in which they are making payments for products with savings and remittances. Credit used for consumption which is now common in the North, has led a community known for its tradition of saving, into a quagmire of debt, especially in a situation in which livelihoods have been disrupted by the lack of a steady income.

The recommendations (for government authorities and donors) that are stemming from this study include technical approaches to solving issues related to the indebtedness of housing beneficiaries, context-specific approaches in addressing most vulnerable groups and a prescriptive policy measure that goes beyond housing reconstruction and applies to post-war development in general:

⁽⁹⁸⁾ This figure is calculated by the Department of Census and Statistics and is based on the most recent (2012/13) Household Income and Expenditure Survey (HIES).

⁽⁹⁹⁾ This figure is calculated by the Department of Census and Statistics and is based on the most recent (2012/13) Household Income and Expenditure Survey (HIES).

Technical Recommendations for Implementing Organisations

- Introduce financial counselling to housing beneficiaries as it is a useful process to identify vulnerable households, their financial difficulties, and tailor housing support accordingly.
- Assess and estimate all unavoidable costs associated with the housing process, paying specially attention to prices increases in building material due to inflation, transportation costs and overall costs of labour (including meals for labourers) prior to implementing housing programme and financial counselling;
- Renegotiate with the GoSL to revise the maximum stipulated grant amount for housing, based on the aforementioned assessment of the revised cost structure.

Recommendations for policymakers

- With the support of the private sector, launch a systematic financial awareness campaign in war-affected areas to promote better financial management and responsibility among people;
- Convene formal private lending institutions to discuss interest-free loan schemes as a reparation mechanism for the people in war-affected areas;
- Consult private sector and development organisations about creating sustainable livelihoods, an initiative that should move in parallel to the construction process.

Acknowledgements

The co-authors wish to thank the SDC for commissioning the study on which the above paper is written. This is drawn from the study initially carried by CEPA *No Silver Bullet. An assessment of the effects of financial counselling on decision-making behaviour of housing beneficiaries in Jaffna and Kilinochchi*. By Gunasekara, Vagisha, Najab, Nadhiya and Munas, Mohamed. September 2015; Studies Series No. 9, 2015. (ISBN: 978955-1040-91-8) and, based on an article *No Silver Bullet: can financial counselling alone help reduce indebtedness?*, first published in the Economic Review; October-December 2015, published by the People's Bank.

Figure 195—Field Log book used to follow on construction progress and expenditure. (Source: Jaime Royo-Olud, EU 2013)

Improving Living Conditions in Returnee Areas of Sri Lanka through Housing

Field Log Book



This project is funded by the European Union,
the Australian Government and
the Swiss Agency for Development and Cooperation (SDC)
and implemented by UN-Habitat
in partnership with SDC

UN HABITAT

Reference No. : BAT / MNW / UNI / 0023

Name : V. Puvaneswary

GN Division : Unichchai

DS Division : Manmunai west

District : Batticaloa

23. Facilitating people's decision-making through financial counselling for housing: Experiences of the Swiss Agency for Development and Cooperation in Sri Lanka

Nimmi Ariyaratne, former programme manager at the Swiss Agency for Development Cooperation in Sri Lanka

If People's Process is putting people at the Centre of decision-making in development processes, then ODHA is a development process that embodies this principle. It has often been described as 'the most empowering, dignified, sustainable, and cost-effective reconstruction approach in many types of post-disaster situations.' (World Bank 2010, p.93). ODHA prioritises people-centred reconstruction that enables and empowers people to realise their full potential in constructing their own houses. Decision-making is done in a participatory manner from the inception, and people are empowered throughout the construction process to optimise their resources to a greater degree of satisfaction. A greater number of families can also be reached through limited resources using ODHA. All these would contribute towards making ODHA a prime example of how people's processes work.

However, for correct rational decision-making, people need to have complete and accurate information and the knowledge and skills to process and understand this information. This is where the implementer of ODHA has to play a role as a responsible and proactive facilitator, providing the necessary knowledge, information and capacities people need to make informed decisions during the construction of their own houses.

Recognising that many households lack the technical skills and knowledge to construct their houses, it is widely accepted that ODHA works best when the government or NGO/INGO implementing the programme, give specific technical guidelines and set minimum standards for houses that are to be constructed through ODHA using the grant money (World Bank 2010, p.94). While people benefiting from many of the ODHA programmes in Sri Lanka have the freedom to choose the plan and design of their house, they have to choose from a set of pre-designed plans, and have to ensure that the minimum standards recommended by the government are met (for example the house has to be at least 500 sq. ft. in size, have two lockable rooms, an indoor kitchen, and a toilet). There is not much flexibility to deviate from these minimum standards. Although these technical limitations to construction can be seen as 'curtailing' the people's choices, it is widely accepted by implementers, donors and the government that these minimum standards make ODHA programmes easier to standardise, monitor and complete on time from an implementer's perspective.



Figure 196—From temporary shelter to permanent housing: child from resettled family observes progress on the house being built through owner-driven-assistance by his family next to the temporary shack they currently live in (Photo: SDC)

The case for financial counselling in ODHA

Is there then a similar role for financial counselling during ODHA? The IFRC Guidelines for Owner-Driven Housing Reconstruction cite financial literacy as one of the key capacities fundamental for the success of owner-driven housing assistance programmes (ODHA) across the world. Basic financial literacy to manage construction finances is even listed first in the list of key capacities fundamental to a household's success in ODHA (IFRC 2010, p.74). Financial literacy is broadly defined as the ability to understand and make informed and effective decisions related to personal and household finances. In order to be functionally financially literate, a person has to have some basic financial knowledge and skills pertaining to purchasing, saving, and borrowing. Individuals and households with financial education are more likely to save, less likely to fall victim to fraudulent activities, and better able to make educated consumer decisions.

SDC வீட்டுத்திட்ட வேலைகளில்
மேலதிகமாக எவ்வளவு பணம் நான் பங்களிப்பு செய்ய வேண்டும்



1



நிறுவனப் பங்களிப்பு	பயனாளி பங்களிப்பு	
	மனிதவலு	பணம்
ரூ.550,000.00		ரூ.200,000.00



2



நிறுவனப் பங்களிப்பு	பயனாளி பங்களிப்பு	
	மனிதவலு	பணம்
ரூ.550,000.00		ரூ.300,000.00



3



நிறுவனப் பங்களிப்பு	பயனாளி பங்களிப்பு	
	மனிதவலு	பணம்
ரூ.550,000.00		ரூ.400,000.00

Figure 197—Poster showing how construction costs rise as ODHA-recipient households build bigger houses, requiring them to finance a greater component of the costs (over the grant amount of LKR 550 000) with own funds.

Many of the beneficiary households of ODHA in Northern Sri Lanka however are financially illiterate. A study conducted by the CEPA with SDC support found that over 50 % of assessed households in ODHA programmes in the North lacked basic financial literacy (Romeshun, Gunasekara & Munas 2014). Without the fundamental ability to be financial literate, can people make the best financial decisions related to the construction of their houses themselves? Economists confirm from across the world that there is a positive correlation between financial illiteracy and over-indebtedness, in both developed and developing countries. Over 2/3rds of the ODHA-recipient households surveyed by CEPA reported an average debt of LKR 150 000, and claimed their entire debt was due to housing. Over 50 % the households surveyed did not even know what the interest rate on their loan was or that interest rates were subject to change. Over 70 % of the households surveyed who were in debt stated that they were struggling to repay their loans due to the lack of income. The CEPA study finds that financial illiteracy was one of the key reasons for poor management of the grant money received and loans incurred amongst ODHA beneficiaries (Romeshun, Gunasekara & Munas 2014).

Findings from the CEPA study also indicate that a good portion of the housing construction-related debt was due to avoidable costs such as aspirations to build bigger houses with costly embellishments. Often these additional costs would be taken on without any prior planning as to how the household would finance them. As a result, households would find themselves resorting to quick 'reactive' borrowing through sources such as pawning to finance the unplanned additional construction costs, rather than 'proactively' planning their finances from the beginning. This can have serious financial implications, as one study points out 'unfortunately, for people operating at the margin, 'reactive' money management strategies can have severe repercussions when they deplete assets and/or place a future claim on income flows.' (Cohen & Sebstad, 2003, p. 8)

Financial Literacy is a broad term as defined above, and in order to really understand some of the key concepts behind interest rates, depreciation and yield on investments, one has to have a fairly advanced level of education and good skills in mathematics. In many of the areas receiving ODHA in post-conflict Sri Lanka, education was disrupted due to over 30 years of war. In such contexts, making people fully financially literate is a task worthy of a separate financial skills development programme of its own. Good financial literacy training can raise awareness among households about the significance of money and how to spend and invest it wisely. A good training should give households the basic skill set related to earning, spending, making a household budget, planning for the future, saving, investing, and borrowing prudently. In the absence of specific financial literacy training programmes however, can ODHA programmes essentially give people a 'crash course' in financial literacy, by giving them the financial awareness they need to make educated and effective financial decisions specifically regarding the construction of their houses?

Financial counselling for ODHA programmes: the case of the Swiss Agency for Development Cooperation

In response to the findings of high levels of financial illiteracy and over-indebtedness among ODHA beneficiaries, the SDC initiated a financial counselling module into the ODHA programme co-funded and implemented by the SDC in northern Sri Lanka. New recipients of ODHA are now provided basic knowledge about financial decision-making pertaining to the construction of houses. The beneficiaries are given guidance before beginning construction on how to manage their housing construction plans with available income and savings. The objective of this module is to increase basic financial awareness and to help beneficiaries avoid unnecessary spending on housing-related expenses. A four-step approach is followed with the goal of making households engaged in ODHA better able to make effective and informed financial decisions regarding the construction of their houses. The key elements of SDC financial counselling component can be summarised as follows:

Objectives of the SDC financial counselling component

1. Increase basic financial literacy to reduce the risk of bad loans.
2. Create awareness about the risks of indebtedness and ways to avoid unnecessary debt.
3. Make beneficiaries more aware of their household finances and repayment capacity.
4. Identify the financially weakest households in the programme at an early stage so they can be given extra guidance and support.



Figure 198—Main stages of the financial counselling offered to the SDC ODA housing beneficiaries

Creating Awareness: Group meetings are conducted from the inception and throughout the ODHA programme to remind beneficiaries of the housing costs, own contribution expected, and ways to cut costs/manage construction efficiently

- (1) Individual Counselling: At the time of the agreement signing with the SDC for ODHA, each beneficiary receives individual financial counselling with a technical officer of the SDC. The technical officer uses a simple housing expenses calculator developed by the SDC to help each beneficiary: analyse the costs of building their house; identify existing assets and resources they can contribute to reduce these costs; add up how much income and savings they can contribute financially towards their house; plan how much they will have to borrow, from where and at what cost, and reflect on whether any optional costs above the minimum construction standards are really required and affordable. To summarise its function, the calculator helps beneficiaries calculate ‘how much they have’ versus ‘how much they will spend’ through an interactive and participatory approach. At the end of the session the Technical Officer asks the beneficiaries to take time to rethink intentions to build bigger and incur optional costs.

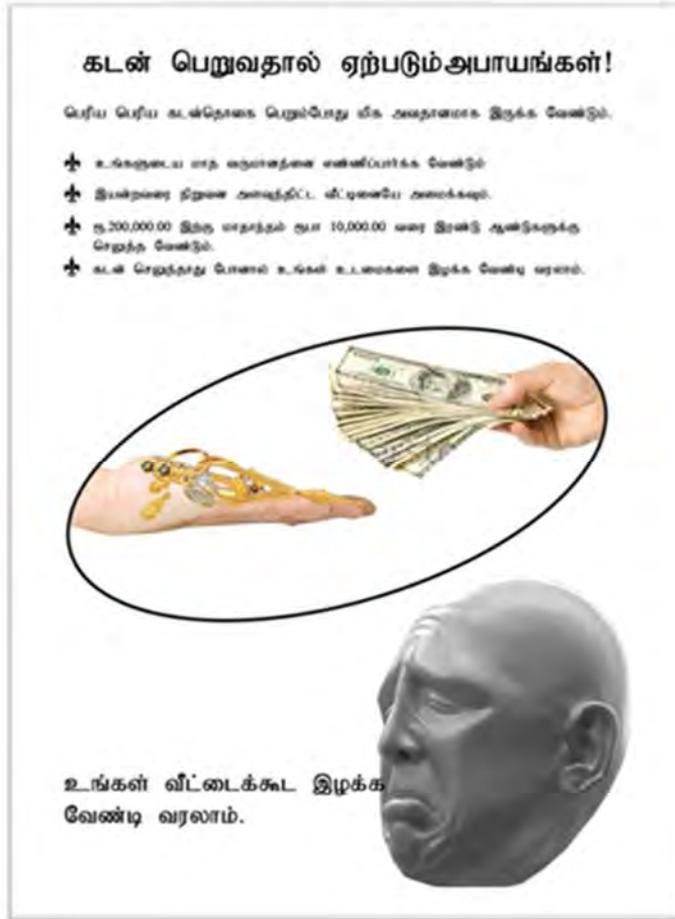


Figure 199—Poster displayed around village showing implications of unnecessary debt.

(2) Close monitoring and follow-up: Technical Officers visit each household regularly to follow up on construction. Beneficiaries keep track of expenses using simple bookkeeping. These are checked regularly by the SDC technical officers. Continuous monitoring of finances and expenses is ensured this way. Beneficiaries sign the financial plan prepared, and agree to stick to it. They also agree to let the SDC know in advance should they wish to make any different financial arrangement later on.

Extra support to vulnerable households: Individual financial counselling gives the SDC the opportunity to better understand the financial situation of each household. Those identified as most vulnerable (usually 10 — 15 % of ODHA beneficiaries) are given additional support in finding skilled labour and purchasing construction material. Their finances are also monitored more closely to prevent them from falling into unnecessary debt taken on under unfavourable credit terms

The results so far

In a short space of time (March 2014-March 2015), it has become apparent that introducing a financial counselling component as an integral part of ODHA shows results. Giving the big picture helps and facilitates people's decision-making: people make rational choices when the implications of their financial decisions are clear to them.

Case study

Ms X (beneficiary name has been withheld for confidentiality) is the head of her family. She has no steady source of income. She was selected to participate in the SDC ODHA programme for vulnerable conflict-affected households. A total cost of LKR 870 000 is estimated to rebuild her house up to the minimum government-recommended requirement. The SDC pledges to meet LKR 615 000 of this cost through a grant distributed in progress-based instalments. Ms X would have to meet any costs above this amount. During the financial counselling process, the SDC helped her identify her minimum costs and how she could reduce this through a labour contribution. Ms X was also asked what optional costs she wished to incur in the construction process. As seen in the first SDC housing expense calculator (see figure below), initially Ms X aspired to build a house larger than the minimum requirement. Her optional expense would have been LKR 260 000 if she had gone ahead with this. During the financial counselling process, Ms X was advised to think about her current income, savings and assets and list them. She was also advised on the risks of getting into non-essential debt without a steady source of income. While reflecting on what she had, Ms X came to the self-realisation that it would be more financially prudent to build a smaller house meeting the minimum requirement, instead of building a larger house and getting into debt. The second expense calculator shows her revised construction plan, requiring a smaller financial contribution from her.

SDC Housing expenses calculator			NEW HOUSE
Minimal requirements			
standard house with minimal requirements	quantity	Total LKR	ref SDC
		735,000	735,000
new toilet and septic tank		80,000	80,000
repair of existing toilet (soakage pit)		60,000	60,000
new well (only in V/East)		55,000	55,000
repair well (only in V/East)		20,000	20,000
Total cost minimal requirements		870,000	
Optional expenses			
additional living area in sqft (for new houses)	175	260,000	1,470
full external plastering			30,000
full sashes			40,000
1			
2			
3			
4			
Total optional expenses		260,000	
Reductions of costs			
labor contribution mason works		50,000	-100,000
own sand contribution			-20,000
1			
2			
3			
4			
Total cost reductions		50,000	
Total costs		1,080,000	
SDC contribution			
new house		550,000	550,000
new well		65,000	65,000
repair well			30,000
Total contribution SDC		615,000	
Own contribution		465,000	
Sources of own funds			
Assets/ savings	Interest	Total LKR	
Pawning of jewellery			
Bank loan			
Private loan			
total own funds			

SDC Housing expenses calculator			NEW HOUSE
Minimal requirements			
standard house with minimal requirements	quantity	Total LKR	ref SDC
		735,000	735,000
new toilet and septic tank		80,000	80,000
repair of existing toilet (soakage pit)		60,000	60,000
new well (only in V/East)		55,000	55,000
repair well (only in V/East)		20,000	20,000
Total cost minimal requirements		870,000	
Optional expenses			
additional living area in sqft (for new houses)			1,470
full external plastering			30,000
full sashes			40,000
1			
2			
3			
4			
Total optional expenses			
Reductions of costs			
labor contribution mason works		50,000	-100,000
own sand contribution			-20,000
1			
2			
3			
4			
Total cost reductions		50,000	
Total costs		820,000	
SDC contribution			
new house		550,000	550,000
new well		65,000	65,000
repair well			30,000
Total contribution SDC		615,000	
Own contribution		205,000	
Sources of own funds			
Assets/ savings	Interest	Total LKR	
		105,000	
Pawning of jewellery		100,000	
Bank loan			
Private loan			

Figure 200—Examples of template for calculating housing construction, repair and additional amenities expenses used by SDC (Source: SDC)

Lessons learned and recommendations

In people's processes, the reconstruction process places people at the centre, empowering them to realise their full potential, take part actively in all decision-making, and make optimal use of limited resources with a greater degree of satisfaction. In order to effectively do the above in ODHA programmes, people have to have basic financial literacy skills. In the absence of these skills, they are not able to make educated and informed decisions and make the most of limited resources to achieve the greatest degree of satisfaction. Furthermore, putting them in situations where they are forced to make financial decisions without first giving them the basic skills and competencies to do so, actually disempowers them and makes them more vulnerable to over-indebtedness and imprudent financial decision-making. In the case of households which are anyway poor and vulnerable at the inception, this is a dangerous situation to be in.

Furthermore, donor assistance for housing reconstruction is dwindling in Sri Lanka. To maximise aid efficiency, it is important to reach a greater number of people by optimising existing resources. Many of the households benefiting from ODHA in Sri Lanka are conflict-affected returnee families who have faced multiple displacements and loss of almost all assets and property. As a result, many of these households start building their houses with very little assets and income. In such a context of restrained resources, financial counselling is essential to facilitate people's processes and enable people to make informed financial decisions on how to spend their limited income.

As part of the SDC financial counselling for ODHA approach, a detailed one-on-one assessment of each household's initial financial situation is done at the inception. This enables implementers to recognise the most vulnerable families at the onset, and offer them closer support and additional assistance. Households also have different needs and capabilities which makes it impossible to successfully apply a conventional one-size-fits-all approach in ODHA. Identifying the most vulnerable through financial counselling will enable implementing agencies to take steps to provide additional technical support and close financial to vulnerable households which clearly require additional assistance to complete their houses under ODHA. From an implementer's point of view, this facilitates effective steering of the programme.

Given the lack of adequate social safety nets and low-income-housing credit facilities targeting poor and vulnerable households, many of the poorest households benefiting from ODHA really struggle to mobilise resources to meet additional expenses above the cost of the housing grant. The experience in Northern Sri Lanka has been that along with large-scale ODHA grants, there is also a rapid rise of labour and construction material costs, in line with normal market demand-supply rules. As a result of this inflation of prices, many ODHA households have to increase their own contribution either in terms of labour or money, to complete their houses on time. Financial counselling can help them consider cost-saving techniques such as bulk purchasing, and using alternative

construction materials, without compromising too much on their aspirations to build their dream house. The SDC experience so far shows that many ODHA beneficiaries decide to reduce optional costs when they realise how much exactly they must contribute, and how they would fall into difficulty raising it.

At the end of the day, financial counselling in ODHA becomes more like a customised consultation on how to build your house in a more cost-effective manner, with minimum debt. There is scope therefore for implementers to use the SDC experience in Sri Lanka as a model and integrate a financial counselling component into future ODHA programmes and provide financial information, advice and viable alternatives, in order to better facilitate people's participation and participatory decision-making.

References

Cohen, M., and Sebstad, J. (2003). *Financial Education for the Poor*. Washington DC.

International Federation of Red Cross and Red Crescent Societies (IFRC) (2010). *Owner-Driven Housing Reconstruction Guidelines*. Geneva.

Romeshun, K., Gunasekara, V., Munas, M. (2014). *Life and Debt: Assessing Indebtedness and Socio-Economic Conditions of Conflict-Affected Housing Beneficiaries in Jaffna, Kilinochchi and Mullaitivu Districts*. CEPA, Colombo.

World Bank (2010). *Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters*.



Figure 201—Government Agent of Kilinochchi (right) and District Secretary (left) comment on thermal comfort of CSEB model house built with the assistance of HfH and WV and funded by the EU. (Source: Jaime Royo-Olid, EU 2018)

PART VI OWNER-DRIVEN APPROACH AND HOUSING POLICY



Figure 202—Mason constructing IAY double-sized house with fly-ash bricks on top of laterite blocks in Banki, Cuttack district, State of Odisha, India. (Source: Prachi Acharya, 2017)



24. Systemic interventions to support the access of rural poor to safe and sustainable housing:

Awareness, action and advocacy by basin-South Asia platform for a responsive policy environment in India

Zeenat Niazi, Mona Chhabra Anand, Sireesha Patnaik with inputs from members of the basin-South Asia regional knowledge platform in India (www.basinsa.net).

Abstract

Building resilience in the face of increasing frequency and intensity of disasters has become a major challenge in the 21st century. People in South Asia, a majority living in rural areas, have to face this challenge in a context of large development deficits that aggravate their vulnerabilities. A durable, safe and sustainable habitat is a manifestation of a resilient society. However, shelterlessness has been a bane of our societies, and all South Asian countries are grappling with the multiple challenges of an increasing housing gap due to population pressure, poverty that reduces access of poor to quality housing and recurrent disasters that continue to cause large-scale damage to life and habitats. Increasing resource constraints leading to negative environmental impacts of development add to the burden.

This paper is a narrative account of the journey of the basin-South Asia platform in India to advocate for a national rural housing policy in order to facilitate safe and sustainable habitat for all in rural India and the movement in the policy environment as a result.

Background

In India, rural housing has been viewed by public policy through the lens of 'social housing' alone. The public sector in the first 60 years of independence focussed on financial assistance to the poor to build houses for a targeted poor and vulnerable population through the flagship programme/scheme called the IAY. The Yojna, one of the most popular public welfare schemes is also a highly debated scheme in its implementation. It has paid limited to no attention to the systems of materials and technologies, skills development, knowledge and related aspects that are necessary to ensure quality and durability of the assets being created. Despite policy intent to be 'homeowner'-led, the scheme has made no provisions to enable homeowners to build safe, durable and environmentally responsive homes.

Basin-South Asia — a regional knowledge platform comprising like-minded organisations from across South Asia working on issues of rural habitat — has promoted interconnected facets of environmental soundness and safety in construction through

appropriate technology, improved skills, local entrepreneurship, innovative financing and decentralised delivery of housing to respond to the rural housing challenge. The basin-South Asia platform, through research, demonstration, awareness building and advocacy, has worked with civil society, government and businesses in the last decade to bring forth the value of a 'systemic approach to rural housing' in India. This approach views rural housing as a sub-system of the rural eco-system. It acknowledges the diversity and disaggregated nature of rural settlements and the potential of the rural market. It builds on a fundamental understanding that rural housing is an incremental process and is closely integrated with people's aspirations for a better quality of life and social mobility. The approach recognises that we live in an increasingly resource-constrained, disaster-prone and interconnected world. New materials, knowledge and skills and innovative delivery mechanisms are critical components of the solution. While targeted assistance for the poor is necessary to enable them to access available solutions, sustainability of the delivery solution will require a much more integrated approach. Demand creation and ownership through credit support, local entrepreneurship, awareness and technical guidance along with necessary checks and balances in the forms of standards, and regulations need to be built in to create an enabling environment that promotes 'people's processes' for a safe, resilient and ecologically sustainable durable habitat. Finally, the approach promotes the setting up of systemic supports for addressing the deficit in quality and quantity of rural housing as essential for even the siloed and targeted social housing scheme to succeed in its aim.

When many decide to walk together off the beaten track, a new track is created for others to walk. A group of civil society organisations came together as the south Asian chapter of the basin (then building advisory services and information network) knowledge platform to lend their voice to express a collective sense of dissatisfaction with the manner in which the need for housing in rural areas was being addressed through the government machinery. Through action research and demonstration of good practice on the ground, members of basin-South Asia created evidence that has over the years provided a direction for the policy framework to develop systemic responses that would enable the rural poor to access quality housing solutions.

Addressing the housing shortage has been an important, as yet unachieved, target for the government and the people of India. On the one hand, there an ever-increasing housing gap with millions awaiting homes manifested in the 'permanent wait list' of village government, on the other, millions face losing homes constructed through personal toil and government support at the hands of disaster risk that has now become a reality for India. A look at the statistics validates this harsh reality. The working group for the twelfth 5-year plan of the Gol noted that 'at least 40 million people have housing

shortage in rural India.’⁽¹⁰⁰⁾ The housing shortage is estimated to have increased at the rate of 0.89 million houses per year during 1991-2002. The same report in addition estimates that about 10 lakh houses are lost to natural disasters each year. According to government figures, an average 20 000 houses are lost to natural hazards every year. Every year a population of nearly 50 million⁽¹⁰¹⁾ is affected due to disasters resulting from natural phenomenon that include earthquakes, cyclones, floods and landslides, amongst others, incurring an indirect economic loss of INR 15 billion. Not only India but all South Asian countries are impacted to a large extent due to geo-climatic, social and economic vulnerabilities. These, over the past decades have worsened due to evident impacts of a changing climatic regime.

Indira Awas Yojana (IAY): the predominant manifestation of policy intent

The largest single response from the government of India to the need for housing in rural areas has been in the form of the centrally supported national scheme of the IAY. Government attention to housing for the poor can be traced back to soon after the independence of India with a programme for the rehabilitation of refugees immediately after the partition. A formal village housing scheme was subsequently launched in 1957 as part of the community development movement. The national rural employment guarantee programme (NREGP), in 1980 and later the rural landless employment guarantee programme (RLEGP) in 1983 also had significant components on rural housing. In 1985-86, the IAY was launched as a sub-scheme of the RLEGP, and it was taken up as a sub-scheme of the *Jawahar Rozgar Yojna* (JRY)⁽¹⁰²⁾ in 1989. On 1 January 1996, IAY was finally delinked from JRY and made an independent scheme.

IAY is currently one of the most popular schemes of the government that is implemented across the country. In addition, similar programmes have also been instituted by various state governments specifically for addressing the housing needs of marginalised people in the state such as tribal families and specific trade communities. The key components of the IAY had remained more or less the same over the first 20 years of its operation with only token changes, primarily in the funding provided per household. The core essence of the IAY is cash support for a minimum shelter classified as *pucca* or permanent to identified and prioritised categories of rural families. It suffered (and continues to suffer) many challenges primarily due to a centralised procedure trying to fit a very diverse rural milieu. The decentralised character of rural settlements and

⁽¹⁰⁰⁾ Working group report on Rural Housing for the 12th Five Year Plan, (para 4.31, pg 86). <http://planningcommission.gov.in/aboutus/committee/index.php?about=12strindx.htm>, last updated November 22nd 2013.

⁽¹⁰¹⁾ <http://habitatindia.in/disaster-response/disaster-in-india/>

⁽¹⁰²⁾ A rural employment scheme

difficult-to-supervise-and-reach rural interiors with small numbers allocated per village made delivery unviable and district-level officers in many cases tried to ‘deliver houses’ through contractors, direct construction by village *panchayats*, asking NGOs to construct houses etc. Lack of clarity on what constituted *pucca* and how local traditional technologies and materials could be brought into the scheme resulted in standardised brick-and-concrete-box houses being promoted across the country, with homeowners dissatisfied on a large scale. No linkage with construction skill development meant that local skills and new potential skills and job creation were largely ignored. Cash transfers in a socially iniquitous society with leakages in the system resulted in massive corruption where the beneficiary households rarely received the entire grant entitled to them. Housing ‘assistance’ was interpreted at the grass roots as complete housing aid, so much so that governments at district and state level and many at the centre level have tried to force fit a ‘complete house’ in the minimal grant available, this resulted in inadequate space, compromised on specifications and quality and most significantly on safety. The IAY was also largely blind to natural-phenomenon vulnerabilities on people’s physical assets and in most cases the social housing scheme responded after a disaster to include reconstruction in its regime, not in the pre-emptive response by ensuring safety through structural strengthening, safer technology, improved skills, safe location and insurance. Another big challenge largely ignored over the first 20 years of the IAY was ecological response. The context of rural India was rapidly changing, availability and access to bio-materials, sands, soils and stone was reduced and or monetised, the local skill base was eroding, and aspirations were rapidly directing new construction to more energy and resource intensities making construction more expensive and unsustainable.

It is in this context that basin-South Asia members came together to address the rural housing sector as a whole and put forth an argument that rural housing as a sector needed to be looked at ‘systemically’ and that public investment and public-private-community partnerships were required to create support and services for enabling ‘all’ in rural society to access ‘safe and sustainable’ shelter. And, that guidelines, benchmarks and standards, skill base, materials and technology supply and knowledge and information base were essential in order to create the necessary ground conditions and that housing finance for rural households was key to driving demand, in addition to ‘grant assistance’ to the poor.

Towards a national rural habitat policy for India: a proposal to the government

A study of the then *National housing policy of India, 1998* revealed that there was a mismatch between the ‘spirit’ of the policy document and its interpretation in the field in rural areas as follows.

- The existing document, although very comprehensive, failed to address specific concerns of rural India: where more than 60 % of the population lived.

- It was biased to the needs of the urban middle class and did not offer any support beyond ‘grants’ to rural poor.
- It did not give any cognizance to the systemic perspective of rural habitat within the rural construction sector, thus did not establish any linkages with skills, materials supply, technical services, financing and local cultural, climatic and ecological contexts.
- It did not recognise the critical links between land, natural resource management and livelihoods of the poor within their habitats.
- Above all, it did not respond to people’s inherent strengths of entrepreneurship and self-help.

There was a clear need to relook at the national housing policy.

The network then embarked on a 3-year long journey of lobbying for a national rural-housing-and-habitat policy for India. The expectation was that the actions of all the stakeholders operating in the rural housing area should be guided by an overarching framework that did the following.

- Gave primacy to the owner and therefore did not merely look at providing a grant to those who were legally ‘below the poverty line’ but also the vast rural middle class that probably did not need the sops but certainly needed facilitative supports such as loans, access to sustainable materials, a skilled workforce and technical guidance to build homes that lasted.
- Recognised that disaster risk and climate variability in the context of a shrinking natural-resource base needs dedicated intervention to mitigate the vulnerabilities of the poor.
- Was inclusive and covered the needs of the entire rural populace as well as other stakeholders directly or indirectly engaged in rural-habitat development.

The aspiration was the development of a habitat policy that would go beyond a set of schemes to help the poor and respond to the changing context of rural India within a globalised as well as climate- and resource-constrained world. It would build upon the strengths of rural India and contribute to local rural development in a sustainable manner.

The groundwork began in 2004 with support from the BSHF, the United Kingdom and the SDC, basin-South Asia initiated a documentation of good practices to understand what works, why and how. The documentation, published in 2005 as *Participatory rural habitat processes: emerging trends*, popularly called the blue book⁽¹⁰³⁾ captured rural housing initiatives both in normal and post-disaster circumstances. In 2006 a *Framework for a rural habitat policy for India, responding to needs of the poor*, popularly known as

⁽¹⁰³⁾ Jain, D. and Niazi, Z. (2005). *Participatory Rural Habitat Processes: Emerging Trends*. DAG.

the red book ⁽¹⁰⁴⁾, written with inputs from the basin-South Asia community in India mapped strategic imperatives for a policy framework for rural habitat in India. The success of partnerships and solidarity in this process further animated the basin-SA platform to develop a draft policy proposal in a consultative manner. The understanding of systemic measures for a people-centric policy was converted into a draft policy document that was written over many sittings of the basin-South Asia India membership. This draft document was made available in nine languages to be effectively used in different parts of the country for public consultations. The poorest area civil society (PACS) programme of the DFID of the United Kingdom served as a large platform for the network to reach out to people in different parts of the country for consultations. With over 50 civil society partners, the draft policy proposal document was taken to 21 states, through village and district-level public hearings, state-level and expert-group discussions, incorporating views of *panchayats*, NGOs, banks, the corporate sector, habitat professionals, as well as district and state-level officials among other contributors. Three sectoral consultations on issues of finance, universal access, technology and post-disaster reconstruction were also conducted.

The voice of the civil society in many states received a good response from the state governments and some states requested for special sessions with their functionaries. The inputs received at the consultations were documented in written form as well as videos and regularly sent to the ministry of rural development through a nodal officer coordinating the working group on rural housing policy. A national consultation was held in May 2007, where countrywide inputs received from various stakeholders were presented formally to the GoI for integration into their initiative on the rural-habitat policy.

Supportive developments in the policy environment — some quick strides

In September 2005, the ministry of urban affairs and poverty alleviation that had the responsibility of revising the national habitat policy announced a draft of the first urban housing policy for the country. Although there was no mention of the rural habitat policy, a clear (eventual) distinction between rural and urban habitat policy concerns was highlighted.

In parallel, a process was initiated by the GoI to look into rural housing situation through an investigation of the rural housing programmes of the government by a standing committee on rural development of the fourteenth Lok Sabha (lower house) of the GoI. Basin-SA members provided both oral and written evidence to the committee

⁽¹⁰⁴⁾ Niazi, Z. and Anand, M. C. (2006). *Framework for a Rural Habitat Policy for India, Responding to Needs of the Poor*. DAG.

regarding actual success on ground and factors that were instrumental in the success. The members emphasised the need for policy support and facilitation to replicate the successes on ground. The 22nd report of the standing committee on rural housing tabled in the fourteenth Lok Sabha strongly recommends the formulation of a 'separate rural housing and habitat policy for India'.

The nationwide consultations resulted in the proposal to the GoI for the first national rural-housing-and-habitat policy. The document, presented to the GoI minister for rural development in December 2007, found its way into the files of the ministry of rural development and was used as a base paper to conduct consultations led by the ministry with state governments in July 2008. The working group on rural housing for the eleventh 5-year plan clearly recognised and put forth the need to formulate a national rural housing and habitat policy during the XI plan period, and a draft policy document which borrowed heavily from the civil society recommendations was put up on the ministry's website for public comments. The *Annual report of the ministry of rural development 2009-10* clearly indicated that they had embarked on the process of formulating a national rural-habitat-and-housing policy after due consultations with state governments. The draft document, along with several progressive and systemic recommendations, laid emphasis on 'environmental conservation and disaster resistance' and recommended the following steps.

- (i) Encourage the use of locally available materials, installation of rainwater-harvesting units and eco-friendly measures.
- (ii) Promote cost-effective and energy-saving technologies.
- (iii) Pay special attention to disaster-prone areas which have been identified by the vulnerability atlas of the country at varying intensities through the incorporation of disaster-resistant designs in house construction.
- (iv) Include disaster-resistant practices in all habitat and housing schemes promoted by the government as well as housing financial institutions.
- (v) Organise special training programmes for masons and *panchayat* presidents for hands-on experience in the construction of disaster-proof houses, cost-effective and environmentally friendly technologies.
- (vi) Designate regional nodal agencies to provide advice on disaster resistant construction practices.' (GoI, 2007)
- (vii) Encourage community-owned development for the mobilisation of processes involving different stakeholders as role players for habitat growth.

Meanwhile, the core group of basin-SA members engaged in this journey continued their work with rural communities, understanding their issues and searching for solutions. Thus continued to feed into the policy document as well as fuel the collective energy to bring about this framework that was already so close and yet far.

A focus on solutions for local governments: the Lok Awas Yatra, 2010-2012

From 2010 to 2012, the basin-South Asia knowledge Platform organised Lok Awas Yatra (people's journey for a better habitat): a series of learning journeys across India with the intention of building a deeper understanding of good practices in eco-habitat development of rural India, especially in relation to stakeholders involved in the actual delivery of housing and habitat solutions. Over 420 people travelled on fourteen small journey of 5 days each (trails) in five regions, north, south, east, west and central covering different geo-climatic zones, visiting over 60 habitat initiatives led by *panchayats*, civil society organisations and state social-housing programmes. The Yatra highlighted the enormous potential of rural India as a market for eco-friendly habitat development. It highlighted the need for technical-resource centres, local-enterprise-based solutions for making habitat goods and services available and the need to invest in institutional measures at *panchayat* (village government) and district levels for converging action and funds to respond to housing and habitat needs in a contextually relevant manner. Most of all, it defined the institutional measures and support systems that are critical to enable homeowners to be at the centre of a housing and habitat intervention. The Yatra clearly identified homeowners as 'customers', whether poor or rich, and the need for viable services of information, supply of 'eco'-materials and skills for safe construction and financing as key drivers for a safe and sustainable rural habitat. Two documents were the outcome of the Yatra *Understanding rural habitat-lessons in sustainability*⁽¹⁰⁵⁾ and a *Handbook on eco habitat for village panchayats*⁽¹⁰⁶⁾ and covered lessons from the Yatras (journeys) and present an analysis of the cross-cutting systemic measures critical for the proliferation of good practices covering environmental, social and economic sustainability in habitat development.

Checking the pulse on disaster-risk reduction — A study of the IAY in six states

A study⁽¹⁰⁷⁾ was undertaken by Unnati and Knowledge Works, both basin-South Asia members, during June. December 2012 to understand the successes and limitations of IAY with regard to perceived vulnerability to different natural hazards in the country. Through local partners, a random sample of 100 houses each (six states) were covered. Odisha to study resilience of IAY houses to cyclones and floods; Uttar Pradesh to understand resilience to floods caused by Ghagra River; Tamil Nadu to capture the impact

⁽¹⁰⁵⁾ Chopra, V; Anand, M.C. and Niazi, Z. (2012). *Understanding Rural Habitat-lessons in Sustainability*. Development Alternatives and RHKN.

⁽¹⁰⁶⁾ Niazi, Z. and Anand, M. C. (2012). *Handbook on Eco-Habitat for Village Panchayats*. Development Alternatives and RHKN.

⁽¹⁰⁷⁾ Anand, M.C. (Knowledge Works), Kapur, R. (Cohesion Foundation), (2011). *Strengthening Community Capacities on Disaster Risk Reduction in Rajasthan and Gujarat*. Evaluation Report; Unnati, May

of the south Asian tsunami; Uttarakhand to look at the possible impacts of landslides and Gujarat to understand earthquake safety of IAY houses. The findings of another independent study by the Centre for Sustainable Development in Himachal Pradesh were also integrated in the study. A total of about 600 houses were examined across the six states exposed to five different kinds of natural hazards. The field survey across the six states exposed to different disaster types unravelled some new facts and reinforced some that have been known for some time though not explored and established in a systematic manner as the pilot study. The study brought forward these challenges.

- Unsafe location of houses and homesteads of many IAY homes, especially exacerbated by the social vulnerability of the beneficiaries and a lack of guidelines to this effect in the social-housing scheme.
- Inadequate safety provisions in construction as a result of choice of materials and technologies, driven largely by aspirations not supported by knowledge and skills, often had detrimental impacts as the homes did not perform under stress, despite *pucca* materials being used.
- Lack of skills, knowledge and adequate finance resulted in inappropriate construction as support was not available at ground level even in areas where guidelines for disaster-safe construction have been issued, further highlighting the inadequacy of the delivery mechanisms at the state, district and ground level.
- Weak monitoring and evaluation system for the IAY was also evident. In parallel, the presence of a dedicated system for monitoring the quality of construction such as in Gujarat and Tamil Nadu was found to contribute immensely to the overall quality of houses especially with regard to the inclusion of safety features.

The pilot study with the small sample of houses highlighted the critical role of the institutional architecture involved in the delivery of social housing.

Systemic interventions for safe and sustainable rural habitat: Actions initiated by basin-South Asia members

Evidence collected over the last 10 years from the action and interventions led by basin-South Asia members and their partners clearly indicate (as captured in various reports and documents mentioned earlier in this paper) that systemic institutional measures will be required if 'safe and sustainable habitat for all' in rural areas is to become a reality. This will need structural reforms, the convergence of programmes at national and state levels and investments in supply, service delivery and demand creation all with 'people and nature at the core'. The evidence clearly indicates that such measures not only ensure that homeowners can be in control of their housing processes but are enabled to build safer homes in sync with the realities of a shrinking resource base and increasing weather unpredictability and extreme events.

Initial studies of the housing interventions by Gram Vikas, a basin-South Asia partner, clearly indicate that investments in safer construction led by people using

improved technologies led to far fewer fatalities and lower asset loss as a result of a natural disaster such as the super cyclone of 1999 ⁽¹⁰⁸⁾.

The DA team, another basin-South Asia partner worked with the Cooperative for Assistance and Relief Everywhere (CARE) and supported a local system of materials, technology and skills supply: the Ashraya Initiative with CORE, a civil society partner in the post Orissa super-cyclone reconstruction phase. Ashraya, popularly known as the building materials and services bank has continued to provide silks and materials for IAY and other construction activities including financed housing initiatives in coastal Orissa. Twelve years later, rapid assessments after Cyclone Phailin of 2012 indicate that housing created through Ashraya initiatives have largely remained unaffected and are robust, justifying the case for investments in technical know-how, materials and skills.

Gram Vikas ⁽¹⁰⁹⁾ was one of the first members of the basin-South Asia membership to discuss the idea behind the community-owned-habitat development. During one of their field experiences operating in the Ganjam area of Odisha, they came across a village which was totally wiped out due to a fire in 1992. Financial assistance came from the Council for Advancement of People's Action & Rural Technology (CAPART) as a grant for reconstruction of the whole village. Gram Vikas helped the community to rebuild *pucca* houses with a community-led approach where the materials were procured in bulk and construction was done on-site for all the households. This not only became cost-effective, but it helped generate income for the local masons. While the project was progressing, other villagers approached Gram Vikas for construction of their own houses. Subsequently clubbed with the rural health and environment programme (RHEP), Gram Vikas introduced the 'all or none' approach for construction of toilets, bathing rooms and piped drinking-water facilities in rural Orissa. Evidence indicated that this development of habitat led to enhancing dignity, reducing the burden of recurring expenditure, improving health, and augmenting local skills and incomes. The Gram Vikas experience further demonstrated that even the poorest people were willing to pay for what they came to consider as essential needs and services. They no longer wait for grants or subsidy-driven schemes to reach them.

⁽¹⁰⁸⁾ Facing Up to the Storm; Gram Vikas, 2000, chapter 7: Johnson, LT; Housing, Sanitation and Drinking Water: strengthening lives and livelihoods. <http://gramvikas.org/uploads/file/Housing-sanitation-drinking%20water.pdf>

⁽¹⁰⁹⁾ Based on discussions with functionaries from Gram Vikas, a not for profit organisation working in Odisha in the sector of habitat, education, health and livelihood development.



Figure 203—TARA Karigar Mandal (TKM) mason guild, Bundelkhand training in green construction technologies.

At this same time, the above experience was reiterated in Azadpura, a small village in Orchha in Madhya Pradesh where IAY funds (INR 14 000 per family) were used in 1995 for the *in situ* development of eco-friendly housing led through design and technical support by TARA Nirman Kendra, a building centre of DA but largely managed through community participation. This creation of customised houses, using alternative construction technologies, with the production of materials in the village and the upgrade of local skills was repeated in small ways across the county by various members of the basin-South Asia and other civil society organisations. This experience was repeated in the same region, in the village of Madore, where an additional component of credit and local skills through TKM (a cooperative of artisans collective trained in eco-construction) provided construction services to a community-led habitat development initiative. Madore village provided the initial lessons of a ‘systems approach to rural habitat’ and became a case example for the Madhya Pradesh state government in its endeavour to design a state-led housing social housing programme, the *Mukhya Mantri Awas Yojna* ⁽¹¹⁰⁾.

⁽¹¹⁰⁾ Madore Ek Ubharta Hua Gaon, the story of Madore www.youtube.com/watch?v=57ldGngpdd4 and www.youtube.com/watch?v=UfsjYNAYDK8: a quest for eco habitat

Another case of a community-driven approach to disaster management was shared by Meda Guru Dutt Prasad director, CADME, a basin-SA member based in Andhra Pradesh, India. The recurrent disasters due to cyclone impacts emphasised the need for preparedness to save lives and livelihoods in that priority. In their drill of understanding vulnerability and capacity building of the community they realised that *pucca* constructions (especially those that have a strong foundation) could be developed using local construction skills and these would save many lives in the case of a severe cyclone. The engagement with the community and their ownership of the process was established right from the assessment of vulnerabilities (see figure above). This led to solution development that was accepted by the families.



Figure 204—A typical village enterprise producing and supplying roofing tiles and providing a roofing service

Experiences of the DA group in Uttar Pradesh, Madhya Pradesh and Bihar and of Ashraya, building materials and services bank in Orissa to promote eco-construction technology based on local resources through the micro-enterprise ⁽¹¹¹⁾ route between 1990 and 2004 brought to the fore the potential of the market-based approach ⁽¹¹²⁾ to the delivery of housing products and services. Large numbers of small entrepreneurs were facilitated with access to credit, training and marketing support to produce and supply materials for roof and wall construction such as micro-concrete roofing tiles, concrete blocks, compressed stabilised blocks, fly-ash blocks etc. These entrepreneurs were able to service the materials and construction need of rural customers, many

⁽¹¹¹⁾ Roy, Subroto; Entrepreneur: Kingpin in Technology Promotion, DAG Newsletter, October 2001.

⁽¹¹²⁾ Heierli, Urs; The Market Creation Approach to Development: poverty alleviation as a business for the poor, <http://devalt.org/newsletter/oct00/lead.htm>

amongst whom are IAY beneficiaries, in a cost-effective and efficient manner, customising the service as well as payment terms to suit the rural client and in the process contribute to the construction of *pucca* shelters.

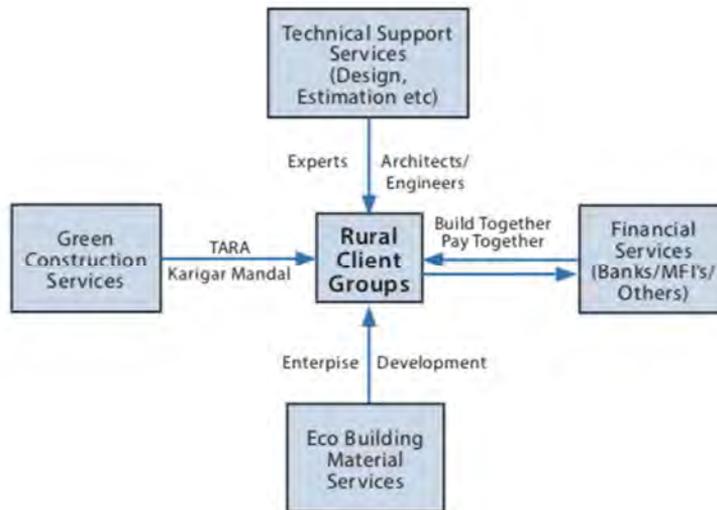


Figure 205—An integrated rural housing delivery model innovated and piloted by DA in Bundelkhand, Central India

Experiences of civil society partners, some of them associated with basin-South Asia in the aftermath of the Bhuj earthquake of 2001, provided useful lessons on homeowners driving housing. Large numbers of civil society groups worked directly in partnership with village communities to develop context-specific responses to reconstruction. In many cases ⁽¹¹³⁾, these responses included knowledge and skill building with respect to safe construction, eco-friendly technologies (upgrading traditional systems) and design, information and hand-holding support to families, artisans and material-production groups. The results were largely satisfactory. It must be noted that the Gujarat state government created a state-wide institutional structure that enabled technical, financial, legal and governance support to the entire reconstruction process. The civil-society initiatives benefited from this enabling environment. These lessons were sought to be replicated in Tamil Nadu and in Bihar in the post-tsunami and post Kosi-river-flood disaster. However, the results were not commensurate with efforts, better in Tamil Nadu than in Bihar. An analysis reveals inadequacies in institutional measures that facilitate information, knowledge, construction guidelines, standards and skill-building

⁽¹¹³⁾ Referring specifically to work led by Hunnar Shala and the Kuthh Nav Nirman Abhiyan, SEWA (Self Employed Women's Association) <http://kutchabhiyan.blogspot.in/2011/05/indigenous-housing-technologies.html>, <http://www.hunnarshala.org/>

systems supply of materials through local entrepreneurs enabling homeowners to take decisions and access desired solutions.

An innovation for the delivery of housing and sanitation in rural areas in Madhya Pradesh provides useful insights for ‘systemic measures’ that can be created at local scales and those that will assist homeowners to drive their housing construction with increased satisfaction. The model consists of key stakeholders coming together within the rural-housing eco-system. These are the homeowners as joint liability groups desirous of building new homes and toilets or extending/repairing existing construction, the financing agency which can be a local bank, a micro-housing finance agency or a combination of credit-cum-grant service (as in the Madhya Pradesh government), the local suppliers of ‘eco’ or environmentally friendly and *pucca* construction materials, local skills providers as in artisan groups and technical service providers (as in a local building centre) facilitated by the civil-society institution. All these stakeholders have a role to play and the model demonstrated in Madhya Pradesh shows a win-win for all thus bringing them together as partners and not beneficiaries enabling participation and decision-making and ensuring that ‘hand holding’ does not create dependencies ⁽¹¹⁴⁾.

Very recently, large-scale damage caused by unprecedented rain, cloud-burst and subsequent landslides in the northern state of Uttarakhand caused damage unimagined so far in history. It brought to focus ecological as well as technical responses to habitat and infrastructure development in fragile eco-systems such as the Himalayas. The National Centre for Peoples’ Action in Disaster Preparedness (NCPDP), a basin-South Asia member and DAG explored appropriate response options. The NCPDP engaged in demonstrating the solutions including training of local skill force in safe construction practices using local materials and improved technologies. With an aim to ‘build back better’, disaster resistant and sustainable more eco-friendly homes, involving the community are being constructed in Uttarakhand with focus on people’s convenience and comfort in construction technologies and designs. Rajendra and Rupal Desai from the NCPDP and their teams started with the seismic retrofitting ⁽¹¹⁵⁾ and restoration work on the existing stone buildings and gradually by gaining the confidence of the community, they initiated semi-permanent shelters which would last two winters and witness one monsoon and summer; giving way to a more resilient construction (from mid-term to permanent shelters). The community’s approval for construction of more permanent households simultaneously emphasised building up local skills to construct safer homes.

⁽¹¹⁴⁾ The ‘build together-pay together’ model with associated mason services through a guild, the TKM, linked to eco-construction materials from local entrepreneurs linked to credit designed and tested by DAG is now ready for roll out. http://webovatesolutions.com/tmp/fem_edit/da.html

⁽¹¹⁵⁾ See http://en.wikipedia.org/wiki/Seismic_retrofit



Figure 206—A semi-permanent house under construction in Uttarakhand

Small and significant steps on a slow and long road: recent developments in the policy environment

India still does not have a national policy on rural housing and habitat, but it is important that India should initiate one. While we do not yet have a comprehensive national rural-habitat-and-housing policy, a drafting process initiated by the ministry used the base of the document prepared by the basin-South Asia network partners in India. The draft policy was discussed within different ministries of the GoI and was put up for comments from the people by the ministry of rural development on its website for over a year. The process seems to have been abandoned mid-way by the ministry, although their directives to state governments for formulating state-level rural-housing policies have been sent out.

A significant intervention was made in 2011. The working group on rural housing (with inputs from members of the basin-South Asia network), for the twelfth plan ⁽¹¹⁶⁾ recommended systemic view wherein the social housing scheme without disturbing the status quo of the grant system (other than enhancing its outlay). This view re-emphasised the need for including safety measures and low-carbon, resource-efficient construction systems, a stronger skill base and knowledge support. It brought forward the need for and a system of easy financing besides grant support for rural housing thus bringing structural changes for the first time. It also recommended a more proactive and informed role of local government functionaries in promoting safe and sustainable rural habitat. Such recommendations were received from many other working groups, prompting the

⁽¹¹⁶⁾ Working Group of Rural Housing for the XII Five Year Plan, Ministry of Rural Development, Government of India, September 2011, http://planningcommission.nic.in/aboutus/committee/wrkgrp12/rd/wgrep_iay.pdf

government to develop a progressive XII plan document, wherein for the first time, substantial emphasis was put on 'low-carbon, sustainable and climate-responsive development strategies' and the non-plan component of the finance to states was enhanced, providing flexible funds for development initiatives by states.

Some of the recommendations in the policy proposal document have been put into action albeit in a piecemeal fashion and directed to 'only the IAY', and not for rural housing as a whole. Amongst these are, land for the landless so that the poorest do not remain bereft from their entitlement, a financing initiative that enables soft loans for meeting the gap between the available grant from the IAY assistance and the actual cost of construction and a knowledge platform to facilitate the information needs of local populations.

Some of the state governments have moved ahead, with Karnataka and Tamil Nadu increasing the assistance amount and Andhra Pradesh leading the way to go for a saturation approach and putting in place very strong institutional methods for constructing *pucca* housing using local building centres and microcredit for meeting the financing gap. Kerala led the way in people's participation within the umbrella of a poverty alleviation programme, Kudumbashree, that addresses social and economic development through women collectives. Gujarat set in place state-wide institutional measures not only for information and technical support but also for insurance and disaster-resilience training, as a very positive learning outcome from the earthquake of 2001. The Madhya Pradesh state government announced significant forward-looking measures in its state housing policy, with the introduction of credit to those not covered under the IAY, demonstration of eco-construction technology measures across the state and the setting in place a state-wide training programme of masons, besides sensitising government engineers and officials at the district level. They also set in place a mechanism to monitor and track each new house and connected the tracking with financing measures using IT and direct connection with homeowners using the mobile telecommunications network.

Another as yet unlinked piece in the puzzle is the RHKN, an initiative of the ministry of rural development. This is a recent initiative to collate and make available knowledge for safe and sustainable rural housing and habitat construction. It is designed to work as a portal providing information and knowledge to various stakeholders in rural housing: rural families, masons, small-scale building entrepreneurs, village *panchayats*, block and district administration, state and central government officials, voluntary organisations, architects, civil engineers, and financial institutions. In its initial days yet, the portal is gathering information, classifying it as per regional characteristics and trying to reach out to different stakeholders in innovative ways.

In 2013, largely in response to the national and global environmental challenges and pressure for greener, more sustainable development strategies, the ministry of rural development released its report on *Greening rural development in India*. The IAY as a

flagship social housing scheme of the GoI was identified to be brought under the purview of the 'greening agenda'. The policy intent for a 'safe and sustainable rural habitat' has again been emphasised.

In 2013, new guidelines for the IAY were issued. The unit assistance per household was substantially enlarged with a provision for subsidised credit as part of the XII plan. A component of management costs and costs for Information and education to create awareness was added with an expectation that this will enable better supervision and management, enhancing the construction quality and safety. The new guidelines re-emphasise that states should identify appropriate local/improved technology options and also set in place training systems for creating masons who can service the construction. Subsequent to the announcement of the new IAY guidelines, the department of rural development of the government of Gujarat has planned to promote the use of local housing material and technology with disaster-resistant safety features. It has now commissioned a study to come up with multiple local specific type designs for five pre-identified hazard zones covering Gujarat in its entirety. This initiative was conceived because of the regular interaction and dialogue between senior government officials and civil-society organisations working on social housing.

Conclusions and recommendations

The unit assistance available under IAY has been further increased by about 75 % to INR 70 000 in plain areas and INR 75 000 in hilly and difficult areas. 'Difficult', is defined as those areas where costs can go up significantly due to adverse geographic, climatic and geological conditions, as identified by the state government. Disaster-prone regions are not considered to be especially difficult. The increase has placed a huge financial burden on the exchequer and equally heavy moral pressure on the stakeholders engaged in this sector to ensure that the assets created are safe and to provide the owners with the necessary security. With the ever-increasing frequency and severity of disaster risk, a casual and non-committal attitude to risk resilience in new house constructions may further fuel an already losing battle.

Putting homeowners in the centre of a housing-delivery strategy that ensures, safe, sustainable, culturally and climatically responsive construction is not just a 'post-disaster response' need, it is an imperative for the social-housing sector as a whole to reduce disaster risk in the first place. Some of the critical steps that need to be taken to improve the disaster resilience of rural housing are as follows.

Addressing the sector as a whole in a systemic manner rather than only a segment of the population. The absence of a coherent and consistent framework that lays down priority actions for reinvigorating and sustaining the rural housing sector as a whole is clearly visible in the ad hoc policy attention in the form of the IAY alone. Although the latest guidelines indicate the intent of putting in place and promoting systemic

measures for information, knowledge, skill building, finance and the appropriate materials and construction technology; the integration of these is not clear.

Strengthening the role of local governments in both disaster resilience and community participation. The village government as the primary unit of integration and development has been given a constitutional mandate by the 73rd and 74th constitutional amendments. Managing disasters at the local level is one of the 29 subjects devolved to the local governments. Enough has not been done with respect to building up capacities of this institution to ensure disaster mitigation and guide disaster-resilient construction in the first place. A basin-South Asia member, Trust for Village Self Governance, developed a capacity-building methodology for village *panchayats* to ensure the safe habitat development. Clearly, a village government is first port of call to identify homestead sites for housing, check unsafe construction, aggregating local artisans for skill building, supporting local enterprise for materials production through land and infrastructure and leveraging technical resources for guiding homeowners ⁽¹¹⁷⁾.

A new menu of materials and technologies for promoting resilience as well as cost optimisation. The housing system exists within the dynamic realities of an increasingly resource-constrained, disaster-prone and interconnected world. Materials, knowledge and skills are critical components of the rural housing eco-system. For constructing the large number of houses that the country needs, it is important to look at innovative building technologies that are people based, environmentally friendly and have high performance standards. The choice of materials and technologies needs to be based on a fundamental understanding that rural housing is an incremental process and is closely integrated with people's aspirations for a better quality of life and social standing.

While, the targeted IAY guidelines highlight the need to use locally available materials, local skills, cost-effective and environmentally friendly technologies in order to reduce environmental impact and reduce costs, these are not reinforced in practice. It is important that not only homeowners but also service providers and monitoring systems understand what is meant by appropriate and cost-effective technology or reduced environmental impacts. This will enable quality and safety.

Strengthening and promoting local enterprise in materials and skills supply: There is a clear need to strengthen production systems and supply chain of appropriate building materials and technologies. This can be done by facilitating small-scale entrepreneurs as well as through building centres. Bringing in local market processes into play to service the needs of the rural society places social housing for the poor within the overall housing and habitat system. Local enterprise activity, for the production and

⁽¹¹⁷⁾ Niazi, Z. and Anand, M.C. (2012). *Handbook on Eco-Habitat for Village Panchayats*. Basin-South Asia, Development Alternatives and RHKN, September.

supply of materials and for building services, addresses all construction activity in the rural catchment. Rather than owner participation being an outcome, a market-based approach is 'based on' the homeowners' active participation in decision-making. Coupled with a robust information and knowledge support service, such an approach enables a family to access what it desires by creating an eco-system of services and supports within their reach.

Artisans as delivery agents as well as influencers: The role of artisans and their skills in the delivery of safe construction has been highlighted enough already. What is additionally and equally important is the critical role the mason plays in influencing different decisions of the homeowner with regard to design, choice of technologies, inclusion of safety features. The capacity of the masons as one of the most critical actors in housing delivery needs to be strengthened so that the mason can inform the homeowner on how to balance cost with structural performance and disaster resilience of the house.

Enhancing access to credit and linking it to disaster resilience: The experience of the last two decades, as also noted in the XI plan document, indicates that inadequacy of cash assistance for construction under the IAY has resulted in poor quality of houses and non-fulfilment of requirements in the disaster-prone areas. Bringing in easy and low-interest credit actually enhances family participation as they now become customers rather than beneficiaries and demand quality. To encourage families to avail of credit support and to banks to proactively lend to rural poor customers it is essential that a link with livelihood- and income-enhancement programmes is made. In addition, if credit is linked to 'safe and durable assets' this itself will drive disaster-risk mitigation in housing. Finally, the current chasm between the insurance sector and rural housing needs to be bridged. This is an area that needs a lot of ground research and continued engagement with the insurance sector.



Figure 207—Traditional homes in Mayurbhanj, Orissa. Can centralised IAY lead to strengthening rather than replacing the cultural aesthetic of our folk housing? (photo: Pankaj Khanna)

Disaster resilience as a measure of quality: What one does that measure, one does not address. It is important that vulnerability assessments followed by measures of disaster resilience are integrated in rural housing measures. Needless to say that a participatory process for is required for this to be internalised by the communities. Even within the social housing focus, the new guidelines fall short with respect to assessing, measuring and mitigating risks due to natural phenomenon. One of the biggest gaping holes is that ‘disaster resilience’ is not even in the list of items to be monitored for quality.

Acknowledgement

The authors would like to thank all members of the basin-South Asia platform (www.basinsa.net), especially those in India who have contributed to the learning through their work on the ground generously shared and or their continuous advocacy for an integrated approach to rural habitat development. Special thanks are due to Binoy Acharya and Joe Madiath for inputs to the paper as well as for inspirational learning to take forward the process of developing safe and sustainable rural habitats. We would like to thank UN-Habitat international conference (Restoring communities through homeowner-driven reconstruction: from post-emergency to development) for providing the opportunity to place this narrative on paper and publish it as part of the conference proceedings.

References

- Anand M. C., Kapur, R. (2011). *Strengthening Community Capacities on Disaster Risk Reduction in Rajasthan and Gujarat*. Evaluation Report, published by Unnati, May.
- Anand, M. C. and Niazi, Z. (2006). Framework for a Rural Habitat Policy for India, Responding to Needs of the Poor, Vol.-1, Red Book.
- Anand. M. C., Chopra, V. and Niazi, Z. (2006). *Understanding Rural Habitat, Lessons in Sustainability. Lok Awas Yatra*, 1st Edition; basin-South Asia Secretariat at Development Alternatives, September.
- Basin South Asia (2008). *Tsunami, Lessons for Habitat Development*, Edition 1; Development Alternatives, UNDP.
- Jani, D. and Niazi, Z. (2005). *Participatory Rural Habitat Processes, Emerging Trends*. Blue Book, Vol. 1; DAG, Building Social Housing Foundation; New Delhi, India.
- Niazi, Z, Anand. Mona C, (2012). *Handbook on Eco Habitat for Village Panchayats. Lok Awas Yatra*, 1st Edition; basin-South Asia Secretariat at Development Alternatives, September.
- Websites referred:**
- <http://planningcommission.gov.in/aboutus/committee/index.php?about=12strindx.htm>, last updated 22 November 2013.
- <http://habitatindia.in/disaster-response/disaster-in-india/>, accessed on 15 February 2014
- http://en.wikipedia.org/wiki/Bottom_of_the_pyramid, accessed on 20 February 2014
- http://en.wikipedia.org/wiki/Seismic_retrofit, accessed on 21 February 2014
- <https://picasaweb.google.com/115342880643253303468/JAITIVILLAGESEMIPERMHELTERCONSTRUCTIONTRAINING?authkey=Gv1sRgCNmW6fuO7PDfpwE>; the link is a photo album showing step-by-step process to construction of a Semi-Perm Shelter, accessed on 22 February 2014
- <http://www.taramachines.com/>, accessed on 24 February 2014
- [http://gramvikas.org/uploads/file/Housing-sanitation-drinking %20water.pdf](http://gramvikas.org/uploads/file/Housing-sanitation-drinking%20water.pdf): Facing Up to the Storm; Gram Vikas, 2000, chapter 7: Johnson, LT; Housing, Sanitation and Drinking Water: strengthening lives and livelihoods. Gram Vikas, 2000
- www.youtube.com/watch?v=57ldGngpdd4 MADORE EK UBHARTA HUA GAON: accessed on 28 February 2014.
- www.youtube.com/watch?v=UfsjYNAYDK8: a quest for eco habitat: accessed on 28 Feb 2014
- <http://kutchabhiyan.blogspot.in/2011/05/indigenous-housing-technologies.html>: accessed on 28 Feb 2014
- <http://www.hunnarshala.org/> (check Community Empowerment: accessed on 28 Feb 2014)
- http://webovatesolutions.com/tmp/fem_edit/da.html: accessed on 28 Feb 2014
- http://planningcommission.nic.in/aboutus/committee/wrkgrp12/rd/wgrep_1ay.pdf: Working Group of Rural Housing for the XII Five Year Plan, Ministry of Rural Development, Government of India, September 2011

Figure 208—Abandoned tile and brick factory at Uddusuddan, Mullaitivu district with enormous potential for reducing costs of construction in the North of Sri Lanka (Source: Jaime Royo Olid, EU 2018)



25. Enabling environment for housing in Sri Lanka:

from practice to a national policy

H. M. Dayananda, Consultant and Former General Manager, National Housing Development Authority, Sri Lanka

Abstract

During the 1980s, there was a paradigm shift towards private sector and community involvement and recognising the 'people's process' in housing. The role of the government shifted from that of a provider of housing to that of supporting, guiding and regulating housing development. A national housing policy was required to ensure that the several public-sector institutions and agencies and the private sector informal and formal actors efficiently harness the resources available and provide quality housing for all segments of the population including low-income groups. This paper builds on a brief history of Sri Lanka's housing policies since 1915, to then focus on the origin and main components of the 2012 national housing policy which is to be put into practice under the United National Front (UNF) Government.

Enabling People-Centred Housing

Prevailing trends in public housing policy centre upon governments withdrawing from the production of dwellings and facilitating private sector (formal and informal) initiatives and investments. The principles of devolution in decision-making and decentralised management, the active (people-based) contribution of all stakeholders (participation) and buildings relationships between different actors and partners (partnerships), result in efficient and effective delivery of public housing. However, for the private sector, communities and households to take on this responsibility they must be 'empowered' and 'enabled' by the government. Therefore, empowering and enabling become a central concern in this approach. The GoSL explicitly subscribes to these principles with the experience of implementing drivers, housing programmes and projects.

Government Policies in Housing

Housing forms part of the process of building human civilisation. In ancient Sri Lanka, a house was an outcome of a collective effort by the family. Construction methods were in harmony with the natural environment and closely tied to their simplicity in nature and lifestyle. The massive construction of *stupas* and *dagabas*, king's palaces, water tanks and the surviving ruins of towns are a testimony to the mastery of construction and human settlement planning in ancient times. The housing process in Sri Lanka remained mostly

a responsibility and the activity of the individual family, and later underwent colonisation induced changes in the economic environment and urbanisation.

The Housing and Town Improvement Ordinance introduced by colonial rulers in 1915 can be termed as the first state intervention in housing. It was introduced with the intention of guiding urban local authorities to regulate and plan building development activities. During the era of the State Council in the 1930s, massive irrigation schemes and colonisation schemes to counteract the problems precipitated by population growth marked the beginning of government interventions in housing and settlement development. Regulatory interventions, such as the Rent Restriction Ordinance passed in 1942, the Town and Country Planning Ordinance introduced in 1946 and the Special Areas (Colombo) Development Ordinance in 1947 are other examples of the initial steps taken towards state intervention in housing.

During the first two to three decades of post-independence (1950s — 1970s) the government's regulative role in housing continued. The construction of houses to cater to new housing demands was considered a government responsibility. In order to establish a 'home-owning society', successive governments became directly involved in housing provision for the people. A separate ministry and department for housing were established in 1953 and 1954 respectively. Housing schemes directly by the government with the support of newly established construction agencies commenced under the recommendation of the committee appointed in 1961.

During the 1970s a progressive housing policy giving priority to house ownership was adopted and several radical pieces of legislation were introduced to ensure this right, such as the Rent Act No.07 of 1972 and the ceiling on housing property law of 1973, which sought to facilitate the ownership of property by a larger number of the populace ⁽¹¹⁸⁾.

Recognising the 'people's process'

During the 1980s there was a paradigm shift towards private sector involvement and recognising the peoples' process in housing, as a consequence of restrictions imposed on state funding to the housing sector in previous decades. The role of the government in housing was transformed in to that of an enabler in response to the increased demand for housing. The government gradually abandoned the role of provider of housing and functioned as a guide, covering a greater number of families through housing programmes as well as moving towards housing solutions affordable to the beneficiaries.

⁽¹¹⁸⁾ Concurrent to the legislation on ownership of houses, two other important Acts were introduced during this period to promote multi-storey (flats) housing schemes — the Common Amenities Board Act No 10 of 1973 and the Apartment Ownership Act No 11 of 1973. Another development that was witnessed in the later part of the 1970s was the introduction of more legislation pertaining to the housing and related research and training institutions including the National Housing Development Authority Act, Urban Development Authority Act, Housing Rent Amendment Act, and Housing Development Finance Act.

Within this policy shift, encouraging the effort made by individuals and communities jointly to develop houses was recommended as basic components of state housing strategies. A keen interest was shown in providing community-based alternative housing solutions. Part of this process entailed the introduction of participatory development methods to fulfil housing requirements through joint approaches and strengthening grass-roots level people processes in housing. This enabling process was to later further develop into a public-private partnership in housing.

Public-private partnerships in housing

Fulfilling housing development responsibility through collaborations between the public and private sectors started to take place. It appears that the recommendations of the Presidential Task Force on Housing and Urban Development appointed by the government in 1996 were a major contributory factor in this regard. The guidelines and operational methodologies recommended by the Presidential Task Force came under six major areas of operations: urban development, physical planning, environment, human settlement development, water and infrastructure facility development; and are used as the foundation for today's urban development, housing and settlement development.

What had been basically outlined as recommended guidelines for housing and human settlement development were that the government should continue to play the role of supporting, guiding, and regulating housing development in the country. However, attention was also paid to the need for direct government intervention in meeting the housing requirement of those affected by relocation and getting valuable lands of underserved settlements released for urban development purposes, while working towards sustainable housing and human settlement development as declared in the second habitat conference held in Istanbul, 1996.

Another trend in the housing sector during this period was the encouragement of the private sector to cater to the housing demands of upper and middle-class income groups while the government directly intervened to introduce alternative housing development methodologies and allocate funds to meet the housing needs of the people of special income categories such as urban shanty dwellers, estate workers, fishermen etc., by respective subject ministries. However, it appears that limited attention has been placed on estate and other underserved sectors although legislation was introduced to facilitate the housing process in these sectors as well.

The need for a national housing policy

The Sri Lankan government's commitment towards meeting the millennium development goals (MDG) of a safe secure home for all, while in particular addressing the plight of slum dwellers and post-conflict reconstruction, have highlighted the need for a national housing policy. The country's estate sector settlements are comparatively in a

deteriorated state and the new generation expects a complete change in the line room system. A significant portion of the urban low-income communities live in underserved environments without adequate facilities. These areas are located in highly congested encumbrance lands which carry a very high development value, and accommodation consists of substandard housing which in some cases are located in environmentally sensitive and/or hazardous areas. These specific housing issues and demands need to be addressed in an effective and socially responsible manner, which helps meet the social and development needs of the populace. It is to this end that the national housing policy is being developed.

An overwhelming majority of houses constructed annually in Sri Lanka are built by the formal and informal private sector using family capital and savings and undertaking individual responsibility for the procurement process. Several public-sector institutions and agencies currently spread across several ministries are responsible for meeting the remaining housing needs, almost exclusively catering to the lower income groups. A housing policy is required to ensure that the national development goals are reflected in the shelter sector and supported by it. To this end the policy should address the sector as a whole to ensure the most effective and efficient use of resources, while at the same time ensuring protection and enhancing the well-being and productivity of all sections of the population.

Implementers of the national housing policy should embrace the support and controls to be developed by the government across the whole sector: all suppliers (public and private; corporate and individual; formal and informal) and consumers (urban, rural and high, middle, and low-income groups). Emphasis inevitably is given to the roles of public institutions and programmes in supporting those households and communities who are marginalised and excluded from the housing market as a result of poverty. The facilitating and supporting role the government plays should not be a passive role but a highly proactive role in the provision of enabling support. A comprehensive national housing policy needs to cover the issues of land, infrastructure, and finance and take into account the capacity of the building resources and construction industries as well as the capabilities and the aspiration of people to house themselves.

The national housing policy

In 2012, the then ministry of construction engineering services housing and common amenities initiated a national housing policy formulation and obtained cabinet approval on 18 September 2014. The *National housing policy framework* was drafted in consultation with relevant ministries and agencies engaged in the housing sector. In the process of policy formulation, the lessons learned from past housing initiatives and experiences and related policies and programmes were acknowledged. The policy was

also built upon recent inputs and advices from the consultative process and was opened to the public for their comments, suggestions etc.

The goals and basic objectives of the policy were developed based on the strategic approaches of supporting and developing the housing sector and direct intervention in assisting vulnerable groups in society. As part of the rationale for the national housing policy, particular emphasis is given to the role of public institutions and programmes to support those households and communities which are marginalised and excluded from the housing market as a result of poverty (Section 3, *National housing policy*) — more specifically Sections 4.3.1 and 4.3.2 of the national housing policy refer to poverty groups and informal income earners respectively, and strategic guidelines to provide the necessary housing for these groups.

Within the existing wide range of housing issues to be addressed collectively and to help understand the range of meeting points between the different sectors involved, the following trust areas were identified and strategic policy guidelines developed: 1. poverty groups, 2. informal income earners, 3. middle class, 4. high income groups, 5. rental housing, 6. urban land development, private investments and planning and management of condominium properties, 7. integrated infrastructure and services provision, 8. housing technology, standardisation of building materials supply and training and 9. housing finance.

The present situation and challenges

The national housing policy saw a change in government from the United People's Freedom Alliance (UPFA) to the UNF Party. An Action Plan was prepared for the policy prior to the change in government but the approved national housing policy was not put into practice due to uncertainty of the previous ministry and delays by the two intervening elections. Therefore, at the time of writing this paper, the policy needs to be updated with the vision of the present government. It also needs to address the emerging trends and priorities in human settlement development in the country.

The present government is committed to making future urban growth more equitable and inclusive while also taking into consideration the increasing trends of urbanisation and its management. Almost all the policy components and strategies outlined in the draft national housing policy have been tested and demonstrated in Sri Lanka in the past. The experience of their operations and effectiveness also exist. However, the issues of natural disasters due to climate changes (a now increasingly frequent phenomenon in Sri Lanka) must be reflected in the housing policy with the appropriate measures and directions. It is also necessary to encourage the utilisation of environmental friendly, hazard resilient and energy saving appropriate housing technologies such as green buildings and revise housing standards, planning and building regulations accordingly. The policy must address the housing sector holistically ensuring

the effective and efficient use of resources, and protecting and extending the well-being and productivity of Rural Urban Estates sections of the population.

However, these various components fall under the purview of different administrations, controls, traditions and values. The national housing policy should bring these components together to facilitate the production and maintenance of the housing stock, ensuring it meets the demands of the people.

The implementation of the strategic guidelines and programmes of the housing policy on a national scale is central to its success. Successful implementation of the national housing policy will require a high level of coordination between different ministries, agencies and programmes. It will also be necessary to identify a national level agency to fulfil these responsibilities and ensure the implementation in district, local authority and settlement level as integrated development programmes.

The Housing Census and Statistics in 2012 reflected the housing situation as a qualitative issue. However, the Central Bank of Sri Lanka estimated the annual housing demand around 50 000 units. The Presidential Task Force on Housing and Urban development appointed in 1996 projected that Sri Lanka's population would increase and stabilise at around 24 million by the year 2040. Accordingly, the total housing requirement will be around 6 million based on the average family size of 4. This would mean that a significant increase in the housing stock has to be achieved particularly in the urban areas to cater to this demand. Although the rural and estate sectors have seen quantitative increases in housing with gradually improvement, they remain at a comparatively lower level with regard to quality and adequate sanitation facilities. Improving the standard of housing provided and meeting housing needs of the country's communities are part of the challenges facing the the national housing policy.

Sri Lanka was the first country to adopt a national scale policy with the government enabling people to house themselves. This was a fundamental tenant of the Vancouver Declaration for the establishment of UN-Habitat. Sri Lanka's adoption and implementation of these policies has without a doubt resulted in better housing conditions of its poor compared to countries of similar economic status. However, a critical analysis of the policies is called for in order to make course corrections in light of the Transitional Agenda of the New government. A special consideration in this regard is the strategic positioning of the urban housing policy within the framework of new development policies, such as the Megapolis Plan for the Western Region which deals with the spatial transformation and structural transformation of the Western Region of the country and the National Economy respectively. As such, it is imperative that the national housing policy and the respective government agencies overseeing its implementation ensure that the needs of the low-income and marginalised sections of the populace and the people's process are given due recognition and importance in Sri Lanka's future development plans.

26. Balancing the scale of supply and quality of outcomes in participatory low-cost urban housing: Comparing innovations in the city of Ahmedabad, India

Anthony Boanada-Fuchs, Post-doc Researcher at the Centre for Metropolitan Studies, University of São Paulo, Visiting Post-doc Fellow at the Institute for European Global Studies, University of Basel

Abstract

The New Urban Agenda ratified at the Habitat III meeting in Quito in October 2016 clearly identifies ‘participation’ as a pre-requisite for sustainable and equitable development that leaves ‘no one behind’ ⁽¹¹⁹⁾. However, participation has long been an all-encompassing term requiring specification. This chapter discusses different forms of participation in low-cost urban housing supply modalities (i.e. in slum upgradation, slum rehabilitation, market-based and public low-cost housing projects) in the city of Ahmedabad, India. This city, in the State of Gujarat, has become in the last two decades a highly relevant geography for the study of participation in housing, as it has staged innovations such as the Slum Networking Project (SNP) and the affordable housing market. These have led to relative successes worth building upon. To discuss ‘participation’ and its wider implications, the author argues for first recognising its multi-faceted reality to analyse its actual depth. The author then proposes situating the characteristics of each approach within the particularities of institutional governance. This paper builds on research conducted during the author’s PhD at the Graduate Institute Geneva (2009-2015) involving over 120 semi-structured interviews with key stakeholders and an institutional analysis of the housing provision systems in Ahmedabad (Boanada-Fuchs 2015).

Introduction

International organisations have long engaged with national governments on improving housing conditions of the poor. To overcome scepticism about the cost of simply subsidising or providing housing to recipients who would remain passive, the World Bank and UN-Habitat (originally called UNCHS) linked their early generations of support programmes to the concept of ‘assisted self-help’. Proponents of the idea of self-help see people’s contribution as a way to making end-users proactive. Proponents of top-down supply saw and see today participation with apprehension. Yet, the diversity of

⁽¹¹⁹⁾See 14 a; point 9, 13 bc, 26, 31, 33, 38, 39, 41, 48, 61, 72, 90, 114, 139, 148, 155 also 125, 138, 140 and 156.

contributions through participation (e.g. in contributing towards improving informal urbanisation and slums) offer opportunities for effectively delivering complex solutions for the unmet housing demands (Abrams 1966; Magnin 1967; Turner and Fichter 1972). Instead of the common practice (by then) of obstructing or even destroying makeshift shelters, governments have been increasingly advised to institutionally support communities in their efforts. Slum upgradation and 'sites and services' projects implemented since 1972 (Cohen 1983) were built on such premises. Participation and empowerment became hence explicitly important elements in the first generation of urban programmes (Bhatnagar and Williams 1992) and a widely discussed topic in the 1970s and 1980s (Mitlin and Thompson 1995). The common view, was that participation, as opposed to more top-down and prescriptive approaches, could lead to greater empowerment (Nikkhah and Redzuan 2009) and even constitute a condition *sine qua non* for sustainable development (Lyons, Smuts and Stephens, 2001).

However, it soon became clear that participation was not a panacea on its own right for better housing programmes and community development. Conyers (1986) nuanced the merits of different ways of participatory community development by distinguishing top-down, bottom-up and partnership approaches. The Arnstein participation model took the argument further by suggesting an eight-level ladder that has been highly influential and adapted to the developing world (Choguill 1996). Numerous programme evaluations have showed that outcomes of participatory processes have not always been positive. Participation has often fallen short in delivering better housing solutions (Lizarralde and Massyn 2008) or in facilitating empowerment particularly when decision-making has been politicised or failed to be truly devolved (Gilbert and Ward 1984).

Slums and the challenge of housing: from global to local

No one questions that housing matters (Arku 2006; Tibaijuka, 2009) but whose housing-related rights ought to prevail and how to deliver is highly contested. The Global Financial Crisis of 2008 and its aftermath have showcased the competing roles of housing for families and communities as fundamental social assets and for international global markets as high quality collateral for investment (Aalbers, 2016). While the tension between housing as social assets and financial commodities has motivated national and local governments to intervene in housing markets, approaches have often been ineffective. In most parts of the world, access to affordable housing (and adequate for the bottom half) remains a distant dream for large parts of the population (UNCHS, 2003). The current housing access backlog, paired with rapid ongoing urbanisation trends (almost exclusively taking place in the Global South), calls for upscaling already successful responses to address the global housing challenge.

For more than two decades, housing policies in the Global South have been based on the policy paradigm of market enablement (Pugh, 1994). After the project-based urban assistance programme of the 1970s⁽¹²⁰⁾, the UN-Habitat and the World Bank shifted, in the context of declining national fiscal resources, their focus towards more structural reforms including policy change, institutional development, private sector involvement, and technology transfer (Sumka 1987, 173). Developed in the course of the 1980s and in line of the Washington Consensus, enablement policies aimed at convincing national governments to stop constructing housing units themselves and take the role of institutional enabler. This role was best achieved by providing beneficial regulatory environments for market- and civil-society-based housing supply. The results of implementation attempts have been modest (Cohen, 2001). Governments often decided to outsource housing supply responsibilities. But in the absence of following up on legal and regulatory reforms, this transfer of responsibilities failed to make housing for the urban poor attractive for real estate markets and investors. The learning-by-doing approach of the international organisations (Cohen, 1983, 93) did not pass the pilot project phase and thus was insufficient in relation to housing demand. As a consequence, market enablement largely fuelled the proliferation of slums instead of preventing them.

Adequate and affordable housing remains one of the key development challenges for the 21st century as reflected in the New Urban Agenda approved in October 2016 in Quito, and the sustainable development goals (SDG) ratified in September 2015. While it has been acknowledged that real estate markets must be liberated from institutional bottlenecks, lengthy administrative approvals, restrictions on access to investment finance, land disputes, access to construction materials, availability of qualified labour, etc. the same international organisations stress the importance of bottom-up and participatory slum upgradation. With almost 1 billion slum dwellers in the world and large concentration of poverty, housing solutions need to be found that correspond to the specific demand of the target population. The call for 'people-centred housing' is not new (Abrams, 1966; Magnin, 1967; Turner, 1977) but has so far failed to produce results at the required scale. It has been even argued that slum upgradation possesses inherent bottlenecks that prevent projects from scaling up (see also Cohen, 1983; Werlin, 1999).

To assess the housing challenge, therefore, it is essential to look at available numbers. While there is a globally-agreed definition of slums (UNCHS, 2003; 2006), it is not always applied in national efforts of data collection. In India, the UN estimate in the

⁽¹²⁰⁾ During the 1970s, international housing policy was based on the idea of public assistance which acknowledged the merits of the informal sector (Buckley, Kalarickal, and Buckley 2005, 235). The World Bank rejected blue-print solutions for social housing programmes from Western countries and extended loans to national countries for the creation of housing programmes based on the idea of self-help and the principles of financial viability and cost-recovery (van Lindert 2015, 253f).

year 2000 was three times larger than the national census numbers estimate (2001). And it still differed by 38 % or 39 million in 2011 (Gol, 2013; UN-Habitat, 2012). As per 2014, there were an estimated 863 million slum dwellers in the world that largely concentrated in the developing world: the slum dwellers of China and India alone represent a third of the global total. In India, a total of around 100 million slum dwellers is rather unequally distributed among its states: Gujarat is the seventh largest Indian state but has only 1.68 million slum dwellers (Census, 2011).

Ahmedabad housing needs

Zooming to the city level yields more detailed and reliable information. The municipal corporation of Ahmedabad differentiates between slums (notified and non-notified), *chawls* (an old house type concentrated in the city centre), and other housing forms of slum-like character. The slum population amount to almost a million people (18.3 %) while another 745 000 live in *chawls* (13.4 %). The 'other slum-like houses' add another 1.67 million or 30 % to the total count. In other words, more than 61.3 % of the 5.57 million inhabitants of the city are inadequately housed. Translated into a housing demand, a total of 357 000 new housing units (to cover natural growth, over-crowded or obsolete houses, and non-upgradable slums) need to be constructed, while 339 000 slum and *chawl* structures require upgrading (for a more detailed discussion, see Boanada-Fuchs 2015, chap. 6.1.2).

To keep the national 'Housing for All 2022' promise, the government of Gujarat needs to assure that the housing stock grows by 55.5 % between 2012 and 2022. This translates into a supply output of 6.41 new and 6.08 upgraded units per 1 000 inhabitants per year. These are ambitious high targets never achieved in India before. Housing supply never surpassed the threshold of 3.0 and reached as low as 1.4 during the 1960s (Boanada-Fuchs 2015, chap. 4.1 based on census data). Ahmedabad's Slum Networking Project discussed below managed to cover 41 slums with 8 703 households and 43 515 people (28 slums completed and 13 in progress; Ahmedabad Municipal Corporation (AMC) and Ahmedabad Urban Development Authority (AUDA) 2006, 76) ⁽¹²¹⁾. This project alone represents a contribution to the delivery rate of only 0.00016 per 1 000 inhabitants. The question arising here is whether such people-centred housing provision can be up-scaled and accelerated to meet the 2022 targets? Or must they remain small and slow to be manageable and not compromising on their quality?

⁽¹²¹⁾ Afterwards the initiative stagnated (45 in 2010, 47 settlements until 2012; interview with official of the SNP cell on 25.04.12).

Different Supply Modalities: people-centredness, strengths and limitations

To answer the question of the speed and scale of people-centred housing provision, we need to situate them within the wider and overarching system of housing provision. The range of housing options available to residents in a city, are produced by different supply modalities of which each has its relative strengths and limitations in comparison to the others. Putting people-centred housing solutions within a wider supply context, raises the fundamental question on what does participation in people-central housing processes actually capture that other more top-down projects do not? Following the Arnstein model 'empowerment represents 'the highest level of participation' in which community members demonstrate actual control of the project and influence the process and outcomes of development' (Lizarralde and Massyn 2008, 1). This notion does not only propose that people should be central in deciding upon the nature and manner of a housing project for the sake of it, but rather that people or rather the relevant community structure has reached the ability to make 'informed choices'. In order to better operationalise the abstract model of participation, we may discern decision-making on the level of (i) use of land, (ii) project planning, (iii) permits, (iv) finance, (v) demand, (vi) construction, and (vii) maintenance.

(a) Slum Networking Project in Ahmedabad

The Slum Networking Project was introduced in Ahmedabad in 1994 and since then won several accolades ⁽¹²²⁾ for its resource-sensitive and participatory approach in delivering infrastructure to deprived slum dwellers (Das and Takahashi 2009; Parikh 2011). The Slum Networking approach was developed by engineer Himanshu Parikh first in Indore and then Vadodora before a pilot project was launched in Ahmedabad. The basic idea of the SNP was to make use of the slums' topography (often built on low-lying areas) to connect them with the city drainage system through cost-effective gravity-based solutions. The environmental improvement, paired with extending tenure security, would boost personal investment and transform slums into healthier and better integrated urban neighbourhoods.

In Ahmedabad, Parikh acted as initiator, partner and developer of the pilot SNP. In its initial configuration, the SNP was based on a balanced collaboration of different stakeholders: the AMC as the public agency, a local company (Arvind Mills) as a corporate capital and implementation partner through its public charitable Sharda Trust and the slum dwellers community as a capital partner, tax payer and in charge of local maintenance. Saath was the NGO looking after community inputs with respect to health and education and SEWA provided the microcredit facilities to the slum dwellers for their

⁽¹²²⁾ The Dubai Award, the 1994 World Habitat Award and the Aga Khan Award for Architecture.

capital contribution to the project. The three main stakeholders (local government, private company, local community) would equally share the costs with a clear division of tasks was key to the functioning: the AMC delivered the infrastructure trunk lines while the private company and slum dwellers implemented all other works. The NGO was in charge of organising the community, disseminating information and raising the funds from the participants, who would also be in charge of the maintenance (for more information, see Tripathi 1998).

Table 7—Different levels of participations in the SNP modality

Slum Networking	Land	Planning	Permits	Finance	Demand	Construction	Maintenance
Organisation	Com		Gov	Community		Gov*	Com
Decision-Making	Gov	Com*					
Implementation		Gov**					Gov/Com

* limited options, ** initially conceptualised as community based; Com (Community), Gov (government)

Under this arrangement, the pilot SNP in Ahmedabad was implemented fast and successful. Slum dwellers upgraded their shelter from shacks to *pucca* (i.e. solid) houses increasing almost 30 times the original investment in infrastructure. Despite the pilot's capacity to mobilise end user resources and efforts, the SNP was discontinued, due to institutional frictions, not uncommon to trans-sectoral initiatives. Frictions arose particularly between the private partner and the AMC due to differences in working speed and information management that ultimately led to Arvind Mills leaving the SNP.

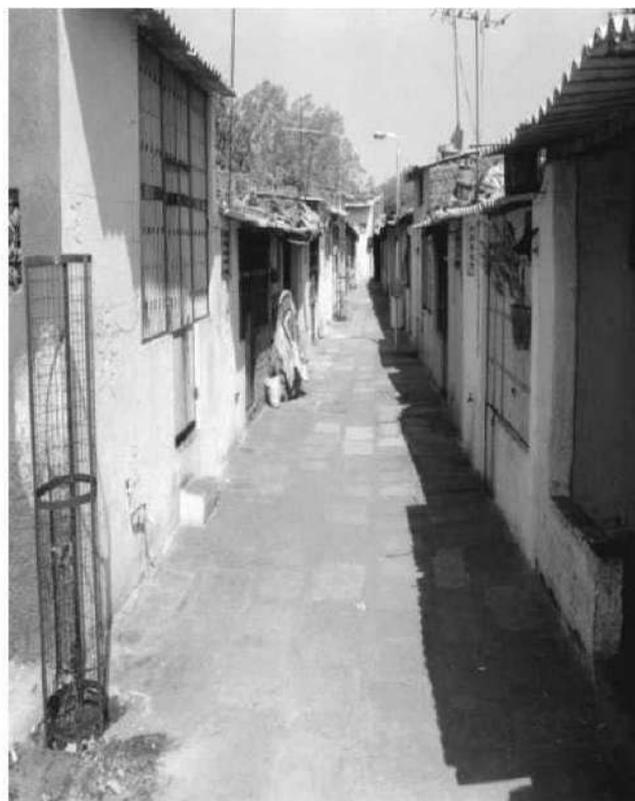
The programme then transformed under the new name of Ahmedabad *Parivartan* (meaning change) into a far more centralised institutional structure. The Municipal Corporation took over the planning and implementation control from the other partners and SEWA became the principal NGO for the micro-financing of the community. Contrary to the more genuinely participatory pilot SNP, the later Ahmedabad *Parivartan* lacked the depth in terms of participation and engagement resulted in a more typical government supply-driven project. Under *Parivartan* and in a bit more than 10 years, 41 slum settlements were covered benefitting more than 43 000 people⁽¹²³⁾. Despite the large extent of achievements with modest financial contributions, it is considered that the implementation of slum upgrading was slow overall. It was limited by the NGO capacities and by progress in savings made by the community. Furthermore, negotiating tenure security was often cumbersome, lengthy, and increasingly met with hostility by the city administration who perceived upgraded slums as not fitting with the aspirations

⁽¹²³⁾ See UN-Habitat best practices list: http://mirror.unhabitat.org/bp/bp.list.details.aspx?bp_id=1762

of a global city (see Ghertner, 2011). This raises the questions of the extent to which bottlenecks to implementation were mainly political and institutional.

On the institutional side of the pilot SNP, the slum communities were generally organised by an NGO in order to negotiate tenure security with the municipal corporation. Saving schemes were set up per lane, after which participants who decided to join the scheme followed a micro-saving plan while agreeing on the desired infrastructure package from a catalogue of options. The SNP can be seen as people-centred in five of the seven dimensions. Another advantage is that there are no geographic limitations to slum upgradation as long as tenure security can be secured. Under the *Parivartan* programme, community-based implementation was quickly abandoned in favour of tender-based contracting of construction companies. Only the maintenance was assigned to the slum community.

Figure 209—Spatial qualities resulting from the SNP: before and after.
(Source: Mahila Housing Trust)



(b) Market-based Low-cost Housing

In India, demand for housing by the poor and most of the middle class was insufficiently met by government programmes and broadly ignored by market actors, which contented themselves to construct housing to the affluent households (Mahadeva 2006; Sivam 2002). This situation only recently started to change caused by an increasing market saturation that pushed developers to venture into new niches. The first reported example of market-based low-cost housing in India has been initiated in 1980s by a local developer enabled by several informal arrangements that helped to cut costs and increase investment security. The attempt by the government to formalise such arrangements failed and disabled such mechanism. Ultimately, this led the developer to leave the low-cost housing market niche and move up-market seeking demand (Mukhija 2004).

Table 8—Different levels of participations in the market-based low-cost housing modality

Market Supply	Land	Planning	Permits	Finance	Demand	Construction	Maintenance
Organisation	Dev	Com/Dev	Dev	Community	Developer	Com	
Decision-Making	Gov		Gov			Com/Dev	
Implementation		Dev	Dev				

Com (Community), Gov (government), Dev (Developer)

Some years later, the Mahila Housing Trust, a subsidiary of the local non-governmental organisation SEWA, decided to venture into the construction of low-cost housing affordable to slum dwellers. Ashoka⁽¹²⁴⁾, an international NGO, introduced Mahila to the developer Vintron to create a project for the 'bottom of the pyramid' (BOP). In the Swapna Shrihti project, the NGO organised the demand, worked with end-users to design housing units and arrange their financial contributions. The developer would execute the works and oversee all financial and administrative decisions of the housing project. The initial idea of creating an equal joint venture (same capital involvement, risk and profit sharing) could not be realised due to the lack of funds of Mahila (The Hilti foundation that supported Ashoka has a policy to not directly financially support initiatives).

⁽¹²⁴⁾ The 'Housing for All' Initiative was launched by Ashoka in 2008 and received support by the HILTI foundation. Their projects focused on Colombia, Brazil, Egypt and India and aimed at enhancing affordability of housing markets. The initiative aims at bringing together developers with organisations of the civil sector. The division of tasks was clear-cut: the developer provides land and organizes the constructions, the NGO organizes the community, and the financial institution extends its finance.



Figure 210—Market-based low-cost Housing at the south-eastern periphery of the city
(Source: Anthony Boanada-Fuchs, 24 May 2011)

Several problems emerged in the collaborative project. Many slum dwellers had to drop out of the project as they could not afford the saving scheme. Tension arose between the NGO and developer because of different working habits on the issue of sharing information and decision-making. While Mahila and Vintron discontinued their low-cost housing projects, a new developer (Development Bank of Singapore (DBS) Communities, also supported by Ashoka) emerged that institutionalised the market-NGO-slum community networks by creating a knowledge and exchange platform on affordable housing. Several projects have been realised and many more are currently under construction. From 2008-09 onwards, other developers started to venture into the affordable housing market segment. While there is a great similarity in project design (large-scale projects in five-floor type at the mostly Eastern urban periphery), these projects differ in institutional arrangements with little or no involvement of an NGO. What can also be observed is a reorientation from the lower income to the middle-income demand (Boanada-Fuchs, forthcoming).

(c) *In situ* slum rehabilitation

In-site rehabilitation is the third supply modality for affordable housing solutions. Such projects provide new housing units to slum dwellers on-site and based on a partnership between the government and a developer. Following the Mumbai model, the basic idea is to use land value capture to entirely cover the costs of the affordable housing units

(and much more). In practice, developers build dense housing projects for eligible slum dwellers which liberates much of the formally squatted land for other uses. The profits made by resale or redevelopment are partly used to cross-finance the scheme. Theoretically, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) already provided for slum rehabilitation since 2009 but the modality did not trigger a market response in Ahmedabad until conditions of Affordable Housing in Partnership (AHIP) were modified. Developers started to respond only after the government relaxed the requirements and granted additional incentives in terms of additional built-up allowance and Transferable Development Rights (TDR).

Rehabilitation is regulated by the AHIP policy⁽¹²⁵⁾ which sets precise unit standards to be followed by the developer. The local community succeeded nonetheless to negotiate some standards seeking additional project benefits, such as more common facilities and larger housing units. At first, rehabilitation projects concentrated on slums in the wealthiest areas of the city, where simultaneously several developers were eager to engage. In other parts with less supply interest, the negotiation power might tip away from the community back to the developers which could be in a position to dictate project characteristics. Considering current supply costs and current land prices, slum rehabilitation projects appear to be only financially viable in certain central areas of Western Ahmedabad (the wealthy side of the city).

Table 9—Different levels of participation in the rehabilitation modality

Rehabilitation	Land	Planning	Permits	Finance	Demand	Construction	Maintenance
Organisation	Dev	Com/Dev	Dev	Community	Developer	Developer	Com
Decision-Making	Gov		Gov				Com/Dev
Implementation		Dev	Dev				

Com (Community), Gov (government), Dev (Developer)

(d) Public Low-cost Housing Supply

For long, Indian governments have been characterised by their declared intent to reach the urban poor with housing programmes. In practice, however, an important share of the initiatives have ended up in the hands of more affluent households than intended and have been, in any case, insufficiently supplied in numbers for the given demand (Sivam and Karuppannan 2002). With the launch of the JNNURM in 2006, the central government provided large conditional funds for urban projects, including low-cost housing under Basic Services for Urban Poor (BSUP) projects. The city of Ahmedabad received national prizes for its successful implementation of over 100 000 units within 7 years. One major reason for the good performance under the BSUP has been the abundantly available land

⁽¹²⁵⁾ See the Affordable Housing in Partnership Scheme Guidelines December 2013, GoI Ministry of Housing and Urban Poverty Alleviation (<http://mhupa.gov.in/writereaddata/AHP-Guidelines.pdf>)

as the municipality has a large land-bank from the land readjustment-based town planning mechanism (Ballaney 2008).

Table 10—Different levels of participation the rehabilitation modality

Government	Land	Planning	Permits	Finance	Demand	Construction	Maintenance		
Organisation	Government					Government			
Decision-Making						Tender		NGO	
Implementation									

The projects, however, are completely top-down with standard project types blueprint solutions for housing units (e.g. 4 floors walk-up apartment blocks). The municipality planned and organised everything with in-house capacities and only outsources the construction via tenders. Eligible low-income households had to register and beneficiaries are drawn via a lottery system. There is thus no choice in terms of housing project or location. The maintenance and collection of loan repayments are given to an NGO.

Figure 211—Public Low-cost Housing Supply EWS BSUP
(Source: Anthony Boanada-Fuchs, 24 May 2011)



Analysis

The four supply modalities described in this article showcase different institutional realities of affordable housing solutions. In combination, it is possible to state a general resistance to participation by developers but also by the government. The relative trade-offs of different supply approaches need therefore to account for the form institutional support or lack of it. This might explain why, broadly, participatory housing projects remain smaller-scale interventions than top-down approaches.

The pilot Slum Networking Project in Ahmedabad was the most participatory project reviewed here. It involved the concerned community in almost all decisions. The project represents by far the most cost-effective housing solution and required a broad consensus between land owners, the municipal corporation (for finance and tenure security), the NGO, and the slum community. It also leveraged the greatest contribution from end-users. But, even after achieving the most favourable outcomes (as seen in the ending 1990s), the SNP failed to be up-scaled in the absence of political support. Its successor project, Ahmedabad's *Parivartan* was slower in delivering and less participatory. Despite this, its shortfalls are often associated to participation instead of institutional support. Given the scale of housing needs, and that the *Parivartan* contributed with a relatively low number of houses for the needs, it has been seen at best as an auxiliary modality.

This (miss-)association of participation and slow speed exemplifies why some large-scale slum upgradation plans of the 'Housing for All' campaign often cut on participation with the intent to accelerate implementation. Yet, when participation is well structured, there is no reason for associating it with delays. It would be useful for future interventions to better understand the actual reasons for the successful pilot SNP failure to upscale. Successful projects to be sustained and mainstreamed invariably require political backing. And political support in turn usually follows two features: first, politicians will favour interventions perceived as orderly and procedurally easy to manage under the usual administrative provisions (i.e. replication is preferred to innovation). Dealing with messy networks of participating slum dwellers, despite proven to work, requires overcoming multiple social and operational prejudices. And second, that the usual patrons of political powers see a direct benefit in it. Slum upgrading inherently competes with the attraction of clearing off the land for full redevelopment through contractors who lobby for it. Overtime, however, slum upgrading has been acknowledged as a viable and socially-sensible approach. So, later slum upgrading projects have been integrated under the nationwide umbrella programme of *Rajiv Awas Yojana* (RAY) renamed to *Pradhan Mantri Awas Yojana-Urban* (PMAY-U) in 2016.

The market-based supply approach discussed in this chapter limits participation to some aspects of design, housing finance and maintenance. Developers perceive participation within an economic logic generally as a burden but with an interest in its

capacity to reduce investment risks. Developers want to assure that the final housing units are close to actual demand expectations for a smoother sale process and progress. Once housing preferences were known, several developers preferred to not involve communities in any design decisions. The perception that exchanges with end-users is cumbersome is also reflected in the ways developers deal with other aspects of housing projects. The organisation of demand finance and the maintenance of the housing units is generally hired out to an NGO.

The same logic of outsourcing institutional burdens is applied in *in situ* rehabilitation. The main difference is that the community involvement is even further reduced to merely determining housing sizes and facilities (as part of a negotiation process). Participation could be greatly improved but interviewed developers see little advantage of doing so, as units are ultimately given for free to the community.

The attitude 'who pays should decide' also dictates the reasoning of the local government in public low-cost housing. The proposed design solution by the engineering branch of the municipal corporation reveals great differences with the housing demands of the urban poor (Boanada-Fuchs forthcoming).

Conclusion

This chapter briefly compared and contrasted four low-cost urban housing provision modalities in the city of Ahmedabad with regards to their level of participation and potential contribution to closing the affordable housing gap. Given the scale of housing needs, all approaches are bound to be used in the future. Ideally, housing should benefit from the level of appropriation and consideration of complex issues that only participatory methods provide. The SNP was the most participatory modality of the four. However, it broke down due to a change in political support. Among the reasons included an elite's world city image without slums, even if they are upgraded. The successful participatory pilot programme was transformed into a more centralised and top-down one by the local government substantially reducing the involvement of the local community and market actors. The *in situ* slum rehabilitation and market-based housing supply modalities share different levels of community participation but differ in the role of other agents. At the opposite end of the participation scale, the chapter situated the public housing programme for its very resource-intensive and complete technocratic top-down approach. Accordingly, it seems fair to conclude that there is a significant untapped potential in the most participatory urban housing approaches. And that capitalising on this potential requires greater institutional sympathy, support and leadership towards participation. The institutionalisation of 'participation' as a viable and preferable approach as stated numerous times by the New Urban Agenda, should hopefully encourage the required political support. Beyond that, only fundamental attitude

changes can lead to greater appreciation of participation, which all too often is unfairly equated with slower and more cumbersome project implementation.

Under the current circumstances, the market-based, public, and partnership modalities discussed in this chapter could, in principle, provide for most of the demand for affordable housing in the city from a quantitative perspective. The main difference is their geographic reach within the city which is partially complementary: *in situ* is only financially viable in central areas, market supply only at the Eastern and Southern periphery of Ahmedabad, while public supply can be realised throughout the city due to the land readjustment-based urban planning system.

Finally, it is suggested here that a systematic understanding of housing supply, its strengths, weaknesses and potential for participation could help formulate more sustainable housing policies (in economic, social, and environmental terms) which in the past were mostly characterised by the tension between punctual success stories (such as the SNP pilot) and broad system failures (as seen in the proliferation of slums).

References

- Abrams, C. (1966). *Housing in the Modern World*. London: Faber and Faber.
- AMC, and AUDA (2006). *Jawaharlal Nehru National Urban Renewal Mission City Development Plan Ahmedabad 2006-2012*. Ahmedabad: Ahmedabad Municipal Corporation, Ahmedabad Urban Development Authority, Centre for Environmental Planning and Technology (CEPT) University.
- Arku, G. (2006). *The Housing and Economic Development Debate Revisited: Economic Significance of Housing in Developing Countries*. *Journal of Housing and the Built Environment* 21(4): 377-395.
- Ballaney, S. (2008). *Town Planning Mechanism in Gujarat, India*. Washington: The International Bank for Reconstruction and Development, The World Bank.
- Bhatnagar, B., and A. C. Williams. (1992). *Participatory Development and the World Bank: Potential Directions for Change*. World Bank Publications.
- Boanada-Fuchs, A. (2015). *Housing Governance — A Process-Oriented, Resource-Centered Actor-Network Approach to Housing Provision Systems in Ahmedabad*. PhD Thesis. Graduate Institute Geneva.
- Boanada-Fuchs, A. (forthcoming). *Affordable Housing in Ahmedabad — A New Market Paradigm?* Habitat International.
- Buckley, R. M., Kalarickal J., and K. Buckley. (2005). *Housing Policy in Developing Countries: Conjectures and Refutations*. *World Bank Research Observer* 20(2): 233-257.
- Choguill, M., and B. Guaraldo. (1996). *A Ladder of Community Participation for Underdeveloped Countries*. *Habitat International* 20(3): 431-444.
- Cohen, M. (1983). *The Challenge of Replicability*. World Bank Reprint Series (287).
- Cohen, M. (2001). *Urban Assistance and the Material World: Learning by Doing at the World Bank*. *Environment and Urbanization* 13(1): 37-60.

- Conyers, D. (1986). *Decentralisation and Development: A Framework for Analysis*. Community Development Journal 21(2): 88-100.
- Das, A. K., and L. M. Takahashi. (2009). *Evolving Institutional Arrangements, Scaling Up, and Sustainability: Emerging Issues in Participatory Slum Upgrading in Ahmedabad, India*. Journal of Planning Education and Research 29(2): 213-232.
- Ghertner, D. A. (2011). *Rule by Aesthetics: World-Class City Making in Delhi.* Worlding cities: Asian experiments and the art of being global: 279-306.
- Gilbert, A., and P. Ward. (1984). *Community Action by the Urban Poor: Democratic Involvement, Community Self-Help or a Means of Social Control?* World Development 12(8): 769-782.
- Gol. (2013). *Primary Census Abstract for Slums. Government of India*. New Delhi: Office of the Registrar General & Census Commissioner. Report.
- van Lindert, P. (2015). *Rethinking Urban Development in Latin America: A Review of Changing Paradigms and Policies*. Habitat International 54: 253-264.
- Lizarralde, G., and M. Massyn. (2008). *Unexpected Negative Outcomes of Community Participation in Low-Cost Housing Projects in South Africa*. Habitat International 32(1): 1-14.
- Lyons, M., Smuts, C., and A. Stephens. (2001). *Participation, Empowerment and Sustainability: (How) Do the Links Work?* Urban Studies 38(8): 1233-1251.
- Magnin, W. (1967). *Latin American Squatter Settlements: A Problem and a Solution*. Latin American Research Review 2: 67-98.
- Mahadeva, M. (2006). *Reforms in Housing Sector in India: Impact on Housing Development and Housing Amenities*. Habitat International 30(3): 412-433.
- Mehta, D. (2011). *Reaching the Poor — Slum Networking Project Ahmedabad, India*. World Water Week.
- Mitlin, D., and J. Thompson. (1995). *Participatory Approaches in Urban Areas: Strengthening Civil Society or Reinforcing the Status Quo?* Environment and urbanization 7(1): 231-250.
- Mukhija, V. (2004). *The Contradictions in Enabling Private Developers of Affordable Housing: A Cautionary Case from Ahmedabad, India*. Urban Studies 41(11): 2231-2244.
- Nikkhah, H. A., and M. Redzuan. (2009). *Participation as a Medium of Empowerment in Community Development*. European Journal of Social Sciences 11(1): 170-176.
- Parikh, H. (2011). *Tapping Local Innovation: Unclogging the Water Slum Networking — Transforming Slums and Transcending Poverty without Aid with an Innovative Water and Sanitation Paradigm*. ed. Changemakers. Report.
- Pugh, C. (1994). *The Idea of Enablement in Housing Sector Development: The Political Economy of Housing for Developing Countries*. Cities 11(6): 357-371.
- Sivam, A. (2002). *Constraints Affecting the Efficiency of the Urban Residential Land Market in Developing Countries: A Case Study of India*. Habitat International 26(4): 523-537.
- Sivam, A., and S. Karuppanan. (2002). *Role of State and Market in Housing Delivery for Low-Income Groups in India*. Journal of Housing and the Built Environment 17(1): 69-88.
<http://dx.doi.org/10.1023/A:1014831817503>
- Sumka, H. J. (1987). *Shelter Policy and Planning in Developing Countries: Introduction*. Journal of the American Planning Association 53(2): 171-175.

- Tibaijuka, A. K. (2009). *Building Prosperity: The Centrality of Housing in Economic Development*.
- Tripathi D. (1998). *Alliance for Change — A Slum Upgrading Experiment in Ahmedabad*. New Delhi: Tata McGraw-Hill
- Tripathi D., Jumani J., (2001). *Change after Alliance — Sequel to Alliance for Change — A Slum Upgrading Experiment in Ahmedabad*. Published by Tata McGraw-Hill
- Turner, J. F. C. (1977). *Housing by People: Towards Autonomy in Building Environments*. New York: Pantheon Books.
- Turner, J. F. C., and R. Fichter. (1972). *Freedom to Build*. London: Macmillan.
- UNCHS. (2003). *United Nations Human Settlements Programme Slums of the World: The Face of Urban Poverty in the New Millennium*. Nairobi:
- United Nations Centre for Human Settlements. (2006). *State of the World's Cities 2006/2007 Slums: Some Definitions*. London: United Nations Centre for Human Settlements.
- UN-Habitat. (2012). *State of the World's Cities 2012/2013 — Prosperity of Cities*. Nairobi: Earthscan.
- Werlin, H. (1999). *The Slum Upgrading Myth*. *Urban Studies* 36(9): 1 523.

27. Reconstruction as a form of intervention:

Examining the role of local institutional mechanisms in building social cohesion

Shailaja Fennell, PhD, Senior Lecturer at the Centre of Development Studies and the Department of Land Economy, University of Cambridge and Fellow of Jesus College Cambridge.

Introduction

Rehabilitating communities of internally displaced rural households through a house-building or reconstruction process that involves homeowners in a substantial and meaningful way is regarded as a best-practice strategy (Jha et al, 2010). The opportunity that a house-building strategy provides is to regenerate lives and livelihoods by including community building initiatives. The key to success in such a strategy is to understand that reconstruction through the building of rural homes is itself a development intervention that affects the dynamics of the community concerned and can change the rules of the game by which lives are refashioned and also critically affect the rules by which livelihoods may be pursued.

It is important that an owner-driven house-building initiative be not merely regarded as a functional solution that will automatically generate cooperation among the new residents. Instead, house-building initiatives need to explicitly recognise that there are power asymmetries within internally-displaced communities, and that the ensuing power struggles between interest groups will affect and change the informal rules and social norms that will operate within the 'new' rural community. These political negotiations across interest groups could result in informal agreements or contracts between groups or individuals to ensure livelihood opportunities such as fishing or artisanal activities. On the other hand, the absence of successful negotiation due to institutional stickiness or path dependency become a hindrance to creating sustainable livelihoods for households in the new rural community.

This paper will begin with a review of the theoretical frameworks that have provided the analytical tools for understanding the lives of the poor. It will then move to examining the methodological approaches that have been used to evaluate the success of house-building initiatives. These approaches will be applied to the case of a reconstruction-housing programme, designed to provide a policy intervention in post-disaster contexts. The paper makes the argument that such programmes must have the ability to gauge how power dynamics in the community affect the local institutional mechanisms of negotiation. The paper unpicks the view that local institutional mechanisms can be understood in simple terms of supply and demand conditions. The former dimension leads to a primary focus on the efficiency of service provision and the effectiveness of organisational delivery, and the latter dimension singularly targets the

strengthening of the ownership of stakeholders. The paper makes the case that to understand the housing needs of communities in post-disaster environments requires existing evaluation mechanisms to move beyond the narrowly economic perspective to a broader multidimensional understanding of service provision.

The paper also provides case study material that shows that the importance of local institutional mechanisms lies in the manner in which they work through social norms and informal rules to affect individual and collective characteristics and incentives and therefore the extent of social cohesion in the new rural community. The case material underlines the value of identification and evaluation of local institutional mechanisms that are collected through survey methods conducted during the implementation phase of a reconstruction programme.

The paper concludes that a narrow understanding using technical criteria could be replaced by a more effective approach that regards a successful intervention not as the simple outcome of improving supply or demand-side factors, but the outcome of power struggles between interest groups. It uses this suggestion to identify new evaluation methods based on a 'new institutional adequacy framework'. The paper concludes that data collection that makes it possible to generate new and more nuanced monitoring and evaluation tools that can show how technical (supply side) and social (demand side) interact and conjointly change the effectiveness of delivery of donor programmes can ensure that house reconstruction initiatives create sustainable rural livelihoods through improving social cohesion in the reconstructed new rural community.

Section 1 — Theoretical frameworks for evaluating the lives of the poor

The multi-dimensionality of poverty provides a powerful conceptual framework for understanding why social mechanisms such as deprivation, marginalisation and social exclusion affect individuals differently on account of their age, location, gender, race, or disability. It is helpful that the identification of multiple dimensions has opened up both the conceptual category of the poor and also served to reduce the distortions that a singular category of poor has on policy prescription (Sen, 2001). Addressing how the abilities of individuals to acquire resources as well as how the actions of individuals across types of capital to accrue livelihoods are affected by their social contexts is a useful way forward to enrich our conceptual understanding of poverty. The frameworks that have been applied to understanding how economic development can reduce poverty through increasing access to and ownership of resources are the institutional and livelihood approaches, with the capabilities approach gaining ground as a new framework that could improve our understanding of how housing might reduce poverty and empower the poor.

(i) New Institutional Economics

The importance of institution building was heralded by the advent of the New Institutional Economics (NIE) in the 1990s. The economic dimension of institution building has been emphasised as a positive feature, whereby reductions in transaction costs through improved contracting and increased protection of private property rights results in greater investment and growth. The key idea in the theoretical formulation of institutional change in the political economy of development literature has been with regard to the concept of the 'political settlement' that is necessary to ensure that opposing political groups are accommodated. The success of a political settlement is that it is able to succeed in balancing the claims of political elites to obtain property rights and thereby ensures a stable development path (Khan, 1995). The primary emphasis on need for political settlements in this literature lies in its formative role in determining the structure of property rights that makes feasible an associated domain of social policies (diJohn and Putzel, 2009).

Institutional change can be identified along both supply and demand dimensions, where the former dimension focuses on the efficiency of service provision and the effectiveness of organisational delivery, and the latter dimension on strengthening the ownership of stakeholders. There are also situations, where institutional change is not the simple outcome of improving supply or demand-side factors, but the outcome of power struggles between interest groups within the supply side organisations as well as the clients accessing services. Furthermore, there are circumstances where institutional change requires changes in social norms, informal and formal rules, or a combination thereof, demanding that there is a focus on both individual and collective characteristics and incentives in a community.

This ability to gauge the process of institutional change in donor programmes can begin to be identified by the facts behind successful interventions. These facts can be identified in the evidence that is currently collected during the implementation of institutional change. The examination of current facts allows us to (i) identify information on the effectiveness of existing policy and/or the need to revise policy instruments to take into account difficult supply and demand-side features. The difficulty of using existing policy also signals (ii) the possibility that power struggles among interest groups exist, and an exploration of whether changing social norms and informal rules provides a way to encourage negotiation and reduce conflict.

These two key aspects in examining a successful institutional change can be distinguished as a result of (a) a purely technocratic process or (b) through changing incentives within the power structure that had previously hindered changes in social norms and formal and informal rules. There is also the third possibility that identifying information about the community permitted the use of external knowledge that brought about (c) an innovative and dynamic combination of technical and social processes. This third feature identifies the increasingly important role that is played by complex

interactions between the technical and social and political processes in service delivery. By mapping institutional change as a multidimensional and many-stranded phenomenon, it is possible to generate new and more nuanced tools that can show how technical (supply side) and social (demand side) interact and conjointly change the effectiveness of delivery and the positive synergies for poverty reduction (Fennell, Clark and van Gevelt, 2013).

Housing for the rural poor has been a limited endeavour in poor countries, as the focus has been on ensuring housing for the informal sector in the urban environment. Rural housing, where it has been encouraged such as in Malaysia, has been through owner-organised methods and has not been a primary objective of housing policies of national governments (Rakodi, 1992). An exploration of successful (and not so successful) programmes that have brought about institutional change in livelihoods through owner-built homes will be critical for building a credible evidence-based evaluation of reconstruction of housing programmes.

(ii) Livelihoods Framework

The starting point of the livelihoods approach is to examine why the mechanisms for ensuring livelihoods among the poor is different from that of the non-poor. The focus was initially on the rural poor and the various strands that are linked together in this approach are (i) the diversity of livelihoods of rural people, (ii) of the roles of different types of assets in rural peoples' livelihoods, and (iii) of the importance of the wider social and political and economic environment in mediating access to assets. The livelihoods approach has been successful in accumulating increasing evidence that rural people engage in many different types of income generating and livelihood activity (see for example, Ellis, 1998; de Janvry and Sadoulet, 1996), it is not clear how the different types of activity that are the resultant of different combinations of financial, human, social, physical and natural capital have come about.

There is also the possibility that some categories of the poor are created by development policies that inadvertently or otherwise result in unequal forms of inclusion in the development process, such as destitution, that have been identified by Harriss-White (2005). Destitution is an extreme form where an individual does not have access to assets, income or insurance mechanisms in the monetary realm of the world and due to the political economy by which they are socially marginalised become unable to acquire 'potential capabilities' (Harriss-White, 2005; p. 886).

Another type of disadvantage that can result in poverty is the mechanism of adverse incorporation that operates through social structures whereby individuals or households are brought into, dropped out of, or manipulated in economic, political and cultural ways. The impact of adverse incorporation can have effects that are often more deleterious than those of marginalisation as it brings about an unequal power relation between the majority and the minority group. Furthermore, the relational aspects are far

more evident in this casting of the problem of subordinated groups rather than in the residual role that has become central to social exclusion analysis (Hickey and du Toit 2007).

There has been a further benefit of bringing together of the capability framework, the research on rural livelihoods (Bebbington 1999) and natural resource management (Leach, Mearns and Scoones, 1998) in development studies. Recent academic and policy debates concerned with attacking (particularly rural) poverty reflect a growing awareness of (a) the importance of a lack of assets as both a symptom and cause of poverty (for example Birdsall and Londono, 1997; De Jainvry and Sadoulet, 2000; Hoddinot et al., 2000), and (b) the value of the livelihoods concept in understanding how the poor call upon a range of different assets and activities as they seek to sustain and improve their well-being (e.g. Ellis, 2000).

The understanding that individuals and households can be disadvantaged by market and institutional mechanisms permits us to open up the livelihood approach to go beyond examining how employment and subsistence options available to households that create new opportunities might help poor households (Chambers and Conway 1992) to the possibility that an inadequacy of resources can be the consequences of how existing social contexts and governance mechanisms can manipulate the availability of assets (Ellis, 2006). The livelihood approach does not directly address the central role played by institutional features, or how the powerful structures severely constrain individual agency. These dominant institutional factors therefore explain both the limited participation and the powerlessness of individuals but lack an analysis of how institutions and agency are inter-related.

The livelihoods approach has been an important driver for developing a participatory research methodology that focuses on bringing to the fore the views and formulations of the communities and individuals that are the focus of a development initiative or programme. At one level, it was brought into poverty measurement due to a need felt by development agencies that such methods would improve the project outcomes funded by donors (Cleaver, 1999). There is another view that there is a moral imperative to work with the poor, using their knowledge, attitudes and practices, to improve their lives (Chambers, 1997). The bringing in of the social aspects of human life into an economic model of individual advancement has been identified with the increasing legitimacy of incorporating community level development into poverty analysis within international donor programmes such as the Poverty Reduction Strategy Papers (PRSPs) on the 1990s and 2000s (Cornwall and Brock, 2005). The benefit of community contexts to improve individual choice and decision-making and reduce poverty was through bringing about changes in the ability of the poor to influence the local decision-making process in their favour. This was to be engineered through the changing of institutional incentives and accountability that would allow the poor to gain control of the levers of change in their community (Narayan, 2002).

The consequence of widespread participation by the poor in the community as set out in this framework, adopted readily by international agencies, was to reduce the asymmetry in power relations in the community so that the poor. This was formulated into the term 'empowerment'; that would allow the poor to consolidate their gains from participation into more widespread abilities to make positive and life-changing choices in the future.

The perspective that participation was a process that resulted in an outcome of empowerment is one of many formulations of the relationship between these social mechanisms that reduce the asymmetry of power and tackle problems of marginalisation and social exclusion. It is also possible to regard each of the mechanisms, participation and empowerment as being both process and outcome. Thinking through the various dimensions of participation and empowerment can also lead to an intertwining of both concepts where reducing power asymmetry might itself lead to greater participation by the poor, while, on the other hand, it might be that creating opportunities to participate would break down power hierarchies (Luttrell et. al. 2009).

Another innovative approach suggests a new method for understanding how large structures and individual agency of actors engage together. It makes the case that it is not that institutional structures entirely determine the behaviour of actors, but rather they provide formal and informal forms of power that are harnessed by actors. This replaces the earlier and simpler institutional postulate that individuals respond to the incentives generated by the formal and informal rules established by 'big structures'. The nature of the structures can either facilitate or obstruct the ability of agents to negotiate and manoeuvre their path to better human outcomes. The methods suggested by this approach require disciplinary knowledge of political and legal traditions as well as those of economics, and would create a broader framework of political economy than that undertaken previously (Hudson and Leftwich, 2014).

These complex interactions between the forms of institutional structures and facilitation that they provide for agents to participate through manoeuvring their way by accessing resources and gaining modes of power could provide the way forward for a greater acceptance on qualitative social science methods. The ability to use rich methods that document the lives of the poor through a range of techniques: oral methods such as life histories, narratives and visual methods such as sketches and photography, indicate that there is no simple rule for identifying how policy interventions affect participation and empowerment without very careful and thorough, and often very time consuming and skill-intensive research methods (Chambers, 2005).

Section 2 — Learning from developments in the reconstruction of housing for the poor and dispossessed

(i) The Early Perspectives on Housing for the Poor

The official stance on the provision of housing for the poor has shifted dramatically from the containment and control policies of the 1970s to the self-help methods of the 1990s (Burgess, 1997). The traditional approach to low-income and slum housing was by means of top-down municipal directives. There was no or little attempt to involve the community or to obtain feedback from the inhabitants of the low-cost housing sector (Satterthwaite and Mitlin, 2005). In sharp contrast the current thinking on community housing for the poor and dispossessed, draws on the notions of engagement and empowerment of the community (Chambers, 2011; Bebbington, 2005). The self-help approach focuses on the importance of giving control to the poor to ensure a successful and sustainable housing provision that helps to improve the asset base of the poor (Burgess, 2001).

The implicit premise of the approach is that the community is the most knowledgeable actor about its own housing needs and should be the generative force behind a programme of housing provision (Scoones, 2009). The unassailable logic of such a premise, notwithstanding, it is pertinent to note that a community-led programme does require a successful negotiation process between the CBO and the municipal authorities and the private sector. Furthermore, the CBO tends to present its case through an NGO rather than acting as its own spokesperson. The inability of the poor to represent themselves creates a need for an intermediary and the associated problem of moral hazard in representation of their views. The poor's lack of self-representation underlines a fundamental problem faced by marginal groups in that they do not have ready or easy access to forums that have the power to make decisions that critically affects their livelihoods (Fennell 2001). The severe restrictions placed on the access available to the poor has meant that the principal actors in the arena of housing provision have tended to be the local state or municipal corporation, the private sector and the NGO.

Provision for housing is no longer viewed as a 'project' but increasingly seen as a 'programme' or, even, a 'process'. The process approach to housing provision is based on the partnership model of public-private interactions. It requires a long-term perspective on the creation and management of housing stock within an environment of appropriate and acceptable levels of physical infrastructure (Durand-Lasserve, 1999). A processual approach is based on regular and continued negotiation between the individual actors so as to ascertain the views and ideologies of each actor. Such negotiation does not occur in an antiseptic surrounding, rather it is undertaken in a highly politicised and fraught environment. Typically, negotiation is consequent to the formation of political alliances and coalitions by the principal actors (Knight, 1992). The nature of the political alliances and the particular actors involved is highly dependent of

the relative dominance of each actor. The relative size of an actor's resources, power and political clout all contribute to their ability to pull weight. The overwhelming strength of a single actor would result in a very unequal distribution of responsibilities between actors. The legitimacy of an actor's presence is determined by previous performance as much as by the length of their association in the particular arena.

(ii) Slum Redevelopment in the 1990s

The process of housing provision that was initiated under the slum redevelopment programmes of the 1990s focussed on the importance of moving away from a project approach to an integrated poverty reduction programme. The case of the slum redevelopment project (SRP) of the Mumbai Metropolitan Regional Development Authority (MMRDA) in 1991 was a case in point. As it was not constructed as a single 'project' but was viewed as an integral part of a long-term strategy to ensure increased asset ownership by the poor and consequently as an empowering and integrating process (Patel 2001).

The key actors involved in creating the SRP were the municipal corporation, represented by the MMRDA; the private sector presence was registered by the presence of property developers; and the third sector was provided by an NGO alliance. The actors were linked through an alliance that was the result of collaboration by the Society for the Promotion of Area Resource Centres (SPARC), an organisation of professionals was set up in 1984; the National Slum Dwellers Federation (NSDF), an organisation representing slum dwellers was created in 1974; and Mahila Milan, a women's CBO representing the interests of women pavement dwellers came into being in 1986. The alliance has used the principle of horizontal equity between the participating organisations by calling upon a 'federation' model. The consequence of an 'equal footing' approach has been the open and easy sharing of the expertise of each organisation and provided valuable knowledge about the nature of the near insurmountable problems faced by them in the provision of housing (Appadurai 2000).

The principal actors established a series of meetings to provide a channel for familiarising the different sectors with their various ideologies and practices in the provision of housing for the poor. The strong presence of elite groups in each of the three sectors present in the formulation of the SRP created an environment conducive to ready recognition of social standing of individual actors and created an initial forum for dialogue (Appadurai, 2000). The political coalition that resulted from the continued rounds of dialogue among these traditionally competing elites was critical for generating an organisational structure that would allow for mutual learning and synergies that facilitate institutional change (Dasgupta, 2000).

Distributional conflict based on mutual distrust and intense competition over resources is the expected result of transactions between elites that is provided by the mainstream institutional literature (Knight, 1992). The ability of communities to come

together in a situation where elites have a leadership role can have adverse results. The possibility that technocratic reasoning will overwhelm community needs has been a long-held concern among CBOs working in the provision of housing for the poor. The creation of a negotiatory platform was essential for the successful delivery of housing. Paradoxically, the individual actors were more susceptible to bouts of vulnerability than the structures that they have built. The ability to build the institution of the platform was an early attempt to approximate the 'best-practice' requirements of public-private partnerships as it used the core competencies of each partner, rather than succumb to the weakest link in the chain.

(iii) Owner-Driven Housing Reconstruction

Using the lessons from slum reconstruction and upgrading programmes to understand the reconstructing communities through a house-building (homeowner) initiative in relation to internally displaced persons, it is important to ask what should be regarded as a best-practice strategy. Where the intention is to relocate and rebuild communities of internally displaced rural households, the key consideration must be the ability to regenerate lives and livelihoods in a post-conflict situation and to move from humanitarian interventions to community building initiatives (Pantuliano, 2007). The key to success in such a strategy is to understand that reconstruction through the building of rural homes is itself a development intervention that affects the dynamics of the community concerned and can change the rules of the game by which lives are refashioned and also critically affect the rules by which livelihoods can/cannot be pursued (Chambers 2010, Ellis 2006).

There are powerful similarities between the reconstruction efforts for internally displaced persons and the housing building programmes for the poor. The additional challenges faced in the reconstruction efforts are related to greater risks and scarcities of physical, environmental and human resources. There is also a greater sense of urgency in the need for delivery of the programme to ensure a move from crisis management to normal development conditions (Pantuliano 2007, Davidson, 2006). It is also the case that in a post-disaster context, the internal displacement of households results in a breakdown of communities making it a considerable challenge for CBOs to build platforms that can be used to drive a reconstruction effort to rebuild homes and lives. In the case of Aceh, there was great difficulty in bringing together communities to consult and drive the participatory approaches that were necessary to rebuild and return the area to a sense of normalcy and post-crisis management principles (Steinberg 2006). It is these difficulties with a CBO approach that have moved international humanitarian agencies towards alternative approaches to rebuilding houses.

A new approach that has been adopted in Asia to respond to housing challenges has been the ODR methodology (Lyons and Schilderman, 2010). The key objective of the ODR approach to housing the poor and dispossessed was driven by a strong directive to

ensure a participatory method to ascertain the needs of the household are at the centre of the building programme. Groups of families are placed at the centre of the reconstruction programme and are provided with both the financial and technical assistance and support necessarily to build and sustain the building of their own homes. This approach also fits well with the normal house-building methods adopted by poor households in rural communities, which tend to be based on self-builds, with the use of the cheapest local available materials and support of local labour and networks. This approach has been adopted by a wide range of international agencies such as the World Bank, the International Federation of the Red Cross and UN-Habitat in the last decade.

The positive features of ODR that have been listed by international donor organisations are welcome and in keeping with the desired objectives of participation in current international development frameworks. There are, however, shortcomings in current analysis of the ODR methodology, due to the inability to see how the collapse of a community in a post-disaster situation militates against any comprehensive focus group evaluation of proposed housing programmes. It could also result in greater access for more elite groups in the community to technical consultants and international donor organisations and their local counterparts, compared to that available to marginal groups. A research evaluation of ODR, CBO and Contractor-Driven Reconstruction (CDR) approaches in the post-earthquake disaster environment in Gujarat showed that while ODR was the most cost-effective, the NGO approach was preferred by households as they were able to take into account the views of the most vulnerable households in an environment where the shattered community context prevented channels of communication for the most marginalised (Duyne Barenstein, 2008).

There is a more fundamental underlying methodological problem, is that the term 'community' cannot be treated as a simple and straightforward category. A community is likely to be a grouping that is characterised by heterogeneity of age, gender, race and ability. It is therefore important to begin with a mapping of the community, as directed by the participatory approach to development (Chambers, various) rather than to begin with a one-size-fits-all mindset that regards focus groups as a simple tick-box exercise that is a summary acknowledgement of a minimal level of 'bottom-up' feedback.

Section 3—New conceptual thinking of frameworks for evaluating housing and human development outcomes

The manifest difficulty in establishing the explicit relations between the outcomes of development programmes and ensuring improved human development, such as reconstruction housing, and the well-being of displaced persons, once again underlines the challenge of trying to use evidence from policy interventions to ensure sustainable livelihoods in the absence of an underlying theory of change. These difficulties that currently persist might be reduced if there was a move to a different operationalisation

of institution building for improving development outcomes. The suggestion for a broader political economy that is no longer limited to regarding institutions and their associated incentives as determining human behaviour, and instead regards individuals as agents who have the ability to decide whether to accept to eschew the rules of the game is a valuable contribution in this regard. The willingness of actors to weigh up the multiple implications of accepting rules, taking on board political, social as well as economic consequences takes them outside the strait-jacket of short-term efficiency-based decision-making. This expansion of the behavioural mode available to actors shifts the focus to explicitly political decision-making that could have powerful consequences for the community, but have significant short-term losses for a large number of agents (Hudson and Leftwich, 2014).

A case in point, is the provision of housing in a community riddled with social differences: the agency concerned regards it to be politically important for all households to have the same type of housing unit, but this might be opposed by households within the community that are higher by the social and political hierarchy. The potential conflict between a development agency and the political and social hierarchies in the community cannot be managed by emphasising the technical or economic benefits of the intervention, rather the various players will need to negotiate the solution through rounds of repeated brokering. (Knight, 1992; Thelen, 2004).

The importance of understanding that institutions facilitate deliberation on permits identification of common ground between all the agents, permits a less functional approach to the relationship between institutional structures, agency intervention and participation by community members. It is also helpful in beginning an intellectual project of reworking the task of identifying the relationship between institutional change and programme implementation by using lateral side-stepping. It may well be possible to utilise a framework mapping a set of background conditions and certain configurations of institutions that would enable a 'conversion factor' approach.

Institutional Adequacy: A New Framework

Given the aforementioned difficulties with measurement and causality, it makes sense to explore other avenues. In terms of identifying the poor using a simple quantifiable measure, namely an income poverty line, the real issue is not so much 'lowness' of income, but 'inadequacy' of income for achieving basic outcomes (see Sen, 1992; pp. 109-112). The distinction between lowness of income and inadequacy of income would be semantics if people were basically the same. But people are not the same and typically differ in their capacity to convert a given income (or bundle of resources) into the same basic achievements or outcomes (see Sen, 1985; 1999; pp. 70-71). Some people inevitably need more income than others to function adequately (see Clark, 2006, for several well-known examples).

One conclusion is that ‘the incomes needed’ should be ‘linked to the causal requirements of minimal [outcomes]’ (Sen, 1992, p. 111). This implies moving different people (depending on their income requirements) across alternative poverty lines. Such an approach is likely to be cumbersome and difficult to put into practice. An alternative approach (worthy of further development in our view), involves starting with a common benchmark (an income poverty line, for example), and then asking what sort of institutional arrangements are required to ensure that anyone who qualifies as non-poor (irrespective of their personal characteristics and circumstances) will be able to achieve certain basic outcomes (Clark and Fennell, 2013).

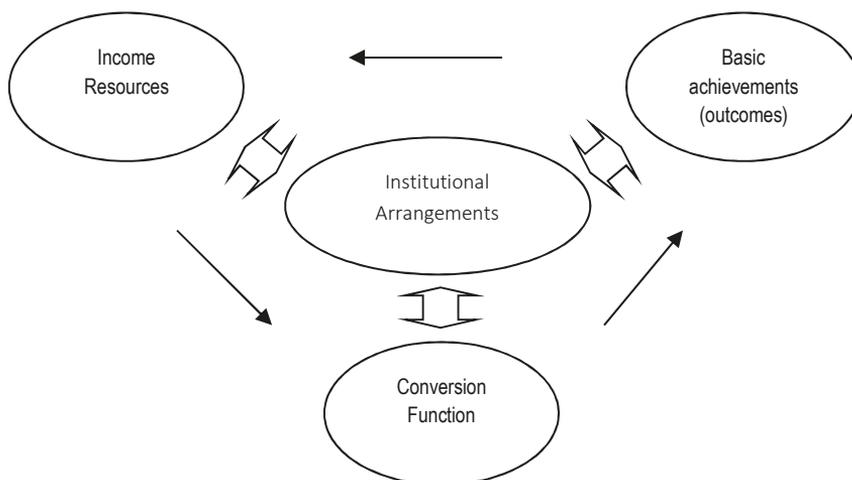


Figure 212—The Institutional Adequacy Framework
(Source: adapted from Clark and Fennell (2013))

This approach would involve separating people with common characteristics (and similar conversion functions) into distinct groups, and then exploring the institutional arrangements that interact with personal characteristics and circumstances to promote or inhibit basic achievements (figure 2). For example, urban slums could be distinguished by the generational life of the slum, whether it is a new slum or one which has been settled for two or three generations as this affects the level of social capital as well as the nature of social norms in play in the slum. Consequently, the conversion factors would be least effective in a first generational slum, whether the quality of both physical infrastructure such as housing materials as well as social networks would be lower than in an established third generation slum. In these distinct slum groups, there would be a different level of need for policy interventions. Consequently, the same institutional support might not produce the desired outcome. In such situations, institutions can be regarded as ‘adequate’ insofar as these arrangements allow anyone who satisfies the benchmark condition(s) to achieve certain minimal outcomes.

Many of the factors that shape personal conversion functions have been identified in the capability and human development literature (e.g. Robeyns, 2005; Sen, 1999; Frediani, 2010; Clark, Biggeri and Frediani, forthcoming 2019) ⁽¹²⁶⁾. Much can also be learned by drawing on insights from the livelihoods approach, chronic poverty and social capital as well as the literature on institutions. These streams of work provide obvious entry points for developing an ‘institutional adequacy’ framework.

This framework can help to understand the reasons for conflict among differently located and entitled households in the aftermath of a natural or human disaster. Conflict is often exacerbated when state actors, or donors, advocate a redistribution of national resources to facilitate a new or reforming economic or productive context. This can lead to acute contestation among different domestic groups (Fennell 2009).

Using an alternative approach by developing the notion of ‘institutional adequacy’ allows us to directly address the personal capacities to convert a given income into basic achievements. This involves investigating the nature of existing processes, relations and institutions in force in a particular context and designing policy interventions to correct or improve performance (see Fennell, Clark and van Gevelt, 2013; figure above). To achieve this end, it is necessary to monitor the adequacy — or lack thereof — of existing institutions as well as the process of institutional change. A first step in this direction involves identifying the relevant institutions that interact with personal conversion factors (see Fennell et al., 2013). Fortunately, a lot can be learned about the nature of personal, social and environmental conversion factors from the capability and human development literature. For example, according to Sen (1985, p. 26; 1999, pp. 70-71) relevant conversion factors include:

- Personal factors — body size, activity levels, age, gender, health status, nutritional knowledge and education;
- Social and relational factors — customs and conventions, position in society, occurrence of social events (festivals, marriages, funerals), distance from family and friends, community relations, social capital and distributional rules (especially within the family);
- Environmental factors — climatic conditions (temperature, rainfall, risk of natural disasters), heating and clothing requirements, the presence or absence of infectious diseases or pollution.

These conversion factors, in turn, point to a range of local, regional and global processes and institutions such as the market mechanism, welfare provision, educational arrangements, public services, social and cultural rules, labour relations, and political structures (see also Robeyns, 2005; Frediani, 2010; Clark and Neff, 2012). These are the

⁽¹²⁶⁾ Some of these conversion factors are briefly summarised by Fennell, Clark and Safdar (2013).

institutions that affect conversion functions and have the potential to empower people to achieve more with a given income (Clark and Neff, 2012). Alex Frediani (2010) provides an alternative classification of conversion functions (individual, local and structural) that may be particularly insightful. Individual conversion factors reflect personal capacities such as physical health and skills whereas local factors refer to facilities and collective norms such as access to basic services (including who controls access to these services). Structural factors include larger scale political and institutional arrangements such as the market system, legal rules and cultural or religious practices.

The institutional adequacy framework could provide an alternative to the current clamour for increasing the contribution of impact evaluations (IE). Over the last decade, the development community has been increasingly focused on measuring results and IEs have become the new mantra for measuring the effectiveness of programmes. The production of IEs at the World Bank Group has been growing rapidly, from an average of 16 per year in the period from 1999-2004 to an average of 62 per year in 2005-10. Impact evaluations have become central to the furthering of learning and the knowledge agenda. The impact of an intervention shows the causal effects of a project on outcomes, whether they are immediate, intermediate or final (World Bank IEG, 2012).

The possibility of a capability framework that pays attention to the agency and values of participants in a policy intervention might be a new way forward that will permit the broader context within which individuals are able to overcome poverty. Social participation as observed from 'visible action' in a public social space is the focus of a capability-oriented approach devised by Mario Biggeri and associates (Biggeri and Libanoro, 2011, inter alia). They make the case that 'capabilities are strictly dependent on the forms (social and individual) and by the possibilities (environment) of agency; [furthermore] (2) the different forms of participation and the environmental conditions that enable its expression need to be valorised and sustained to enable them to reproduce over time: there are no 'natural' capabilities ... only those socially built' (Biggeri, Ballet, and Comim, 2011: 12).

The advantage of using an institutional adequacy framework would be that it would permit us to evaluate the needs and perceptions of groups of individuals, differentiated by structural differences in their environment, so as to overcome the current challenge of excluding the most vulnerable groups, and implementation of donor programmes that do not take adequate account of the fracturing of the community in a post-disaster context. It would also ensure that the information and perceptions of the differentiated groups within the community can be the baseline for devising focus groups to ascertain possible conflicts in the valuation of different dimensions of a housing programme, currently identified in comparisons of ODR, CBO, NGO, and CDR driven delivery.

Conclusion

The possibility of bringing together institutional, livelihoods and capability approaches to poverty reduction could assist in improving the new qualitative methods that could evaluate the effectiveness of housing programmes for the poor, particularly the high-risk context of reconstruction housing for internally displaced people after natural disasters. These methods also sit well with new methodologies that are being developed by Oxfam and the Overseas Development Institute (ODI) to understand the causal mechanism that will bring about poverty reduction. Furthermore, indicators such as empowerment that are being currently discussed by Oxfam GB could also benefit from being located within a new framework.

Participatory methods, emerging from the livelihood framework, provide a way forward as they do have definitional characteristics (see, for example, Ruggeri-Laderchi, 2001). First, they are contextual and seek to understand the multidimensional nature of poverty from the 'bottom up'. Second, they emphasise people's creativity and ability to understand their reality. Third, they encourage outsiders (including facilitators of participatory exercises) to share in local knowledge and to reflect critically on their own values and preconceived ideas. Fourth, they are not supposed to be extractive or raise expectations. And finally, the results are shared with the local community as well as other stakeholders and end-users.

Participatory approaches have been advocated through the capability framework, and permit further theorising of how to measure human development. This has prompted some commentators to call for a theoretical framework to guide applications: '[t]here is a need to conceptualise participatory approaches more broadly, for more complex analyses of the linkages between intervention, participation and empowerment' (Cleaver, 2001, p. 31; Frediani, 2006, p. 3). One promising way forward is to explore the complementariness and synergies between the capability approach and participatory approaches and methods. This is the subject of a forthcoming book that points to the 'value added' of a more 'integrative' framework (Clark, Biggeri, Frediani, 2019 forthcoming).

Developing a framework that constructs outcomes and indicators by evaluating a series of conversion factors that have been drawn from qualitative participatory methods could provide the important next step to understanding the impact of policy interventions on poverty reduction. It would be particularly helpful in providing a conceptual basis to the new 'theories of change' constructs that are currently being operationalised by international organisations such as Oxfam and ODI. It would also provide an additional impetus to the mixed methods approaches to assist the integration of quantitative and qualitative methods that is currently being attempted (see Shaffer et al., 2008).

This combining of capabilities and livelihoods frameworks will permit the proposed concept of institutional adequacy to be linked directly to an examination of the

possibility of empowerment. This will be undertaken by using the level of conversion factors to distinguish groups who share common features. Each such group will then be the subject of an evaluation that will examine the level of institutional adequacy that will be needed to bring about empowerment. This will provide a lateral approach to creating new indicators that could be more effective in bringing institutions and institutional change to the centre ground of policy interventions. Such a framing would be particularly useful in taking forward the evaluation of housing reconstruction programmes as well as the broader category of housing for the poor and dispossessed.

Bibliography

- Addison, T., Hulme, D. and Kanbur, R. (2008). *Poverty Dynamics: Measurement and Understanding from an Interdisciplinary Perspective*. BWPI Working Paper 19,
- Barrett, C.B., Carter, M.R., (2010). *The power and pitfalls of experiments in development economics: some non-random reflections*. Applied Economic Perspectives and Policy 32, 515-548.
- Biggeri, M., R. Libanora, S. Mariani and L. Menchini, (2006). *Children Conceptualising their Capabilities: Results of a Survey conducted during the First Children's World Congress on Child Labour*. Journal of Human Development and Capabilities, 7, 1, 59-83.
- Bird, K., Hulme, D. Moore, K. and Shephard, A. (2002). *Chronic Poverty and Remote Rural Areas*. CPRC Working Paper 13.
- Botes, L. and van Rensburg, D. (2000). *Community participation in development: nine plagues and twelve commandments*. Community Development Journal, 35(1), pp. 41-58.
- Brock, K. (2002). *Knowing poverty: Critical reflections on participatory research and policy*. in Brock, K. and McGee, R. (eds.) *Knowing Poverty*. London: Earthscan.
- Chambers, R. (1997). *Whose Reality Counts? Putting the First Last*. ITDG, London.
- Clark, D. A. (2002). *Visions of Development: A Study of Human Values*. Edward Elgar, Cheltenham.
- Clark, D. A. (2006). *Capability Approach*. In Clark, D. A. (ed.) *The Elgar Companion to Development Studies*, Edward Elgar, Cheltenham, pp. 32-45.
- Clark, D. A. (2013). *Creating Capabilities, Lists and Thresholds: Whose Voices, Value Judgments and Intuitions Count?* Journal of Human Development and Capabilities, 14 (1): 172-184.
- Clark, D. A. and Fennell, S. (2013). *Indicators of Development and Institutional Adequacy*. Mimeographed (preliminary first draft), Development Studies, University of Cambridge.
- Clark, D. A., Biggeri, M. and Frediani, A. A. (ed.) (forthcoming 2019). *The Capability Approach, Empowerment and Participation*, Palgrave Macmillan, Basingstoke.
- Cleaver, F., (1999). *Paradoxes of Participation: Questioning Participatory Approaches to Development*. Journal of International Development, 11, 597-612.
- Cooke, B., and U. Kothari, (2001). *Participation: The New Tyranny*. Zed.
- CPRC (2009). *The Chronic Poverty Report 2008-09: Escaping Poverty Traps*. Chronic Poverty Research Centre, University of Manchester, Manchester.

- Davis, P. (2006). *Poverty in Time: exploring poverty dynamics from life history interviews in Bangladesh*, CPRC Working Paper 69.
- Davis, P., (2009). *Exploring causation in poor people's lives: towards a pragmatic approach*.
- Deaton, A., (2010). *Instruments, randomisation, and learning about development*. Journal of Economic Literature 48, 424-455.
- Di John, J. and Putzel, J. (2009). *Political settlements*. Issue paper. Governance and Social Development Resource Centre, University of Birmingham.
- Dorwood, A., S. Anderson, S. Clark, B. Keane, and J. Moguel, (2001). *Asset Functions and Livelihood Strategies: A Framework for Pro-Poor Analysis, Policy and Practice*. Contributed Paper to EAAE on Livelihoods and Rural Poverty, September 2001.
- Du Toit, A., (2007). *Poverty Measurement Blues: Some Reflections on the Space for Understanding 'Chronic' and 'Structural' Poverty in South Africa*. Paper presented at the Workshop on Concepts and Methods of Analysing Poverty Dynamics and Chronic Poverty, Manchester, 23-25 October, 2006.
- Duyn Barenstein, J. (2008). *From Gujarat to Tamil Nadu: Owner-driven vs. contractor-driven housing reconstruction in India*. Switzerland: Geneva. <http://www.irbnet.de/daten/iconda/CIB11511.pdf>
- Fennell, S., (2010). *Rules Rubrics and Riches: the relationship between legal reform, institutional change and international development*. Routledge.
- Fennell, S., Clark, D. A. and Safdar, T. (2013). *Current Indicators and their uses and limitations*. Working paper, World Bank.
- Frediani, A. A. (2010). *Sen's Capability Approach as a framework to the practice of development*. Development in Practice, 20 (2), pp. 173-187.
- Harriss, J., (2009). *Why Understanding of Social Relations Matters more for Policy on Chronic Poverty than Measurement*. In Addison, T., Hulme D. and Kanbur, R. (ed.) *Poverty Dynamics: Interdisciplinary Perspectives*. New York: Oxford University Press.
- Hickey, S. and A. du Toit, (2007). *Adverse Incorporation, Social Exclusion and Chronic Poverty*. Working Paper no. 81.
- Hulme, D., (2007). *Integrating Quantitative and Qualitative Research for Country Case Studies of Development*, Global Poverty Research Group, GPRG-WPS-063.
- Ibrahim, S. (2011). *Poverty aspirations and well-being: afraid to aspire and unable to reach a better life — voices from Egypt*. BWPI Working Paper 141, University of Manchester, United Kingdom.
- Ibrahim, S. and Fennell, S. (2006). *Levels and Frames: Towards developing an Institutional Framework for Poverty Reduction in Egypt*. MEEA Conference, Sousse, Tunisia.
- Jha A. K., Duyn Barenstein J., Phelps P. M. and Sena S. (2010). *Safer Homes, Stronger Communities: A Handbook for Reconstruction after Natural Disasters*. Global Facility for Disaster Reduction and Recovery (GFDRR). The World Bank. Washington DC.
- Kanbur, R., and P. Shaffer, (2007). *Epistemology, Normative Theory and Poverty Analysis: Implications for Q-Squared in Practice*. World Development, Vol. 35, No 2, pp. 183-196.
- Khan, M. H. (1995). *State Failure in Weak States: A Critique of New Institutional Explanations*. In Harriss, John, Janet Hunter and Colin M. Lewis (eds) *The New Institutional Economics and Third World Development*. London: Routledge.
- Knight, J. (1992). *Institutions and Social Conflict*. Cambridge University Press

- Leftwich, A., and Sen, K. (2010). *Beyond Institutions. Institutions and organisations in the politics and economics of poverty reduction — a thematic synthesis of research evidence*. IPPG, University of Manchester.
- Naraya, D., Patel, R., Schafft, K., Rademacher, A., Koch-Schulte, S., Naraya, D., Patel, R., Schafft, K., Rademacher, A., Koch-Schulte, S. (2000). *Voices of the Poor: Can Anyone Hear Us?* Oxford, Oxford University Press.
- North, D., (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.
- North, D., (2005). *Understanding the process of economic change*. Princeton University Press, Princeton.
- Olsen, W., (2006). *Pluralism, Tenancy and Poverty: Cultivating Open-mindedness in Poverty Studies*. Q-Squared Working Paper no. 26.
- Pantuliano, S. (2007). *From food aid to livelihoods support: rethinking the role of WFP in eastern Sudan*. In Disasters ODI, Volume 31, Issue 1, Special Issue: Food security in Sudan, March 2007, Pages S77-S90.
- Parker, B. and V. Kozel, (2007). *Understanding Poverty and Vulnerability in India's Uttar Pradesh and Bihar: A Q-squared approach*, World Development, 35, 2, 296-311.
- Rakodi, C., (1992). *Housing Markets in Third World Cities: Research and Policy into the 1990s*. World Development, vol. 20, no. 1. 39-55.
- Ravallion, M. (2008). *Evaluating Anti-Poverty Programmes*. In T. P. Schultz and J. Strauss (eds). *Handbook of Development Economics* (volume 4), Elsevier North Holland, Oxford. pp. 3788-3846.
- Robeyns, I. (2003). *Sen's capability approach and gender inequality: selecting relevant capabilities*. Feminist Economics, 9(2-3): 61-92.
- Robeyns, I. (2005). *The Capability Approach: A Theoretical Survey*. Journal of Human Development, 5 (1), pp. 93-114.
- Sen, A. (1999). *Development as Freedom*. Oxford: Oxford University Press.
- Shaffer, P., Kanbur, R. Thang, N. and Areetey, B. (2009). *Q-Squared in Policy: The Use of Qualitative and Quantitative Methods of Poverty Analysis in Decision Making*.
- White, H., (2009). *Theory-based impact evaluation: principles and practice*. International Initiative for Impact Evaluation Working Paper 3.



Figure 213—Baby napping in CSEB model house in thermally comfortable room, in owner-driven house built with the assistance of HfH and funding from the EU (Source: Jaime Royo-Olid, EU-2018)

Building, owning and belonging

Jaime Royo-Olid and Shailaja Fennell

Reconstruction offers an opportunity to initiate key development processes for the mid- and long-term. Yet, the empathy necessary to mobilise funds to assist people in need of housing is usually short-lived beyond the post-emergency phase. Despite so important to well-being, the provision of assistance to housing is all too often opposed by the belief that markets will eventually sort it out on their own. Markets will likely be important but will rarely cater for the most vulnerable when most needed. Therefore, a key challenge when support is vanishing is how to transition to self-reliant local production of housing. This may involve different kinds of public, community and market collaborations.



Figure 214—House ruined by conflict in Millivaikal, Mullaitivu district, Sri Lanka
(Photo: Jaime Royo-Olid, EU 2016)

Housing lies at the crossroads of political interests of construction-related business, rent-seeking structures and the fundamental social needs of inhabitants. Therefore, even basic shelter can become a commodity serving primarily as financial opportunity for third parties. This is not always bad in so far it leads to productive investment. The problem however is when investment becomes more extractive than productive. Where people are particularly vulnerable, housing becomes an easier opportunity for extracting. While acknowledging the potential contributions that different sectors can provide, the function of 'home' must be secured.

In the absence of subsidies or savings, most households require large loans relative to their income to obtain or construct a house or to pay a substantial share of their income as rent. As people take loans and mortgages to fund access to housing, they find themselves forced to work harder to earn and repay. This can boost productivity. But as discussed in various chapters in this book, in the absence of financial literacy and amidst exploitative commercial loans lending, many house owners end up in debt traps leading to negative, even tragic, outcomes. The pressure of debt repayment in unregulated markets implies a considerable reduction of disposable income and may even lead to exploitation and abuse. Interestingly, mortgage markets in developed economies have been found to have overall a negative effect on entrepreneurship (Bracke, Philippe and Hilber, Christian A. L., 2012). Entrepreneurship being particularly important for economic transformation and progress, it would be interesting to find out about this relationship in post-disaster contexts and more widely in emerging economies.

Those having worked hard to buy or build a house may consider it unfair that others receive financial assistance (unless there is a shock such as a disaster or war justifying solidarity). Housing policies and markets are hence not only ways for pushing people to work, for equity creation or rent seeking but also for people to assess how well they are performing socioeconomically *vis-à-vis* others, as well as how fairly they are being treated by public policies.

Ideally, demand for housing should stimulate a spontaneous response of supply chains that deliver it. However, in post-emergency contexts, demand peaks and some suppliers might have vanished and the few remaining suppliers may struggle to meet the needs while also becoming monopolists or cartels. Further, dependency syndrome — on aid and on government subsidies — may kill individual initiative (e.g. why would anyone invest in self-help when there is a chance of getting assistance?). Thankfully, in the aftermath of disasters, society largely understands — temporarily at least — that supply chains are broken and that markets and government failures prevail. This period therefore offers a window of opportunity for intervention.

There has not been a juncture when the importance of proactively promoting affordable housing has been more widely acknowledged than the Habitat III New Urban Agenda of 2016. As per this declaration there is the need for participatory, inclusive, financially and environmentally sustainable support to housing. However, the emphasis remains one of entitlement and of legal right to housing. Yet, the challenge before us is how can institutions, communities and private actors practically deliver.

The underlying proposition of this book is that reconstruction processes constitute a chance to invest in communities' long-term capabilities. To understand the task at hand it is useful to problematise the classic Chinese proverb 'Give a fish and you will feed him for a day; teach a man to fish and you feed him for a lifetime'. Providing access to a house is often and reductively compared to 'giving a fish'. This may be a fair analogy when houses are generically produced and failing to exploit their wider potential

e.g. isolated houses that become livelihood traps, hence not facilitating anything other than shelter. But housing processes that contribute to developing livelihoods (e.g. such as generating local supply chains, enhancing women's leadership, etc...) are closer to acting as a resource pool (i.e. the water body where people can fish) or as a tool with which people fish (i.e. a boat, a fishing net or rod). In other words, a house is often reduced to a consumable yet it has the potential of being a platform for both social and economic activities which help the development of people's capabilities.

As we suggested, houses can be conceptualised, designed and built as an 'expandable storage of value'. This can manifest in material terms in the form of incremental growth or economically as improved incomes streams (e.g. through rents, productive space, improved health, solar energy, rain water harvesting, etc...) during the life cycle of inhabiting a house. The same way a person can be taught how to fish, some can also learn how to build, improve, expand or repair a house. While most ODR reconstruction trainees do not get to use acquired skills for income generation beyond the construction of their house, construction skills remain useful. It is instrumental in 'owning' the process of reconstruction, maintaining and expanding a house. Whilst we cannot expect each homeowner to become a mason over and above their pre-existing source of livelihood (e.g. in addition to being farmers, fishermen, teachers, transport workers) there is a case for incentivising awareness in construction. Further, local enterprise development in the terms of Salas (2000) 'the possible industrialisation' can contribute to the local economy towards which construction awareness can help.

A premise in the book is that 'people's processes should be king' (i.e. owners' choices, aspirations and preferences should be accommodated as much as possible). This requires donors, implementing agencies and technicians to promote beneficiaries' 'informed choices'. Lalith Lankatilleke, who coined the notion of 'people's process', takes this further suggesting the 'de-professionalising' of the dialogue. While we welcome the humbling call, we prefer to argue however that it is useful — and professional in a different way — to promote a balanced exchange of knowledge of both owners and technicians reconciling what is meaningful for homeowners and technical imperatives such as structural stability, cost-effectiveness, disaster resistance, durability, thermal comfort, incremental growth potential, and financial viability of housing.

Public policy on affordable housing in developing contexts needs to better engage with the fact that most housing production in the world is undertaken by the informal sector. This operates with different rules that may disconcert built environment professionals such as architects, developers or builders. This however does not mean there is no role for the expert in assisting 'people's processes'. Since 'people's processes' are more efficient in using scarce resources, there is scope for reciprocal learning and for economic opportunity. In fact, the particular set of technical and soft skills required to assist in building people's ownership of their development process, may well constitute a rich source of knowledge for policy at all levels.

The repeatedly quoted difference between Turner’s notion of ‘housing’ as a process and the provision of ‘houses’ as objects reminds us of the social, technical and practical implications arising from the different realities of communities. These vary from symbolism to concerns on construction technology to everyday reality of local political economy. As posited by Schilderman and Parker (2014, xiii) ‘the role of donors and humanitarian agencies is frequently misconstrued as being to provide houses, rather than to provide assistance that enables communities and local government to identify and overcome issues that prevent families — particularly the most vulnerable families — from accessing decent, durable, and affordable housing’. Again, the question is how to achieve this. We conclude with ‘building, owning and belonging’ as processes that may help when thinking of enabling access to housing for the long term beyond reconstruction.

References

- Bracke, P., Hilber, C. and Silva, O. (2012). *Homeownership and entrepreneurship*. SERC Discussion Papers. Spatial Economics Research Centre (SERC), London School of Economics and Political Science, London, UK.
- Salas Serrano, J. (2000). *La Industrialización Posible de la vivienda Latinoamericana*. Escala. *Tecnologías para vivienda de interés social*. CYTED. Madrid.
- Schilderman T., & Parker, E. (Eds.) (2014). *Still Standing? Looking back at reconstruction and disaster risk reduction in housing*. Practical Action Publishing.

Figure 215—Children of homeowner in owner-driven house built with the assistance of UN-Habitat and funded by the EU. (Source, Jaime Royo-Olvid, EU 2014)



About the authors

Anand, Mona Chhabra, PhD, trained as an architect, holds a Bachelor's degree from the School of Planning and Architecture, New Delhi, a Master's degree from the Development Planning Unit of University College London and a doctorate from the Indian Institute of Technology, New Delhi on 'Reducing disaster vulnerability of social housing schemes - a case of rural habitations in India'. In the last 20 years, she has worked extensively on access to quality housing and habitat by the rural poor in both development and disaster contexts. She has been widely engaged in policy research and has contributed towards national policy development for rural housing and habitat in India as part of relevant Working Groups of the Gol.

Ariyaratne, Nimmi is former National Programme Officer at the Swiss Agency for Development Cooperation in Sri Lanka. Ms Ariyaratne has been working in research, implementation, monitoring and evaluation and knowledge management of development projects since 2008, both in Sri Lanka and internationally. Her thematic areas of specialisation include rural livelihood development, microfinance, private sector engagement and post-disaster/conflict community rehabilitation. In the capacity of National Programme Officer (2011-2015), Nimmi contributed towards the management of the Post Conflict Rehabilitation Programme implemented by the SDC in Sri Lanka, participating in the strategic planning, design and implementation of a portfolio of reconstruction, livelihood assistance and community empowerment related projects linked to the programme's overall objectives of relief, rehabilitation and resettlement. She currently works as Programme Analyst for the United Nations Development Programme (UNDP) in Sri Lanka. Nimmi holds a Master's Degree in Development Studies from the London School of Economics, United Kingdom and a Bachelor's Degree in International Relations and French from Wellesley College, USA.

Barac, Matthew, PhD, is Reader at the Sir John Cass School of Art, Architecture and Design, London Metropolitan University where he leads the Postgraduate Taught Course programme in Architecture. Previously, he was a senior lecturer in architecture at London South Bank University where he was Research Leader for Architecture, a member of the Medical Architecture Research Unit, and an associate member of IDEARS: International Development, Emergency and Refugee Studies. For 8 years, he chaired the board of *Architecture Sans Frontières*, a United Kingdom charity that enhances the built environment sector's contribution to humanitarian and development goals through education and debate. Drawing on a professional background in architecture which includes the delivery of public infrastructure in the context of poverty, his research explores the interplay between urban experience and development practice to consider

new ways of theorising, designing, and constructing the built environment. A member of the editorial advisory board of Architecture & Culture, he regularly contributes to academic journals and books as well as writing for mainstream publications, and until recently was pedagogy correspondent for the Architectural Review. His PhD from Cambridge University won the RIBA President's Award for Research (2007) and the International Bauhaus Award (2004).

Bartosiak, Desirée M. has over 12 years of practical experience specialising in complex, cross-sectoral programming and leading multidisciplinary teams at regional and field levels. Her background spans development and humanitarian aid programmes in Africa, Asia, the Caribbean, Europe, North America and the Middle East, with a technical focus on Housing and Human Settlement. A central part of her work focuses on implementing strategic programming through negotiating partnerships with government actors, UN agencies, bilateral donors, multi-national companies and international and national non-governmental organisations. Within senior leadership roles, she has managed country programmes focused on shelter in Ethiopia for long-term development, Nepal for disaster response and Sri Lanka for post-conflict reconstruction. Her focus on innovation and process improvement can be seen within her work on the Cities Alliance Ethiopia Country Programme as a Steering Committee Member to promote solutions for housing and slum upgrading, and as Project Director of the Qatar Shelter Initiative, where she managed a scoping study for the Qatar Foundation, exploring the need for innovation within the humanitarian shelter sector through engaging the global stakeholder community. Prior to this, Ms Bartosiak held a variety of humanitarian/development positions worldwide for organisations such as HFHI and Silatech developing strategies to enhance their sustainable and meaningful impact in international programming. Ms Bartosiak holds a Bachelor of Science degree from Bradley University, a Master's degree in International Social Development from University of Sussex and a certification in non-profit management from the University of Chicago.

Bhut, Gautam graduated with a Master in Business Administration and was with AIDMI for 3 years to develop its safer school campaign at school level in all districts of Assam. He builds capacities and capabilities, both of local school and community leaders.

Boanada-Fuchs, Anthony, PhD, teaches at the Master of Advanced Studies (MAS) in Housing at the Swiss federal institute of technology (ETH) Zurich. He is Post-Doc Researcher University of São Paulo and visiting Post-doc Fellow at the Institute for European Global Studies, University of Basel. Dr Boanada-Fuchs is a trained architect (MSc) and urban planner (MSc) with a PhD in political science obtained at the Graduate Institute Geneva, Switzerland. His doctoral research systematically analysed the metropolitan housing market of the city of Ahmedabad. Anthony aims at using his

technical knowledge to analyse affordable housing policies and typologies in the Global South with special reference to Brazil, India, South Africa, and Thailand. His post-doctoral research focuses on the role of real estate markets in answering to enablement paradigms of local and national governments.

Chariar, Vijayaraghavan M., is Professor at the Centre for Rural Development and Technology of the IIT Delhi. While Dr Chariar's training is in experimental material science, he has over the last decade worked on diverse areas such as wisdom-based leadership, design for sustainability, traditional knowledge systems, appropriate housing and ecological sanitation. He was awarded the Teaching Excellence Award by IIT Delhi in 2011 and the Fulbright Visiting Professorship 2012-13 as part of which he affiliated with the College of Technology and Innovation, Arizona State University, USA. He has authored several patents, publications and design registrations to on innovative technologies. He also serves as Chairman of the IIT Delhi start-up company Ekam Eco Solutions. See more at <http://web.iitd.ac.in/~chariarv/>

Chauhan, Vandana has a Master in Business Development and has worked with the All India Disaster Management Institute (AIDMI) for two decades on integrating DRR with Climate Change Adaptation in local district, city and department plans in various states of India. She led AIDMI work in Afghanistan and Nepal focusing on child protection and DRR.

Croos, Juderaj joined Habitat for Humanity Sri Lanka as Project Director of the EU-funded project 'Homes not Houses' in May 2017. He counts 22 years of experience working in housing construction, development, disaster risk reduction and response (DRR) and humanitarian responses in international agencies such as UNDP, UN-Habitat, FAO, Oxfam GB, CARE, ASB, and Government State Service. He has also served internationally in UNDP Maldives. He holds a PGDBM and BBA from the University of Jaffna and is presently reading for a MSc in Disaster Management from the University of Peradeniya.

D'Urzo, Sandra is a qualified architect and Senior Officer at the Shelter and Settlements Department of the IFRC based in Geneva. She is the Focal Person for Shelter Risk Reduction and Recovery as well as being supporting post-disaster operations and shelter programmes in the Americas. She is an architect whose work aims to improve the living conditions of the most vulnerable. Prior to her humanitarian and development work, she collaborated with the international office of Mecanoo in the Netherlands to develop sustainable architecture and planning projects and ecologically sound building technologies. After completing her MA in Barcelona in 2001, she brought her skills to INGOs such as A&D in El Salvador, Timor-Leste, the Philippines, Afghanistan and Palestine as well as leading the shelter/housing response of Oxfam GB and GIZ in post-tsunami reconstruction in Sri Lanka. She is a regular visiting lecturer at MIT, Harvard and

universities in Paris, Rome and Barcelona and has extensively written on post-disaster reconstruction, architecture and human dignity.

Davis, Lara is an architect, structural mason, and faculty member at the AVEI, India, Unesco Chair of Earthen Architecture. She holds a Bachelor of Fine Arts (BFA) degree from the New York State College of Ceramics and an M.Arch from the Massachusetts Institute of Technology (MIT), where she studied structural design for thin-shell masonry vaulting. She has pursued research in structural masonry and appropriate building technologies at the Institute for Lightweight Structures (Germany), the Block Research Group, ETH Zurich (Switzerland), and the Future Cities Laboratory (Singapore), and has been the recipient of multiple international research awards. She has worked professionally as a mason, foreman, architect, junior engineer, and project manager, leading constructions and teaching workshops in India, Algeria, Ethiopia, Switzerland, United Kingdom, and the US.

Dayananda, H. M., general manager, Real Estate Exchange Pvt. Ltd, is an urban planner by profession, practising in housing and human settlement sector who has over 25 years' experience. He has specialised in the area of urban housing and community development. He has served in government sector agencies including the urban development authority and national housing development authority, as well as on urban settlement improvement project as a senior official. He is presently the general manager of the real estate exchange (Pvt) Ltd under the ministry of construction, engineering services, housing and common amenities.

Fennell, Shailaja, PhD, is Senior Lecturer at the Department of Land Economy, University of Cambridge, primarily based at the Centre of Development Studies. She is also a Fellow of Jesus College, Cambridge. She was awarded her degrees of BA, MA and MPhil in Economics from the University of Delhi, and then went on to read for an MPhil and PhD at the Faculty of Economics and Politics, University of Cambridge. She has considerable research experience in Asia, particularly in China, India and Central Asia. She has recently completed a UKIERI funded project on ICT networks and aspirations of rural youth in India (IRuralNet) that was conducted from 2014-16. She was previously an international team leader researching public-private partnerships in education as part of a DFID funded research consortium on educational outcomes and poverty (RECOUP) from 2005-10. Shailaja's research interests include institutional reform and structural transformation, rural development and diversification, gender, kinship and ethnicity, and comparative economic development. She has been a consultant with the World Bank, ILO, Oxfam and has ongoing research collaborations in both Africa and Asia.

Ganepola, Piyal is Advisor (engineering & infrastructure) at UN-Habitat, Sri Lanka. He is a chartered Civil Engineer by profession, with a strong professional background and

experience in the housing sector. He served as General Manager for the National Housing Development Authority, Senior Consultant — Moratuwa University, Project Manager/Coordinator for the German Development Corporation GIZ and The Asia Foundation and Member of Technical Advisory Committee of Disaster Management Centre. He was a pioneering personality in the introduction of alternative technology concepts in Sri Lanka.

Grant, Brian joined Habitat for Humanity International in November 2017 as the EU-funded project 'Homes not Houses' Consortium Chief of Party. With over 20 years of project management experience, he has worked with large donors such as USAID, World Bank, The Global Fund, The Bill and Melinda Gates foundation, The Lemelson Foundation and the John Deer Foundation. He has also managed projects for KickStart International, The Mennonite Development Associates, EngenderHealth and Africare. Brian has an aviation engineering background and is a co-holder of a human powered agricultural irrigation pump patent with KickStart International. His achievements include a USAID innovation award for a mobile phone anemia testing app and an Avon award for a short video focused on behaviour change communications around gender-based violence. In 2006, the USAID Administrator highlighted the project that he was managing as a global example of how Global Development Alliances are successful.

Gunasekera, Vagisha, PhD, received her doctorate in political science from Purdue University, USA. Her doctoral research focused on women's empowerment in post-war settings. She has more than 8 years of research experience on post-conflict reconstruction, women and citizenship, and comparative social policy. In the past 10 years, she has also worked on programme designing, project implementation, policy development and independent consultancies on issues of violence against women, reproductive rights of women, men, and youth, and women's economic and legal empowerment, with non-governmental organisations and multilateral agencies. At CEPA, she spearheaded the Reimagining Development initiative and the post-conflict thematic.

Gupta, Kshitij holds a Master in Business Administration and leads AIDMI work on knowledge utilisation and consolidation of real experience for policy use for southasiadisasters.net which is the longest standing DRR publication in Asia with focus on innovation and new ideas.

Halani, Khyati graduated from the University of Nottingham, United Kingdom and worked with AIDMI for 2 years in its work on Climate Smart Disaster Risk Management in Odisha, India. She independently developed the programme implementation and captured the learning for sharing across south Asia.

Jeyamaran, Joseph joined Habitat for Humanity Sri Lanka as Senior Project Manager of the EU-funded project 'Homes not Houses' in January 2016. He counts over 19 years of professional work experience in planning, implementing and managing development, rehabilitation, emergency and relief related programmes. Prior to this he has worked at ICRC, UN-Habitat, UNICEF, UNOPS, Oxfam and GTZ. He holds a master's in business administration (MBA) from the University of Colombo and a BSc. in Civil Engineering (Hons) from the University of Peradeniya.

Jezeer, A. H. M., Deputy Project Manager, UN-Habitat, Sri Lanka, has 10 years of experience in the humanitarian and development sectors in Sri Lanka. Jezeer has first-hand experience in the application of the owner-driven approach in housing projects in both post-tsunami and post-conflict humanitarian intervention. This includes designing, implementing, monitoring and evaluating donor-funded projects. He has conducted two academic research papers titled 'Disputes Arising out of Permanent Housing Project in the context of Post-Tsunami resettlement in the Ampara District' and 'Multi-Level Factors that affects Livelihood Diversification in the Post-War Setting'. He holds a MA in Development studies and public policy, PGD in Conflict resolution and peace preparedness from University of Bradford and BA in Sociology from South Eastern University of Sri Lanka.

Kumarasuriyar, Mano, PhD, has been engaged in housing evaluations in a number of Asian and Pacific Island countries for international organisations such as the UN-Habitat, the Asian Development Bank, AusAID, JICA and the EU. In 1986, he was the lead UN Consultant for the Evaluation of the MHP in Sri Lanka. This study resulted in 29 recommendations, all of which were urgently incorporated in the MHP by the National Housing Development Authority. Lately, Dr Kumarasuriyar has focused on research and consulting in Smart Cities Planning and Management. He is currently the independent Master Planning consultant to the Chinese Harbour Engineering Company (CHEC) for the Colombo Port City project. He taught Planning in the Department of Geographical Sciences and Planning at the University of Queensland, Australia, where he was also the Director of the Development Planning Programme. He has been an advisor to several National, State and City governments around Asia, the Pacific region and Africa. Mano holds a doctorate in urban planning from the University of Queensland, a Master of Regional Planning from Cornell University, New York and undergraduate qualifications in Architecture from the University of Sri Lanka. He also spent 4 years in Japan researching in Architecture and in Urban Planning at the University of Chiba and at Tokyo University.

Lankatilleke, Lalith is an architect-planner by profession, with over 40 years' experience in 'people's development'. He has been with UN-Habitat for 34 years working in several countries in Africa and Asia. He is credited with championing the 'people's process' t by

placing people at the centre of decision-making in planning and development. In Sri Lanka (1984-89), he was responsible for the design of the Urban Housing Sub-programme of the world-renowned MHP. He developed community decision-making methods, such as CAP, Community Building Guidelines and Rules, Community Contracting and many others. In Namibia (1992), he designed the build together national housing programme. He introduced the people's process of housing to South Africa in 1995. Since then he has worked for UN-Habitat in Bangladesh and Afghanistan as the head of the agency. In 2005, following the Indian Ocean tsunami, he played a pivotal role in empowering affected people to rebuild their lives and housing. From 2006 to 2016, he served as Senior Human Settlements Officer in the Regional Office for Asia and the Pacific of UN-Habitat in Fukuoka, Japan responsible for Afghanistan, Pakistan, Bangladesh and Sri Lanka. He has also been teaching at major universities around the world.

Leysen, Joeri has more than 15 years of work experience in Asia. He started off as a student at the Asian Institute of Technology (AIT) — Thailand in 2000. Two years later, he moved to Vietnam — after a short assignment in Uganda — where he became country representative for an INGO. He then relocated to Sri Lanka as advisor for the Tsunami programme of Caritas in Galle. His most recent assignment was as representative of Caritas Belgium in Asia. Joeri lived and worked in various countries in the region, including Vietnam, Indonesia, Thailand, Sri Lanka, India, Nepal, Bangladesh and Mongolia. He had the opportunity to work on a wide variety of topics ranging from basic education, children rights, volunteer involvement to community development, food security, emergency response, DRR and housing. Joeri holds a MSc in Rural and Regional Development Planning, AIT Thailand, a MA in Evaluation and Management of Projects, University of Antwerp Belgium and another MA in Political Science, University of Leuven Belgium.

Maïni, Serge (known as Satprem) is a French architect specialised in earthen architecture and he lives in Auroville, India, since 1989. He is the director of the AVEI, where he works as an architect, builder, consultant, researcher, trainer and lecturer. He has worked in 36 countries for promoting earth architecture. Satprem and his team have trained more than 12 000 people from 78 countries on earth architecture and technology. Satprem is the Representative for Asia of the Unesco Chair 'Earthen Architecture' and he is an occasional consultant of the United Nations. He specialised with building arches, vaults and domes as well as disaster resistance. Satprem has been granted 13 awards: 2 international and 11 Indian Awards.

Martelli, Mario is an Italian architect with 25 years of experience in architecture and civil engineering. He has worked in both the management and the construction sector, for private enterprises as well as international development programmes. His previous experience as university lecturer and mentor of professional teams of architects,

engineers and other professionals with very different profiles, allowed him to develop strong capacity-building skills. Working as project manager and auditor across different countries in Europe, Africa, South America and Asia, Mario has built a fervid and flexible mindset to approaching new challenges, showing a creative personality and a good sense of humour. His concern for a sustainable architecture and civil engineering has earned him prizes as designer and consultant. A number of publications have illustrate his 'green-sensitivity' and his curiosity towards the rediscovery of traditional approaches to construction across different cultures and climates.

Mendis, Rasika is a legal and policy consultant specialising in socioeconomic rights and rights-based policy development. Her postgraduate specialisation (LLM) from the University of Warwick (UK) is in 'law and development'. She has engaged in high-level analysis of legal and policy issues impacting sectors such as housing, land, water and sanitation, and has contributed to key forums for the formulation of rights-based policy. Ms Mendis has worked with the Human Rights Commission of Sri Lanka and the non-governmental sector, for the integration of appropriate development responses through evidence-based research; and in the academia, as an external lecturer. She is currently academic (Consultant) coordinator and a member of the academic staff, for the Master of Human Rights and Democratisation (MHRD) programme, conducted by the Centre for the Study of Human Rights (CSHR), University of Colombo. Ms Mendis is currently reading for a PhD at the Faculty of Graduate Studies, University of Colombo.

Miranda, Ramona is a development practitioner and researcher with over 20 years' experience in South Asia, particularly in development communication, appropriate technology, participatory approaches, gender and disaster risk reduction working with organisations such as Practical Action, *Duryog Nivaran* and UN-Habitat. Ramona coordinated the conference *Restoring communities through 'homeowner-driven' reconstruction: from post-emergency to development* (Colombo, 24-25 March 2014) from which this book emerged. She then became coordinator for project development at UN-Habitat Sri Lanka where, among other things, she leads the State of Sri Lankan Cities report. As a Steering Committee member of *Duryog Nivaran* she also leads a gender stakeholder group for DRR in the Asia region. Ramona holds a Bachelor of Arts in History from the University of Peradeniya and a Master of Arts in Communication from the Ohio State University.

Mohamed, Munas received his Master's in Economics from the University of Colombo and read for a Bachelor's in Agriculture at the University of Peradeniya. Munas has over 10 years' experience researching poverty, conflict, fisheries, migration and diaspora issues. Also, he has conducted project evaluations in the conflict-affected areas of Sri Lanka. Munas coordinates the Migration thematic at CEPA. He leads a research project

on diaspora engagement in conflict settings, focusing on Sri Lanka. He also conducts training on qualitative data analysis using Nvivo software. Other areas of his interest include: reconciliation, project evaluation, post-conflict livelihoods and small-scale fisheries. He is a PhD candidate at the Radboud University, Nijmegen.

Niazi, Zeenat, vice-president of Development Alternatives (DA) Group, has over 28 years' experience in sustainable development action and planning working with rural communities in India. She is an architect and a planner with a specialisation in social housing and habitat development, and trained in policy analysis and advocacy. Her work includes design of affordable eco-housing delivery models, post-disaster housing reconstruction interventions, habitat policy development at national level and sustainability assessments of construction technology and housing projects. Her work has extended to design and coordination of low-carbon development strategies for the central Indian region of Bundelkhand and coordination of climate change adaptation, action and communication, knowledge management and dissemination for promoting national and global sustainable development strategies. Her current work involves guiding regional planning and institutional strengthening processes focused on local and national action for sustainable development. She represents DA in the Independent Research Forum (see www.irforum.org), a network of international research organisations that support national and regional stakeholders on the Global Sustainable Development Agenda, 2030. She is a member of the Technology Committee for rural housing of the National Institute of Rural Development & *Panchayati Raj* (NIRD&PR), Gol and member of the multi-stakeholder advisory committee of the United Nations Environment Programme (UNEP) for Sustainable Buildings in their 10-year Framework Programme (10YFP). She represents DA at the Climate Action Network south Asia of which she was the co-chair of the Board from 2013 to 2015 and has been associated with basin-South Asia. Her key interests lie in the area of resource efficient and people-nature centric development planning. She leads the policy studies and communication, knowledge management and development action initiatives at the DA Group.

Nolan, Riall W., DPhil, is Professor of Anthropology at Purdue University and a specialist in international development. Between 1965 and 1984, he worked mainly as a development anthropologist in North and West Africa, south Asia, and the Southwest Pacific. He was USAID's housing policy advisor in Sri Lanka from 1982 to 1984. In 1984, he began his second career in university administration. He managed international programmes at the University of Pittsburgh, Golden Gate University, and the University of Cincinnati before coming to Purdue in 2003. Today, he is a full-time academic, teaching courses on the application of anthropology to global issues, as well as courses on international development, work and learning in cross-cultural environments, and how anthropology is used outside the classroom. He also teaches anthropology in the MPhil

in Development Studies at the University of Cambridge, UK. His most recent books include *Using Anthropology in the World* (2017) from Routledge; the *Handbook of practising anthropology* (Wiley/Blackwell, 2013); *Internationalising the academy* (with Gil Merx, Harvard Education Press, 2016); and *Using anthropology in the world*, (Routledge, in press). He holds a DPhil (1975) in Social Anthropology from the University of Sussex. He speaks and consults frequently on issues of international development, international education, cross-cultural adaptation, and applied anthropology. He can be contacted at rwnolan@purdue.edu.

Page, Anjalie works for World Vision Lanka and held various positions HFHSL including project director playing a key role in setting up the 'Homes not Houses' project funded by the EU in Sri Lanka. Prior to this, Anjalie worked in the private sector in management consulting. She holds a BSc (Hons) in Psychology, University of Nottingham and a MSc in Economics, Finance and Management, University of Bristol.

Pandya, Mehul holds a master in social work and has been leading AIDMI work on risk transfer now for over a decade across India. Recently he works on integration of DRR with climate change adaptation at local level in across coastal and Himalayan states where AIDMI works.

Parker, Eleanor J., BSHF & Coventry University, has been a researcher and lecturer in Disaster Management at Coventry University for 17 years, in which time she has undertaken numerous research, consultancy projects and research student supervisions associated with UK emergency management and International DRR. In January 2014 she coordinated Coventry University's contribution to hosting the BSHF conference titled *Looking back at reconstruction: the need for a longer-term approach in housing*. She is also co-author along with Theo Schilderman of BSHF of the 2014 book *Still Standing? Looking Back at Reconstruction and Disaster Risk Reduction in Housing* published by Practical Action Publishing. An engineering geologist by background with a PhD in climate change, her particular interests are community adaptive resilience to the impacts of acute hazards & climate change particularly the relationship between pre-disaster social capital, preparedness and post-disaster recovery. She also has an interest in the development and implementation of effective early warning systems and the associated challenges of risk communication and raising awareness, targeting effectively and developing bespoke information in a participatory way prior to warning and informing the public. She is currently Associate Head of Department prior to which she was course director for undergraduate and research degrees in disaster management at Coventry. She is a member of the UK government National Steering Committee for Warning and Informing the Public.

Patnaik, Sireesha, architect and planner with a specialisation in environmental planning, has been engaged in habitat planning and finance since 2009. She is currently Senior Manager — Housing Microfinance at the Affordable Housing Technical Assistance Centre (AFHTAC) a technical wing of HFHI, where her work involves conducting the readiness assessment of finance Institutions (MFI, NBFC, HFC) to incubate and develop new housing loan products, provide hand-holding support in the process by understanding their existing operational plans and suggesting feedback points at various stages for their loan procurement. Here, she leverages on the existing in-house team of experts (AFHTAC and Institution) such as engineers and architects to provide holistic development of the loan product and facilitates advisory services to address the challenges during the loan product launches. Between 2015-2016, she was involved with the SEWA Mutual Benefit Trust as Head of Operations responsible for organisational management, fund raising, setting up of systems and processes conceptualising and facilitating training and capacity-building programmes on housing finance literacy. She has also worked as a research consultant at Development Alternatives where she provided inputs to the UNEP — Sustainable Urban Social Housing Initiative (SUSHI), designed training module for sustainable urban social housing with focus on financial inclusion and conducted research on a business model for affordable social housing. She provided secretariat support to the basin South Asia's fundraising for a national exposure and capacity-building initiative, *Lok Awaas Yatra*, documented evidence on good-practice for wide dissemination and contributed in creating a Habitat Practitioners Directory in collaboration with IIT Delhi. Besides consulting, she volunteers for promoting water and sanitation programmes and for women empowerment and dignity. Issues related to climate change and its impact on family and habitat are of her interests.

Pullenayegem, Vasant has over 5 decades of experience in architecture and construction, of which 44 as an independent architectural design consultant. He began his career in 1958 with Chartered Architects Selvaratnam & Monk and Selvaratnam & Perera, and subsequently practised privately from 1972. He served as in-house consultant with Chartered Architect V. S. Thurairajah from 1999 to 2002. In 2002, he successfully completed a practice examination for Architectural Licentiates conducted by the Board of Architectural Education (BAE) of the Sri Lanka Institute of Architects (SLIA). Since then, Vasant has engaged in private practice. From 2005 to 2013 he has served as Housing Consultant with Practical Action; a development oriented International NGO. He has acquired expertise in sustainable resettlement housing, low-energy housing, quality assurance in construction of houses in large housing settlements. He has researched design and construction of houses to mitigate natural disasters common to Sri Lanka. He has a special interest in sustainable architecture and tropical architecture and has contributed several articles on these and related topics to *Constructor* — the official publication of the National Construction Association of Sri Lanka (NCASL).

Royo-Olid, Jaime is a qualified architect and urban planner working as infrastructure programme manager for the European Commission, first at the European Union Delegation to Cape Verde (2006 to 2008), then to Eritrea (2009 to 2012) and to Sri Lanka and Maldives (2012 to 2018). In Sri Lanka, he has overseen 'HOD' housing reconstruction assisting over 12 000 households with UN-Habitat, the SDC, Habitat for Humanity and ASB. His development career began in 2004 as volunteer coordinator of *Architecture Sans Frontières-International* with whom he led the drafting of its common declaration of principles (the Charter of Hasselt). With NGO A&D he volunteered as architect for a post-tsunami housing reconstruction project in south India recognised as best practice by UNDP India. In 2005, he became research assistant on Sustainable Humane Habitat in Developing Contexts at the University of Cambridge. Jaime founded *Architecture Sans Frontières-Cambridge* (2001) that led to establishing ASF-UK (2003). Royo-Olid holds a BA with Honours (2001) and Diploma in Architecture (2004) and an MPhil in Development Studies (2006) from the University of Cambridge (UK) involving exchanges with MIT's School of Planning (US) and the Centre for Environmental Planning and Technology (CEPT) University's School of Planning and Policy, Ahmedabad (India). He is a specialist by the Unesco Chair in Human Settlements of the *Escuela Técnica Superior de Arquitectura de Madrid* (ETSAM), Spain. He is also a PhD candidate in Development Studies at Cambridge researching on the relationship between financial deepening and the affordability of housing in metropolitan Odisha, India.

Schilderman, Theo is senior researcher at the BSHF (now called World Habitat), consultant and lecturer. He is a Dutch architect with over 40 years of experience in low-income housing and post-disaster reconstruction who has worked for Practical Action, COOPIBO and the Institute for Housing and Urban Development Studies (IHS) in the past, both in developing countries and in management. He was the editor, with Michal Lyons of *Building back better* in 2010 and with Eleanor Parker of *Still Standing? Looking back at reconstruction and disaster risk reduction in housing* in 2014.

Serdaroglu, Ela is an urban planner and humanitarian professional with some 20 years' experience. She holds the position of Shelter Lead at the International Federation of the Red Cross and Red Crescent Societies (IFRC) at the organisation's headquarters in Geneva. In this capacity, she is also the Global Shelter Cluster Coordinator for the IFRC, co-leading the Shelter Cluster with the Office of the United Nations High Commissioner for Refugees (UNHCR). Before that, Ela worked for the IFRC, Netherlands Red Cross, HealthNet International and Unicef at field and headquarters levels on a variety of programmes covering the full range of disaster management continuum, venturing into some development and organisational development and capacity building. As part of her dedication to progressing the humanitarian shelter, Ela is one of the chapter lead authors for shelter and settlements in the upcoming revision of Sphere handbook. Sri Lanka holds

a special place in Ela's heart. Her work and interest in the country that started in the aftermath of the Indian Ocean tsunami in 2004 lasts to date and has spanned several projects and approaches in various capacities. Born and raised in Turkey, Ela holds a Bachelor of Science in city and regional planning from the Middle East Technical University in Ankara, two masters degrees, one from Harvard University in the USA on urban planning and another from the University of Groningen in the Netherlands in international humanitarian assistance. When not working, and thinking about humanitarian challenges, she translates and edits children's books and works on improving her silversmith skills.

Shah, Kirtee architect and advisor to the Government of India, is a founder director of ASAG, a public charitable trust, for past 35 years. He was the president of Habitat International Coalition, world's largest coalition of Habitat professionals working on issues of housing rights and sustainable urban development, for 10 years; founder President of INHAF with over 200 members across the country; one of the founders of Ashoka Innovator for the public, which now works in 45 countries of the world. He is an active member in ACHR in Thailand and CityNet in Japan. He is a founder Chair of HOLSAA — Home Losers' Service Association in Ahmedabad, following the Gujarat Earthquake. He has written several papers on people's rights on housing, earthquake policy and riverfront development in Ahmedabad. He is also a practising architect and Chair of KSA Design Planning Services P. Ltd

Sirisena, Dulani currently works as Programme Manager (Economic Development) at the Australian High Commission in Colombo. She has 14 years of experience working with the United Nations and bilateral donors in Sri Lanka on humanitarian and development issues. As part of her engagement with the Australian government's aid program in Sri Lanka over the past 6 years, Dulani has managed humanitarian response and early recovery programmes including the Australian government's support to permanent housing in the Northern Province. Her current work focusses on the design and management of economic development programmes in key growth sectors of the Sri Lankan economy with a focus on engaging the private sector. Dulani holds a Bachelor's Degree in Information & Communication Technology from the University of Colombo, a Diploma in Conflict Resolution from the UN University for Peace (UPEACE) Costa Rica and a Postgraduate Diploma in Conflict and Peace Studies from the University of Colombo. She is completing a Master of Arts degree in the same subject where her research focusses on land rights and the impact of competing claims for land on permanent housing projects in northern Sri Lanka. Dulani has received extensive international training in humanitarian field coordination, International Humanitarian Law, Do No Harm, making markets works for the poor and gender studies.

Srivardana, Susil, is the Former Chairperson of the Housing Authority and writer. Mr Srivardana played key roles in the MHP and the National Poverty Alleviation Programme (1980s and early 1990s) and has written extensively on Participatory Development Paradigm, critically reflecting on the success. He can be contacted at seniadv@gmail.com.

Skinner, Reinhard, PhD, is a British sociologist based in The Netherlands. He has 25 years' experience in low-cost housing built up in over 30 countries worldwide and has managed, appraised or evaluated over a dozen housing and construction projects in developing countries. His doctoral dissertation is entitled Community Organisation, Collective Development and Politics in Self-Help Housing: Villa El Salvador, Lima (1971-1976). Major long- and short-term assignments have been as a consultant and staff member for donor and development agencies such as UN-Habitat, the European Commission, the World Bank, DFID, UNDP and Danish International Development Agency (Danida). His experience also includes long-term management and short-term team leadership positions of slum upgrading and poverty reduction projects and programmes. Most recently he led a two-year capacity-development programme in six cities in Myanmar and is currently leading the establishment of a monitoring and evaluation (M&E) system for a major World Bank funded rural sanitation programme in Egypt. Additional professional interests include stakeholder participation, training and M&E. Dr Skinner has lectured on participatory housing at 14 universities in Asia, Europe, Africa and Latin America and has published extensively internationally on this subject. His most recent publication is a Practical Guide to Designing, Planning and Executing Citywide Slum Upgrading Programmes for UN-Habitat.

Srivasta, Anurag, is Director (Finance), Ministry of External Affairs, Government of India he administers an annual budget of USD 2 billion. As more than half of this budget is directed towards supporting India's development partnership projects globally, he is tasked with not only managing their financial flows, but also their monitoring and oversight. After obtaining degrees in engineering and business management, and a brief stint in the corporate sector, he joined the Indian Foreign Service in 1999. He was posted to India's Permanent Mission to the United Nations in Geneva where he handled work related to human rights, refugees and trade policy. Upon his return to Delhi, he worked for a year as desk officer in the division handling India's relations with Pakistan, Afghanistan and Iran and then with the spokesperson of the ministry responsible for interface with the media for 3 years. Mr Anurag Srivastava obtained a postgraduate diploma in Diplomatic Studies from the University of Oxford during a sabbatical. In his last overseas assignment, Mr Srivastava headed the political wing at the HCI in Colombo. Along with other responsibilities, he was involved in formulation and implementation of India's bilateral assistance, including the IHP.

Tissaveerasinghe, Stanly Prashanthan has more than 12 years' experience in engineering, project management, risk management, monitoring and evaluation; reporting, resource management, appropriate construction technologies and occupational safety and health. Prashanthan has worked for UN-Habitat Sri Lanka and for several INGOs (i.e. UNDP, Oxfam-Great Britain, the Canadian Red Cross, *Action Contre la Faim* and the German Red Cross). He joined Habitat for Humanity Sri Lanka as alternative construction specialist in January 2017. He holds an MSc. in environmental sciences from the Open University of Sri Lanka, a B.Eng. (Civil Eng.) from the Engineering Council, United Kingdom and in Chemical Process Engineering from University of Moratuwa, Sri Lanka.

Weerasoori, Indu, Project Manager (Urban), UN-Habitat, Sri Lanka is an Urban Planner with 30 years of experience with the Urban Development Authority, where she was the Deputy Director General (Planning). Ms Weerasoori's experience includes preparation of development plans and working on town planning projects across Sri Lanka. She joined UN-Habitat in 2012 as the Project Manager, DRR and has overseen the development of this unit to roll out the Resilient City Programme across three districts. Ms Weerasoori is a Fellow Member and immediate past President of the Institute of Town Planners Sri Lanka. Ms Weerasoori has been appointed as a member of the advisory committee of the Cities and Climate Change Initiative (CCCI), UN-Habitat and she was also visiting lecturer and faculty member of the universities of Moratuwa and of Jayawardenapura. Ms Weerasoori has a MSc in Urban Development from the University of London and special postgraduate diploma in Urban Rehabilitation & Heritage Management from the HIS, Netherlands.

Zaidi, Hina is a Senior Architect at Heritage Foundation (HF) of Pakistan, where she works since 2012. Heritage Foundation is a non-for-profit social and cultural entrepreneur organisation. Like all its employees she has been engaged in research, publication and training for heritage management and DRR-compliant methodologies. She was also the project coordinator for HF of Pakistan and International Organisation for Migration (IOM) 'Women centered Community-Based Disaster Risk Management Strategy' a 7-Village pilot project, where a committee of women was trained in several aspects of Disaster Preparedness. She has been involved in the HF ParhoPakistan Programme. This programme is a word recognition programme to create an interest in literacy for Village children, in order for them to continue their education in government schools. At Heritage Management she has played a vital role in the Cataloguing and Recording of the Heritage Assets of World Heritage Site, Makli Necropolis. Hina Zaidi holds a Bachelor's in Architecture from the National College of Arts, Lahore. Her work in the development sector has shown a side of architecture practice that was not taught in college. Her work experience has taught her how an architect can truly be a builder, a builder of hopes and homes, lives and livelihoods while keeping the morale and spirits high.

