From:

Gertrud Tauber

Architects and Post-Disaster Housing

A Comparative Study in South India

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This book examines the different roles of architects in rural post-disaster housing and their impact on the degree of success of the projects from villagers' perspective. It is based around the building process of three case studies affected by the tsunami of 2004 in rural South India. It identifies the critical parameters and skills required at project level during the course of the building process. The results from villages and interviews with experienced international and Indian architects, engineers and NGO representatives show that architects are often poorly equipped to work in this contexts. Gertrud Tauber concludes with a proposal for a course to help architects in the building of people-oriented housing in post-disaster environments.

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Preamble

In February 2005, approximately one and a half months after the Indian Ocean tsunami of 2004 had hit many regions in Southeast Asia, I set off to Tamil Nadu to work as a member of the 'shelter team' in the reconstruction programme launched by the NGO Caritas India and its partners. I was appointed by Caritas Austria, one of Caritas India's funding partners, and I arrived at Chennai at a time when the world was still shaken by this terrible disaster. The question of how best the many villages and urban areas affected should be reconstructed was debated heatedly. I entered, as a young architect and for the first time, a chaotic and emotionally-charged working environment, one in which I would stay and work for more than two years.

Our team, two Indian engineers and myself, were assigned responsibility for guiding seven local partners (NGOs) through their efforts to errect post-disaster housing in the villages affected by the tsunami. In total, thirty seven villages in ten districts spread along the coastal belt of Tamil Nadu were provided with housing, and the projects ranged from reconstruction in-situ to relocation. During these years, our team was confronted with numerous challenges and constraints at various levels and various stages of this large reconstruction programme. However, there were two factors that impeded the programme most. Firstly, none of the local partners had experience in the construction of post-disaster housing as they focus on socio-economic issues. Thus, they needed to be introduced, first of all, to this specific building system and its procedures, and the fundamental themes related to it. Secondly, a premise of the reconstruction programme formulated by our team was that there had to be close cooperation between the architect and the villagers, particularly during the planning stage (see Caritas India 2005a). I soon realised, however, that

the premise of 'close cooperation between the architect and the villagers' was easier said than done.

Tamil Nadu has many well established and experienced architects. While most of them focus exclusively on projects related to the urban context, only a few have experience of working on rural environments, not to mention post-disaster housing. Nevertheless, local architects were appointed by the bodies charged with the reconstruction and they were assigned responsibility for the planning and management of the projects.

The architects were of considerable value for the NGOs as they provided vital skills for the numerous practical and technical tasks to be handled during the building process. Still, were they of value for the villagers? Did the architects contribute to the realisation of housing projects that responded to the villagers' needs and aspirations?

What I witnessed and experienced first-hand helped to formulate my thesis that to be of value for the people in a delicate context such as that of post-disaster housing involves a great deal more than the mere application of creative urges and (technical) skills provided by formally trained architects. Two questions were raised by my experience. Which skills are required in this specific working context? Which role(s) should an architect take on so that people (with different socio-cultural backgrounds) benefit from it/them?

After having been confronted with these questions earlier during the course of a pilot housing project with a gypsy community in Northern Italy (Tauber 2005), and again during different development projects after my work assignment in Tamil Nadu, they led me to pursue a PhD, aiming to find out a great deal more.

Introduction

Some Facts

Globally, natural disasters are on the increase: storms, floods, famine, cyclones, drought, typhoons, earthquakes, mudslides and avalanches. According to the International Federation of the Red Cross and Red Crescent, 'an average of 354 natural disasters occurred throughout the world each year from 1991 to 1999'[1]. 'In the past decade an average of 456 disasters have been recorded annually, out of which only 29 were covered by the media in the West.'[2] Looking at the geographical distribution of these, 'Asia was the continent most often hit by natural disasters in 2011 (44.0%), followed by the Americas (28.0%), Africa (19.3%), Europe (5.4%) and Oceania (3.3%). This regional distribution of occurrence resembles the profile observed from 2001 to 2010' (Guha-Sapir *et al.* 2012: 2).

During the past two decades, non-governmental organisations (NGOs) have increased their profiles at local, national and international level, and they have also become recognised as important players in the field of post-disaster recovery and reconstruction (see Lewis *et al.* 2009: 1). The increase in the number and scale of the disasters has pushed NGOs to seek, among other experts, the skills of professionals of the built environment (see Lloyd-Jones 2009, Aquilino 2011, Desai 2011). Architects, engineers

1 | http://www.christianaid.org.uk/emergencies/prevention/facts.aspx (accessed on 02.09.2013).

2 | Data presented by Graham Saunders, Head, Shelter & Settlements, IFRC at the 6th International i-Rec Conference on 'Sustainable Post-Disaster reconstruction: From Recovery to Risk Reduction', in Ascona/Switzerland. Date of Presentation: 27.05.2013.

and land-use planners have been appointed as consultants, managers, planners and designers at local, national and international level. Nevertheless, the literature has so far neglected to examine the distinctiveness of this working context and to ascertain, based on empirical data, the skills required to realise the goal put forward by the NGOs, the creation of people-oriented housing. This research addresses this imbalance by examining permanent housing funded by international NGOs, implemented by local NGOs and planned by local architects in rural post-disaster environments affected by the Indian Ocean tsunami of 2004.

Post-Disaster Housing: A Challenging Working Context

One of the most challenging and at the same time most important tasks in post-disaster reconstruction is to organise the building process and the procedures related to it (Davidson 2010). According to Davidson, the degree of success of the project depends to a large extent on the skilful interplay and relationships between the multiple actors involved. Designing the process and defining the roles and responsibilities of the numerous actors (the people affected, NGO personnel, public authorities, professionals in various fields, and skilled and unskilled labour) in this particular context is, though, a delicate endeavour for a number of reasons.

Firstly, disasters create social disorder. They represent a time of chaos and sometimes of upheaval (see Luig 2012: 15). Some want to reconstruct the previous state of affairs. Others hope for a new beginning, for the opportunity to have a second chance in life (see Hoffman 1999: 150), and the building industry is called upon to provide more than just the provision of basic housing and services. The act of 'rebuilding is closely bound to how society frames its own values and re-establishes itself' (Duffy *et al.* 2013: 117). Potential participants (people affected, international, national and local NGOs, bi-lateral and multilateral agencies, and public authorities) in the process have many differences regarding their socio-cultural backgrounds, working cultures, powers and visions (see Boano *et al.* 2012), and conflict inevitably arises over what and how to reconstruct.[3]

3 | It is important to emphasise here that the actors (the people, NGOs, and government) are not seen as homogenous groups that share the same socio-eco-

Politicians, bureaucrats, middle men and entrepreneurs dream of the creation of entirely new villages (and/or cities), enforcing radical concepts of modernisation. 'Modern' technology is used, real and imaginary, 'as a symbol to reassure people that their new homes would be safer and more secure than those they had lost' (Desai 2011: 84). As a result, 'modern' construction technologies are in, and 'traditional' building techniques are out. 'Modern' settlement layouts and house styles are synonymous with a better future, while 'traditional' habitat structures and house layouts are equated with 'backwardness' (see Jigyasu 2002, 2006, 2010, Desai 2011). In other words, post-disaster reconstruction is characterised by disorientation, and bitter and tenacious negotiations over space, identity, and resources (see Boano *et al.* 2011, Luig 2012). Structures of power and inequality are revealed (see Luig 2012: 15) at local, national and international level, and the question of who decides what for whom (see Turner 2009 [1976]) becomes fundamental.

To complicate matters further, there is no clear project initiator, the equivalent of a building owner in a traditional building process (Davidson 2010: 99), in charge of specifying the project's brief. Public authorities, NGOs, bi-lateral and multilateral agencies all claim their right to co-determine the parameters of the reconstruction programme in general and the housing projects in particular.

Moreover, there is 'no pertinent earlier experience available due to the unique circumstances that characterise each disaster (location, gravity, time, socio-political context, etc.)' (*ibid*). Thus, each reconstruction process (and the procedures related to it) has to be designed from scratch.

Furthermore, providing housing is one of the most demanding activities after a disaster, because it operates in conditions of uncertainty, in regions struck by conflicts, in remote and environmentally delicate locations, and within severe budgetary constraints (see Wu *et al.* 2004, Steinberg *et al.* 2010). Added to this, the many actors involved (the donors, politicians, public and private agencies, international, national, and local NGOs, and the people affected) want results immediately, and time is of the essence.

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nomic background, values and ideas (see also Guijt *et al.* 1998, Hüsken 2010, Sökefeld 2012). However, as this study is concerned with their interplay at various levels it will continue to refer to the people (and/or villagers), NGOs, and the government.

Acknowledging the socio-political dynamics of post-disaster contexts, and taking into consideration the intricacies on the ground, the NGO's approach to reconstruction and the role of the architect assigned responsibility for the planning and designing of the new houses (and habitats) become central. The following chapter will argue why.

NGOs, Architects and Post-Disaster Housing: Why Rethink the Role of the Architect?

Non-governmental organizations (NGOs) are high-profile actors in the field of international development, both as providers of services to vulnerable individuals and communities and as campaigning policy advocates (see Lewis *et al*. 2009). They began attracting attention during the late 1980s, and they appealed to different sections of the development community for different reasons. NGOs appealed to some western donors, who had become frustrated with the bureaucratic and inefficient government-to-government project-based aid then in vogue (see Lewis 2009: 16). NGOs provided 'an alternative and more flexible funding channel, which potentially offered a higher chance of local-level implementation and grassroots participation' (*ibid*.). According to Michael Cernea, NGOs embodied 'a philosophy that recognizes the centrality of people in development policies' and this, along with some other factors, gave them certain 'comparative advantages' over government and the public sector (1988: 8). NGOs were seen as fostering close cooperation with the people since they were more locally rooted organisations, and as a result, closer to marginalised groups than most public authorities were. Poor people were often found to have been bypassed by existing public services and programmes due to the fact that many public institutions 'faced resource shortages and their decision-making processes were captured by elites' (Lewis 2009: 16). Others also claimed that NGOs generally operated at a lower cost, and they were seen as 'possessing the scope to experiment and innovate with alternative ideas and approaches to development' (*ibid*.: 17).

While there have been many advocates for NGOs that stress their strengths, NGOs have also been subjected to fierce criticism. Different scholars have argued that the NGOs' claims can not be substantiated in many ways (see Tendler 1982, Tvedt 1988). Michael Edwards (1999), a writer and activist

sympathetic towards NGOs, argues that few NGOs have developed structures that genuinely respond to the needs of the people, and even though they talk of 'partnership', the control over financial resources and decision making remains to a large extent unequal. With the rise of NGOs working in the context of post-disaster reconstruction during the past decade (see CHAPTER Some Facts) they have challenged the work of the public sector. At the same time, their own shortfalls have been exposed, and awareness has grown of the fact that there is a 'need for NGOs to be accountable to key stakeholders, both to consolidate their ethical position and to foster credibility' (Meding *et al.* 2009: 38).

A series of reports by ALNAP[4] has found that 'shelter and housing work is the least successful form of aid when compared to other humanitarian intervention sectors' (quoted in IFRC 2003: 4), and Cuny's (1983) groundbreaking post-disaster housing analysis for Oxfam America has not lost any of its relevance. Cuny found that most NGOs rush to build housing without any experience of the construction industry whatsoever, lacking a subtle approach and long-term commitment. Furthermore, he has shown that the majority of NGOs lack an understanding of the complexities of post-disaster housing, and they fail to link post-disaster housing to the local building process, a critical parameter for an integrated approach. As a consequence, many permanent houses provided by NGOs are deemed to be inappropriate and they remain, in the worst case, unoccupied (see Barakat 2003, Steinberg 2007). NGOs have trusted in the expertise provided by formally trained architects, assuming that the use of these professionals leads to the realisation of people-oriented post-disaster housing.[5] However, studies have highlighted that despite their involvement projects continue to fail, culturally and technically (see Ortiz 2002, Karunasena *et al.* 2010, Boano *et al.* 2011, 2012, Tauber 2013, 2014). What are the reasons?

4 | The Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP) is an interagency forum dedicated to improving learning among agencies working in humanitarian response (see http://www.alnap.org/).

5 | A frequent answer given during the interviews carried out with NGO representatives in decision-making positions was: 'We expect architects to realise people-oriented projects because they are not only concerned with technical issues, unlike the engineer. Architects plan for, and work with, people, and they know how to do that.'

The relevance of built-environment professional expertise in disaster response in general, and of architects in the reconstruction of permanent housing in particular, seems obvious on the face of it. Indeed, the value and significance of involving architects has been stressed by various researchers (Aquilino 2011, Harris 2011), and a guide for humanitarian agencies has been published, aiming to demonstrate the 'value of using built environment professionals' (Lloyd-Jones 2009: 5). Being general in scope, this guide deals broadly with disaster risk reduction and response. It mentions the typical built environment professionals (engineers, planners, architects and surveyors) and their skills, attempting to delineate their roles in terms of a typical set of activities. The architect's activities (and his/her value) were defined in terms of the following fields: 'design and building technology for dwellings (including open spaces), supervision and advice as the buildings are constructed, providing training in construction, retrofitting and maintenance, overseeing the delivery of dwellings, and identifying the contribution communities can make (and feed that into cost model)' (*ibid*.: 29).

The importance of appointing professionals of the built environment is emphasised by these scholars, and the NGO's choice of, and reasoning for, appointing architects seems to derive from an approach which owes much to the formal sector (see CHAPTER Building Cultures). However, the literature has neglected to examine the degree of 'success'[6] of these professionals in general and of the architect in particular. To be more precise, it is not known if formally trained architects have contributed to the realisation of people-oriented housing from the perspective of the villagers themselves. Hence, there is a need for a realistic picture, as argued here, of the potential and limitations of this professional in rural post-disaster environments, based on empirical data.

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6 | The term 'success', as used here, refers to the inhabitants' degree of satisfaction regarding their new house (and new habitat in case of relocation). 'Success' was defined by the villagers based on the following parameters: size of the plot, size of the house, orientation and type of sanitary facilities, availability of a *puja* (prayer) room, provision of an outdoor kitchen, possibility of future extension of the house and the hamlet, quality of construction, possibility of self-repair, participation in decision-making stages, close interaction with the planner of the new house (and habitat), and carrying out of *pujas* during the building process (see CHAPTER The Household Interviews).

This study attempts a first step in this direction. Based on quantitative and qualitative data obtained in the villages, it seeks to shed light on the intricacies of the reconstruction process as a whole in rural environments and on the challenging task of identifying and assigning adequate personnel and their roles during a complex building process. Aiming to assess the degree of success of the architect involved, it is interested in the three questions of what, which and when? What was the architect's scope of work? Which results were obtained at project level? When was he/she involved during the course of the building process? In doing so, the study seeks to identify, first of all, the gaps in skills and planning during the course of the building process and the fundamental parameters which have an impact on the degree of success. From this it aims to explore the challenges architects are faced with at village level, to find out the different skills and capacities required to overcome them, and to ascertain if formally trained architects are adequately equipped for these tasks. Furthermore, this study aims to identify the fundamental parameters that are useful for defining the role and scope of work of the architect in a context as intricate as that of building permanent houses.

According to Davidson, the success of a project depends, to a large extent, on the relationships between the multiple actors involved, and their roles during the course of the building process. Hence, the challenge is, amongst others, 'to "design" the relationships of the various actors involved in the best interest of the recovery effort' (2010: 88). Deciding what is to be produced and who is to participate in reconstruction is difficult since conditions are not stable.[7] Moreover, the actors involved (the people affected, local and central governments, NGOs and international agencies and, of course, professionals of the built environment, builders, and skilled and unskilled labour) possess as many differences as they have different socio-cultural backgrounds, with different languages, technical, cultural and economic values and working cultures. They may be commercial or non-commercial, and they may be driven by priorities imported

7 | Davidson outlines the challenges (and the differences) of the management and procurement processes during the course of building projects under relatively stable circumstances and during unstable conditions, i.e. post-disaster reconstruction. The premise is that construction and reconstruction problems are by their very nature *wicked*, and that organizing for their 'solution' is of itself a major design problem (2010: 90).

from elsewhere or from another context. Thus, the questions of 'who does what, why and when' (*ibid*: 108) need to be answered afresh and sensitively in each context.

Taking into consideration the tricky task of defining the role and scope of the work of the actors involved, this study has four main aims:

- To analyse the reconstruction process comprehensively (who did what and when) in order to illustrate the distinctiveness and complexity of a rural post-disaster housing project, and to examine if the involvement of formally trained architects has proven to be significant for the goal put forward by the NGOs, the realisation of people-oriented housing.
- To ascertain which skills and capacities are required at project level, and why?
- To help NGOs and architects working in this particular context act more cautiously, and prudently, when designing and taking on roles during the building process.
- To provide a foundation for educational institutions for the design of a specific training course for architects who intend to work in the context of (rural) post-disaster reconstruction.

I seek to approach these aims by analysing the three case studies against the following background:

- The rural environment

Rural habitats in India follow their own logics with regard to the use (and meaning) of open and private spaces, of neighbourhood, and of construction materials. Each area within a hamlet has certain peculiarities. Temples spaces, trees, the different styles of houses and their location reflect a very strong hierarchy, which is specific to each and every village. In the creation of rural habitats 'folk beliefs, caste, kinship, family, marriage, rules of inheritance of property and of succession, etc., play an important role' (Chandhoke 1990: 3).

- The rural building culture (in normal times)

In rural India building a house takes place in the informal sector: people build the houses either by themselves or, if the financial means are available, this process will be guided (and executed) by local professionals (masons, carpenters) (Davis 1999, Ifthekar 2011). The building cultures in place in rural contexts follow their own logics. They differ from formal-

ised and institutionalised building cultures in many ways, yet share the same aim: the realisation of a built environment (see CHAPTER Building Cultures). In this context, formally trained architects do not play any role whatsoever during the building process. They are 'outsiders'.[8] Still, in the aftermath of the Indian Ocean Tsunami of 2004 the values of a formal building culture and its professionals were, in many cases, superimposed on those of the villages.

- Formally trained architects

Current architectural education does not equip the professional to work in contexts that differ from his/her own socio-cultural environment (see Rieger-Jandl 2005, Davis 2006, Latter 2006). 'Traditional' architecture and construction technologies are seen as being 'primitive' by architecture schools (see also Oliver 1999, 2003, Asquith *et al.* 2006, Asquith 2006, Davis 1999, 2006, Latter 2006), and there is the assumption that the future has nothing to learn from the past. Experimenting with and developing new and 'modern' construction materials as well as technologies is an essential part of architectural education today (see Davis 2006). Moreover, architecture departments in universities do not introduce aspiring architects to the skills and methods of other disciplines (for example sociology or social anthropology), nor do they integrate building know-how available outside the academic circle into their courses. Architecture today is mostly taught as an individual pursuit and expression of the designer (see Davis 2006, Latter 2006). None of these premises and attitudes provide architects with the skills required for a working context as intricate as that of post-disaster housing.

- The labour market

Investigations during the course of this study have revealed that only a few colleges world-wide (see CHAPTER A Challenging Task Ahead) offer specific training courses for architects with a focus on post-disaster reconstruction. Hence, NGOs face difficulties when identifying adequately skilled professionals. This situation is further aggravated after major disasters, when many agencies compete for human resources (see Harris 2006).

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8 | Interview with the Indian engineer, Rajendra Desai, who has worked extensively in the context of post-disaster housing over the past two decades. Personal communication on 22.12.2011 (Internet phone).

- The NGO as provider and employer of architects

As has been mentioned already, many NGOs participating in reconstruction operate outside their traditional field of expertise (see Barakat 2003, Steinberg 2007). Thus, they are neither familiar with the building industry and the themes and procedures related to it, nor with the challenging task of designing the building process and assigning the 'right' personnel. Reconstruction can be undertaken in a number of different ways. The case studies under examination in this study were all implemented within a donor-driven scheme. Below, the characteristics of this scheme will be explained in more detail.

NGOs as Provider: The Donor-Driven Approach

There is a growing body of literature concerned with the merits and drawbacks of different reconstruction schemes (Twigg 2000, Barakat 2003, Harvey 2005, Duyne-Barenstein 2006, Karunasena *et al.* 2010). Broadly, there are two main reconstruction approaches: the owner-driven approach (ODA) and the donor-driven approach (DDA).[9] The owner-driven approach enables people to undertake the building work themselves, with external financial, material and technical assistance. This approach can include the repair and reconstruction of houses. The criteria for financial support are based on damage assessments. This approach does not, necessarily, mean that the people build their houses on their own, rather, within this approach they retain, to a large extent, control over the entire building process.

Contrary to the owner-driven approach, in the donor-driven approach the project is fully managed by the agency and its personnel, from inception to completion. In many cases, planning (designing) is carried out by architects, construction by contractors, and supervision by engineers (and/or architects). Traditionally, governments and private agencies providing housing have assumed that this approach is the quickest and most

9 | These two approaches can be further divided, and thus many more exist in the literature. However, it is not the scope of this thesis to describe the various types of approaches in detail (their merits and faults). For further reading on this subject the following studies are suggested: Barakat (2003), Duyne-Barenstein (2006), Karunasena *et al.* (2010), Lyons (2009, 2010).

effective way to reconstruct houses. However, studies have shown that this claim could not be sustained in many respects and for a number of reasons (Oliver-Smith 1991, Barakat 2003, Duyne-Barenstein 2006, Lyons 2010, Karunasena *et al.* 2010).

First, the donor-driven approach tends to be top-down and to exclude people from the entire reconstruction process (Lyons 2010). Moreover, comparative studies highlight that this approach has been less successful than the owner-driven approach with regard to a number of significant parameters, namely: 'a) durability of house, b) availability of space, c) incorporation of people's requirements, d) flexibility for future changes, e) location of the house, f) size of land, g) overall facilities provided, and h) response time[10]. Only two parameters scored higher ratings for the donor-driven approach, namely aesthetics and functionality' (Karunasena *et al.* 2010: 180). This is 'not surprising because donor-driven housing projects were generally designed by professional architects' (*ibid.*). Despite these deficiencies, the donor-driven approach has been the most widespread in many post-disaster contexts, for the following reasons. After major disasters, funds have increasingly been channelled through large international agencies (see Steinberg 2007, Lewis 2009), and thus, local governments have been inclined to outsource the reconstruction of permanent houses to private agencies and NGOs (see Duyne-Barenstein 2010). Further, as the majority of NGOs have no experience in the field of housing in general, and in the provision of large-scale permanent housing in particular, they tend to adopt the donor-driven approach in order to externalise or reduce risk and construction time (see Lyons 2010).

After the Indian Ocean tsunami of 2004, the donor-driven approach was applied in most of the affected regions. While in some contexts different approaches were possible (for example in Sri Lanka), in others (for example in TN and the UToP, India) the state government outsourced reconstruction as far as possible to private agencies and NGOs (see Duyne-Barenstein 2010).

Due to the flow of grant funding (see CHAPTER Locating the Field), many NGOs expanded their initial commitment from emergency aid to the provision of housing. While they had previous experience when responding to emergencies, reconstruction work has been very taxing for

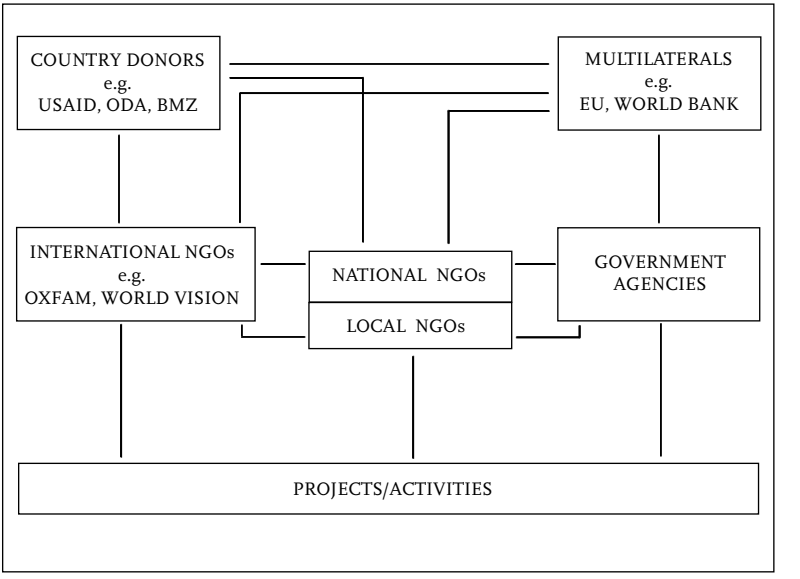
10 | The term 'response time' refers to the time-span required before construction can begin.

most of them, as many operated outside their traditional sphere of expertise and thus they lacked experience and skills (see Steinberg 2007: 157). Moreover, the scale of reconstruction and the management of large-scale projects as a whole were often far beyond the capabilities of both experienced and inexperienced organisations.

To get some idea of the scale of involvement it is interesting to look at a few NGOs such as the International Federation of Red Cross and Red Crescent Societies (IFRC), the international Caritas confederation, Oxfam, or the Indian NGO Mata Amritanandamayi Math. The IFRC, for example, provided 30,265 houses in Sri Lanka, 21,342 houses in Indonesia, and 1,514 houses in the Maldives (IFRC 2011: 12). In Sri Lanka alone the houses built by the IFRC represent '30 per cent of the total number of houses that were damaged or destroyed' (IFRC 2009: 8). The international Caritas confederation built permanent houses in India, Sri Lanka and in Indonesia. In India, a total of 13,472 permanent houses were constructed in the states of Tamil Nadu, Andhra Pradesh, Kerala, and in the Union Territories of Puducherry and the Andaman & Nicobar Islands. 13,391 houses were built in Indonesia, and 6,800 houses in Sri Lanka (Caritas Internationalis 2007: 5). Oxfam built a total of 2,900 houses in Indonesia, Sri Lanka and India (Oxfam 2009), and the Indian NGO Mata Amritanandamayi Math constructed 6,200 houses in India and Sri Lanka.[11] The following figure provides an overview of the different types of agencies involved.

11 | http://archives.amritapuri.org/tsunami/tsunami.php (accessed on 01.02.2013).

Figure 1: Different types of development agencies, potential partnerships and flow of resources



Source: adapted from: Gardner *et al*. 1996: 9

Common to all the three NGOs examined here was that they were new to the field of post-disaster housing, and they were all funded by international NGOs. However, they approached the task of reconstruction in the villages using different building processes, methods and strategies.

Most importantly, the architect's role and scope of work varied significantly, from 'project management consultant', to 'draftswoman', to 'surveyor-anthropologist'.[12] The following study will investigate whether the different roles (and scope of work) facilitated the realisation of people-oriented housing.

12 | It was found important to name the different types of architects and to highlight possible roles for the purpose of this study. The name 'project management consultant' was given by an NGO (see Caritas India 2005a: 3). The names 'draftswoman' and 'surveyor-anthropologist' were assigned by the author based on their scope of work for that particular project.