# A SYSTEM FOR IMPLEMENTING RESETTLEMENT HOUSING PROJECTS IN THE NORTHERN PROVINCE OF SRI LANKA

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#### **ABSTRACT**

With the end of the armed conflict in May 2009, the resettlement activities of the Government of Sri Lanka (GOSL) commenced in November 2009 in the Northern Province (NP). Non-Governmental Organisations (NGOs) and International Non-Governmental Organisations (INGOs) and foreign governments were involved in providing transitional shelters, repairing damaged houses and constructing new houses. The number of houses initially planned to be constructed could not be completed on schedule. According to media reports, there have been issues during Before Construction Period (BCP) and During Construction Period (DCP). Thus it has become necessary to propose a framework to identify a suitable system for implementing housing projects in these areas.

This study develops an approach to solve identified problems using a mixed research approach. The Relative Important Index and Spearman Rank Correlation were used for the data analysis.

A suitable system consisting of two frameworks was then developed to make the beneficiaries aware of the importance of keeping land documents safely to prove their ownership of the land and also on the proper utilization of funds they receive through grants. The Implementing Partners also need to conduct awareness programmes on these aspects. Authorities need to issue land documents and resolve common issues related to land ownership and the Banks need to serve the resettled people well and open new branches and mobile banking services in the areas.

**Keywords:** Before Construction Period; During Construction Period; Framework; Housing Projects; Resettlement.

# 1. Introduction

#### 1.1. BACKGROUND

In Sri Lanka there is a long history of people getting voluntarily or involuntarily displaced (Centre for Poverty Analysis (CEPA), 2009). These Internally Displaced Persons (IDPs) who live in camps faced many difficulties (International Medical Health Organisation, 2010). In November 2009, the GOSL initiated an accelerated resettlement programme in the Northern Province to enable people to return to their homes or to their districts of origin at least. (United Nations Human settlement programme (UN Habitat, 2010).

According to the 2012 report of the Ministry of Resettlement Performance and Progress, as at 2012.08.31 there were 93,631 houses in the Northern Province that had got fully damaged due to the conflict (Ministry of Resettlement, 2013). The GOSL had to seek assistance from Semi Government Organisations, INGOs, local NGOs, UN Agencies and countries like India, Australia, Pakistan and Saudi Arabia etc. to help families to reconstruct their damaged houses. Some housing programmes such as the World Bank funded North East Housing Reconstruction Programme (NEHRP) were initiated even before the war ended.

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# 1.2. AIM AND OBJECTIVES

The aim of this study is to identify a suitable system for implementing housing projects when resettling displaced persons in the Northern Province and had the following as its main objectives:

- Identification of significant problems
- Identification of the causes of those significant problems
- Identification of the role of each party involved in the abovementioned projects in solving these problems

Proposing frameworks to identify a suitable system for implementing these housing projects in BCP and DCP.

# 2. LITERATURE REVIEW

#### 2.1. PROBLEMS RELATED TO DISPLACEMENTS IN SRI LANKA

In Sri Lanka, most of the displacements occurred internally and Thiyagaraja (2012) stated that they are a major obstacle for development. There were overcrowding, spread of communicable diseases, insufficient medical care, shortage of clean drinking water, lack of freedom of movement, separation from family members and psycho social problems etc. in the Menik Farm Relief Villages in Vavuniya (International Medical Health Organisation, 2010).

# 2.2. RESETTLEMENT AND GOVERNMENT INSTITUTIONS

Thiyagaraja (2012) stated that Sri Lanka is the first South Asian country to incorporate fully into its state policy the guiding principles of displacement. The displaced people have to be resettled either in their original places of living or in alternative places provided they are agreeable. Thiyagaraja (2012) stated that the Ministry of Relief, Rehabilitation and Reconciliation was set up in July 1999 to ensure that basic needs of people affected by conflict are met and to rebuild their productive livelihoods.

The Ministry of Resettlement was established during the latter part of 2005 mainly to resettle the displaced people of the Northern and the Eastern Provinces in coordination with the World Bank, UNHCR, United Nations International Children's Emergency Fund, NGOs and INGOs. There are several other Ministries also that deal with IDPs and their resettlement (South Asian for Human Rights, 2012).

# 2.3. IMPORTANCE OF HOUSING FACILITIES IN RESETTLEMENT

The war victims of the Northern and Eastern Provinces lost their dignity with the loss of their homes. They lived in temporary shelters, welfare camps or with friends and relatives (NEHRP, 2012). The NEHRP report also indicated that a limited number of housing programmes were undertaken by UN agencies, donor agencies and the NHDA in these areas. Barakat (2003) argued that housing reconstruction should receive more prominence in post - conflict and post - disaster work.

Shaw and Ahmed (2010) classified the provision of post disaster housing assistance mainly under two modes, i.e rebuilding them in their origin allocations and in alternative locations. More than 230,000 houses are estimated to have got damaged or destroyed during the conflict (United Nations Office Coordination of Humanitarian Affairs (UNOCHA), 2010).

Indian Housing Projects, NEHRP and United Nations Human settlements Programme (UN Habitat) are some of the major Projects implemented in the North.

# 2.4. DETAILS OF RESETTLEMENT HOUSING PROJECTS AS AT 31.12.2013

Table 1 shows that in the Northern Province there is a difference of 19,533 between the required number of houses and the number of houses that were planned.

Table 1: District Wise Details of Housing Projects 2013 (Owner Driven Model) in Northern Province as at 31.12.2013

S.No	District	No. of Houses Required	No. of Houses Planned	No. of Houses Completed
1	Jaffna	33,386	20,808	13,891
2	Kilinochchi	26,730	16,309	10,415
3	Vavuniya	14,189	9,057	3,657
4	Mannar	6,150	13,124	6,860
5	Mullaitivu	15,065	9,743	6,808
	Total	88,574	69,041	43,311

Source: Jaffna District Secretariat, 2014; Vavuniya District Secretariat, 2014; Mannar District Secretariat, 2014; Mullaitivu District Secretariat, 2014; Kilinochchi, 2014

#### 2.5. Overview of the Approaches and Modalities of Housing Projects

Karunasena and Rameezdeen (2010) stated that a good housing reconstructing strategy meets social needs while ensuring long term disaster mitigation and sustainability. Barenstein (2006) has identified five approaches, namely Owner Driven, Subsidiary Housing, Participatory Housing, Contractor Driven for houses built in their original locations and the Contractor Driven Approach for houses built in alternative locations. Barakat (2003) indicated two types of models, i.e Contractor Model (Donor Driven Model) and Self-build Model (Owner Driven Model). Donor Driven Approach and the Owner Driven Approach are used in the Northern Province.

# 2.6. OWNER DRIVEN APPROACH - PROBLEMS AND THEIR CAUSES

#### 2.6.1. VILLAGE RELATED PROBLEMS

The wrong selection of war affected villages (The World Bank, 2011) and the duplication of selected villages (Shaw and Ahmed, 2010) are the two problems that come under this category.

#### 2.6.2. BENEFICIARY RELATED PROBLEMS

Barakat (2003) stated that the selection of the beneficiary is difficult. Unnati (2006) indicated some deserving families had not been selected for warrant of legal documentation. Further Shaw and Ahmed (2010) observed that there had been delays in selecting beneficiaries after the 2004 Tsunami in India and Sri Lanka.

#### 2.6.3. LAND RELATED PROBLEMS

- Land Ownership Barakat (2003) indicated that in Kosova and Ruwanda there were difficulties in verifying the legal status and ownership of land subsequent to a disaster. In post disaster situations, especially after a conflict, the legal framework collapses totally and it is difficult to verify the legal status of land and ownership especially with new owners.
- Shortage of Suitable Land and Loss of Agricultural Land In Sri Lanka and Kenya, there is a shortage of land for residential purposes (Ministry of Construction, Engineering Services, Housing and Common Amenities, 2011; Njathi, 2011). Further in India, Barenstein and Iyengar (2012) indicated that in India the use of agricultural land for housing projects is a critical issue for farmers.

# 2.6.4. FUND RELATED PROBLEMS

Delay in Receiving Second and Third Installments - Karunasena and Rameezdeen (2010) observed that victims were unable to collect their instalments on schedule as they failed to show their progress making them depend on their own resources.

- Corruption In the Gujarat Earth Quake (2001) Reconstruction Programme implemented in India, technical staff in anticipation of bribes, allowed beneficiaries to construct their houses by themselves (Unnati, 2006). Dauvergne (1997) indicated that there was corruption in the Indonesian Housing Reconstruction Programme.
- **Beneficiaries' Behaviour** The guideline published by the International Federation of Red Cross and Red Crescent Societies (2010) states that under the owner driven model, beneficiaries utilize the money they receive to meet their daily expenses and that the most vulnerable families will not take part in the Programme fully unless there is a financial benefit.
- Insufficient Grants and Under Estimation Krishnar (2011) observed that beneficiaries in the Vadamaradchchi South West Division in the Jaffna District faced difficulties when the grants they received under NEHRP were insufficient. Beneficiaries also failed to meet the budgetary requirements (Zabihullah et al., 2011). Barakat (2003) stated that in China, authorities underestimate the work and according to Chang (2012) this compels beneficiaries not to take part in the programmes. They do not seek support from banks because of high lending rates and lack of information on credit facilities (Ministry of Construction, Engineering Services, Housing and Common Amenities, 2011).

#### 2.6.5. Physical Resource Related Problems

After the December 2004 Tsunami, the cost of building material started to increase because of the shortage of resources (Jayasuriya and McCawley, 2008; Ministry of Construction, Engineering Services, Housing and Common Amenities, 2011). In Indonesia there had been a shortage of building material and the need for alternatives had created a major bottleneck in the programme (Nazara and Resosudarmo, 2007; Zuo and Wilkinson, 2008). Barenstein and Iyengar (2012) stated that in India, targets could not be met because of the low quality of material used which resulted in poorly built structures. Barakat (2003) indicated that there was a disruption in the chain of supply and according to Chang (2012) in China there was inflation in the earthquake affected areas.

#### 2.6.6. Human Resource Related Problems

Shaw and Ahmed (2010) indicated that in the Tsunami reconstruction programmes in Sri Lanka and India, local government offices did not have sufficient resources to cope up with their drastically increasing workloads. High wages had to be paid for labourers (Ministry of Construction, Engineering Services, Housing and Common Amenities, 2011). Indonesian reconstruction programmes there was a shortage of human resources (Verby *et al.*, 2007). Prior to the Christchurch earthquakes of 2010 and 2011, the shortage of human resources was identified as one of the potential constraints that follow a major disaster in local production facilities (Nazara and Resosudarmo, 2007).

#### 2.6.7. CONSTRUCTION QUALITY RELATED PROBLEMS

The World Bank (2010) observed that the fact that owner driven houses are not designed by professionally qualified architects and the fact that owners often occupy their houses before completion of work are two main reasons for the poor construction quality. Low quality houses are prone to damage (Guideline of the International Federation of Red Cross and Red Crescent Societies, 2010). In Indonesia due to poor coordination and communication between the housing providers and beneficiaries there were issues on the quality of work. (ACARP, 2007 and Steinberg, 2007).

#### 2.6.8. BUILDING PERMIT RELATED PROBLEMS

The procedure for obtaining building permits was complicated. In Ruwanda, there was no set procedure for obtaining a building permit (Barakat, 2003). Unatti (2006) stated that often a beneficiary had to spend at least Rs.10,000.00 from the Rs. 550,000.00 he received, for designing the house and for obtaining the permit. Bureaucracy and intuitional problems caused the delays in obtaining building permits (Verby *et al.*, 2007).

#### 2.6.9. Infrastructure Facilities and Amenities Related Problems

Shaw and Ahmed (2010) pointed out that in Sri Lanka; there were delays in developing infrastructure under the Tsunami reconstruction programme. There had also been a shortage of services and amenities in the housing sector in Sri Lanka and Indonesia (Ministry of Construction, Engineering Services, Housing and Common Amenities, 2011 and Oxfam, 2006).

#### 2.6.10. OTHER PROBLEMS

Work related problems due to delays in commencing the work (Guideline of International Federation of Red Cross and Red Crescent Societies, 2010), Communication and coordination related problems (Verby *et al.*; 2007, Shaw and Ahmed, 2010; ACARP, 2007; Zabihullah *et al.*, 2011), Environmental problems (UN Habitat, 2010 and Salazar, 2011), Construction related problems due to delays and incomplete work (Salazar, 2011; Ophiyandri *et al.*, 2010; Oxfam, 2006). Culture related problems (The World Bank, 2010; Chang, 2012 and Dauvergne, 1997) and Weather related problems (UNHabitat, 2012; Susilawati and Al – Surf, 2011) are some of the other problems.

#### 2.7. CONTRIBUTION FROM THE SYSTEM

System is an organized purposeful structure created to solve problem. System can concentrate on end results rather than the means, provides an orderly and efficient plan of action, develops coordination of the specialized activities, provides a good basis of control and frees management from many daily details of operations management (Banerjee, 2012).

# 3. METHODOLOGY

#### 3.1. PRELIMINARY SURVEY

Preliminary Survey is one of the guidance to develop the detailed Survey. Since it helped to validate the factors which developed using literature review and develop the questionnaire for the detailed survey. Semi structured interviews were adopted in this study as preliminary survey since in this research, researchers had to get respondents' opinion about the suitability of identified problems, causes and roles relevant to the implementation of housing projects for resettlement in Northern Province of Sri Lanka. Further interviewees were asked to express their ideas, views, share the knowledge and experiences on the above mentioned matters. Considering semi structured interview, all questions are well structured and no space for respondents' opinion. Further face -to -face interviews were used in this study due to highest response rates, less time consuming, less expensive and Small Number of (only six) interviews were held. Two interviewees were randomly selected for each (three) type of resettlement housing projects.

# 3.2. QUESTIONNAIRE

Section A of the questionnaire obtained information on the respondents and the rest of the sections focused on problems encountered in implementing housing projects, their ranking and causes and role of each stakeholder in resolving the problems and their ranking. A five point Likert Scale, commonly used in the literature and ranging from 1 (Very Low Significance and Importance) to 5 (Very High Significance and Importance) was used in the study. The Quantitative Research Approach and the Qualitative Research Approach were both used for the study. Therefore the research approach used in the study is a mixed approach.

#### 3.3. DATA ANALYSIS

The Relative Important Index (RII) was used to determine the relative significance of the problems, their causes and the importance of the role of each party in implementing housing projects. To examine the agreement of the ranking of the significant or important variables between beneficiaries and implementing partners, the Spearman Rank Correlation Test was conducted. The Statistical Software package Minitab and Microsoft Excel were used for data analysis.

# 4. FINDINGS

The questionnaire survey was conducted for the first three objectives of the study.

# 4.1. Significance of Main Problems Based on the Implementing Partners' (C) and Beneficiaries' (D) Views

As indicated in Table 2, both Implementing Partners and Beneficiaries ranked BCP related problems (A) above DCP related problems (B). This is justified as in a post conflict situation all systems collapse and people find it difficult to submit required documents either them being lost or misplaced. The selection of the most deserving village and the beneficiary is also not easy. In the BCP stage, there are common Problems such as those due to land mines and High security Zones. There are also individual problems such as loss of land documentation, delays in getting approval for using one's own resources in the BCP stage making them more significant than those of DCP.

Notation **Main Problems Implementing** Beneficiaries (D) Overall (C+D) Partners (C) RII Rank RII RII Rank Rank **Before Construction** 0.779 1 0.768 0.774 1 A Period (BCP) **During Construction** 0.738 2 0.756 2 0.747 2 B Period (DCP)

Table 2: Main Problems and their Ranks

# 4.2. SIGNIFICANCE OF GROUP PROBLEMS BASED ON THE IMPLEMENTING PARTNERS' (C) AND BENEFICIARIES' (D) VIEWS

The significance of group problems in the BCP is shown in Table 3.

Table 3: Significance of Group Problems in Main Problem A

Main Problem	Notation	Group Problems	Implementing Partners (C)		Beneficiaries (D)		Overall (C+D)	
			RII	Rank	RII	Rank	RII	Rank
A	$A_1$	Ownership of Land	0.845	1	0.856	1	0.850	1
	$A_2$	Selection of Beneficiary	0.793	3	0.792	2	0.793	2
	$A_3$	Selection of Village	0.807	2	0.72	3	0.763	3
	$A_4$	Commencement of construction	0.741	4	0.692	5	0.717	4
	$A_5$	Approval of housing plans	0.717	5	0.66	4	0.689	5

# 4.3. SIGNIFICANCE OF GROUP PROBLEMS BASED ON THE IMPLEMENTING PARTNERS' (C) AND BENEFICIARIES' (D) VIEWS

Table 4 indicates the significance of group problems in the DCP stage.

Table 4: Significance of Group Problems in Main Problem B

Main Problem	Notation	Group Problems	Implementing Partners (C)		•		Overall (C+D)	
В			RII	Rank	RII	Rank	RII	Rank
	$\mathbf{B}_1$	Fund	0.834	1	0.836	1	0.835	1
	$\mathbf{B}_2$	Infrastructure facilities	0.717	2	0.676	2	0.697	2
	$\mathbf{B}_3$	Physical Resources	0.700	4	0.656	3	0.678	3
	$\mathrm{B}_4$	Other	0.666	5	0.608	4	0.637	4
	$\mathbf{B}_5$	Human Resources	0.710	3	0.548	5	0.629	5

# 5. FRAMEWORKS

# 5.1. Framework for Implementation of Housing Projects

The two frameworks developed based on the findings are shown in Figures 1 and 2.

#### 5.2. OBJECTIVES OF THE FRAMEWORKS

The objectives of the two frameworks are as follows:

- To indicate in one single diagram for easy reference, the most significant problems, their most significant causes and the most important role of the implementing partners and beneficiaries.
- To indicate the relationships among the above mentioned factors

# 5.3. FRAMEWORK FOR BCP

Based on the findings, **ten** most significant sub problems (**overall RII > 0.65**) **thirteen** most significant causes of them (**overall RII > 0.65** or causes of identified sub problem with an **Overall Rank 1**) and important roles of implementing partners and beneficiaries related to these sub problems (overall RII > 0.75) were identified. Table 5 shows the relevant details.

# 5.4. FRAMEWORK FOR DCP

Based on the findings, **twelve** most significant sub problems (**overall RII > 0.65**), **fifteen** most significant causes of these sub problems (**overall RII > 0.65** or with an Overall **Rank of 1**) and important roles of implementing partners and beneficiaries related to these sub problems (**overall RII >0.75**) were identified. Table 6 shows the relevant details.

# 5.5. USE OF THE SYSTEM

Developed system provides following uses;

- Reduce bottlenecks to implement resettlement housing projects as well as community based owner driven approaches especially BCP and DCP stages.
- Educate the beneficiaries who are involving resettlement housing projects.
- Conduct advocacy programmes to officials, politicians and etc. who are stakeholders of the resettlement housing projects.

Table 5: Notation of Identification Factors in the Framework for BCP

Sub Problems	Causes	Roles of Implementing Partners	Roles of Beneficiaries	
A <sub>11</sub> - Loss of Land Development	C <sub>1</sub> - Conflict situation	RI <sub>1</sub> - Taking action to issue land	RB <sub>1</sub> - People to obtain land documents	
Ordinance (LDO) Permits/ Grants/ Deeds	C <sub>2</sub> - Low income families	documents	RB <sub>2</sub> - Taking responsibility to keep	
	C <sub>3</sub> - No awareness about importance of	RI <sub>2</sub> - Instructing Beneficiaries to take	land documents safely	
A <sub>12</sub> - Families who previously occupied the land not transferring / subdividing it	transfer	responsibility to keep documents with them	RB <sub>3</sub> - To participate actively	
to the new owners	C <sub>4</sub> - Lack of Human Resources in Offices	RI <sub>3</sub> - Conducting awareness programme	RB <sub>4</sub> - Owners to submit on time	
A <sub>13</sub> - Non regularization of	C <sub>5</sub> - Un educated families	about the importance of Land documents/	RB <sub>5</sub> - To get interested in getting other housing projects	
encroachments which took place prior	C <sub>6</sub> - Affected families' villages being not	starting on time /building plan/permit		
to 15.06.1995	selected	RI <sub>4</sub> - Conducting Land Mobile Services	RB <sub>6</sub> - Not to complain unnecessarily	
A <sub>21</sub> - Non selection of eligible families	C <sub>7</sub> - Beneficiary not fulfilling the requirements	periodically	RB <sub>7</sub> - To be interested in resettling in	
as beneficiaries		RI <sub>5</sub> - Regularizing land ownership	their own land	
A <sub>22</sub> - Influence exerted by pressure	C <sub>8</sub> - Political parties interested in their	RI <sub>7</sub> - Making beneficiaries understand	RB <sub>8</sub> - To be interested in resettling in their own land	
groups and political parties during beneficiary selection	election campaigns	the criteria of selection and avoiding		
•	C <sub>9</sub> - Lack of infrastructure facilities	complaints to politicians	RB <sub>9</sub> - To get involved in income	
A <sub>23</sub> - Delay in receipt of House Damage Assessment Survey form / conducting	C <sub>10</sub> - Delay in getting approval for the	RI <sub>8</sub> - Making arrangements to resettle the	generation projects	
the above Survey	building plan	people in their own land		
A <sub>31</sub> - Non Selection of affected villages	C <sub>11</sub> - No proper utilization of funds	RI <sub>9</sub> - Implementing income generation projects		
A <sub>32</sub> - Delay in selection of affected	C <sub>12</sub> - Delay in getting approval to use			
Villages	one's own resources	RI <sub>10</sub> - Arranging the supply of material on time		
A <sub>41</sub> - Delay in the commencement of	$C_{13}$ - No awareness on the procedure to			
construction	get approval for the building plan	RI <sub>11</sub> - Advising technical staff to provide technical advice		
A <sub>51</sub> - Delay in getting approval of				
building plan		RI <sub>12</sub> - Conducting awareness programme about procedure to get building permit		

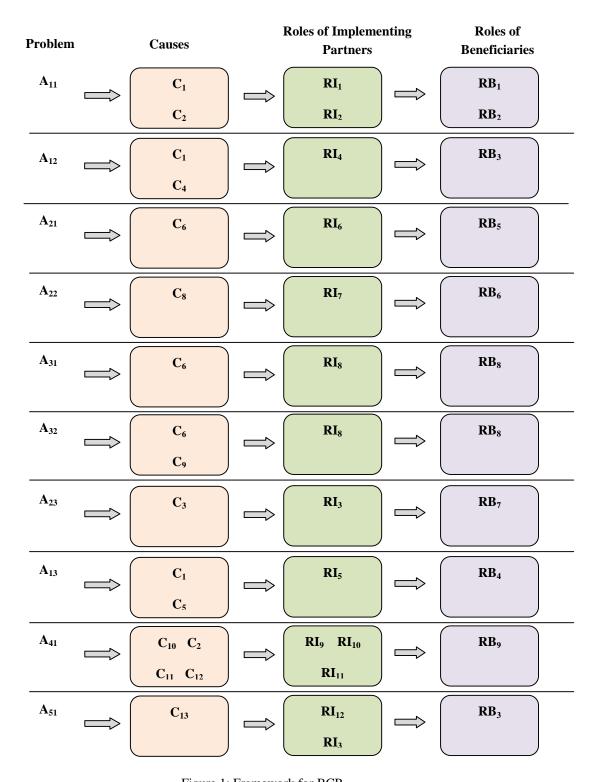


Figure 1: Framework for BCP

Table 6: Notation of Identification Factors in the Framework for DCP

Sub Problems	Causes	Roles of Implementing Partners	Roles of Beneficiaries		
B <sub>11</sub> - Failure to properly	C <sub>1</sub> - Lack of income	RI <sub>1</sub> - Creating income	RB <sub>1</sub> - To be self-		
utilize funds	generation facilities for	generation opportunities/	employed		
B <sub>12</sub> - Delay in releasing	resettled people	RI <sub>2</sub> - Conducting	RB <sub>2</sub> - To participate in		
second and third instalments of payments	C <sub>2</sub> - Low income of the Beneficiaries	awareness programme about the importance of	awareness programmes		
B <sub>13</sub> - Lack of Bank	C <sub>3</sub> - Beneficiary not	completing the	RB <sub>3</sub> - To be keen to get involved in income		
facilities	fulfilling the requirements	construction on time	generation activities		
B <sub>14</sub> - Change in	C <sub>4</sub> - Lack of infrastructure	RI <sub>3</sub> - Instructing the beneficiaries of any	RB <sub>4</sub> - To be kept		
names/Account Numbers of beneficiaries	facilities and security	changes immediately	informed immediately of any changes		
B <sub>21</sub> - Lack of services and	C <sub>5</sub> - Non availability of the original beneficiary	RI <sub>4</sub> - Instructing the	RB <sub>5</sub> -To fulfil the		
amenities (water supply,	(Death / being out of the	officers to perform duties on time	requirements on time		
electricity and etc.)	country)	RI <sub>5</sub> - Instructing	RB <sub>6</sub> - To inform their		
B <sub>31</sub> - Shortage of physical resources	C <sub>6</sub> - Difficulty in providing all services and	Beneficiaries to fulfil the	needs		
B <sub>32</sub> - Slow Delivery	amenities in a short period	requirements on time	RB <sub>7</sub> - To be aware of banking services		
$B_{51}$ - Unavailability of	C <sub>7</sub> - Increasing price of	RI <sub>6</sub> - Priority to be given to development work in	RB <sub>8</sub> -To coordinate with		
skilled labourers	material	resettled places	suppliers and requesting		
B <sub>33</sub> - Lack of storage	C <sub>8</sub> - Lack of transportation facilities	RI <sub>7</sub> - Educating the people (interest) on banking services	them to deliver material at low prices		
B <sub>41</sub> - Lack of community	C <sub>9</sub> - Non availability of proper storage facilities		RB <sub>9</sub> -To participate in		
influence and participation in		RI <sub>8</sub> - Improving road development especially in	training programmes		
construction planning and	C <sub>11</sub> - Implementing partners following donors'		RB <sub>10</sub> - Finding labourers		
designing facilities		resettlement areas on time	from adjoining areas		
B <sub>52</sub> - Unskilled labourers	guidelines	RI <sub>10</sub> - Advise to/ select a			
	C <sub>15</sub> - Lack of skilled labourers	common place for proper storage			
	C <sub>13</sub> - Unequal distribution	RI <sub>11</sub> - Conducting/			
	of the labour force	participating in awareness programmes about planning and designing of constructions			
	C <sub>14</sub> - Skilled Labours being involved with other on-going Mega development projects				
		RI <sub>12</sub> - Conducting training			
	C <sub>12</sub> - Implementing	programmes			
	partners being keen to perform their agencies'	RI <sub>13</sub> - Finding labourers from adjoining areas			
	duty perfectly	<b>J</b>			

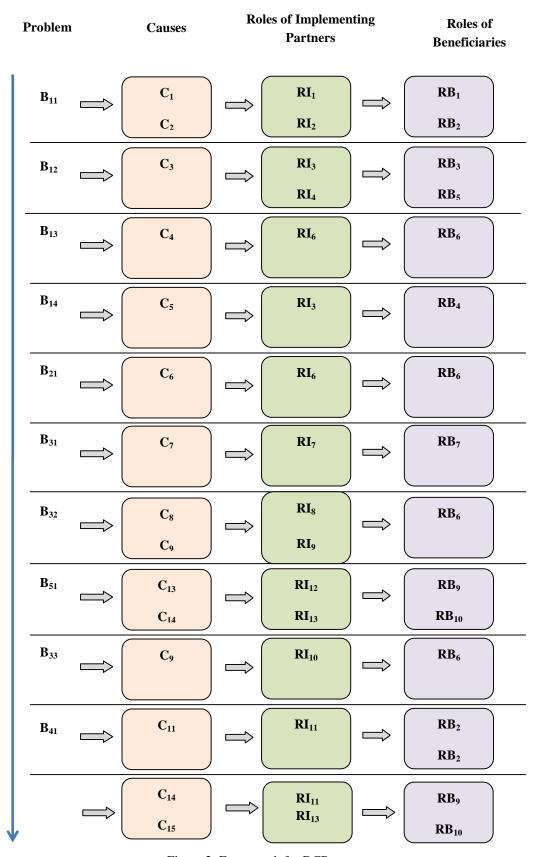


Figure 2: Framework for DCP

# 6. CONCLUSIONS AND RECOMMENDATIONS

#### 6.1. CONCLUSIONS

Main Problems, Group Problems and Sub Problems were the three types of problems considered in this study. According to RII values obtained for the Main Problems, problems 'Before Construction Period (BCP)' are more significant than those encountered 'During Construction Period (DCP)'. Under BCP 'Ownership of Land' is the most significant group problem and under DCP 'Fund Related' problems is the most significant group problem. Considering the sub problems under land related problems, 'Loss of LDO Permits/Grants/Deeds' is the most significant sub problem. Likewise under Fund Related Problems, 'Failure to properly utilize funds' is the most significant sub problem. The most significant cause of the sub problem 'Loss of LDO Permits/ Grants/ Deeds' under BCP is 'Displacement'. The most significant cause of the sub problem 'Failure to properly utilize Funds' under DCP is 'Lack of income generation facilities for resettled people'.

The roles of the implementing partners and beneficiaries in relation to the most significant sub problem 'Loss of L.D.O permits/ Grants/ Deeds' under BCP in the order of their importance are 'Taking action to issue copies of deeds for private land', 'Regularizing land ownership' and 'Taking responsibility to keep land documents safely'. Likewise the roles of the implementing partners' and beneficiaries' in relation to the most significant sub problem 'Failure to properly utilize funds' under DCP in the order of their importance are 'Implementing income generation activities' and 'To be keen to get involved in income generation activities'.

The final objective was to propose frameworks to identify a suitable system for the implementation of BCP and DCP. The two frame works identified could be used in any future housing projects mitigating associated impediments.

# 6.2. RECOMMENDATIONS

This study reveals that Implementing Partners should conduct awareness programme on the importance of having land documents and the relevant authorities should take necessary action to issue copies of the missing deeds to land owners formally. Land related issues on ownership should be resolved by conducting land mobile services, strengthening human resources and utilizing aid received from donors and NGOs. All land documents must be computerized. Beneficiaries should be aware of the importance and usefulness of land documents and should take care of them. Beneficiaries must actively participate in the awareness programmes and land mobile services.

Implementing partners should get the beneficiaries involved in income generation activities. Resettled people should strive to have their own income sources rather than waiting for outside aid. Banks should provide an optimum service to resettled people and there should be new branches and mobile banking services. Beneficiaries should be interested in these new services. To ensure that the most deserving Villages and Beneficiaries are selected, housing plans should be approved with transparency without yielding to pressure groups and the beneficiaries too need to cooperate with officers to help them perform their duties properly. Authorities should give priority to infrastructure development projects in resettlement areas. Implementing partners, relevant agencies, community and other service providers should have good communication and coordination among them working as a team. It is also recommended that authorities consider using the frameworks developed use them in future housing projects.

# 7. REFERENCES

Aceh Community Assistance Research Project (ACARP), 2007. *The Acehnese Gampong Three years on Assessing Local Capacity and Reconstruction Assistance in Post- tsunami Aceh* [online]. Banda, Aceh: ACARP. Available from: http://www.worldcat.org/title/acehnese-gampong-three-years-on-assessing-local-capacity-and-reconstruction-assistance-in-post-tsunami-aceh-report-of-the-aceh-community-assistance-research-project-waacarp/oclc/489265374 [Accessed 21 March 2013].

- Banerjee, A., 2012. Five Main Advantages System Approach in Management [online]. Sri Lanka. Available from: http://www.preservearticles.com/2012051832330/5-main-advantages-of-systems-approach-in-management.html [Accessed 16 May 2015].
- Barakat, S., 2003. Housing Reconstruction after Conflict and Disaster. *Humanitarian Practice Network (HPN) Paper* [online], (43), 1-40.
- Barenstein, J.D., 2006. Housing Reconstruction in Post-Earthquake Gujarat: A Comparative Analysis. *Humanitarian Policy Network Paper* [online], 54.
- Barenstein, J.D. and Iyengar, S., 2010. From Housing to Reconstruction in India. In: Lyons, M., Schilderman, T. and Boano, C., Ed. *Building Back Better*, Warwickshire, UK: Practical Action Publishing Ltd, 164-188.
- CEPA (Centre for Poverty Analysis), 2009. Force to Move: Involuntary Displacement Policy and Practice. In: 9th Annual Symposium on Poverty Research in Sri Lanka.
- Chang, Y.A., 2012. *Resourcing for Post- Disaster Housing Reconstruction* [online]. Dissertation (Doctoral). Available from: http://www.researchspace.auckland .ac.nz/does/uoa-docs/rights.htm [Accessed 18 June 2013].
- Dauvergne, P., 1997. Globalization and Deforestation in the Asia-pacific. Australian National University, Canberra.
- International Federation of Red Cross and Red Crescent Societies (IFRC), 2010. *Owner Driven Housing Reconstruction Guideline of IFRC* [online]. Available from: http://www.sandradurzo.org/Conferences/ODHR\_Guidelines.pdf [Accessed 21 March 2015].
- International Medical Health Organisation, 2010. *The Internally Displaced Persons (IDPs) of Sri Lanka* [online]. PowerPoint Slide No: 5. Available from: www.ThelMHO.org [Accessed 16 May 2013].
- Jaffna District Secretariat, 2014. *District Statistical Hand Book 2014*. Jaffna, Sri Lanka: Jaffna District Planning Secretariat.
- Jayasuriya, S. and McCawley, P., 2008. Reconstruction after a Major Disaster: Lessons from the Post Tsunami Recovery: Issues and Challenges in Indonesia, Sri Lanka and Thailand. *Working Paper*, (25). Tokyo: Asian Development Bank Institute.
- Karunasena, 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* [online], 1(2), 173-191.
- Kilinochchi District Secretariat, 2014. *District Statistical Hand Book* 2014. Kilinochchi, Sri Lanka: Kilinochchi, District Planning Secretariat.
- Krishnar, S., 2007. Planning Socio Economic Development in Economically Disadvantages Groups in Vadamaradchy South West Division through Reconstruction Housing Reconstruction Programmes. Unpublished Dissertaion (M.Sc.). University of Jaffna.
- Mannar District Secretariat, 2014. District Statistical Hand Book 2014. Mannar, Sri Lanka: Mannar District Planning Secretariat.
- Ministry of Construction, Engineering Services, Housing and Common Amenities, 2011. *National Housing Symposium, Sri Lanka Foundation Institute*, Colombo 22-23 March 2011.
- Ministry of Resettlement, 2013. Progress and Performance Report 2012. Sri Lanka: Ministry of Resettlement.
- Mullaitivu District Secretariat, 2014. .*District Statistical Hand Book 2014*. Mullaitivu, Sri Lanka: Mullaitivu District Planning Secretariat.
- Nazara, S., and Resoundarmo, B.P., 2007. Aceh-Nias Reconstruction and Rehabilitation: Progress and Challenges at the End of 2006. *Discussion Paper*. Tokyo: Asian Development Bank Institute.
- Njathi, M.E., 2011. *The Challenges of Housing Development for Low Income Market*. Thesis (MBA). Strathmore University.
- North East Housing Reconstruction Programme (NEHRP), 2012. *Preparation of the Implementation, Completion Results Report.* Paranthan, Kilinochchi, Sri Lanka: NEHRP.

- Ophiyandri, T., Amaratunga, D. and Pathirage, C., 2010. *Community Based Post Disaster Housing Reconstruction: Indonesian Perspective* [online]. Available from: http://www.cib2010.org/post/files/papers/536.pdf [Accessed 16 March 2013].
- Oxfam, 2006. Oxfam International Tsunami Fund International [online]. Second Year Report December 2006. Available from: http://www.oxfam.ca/sites/default/files/Oxfam-international-tsunami-fund-second-year-report.pdf [Accessed 16 May 2015].
- Shaw, J. and Ahmed, I., 2010. *Design and Delivery of Post Disaster Housing Resettlement Programme: Case Studies from Sri Lanka and India* [online]. Melbourne, Australia: The Royal Melbourne Institute of Technology. Available from: http://mams.rmit.edu.au/2uisye01kgb5z.pdf [Accessed 30 March 2013]
- South Asian for Human Rights, 2012. Internally Displaced Persons in Sri Lanka: Legal Framework and Key Issues.
- Steinberg, F., 2007. Housing Reconstruction and Rehabilitation in Aceh and Nias, Indonesia- Rebuilding lives [online]. *Habitat International*, 31(1), 150-166. Available from: http://www.sciencedirect.com/science/article/B6V9H-4N0XN7T-1/2/a28e92ad63f31cda9ada4e54ef8b9299 [Accessed 18 March 2013].
- Susilawati, C. and Al surf, M., 2011. Challenges Facing Sustainable Housing in Saudi Arabia: A Current Study Showing the Level of Public Awareness. In: 17<sup>th</sup> Pacific Rim Real Estate Society Conference.
- The World Bank, 2010. *Involuntary Displacement* [online]. Available from: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTINVRES/0,,menuPK:410241~pagePK:149018~piPK:149093~theSitePK:410235,00.html [Accessed 16 March 2013].
- The World Bank, 2011. *Involuntary Resettlement* [online]. Available from: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTINVRES/0,,contentMDK:20486618~menuPK:1242235~pagePK:210058~piPK:210062~theSitePK:410235,00.html [Accessed 30 March 2013].
- Thiyagarajah, J., 2012. *A Road Map to the End of Displacement in Sri Lanka? FMR/BRRKINGS-BERNSPECIAL/ISSUE* [online]. Available from: http://www.brookings.edu/fp/projects/idp/resources/Henglish.pdf [Accessed 16 May 2015].
- UN-HABITAT, 2010. Support to Conflict Affected People through Housing [online]. Available from http://www.unhabitat.lk/project7a.html [Accessed 15 May 2013].
- UNNATI, 2006. Owner Driven Housing Process Post Earthquake Reconstruction Programme. Bhachau: Ahmedabad, Gujarat, India: UNNATI.
- UN Office for the Coordination of Humanitarian Affairs (UN OCHA), March 2010. *Sri Lanka: North East Joint Humanitarian Update #21* [online]. Available from: http://www.humanitarianinfo.org/srilanka\_hpsl/Files/Situation%20Reports/Joint%20Humanitarian%20Update/L KRN040\_100227-100312%20-%20SL%20-%20IA%20-%20Sitreps%20-%20Update%20-%2021.pdf.
- Vavuniya District Secretariat, 2014. *District Statistical Hand Book 2014*. Vavuniya, Sri Lanka: Vavuniya, District Planning Secretariat.
- Verby, M., Manu, C. and Berman, L., 2007. Community Development Approach in Aceh Reconstruction, Reflecting on Lessons Learned for Yogyakarta Lesson Learned from the Field, A Practical Guideline in Modern Project Management Style in Post-Disaster Areas. In: International Seminar on Post Disaster Reconstruction: Assistance to Local Governments and Communities, Yogykarta. Urban and Regional Development Institute.
- Zabihullah, S., Vaughan. C. and Trigunarsyah, B., 2011. Post Disaster Housing Reconstruction: Challenges for Community Participation. In: *The International Conference on Building Resilience: Interdisciplinary Approaches to Disaster Risk Reduction, and the Development of Sustainable Communities* [online], Heritance Kandalama, Sri Lanka. Available from: http://www.eprints.qut.edu.au/4217 [Accessed 16 May 2015].
- Zuo, K. And Wilkinson, S., 2007. Supply Chain and Material Procurement for Post Disaster Construction: The Boxing Day Tsunami Reconstruction Experience in Aceh, Indonesia. In: *The CIBW89 International Conference on Building Education and Research BEAR 2008*, Heritance Kandalama, Sri Lanka.