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Managing Housing Needs of Post Conflict Housing Reconstruction: Sri Lankan Perspective

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Abstract

Purpose: Post conflict housing reconstruction is crucial to development and peacekeeping. However, the success of it is hindered by a number of problems related to lack of addressing housing needs. This paper explores how such housing needs can be effectively managed in post conflict housing reconstruction in Sri Lanka.

Design: Using the grounded theory method as the research strategy, unstructured interviews were conducted with policy makers, practitioners, beneficiaries and academics in Sri Lanka. Data were analysed using open, axial and selective coding to develop the theoretical framework.

Findings: The study reveals the challenges, contributing factors and strategies in addressing housing needs of accessibility, habitability, affordability, location, facilities, cultural considerations and security of land tenure. It also identifies the gaps and recommendations. The paper establishes the links between these and presents a theoretical framework for managing housing needs effectively in post conflict housing reconstruction in Sri Lanka.

Implications: This research enhances the success of post conflict housing reconstruction through addressing housing needs effectively, which contributes to sustainable housing development after conflicts.

Originality: The study combines literature from five main areas: conflicts, post conflict, post conflict reconstruction, post conflict housing reconstruction and housing needs and provides a better understanding on how the housing needs can be managed during post conflict housing reconstruction in developing countries based on empirical evidence.

Key words: Adequate housing measures, grounded theory, housing needs management, problems and solutions, post conflict housing reconstruction, Sri Lanka.

1. Introduction

A number of problems continue to hinder the success of post conflict housing reconstruction, which is a significant post conflict intervention that contributes to development and peacekeeping. Housing that often not appropriate for local, cultural, social and economic conditions of occupants, its lack of contribution to local economic development, lack of strategies to address the challenges faced by vulnerable groups, inefficiencies of housing implementation agencies and lack of security of land tenure are some of the problems. The study argues that these problems are directly or indirectly related to a lack of addressing housing needs. Hence, addressing housing needs in post

conflict housing reconstruction would enhance the success of post conflict housing reconstruction. However, the challenges posed by the characteristics of the post conflict setting hamper the addressing housing needs and it is necessary to develop strategies to address housing needs in response to these challenges. Barakath (2003) acknowledged the problems of post conflict housing reconstruction and the need to find ways of improving the process. A dearth of research however, has been carried out in this area (Barakath *et al.*, 2004) and a lack of empirical research on managing housing needs in post conflict housing reconstruction has been identified. In this context, this study aimed to investigate how housing needs can be effectively managed in post conflict housing reconstruction.

The study was centred in Sri Lanka for a number of reasons. First, it is widely acknowledged that conflicts exist in many developing countries (Cuny and Tanner, 1995; El-Masri and Kellett, 2001; Anand, 2005; Bagwitz *et al.*, 2008; Fearon *et al.*, 2009) and have a great impact on the built environment in developing countries (Barakath, 2003). In a similar manner, conflict has resulted severe problems in Sri Lanka, a developing country in South Asia and focusing this study on such an incapacitated country like Sri Lanka would bring immense benefits to the international community and developing countries affected by war. Second, Sri Lanka's 26 years of conflict ended in 2009 and the country is now in its post conflict phase. As much of the housing is reported to have been badly damaged or destroyed (International Crisis Group, 2010; Price, 2010), housing reconstruction is essential to ensure the sustainable return of IDPs. Therefore, Sri Lanka provides a sound basis for this research. Third, research in the context of armed conflict is particularly compounded with difficulties of accessing information and respondents (Barakath et al., 2002) and conducting the research in the researcher's country of origin will minimise these difficulties and ensures the personal safety of the researcher.

Conflicts are classified as 'political' and 'violent' based on the way the parties pursue their objectives. Wars are classified as violent conflicts that result in massive destruction. While most of the recent conflicts are identified as intra-state wars, reconstruction of countries affected by such wars is identified as a major challenge for international communities. Thus, intra-state wars form the basis of this study. Since the terms 'conflict' and 'war' are used interchangeably in the literature, hereinafter the term 'conflict' is used synonymous to 'war'.

2. Post conflict housing reconstruction: significance and problems

Damage or destruction of housing is the most common impact of conflicts on housing (Carlowitz, 2005; Leckie, 2005). The outbreak of war also brings to a halt investment in housing construction and maintenance (Wegelin, 2005). Due to deferred maintenance during the war, most houses become unfit for human habitation. Housing damage and displacement cause negative effects on household income and by the end of most conflicts there is a huge demand for housing. Therefore, among the other approaches to housing, such as temporary shelters, temporary housing and repairing damaged houses, housing reconstruction remains significant as it contributes to full recovery and a return to normality. It also contributes to the social and economic well-being of affected people and peacekeeping. Procurement of materials, labour and other inputs required for housing reconstruction contributes to investment in the economy (Kissick *et al.*, 2006) and housing enables the rapid return of people to their home communities and the resumption of their livelihood and income generating activities (Barakath and Zyck, 2011). Thus, it contributes to economic development and poverty alleviation. It also promotes gender equity and empowerment through minimising the difficulties that women face in accessing housing reconstruction assistance (Barakath and Zyck, 2011) and participation of women in planning, designing, construction and skills training during construction (Ndinda, 2007). Participation of vulnerable groups in the development process through capacity-building and empowerment promotes inclusiveness, which is fundamental to peace building (Leest *et al., 2010)*. Post conflict housing reconstruction is a crucial incentive to reintegrate

communities (Barakath, 2003) and it supports the peace process through restoring the security, trust and faith in the future among conflict affected people and investors (Barakath *et al.*, 2004). It also promotes legitimacy and stability through providing sufficient, timely and transparent assistance to affected people (Barakath and Zyck, 2011).

The success of post conflict housing reconstruction is hindered by a number of interrelated problems. Barakath *et al.* (2008) claim that strategies to address the unique challenges faced by female headed households are lacking in post conflict housing reconstruction that resulted female headed households making significantly slower progress in housing reconstruction. Female head households have to shoulder the economic survival of their families (Cain, 2008). Yet have very few avenues for earning income and a lack of family support (Ndinda, 2007). Wanasundara (2006) highlights the need to develop strategies to address the challenges faced by female headed households. Local participation has also been limited (Mokoena and Marais, 2007) leading to unsustainable post conflict housing reconstruction programmes with limited local economic development (Minervini, 2002). Mobilisation of local labour and local building materials in housing reconstruction enhance the local economic development. The need to respond quickly to an emergency situation neglected the objective of maximising the community linkages (Awotona, 1992). As social networks are essential to peace, such networks that destroyed by the conflict must be built through housing reconstruction. Provision of culturally inappropriate housing is another issue (Sepic *et al.*, 2005; Barakath *et al.*, 2009). Since many aspects of housing are bound up with socio economic factors of people, neglecting socio economic factors results in alterations to the dwelling or abandonment (El-Masri and Kellett, 2001). Also, assistance on housing created an attitude of dependency among people, which exaggerated the housing damage to attract higher levels of housing assistance (Barakath *et al.*, 2008) A lack of technical oversight during construction, poor quality housing, absence of post occupancy evaluation and lack of security of land tenure are some additional problems. If not properly managed, these problems lead to hindering the success of post conflict housing reconstruction. This study argues that the lack of concern on housing needs has directly or indirectly given rise to most of these problems and addressing housing needs in post conflict housing reconstruction would minimise these issues. The section below establishes the relationship between the problems of post conflict housing reconstruction and housing needs.

3. Addressing housing needs to minimize the problems

Little data was found on the definition of housing needs and Morris and Winter (1975) claim that housing needs are seldom explicitly defined. However, it is evident that different approaches are available in defining housing needs. *Spatial tradition* is one such approach that presumes basic housing needs satisfaction is closely related to the spatial attributes of a dwelling (Ytrehus, 2001). This approach does not take into account the local conditions and social and cultural needs of households it cannot be considered as relevant for the satisfaction of housing needs after conflict, as the lack of consideration of local conditions and socio economic needs of households led to unsuccessful housing reconstruction. In contrast to the spatial tradition approach, the *market oriented approach* understands housing needs in terms of the subjective preferences of the households. However, the market oriented approach is also not appropriate in defining housing needs for post conflict housing reconstruction, as after a conflict meeting the individual's subjective housing preferences is challenged by the restrictions on time, finance etc. Another approach, called the *cultural relativist approach,* is developed based on the idea of social inclusion, which views that what is actually necessary to obtain social inclusion defines to some extent the needs of a person. As Ytrehus (2001) indicates, this approach does not provide a common framework of reference in satisfying housing needs and thus cannot be considered for addressing housing needs in post conflict housing reconstruction. In the meantime, the *universal standard tradition* was developed based on universal human needs, with the goals

of physical health and autonomy (Doyal and Gough, 1991). In order to achieve these goals, Doyal and Gough (1991) identify a group of intermediate needs including protective housing, which should provide reasonable protection from climate and disease, adequate sanitation and adequate privacy. While this approach identifies some essential features of housing, *adequate housing measures* presents a more comprehensive list of measures including the aforementioned aspects of protective housing measures. Adequate housing measures was recognized as part of the right to an adequate standard of living in the 1948 Universal Declaration of Human Rights and in the 1966 International Covenant on Economic, Social and Cultural Rights, which include accessibility, habitability, affordability, location, facilities, cultural considerations and security of land tenure (OHCHR, 1994). Accessibility refers to the availability of housing for those who are entitled to it while habitability refers to the adequate space and protection from structural hazards, weather and disease. Affordability ensures that the costs associated with housing should not threaten or compromise the attainment and satisfaction of other basic needs. Location should facilitate access to employment, health care services, education facilities and social facilities. Furthermore, location of housing should not cause any threats to health of the inhabitants. Facilities refer to the access to safe drinking water, energy, sanitation and washing facilities and to disposal and drainage facilities while cultural consideration refers to the cultural identity and diversity in housing design, construction material and construction method. Finally, security of land tenure refers to the legal protection against forced evictions, harassment and other threats. Therefore, adequate housing measures can be used as a guideline to ensure that the housing needs are addressed in post conflict housing reconstruction. For instance, in considering the problems faced by female headed households in post conflict housing reconstruction as discussed in section2, they can be considered as a disadvantaged group and prioritised in 'accessing' post conflict housing. Furthermore, their financial difficulties can be considered through 'affordability'. Moreover, use of culturally appropriate building materials and building technology in accordance with 'cultural consideration' contributes to minimising the issues interrelated to the lack of local economic development and community linkages. Cultural consideration also helps minimise the issues related to lack of cultural and local identity. Measures of 'habitability', 'affordability', 'location' and 'availability of services and facilities' contributes to the identification of strategies to minimise the issues related to local, cultural and socio-economic conditions in post conflict hosing reconstruction. In the meantime, the problems related to landownership can be ensured through security of tenure.

4. Research Methodology

The grounded theory method is chosen as the most appropriate research strategy for this study based on a number of factors. Grounded theory can provide more insight into the phenomenon through the explanations based on the reality and it is appropriate when the phenomenon is poorly understood (Denscombe, 2007). As the subject area of this study is deficiently found in the literature it suggests that the grounded theory approach is more appropriate as it allows the exploration of the phenomenon in depth. It is also a useful strategy for research carried out in societies emerging from conflict (Haigh *et al.*, 2011) as it is important not to go with pre-conceived ideas since conventional theories and concepts may not be applicable in such societies. Grounded theory works well when research addresses real practical needs by providing meaningful explanations to the research participants (Denscombe, 2007) and this also justifies the appropriateness of the grounded theory method since this study explores how housing needs can be effectively managed in post conflict housing reconstruction. Moreover, a grounded theory approach provides systematic and flexible guidelines for collecting and analysing qualitative data (Charmaz, 2006; Georgieva and Allan, 2008) and allows for a wider range of sources including interviews, observations and secondary data (Corbin and Strauss, 1990; Goulding, 2005). The study used the approach by Strauss and Corbin to grounded theory, since it allows for the identification of the research problem and phenomenon through the literature review before starting the data collection and analysis. As a novice researcher, familiarity with

relevant literature enhances the researcher's sensitivity to recognise the significance of concepts and their approach recognises that the literature review enhances the researcher's sensitivity. Most importantly, the approach by Strauss and Corbin provides a systematic method to learn and apply grounded theory for a novice researcher.

As this study aimed to explore the phenomenon in-depth, interviews that allow the collection of data that is not unduly shaped by prior concepts or theories are preferred for this study. Therefore, unstructured interviews were conducted with 37 participants comprising policy makers, practitioners, academics and beneficiaries who engaged in managing housing needs in post conflict housing reconstruction in Sri Lanka. The interviews each lasted between 45-120 minutes. Interviewees are informed the purpose of the data collection by providing an information sheet and informed consent forms are collected from each interviewee to ensure that their participation is voluntary, ability to refuse to answer any question, ability to withdraw at any time and permission to digitally voice record the interview. All interview transcripts were stored anonymous. Concurrent data collection and analysis was continued until all categories were saturated. Where possible, interview data was supplemented with creative visual images produced during the field visit.

In grounded theory data analysis, concepts form the foundation of the data analysis and theory development (Holton, 2010). While all concepts arise out of the data, concepts vary in 'levels of abstraction'. While higher level concepts represent the categories, lower level concepts define properties and dimensions of these categories. Raising the data into conceptual level is termed 'coding' and grounded theory consists of three phases of coding namely, open coding, axial coding and selective coding. In open coding, the data will be disaggregated into concepts and provided with a label while axial coding refers to the act of relating concepts or categories. Selective coding is the integration of categories to form a theory.

In adhering to the principles of grounded theory, the researcher approached the data collection and analysis with an open mind and the data collection was initiated by interviewing individuals involved in post conflict housing reconstruction and who could provide relevant information on managing housing needs in post conflict housing reconstruction. The interviewee was thus allowed to talk about post conflict housing reconstruction as the interviewee saw it and only when the interviewee finished their story did the researcher ask questions about points brought up in the interview in order to gain more insight. This allowed interviewees to tell their story without the researcher preconceiving the content. However, this strategy was subject to change as the researcher moves back and forth between the data collection and analysis. When some participants were interviewed, the subsequent participants were selected to follow up the ideas prompted by the data. From this point onward, selection of participants depended on the codes, concepts and categories evolved from the research. Soon after the first interview, analysis began as the first data collected provided the foundation for further data collection and analysis. Accordingly the digitally recorded interview was transcribed in MS Word and then imported into Nvivo (Version 8) with a unique code for reference purposes to retain the confidentiality and anonymity of the data. Then the data was coded openly while the attempts were made to do some axial coding in the early stages of the analysis. At the end of the coding, a list of concepts was identified. Coding of the first set of data also resulted in creating more suggestions as to categories even though these categories were undeveloped at this stage. The data analysis of the first interview directed the next data collection. This continuous process of data collection, data analysis, memo writing and asking questions continued until the researcher acquired sufficient data to describe each category. The saturation point was identified through the signals of repetition of information and confirmation of existing conceptual categories. Data collection and analysis of this study identified five major categories challenges, contributing factors, strategies, gaps and recommendations to minimise such gaps in managing housing needs in post conflict housing reconstruction. Figure 1 presents a summary of the concepts related to these

categories. Once the major categories were developed, these major categories were integrated to develop a theory that explains the phenomenon being investigated.

5. Managing housing needs effectively in post conflict housing reconstruction

This section presents how the housing needs: accessibility, habitability, affordability, location, cultural consideration, availability of facilities and security of land tenure are managed in post conflict housing reconstruction using the major categories and concepts derived through the primary data.

Managing accessibility in post conflict housing reconstruction

The need for housing reconstruction at the end of a conflict is resulted by the damage to houses during the conflict. An extensive destruction of housing led to a critical housing shortage followed by a huge demand for housing, which challenged the management of accessibility in post conflict housing reconstruction. Military operations and the removal of materials from abandoned housing during the conflict accounted for direct damages. Home owners themselves removed the materials with the intention of erecting temporary shelters during the displacement meanwhile neighbouring households removed the materials from abandoned housing during reconstruction. Indirect damage to houses was mainly caused by lack of housing development in conflict zones. Some of the housing development programmes that took place in other parts of the country had not penetrated into these areas due to rebel control, while some housing development programmes that had been initiated in these areas were hampered due to the resumption of the conflict. In the meantime, some people were prevented from constructing houses by themselves due to ransoms imposed by rebels. The lack of housing development gave rise to substandard housing in conflict zones, which led to exaggerating the direct damage caused by the military operations due to their poor quality. Damages were classified as fully damaged houses and partially damaged with structural or non-structural damage through a housing damage assessment. The statistics on housing damage represent the cumulative housing damage that occurred throughout the duration of the conflict though such damage occurred in different eras of war causing different durations of displacement. This aspect was considered when assessing the vulnerability of affected people in managing access to post conflict housing reconstruction by giving priority for people who have been displaced for a longer time in accessing post conflict housing.

A weak socio economic profile of conflict affected people was another challenge in managing access to post conflict housing reconstruction. Financial income of most conflict affected people was lower since their livelihoods were hindered by the displacement and disruption caused by conflict. Most of the people were not able to afford post conflict housing. Death and injury led to loss of or disabled family breadwinners. Vulnerable people such as the elderly, widows, female headed households and the disabled were confronted with difficulties in supporting their families. While the lack of financial income basically hindered the ability of people to rebuild their houses, families with widows, female heads, disabled, elderly and orphaned children faced more challenges in rebuilding their houses due to lack of income, lack of family support and additional family commitments etc. These resulted in claims for assistance in housing reconstruction and the assistance that can be given in housing reconstruction mainly depended on the financial availability. The country mainly depended on donor finance in post conflict development projects and compared to humanitarian assistance, permanent housing reconstruction was characterised by a lack of donor finance. Donor finance was also limited by parallel catastrophic events occurring in other countries and economic crises. Access to post conflict housing reconstruction was also challenged by the attitudes of the affected people. The provision of assistance created an attitude of dependency among the affected families and duplicated the assistance required during the housing need assessment that represented a higher housing need than iss actually required. Assessment of housing need within a short period of time also increased

this duplication. Among these challenges, ownership of land acted as a contributing factor in managing access to post conflict housing through eliminating the issue of land allocation.

As financial availability was limited, access to housing assistance was limited for selected families or beneficiaries. Hence, the selection of beneficiaries was used as a strategy to overcome the challenges of extensive damage to houses, poor socio economic profile of affected people, limited financial availability and dependency attitude of conflict affected people. Eligible families were identified based on eligibility criteria that took into account the housing damage, financial income and land ownership. The level of damage was established as fully damaged to screen families whose housing was destroyed by the conflict. A minimum level of financial income was established to screen poor families among the affected. Land ownership was established to screen families who own land. When the available finance was not adequate to assist all the eligible families, then they were prioritised based on their vulnerability. Prioritisation was based on a points system that considered the period of displacement, number of family members, number of disabled family members, elders, dependent children and female headed households. Selection of beneficiaries was aided through raising the awareness among them

Managing habitability in post conflict housing reconstruction

Addressing subjective housing requirements was one of the challenges in managing habitability and beneficiaries rarely seemed satisfied due to their high expectations. It was mainly challenged by the limited finance available. As the finance available was limited, the allocation of funds for a house was limited. Donor requirements too challenged the habitability through limiting the amount of financial allocation as donors preferred to maximise the number of beneficiaries assisted. Hence, minimum housing requirements were defined based on floor area, layout, sanitary facilities and satisfactory finishes. Minimum floor area was defined in accordance with minimum standards and the layout was determined in considering some cultural requirements such as privacy and fire wood cooking. Location of the sanitary facilities, which was outside the house was also determined based on the cultural requirements. Finishes were nevertheless limited to internal areas and to a habitable level. However, the unverifiable minimum housing standards gave rise to a lack of transparency in managing housing needs. Therefore, it is suggested that transparency is enhanced through adopting verifiable housing standards. Housing standards that were already developed after the tsunami was not used in defining these standards indicating a lack of knowledge sharing. Knowledge sharing between consecutive phases of post conflict housing reconstruction too can enhance the process. Use of local construction material enhanced not only the habitability but also the affordability and cultural consideration in post conflict housing reconstruction.

In order to accomplish minimum housing requirements, financial assistance was provided. The mode of financial assistance was determined as a grant in considering the financial income and vulnerability of the affected people. The amount was increased, in response to the inflated labour and material prices as a result of the shortage of labour and material in the conflict zone. Payment strategy, which was developed based on the minimum housing requirements ensured spending the financial grant as intended. Construction and payments were scheduled in stages. However, the irregular payment of instalments led some beneficiaries to confront with difficulties in mobilising labour and materials emphasizing the need for prompt payment.

The beneficiary participatory implementation strategy was chosen in considering many factors. Beneficiaries were required to mobilise labour and materials and contribute their own labour during construction. This ensured ownership towards housing reconstruction, while reducing the cost of construction. Nevertheless, a lack of consideration on vulnerability in specifying beneficiary contribution led female headed households with dependent children, disabled and elderly to experience difficulties in labour support during

construction. Hence, determining the amount of financial grant through accounting the beneficiaries' labour contribution created difficulties for these vulnerable groups in reaching minimum housing requirements highlighting the need for an additional vulnerability assistance.

Technical assistance was provided through the provision of architectural designs, which pertaining to the minimum housing requirements and local construction materials. Several designs were developed and all beneficiaries were given an opportunity to choose a design from the available designs. Technical monitoring was also carried out by the implementing agencies during the construction to ensure the time, cost and quality aspects of housing reconstruction. Inadequate monitoring resulted poor housing lacks in sanitary facilities, habitable finishes and constructed with low quality material. Omitting sanitary facilities to upgrade the housing construction led to a lack of protection from disease. Use of poor quality materials for doors and windows and for the roof structure hampered the weather protection and structural stability. Therefore, agencies need to ensure effective monitoring through technical oversight during reconstruction in enhancing the habitability of housing. Bulk purchasing of construction materials by implementing agencies contributed to reducing the cost of materials. Post conflict housing reconstruction was challenged by a shortage of construction materials resulted from the disrupted material manufacturing in conflict affected areas. Transporting materials from outside areas was challenged by the poor quality Infrastructure in the area. Therefore, bulk purchasing of construction materials helped beneficiaries to reduce the cost of materials through reduced transportation cost. If beneficiaries are given the flexibility to use several types of material there should be an agreement among them on what type of materials they will use, in order to proceed with bulk purchasing.

Raising the beneficiaries' awareness on payment strategy and technical details helped them to manage habitability effectively. Inadequate awareness on the purpose of beneficiary participatory implementation resulted hiring unskilled labour limiting the finance for housing construction. Omitting sanitary facilities to upgrade the housing construction, also partially resulted from inadequate beneficiary awareness. Hence agencies need to ensure that beneficiaries are well aware of the purpose of beneficiary participatory implementation and habitable housing requirements.

Though the minimum floor area was determined based on the minimum housing standards, flexibility to enlarge this area was provided if beneficiaries could afford the additional cost of the extension. Most beneficiaries who secured financial savings were therefore motivated to extend their houses. Nevertheless, lack of cost estimates and beneficiaries' high housing desires hindered effectiveness of such flexibility. Non-preparation of cost estimates led beneficiaries to extend the houses with insufficient savings, which later on created difficulties in meeting the inhabitable conditions. Development of standard designs for such extended floor areas allows the preparation of cost estimates in advance and the effective management of flexibility.

Responsiveness to conflicts was another challenge in managing habitability. Dissimilar pre-war housing such as temporary, semi-permanent and permanent housing resulted different levels of financial loss as financial loss of a permanent type house is higher than a semi-permanent or a temporary type house. However, a same grant was given for all the beneficiaries to ensure equality. Furthermore, the approach to housing reconstruction was standardised in collaboration with the donor agencies involved in housing reconstruction, ensuring all the agencies adopt a similar approach in assisting post conflict housing reconstruction. Within this context, unequal increment of the grant and unequal permission to extend the floor area resulted lack of equality. Communal divisions also challenged the management of housing needs. As people have been trained to think along ethnic lines for many years, divisions among communities inevitably exist even when the conflict comes to an end with the military defeat. Thus, community linkages were mainly established through

rehabilitation of combatants. Conflict sensitivity suggested to be enhanced through applying 'do no harm' principles into post conflict housing reconstruction.

Landmines challenged post conflict housing reconstruction as many conflict affected areas are heavily mined. Slow and costly de-mining requires years to clear the mines. In response to the slow progress of de-mining, reconstruction of post conflict housing was programmed in sequential phases corresponding to the phases of war. This allowed building works to start in liberated areas without a delay.

Managing affordability in post conflict housing reconstruction

Limited financial availability led to select the low income vulnerable families as beneficiaries and a financial grant to satisfy the minimum housing requirements was provided in accounting beneficiaries' unskilled labour support. Lack of concern for vulnerability in specifying beneficiaries' unskilled labour supports resulted in female headed households with dependent children, the disabled and elderly being confronted with difficulties in contributing their labour during construction. Therefore, determining the amount of financial grant based on the specification of beneficiaries' labour contribution resulted these groups facing difficulties in reaching minimum housing requirements. Hence, female heads with dependent children, the disabled and elderly needed to provide with additional vulnerability assistance in order to meet the minimum housing requirements within their capacity. As per the minimum housing requirements, habitable finishes was specified with the expectation of completing the remaining construction by the beneficiaries in the future. Habitable finishes basically facilitated the occupation of the house. Taking into account the beneficiaries' low financial income and vulnerability, livelihood capacity building was incorporated into housing reconstruction through livelihood support packages and construction skills training. Livelihood support packages were provided for different livelihood sectors to initiate income generation and the value of the package was determined based on the available finance. A weakened construction industry in conflict affected areas led to a shortage of local skilled labour and the skilled labour requirement was fulfilled from outside the area. This led not only to raise the labour prices but also to impede the development of the local economy in the conflict affected area. Such labour shortage overcome through craftsmen training programmes.

The lack of financial income however, led beneficiaries to struggle in completing the remaining construction. As a lack of irrigation facilities led to a lack of agricultural production, irrigation development will contribute to enhance the income generation of these families. As financial income of female heads with dependent children, the elderly and disabled was limited due to their vulnerability, these groups need additional vulnerability assistance to complete the remaining construction. Gaps in income generation can also be minimised through on the job skills training integrated with skills training institutions. These skills could benefit in completing the remaining construction and securing livelihoods. Similar to the skilled labour shortage, post conflict housing reconstruction was challenged with a shortage of construction material. Bulk purchasing of materials contributed to reduce the cost of materials. Resumption of materials manufacturing in these areas is also important.

Managing location in post conflict housing reconstruction

Land ownership of the affected people facilitated housing reconstruction in beneficiaries' original place of living. As people attached to their places of origin due to the sentimental value of their land, such housing reconstruction enhanced the beneficiaries' satisfaction towards location. Multiple places of living posed challenges in determining the place of origin and community participatory decision making helped in deciding the location of reconstruction. Landmines and zoning prevented housing reconstruction in the places of origin and for these new lands were allocated in safe areas. However, relocation resulting

from extensive landmines and zoning dissatisfied many people due to their attachment to the original land. Though inevitable, such relocation affected the equality in accessing places of origin. Hence, it is significant to adopt 'do no harm' principles to enhance conflict sensitivity of such decisions.

Infrastructure damage necessitated infrastructure reconstruction in conflict affected areas. While direct damages were caused by wilful harm by rebels, indirect damages were caused by poor maintenance and lack of infrastructure development in the areas. Damaged infrastructure impeded the labour and material supply into the affected areas. Similar to housing, reconstruction of infrastructure was also challenged by the limited availability of finance. Thus, priority was given to the reconstruction of essential infrastructure such as roads, health care services, education facilities and social facilities. Housing reconstruction in the places of origin overcome the challenge of infrastructure reconstruction compare to relocation, as relocation include extensive development of infrastructure.

Managing facilities in post conflict housing reconstruction

Facilities damage and lack of facilities development in conflict affected areas led to facilities reconstruction after the conflict, which was challenged by the limited availability of finance. Hence, priority was given for the most essential facilities such as sanitation, drinking water and electricity. Due to the importance, sanitary facilities were recognised within the minimum housing requirements. Therefore, agencies must ensure effective monitoring and adequate beneficiary awareness raising to ensure protection from disease through sanitary facilities. Drinking water was provided through reconstructing domestic and community wells. Some beneficiaries faced with difficulties in providing drinking water and adequate drinking water facilities need to be provided in managing the facilities effectively in post conflict housing reconstruction.

Managing cultural consideration in post conflict housing reconstruction

In designing the housing layout within the minimum housing requirements, consideration was given to cultural requirements such as privacy of households, smoke free kitchens for fire wood cooking and location of sanitary facilities. As a lack of cultural consideration in house design leads to dissatisfaction of beneficiaries, designs should be developed after consultation with them. Lack of cultural consideration also resulted from a lack of professional engagement in developing architectural designs. Thus it is important to engage professionals in developing housing designs and estimates in post conflict housing reconstruction. The use of local construction materials and traditional construction methods acknowledged the local conditions in affected areas. Communication and coordination among agencies facilitated resolving design issues related to cultural requirements during the construction stage.

Managing security of land tenure in post conflict housing reconstruction

Land ownership led to reconstruct the housing in original places of living and helped to determine the eligibility of affected families in accessing housing assistance. Identification of land ownership as an eligibility criterion in beneficiary selection ensured the security of land tenure while overcoming the challenge of duplication of housing assistance. Nevertheless, unavailability of ownership documents posed challenges in determining eligibility. Loss of ownership documents, inability to transfer the ownership of the land and failure to issue ownership documents during the conflict were related issues. Registration of land ownership was hindered by weakened government administration. Thus, strengthening government administration helped re-establishing land ownership. Raising the awareness of affected people on eligibility, communication and coordination between government administration and agencies also helped to establish land ownership.

6. Conclusions

The study establishes that the adequate housing measures of habitability, affordability, location, facilities, cultural consideration and security of land tenure provide a guideline in addressing housing needs in post conflict housing reconstruction and the theoretical framework of managing housing needs effectively in post conflict housing reconstruction includes the relevant challenges, contributing factors, strategies, gaps and recommendations in addressing accessibility, habitability, affordability, location, facilities, cultural consideration and security of land tenure in post conflict housing reconstruction. The framework provides a holistic approach for managing housing needs effectively in post conflict housing reconstruction. This enhances the success of housing reconstruction and its contribution to development and peace. Thus, this study lends to sustainable housing development after conflicts. As the grounded theory method generates theories that are closely connected to the empirical reality, the findings of this research are applicable to developing countries like Sri Lanka. However, the rich data based on which every concept of the research was developed, enables judgments to be made about possible transference to other contexts. Interview excerpts are not included as it exceeds the word limit of the paper.

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Figure 1

Managing housing needs effectively in post conflict housing reconstruction
(Accessibility, Habitability, Affordability, Location, Facilities, Cultural consideration and Security of land)

Challenges

Damage to houses
    Extent
    Classification
    Causes
    Variations
Socio economic profile of people
    Financial income of affected people
    Vulnerability of affected people
Financial availability
Donor requirements
Attitudes of affected people
Beneficiaries' housing requirements
Construction material shortage
Infrastructure damage
Facilities damage
Responsiveness to conflicts
    Dissimilarities among beneficiaries
    Communal divisions
Land disputes
    Landmines
    Unavailability of documents
    Multiple places of living
    Zoning
Construction Labour shortage
Weakened government administration

Contributing factors

Land ownership
Land availability

Strategies

Selection of beneficiaries
    Eligibility criteria
    Vulnerability criteria
Awareness raising
    Affected people
    Beneficiary
Minimum housing requirements
Local construction material
Financial assistance
    Mode
    Amount
    Payment strategy
Technical assistance
    Architectural designs
    Construction monitoring
    Bulk purchasing of materials
Flexibility to enlarge habitable space
Conflict sensitivity
    Equality
    Communal linkages
Phasing housing reconstruction
Participatory approach
    Community decision making
    Beneficiary implementation
Livelihood support
    Livelihood support packages
    Skill training
Housing approach
    Housing reconstruction
    Traditional construction
Infrastructure reconstruction
Facilities reconstruction
Communication and coordination
Strengthening government administration

Gaps

Unverifiable housing standards
Poor knowledge management
Lack of concern over vulnerability
Irregular payment of installments
Poor habitability
    Lack of protection from disease
    Lack of protection from weather
    Lack of protection from structural hazards
    Lack of habitable finishes
Inadequate monitoring
Inadequate beneficiary awareness raising
Poor management of flexibility to enlarge space
    Non preparation of cost estimates
    Poor management of beneficiaries' housing desires
Lack of conflict sensitivity
    Lack of equality
    Lack of communal linkages
Lack of financial gain by the beneficiaries
Lack of drinking water facilities
Lack of cultural consideration
Lack of professional involvement

Recommendations

Enhanced transparency
Enhanced knowledge management
Vulnerability assistance
Prompt payment of installments
Effective monitoring
Adequate beneficiary awareness raising
Development of standard designs for extended floor areas
Do no harm principles
On the job skills training
Irrigation development
Material manufacturing
Adequate drinking water facilities
Enhanced beneficiary participation