

Compensation for Compulsory Land Acquisition; Does Social Sustainability Matters on Satisfaction

G. S. Dilrukshi

Department of Estate Management and Valuation, University of Sri Jayewardenepura, Sri Lanka,shymali.galappaththi96@gmail.com

N. C. Wickramaarachchi

Department of Estate Management and Valuation, University of Sri Jayewardenepura, Sri Lanka nishani@sjp.ac.lk

Abstract

Payment of compensation for different types of losses are continuously experiencing in Sri Lanka. One of the typical aspects is the compulsory land acquisition. Government acquires the lands from private landowners for providing infrastructure in terms of public interest and proceeds to pay the monetary compensation recovering the losses while the National Involuntary Resettlement Policy (NIRP) intends to address involuntary resettlement because of land acquisition. However, distrust is arising on satisfaction of the victims of this process and no evidence how far the social sustainability concept is addressed. Therefore, this paper aims to analyze the determinants of satisfaction while focusing on the factors representing the social sustainability concept in compensation procedure of compulsory land acquisition of Sri Lanka. For acquiring data, questionnaire survey was conducted with 30 re-settlers who were the victims of government land acquisition for a reservoir project and an interview was carried out with prominent community leaders on 09 factors. Data were analyzed using descriptive statistics and a content analysis. The findings reveal that social sustainability aspects of neighborhood environment, education, market availability, electricity, and public health services were successful to some extent, while there were significant inconsistencies amongst assessed components within individual cases. Hence, the study reveals that pure monetary compensation process was unsuccessful since it represents the inadequacy to cover all losses of victims. Thus, for a total loss a resettling

strategy is essential along with high concentration on the social sustainability aspects.

Keywords: Compulsory Land Acquisition, Involuntary Resettlement Policy, Payment of Compensation, Social Sustainability Concept, Satisfaction

INTRODUCTION

Pressurizing direct and indirect demand for land resources is unavoidable in many Asian countries, following the increasing trend of population growth. Whilst direct demand for land stands on residential, commercial, industrial, and agricultural purposes, a huge indirect demand generates for the needs on infrastructure facilities viz., highway, railway, schools, hospitals, hydropower, and telecommunication implying the state responsibility to meet them, whereas the private sector hardly involve in targeting the social needs. Realizing the basic requirements to a satisfactory level of the people in the country, ultimately rests on the government. Thus, the agenda of compulsory land acquisition arises. Simply, compulsory land acquisition can be defined as the power of the government to take private property rights in land for societal benefit by giving compensation for the affected landowners and interested parties. Henceforth it is clear that whatever the purpose of the land acquisition, compensation is the redress available to the people who are affected by such acquisition process. Accordingly, compensation is defined as the re-preparation of wrong through a delivery of an equivalent, usually sum of money (Patnaik & Padhi, 2012). The adequate compensation is another important term in compulsory land acquisition process. The open market worth of land, as well as its repercussions, such as services, harmful affection and disturbance, and the worth of property to the affected property owner, is usually referred to as adequate compensation (Atahar, 2013). The meaning of adequate compensation somewhat varies from country to country e.g. compensation provision in USA, UK, Australia, New Zealand, Hong Kong and Malaysia are based on the just value to the land owner plus market value of the subject property which is held as compensation for the

displaced landowners (Olanrele., 2017). While African countries like South Africa, Nigeria and Rwanda, the sum of the compensation payable may be market value of subject property plus other losses sustained by landowners which based on principle of value to the owner and equity, equivalence, fair value and displacement cost. The monetary compensation is incorporated as the primary solution for compensation (Ghimire, et al., 2017) whereas resettlement is an alternative way of paying compensation for loss of property due to compulsory acquisition and widely observed in agricultural land. However, there is no extensively acknowledged model for determining acceptable compensation, and it is recommended that the amount of compensation be determined through discussion to ascertain the entire losses incurred in the case of compulsory acquisition.

The acquisition of lands from private owners for the public purpose is legally supported in Sri Lanka, by the Land Acquisition Act No. 09 of 1950. Based on the provisions of land acquisition act, government is paying compensation for affected parties during the acquisition process to bring them to prior position. Despite the prevailing regulatory framework, there are number of critics related to the dissatisfaction on the adequacy of the amount of compensation paid. The monetary compensation is only dealing with few heads of economic distresses including market value of acquired land, injurious affection and severance to balance land, loss of business and change of residence. Besides, social, and cultural injuries can also be seen because of compulsory acquiring. However, the current compensation procedure in compulsory land acquisition in Sri Lanka, is mainly compensates the physical and few economic losses implying the inadequate attention on social and cultural values. To retain the effectiveness and to increase the satisfaction of compensation in compulsory acquired lands, many countries have endeavored to attain sustainability dimensions of social, economic and environmental. There is inadequate evidence on a research conducting to identify the actual social losses and dissatisfaction arise and to the extent of incorporating social values into compensation payment procedure enabling the coverage of all the losses sustained by affected people and fulfilling the social sustainability concept. Therefore, the main aim of this study is to analyze the factors representing the social

sustainability concept in compensation procedure of compulsory land acquisition of Sri Lanka along with other factors contributes to the satisfaction, to encourage fair and adequate compensation process for affected parties.

LITERATURE REVIEW

Compulsory Land Acquisition

The power of the state to seize private property rights in land for public purposes without the owner's or occupant's agreement is known as compulsory land acquisition (Keith, 2008). Thus, the compulsory acquisition is government directed activity without any vote of landowners. Hence, compulsory land acquisition necessitates striking a compromise between three factors: public need for land, land tenure security, and private rights preservation (FAO, 2009). No government can implement such power without any support legal background and are not feasible. Therefore, the purchase of private lands by the government of any country is typically backed up by provisions of a strong active statute. Such laws may establish an acquiring agency, generally a government department, to handle the purchase for the government, as well as lay out the specific process and method and provide monetary compensation (or resettlement) to affected property owners (Akujuru, 2014; Christopher, 2017). Despite the fact that, compulsory acquisition power is firmly anchored in practically all legal systems, several countries including USA, Rwanda, Hong Kong, China, Australia etc. that have been constructed effective, fair and equitable legal and institutional frameworks for exercising compulsory acquisition for affected landowners (Larbi, et al., 2014; Olanrele, 2017). Thus, from the specific acts or laws outline the objective of property acquisition, the authorities that will exercise the power of eminent domain, the method of compensation valuation, and the management of any claims or appeals that may arise. Accordingly, a fair approach for land acquisition has been expanded the people's right over their land while respected and adequate compensation is paid to displaced people.

Adequate Compensation in Compulsory Land Acquisition

Several authors have been elaborated on differing opinions on the word compensation in contract and tort law. According to Alias and Daud, (2006) the compensation is defined as the amount paid to a disposed landowner in exchange for the land seized as well as any additional losses incurred as a consequence of the compulsory land acquisition. Compensation should be directed by the aims of "equity" and "equivalence," according to a long-standing concept in many jurisdictions. It means that the sufficiency of compensation should be judged against the purpose of ensuring that individuals are neither impoverished nor enriched (Keith, 2008). Accordingly, a reasonable payment by the government for acquired property, guaranteeing that the owner is not worse off as a result of the purchase, is what adequate compensation entails (Olanrele, 2017). The adequate compensation is always trying to put the affected parties on the pre-displacement position. Therefore, adequate compensation is always being referred to as the open market value of land taken simultaneously with its consequences including services, injurious affection and disturbance, and the value of property for affected property owner (Omar et al, 2001). Kotaka, (2008) reasoned that adequate compensation must accomplish three conditions to done land acquisition fairly; including, payment for all losses sustained as agreed during harmonized negotiation in an arm's length transaction, consideration of physical factors as well as non-sentimental value and date of valuation should be based on the first proposal to acquire land. Later Nuhu (2008) confirmed that when land is compulsorily acquired for just and fair purpose, adequate procedure of compensation payment is critical by considering lot of the interested parties in order to improve their livelihood and contribution to the economic and social activities. It is somewhat complying with sustainability concept since it focuses to improve people livelihood. Although, his ideas failed to interpret what adequate compensation should be. In this milieu, Ige, (2016) concluded that there is no universally accepted model defining adequate paid compensation and recommends that negotiation is necessary the determine the amount of compensation, to delineate the total losses suffered in the event of compulsory acquisition.

Value Assessment for Compensation Procedure

The compensation should be valued based on the value of the land right, any modifications to the land, and any other connected expenditure or losses. The market value or equitable remuneration should be included in the concept (Olanrele, 2017). Commonly, compensation is anticipated to compensate any losses resulting from compulsory land acquisition in order to make it viable, and must comprise the items of land acquired, building, improvements to other crops, decrease in the value of the land, disturbances, severance, emotional injuries, and fees (Anuar & Nasir, 2008 ; Akujuru V.A, 2014). However, in a scenario of compulsory land acquisition, Vaughan and Smith (2014) claimed that compensation value evaluation should be based on the "principle of equivalent" to guarantee that disposed owners are properly paid for their losses. Sri Lankan land acquisition act does not specify definitive way of value assessment for compensation. The basis of financial compensation should be the principle of equity and equivalent which means that the money paid should be able to put back the claimants on their immediate position before displacement by recovering all the losses suffered. However, this rarely occurs in practice in Sri Lanka (Godamunne, 2012).

Compensation for Compulsory Land Acquisition in Sri Lanka

Land acquisition practices in Sri Lanka dates to the colonial period with the initiation of Land Acquisition Ordinance No 03 of 1876. However, at present the whole acquisition procedure is governed by the enactment of Land Acquisition Act No 09 of 1950. As per the provision of Land Acquisition Act No. 09 of 1950, compensation equation consists with following heads of claims as shown below.

Market Value of the land taken
xxxxx
Plus (+)
Compensation for injurious affection and severance to balance land
xxxxx
(Not exceeding 20% of the market value of acquired land parcel)
Loss of Business
xxxxx
Any reasonable expense for change of residence
xxxxx
Minus (-)
For betterment to the balance land
(Not exceeding 20% of the market value)
(xxxx)
Compensation amount
Rs. xxxx

Compensation for the properties acquired by the state is based on ‘market value’ which is defined in the act as “the amount which the land might be expected to have realized if sold by a willing seller in the open market as a separate entity on the date of the publication of the notice under section seven in the Gazette. Thus, the terms of “land” and “interested parties” are interpreted in the act as the term of “land” includes any interest in, or any benefit to arise out of, any land, any leasehold or other interest held by any person in any crown land and things attached to the earth or permanently fastened to anything attached to the earth. While, the “person interested”, with reference to a land, means a person having an interest in the land as owner, co-owner, mortgagee, lessee or otherwise, whether absolutely for himself or in trust for any other person or for any charitable, religious or other purpose; or person having a servitude over the land but does not include a tenant on a monthly tenancy (Godamunne, 2012). However, there are several restrictions on determination of compensation when properties

are compulsorily acquired under the land acquisition act subject to the legal provisions given in various other acts. However, in current compensation valuation process mainly focused on physical losses with economic value of the land that had not been considered about the social and cultural losses to the affected parties and mental losses with expropriation.

Alternative Appliances for Compensation Process

In monetary compensation, since there are some complexities associated with assigning realistic monetary values to lost assets and displaced rights which is mainly due to the difficulties of applying “uniform” compulsory purchase legal framework to some social phenomenon in which value of land is different than land is valued in functioning market economy. Conversely the identification of land rights in rural areas is problematic since some land rights are inheritable to rural livelihoods such as access to forest resources, rights of pasture which may simply not be capitulatory to monetization (Lindsay, 2012). The provision of alternatives is the only solution to address these losses. The provision of alternative land as compensation may also avoid issues that arise “when financial compensation is paid to people who are unfamiliar with handling large sums of money and who may soon after receiving compensation find themselves without land to farm, no income stream to support themselves, and no job skills to compete in a nonagricultural economy” (Keith et al., 2008).

The World Bank Policy on Involuntary Resettlement stresses the provision of alternative and equivalent land as a preferred solution where livelihoods are land based. The principle of equivalence has been shifted to aim beyond equivalence to improving the position of those affected wherever possible this principle is articulated by World Bank in Policy on Involuntary Resettlement as “Displaced persons should be assisted in their efforts to improve their livelihood and standard of living or at least restore them, in real terms, to pre displacement level or to levels prevailing prior to the beginning of project implementation, which is higher (World Bank Group, 2016). In view of this policy, involuntary resettlement is one of way which helps to improve people’s living standard and improve their livelihood. Moreover, it is important to note that resettlement is another way of making

compensation for acquired land especially with agricultural land and which is considered as alternative to monetary payment of compensation (World Bank, 2013). Further, some countries are practicing this alternative method. For an instance, in Ghana and Australia, alternative land can be provided for any land taken and Canada provide “Home for Home” resettlement in lieu of monetary compensation. However, it is important to note that government intervention is necessary to rebuild community as a group based on host needs of community which cannot be achieved only providing “land for land” or “home for home” for affected people. Hence, involuntary resettlement is one of initiatives which focusing on incorporation of sustainability concept into compensation procedure.

Mid of 2001, Sri Lanka has formulated “National Involuntary Resettlement Policy” to address the current gap in the Land Acquisition Act in addressing resettlement issues such as exploring alternative resettlement project options to avoid, minimize impacts on people, compensating those who do not have legal title to, but currently using and dependent on land or implementation of income restoration measures aimed at the social and economic rehabilitation (Godamunne, 2012). However, the sustainability of National Involuntary Resettlement Policy in Sri Lanka has been criticized for failing to identify a variety of risks associated with resettlement, such as landlessness, joblessness, homelessness, social marginalization, etc. (Hettiarachchi, 2015). Therefore, the current study is interestingly assessed the social sustainability concept in compensation procedure of compulsory land acquisition of Sri Lanka in order to determine fair and adequate compensation procedure for affected parties.

METHODOLOGY

Conceptual Framework

On par with the theoretical settings, following are the criteria that have been discussed to represent the satisfaction in a compensation procedure including a re-settlement strategy. Hence, both aspects of social and economic entails in satisfaction attributes while difficult to distinct those aspects due to certain interrelationships among factors in this type of studies. Therefore, the study conceptualizes all the identifying factors, in

order to analyze and understand compensation and resettlement issues in present compulsory land acquisition process.

Table 1: Conceptual Framework

Factors		Description	Satisfaction
F1	Neighborhood Environment	It is more vital to plan and create a community than to just create a group of dwellings, as this will give people a sense of belonging (Steinberg, 2007).	
F2	Sanitation Facilities	Maintaining appropriate sanitary amenities including, pipe lines, waste water and waste disposal in housing construction is a crucial aspect in ensuring community satisfaction in the long run (Kennedy et al., 2008).	
F3	Public Transport Facility	Basic amenity of transport facility including roads, public transportation should be provided properly when people are resettled (Perera et al., 2013).	
F4	Educational Facility	Basic amenity of education facility including schools, Montessori, Dhamma Schools and other educational institutes should be provided properly and conveniently when people are resettled (Rameezdeen, 2010).	
F5	Financial Status	The financial status should be ensured via attributes including income, expenditure, loan facility and alternative income sources when people are resettled (Kennedy et al., 2008).	
F6	Employment Opportunity	Agricultural skills and nonagricultural vocational trainings, livelihood restoration should be available when people are resettled (Sapkota & Ferguson, 2017).	
F7	Market Availability	The accessibility to main market places, specially selling to the cultivation, therefore market places should be provided properly and conveniently when people are resettled (Sapkota & Ferguson, 2017).	
F8	Electricity Services	Basic amenity of electricity should be provided properly when people are resettled. (Perera et al., 2013)	
F9	Public Health Services	Basic amenity of public health facilities should be provided properly when people are resettled (Rameezdeen, 2010).	

Source: Author developed based on Literature, 2020

Study Area

Properties acquired for the Yan Oya Irrigation Project, located in the North-Eastern Province and administratively belong to the two districts of Anuradhapura and Trincomalee in Sri Lanka were identified for the empirical evidence. The main aim of Yan Oya Project was to harness the water resources of Yan Oya River (the fifth longest river in Sri Lanka) by constructing an earth embankment dam of 2.35km length and a canal system, to facilitate irrigation water facilities for nearly 5700 hectares. In addition, the project aims to enhance the drinking water facility for the people in above two districts where severe water deficit is observed. Yan Oya Reservoir Development is one of the largest projects and approximately Rs. 5000 million of compensation was granted to the farmer's families whose land and property acquired to the reservoir project. Majority of the families' livelihoods were based on agricultural activities and land was the inevitable resource for them. Thus, the reservoir is spreading in eight Grama Niladhari Divisions (village level administrative units) which belongs to the two Divisional Secretariat Divisions namely, Horowpathana in Anuradhapura District and Gomarankadawala in Trincomalee district.

The Yan Oya Reservoir Project is deemed fit for the study since its acquisition is for the public purpose and all the steps involved in the project had been almost completed at the time of the study conducted. It was making possibilities to do assessment and analysis on compensation valuation procedure.

Population, Sample and Data Collection

There were 234 families identified as affected due to the project (loss of full property or partially) and were belong to two districts. Out of 99 families, recognized as affected from Anuradhapura district, thirty families who have been resettled, were selected by adopting the convenience sampling approach. Accordingly, the sample is comprised of respondents with three new resettlement locations namely 'Malporuwa', 'Aluth Gammanaya' and 'Omarakada' (these three resettlement locations will be identified as

Malporuwa = Case A, Aluth Gammanaya = Case B and Omarakada = Case C for the purpose of this article). In addition, 06 experts representing 02 from each settlement were purposely selected.

The data was obtained from primary and secondary sources. The primary data was collected from two angles i.e., through a five-point Likert scale questionnaire (1-5 SD to SA) from thirty (30) families selected as above explained and an interview schedule was used to collect data from experts. to confirm the satisfaction and reasons. The latter key informant interviews were carried out with prominent six (06) community leaders representing two from each location. Field observations were conducted to verify the actual physical characteristics of re-settlers such as the housing condition and other infrastructure facilities. The study relied on secondary data that collected through documentary reviews to understand the project details. The analysis explored using quantitative approach and qualitative approach respectively represent the descriptive statistics for the data collected from the questionnaire and the content analysis for the data collected through the interviews. In content analysis, the factors were ranked as weighted mean values and the rankings were collected on a scale ranging from 1 to 9 representing, 1 for lower-level satisfaction and 9 for high-level satisfaction.

RESULTS AND DISCUSSION

Demographic Profile of the Respondents

Table 2, reflects the demographic profile of the respondents. The total numbers of male respondents were more dominant than females in case B and C that equally distributed in case A. The respondents were categorized into three age groups: below 30 years (n= 2), 30-50 years (n=13) and 51 years and above (n=15). The family size of the respondents was identified as per the three categories viz., 1(n=2), 3 to 5 (n= 23) and 6 and above (n= 5). Most of the respondents had an Ordinary Level education (n=13) or less (n = 12) while a smaller number had Advanced Level education (n =5) and anyone had not degree or diploma level education status.

Table 2: Demographic characteristics of respondents selected from three resettlement sites

Demography	Case (A)	Case (B)	Case (C)	Total
Gender				
Male	3 (50%)	8(88.9%)	13 (86.7%)	24 (80%)
Female	3 (50%)	1 (11.1%)	2 (13.3%)	6 (20%)
Age Category				
Below 30 Years	1 (16.7%)	0 (0%)	1 (6.7%)	2 (6.7%)
31 – 50 Years	3 (50%)	3 (33.3%)	7 (46.7%)	13 (43.3%)
Above 51 years	2 (33.3%)	6 (66.7%)	7 (46.7%)	15 (50%)
Family Size				
1	1 (16.7%)	1 (11.1%)	0 (0%)	2 (6.7%)
3-5	1 (16.7%)	1 (11.1%)	3 (20%)	23(16.7%)
> 6	4 (66.7%)	7 (77.8%)	12 (80%)	5 (76.7%)
Educational Level				
No Schooling	0 (0%)	0 (0%)	1 (6.7%)	1 (3.3%)
Primary Level	2 (33.3%)	4 (44.4%)	5 (33.3%)	11 (36.7%)
Ordinary Level	2 (33.3%)	3 (33.3%)	8 (53.3%)	13 (43.3%)
Advanced Level	2 (33.3%)	2 (22.2%)	1 (6.7%)	5 (16.7%)
Family Type				
Main Family	5 (83.3%)	9 (100%)	14 (93.3%)	28 (93.3%)
Sub Family	1 (16.7%)	0 (0%)	1 (6.7%)	2 (6.7%)

Source: (Survey Data, 2020)

Long-term Contentment of Resettlement Housing

The levels of user satisfaction in the overall three case studies are shown in Table 3. A score of 3 can be regarded the cut-off point for satisfaction/dissatisfaction, given the manner the ratings were assigned using the five-point Likert scale options.

Table 3: Level of satisfaction of resettles with regard to sustainable living

		1	2	3	4	5	Mean	SD
Neighborhood Environment	Frequency	3	5	10	6	6	3.47	0.725
	%	10	17	33	20	20		
Sanitation Facilities	Frequency	9	10	5	4	2	2.98	0.543
	%	30	33	17	13	7		
Public Transport Facility	Frequency	12	13	1	3	1	2.94	0.521
	%	40	43	3.5	10	3.5		
Educational Facility	Frequency	2	4	12	5	7	3.42	0.719
	%	7	13	40	17	23		
Financial Status	Frequency	17	7	4	1	1	2.74	0.403
	%	57	23	13	3.5	3.5		
Employment Opportunity	Frequency	11	6	9	1	3	2.86	0.503
	%	36.5	20	30	3.5	10		
Market Availability	Frequency	3	3	16	5	3	3.18	0.678
	%	10	10	53	17	10		
Electricity Services	Frequency	-	-	1	4	25	4.89	1.896
	%	-	-	3.5	13	83.5		
Public Health Services	Frequency	2	2	15	5	6	3.39	0.689
	%	7	7	49	17	20		

Source: (Survey Data, 2020)

The overall survey results from the three case studies show that all respondents were satisfied with the neighborhood environment (m=3.47), educational facility (m= 3.42), electricity supply (m= 4.89), public health services (m= 3.39) and market availability (m= 3.18). When comparing satisfaction in terms of social aspects the three resettled locations, however, there are disparities in respondents' opinions depending on location changes for various reasons. Therefore, this study includes content analysis to examine the data in order to match the variables with historical context and draw reliable conclusions, which were gathered through semi-structured interviews with prominent community leaders in three resettled sites.

Table 4: Results of Content Analysis

	Case A		Case B		Case C		Weight Mean	Ranking
	RS1	RS1	RS1	RS1	RS1	RS1		
F1	7	8	6	8	8	6	7.1	3
F2	4	5	4	4	3	4	4	6
F3	1	1	3	2	1	1	1.5	9
F4	6	7	7	5	6	7	6.3	4
F5	2	2	2	1	4	2	2.1	8
F6	3	3	1	3	2	3	2.5	7
F7	5	4	5	6	5	5	5	5
F8	9	9	9	9	9	9	9	1
F9	8	6	8	7	7	8	7.3	2
Overall Satisfaction	Yes	Yes	No	No	No	No		
F1- Neighborhood Environment, F2- Sanitation Facilities, F3- Public Transport Facility, F4 -Educational Facility, F5- Financial Status, F6- Employment Opportunity, F7 - Market Availability, F8- Electricity Services, F9- Public Health Services								

Source: (Survey Data, 2020)

As presented in table 4, the respondents of case A were positively response on overall resettlement program while respondents of case B and C had somewhat negative perceptions. Thus, the content analysis confirmed that the factors of electricity facility, public health service, neighborhood environment, education facility and market availability have reflected highest weighted mean values with first five rankings. However, there were significant inconsistencies in the assessed components within individual cases (case A, B, and C).

Giving reference to table 3 and 4, people who resettled in the vicinity of the reservoir (Case A) were totally satisfied with the neighborhood environment than those who resettled case B and C. The high social integration and cohesiveness with same neighbors in previous location, to made collective decisions to continue their paddy cultivation was the main reason for high satisfaction on neighborhood environment of the case A residents (refer table 3). Subsequently, satisfaction related with the sanitation facility, majority of the respondents from case B and C dissatisfied with current, pipe, sewage system and trash while case A expressed fair satisfaction. Hence, considering the satisfaction on transport

facility, all three cases respondents reflected dissatisfaction due to prevailing disputes of bus transportation and deprived roads e.g. struggle to reach to fulfill some services e.g. health services people require to hire three-wheelers (taxi) which is somewhat costly option. Conversely, village roads allow improving access to towns and marketplaces where the present transportation infrastructure has failed in this resettlement. If these facilities are well-maintained and linked with other activities, such as livelihoods, schools and health facilities should be able to fully benefit from them. The high percentage of respondents in “case A” was satisfied with available educational facility, due to the reason of construction of the new school within new resettlement. Even though, case B and C respondents either satisfied or dissatisfied in connection with available facility for education while hold fair idea.

The satisfaction level for financial factor is mainly measured as per the attributes of respondents’ income, expenditure, loan facility and alternative income sources in which comparing the context of before and after resettlement. Accordingly, majority of the respondents of all three cases have dissatisfied with their financial status after the resettlement. There is a sudden dropdown of the income in three villagers (case A, B, and C) after the resettlement. On average income was LKR 32,783/- before resettlement which drop down up to LKR 20,533/- after the resettlement. The lessening of income from alternative income sources and the shortage of compulsory resources including land and irrigation facility were main identified reasons for income reduction. Conversely, the average monthly expenditure of sample household was LKR 18,400/- before land acquisition which increased up to the average level of LKR 24,500/- after the resettlement. The high food expenses as the result of losing subsistence farming and agricultural production especially paddy production were main reasons. The survey verified that respondents of all three cases have not much tend to obtain loan facility after the resettlement and few has been obtained loans for the purposes of build their housing and agricultural activities as well. Even though, majority of respondents of all three cases, especially case B had dissatisfied with available alternative income sources due to small portion of land parcels of new resettlement location were loosed their

livestock and other subsistence farming income. Thus, the references based on the employment opportunities, majority of case A and B respondents dissatisfied on livelihoods after the resettlement due to losing agricultural lands and rendering most people to joblessness.

Regularly, many obstacles faced the restoration of production and livelihoods since there was insufficient area for agriculture, land-based choices remained impracticable. Therefore, people must, however, pursue non-agricultural work opportunities. Therefore, restoring the village's agricultural production capability or offering training for new employment opportunities are required when people are resettled. However, respondents in Case C had a positive attitude about employment opportunities because of receiving distinct land lots for their agricultural production. Even though, some responders in Case C were disappointed due to a lack availability of adequate irrigation water supply system. Almost all the respondents from the three resettled locations indicated strong satisfaction in relation to the electricity services available in three new resettled locations (see table 4). Finally, majority of respondents in cases B and C expressed high satisfaction with available public health services, while case A respondents expressed lower satisfaction when compared to cases B and C. Ultimately, the respondents of all three cases were not satisfied with the paid amount of monetary compensation for the land acquisition process of Yan Oya Reservoir project.

CONCLUSION

The main aim of this study is to critically analyze the factors representing of the social sustainability concept in compensation procedure of compulsory land acquisition of Sri Lanka, based on the Yan Oya Reservoir Construction Project. The social sustainability aspects of neighborhood environment, education, market availability, electricity and public health services were successful some extent while there were significant inconsistencies amongst assessed components within individual cases that confirmed from both quantitative and qualitative studies. As a whole, it can be noted that people in the resettled communities in overall study are not satisfied with the measures of public transport, sanitary, financial status and

employment with livelihoods. Hence, the study reveals that pure monetary compensation process was unsuccessful since it represents the inadequacy to cover all losses of victims. Thus, for a total loss a resettling strategy is essential. Selecting the resettlement option also may not be adequate if more attention on social sustainability aspects were not given. It is obvious that recipient needs must be recognized and addressed from the beginning, rather than simply providing a "home." Furthermore, the study indicates that the framework is effective in assessing satisfaction on compensation and resettlement, particularly in terms of social sustainability. However, the measurements and impacts may not apply consistently in all contexts.

Acknowledgement

Centre for Real Estate Studies (CRES), Department of Estate Management and Valuation, University of Sri Jayewardenepura.

References

- Akujuru V.A, R. L., 2014. Determination of Compensation Payable in Niger Delta from compulsory acquisition and need for sustainable practice. *Journal of Sustainable Development in Africa*, volume 16, (2), pp. 102 - 114.
- Alias, A., & Daud, M. N. (2006). Payment of Adequate Compensation for Land Acquisition in Malaysia. *Pacific Rim Property Research Journal*, 12(3), 326-349.
- Anuar, A, Md Nasir, D., (2008), Compensation for Orang Asli Native Land in Malaysia: The Perceptions and Challenges in its Quantification, *Journal of Design and Built Environment (JDBE)*, Vol.4, No.1, 2008
- Atahar, S., 2013. "Development Project, Land Acquisition and Resettlement in Bangladesh;A Quest for Well Formulated National Resettlement and Rehabilitation Policy". *International Journal of Humanities and Social Science*, 3(7), pp. 306-319.
- Christopher L.D., A. V., 2017. Investigating the Sufficiency of Paid Compensation for Compulsory Acquisition in Road Infrastructural Provision in Rivers State. *Research on Humanities and Social Sciences*, 7(2), pp. 20-27.

- Ding, 2007. Policy and Praxis of Land Acquisition in China. *Land Use Policy*, Volume 24, pp. 1-13.
- FAO. (2008) *Compulsory Acquisition and Compensation*. FAO Land Tenure Studies 10. Rome: Food and Agricultural Organization
- Ghimire, S., Tuladhar, A. & Sharma, S. R., 2017. Governance in Land Acquisition and Compensation for Infrastructure Development. *American Journal of Civil Engineering*, 5(3), pp. 169-178.
- Godamunne, N., 2012. Development and displacement: the national involuntary resettlement policy (NIRP) in practice. *Sri Lanka Journal of social Sciences*, pp. 37-48.
- Hettiarachchi, J., 2015. *Compensation and Equity*. Sri Lanka: Department of Estate Management and Valuation, University of Sri Jayewardenepura.
- Ige, V. A. A. A. T., 2016. Compulsory Land Acquisition and Compensation in Nigeria; Coastal Communal Perception. *Ethiopian Journal of Environmental Studies & Management*, 9(5), pp. 545-553.
- Karunasena, G. and Rameezdeen, R. (2010), "Post-disaster housing reconstruction: comparative study of donor vs owner-driven approaches", *International Journal of Disaster Resilience in the Built Environment*, Vol. 1 No. 2, pp. 173-191.
- Keith S, M. P. K. R. L. J.-. f. P. P. D. a. S. L., 2008. *Compulsory Acquisition of Land and Compensation*. [Online] Available at: <http://indiaenvironmentportal.org.in/files/Land%20Reform%20%20Ref.pdf> [Accessed 15 02 2020].
- Kennedy, J., Ashmore, J., Babister, E. and Kelman, I. (2008), "The meaning of 'build back better': evidence from post-tsunami Aceh and Sri Lanka", *Journal of Contingencies and Crisis Management*, Vol. 16 No. 1, pp. 24-36.
- Larbi, Wordsworth, Antwi & Adarwah, 2014. *Compulsory Land Acquisition in Ghana- Policy and Praxis*. [Online] Available at: https://www.researchgate.net/publication/222841349_Compulsory_Land_Acquisition_in_Ghana-policy_and_praxis [Accessed 20 01 2020].

- Lindsay, J. M., 2012. PPP INSIGHTS; Compulsory Acquisition of Land and Compensation in Infrastructure Projects. [Online] Available at: <http://www.worldbank.org/ppp> [Accessed 20 January 2020].
- Nuhu, M. B. (2008). Compulsory Purchase and Payment of Compensation in Nigeria: A Case Study of Federal Capital Territory (FCT) Abuja. *Nordic Journal of Surveying and Real Estate Research*, 3(Special Series), 102-126.
- Olanrele O.O., e. a., 2017. Towards Global Uniformity and Sustainable Compensation Valuation for Compulsory Land Acquisition. *Journal of Design and Built Environment*, Issue Special Issue, pp. 27-37.
- Patnaik , B. C. M. & Padhi, P. C., 2012. Compensation Management: A theoretical preview-. *Asian Journal of Marketing & Management Research*, 1(1), pp. 39-48.
- Perera, T., Weerasoori, I. and Karunarathne, H. (2013), “An evaluation of success and failures in Hambantota, Siribopura resettlement housing program: lessons learned”, *Sri Lanka Journal of Real Estate*, No. 6, pp. 1-15.
- Sapkota , N. & Ferguson, S., 2017. *Involuntary Resettlement And Sustainable Development*, Philippines.: Asian Development Bank.
- Steinberg, F. (2007), “Housing reconstruction and rehabilitation in Aceh and Nias, Indonesia – rebuilding lives”, *Habitat International*, Vol. 31 No. 1, pp. 150-166.
- Vaughan, D., & Smith, L. C. (2014). An Introduction to compulsory purchase valuation principles spanning 150 years. *Journal of Building Survey, Appraisal and Valuation*, 3(2), 184-189. Weber, R. P. (1985). *Basic Content Analysis*. New Delhi. Sage
- World Bank , 2013. Operational Manual on Involuntary Resettlement OP 4.12, s.l.: World Bank Organization.
- World Bank Group, 2016. *Improving Quality of Land Administration In Sri Lanka*, Sri Lanka: World Bank Documents.