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# **The Social Cost of Upgrading Informal Settlements in Butuan City, Philippines**

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## **The Social Cost of Upgrading Informal Settlements in Butuan City, Philippines**

### **Abstract**

The informal settlements in Butuan City, Philippines pose the intractable problem of housing and providing services for the urban poor. In particular, their displacement as a result of the implementation of a government infrastructure project exact tremendous challenge in coming up with just solutions. In this study, the solutions focus on upgrading the informal settlements. The different modalities are accounted for and the cost they will incur the government are estimated. Overall, the results present a rich picture of the experience of informal settlements upgrading in Philippines. The findings of the study have crucial policy implications.

**Key Words: INFORMAL SETTLEMENTS, RESETTLEMENT COSTS, RESETTLEMENT POLICY, UPGRADING OF INFORMAL SETTLEMENTS, URBAN RENEWAL**

## **INTRODUCTION**

### **Background of the Study**

In many cities, especially in developing countries, slum dwellers constitute more than half of the urban population, with little or no access to shelter, water, and sanitation. The United Nations Human Settlements Programme is mandated to achieve the Millennium Development Goals (MDGs) of improving the lives of at least 100 million slum dwellers, around 10 percent of the global slum population by the year 2020 (1).

Solving the urban and social problems prompted by informal settlements is gaining importance in the development agenda of most large cities around the world. Increasingly, upgrading informal settlements has become a means for urban regeneration. Resettlement upgrading is seen by many governments not only as an enabling approach to support informal settlers but also an effective tool for urban regeneration. This is to optimize improvement in the economic, physical, and environmental condition of the city. In addition, it ensures social justice and equity, as they have evolved from demolition strategy to resettlement and rehabilitation programs.

Within the Philippines, cities are tackling the land tenure, sanitation, and urban services deficiencies of informal settlements. In order to localize this global agenda, cities across the country are developing initiatives on the upgrading of informal settlements. The upgrading of informal settlements often result from the implementation of government infrastructure projects as a resolution to urban problems.

A particular case is in Butuan City. The occurrence of flooding in Butuan City exacts a heavy toll in terms of economic and physical losses. To respond to this problem, a drainage improvement project was implemented to reduce the incidence of flooding within the city. This project was covered by the Butuan City Drainage Improvement Project (BCDIP) Phase 1, a sub-project of Agusan River Basin Integrated Water Resources Management Program (ARBIWRMP).

However, the intervention resulted in some involuntary displacement of 175 informal settlers as potentially affected households (PAHs). Against this backdrop, the study focuses on describing the equitable solutions and modalities of informal settlements upgrading in the country as applied to Butuan City, as well as accounting for the total cost it will incur the government.

### **Objectives of the Study**

This study aimed to come up with equitable schemes in upgrading of informal settlements affected by the Butuan City Drainage Improvement Project Phase 1. The paper poses two specific research questions: first, describing the modalities for upgrading the informal sectors, including the existing legislative, and policy framework of informal settlement. Second, accounting for the estimated cost the modalities will incur to the local government.

## **REVIEW OF RELATED LITERATURE**

### **Informal Settlements as Urbanization Problem**

The myopic and unguided economizing plan of the government without proper land use planning, effective infrastructure development or social housing program for informal resettlement due to expanding in-migration may resolve short term problem but eventually result to greater social costs (2,3). Nonetheless, informal settlements have become persistent feature of urbanization and globalization (4).

Literatures enumerated six characteristics of informal settlements for which create environmental and urban development problems (2,3). First, informal settlers squat on areas typically lack a road network. Second, these dwellers settle in a denser area with poor or no adequate public facilities which increase their vulnerability to diseases and criminalities. Third, quality of electricity is often below formal sector standards are common sight in these communities. Fourth, access to quality drinking water increases the susceptibility to waterborne diseases and poor sanitation. Fifth, poor sanitation and waste water discharged experience by households in informal sector are largely attributed from the enumerated characteristics of dwelling enumerated above. Sixth, unplanned settlement generates water pollution and wastes accumulation as raw sewerage and garbage are thrown directly to nearby water system and open spaces (2). Table below summarizes of the major types of informal settlements with a reference to their location and quality.

Table 1. Matrix of Informal Settlement Types

Informal Settlement Types	Location			
	Inner City	Peri-urban	Substandard/Slums	Relatively good quality
Squatter settlements on public or private land	x	x	x	
Settlements for refugees and vulnerable people	x		x	
Upgraded squatter settlements	x	x		x
Illegal suburban land subdivisions on private or public land		x		x
Overcrowded dilapidated housing without adequate facilities	x		x	

Source: Tsenkova et al., 2008

There are three costs of informal settlement, namely: economic, social and environmental. Informal settlements siphon considerable public and private investment outside the formal economy and investment cycle (5). Notwithstanding the economic challenges faced by the individual occupant, informal settlements pose a high political and economic cost for the government and the public in cases of evictions, legalization and resettlements.

### **Upgrading of Informal Settlements**

Recognizing the economic, social and environmental challenges of informal settlements is an important step toward practical and well-thought out urban housing policies. Providing security of tenure for informal settlers has been an integral part of most upgrading projects implemented in the last thirty years. Numerous evidences suggest that, a well-administered slum upgrading, has significant linkages with the socio-economic well-being of the poor in every society. It can help in combating poverty and vulnerability, achieving sustainable human development, and promoting environmental sustainability (1).

Rather than strive to eliminate informal settlements, governments began to formulate ways to accommodate existing informal settlements and to capitalize upon the energies that built the settlements in the first place. Under this new policy direction, governments withdrew from directly producing housing units and instead focused on enabling or facilitating settlement improvement by ensuring the availability of the basic inputs, namely urban infrastructure, land with tenure security, and appropriate financial and technical services, that enable people to improve their living situation themselves (6).

The provision of improved infrastructure and services to informal settlements is another central component of upgrading and one with the greatest record of success. This includes provision of basic infrastructure services such as water, sanitary facilities, roads, and street lighting, in a manner that is affordable to the urban poor. Many projects have resulted to better living standards and health indicators (7).

Upgrading resettlement projects should also generate additional income for the urban poor. Studies conducted in India, the Philippines, and Brazil have shown that slum upgrading programs have a positive impact upon income by facilitating the establishment or expansion of home-based enterprises (HBEs) (8).

A final solution is to relocate or resettle informal settlers. Relocation is intra-settlement in nature, basically shifting residents to new locations within their original neighborhood. Relocation is commonly caused by installation of infrastructure, such as opening up new roads or installing water pipes or sewerage. As expected, the degree of relocation within a settlement is linked to standards and has implications for project costs. Higher standards for parcel sizes, road reserves and infrastructure will cause more dislocation. Resettlement can be thought of as extra-settlement in nature: squatters are moved to a completely new place. In resettlement, projects must do more than move people; they must provide physical infrastructure as well as economic opportunities and social services (9).

## **METHODOLOGY**

Primary data were collected through inventory of losses (IOL), socio-economic survey (SES) and the replacement cost surveys to the PAHs. Implementation of these surveys took place in January to early March 2011. The replacement cost survey obtained data on the value of affected assets and the cost of replacing them as a basis for compensation. In addition, Key Informant Interviews were also conducted to various government officials to generate the needed information on current market replacement and resettlement costs. Lastly, the researchers also gathered primary information through scheduled visits to the city and site observations which involved recording of the various resources found in the communities, nature of housing, household and business activities<sup>1</sup>.

The secondary data were sourced from various government agencies. The list of affected barangays was provided by the City Housing Office. The data on comparative market prices for structures and lot per barangay were gathered from the City Assessor's Office, National Housing Authority (NHA) and the Department of Public Works and Highways (DPWH). Information for the market prices for perennial plants was obtained from the City Agriculture Office.

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<sup>1</sup> See Appendix A for complete list of methodology and sources of information.

## RESULTS AND DISCUSSION

### Housing Needs in Butuan City

The high incidence of informal settlements can be attributed to the shortage of low cost housing in Butuan City. This shortage is confirmed through the data from 2009-2010 gathered by the Statistical Research and Training Center (SRTC), the research and training arm of the Philippine Statistical System (PSS), in collaboration with Housing and Urban Development and Coordinating Council (HUDCC), for a research entitled “Housing Backlog Study” under the “Development of Shelter Monitoring Information System (DSMIS) Project.”

Table 2. Housing Needs Estimates by Housing Indicator in CARAGA Region and Butuan City, May 2010

Location	Accumulated Needs					
	Rent-free without consent of owners	Homeless (Other type of Housing Units )	Dilapidated/ Condemned	Marginal Housing	Doubled-up Households in Acceptable Housing Units	Total
CARAGA Region	12,637	28	3,439	4,196	8,900	29200
Butuan City	2,645	3	451	269	1,243	4,611

Source: National Statistics Office

Table 2 shows the accumulated housing needs estimates as of May 1, 2010 for the CARAGA Region as well as for Butuan City. Their total accumulated housing needs is at 12,637 and 2,645, respectively.

Another component of the research project with HUDCC is the identification of Informal Settler Families (ISFs). The SRTC, in collaboration with the Technical Working Group on Housing Statistics of the Technical Committee on Population and Housing Statistics coordinated by National Statistics Coordination Board, came up with the operational definition. *Informal settlers* are individuals/households living under any of the following conditions: 1) lot without consent of the property owner (informal settler); 2) dangerous areas (along riverbanks, railways, under the bridge, etc); 3) areas for government infrastructure projects; 4) protected/forest areas (except for indigenous peoples); 5) areas for Priority Development (APDs); and 6) other government/public lands or facilities not intended for human habitation.

Households under the status “rent-free without consent from owners” or informal settlers comprise 58% at the regional level and 85% in Butuan City. From the survey results, this prevalence, as well as the increase in the number of informal settlers in the city, is due to natural increases as well as in-migration. An estimated 90 % of the residents lack steady jobs and usually work as hired laborers on an irregular basis, peddlers, load carriers, household help, construction workers, among others. The relative low growth rate of the business sector has accentuated the city’s problem of inadequate labor absorption.

Table 3. Number of Households and Informal Settlers in CARAGA Region and Butuan City: 2000, 2010

Location	2000				2010			
	Number of Households	Rent-free without consent of owners	Incidence (Percent)	Ranked Incidence	Number of Households	Rent-free without consent of owners	Incidence (Percent)	Ranked Incidence
CARAGA Region	386,283	16,978	4.4	No 2 (out of 17)	504,257	12,637	2.51	No 4 (out of 17)
Butuan City	50,273	3,927	7.81	No 6 (out of 18)	65,642	2,645	4.03	No 11 (out of 18)

Source: National Statistics Office

### Upgrading of Informal Settlements for Project Affected Households

#### A. Provision of Replacement Cost under the Premise of Fair Market Value and Subjective Value

Most countries around the world have constitutional and/or statutory standards that call for Fair Market Value (FMV) compensation for lost assets that the state expropriates. A second approach calls for Replacement Cost (RC). The compensation at Fair Market Value and Replacement Cost is dependent on (i) markets provide reliable information about prices and (ii) comparable assets or acceptable substitutes are available for purchase. The FMV is commonly defined as the amount that the land and structure might be expected to realize if sold in the open market by a willing seller to a willing buyer (10).

Most governments in high- and middle-income countries with well-functioning legal systems have adopted FMV of the appropriated asset as the standard for determining compensation for state expropriations. The underlying reason for adopting the fair market value standard is that the market is an objective gauge for assessing the value of the land. Under the FMV standard, land expropriation laws in many of these countries provide further practical rules to guide adherence to the standard. Some countries provide a premium above the FMV because of the involuntary nature of the taking. In a compulsory land taking, the government is a willing buyer, but the affected landowners are often not willing sellers. Some governments have developed a variety of mechanisms to compensate landowners in excess of market value because of the involuntary nature of the taking (11).

In this study, FMV is based on the perspective of the City Assessor's and the private entities represented by banks and construction companies and real estate developers. On the other hand, RC for structures is computed in terms of the current market value (direct costs which include materials, labor, developer's fee, etc.) plus indirect costs that include monetary cost of obtaining a building permit, fire protection permit, and real estate taxes.

In the Philippines, the indirect costs for structures involve building permit plus fire protection fee and insurance: <sup>2</sup>USD199.89 (strong materials) and USD99.94 (light materials), real estate

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<sup>2</sup> A 2010, 1\$ = 40.023

tax for residential properties is equivalent to 1% of the zonal value or fair market value, whichever is higher. As for commercial properties, it is equivalent to 1.75% of the zonal value or fair market value, whichever is higher.

A third approach used in this study is the subjective value. Subjective value is the amount of money or money's worth in return for which the owner would willingly part with a piece of property, whether or not there exists a willing purchaser at such a price. This is also referred to as reserve price. This is under the assumption that owners of all existing properties would have established in their minds a subjective value for their properties based upon their evaluation of the future returns to them. Such personal returns from the amenities of their individual properties would be in excess of the prices buyers demand in the market as evidenced by the fact that only a very small fraction of all properties are even offered for sale.

#### *A.1 Compensations Rates for Structures Adopted in the Study*

The research adopted an 8-typology of structures which apply to both housing and business establishments. These typologies are established by City Housing Office and the DPWH. The typologies are described in Table 4.

Table 4. Eight Typologies of Structures

Typologies		Description
A	Strong	Galvanized Iron sheets; hardwood/ concrete foundation, columns, beam, walls and flooring; complete finishing and tilings.
B	Light	Nipa for roofing; lumber/bamboo for foundation, columns, beams and flooring; and amakan/light plywood for walls
C	Mixed but predominantly strong	More than fifty percent of the structure is made up of strong materials.
D	Mixed but predominantly light	More than fifty percent of the structure is made up of light materials.
E	Makeshift	Made up of salvaged materials
F	Mixed but predominantly makeshift	Made up of different construction materials but more than fifty percent is made up of makeshift materials
G	Semi finished but predominantly strong	Partially finished structure using predominantly strong materials.
H	Semi finished but predominantly light	Partially finished structure using predominantly light materials.

Table 5 & 6 shows the market valuations of the different typologies of affected structures and commercial buildings in the areas. The values presented are based on current market values and developer's cost. The current market values were obtained from the City Assessor's Office. Alternatively, current market values were obtained from real estate developers per typology to provide a basis for comparison<sup>3</sup>.

Table 5: Household Structure Rate per Typology

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<sup>3</sup> A copy of the reproduction cost of the three developers per typology can be found in Appendix B.



Types of Residential Structure	Commercial Developer's Perspective (sqm)	City Assessor's Office (sqm)		Residential Owners' Perspective *Subjective valuation (sqm)
		Residential	^Animal Coop	Affected Households
Mixed but predominantly strong materials	USD 424.76	USD 107.6- USD 112.94	USD 49.97 – USD 52.72	USD 62.46
Salvaged/Make-shift materials	USD 124.93	USD 46.47– USD 48.22		USD 12.49
Mixed but predominantly salvaged materials	USD 174.90	USD 51.72– USD 54.22		USD 16.24

At 2010, 1\$: PhP40.023

^Animal Coop: PigPen/Hog house, Poultry and Goat House

Table 6: ^Commercial Structure Market Value per Typology

Type of Commercial Structure	Commercial Developer's Perspective (sqm)	City Assessor's Office (sqm)	Business Owners' Perspective * subjective valuation (sqm)
Mixed but predominantly strong materials	USD 424.76	USD 107.44 – USD 113.18	USD 107.06
Salvaged/Make-shift materials	USD 124.93	USD 46.47 – USD 48.72	USD 14.99
Mixed but predominantly salvaged materials	USD 174.90	USD 51.47 – USD 54.22	USD 18.74

At 2010, 1\$: PhP40.023

^Commercial Building includes apartment stores, restaurant, carenderia/eatery, sari-sari stores, dress/tailoring shops, KTV bar and hard wares

### A.2 Valuation of Non-tenured Properties

The PAHs in Butuan City predominantly consist of informal settlers. As a result, some of the households and businesses interviewed were uncomfortable disclosing their valuation of the land and structure because the illegal tenure of their settlement. They know that anytime the lots will be used, their structures will be demolished.

In the Philippines, the policy framework limits resettlement options to those whose tenure is insecure. Also, if the place of business is the pedestrian walkway, easements, or the road itself, the law declares that these places are “beyond the commerce of man” and, therefore, they have no right to build or conduct business there. Their structures are illegal and therefore not subject to compensation when dismantled. Neither does the law provide any compensation for their loss of income during relocation.

### A.3 Estimated Replacement Costs for Structures of Project Affected Households

The Replacement Cost (RC) approach for structures in a typical developed country is based on the theory that the market value of an improved parcel can be estimated as the sum of the land value and the depreciated value of the improvements. Its underlying principle is that an informed buyer will pay no more for an improved property than the price of acquiring a vacant site and constructing a substitute building of equal utility (12).

The RC approach requires descriptive data on the improvements being valued. It is also important to determine an accurate cost estimate. Costs consist of all expenditures necessary to complete construction of a house or other building. They are either direct or indirect costs. Direct costs include materials and labor, while indirect costs include monetary cost of obtaining a building permit, registering the house with relevant government agency, insurance and real estate taxes.

For mass appraisal, the comparative unit method is widely used. This method is constructed based on the unit-in-place method. It simplifies the estimation process by grouping all itemized direct costs and indirect costs into a composite unit cost expressed in square foot of ground area or floor area or cubic feet of space. The unit cost is further broken down based on quality of the structure and the number of levels. Percentage or lump-sum adjustments for features not included in comparative unit cost may be made with the unit-in place method. Cost estimations for both single-property appraisals and for mass appraisals attempt to answer the question, “How much does it cost to build the same structure today?” In this study, this is achieved though the cost estimates provided by the real estate developers reflected in Table 7. Building cost data are readily available for valuation purposes which fit well with this approach.

The last step for valuing structures is to estimate accrued depreciation. Accrued depreciation is the loss in value from replacement cost which is defined as the replacement cost as if the similar structure were built as of the date of appraisal. This depreciation is based on the concepts of the structure economic age and economic life. The concept here is that, as the structure ages in time, its physical value will diminish. In the case of informal settlers, the cost of building their structure is purely based on the direct cost because construction of their structures did not go through the legal procedures. Thus, indirect costs such as building permit, fire protection fee, insurance and real estate tax were not incurred.

Table 7. Commercial Developer’s Cost and Economic Valuation

Types of Structure	Commercial Developer’s Cost (psm)	Economic Valuation				
		Direct and Indirect Costs		Life Span in years	Depreciation Cost per Year	
		Residential	Businesses		Residential	Businesses
Mixed but predominantly strong materials	USD 424.76	USD 112.94	USD 113.18	18	USD29.87	USD29.89
Salvaged/Make-shift	USD 124.93	USD	USD	.5	USD 0	USD 0

materials		48.22	48.72			
Mixed but predominantly salvaged materials	USD 174.90	USD 54.22	USD 54.22	1.5	USD152.76	USD152.76

At 2010, 1\$: PhP40.023

Note : Philippine Government does not account transaction costs for buildings made of salvaged and mixed but predominantly salvaged materials. Businesses and households living in these construction materials are informal settlers in the area.

Table 8 below displays the market value of the replacement costs for structures per typology. As shown in Table 7, structure made of salvaged materials has a life span of six months, while structure made of mixed but predominantly salvaged materials has a life span of eighteen months. The replacement costs for structures on mixed but predominantly strong materials, salvaged and mixed but predominantly salvaged materials exclude the cost for building permit, fire protection permit, insurance fee and real estate tax. Aside from that, replacement cost of structures made of salvaged materials is zero due to the fact that the structure becomes fully depreciated in less than a year. Structures made of these materials are very common among the informal settlers in the area.

Table 8. Market Value and Replacement Costs for Structure

Types of Structure	Commercial Developer's Perspective (sqm)	Residential (sqm)		^Commercial (sqm)		Replacement Cost (sqm)	
		City Assessor's Market Value	Residential Owners' Perspective *subjective valuation	City Assessor's Market Value	Business Owners' Perspective *subjective valuation	Household	Business
Mixed but predominantly strong materials	424.76	USD 107.6- USD 112.94	USD 62.46	USD 107.44 – USD 113.18	USD 107.06	USD 394.89	USD 394.87
^^Salvaged/Make-shift materials	124.93	USD 46.47– USD 48.22	USD 12.49	USD 46.47 – USD 48.72	USD 14.99	0	0
Mixed but predominantly salvaged materials	174.90	USD 51.72– USD 54.22	USD 16.24	USD 51.47 – USD 54.22	USD 18.74	USD 20.14	USD 20.14

At 2010, 1\$: PhP40.023

^Commercial Building includes apartment stores, restaurant, carenderia/eatery, sari-sari stores, dress/tailoring shops, KTV bar and hard wares.

Note : Philippine Government does not account transaction costs for buildings made of salvaged and mixed but predominantly salvaged materials. Businesses and households living in these construction materials are informal settlers in the area.

#### A.4 Estimated Replacement Costs for Residential Structures

Table 9 presents the estimated replacement costs per typology. There are 175 informal settlers living in the project site. There are 117 who lived in structures described as mixed but predominantly strong materials, 37 lived in a house classified as mixed but predominantly salvaged materials, and 21 are living in houses made of makeshift materials. On the average, floor area for residential structures made of salvaged/makeshift and mixed but predominantly salvaged materials is around 24 square meters while mixed but predominantly strong materials is 32 square meters. The total estimated replacement cost of the affected households per typology amounted to <sup>4</sup>USD 1,496,352.48. Bigger bulk of the total estimated replacement cost is attributed to structures which use strong housing materials. In the perspective of the Philippine government, the replacements cost for structures made of salvaged and makeshift material is zero.

Table 9. Replacement Cost for Residential Structure

Types of Residential Structure	Total House holds affected	Commercial Developer's Perspective (sqm)	City Assessor's Market Value (sqm)	Residential Owners' Perspective/ Subjective Value by Households (sqm)	↑Estimated Replacement Cost with Respective Floor Area	Total Estimated Replacement Cost per Typology
Mixed but predominantly strong materials	117	424.76	USD 107.6– USD 112.94	USD 62.46	USD 12636.48	USD 1,478,468.16
Salvaged/Make-shift materials	21	124.93	USD 46.47– USD 48.22	USD 12.49	0	0
Mixed but predominantly salvaged materials	37	174.90	USD 51.72– USD 54.22	USD 16.24	USD 483.36	USD 17,884.32

At 2010, 1\$: PhP40.023

↑Assumption: The average house size for salvage/makeshift and mixed salvage is 24 sqm while mixed but predominantly strong is 32 sqm.

#### A.5 Estimated Replacement Costs for Commercial Structures

Table 10 presents the total estimated cost of commercial structures affected by the project. In this study, there are 13 affected businesses in the project site. The sixth column shows the estimated replacement cost per floor area. Based on the survey, the average area for commercial structure made of salvaged/makeshift and mixed but predominantly salvaged materials is 10 square meters while mixed but predominantly strong materials is 34 square meters. The last column shows the replacement cost of the commercial structures amounting

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<sup>4</sup> At 2010, 1\$:PhP40.023

to USD 95,373.00. The larger share of this figure is attributed to commercial structures made of strong materials.

Table 10. Replacement Cost for ^Commercial Structures

Types of Commercial Structure	Total Businesses affected	Commercial Developer's Perspective (sqm)	City Assessor's Market Value (sqm)	Subjective Value of Business Owners (sqm)	↑Estimated Replacement Cost with Respective Floor Area	Total Estimated Replacement Cost per Typology
Mixed but predominantly strong materials	10	424.76	USD 107.44 – USD 113.18	USD 107.06	USD 9476.88	USD 94,768.80
Salvaged/Make-shift materials		124.93	USD 46.47 – USD 48.72	USD 14.99	0	0
Mixed but predominantly salvaged materials	3	174.90	USD 51.47 – USD 54.22	USD 18.74	USD 201.4	USD 604.20

At 2010, 1\$: PhP40.023

^Commercial Building includes apartment stores, restaurant, carenderia/eatery, sari-sari stores, dress/tailoring shops, KTV bar and hard wares.

↑Assumption: The average floor size for salvage/makeshift and mixed salvage is 10 sqm while mixed but predominantly strong is 24 sqm.

#### A.6 Estimated Replacement Costs for Trees and Other Crops

Households in the project site commonly have 2-3 fruit bearing trees. In this study, the most common fruit bearing trees and perennial plant are calamondin (local name: calamansi), guava and coconut trees. The market value of these fruits and perennial plant is shown in Table 11. In this study, 60 percent of the settlers grow these trees and perennial plants. Except for coconut, the above-mentioned trees bear fruits twice a year. As such, the total estimated replacement cost for fruit bearing trees and plant is USD 2,153.89.

Table 11. Market Value of Perennial Plants and Fruit-Bearing Trees

Kinds	Market Value
Coconut/Tree	USD 4.52
⊥(Calamondin)/Tree	USD 5.75
⊥Guava (Native)/ tree	USD 2.25

At 2010, 1\$: PhP40.023

## B. Resettlement of Project Affected Households

Another scheme to compensate for the PAHs is to relocate them to a resettlement area. This option was adopted by the government for the Butuan Drainage Project.

### *B.1 Philippine Legal Framework for Resettlement of PAHs Affected by Public Projects*

This section discusses legal basis of the resettlement project, the Philippine Republic Act 7279 and Land Acquisition, Resettlement, Rehabilitation and Indigenous People's Policy 2007 (LARRIPP). The former is the foundation of resettlement policy in the Philippines while the latter is the policy and guidelines of Department of Public Works and Highways (DPWH) on resettlement as expressed in the Infrastructure Right of Way Procedural Manual (2003).

#### *B1.1 Republic Act 7279 (Urban Development and Housing Act of 1992)*

As stated in Section 28 of the Act, eviction and demolition as a practice shall be discouraged and may be allowed when persons or entities occupy dangerous areas and when government infrastructure projects with available funding are about to be implemented or when there is a court order for eviction and demolition.

Based on Section 29 of the Act, the local government unit, in coordination with the National Housing Authority, shall provide relocation or resettlement sites with basic services and facilities and access to employment and livelihood opportunities sufficient to meet the basic needs of the affected households.

#### *B.1.2 Land Acquisition, Resettlement, Rehabilitation and Indigenous People's Policy 2007 (LARRIPP): DPWH Policy and Guidelines on Resettlement*

The following section is an adoption from the policy and guidelines of <sup>5</sup>DPWH on resettlement as expressed in the Infrastructure Right of Way Procedural Manual (2003) and the Land Acquisition, Resettlement, Rehabilitation and Indigenous People's Policy (3<sup>rd</sup> edition in April 2007).

Compensation in LARRIPP shall only be given to legal landowners, owners of structures who have full title, tax declaration, or who are covered by customary law (e.g. possessory rights, usufruct, etc.) or other acceptable proof of ownership, owners of structures, including shanty dwellers, who have no land title or tax declaration or other acceptable proof of ownership, and renters.

##### *B1.2.1 Indicators of Severity of Impacts*

Properties to be acquired for the project may include the entire area or a portion of it. Hence, compensation for such assets or properties depends on whether the entire property will be affected or just a portion of it. The condition is classified as "Severe" if the portion of the property affected is more than 20% of the total land area or less than 20% if the remaining

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<sup>5</sup> Department of Public Works and Highways, 2011. Resettlement Action Plan in Accordance with the JICA Resettlement Guidelines/Policies for Social Considerations p. 25

portion is no longer economically viable or will no longer function as intended. The owner of this property (land or structures, etc.) shall be entitled to full compensation in accordance to RA 8974. On the other hand “Marginal” will be the classification if the impact is only partial and the remaining portion of the property or asset is still viable for continued use. Compensation will be on the affected portion only.

*B1.2.2 Compensation per Category of Assets Affected*

The classifications or categories of assets to be compensated include land, structures, other improvements, crops, trees and perennials. Compensation for structures will be provided in cash for the affected portion of the structure, including the cost of restoring the remaining structure, as determined by the concerned Appraisal Committee, with no deduction for salvaged building materials. In addition compensation for other improvements will be given as cash at replacement cost for the affected portion of public structures to government or non-government agencies or to the community in case of a donated structure by agencies that constructed the structure. This will also include compensation to cover the cost of reconnecting the facilities, such as water, power and telephone. Lastly, cash compensation for crops, trees and perennials of commercial value will be determined by the DENR or the concerned Appraisal Committee.

*B1.2.3 Other Types of Assistance or Entitlements*

Six other types of assistance will be given to PAHs. First is the disturbance compensation for severely affected agricultural land are entitled to disturbance compensation equivalent to five times the average of the gross harvest for the past 3 years but not less than PhP 15,000. Second is the coverage for income loss. The PAHs will be entitled to an income rehabilitation assistance to be based on the latest copy of the PAHs’ Tax record for the period corresponding to the stoppage of business activities, otherwise not to exceed PhP 15,000 for severely affected structures. Third, inconvenience allowance in the amount of P 10,000 shall be given to PAHs with severely affected structures, which require relocation and new construction. Fourth, rehabilitation assistance in the form of skills training and other development activities equivalent to P 15,000 per family per municipality will be provided in coordination with other government agencies, if the present means of livelihood is no longer viable and the PAHs will have to engage in a new income activity. Fifth, rental subsidy will be given to PAHs without sufficient additional land to allow the reconstruction. Lastly, transportation allowance will be given for relocated PAHs.

*B1.3 Legal Entitlement*

This section specifies the additional entitlements that will be received by the informal settlers affected in the proposed flood mitigation project. The compensations/entitlement is either based from RA 7279 and the researchers’ recommendation. The entitlement matrix for compensation is shown in Table 12.

Table 12. Matrix for Entitlement Compensation

Type of Loss	Structure Typology	Compensation/Entitlement	
		Under RA 7279	Researchers’ recommendation

Structure	Mixed but predominantly strong materials	<ul style="list-style-type: none"> <li>• Inconvenience allowance P 10,000.</li> <li>• For transportation assistance, microbuses will be used for free transportation of families that include children, women and senior people, instead of trucks.</li> <li>• For the families with persons who need special physical or medical care, DPWH</li> <li>• will request respective LGUs to provide</li> <li>• nurses or social workers to help them</li> <li>• before and during the resettlement activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Cash compensation for entire structure (residential and commercial) at full replacement cost</li> </ul>
	Salvaged/Make-shift materials		
	Mixed but predominantly salvaged materials		
Crops, Trees, Perennials		<ul style="list-style-type: none"> <li>• Cash compensation for crops (which are not yet suitable for harvesting), trees, and perennials at current market value as prescribed by the concerned LGUs and DENR, confirmed by DPWH as the same level with market value.</li> </ul>	<ul style="list-style-type: none"> <li>• Cash compensation for crops, trees and plants at market value.</li> </ul>
Improvements (pig pen, dog houses, pigeon houses, fences)		<ul style="list-style-type: none"> <li>• Cash compensation for the affected improvement at full replacement cost.</li> </ul>	<ul style="list-style-type: none"> <li>• Cash compensation for entire structure at full replacement cost</li> </ul>
Livelihood Rehabilitation Assistance/Training		<ul style="list-style-type: none"> <li>• DPWH will monitor the change of living standard of the PAF before and after the resettlement.</li> <li>• When the PAF are found that their living standard worsen, or whose present means of livelihood became not-viable, DPWH, in coordination with other appropriate institutions, will provide assistances, such as skills and livelihood trainings.</li> </ul>	

### *B.2 Total Resettlement Cost for the Project Affected Households*

Table 13 shows the estimated cost for 175 project affected households based on all the legal provisions for resettlement,. The total amount is estimated at USD 14,147,765.26. This excludes the cost estimation for internal and external monitoring and evaluation; and price escalation and taxes. The development of relocation site includes the cost on house and lot, road, water supply, electricity and site development.

Table 13. Total Estimated Resettlement Cost



Activities	Estimated Cost (PhP)	Estimated Cost (USD)
A. Preparatory Services	2,250,000	56,217.67
B. Capability Building, Skills and Livelihood Training Programs for Project Affected Families	36,000,000	899,482.80
C. Acquisition of Properties		
Land acquisition including payments of various Subdivision Survey, Parcellary Survey and Relocation Survey of affected lots including access road and Relocation Site	396,000,000	9,894,310.77
Miscellaneous Expenses (Expropriation, Barter and related activities)	10,500,000	262,349.15
	3,750,000	93,696.12
D. Transfer and Titling of Properties		
Taxes and fees	6,670,800	166,674.16
Titling expenses	7,872,000	196,686.91
Other expenses including legal advisory fee	3,000,000	74,956.90
E. Clearing of Structures, Improvements and Removal of Dwellers	26,340,000	658,121.58
F. Administrative Expenses		
Butuan Local Government Units (Local Project Management Team)	21,600,000	539,689.68
Purchase of Vehicular Service	10,500,000	262,349.15
G. Development of Relocation Site	32,986,009	824,176.32
H. Contingency Reserve	8,767,200	219,054.04
<b>TOTAL</b>	<b>566,236,009</b>	<b>14,147,765.26</b>

At 2010, 1\$: PhP40.023

### **Total Upgrading Costs for the Project Affected Households**

Overall, to ensure the equitable compensation for the displaced informal settlers, the informal settlers' upgrading costs would incur the government an estimated amount of PhP 629,287.99 or USD 15,723,156.11.

Table 14. Total Estimated Cost of Upgrading Informal Settlements

Activities	Estimated Cost (PhP)	Estimated Cost (USD)
Total Replacement Cost Physical Structures (Residential)	59,172,731.17	1,478,468.16
Total Replacement Cost Physical Structures (Commercial)	3,792,931.68	94,768.80
Total Replacement Cost Crops and Trees	566,236,009	14,147,765.26
<b>TOTAL</b>	<b>629,287,876.99</b>	<b>15,723,156.11</b>

### **Financing the Upgrading of the Informal Settlers**

The local government intends to request a loan from the Asian Development Bank (ADB) to finance the project. The loan will have a term of 25 years, including a grace period of 6 years, with an interest charge at the rate of 1.07% (comprising 0.87% 5-year Japanese Yen swap rate and 0.20% ADB spread) per annum. The ADB loan proceeds will be on-lent to the

Government of the Philippines and to each participating local government unit and water district. The Government of the Philippines will bear the foreign exchange risk. Interest during the project implementation period will be capitalized. The ADB loan will finance 79.7% of the project cost, and co-financing through the Global Environmental Facility will finance 2.4%. About 18 % of the total project cost will be provided by the Government of the Philippines through DENR (13).

## CONCLUSION

With the implementation of the flood mitigation project through the Butuan City Drainage Project, a number of the city's residents particularly informal settlers in the project site were directly affected, hence the need to be compensated or relocated to appropriate resettlement sites. This paper has two purposes. First, the paper seeks to broaden the inquiry into the modalities of compensating justly informal settlers affected by a government through upgrading initiative. Secondly, it tries to incorporate the estimation of the cost such modalities will incur. This comprehensive review is intended to provide a solid baseline of information on experience of in upgrading in Philippines.

Economically speaking, if the government is forced to pay for what it acquires, it should strive to make rational economic decisions that will bring beneficial development to all parties. In the spirit of social justice, the government has to give protection to the reasonable expectations of those who will be affected and relied on it, particularly the marginalized. Just solutions must not only consider the replacement cost but also the resettlement cost for the affected households and their livelihoods. It must ensure that the living standards and future livelihoods are maintained and improved.

The situation becomes problematic when it involves informal settlers. In many developing countries, the governments that don't have the resources resort to a variety of solutions through the use of force to demolish the informal settlers. Another major approach, which is almost the opposite, is in the use of social transfers. This is the other end of the urban regeneration continuum. Being much less interruptive and political will-dependent, this approach is favored by institutions such as the Asian Development Bank, NGOs and activists. This is the approach gaining popularity in the Philippines. At face value, it looks like a good approach, but when it comes to the practicality of the numerous informal settlers and deteriorated areas, the solutions do not seem to work.

In the case of the Butuan Drainage project, the upgrading of informal settlers resulting from the project may be a means to uplift the economic conditions of these members of society and improve their economic well-being. However, informal settlers add up to the financial burden of implementing public infrastructure projects. The upgrading measures add to the cost of implementing public infrastructure projects. This is evident in the Butuan Drainage Project where a substantial amount was needed to implement the project.

The findings of the study have crucial policy implications which should increase policymakers' awareness that informal settlement represent a solution as well as cost at a great burden. Governments reap great public costs from the resulting informal settlements mid and long-term. The upgrading costs could divert valuable government resources into expenditures which otherwise could have been spent on other development projects. Thus, it is imperative that local government units must be effective in preventing unguided land

invasions as well as establish sustainable solutions that address the problems causing informal settlements.

## References

1. UN Habitat. The Challenge of Slums: Global Report on Human Settlements 2003. (Revised April 2010).  
[http://www.unhabitat.org/downloads/docs/GRHS\\_2003\\_Chapter\\_01\\_Revised\\_2010.pdf](http://www.unhabitat.org/downloads/docs/GRHS_2003_Chapter_01_Revised_2010.pdf)
2. Greene, M. and E. Rojas. "Housing The Poor In The City Centre: A Challenge For Progressive Design. A Review Of Recent Chilean Experience". In F. Hernández y P. Kellett (editors). Rethinking the Informal City: Critical Perspectives from Latin America. Oxford – New York: Berghahn Books; 2009.
3. Ferguson, B. "Housing microfinance – a key to improving habitat and the sustainability of microfinance institutions," Small Enterprise Development 14:1, March 2003.
4. Tsenkova S. The phenomenon of informal settlements in post-socialist cities: Factors and patterns of diversity. Urban Challenge. 2008; 21(2):73-84.
5. de Soto, H. The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else. New York, Bantam Books; 2003.
6. Keare, D. H. and S. Parris. Evaluation of Shelter Programs for the Urban Poor: Principle Findings. Washington, DC, The World Bank; 1982.
7. Cohen, M. Urban Assistance and the Material World: Learning by Doing at the World Bank. Environment and Urbanization. 2001;13 (1), 37-60.
8. Mehta, M. and Mehta, D. Home Upgradation and Income Generation from Housing; 1990. In: The Place of Home-based Enterprises in the Informal Sector: Evidence from Cochabamba, New Delhi, Surabaya and Pretoria Urban Studies. April 2005; 42: 611-632. <http://usj.sagepub.com/content/42/4/611.refs>
9. World Bank. Informal Settlement Upgrading in Sub-Saharan Africa: Retrospective and Lessons Learned; 2003.  
[http://people.virginia.edu/~emb7d/docs/wblitreview-Jan03\\_web.pdf](http://people.virginia.edu/~emb7d/docs/wblitreview-Jan03_web.pdf)
10. Knetsch, Jack L., and Thomas E. Borcharding. Expropriation of Private Property and the Basis for Compensation. University of Toronto Law Journal. 1979;29(237).
11. Rose-Ackerman, S. "Redesigning the State to fight corruption: transparency, competition, and privatization". World Bank, Viewpoint. 1996; 75.
12. Eckert, Joseph K., ed. Property Appraisal and Assessment Administration. Chicago: IAAO. 1990; 87.
13. Asian Development Bank. Agusan River Basin Integrated Water Resources Management Project. Draft Final Report. Vol. 1.2011.