

# LOCAL SHELTER PLANNING

M A N U A L  
updated 2016



OFFICE OF THE PRESIDENT

HOUSING AND URBAN DEVELOPMENT COORDINATING COUNCIL



# **LOCAL SHELTER PLANNING MANUAL**

Updated 2016



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HOUSING AND URBAN DEVELOPMENT COORDINATING COUNCIL



# FOREWORD

**T**he Philippines is experiencing one of the highest growth rates in Asia, and with it, rapid urbanization. This rural to urban transformation poses a great challenge and opportunity for the housing sector. Around half of the Filipinos are now living in urban areas and it is projected that by the year 2050, this number will increase to 84%. If left unchecked and poorly managed, this trend will have immense consequences on the provision of adequate housing and related services for all Filipinos.

The country's current housing need of 5.5 million units provides a compelling message that we have to take a serious stand and pro-active planning for our shelter programs at the national level down to the local level. This high demand for housing is further compounded by the complex issues on access and affordability, the existence of 1.5 million informal settler families in government and private land and in danger areas susceptible to both natural and man-made disasters. Our planning and management will have to consider seriously the fast pace of urbanization and dynamics of our urban realities. Responding to these inter-locking issues, this "Local Shelter Planning Manual" will be a valuable source of information, best practices and practical approaches for local government units and shelter agencies and housing sector stakeholders in addressing the increasing demand for housing.

The publication of this LSP Manual is timely. The country is an active participant in the crafting of the New Urban Agenda for the next twenty years through Habitat III global processes. As a member state of the United Nations, we are committing to the Sustainable Development Goals (SDGs) which include a target on inclusive, safe, resilient and sustainable cities and human settlements. Shelter planning plays an important role in ensuring participatory processes at all levels in order to achieve these agenda and goals particularly for the bottom 20% of the population for whom access to adequate housing is a major challenge.

The Housing and Urban Development Coordinating Council (HUDCC), by virtue of Executive Order No. 90 (1986), serves as the oversight, the over-all coordinator, initiator and facilitator of all government policies, plans and programs for the housing sector. I encourage the wide dissemination and use of this LSP Manual across the country.

Let us all work together in achieving adequate shelter for every Filipino!

Thank you very much!

  
**Atty. Chito M. Cruz**  
Chair, HUDCC

# MESSAGE

One of the most crucial problems in the country is the lack of adequate shelter. The Philippines continues to urbanize rapidly, and with 49% of the Philippine population already living in urban areas, the need for shelter will necessarily increase. In Metro Manila alone, more than half a million families are living in informal settlements located mostly in vulnerable and dangerous areas. The pressing development challenges brought about by climate change and other natural hazards are compelling local governments to provide urgent responses.

At the global level, UN-Habitat has launched the Global Housing Strategy. It is a collaborative global movement toward adequate housing for all, improving access to housing, in general, and improving the living conditions of slum dwellers, in particular. Its main objective is to assist member-States in working toward the realization of the right to adequate housing. The backbone of the Strategy will rely on the principle of inclusive cities as the foundation for sustainable urban development. Inclusive cities are achieved by mainstreaming human rights in urban development, including housing and slum upgrading, to ensure social integration, and aiming for the elimination of the urban divide. One of the main objectives of the Strategy is for member-States to develop national housing strategies. Housing strategies, at national and city levels, are inseparable from land-use strategies; infrastructure strategies, including mobility, and; local economic development strategies—all integrated in the broad, participatory, and inclusive urban planning and management process within a supportive legal and regulatory framework. The principles, goals, approaches, and tools espoused by the Strategy are considered in the formulation of these new guidelines.

In the Philippines, UN-Habitat is honored to work with the Housing and Urban Development Coordinating Council (HUDCC) in developing these new local shelter planning (LSP) guidelines. The guidelines, while taking off from the previous LSP guidelines developed also by HUDCC with UN-Habitat support, are informed by the ground through training workshops conducted in the cities of Silay, Butuan, Iligan, and Cagayan de Oro. An important feature of these guidelines is the mainstreaming of climate change and disaster risk reduction in the LSP, ensured through the conduct of vulnerability assessments as an integral part of the analysis of the housing situation and the formulation of shelter strategies, and considering the broader context of local development planning as articulated in the comprehensive land use plan (CLUP) and the comprehensive development plan (CDP).

UN-Habitat is committed to sharing resources, increasing capacities, and focusing on solutions, with government and other development partners, to achieve the aim of promoting sustainable towns and cities, and providing adequate shelter for all. We are confident that this publication will help local governments develop better shelter strategies and contribute to the achievement of adequate housing for all.



**Christopher Rollo**

Country Programme Manager  
United Nations Human Settlements Programme (UN-Habitat) - Philippines

# ACKNOWLEDGEMENTS

This manual would not have been possible without the encouragement and full support of many organizations and individuals. Our special thanks to the Housing and Urban Development Coordinating Council (HUDCC), under the leadership of Undersecretary Celia Alba, for her leadership and commitment in pushing this manual to be more relevant and functional to the mandated shelter tasks of the local government units. Valuable inputs were also made by other HUDCC Technical and Regional staff. From July to September 2013, a series of workshops was held in four cities, namely, Silay, Cagayan de Oro, Butuan, and Iligan to pilot and enhance the manual. Many thanks to these cities and their respective Technical Working Groups. The rich and diverse experiences in these workshops contributed a lot to the improvement of the manual.

We extend our gratitude to the meaningful contributions of all key informants, focus group discussion (FGD) participants, NGO representatives, and experts involved. We would not have been able to come up with this much-needed manual without the experiences, time, and perspectives you shared with us. We are grateful for the support we received from the government shelter agencies such as the National Housing Authority (NHA), the Housing and Land Use Regulatory Board (HLURB), the Socialized Housing Finance Corporation (SHFC), and the Pag-IBIG.

Despite the challenges and issues surrounding the provision of decent and affordable shelter, your seasoned knowledge and experiences were very helpful in making this manual more coherent with the government's housing and shelter programs. This updated and enhanced manual also benefitted from the exhaustive reviews and constructive suggestions from the joint core team of the HUDCC and UN-Habitat: Director Zaki Abanez, Rowena Dineros, Myles Rivera, Eva Marfil, Cris Rollo, Yen Flores, and Laidis Cea. Especially commendable were the inputs in integrating climate change and disaster risk reduction measures in the manual.

Finally, we are grateful to all the communities and urban poor associations which participated in the activities leading to the completion of this manual.

# LIST OF ACRONYMS

CCVAA	Climate Change Vulnerability and Adaptation Assessment
CDP	Comprehensive Development Plan
CLUP	Comprehensive Land Use Plan
CMP	Community Mortgage Program
CPDC	City Planning and Development Coordinator
CSWDO	City Social Welfare and Development Office
DRRM	Disaster Risk Reduction and Management
HDMF	Home Development Mutual Fund (Pag-IBIG Fund)
HGC	Home Guaranty Corporation
HH	Household
HLURB	Housing and Land Use Regulatory Board
HUDCC	Housing and Urban Development Coordinating Council
ISF	Informal Settler Family
LGU	Local Government Unit
LSP	Local Shelter Plan
MPDC	Municipal Planning and Development Coordinator
MSWDO	Municipal Social Welfare and Development Office
NEDA	National Economic and Development Office
NHA	National Housing Authority
NHMFC	National Home Mortgage Finance Corporation
SHFC	Social Housing Finance Corporation

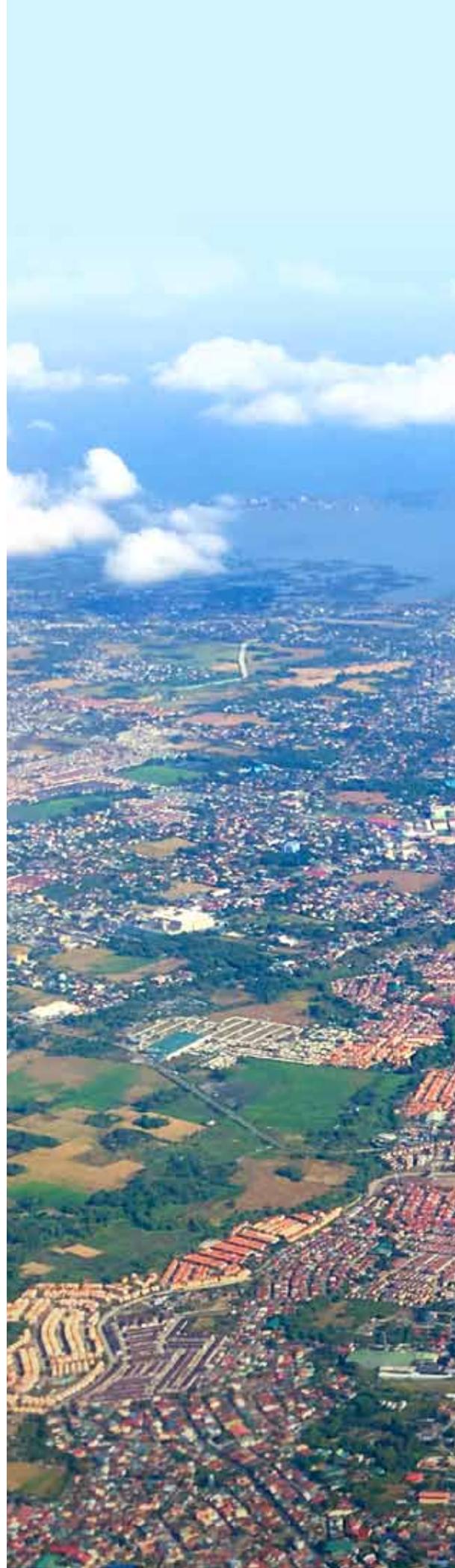
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## INTRODUCTION

*It shall be the policy of the State to undertake, in cooperation with the private sector, a comprehensive and continuing Urban Development and Housing Program which shall uplift the conditions of the underprivileged and homeless by making available to them decent and affordable housing, basic services, and employment opportunities; provide for the rational use and development of urban land; direct urban growth and expansion towards a more balanced urban-rural interdependence; provide for an equitable land tenure system that guarantees security of tenure to beneficiaries while respecting the rights of small property owners; encourage people's participation in the urban development process; and improve the capability of local government units in undertaking urban development and housing programs and projects.*

— Excerpt from Article 1 of the Urban Development and Housing Act of 1992

In the Philippines, local government units have the primary responsibility on shelter planning and addressing the housing needs of their constituents. This was embodied in the Local Government Code of 1991 (Republic Act 7160) and the Urban Development and Housing Act of 1992 (Republic Act 7279).

It is therefore a necessity for each LGU to formulate a Local Shelter Plan (LSP) to enable them to effectively implement their mandate on shelter provision. A shelter plan provides LGUs with a grounded perspective of the shelter situation through a purposive analysis of shelter issues and concerns. It enables the LGU to determine their housing need, conduct an inventory of its resources that may be earmarked for shelter and develop strategies to address their housing and urban development concerns based on an assessment of the capacity of the LGU and existing local dynamics. A multi-sector engagement in the identification of strategic and long-term solutions, implementation and monitoring of the LSP is recommended to ensure acceptability and sustainability of shelter strategies.

The passage of two national laws, namely, the Climate Change Act of 2009 (Republic Act 9279) and the Disaster Risk Reduction Act of 2010 (Republic Act 10121), bolsters the shelter planning mandate of LGUs. These laws oblige LGUs to conduct risk-sensitive land use and housing and infrastructure planning and development in their respective localities.

With the increasing challenges in risk resilience and rapid management urbanization, principally in the area of shelter delivery, the Housing and Urban Development Coordinating Council (HUDCC), in partnership with the United Nations Human Settlements Programme (UN-Habitat), embarked on the development of this revised LSP Manual, which aims to respond to the new challenges.

This updated manual lays out the framework and guidelines in the formulation of local shelter strategies. It introduces innovations that will enable LGUs to keep up with new and emerging methodologies in achieving adequate shelter for all. This updated manual aims to do the following:

- Provide a step-by-step procedure in formulating a Local Shelter Plan that will address housing problems in the locality, to ensure that shelter strategies including housing supply are responsive to the housing demand;
- Enable the LGUs to plan and implement their mandates as embodied in the Urban Development and Housing Act of 1992 (UDHA);
- Facilitate the consolidation and coherence of the LGU's shelter plan with its Comprehensive Land Use Plan (CLUP), Comprehensive Development Plan (CDP), and other related local plans;
- Ensure that each LGU's shelter strategies and implementation plan would integrate and promote actions that also address disaster risk and climate change resilience; and
- Operationalize the guiding principles foregrounded in this manual.

We recommend that the LSP drafted, as an output of the LSP technical working group, would be presented to the Local Housing Board or any similar local body and legislated by the Sanggunian to form part of the CLUP and CDP to ensure acceptance, ownership and sustainability.

## Guiding Principles in LSP Formulation and Implementation

**Rights-based.** International human rights law recognizes everyone's right to an adequate standard of living, including adequate housing. Adequate housing was recognized as part of the right to an adequate standard of living. This was articulated in the 1948 Universal Declaration of Human Rights and in the 1966 International Covenant on Economic, Social, and Cultural Rights. (Source: The Right to Adequate Housing, United Nations Commission on Human Rights or UNCHR, Fact Sheet No. 21, Rev. 1.)

As defined in the Habitat Agenda 1996, adequate shelter means more than a roof over one's head. It also means adequate privacy; adequate space; physical accessibility; adequate security, and security of tenure. Moreover,

adequate shelter includes structural stability and durability; adequate lighting, heating, and ventilation; and, adequate basic infrastructure, such as water-supply, sanitation, and waste-management facilities. The term also takes into account suitable environmental quality and health-related factors, as well as adequate and accessible location with regard to work and basic facilities.

Most importantly, all these factors should be available at an affordable cost. Adequacy should be determined together with the people concerned, bearing in mind the prospect for gradual development.

**Leadership and commitment.** Shelter strategies and implementation need to be supported by a clear and strong leadership and political will. Within the government, institutions should be charged with the responsibility of coordinating sustainable affordable housing initiatives. Coordination among various relevant authorities is important.

**Capacity development.** The shelter plan should incorporate capacity-building for the LGUs, their development partners, and all stakeholders. By imbuing a sense of ownership of their development, LGUs are then expected to respond to the shelter needs of their constituents and ensure the delivery of basic infrastructure and services.

**Inclusive participation.** Inclusiveness welcomes the socio-cultural diversity of the planners, stakeholders, and target beneficiaries who have varied backgrounds, capacities, interests, and preferences. The ultimate goals of participation are empowerment, capacity-building, and a healthy social mix, thus ensuring collective ownership of the plan.

**Plan in advance with sufficient scale and density.** Medium- to long-term planning provides a holistic and integrated approach to shelter provision. Achieving workable density in shelter planning helps prevent or minimize urban sprawl. It also promotes economies of scale. Other benefits of proper density projections include efficient land use, social integration, business activities, and mobility.

**Context-specific approaches.** It is important to use holistic, spatially focused approaches with locally nuanced solutions addressing specific contexts. This requires integration and consistency with the regional context.

**Localized decision-making.** This principle seeks to ensure ownership, accountability, and efficiency in the implementation of the plan. It can draw on local knowledge, expertise, and solutions to address locally identified priorities. Significant local participation can expedite the design and implementation of the LSP.

**Gender equity.** The LSP must be gender-sensitive in that the unique needs of women, men, children, differently abled people, indigenous peoples, and other groups are addressed. At a minimum, baselines and indicators should disaggregate data by gender wherever possible.

**Adequate public space and streets.** Developing adequate public space, which includes streets, ensures better mobility, healthy social mix, vibrant economic activities, socio-cultural interaction, and cohesive sense of neighborhood.

**Sustainability.** An LSP must integrate other critical elements of human settlements like basic services and infrastructure, employment and livelihood, as well as financial viability and resilience to climate change and disasters. Monitoring should ensure that gaps in implementation are addressed in the next planning cycle. A legislated LSP can ensure sustainability.

# Getting Started



# Getting Started

It is essential to understand that local shelter planning is a cycle, not a straight linear process. This allows iterations and adjustments, grounding it to the dynamics of the real world. This way, shelter planning becomes realistic and flexible to adapt and respond to the realities of local governments and the needs of the people in the community.

## LSP Orientation

The LSP Formulation process usually begins with an Orientation by HUDCC to provide local government units an overview of the Local Shelter Plan. During orientation, the HUDCC technical staff explains the importance of the LSP, the data requirements and process in the formulation of a Local Shelter Plan, the role of the LGU and an overview of the financial and technical assistance that LGUs may avail themselves of from the HUDCC and the Key Shelter Agencies (KSAs).

Following are the topics discussed during the LSP Orientation:

- Overview of HUDCC and Policy Environment
- Rationale for Shelter Planning and Local Development Planning Context (see Annex 1)
- Responsibilities and tasks of LGUs on shelter provision under RA 7279 and RA 7160
- Overview of the LSP and LSP Formulation Process
- Data requirements for LSP Formulation
- Programs of HUDCC and Key Shelter Agencies

## LSP Preparation

Building sustainable and resilient communities is one of the ultimate aims of local shelter planning. To address such a challenge, the LGU needs to organize or activate a technical working group (TWG) that shall be tasked with the preparation of the LSP.

The TWG shall conduct the following, among others:

- Gather available data and process information relevant to the preparation of the LSP;
- Ensure policy coordination and uniformity in operational directions for shelter planning;
- See to it that the processing of information and the corresponding actions are in line with national and local policies and standards;
- Establish (or maintain) linkages with and seek substantial inputs from the appropriate national government agencies, civil society organizations, and private sector groups in all stages of the local shelter planning and development processes; and,
- Formulate the LSP and initiate community validation and consultation.

Since the LSP addresses multi-sectoral concerns of the community, the composition of the TWG is also multi-sectoral. Below is the suggested composition, while allowing for flexibility as deemed fit by the LGU:

<b>Chair</b>	Local chief executive or designate
<b>Co-Chair</b>	City/Municipal Planning Development Coordinator (C/MPDC)
<b>Members</b>	Sanggunian Committee Chair on Housing and Urban Development City/Municipal Housing Officer (C/MHO) Local Disaster Risk Reduction and Management Officer (LDRRMO) Urban Poor Affairs (UPA) Officer City/Municipal Engineer City/Municipal Assessor City/Municipal Social Welfare and Development Officer (C/MSWDO) City/Municipal Budget Officer

Representatives from the following agencies may also be invited or consulted by the TWG to provide inputs in the LSP:

- Housing and Urban Development Coordinating Council (HUDCC)
- Presidential Commission for the Urban Poor (PCUP)
- Department of the Interior and Local Government (DILG)

Likewise, representatives from the private sector and LGU-accredited representatives from the concerned people's organizations (POs) and non-governmental organizations (NGOs) should also be engaged by the TWG to participate in all stages of the shelter planning process.

## LSP Formulation Process

This manual identifies six key stages in the formulation of the LSP:

1. Data Gathering
2. Situational Analysis
3. Goals and Objectives Formulation
4. Strategies Development
5. Implementation Planning
6. Strategy Monitoring and Evaluation



The LSP Formulation Process

# STAGE 1: Data Gathering



# STAGE 1: Data Gathering

The initial task of the LGU planners in formulating the LSP is to gather the necessary data to be used for the computation of housing needs, analysis of resources requirements and availability and the community’s affordability level for housing. The LGU should ensure that these data and information are complete, current, reliable and validated because the “quality” of the LSP will depend on the accuracy of the data to be used in the assumptions and computations. Thus, it is important that the community and other concerned stakeholders will be involved in the data gathering process particularly in the identification, mapping and inventory of displaced households and upgrading needs.

Table 1 below enumerates the data needed for LSP formulation, the relevant agencies and LGU departments where these data can be sourced from, the purpose of the data and where it will be used in the LSP.

DATA REQUIREMENTS	SOURCE	TO DETERMINE
		<b>FUTURE HOUSING NEED</b>
<b>Household Population</b> <b>Population growth rate</b> <b>Average Household (HH) size</b> <b>Number of Households</b> <b>Housing Stock or Occupied Dwelling Units</b>	PSA Data (latest published data)	Household Population Projection  Number of Households  Housing Stock for Base Year Data
		<b>ACCUMULATED HOUSING NEED</b>
<b>Homeless households and individuals (not a member of household)</b>	C/MSWD	Homeless Population
<b>Households or ISFs residing in:</b>  <b>a. danger areas</b> i. <b>current danger areas</b> ii. <b>projected danger areas based on Climate Change Projections, Risk and Hazard Mapping</b>  <b>b. areas where priority infrastructure projects will be implemented</b>  <b>c. areas covered by court order for demolition</b>	LGU survey CC Vulnerability and Risk Assessment, MGB, PAGASA,  DPWH or Local Engineering Office  UPAO, Local Housing Office, C/MPDO, C/MAO, Local Courts	Displaced Units (Relocation need)
<b>Average Household size</b> <b>Number of Houses/dwelling unit</b> <b>Housing Stock (occupied dwelling units)</b>	PSA or LGU (C/MPDC)	Doubled-up Households

DATA REQUIREMENTS	SOURCE	TO DETERMINE
		<b>UPGRADING NEEDS</b>
<b>Households residing in areas suitable for housing but with inadequate security of tenure</b> (i.e., land can be purchased or leased from government or private land owner)	C/MPDO, C/MSWDO, UPAO, Local Housing Office	Tenure Upgrading Requirements
<b>Households lacking access to basic services and utilities</b> <ul style="list-style-type: none"> <li>• water</li> <li>• power</li> <li>• sanitation</li> <li>• solid waste facility</li> <li>• roads and drainage</li> </ul>	<ul style="list-style-type: none"> <li>• LWU Provider/ LGU</li> <li>• Power Provider</li> <li>• MHO or ENRO</li> <li>• ENRO, GSO</li> <li>• City/ Municipal Engineering Office, DPWH</li> </ul>	Infrastructure Upgrading
<b>Households whose housing units are made of temporary materials which needs to be repaired to minimum acceptable level</b> (e.g. barang-barong units)	LGU (primary survey, ocular inspection) NSO (CPH), M/CDRRMC	Structural improvement
		<b>AFFORDABILITY FOR HOUSING</b>
<b>Income group distribution Typical</b> (median income)	NSO (Family Income and Expenditures Survey), M/CSWDO, Nat'l HH Targeting System (DSWD)	
<b>Poverty threshold &amp; poverty incidence</b>	NEDA	
<b>% of income for capital costs of housing</b>	PSA (FIES)	
<b>Loan terms of gov't housing loans</b>	HUDCC, SHFC, HDMF	
<b>Rental rates of existing housing units</b>	Local Survey or interview of renters	
		<b>RESOURCE REQUIREMENTS</b>
<b>Land cost/value</b>	City/Municipal Assessor's Office	Land
<b>Available residential land Vacant land suitable for housing</b>	CLUP Primary survey, CPDO, City/Mun. Assessor, Zoning Administrator	
<b>Land owner</b>	Register of Deeds, Assessor	
<b>Land Use (Present and Zoned land use)</b>	City/Mun. Assessor's Office Zoning Admin (Zoning Ordinance), C/MPDO, HLURB (CLUP)	
<b>Cost of Building Materials and Labor</b>	Municipal Engineering Office	
<b>Land development cost (various levels)</b>	Municipal Engineering Office	Housing Construction
<b>Housing construction cost (various types of houses)</b>	Municipal Engineering Office, NHA	
<b>Housing Standards and Regulations: Minimum design standards (average floor area, minimum lot requirement);</b>	Zoning Officer, C/ MPDO, HLURB	
<b>Risk Values for Settlements</b>	City Survey and Local Risk Data, C/MDRRMC	
<b>Innovative technologies &amp; materials for housing</b>	AITECH-NHA	

DATA REQUIREMENTS	SOURCE	TO DETERMINE
<b>Annual infrastructure provision capacity (water, electricity, sewerage, road access, drainage, waste collection)</b>	City Engineer, CPDO, Developers, Public Utility Companies	Infrastructure and Utilities
<b>Available Developmental Financing</b>	HDMF, NHA, banks, private developers (joint-venture), NGOs	Financing
<b>Available Buyers' Financing and Government/ Non-Gov't Housing Programs</b>	HDMF, SHFC, Private Banks, subdivision owners/ developers	
<b>Available Local Government Funds for Housing</b>	LGU	

The Comprehensive Land Use Plan (CLUP) and the Comprehensive Development Plan (CDP) are to be used as references during the shelter plan formulation to ensure that the LSP is harmonized with the overall development plan of the LGU.. It should be noted that the LSP and CLUP are complementary studies, with the LSP providing details on the housing subsector component of the CLUP. As such, the prescribed timeline for the coverage of the LSP should harmonize with that of the CLUP.

To mainstream climate change adaptation and disaster risk reduction and management in the LSP, the result of the LGU's vulnerability adaptation assessment study, as well as its Local Climate Change Action Plan (LCCAP) and Local Disaster Risk Reduction Management Plan (LDRRMP) shall also be used as input for LSP formulation particularly in the mapping and identification of households in danger areas and other vulnerable communities, as well as in the identification of suitable areas for resettlement.

In most cases, some data are not available, unreliable or updated during LSP preparation. For purposes of the training on LSP Formulation conducted by HUDCC or the initial drafting of the LSP, HUDCC allows the LGU/planners to use estimates and assumptions. However, these estimates and assumptions have to be validated (i.e., through site inspection, conduct of actual survey, consultations, etc.) prior to the finalization and approval of the LSP.

The list of basic data, definitions, and assumptions should also be established and clearly stated right at the beginning to clarify the information and figures used in the LSP. This will guide readers and users of the plan in understanding the scope and limitations of the analysis and projections.

Further, some terms or phrases used in the LSP may need to be defined in the context of local shelter planning. A clear definition of the terms (see Glossary) and assumptions used in the LSP would aid future planners in reviewing and updating the shelter plan.

### **Data Gathering Methodologies for Primary and Secondary Data**

(Excerpt from A Practical Guide for Conducting: Housing Profiles, a publication by UN-Habitat on conducting housing profiles that may be applicable and customizable for the Philippine setting on both national and local levels.)

#### **Secondary data**

Initially, the team should identify and review all existing data relevant to their respective sub-theme(s) in order to become acquainted with the level of relevant, documented knowledge that already exists about housing of the country being profiled. Secondary data includes:

- Publications (monographs, edited books, journal articles etc.)
- Unpublished research reports and 'grey' literature
- Policy documents
- Statistical data from population and housing censuses and other socioeconomic surveys (e.g. Demographic and Household Surveys) from the relevant institutions, and where available, international agencies
- Where accessible, market research and private sector analysis of related industries associated with the housing sector
- Newspapers (articles, advertisements) and other local media releases; and
- Any other non-conventional secondary sources.

The intention is that the profile team/team leader compiles all reviewed secondary data in an annotated list of resources that will be used for developing the Housing Profile. This list should be comprehensive, reflecting the latest state of available knowledge.

#### **Primary data**

Primary data needs to be generated in areas where no reliable or up-to-date secondary data exists. Primary data can be obtained from the following activities performed as part of the profile process:

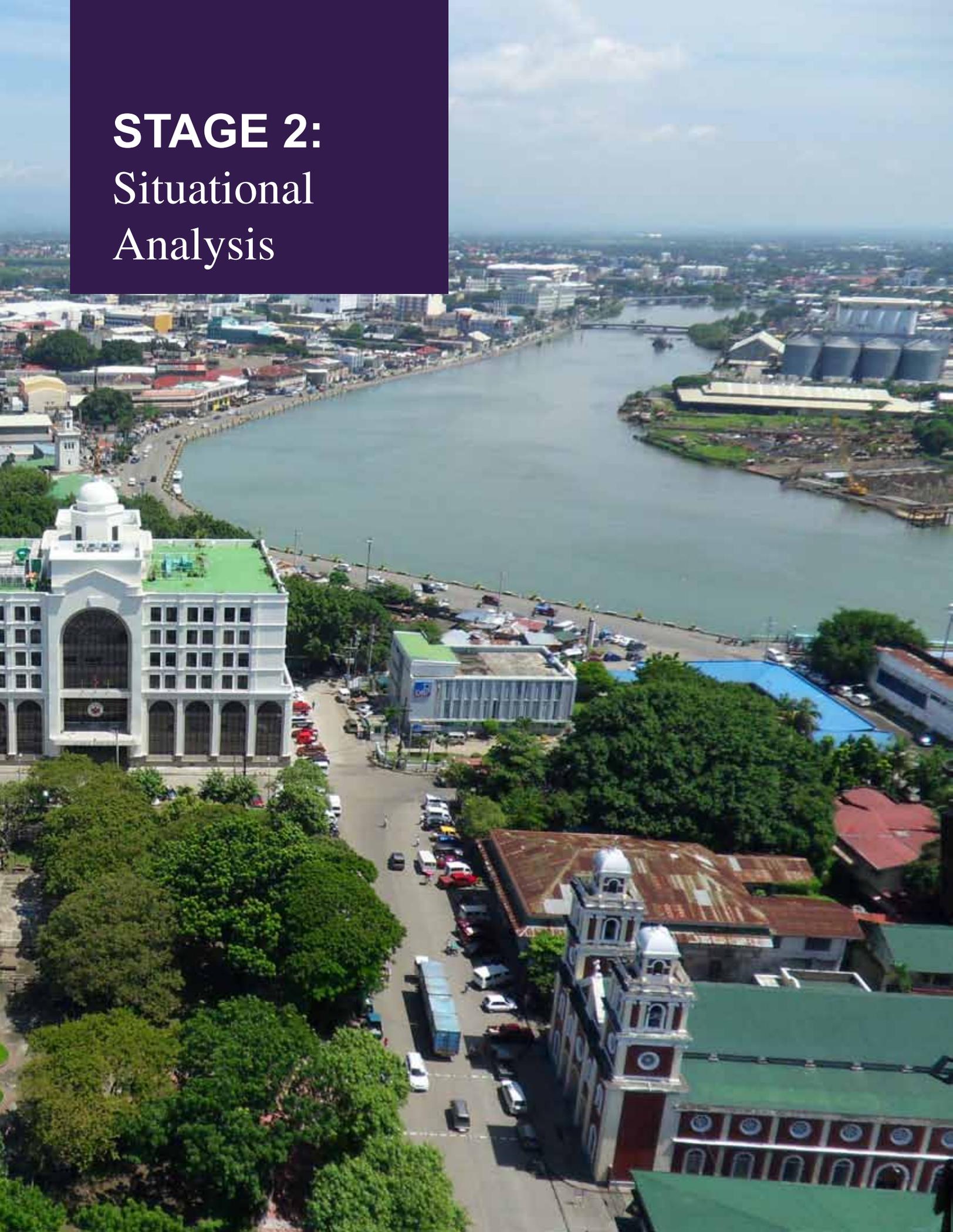
- In-depth interviews with key actors (national and local government officials, decision-makers from CBOs, NGOs, FBOs, grassroots organizations, construction companies, banks, property management companies, real estate and other private firms, formal and informal brokers/agents, research and academic institutions)
- Participants' observations during site visits
- Participation in on-site dialogues
- Facilitation of focus group discussions
- Sample household and field surveys

A sample survey may be considered by the housing profile team on households, plots, buildings and/or settlements when shown to be relevant to investigate a particular issue. The survey may cover, but not be limited to, information regarding land tenure, quality and size of housing stock, property prices and market transactions, opinions on recent trends or proposed policies which might affect housing prices or practices, etc. (see side bar).

In addition to sample surveys, the team may use maps, GIS technology, satellite photo interpretation, google earth map overlays and other visual aids to establish knowledge or corroborate existing information.

**High value has to be put on locally generated data as this more accurately reflects realities on the ground (e.g. CBMS, MBN).**

# STAGE 2: Situational Analysis



## STAGE 2: Situational Analysis

The situational analysis stage involves scrutiny of the current housing and development situation of the LGU. It is important for the LGU planners to examine the extent of the housing need and housing and urban development related problems, assess the capability of the LGU to address its shelter needs based on available resources and determine the affordability level of the target beneficiaries for availing housing programs. The conduct of situational analysis is crucial as this will be the basis for the formulation of applicable shelter strategies and implementation plan for addressing the housing needs.

In the light of climate change adaptation (CCA) and disaster risk reduction management (DRRM), it is important to consider available studies on local hazard and vulnerability assessments in the situational analysis and how these hazards can potentially affect housing and development investments. The results of the risks and vulnerability assessments for instance can help in determining what hazards are present in the locality and which areas are exposed to hazards, whether geologic, hydro-meteorological, or man-made. These assessments will also serve as a guide in ascertaining the range of sensitivity and adaptive capacity of the people and areas at risk and aid the LGU planners and decision-makers in identifying and prioritizing



Understanding the housing need of the population and the capability of the local government to address said need is an important step in formulating shelter strategies and implementation plan.

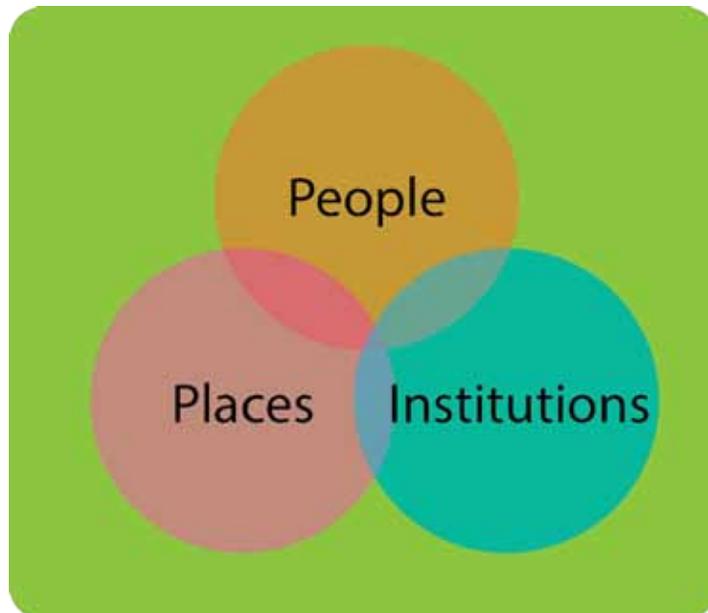
the households that need housing assistance and support. Aware of such risks and vulnerabilities, the LGU can then proceed to identify areas which are suitable for habitation or settlement. The analysis can also flag the LGU on the necessary local policies that need to be issued, reiterated, institutionalized and/or adjusted to ensure the local communities' resilience in the context of risk reduction and adaptation.

This stage also provides information on current and future shelter development needs based on current trends and population growth including those in the context of CCA and DRRM.

To ensure that the planning would encompass key facets of sustainable shelter development, LGU planners should look into the interaction of people, places, and institutions in the shelter sector. Understanding the sector as a "system", where elements and players interact, would result in a more comprehensive and practical sector development strategy.

Using the framework illustrated below, the situational assessment should be able to answer the following key questions:

- Which areas require particular attention?
- Who would require shelter support (construction of new units and upgrading of existing units)?
- Are there specific vulnerable groups identified?
- What are the existing assets (tangible and intangible) available to address the requirements/demand?



## Task 1:

### *Identify which areas require particular attention*

#### Purpose

This task seeks to present spatially, or in a map, the areas that need particular attention. The action plan is correlated with the CLUP and CDP of the local government. This makes it easy to tag informal settlements, thus facilitating a relevant vulnerability assessment.

#### Steps

1. **Obtain a copy of the base map of the city/municipality.**
2. **Mark in the base map (if not available in the CLUP), or overlay another sheet where the major government projects are planned.**
3. **Mark or overlay the sites or areas where a court order for eviction has already been issued.**
4. **Have at hand a separate map or overlay another sheet that features the dangers zones or high-risk areas.** In view of the DRR and CC risk, also include the maps of areas exposed to hazards.

A useful guide in this regard is in the exposure assessment in **Annex 3**. Depending on the physical characteristics of the locality and based on CC projections, danger areas could be further classified into “currently uninhabitable” and “over time will be uninhabitable.” Use the development considerations provided for in any of the following:

- Joint DENR, DILG, DND, DPWH, and DOST Memorandum Circular On Hazard Classification
  - Article 51 on Easements of the Water Code of the Philippines (PD 1067)
  - RA8550 on Coastal Zones
  - Other relevant laws
5. **If there are other areas of concern, like high-density areas, show a pertinent map as well.** This may be relevant for urban areas, where shelter plans need to be mindful of development controls. This facilitates the drawing up of pertinent responses to issues on safety and security, basic shelter infrastructure improvement, and mobility improvement, among others.

In this task, the planning team should be able to identify or map the following kinds of settlement areas:

- ✓ Sites approved to be used for major government projects and/or sites with court order for eviction;
- ✓ Areas with informal settlements in government and private lands;
- ✓ Sites and areas which are identified as danger zones or at high risk due to hazards.

**Task 2:**

*Determine shelter needs (construction of new units and upgrading of existing ones)*

**Purpose**

This task will help deliver a number of key analyses.

- First, it will determine the accumulated housing need at the beginning of the planning period.
- Second, it will facilitate an understanding of future shelter requirements due to population growth.
- Third, it will identify settlements requiring upgrading of tenure, housing structure, and basic community infrastructure and services.

**1. Compute for the ACCUMULATED HOUSING NEED.**

This pertains to the total new units needed at the start of the planning period — the sum of the housing requirements of doubled-up households, displaced households, and the “homeless.”

**Steps**

**1.1. Establish Base Data.**

**Use latest Philippine Statistics Authority (PSA) census data of the LGU.**

Data from PSA Census	Base Data
• Household Population in the last census year (2010)	120,999
• Annual Population Growth (%)	1.17%
• Average Household Size	4.5%
• Housing Stock (2010)	26,513

*Box 1*

**1.2. Establish Planning Period and Base Year.**

- Planning Period covers the timeline that will be needed to realize the housing vision of the LGU. (This should be the same period covered by the CLUP).
- Base Year is the year before the first planning period.

The Planning Period is from 2013-2022, covering 10 years and to be divided into three (3) phases. Therefore, the Base Year is 2012.

### 1.3. Compute for the Base Year Data.

Housing and Population Data	Base Data/Latest Census Year	Base Year	Planning Period
	2010	2012	2013-2022
Household Population	120,999	123,847	
Annual Growth Rate	1.17%	1.17%	
No. of Households	26,889	27,522	
Average Household Size	4.5	4.5	
Housing Stock	26,513	27,138	
No. of Homeless Household	28		

- To compute for the household population for the base year data, use the formula in computing for Population Projection in Step 2.2.
- To compute for the number of households for the base year, divide the household population by the average household size.
- For Household Size and Annual Growth Rate, the assumption is that these are constant for both the base data and base year data throughout the entire planning period
- To compute for the housing stock for the base year data, use the formula in Step 1.4 (Box 5). To compute for the homeless household, see Step 1.5 ( box 6).

### 1.4. Compute the number of DOUBLED-UP HOUSEHOLDS.

This refers to the number of dwelling units shared by two or more households. The Census on Population and Housing (CPH) of the Philippine Statistics Authority provides data on doubled-up households under “Ratio of Households to Occupied Housing Units” (see Box 3).

#### Computation for Doubled-up Households

**Formula:**

Doubled-up Households = Housing Stock x Percentage of Household per Dwelling Unit

**Given:**

Households = 27,522

Housing stock in base year = 27,138

Household per Dwelling Unit in base year = 1.0131 or 1.31% of Housing Stock

**Solution:**

Doubled-up Households = 27,138 x 1.31% = 356

Box 3

To compute for the Percentage of Household per Dwelling unit in base year, deduct the number of homeless from the number of households and divide by the number of occupied dwelling unit.

Where:

Number of homeless household = 28

Number of household for the base year = 27,522

Number of occupied dwelling unit for the base year= 27,138

Solution:

$$27,522 - 28 / 27,138 = 1.0131 \text{ or } 1.31\%$$

Box 4

The doubled-up households can also be determined by an actual count or a survey. However, if historical data on the doubled-up households are unavailable, a conservative projection may be derived by multiplying a percentage estimate with the number of households in the base year.

Data on Housing Stock is needed for computing the doubled-up households. If the number of housing stock in the base year is not available, it can be counted by subtracting homeless households from the number of households and dividing this by the number of households per dwelling unit. Please refer to the example in Box 4 below for reference.

**Computation for Housing Stock (Occupied Dwelling Units)**

**Given:**

Households = 27,522

Homeless = 28

Households/dwelling unit in base year = 1.0131

**Formula:**

$$\text{Housing Stock} = \frac{\text{Number of households in base year} - \text{Homeless}}{\text{Household per dwelling unit}}$$

**Solution:**

$$\text{Housing Stock} = \frac{27,522 - 28}{1.0131} = 27,138$$

Box 5

### 1.5. Determine the number of the HOMELESS population in the locality.

The term “homeless” refers to individuals or households living in public spaces (such as parks and on sidewalks) and all those without any form of shelter. The contention is that new units should be provided for these people. Information on the homeless and their needs can be gathered from the M/CSWDO, the DSWD, the Urban Poor Affairs Office (UPAO), NGOs, and other agencies/projects operating in the area.

To determine the total housing need of the homeless, add up homeless individuals and homeless households. To compute for homeless households, subtract the number of homeless individuals (those homeless individuals who are not a member of any household) from the total homeless population and divide by the average household size (see box 5).

**Computing for Homeless Households**

**Formula:**

$$\text{Homeless Households} = \frac{\text{Total homeless population} - \text{Homeless individuals (as defined above)}}{\text{Average Household Size}}$$

**Given:**

Homeless Population = 98  
 Homeless Individuals (not part of any household) = 8  
 Average Household Size = 4.5

**Solution:**

$$98 - 8 = \frac{90}{4.5} = 20 \text{ homeless households}$$

**Therefore:**

$$\text{Homeless Households} = \frac{20 \text{ homeless households} + 8 \text{ homeless individuals}}{28 \text{ Total Homeless}}$$

Box 6

**1.6. Compute for the DISPLACED HOUSEHOLDS or new units required due to the resettlement needs (), using as a reference material the area-tagging done in Task 1 of this module.**

To compute, add up the following: the number of dwelling units in danger areas; the number of units affected by planned government infrastructure projects; the number of units subject or might probably be subject to a court order for eviction or demolition; and, the estimated number of units for future displacement due to natural disasters. **The number of units required should be itemized by project or specific area**, with their corresponding program period based on the priority of implementation.

<b>1. Households in danger/hazardous areas</b>			
Type of Danger/ Hazard (Flood, landslide, etc.)	Location	Land Owner of occupied lot	No. of Households
<b>2. Households to be affected by infrastructure project</b>			
Type of Infra Project	Location	Land Owner of occupied lot	No. of Households
<b>3. Households with court order for eviction/demolition (but not included in 1 &amp; 2)</b>			
Homeowners Association (HOA)	Location	Land Owner of occupied lot	No. of Households

- Items 1-3 above are considered Displaced Households that will need relocation and new housing units.
- Items 4-6 listed below may or may not necessarily require resettlement or new housing units, but are important for the LGU to take note. In the case of item 6, relocation or new housing units may not be needed if the potential climate change threat are addressed with appropriate engineering interventions and other appropriate mitigating measures.

<b>4 Households with threat of demolition/eviction (but not included in 1,2 &amp; 3)</b>			
Homeowners Association (HOA)	Location	Land Owner of occupied lot	No. of Households
<b>5. Informal settlers whose landowner of area occupied is willing to sell the property (but not included in 1,2,3 &amp; 4)</b>			
Homeowners Association (HOA)	Location	Land Owner of occupied lot	No. of Households
<b>6. Households to be potentially displaced due to climate change (not included in 1-5)</b>			
Homeowners Association (HOA)	Location	Land Owner of occupied lot	No. of Households

1.7. Sum up the Total Accumulated Housing Need. See Annex 4, filled-out Worksheet

**NEW HOUSING UNITS NEEDED (Accumulated Housing Need)**

	TOTAL	ANNUAL	PROGRAM PERIOD
DOUBLED-UP (1.31% OF HS)	356	51	2016–2022 (7 yrs)
HOMELESS	28	14	2014–2015 (2 years)
DISPLACED	8,025		2013–2022 (10 yrs)
Barangay 1	154	702	2013
Barangay 2	274		
Barangay 3	20		
Barangay 4	254		
Barangay 5	126	530	2014
Barangay Rizal	404		
Barangay Lantad	909	454	2015
		455	2016
Barangay Balaring	515	515	2017
Barangay E. Lopez	759	759	2018
Barangay Hawaiian	1,893	946	2019
		947	2020
Barangay Mambulac	1,439	1,439	2021
Barangay Guinhalaran	1,121	1,278	2022
Barangay Guimbalaon	157		
	<b>TOTAL: 8,409</b>		

Table 1

2. Compute for new units needed due to population growth.

Steps:

2.1 Find out the annual growth rate of the locality.

The growth rate is used to project population numbers throughout the planning period.

If data on growth rate are not available, get the population data from two previous censuses, and then compute for the growth rate using the formula below and the accompanying example as reference (see box 7).

**Growth Rate (%)**

**Where:**  
 P1: Population 2000 = 107,722      P2: Population 2010 = 120,999      t: time = 10 years

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**Formula:**  $r = \text{Antilog} \left\{ \frac{\text{Log} \frac{P2}{P1}}{t} \right\} - 1 \times 100$       **Computation:**  $r = \text{Antilog} \left\{ \frac{\text{Log} \frac{120,999}{107,722}}{10} \right\}$

**r = 1.169% or 1.17%**

NOTE: Do not get the annual growth rate by dividing the total growth over 10 years and finding the percentage of this against the base year, because this gives an exaggerated growth rate.

Box 7

**2.2 Compute and present the population projection using the growth rate derived above.**

Assumption: Growth rate is assumed to remain constant over the entire planning period. In Box 8 below is the formula for population projection

**Population Projection**

<p><b>Where:</b>                  Growth rate = 1.17%                  Population 2010 = <math>P_{2010}</math> = 120,999                  n = time*                  Population 2012 = <math>P_{2012}</math> = ?</p>	<p><b>Formula:</b>  <math display="block">P_{2012} = P_{2010} (1 + r)^n</math></p> <p><b>Computation:</b></p> <table style="width: 100%; background-color: #c9e0c9;"> <tr> <td style="padding: 2px;"><math>P_{2012}</math></td> <td style="padding: 2px;">=</td> <td style="padding: 2px;">120,999 (1 + 0.0117)<sup>2</sup></td> <td style="padding: 2px;">=</td> <td style="padding: 2px;">123,847</td> </tr> <tr> <td style="padding: 2px;"><math>P_{2018}</math></td> <td style="padding: 2px;">=</td> <td style="padding: 2px;">120,999 (1 + 0.0117)<sup>8</sup></td> <td style="padding: 2px;">=</td> <td style="padding: 2px;">132,799</td> </tr> </table>	$P_{2012}$	=	120,999 (1 + 0.0117) <sup>2</sup>	=	123,847	$P_{2018}$	=	120,999 (1 + 0.0117) <sup>8</sup>	=	132,799
$P_{2012}$	=	120,999 (1 + 0.0117) <sup>2</sup>	=	123,847							
$P_{2018}$	=	120,999 (1 + 0.0117) <sup>8</sup>	=	132,799							

\*2 years if projecting for 2012, 8 years if projecting for 2018

Box 8

**2.3 Sum up and present the computation of the number of units needed due to population growth according to the planning period or the coverage or time-frame of the LSP.**

**New Units Needed Due to Population Increase**

Planning Period	Households In Planning Periods	Total Number Of Units Needed Due To Population Growth	Number Of Years In A Planning Period	New Units Needed Annually
1st Planning Period: 2013-2015	28,499 – 27,522 =	977	+ 3 years =	326
2nd Planning Period: 2016-2018	29,511 – 28,499 =	1,012	+ 3 years =	337
3rd Planning Period: 2019-2022	30,916 – 29,511 =	1,405	+ 4 years =	351
<b>TOTAL</b>		<b>3,394</b>		

Table 2

### 3. Compute for Upgrading Needs

The term “upgrading need” is defined as the need for improving the following:

- **land tenure status and other tenure schemes** (e.g., from the provision of minimum security of tenure—such as a written contract—to possessing a title to the land)
- **access to basic services** (e.g., from macadam road to paved road)
- **house condition** (e.g., from semi-permanent

Upgrading needs could take any of the following forms (there may be situations in which units require two or more upgrading needs):

- **Tenure upgrading need**
- **Infrastructure and basic services improvement need**
- **Structural improvement need**

The LGU has to determine the criteria and benchmarks to use in determining what needs “upgrading.”

- For instance, is local upgrading to meet the basic standards for “potable water supply” referring to Level 1, Level 2, or Level 3?
- Should local benchmark for sanitation be for individualized septic tanks connected to an integrated sewer system; or would communal sewage treatment facility suffice?

The same local benchmarks should be defined for the provision of power or electricity, drainage, garbage disposal, and road access. The LGU also has to define what it considers to be the minimum land tenure. All units classified as needing upgrading are understood to be upgradeable in place (i.e., in their present site). This means displaced households should not be considered among those needing upgrading.

#### Box 9

The conduct of actual survey is recommended if data on upgrading needs are unavailable. The data should include the number of units requiring each type of upgrading activity or combination of upgrading activities, such as units that need tenure upgrading, units that require a combination of land tenure and infrastructure upgrading, or of land tenure, infrastructure, and structural upgrading.

**Steps:**

**3.1 Establish the definition of upgrading needs:**

**Tenure Upgrading Need**

Secure tenure is the right of all individuals and groups to effective protection by the state against forced evictions. People have secure tenure when there is evidence of documentation that can be used as proof of secure tenure status, or there is either de facto or perceived protection from forced evictions.<sup>1</sup>

Tenure need is the need of households considered to have inadequate security of tenure on the land and/or dwelling they occupy, i.e., with no legal title or any other written instrument regarding the land and/or dwelling they occupy.

Households can be assumed to be in varying degrees of insecurity and can be considered in need of improving land tenure.

The LGU Planners should decide what proportion of the number of these housing units will be considered to have tenure upgrading need. This will depend on local circumstances.

Note :. The Philippine Statistics Authority's (PSA), has Census of Population and Housing (CPH) data on the tenure status of housing units and the tenure status of lots in owner-occupied units. These data can be used as reference in determining land tenure upgrading need.

Other agencies—such as the **Presidential Commission for the Urban Poor (PCUP)**, the **Housing and Land Use Regulatory Board (HLURB)**, and the **Social Housing Finance Corporation (SHFC)**—may also be able provide data on the number and location of members of homeowners associations who are in the process of applying for the Community Mortgage Program CMP who have made direct land purchase; who are utilizing other schemes of on-site land acquisition; and other schemes like public rental housing

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<sup>1</sup> <http://ww2.unhabitat.org/programmes/guo/documents/mdgtarget11.pdf>

### Infrastructure and Basic Services Upgrading Need

**There is infrastructure improvement need** if the dwelling unit lacks access to one or more basic services and utilities (i.e., water supply, sanitation, electricity, drainage, road access, and garbage disposal). The infrastructure improvement need should also consider the findings in the Climate Change (CC) and Disaster Risk Reduction (DRR) Vulnerability and Adaptation Assessment (V&AA), if already conducted. It should also take note of the basic services and utilities at risk from climate change and other hazards. (i.e need to upgrade the size of the drainage system to accommodate the increasing volume of floodwater.)

The TWG should decide on the standard it considers as adequate with regard to basic services. For instance, this question may be mulled over: “Is piped water with public connection (shared, Level 2) a basic standard or is there a need for an individual household connection (Level 3)?”

Once the TWG has decided on the standards, data from the local Engineer’s Office, **M/CSDWO, and local housing office**—such as on the status of power facility, garbage management system (collection and disposal), drainage, and roads—can be used and analyzed. The **local health office** can provide data on the status of the sanitary facility and potable water system. The local **service providers** may also have data on their respective services and clients.

### Structural Upgrading Need

Structural improvement is needed in cases where:

- the structure of the dwelling unit is made of temporary and/or substandard materials (e.g., barong-barong units which need to be repaired to a minimum acceptable level, especially given new weather patterns and climate change exposures)
- the dwelling unit is located in an area with identified hazards but such can be addressed by engineering or mitigating measures
- the dwelling unit has insufficient living areas which do not comply with national standards (A housing unit meets the minimum acceptable level if it can fully protect the occupants from the elements, i.e., rain, wind, temperature, and the like.

The **M/CDRRMC, M/CSWDO, and the Office of Civil Defense (OCD)**, which usually conduct actual counts after a calamity, may have data on the current conditions of dwelling units. These data may be used as the basis in assessing structural upgrading needs. The results of community surveys or risk mapping from the **CC and DRR Vulnerability Assessment** can likewise be used as reference.

**3.2. Summarize and review your results.**

**Use LSP Worksheet 3 (Summary of Upgrading Needs) in Annex 4.**

Table 3 shows a simple summary presentation of the upgrading needs. The column on Percentage of Housing Stock gives the LGU Planners a quick glimpse of the state of the municipality or city in terms of the situation presented. This can be an important tool in making an analysis.

In the example below, for instance, it column 2 indicates that the LGU has problems with regard to power supply (41.12%) and water supply (70.05%), but has a relatively well-distributed land ownership matrix, with only 10% of the housing stock without security of tenure.



Community action planning scene

## SUMMARY OF UPGRADING NEEDS

UPGRADING NEEDS	% OF HOUSING STOCK	TOTAL	ANNUAL	PROGRAM PERIOD
<b>1. Tenure Need /Location</b>	<b>10.00</b>	<b>2,710</b>		<b>2013 – 2017</b>
Barangay Mambulac		1,145	572 573	2013 2014
Barangay E. Lopez		459	459	2015
Barangay Lantad		538	538	2016
Barangays 1, 5, Rizal, Balaring and Guinhalaran		568	568	2017
<b>2. Infrastructure Need</b>				
<input type="checkbox"/> Households without electricity	41.12	11,159	2,790	2013–2016
<input type="checkbox"/> Households without adequate potable water supply	70.05	19,012	3,169	2013–2018
<input type="checkbox"/> Households without adequate sanitation	15.28	4,148	691	2013–2018
<input type="checkbox"/> Households without drainage system	14.77	4,008	1,336	2014–2016
22 CMP Take-out (in 12 poblacion barangays)		2,034	2,034	2014
LTAP Take Out (Barangay Milibili)		190	1,080	2015
MMP take-out (Barangay 5)		102		
6 pre-PCL CMP (Barangay 7, 8, & 9))		659		
Tanque Datiles		31		
Tanque Isla Bonita		49		
Barangay 6 (Sitio Cuadra)		49		
Mabini Altavas (Baybay)		142	894	2016
Alba Village Dinginan		207		
SitioLuyo, Culasi		73		
Barangay Libas		37		
Barangay Bolo		200		
La Salle (Banica-Asis)		179		
BLISS Cagay		56		
<input type="checkbox"/> Households without adequate road access	14.77	4,008	The same as in upgrading of drainage	2014–2016
<input type="checkbox"/> Households without regular garbage collection	16.05	4,356	1,089	2013–2016
<b>3. Structural improvement need</b>	<b>8.49</b>	<b>2,304</b>	<b>230</b>	<b>2013-2022</b>
<b>Housing Stock = 27,138</b>				

Table 3

**Task 3:**

*Identify particular vulnerable groups requiring special consideration and attention*



Data on vulnerable groups must be collected to inform shelter planning.

**Purpose**

This Task will ensure that the assessment captures the baseline needs and concerns with regard to gender and other vulnerable groups. This will guide the LGU Planners in their succeeding activities and next steps as they understand and become sensitive to the special concerns of particular groups.

**Steps**

**1. Using the data gathered in the previous tasks, determine the total number of the following groups:**

- women
- men
- youth
- children
- senior citizens
- persons with disabilities
- indigenous peoples
- other sectors whose situations may be of interest with regard to the principle of inclusion

The data collated shall be the baseline that will guide the planning team in understanding vulnerable groupings in particular areas of concerns.

**2. From the total number of persons per group, further disaggregate the numbers per barangay and for every area identified in Task 1 (i.e., areas that require particular attention).**

Note that this baseline and mapping may already be available in the CLUP or in other studies previously or separately done, including the CC and DRR Vulnerability Assessment. In this case, the maps previously produced may be reviewed and updated.

**3. The baseline numbers of gender and vulnerable groups should also be produced.** This will disaggregate data with regard to households tagged or identified as requiring “Upgrading Needs.”

#### **Task 4:**

*Determine the income levels, as well as the affordability and housing options of the identified households*

##### **Purpose**

This Task will help determine and analyze information on the affordability levels of households identified in Tasks 1 to 3. Task 4 will determine the income groupings in the LGU and the loan-carrying capacity of the income groups.

Use Worksheet on Affordability Analysis & Land Need Calculation from Annex 6 and refer to Table 6 for a sample computation

##### **4.1. Categorize households into income groups.**

The LGU Planners have to determine the income distribution most applicable to the locality. In the example given in Table 5 below, the total population of the LGU was divided into six income groups.

Family income data available at the LGU level shall be used. In case this is not available, the PSA provincial or regional data on Family Income and Expenditure Survey (FIES) survey ( “Total Number of Families, Total and Average Family Income”) can be used as reference to arrive at the six income groups. However, depending on which year the FIES survey was done, there might be a need to raise the income levels to reflect wage increases (wage inflation). For the purpose of this Task, family income may be equated with household income.

**Percentage Distribution of Families by Income, 2009**

Annual Income (Php)	%	Monthly Income (Php)	Income Group	%
Below 40,000	5.2	Below 3,333	1st	45.00%
40,000–59,999	11.4	3,333–4,999		
60,000–79,999	15.5	5,000–6,665		
80,000–99,999	12.9	6,666–8,332		
100,000–299,999	43.7	8,333–24,999	2nd	21.75%
300,000–499,999	7.3	25,000–41,665	3rd	25.5%
500,00–699,999	2.4	41,666–58,332	4th	4.85%
700,000–899,999	1.1	58,333–74,999	5th	2.10%
900,000 & over	0.5	75,000 & over	6th	0.80%

Table 4

- The first column of Table 4 presents nine Annual Income Classes, reflecting the annual household income. The second column shows the corresponding percentage of households belonging to each income level (adding up to 100%). In the third column, annual income is translated into monthly income by simply dividing annual income by 12 months.
- To get the percentage of households per income group, first, divide the households into five income groups, this will result to a factor of 20% (100%/5) which will be used to set the range per income group.

In the example above, note that the highest income class has monthly income of Php75,000 and over. Twenty percent of Php75,000 is Php15,000, which was used for coming up with the range for each of the income groups. This means that each income group should, more or less, have a range of Php15,000.

Then, the first income group was divided into two groups in order to have a total of six income groups. This is done to further dissect the lowest income households, which usually comprise the largest percentage of the housing need. Hence, the first income group will be composed of households living below the poverty threshold. In the example, it is assumed that the poverty threshold is P8,000.00/month.

The second income group includes households falling under the first 20% or first quintile of the income group, but whose earnings are above the poverty threshold. The remaining four income groups (3rd to 6th income groups) comprise the second, third, fourth and fifth quintiles of the population in terms of household income.

- The last column reflects the percentages of households belonging to each of the six income classes. This was derived by adding up the percentages in the second column that correspond to the monthly income class. Thus, the 45% that comprises the first income group was derived from the sum of 5.2%, 11.4%, 15.5%, and 12.9%.

The second income group comprises 21.75%, or approximately half of the 43.70% that partly belongs to the second quintile. This represents the percentage of the households belonging to the first quintile, earning a maximum of Php15,000 monthly, but earning also more than the Php8,000 poverty threshold. Repeat the same procedure in estimating for the income of the third to sixth income groups.

**Table 5** shows the assumed income groups and their corresponding percentages of households based on the computation in Table 4. Table 5 shows that the first income group comprises 45% of the total number of households in need of housing assistance; the next income group, comprising 21.75% of the total number of households, is presented as earning P8,001-P15,000 monthly; and so on until the sixth income group.

#### Distribution of Households by Income Group, 2012

Classification variables	1st income group (below poverty threshold)	2nd income group	3rd income group	4th income group	5th income group	6th income group
Income (minimum, maximum) in Php	Up to 8,000	8001 – 15,000	15,001 – 30,000	30,001 – 45,000	45,001 – 60,000	Over 60,000
% of new units	45%	21.75%	25.50%	4.85%	2.10%	0.80%

Table 5

Note: The Family Income and Expenditure Survey (FIES) presents regional income and expenditure information. Thus, it may not represent the true income profile of the households in a city or municipality. The numbers are usually too high especially for non-urban areas. If there is a reliable local income survey, it is best to use this as the basis for coming up with the income groups.

The LGU planners may also opt to categorize affected households into income groups according to sources of income. See example in Box 9 below:

**EXAMPLE**

The target household (HH) beneficiaries' income groupings are based on the information gathered by the City Assessor's Office when it surveyed the areas for a re-assessment of real properties in 2010.

**1st income group** – families of sugarcane farm workers, *trisikad*/tricycle drivers, small fisherfolk and odd-job wage earners earning a household monthly income of Php8,000 and below, and comprising about 45% of the total need

**2nd income group** – families of tricycle operators, casual workers, small businessmen, and vendors earning a household income of Php8,001–Php15,000/month, representing 21.75% of the need

**3rd income group** – families of permanently employed and skilled laborers earning Php15,001–Php30,000/month, composing 25.50% of the need

**4th income group** – OFW-supported families receiving Php30,001–Php45,000 monthly, comprising 4.85% of the need

**5th income group** – families of middle-class professionals earning around Php45,001–Php60,000 monthly, representing 2.10% of the need

**6th income group** – families of highly paid professionals and entrepreneurs earning more than Php60,000 every month, comprising 0.80% of the need.

Box 9

**4. 2 Compute the typical (or mean) income of households in each income group.**

Note: Accurate data on the distribution of income of households within each income group is not always available. In this case, it is recommended to use the mean income based on the average of the maximum and minimum incomes (see Box 10). For the first and sixth income groups, however, whose minimum and maximum incomes are not definitive, the TWG may peg an income which majority of those within a particular income group earns.

**EXAMPLE**

If the income bracket of the second income group is Php8001 - Php15,000, the mean income is  $\frac{(Php8,001 + P15,000)}{2} = P11,500.50$ . This is rounded off to P11,500.

For the first income group earning Php8,000 and below, the planner assumed that majority are earning Php5,000. Thus, the typical income is pegged at Php5,000.

Box 10

### 4.3. Compute the percentage of income which can be allocated for housing by each income groups.

Housing programs are likely to succeed if housing packages or options are affordable to the target income groups. To ensure repayment of loans, the monthly paying capacity of each target income group must be determined.

The LGU Planners should be knowledgeable on the various government housing programs that can be accessed to enable the LGU determine and develop appropriate programs that they will adopt to respond to the housing need of their target beneficiaries. Following are examples of the housing programs that the LGU Planners can use as reference for the Affordability Analysis:

- The Localized Community Mortgage Program of the Social Housing Finance Corporation (SHFC);
- The Group Housing Loan Program and the LGU Pabahay Program of the Home Development Mutual Fund (HDMF) or Pag-IBIG Fund;
- The NHA's Resettlement Assistance Program for LGUs;
- Rental housing and other options; and
- Best practices on housing of other LGUs.

The loan-carrying capacity of each income group can be established by defining the potential percentage of income that can be made available for capital costs of housing, i.e., loan repayments and interest.

This is relevant for the LGU Planners to determine if their target households still have the financial leeway to accommodate additional loan amortizations which may result from any of the housing financing options that may be developed and adopted in the LSP.

#### Computation

To determine the potential percentage of income for housing, exclude the following necessary basic expenses from the household income:

- Food
- Fuel, light, and water
- Transportation and communication
- Household operations
- Clothing, foot wear, and other wear
- Education
- Medical care
- House maintenance and minor repairs
- Taxes paid

The loan-carrying capacity of each income group can be established by defining the potential percentage of income that can be made available for capital costs of housing, i.e., loan repayments and interest.

This is relevant for the LGU Planners to determine if their target households still have the financial leeway to accommodate additional loan amortizations which may result from any of the housing financing options that may be developed and adopted in the LSP.

### **Computation**

To determine the potential percentage of income for housing, deduct the cost of the following necessary basic expenses from the household income:

- Food
- Fuel, light, and water
- Transportation and communication
- Household operations
- Clothing, foot wear, and other wear
- Education
- Medical care
- House maintenance and minor repairs
- Taxes paid

The FIES table on the “Distribution of Total Family Expenditure by Expenditure Group and Income Class” shows how much households spend for different expenditure groups.

#### **Note.**

- Usually, the potential percentage is much higher than the present portion of income used for housing. Housing investments largely depend on the household’s willingness to invest and the possibilities to improve their housing situation. Given the right opportunity to acquire better housing, many households would seek new income sources, thus increasing their income level.
- When estimating potential investment capacity, remember that households also need funds to cover recurrent costs related to shelter, such as service charges and maintenance costs (water and power, among others).
- Avoid stretching too high the potential percentage of income a household may make available for housing. Otherwise, program beneficiaries might fail to meet the monthly amortization. The TWG must decide which affordability assumptions to use. Generally, the potential percentage of income for housing should not exceed 20% of the household’s gross monthly income.

#### 4.4 Compute for housing loan affordability of each income groups.

Establish the maximum affordable housing loan of each income groups by factoring in the monthly amount for potential capital costs for housing the prevailing loan terms (repayment period and interest rate) and the annuity factor.

It is relevant for the TWG to determine which housing financing options, from among those developed and adopted in the LSP, are within the affordability levels of the target constituents.

##### Computation

- a. Multiply the Typical Monthly Income by the Potential Percentage of Income for New Housing. Multiply the product by 12 months to get the Annual Potential Capital Costs for Housing.
- b. Determine the loan terms, such as the interest rate and the repayment period in number of years. The interest rate and repayment period can be pegged on the current rate of housing loan programs of the Pag-IBIG Fund, SHFC, and other financial institutions.
- c. Once the loan terms are established, the TWG may now compute the housing loan affordability of each income group by multiplying the Annual Potential Capital Costs for Housing by a particular factor found in the Table of Annuity Factor corresponding to the loan term chosen. (Please see Annex 9 for Annuity Factor and also for an Alternative Method of Computing for Affordable Housing Loan and Monthly Amortization.)

Table 6 below presents an example of a filled-up worksheet on Affordability Analysis & Land Need Calculation.

## AFFORDABILITY ANALYSIS &amp; LAND NEED CALCULATION

Income Group	1st	2nd	3rd	4th	5th	6th
Monthly income in Philippine pesos (minimum, maximum)	8,000 and below	8,001–15,000	15,001–30,000	30,001–45,000	45,001– 60,000	Over 60,000
% of new units	45%	21.75%	25.5%	4.85%	2.10%	0.80%
Number of units 11,803	5,311	2,567	3,010	572	248	95
Typical monthly income	5,000	11,500	22,500	37,500	52,500	65,000
Potential % of income for upgrading or new housing	8%	8%	10%	10%	12%	12%
<b>Potential capital cost for housing:</b>						
Monthly	400	920	2,250	3,750	6,300	7,800
Annual	4,800	11,040	27,000	45,000	75,600	93,600
<b>Loan Terms</b>						
Interest rate	6%					
Repayment period, years	30					
Affordable housing loan	66,072.00					
Affordable option	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
	Rent-to-Own scheme of a 5-story LRH Ground floor for commercial use Floors for 2–5 or residential use Floor area: 20 sqm. About 64 residential units per building Land development cost at Php600/sqm Housing unit cost at Php14,000/sqm. Indirect cost for documentation and building maintenance: 20% Total Unit Cost = Php401,949.60 per unit Monthly rent or amortization starts at Php400 and will be re-priced every 3 years (see Annex 13 for schedule of amortization)	40 sqm developed land which includes concrete roads, covered drainage, septic vaults, electrical connection With 18 sqm shell row house costing Php150,395.84	54 sqm developed land which includes concrete roads, covered drainage, septic vaults, electrical connection With 24 sqm shell row house costing Php344,652	60 sqm developed land which includes concrete roads, underground drainage, septic vaults, electrical connection With 32 sqm complete row house costing Php522,144	72 sqm developed land which includes concrete roads, underground drainage, septic vaults, electrical connection With 36 sqm complete duplex costing Php795,312	90 sqm developed land which includes concrete roads, underground drainage, septic vaults, electrical connection With 36 sqm single-detached complete house costing Php914,256
Land Area per unit	7.81*	57.14	77.15		103	129
Lot size	26.033 sqm*	40	54	60	72	90
Required land (in hectares)	13.83	14.67	23.22	5.00	2.60	1.23
<b>Land requirement for those below poverty threshold (assume Php8,000 as poverty threshold): <u>13.83 hectares</u></b>						
<b>Total land need for all income groups in 2013–2022 = <u>60.55 hectares</u></b>						
<i>*Note: For computations of land area per unit and lot size of the First Income Group, please refer to Box 29.</i>						

Table 6



Affordable housing options must be developed to ensure that every income group may be able to afford a house within their means.

The figure for Monthly Potential Capital Cost for Housing can be used to determine affordability for monthly rent (see Box 11). This is particularly useful for those in the lower income groups whose affordability level may not be enough to purchase a house-and-lot package and are usually not qualified to avail themselves of housing loans. Instead of a house and lot package, rental housing can provide them with a dwelling unit that will shelter them from natural and man-made hazards.

#### Computing for Potential Capital Cost for Housing and Affordable Housing Loan

##### Formula:

**Annual Potential Capital for Housing** = Typical Income x Potential % of Income for New Housing x 12 Months

**Affordable Housing Loan** = Annual Potential Capital for Housing x Annuity Factor

##### Given:

Typical Income = Php5,000

Potential % of income for new housing = 8%

Annuity factor for 6% at 30 years repayment period = 13.765

##### Solution:

**Annual Potential Capital Cost for Housing** = Php5,000 x 8% x 12 months = **Php4,800**

**Affordable Housing Loan** = Php4,800 x 13.765 = **Php66,072**

Box 11



Shelter plan must ensure the provision and sustainability of basic social services.

#### 4.5. Develop affordable housing options.

After determining the affordability levels of each of the income groups, the next step is to determine what affordable housing options can be provided accordingly. The housing options should ideally include a dwelling unit, either to be rented or leased on a long-term basis, or amortized. The “lot only” option is discouraged since this cannot guarantee the provision of decent shelter nor can it ensure the safety of the target clientele from natural and man-made hazards.

The LGU Planners should make cost estimates of each of the possible solutions based on the minimum allowable standards. Cost estimates should include all direct and indirect charges. Total direct cost includes cost of land, land development, and house construction, while indirect cost refers to professional fees, taxes, processing fees and licenses, administrative overhead costs, marketing fees, and the like.

In the example in Table 7 below, the indirect cost indicated is 12% of the total direct cost of all projects with land component and 20% for low-rise/medium rise building.

**AFFORDABLE HOUSING OPTIONS**

Income Group	Main Options	Lot Size (m2)	Total land need / unit (m2)	Land cost (Php)		Land development cost (Php)		House construction cost (Php)		Indirect cost /unit	Total Unit Cost (Php)
				/m2	/unit	/m2	/unit	(Php)	/unit		
First Income	Rent-to-own scheme of a 5-storey LRH Ground floor for commercial use 2nd to 5th floors for residential use Floor area: 20 sqm Estimated at 64 residential units per building Total unit cost: Php405,940.80 per unit Rent or amortization starts at Php400 a month and will be re-priced every 3 years (see Annex 13 for schedule of amortization)	7.81	26.033	Land cost will not be recovered since only the units will be sold		600	15,618	14,000	319,340	66,991.60	401,949.60
						Complete amenities including shared parking area			20 sqm floor area + 2.81 sqm common area = 22.81 sqm x Php14,000	20% Indirect cost for documentation and building maintenance.	
Second Income	Developed land which includes concrete roads, covered drainage, septic vaults, electrical connection With subsidized 20 sqm shell row house	40	57.14	800	45,712	500	28,570	3,000 for materials	60,000	12%	150,395.84
								With housing unit either from Gawad Kalinga, Habitat for Humanity, or other similar organizations where beneficiaries are charged only for the housing materials cost but the labor is through "sweat equity" rendered by the homeowner.		16,113.84	
Third Income	Developed land which includes concrete roads, covered drainage, septic vaults, electrical connection With 24 sqm shell row house	54	77.15	1,000	77,150	500	38,575	8,000	192,000	36,927	344,652
Fourth Income	Developed land which includes concrete roads, open drainage, septic vaults, electrical connection With 32 sqm loftable row house	60	86	1,000	86,000	700	60,200	10,000	320,000	55,944	522,144
Fifth Income	Developed land which includes concrete roads, open drainage, septic vaults, electrical connection With 36 sqm loftable duplex	72	103	2,000	206,000	700	72,100	12,000	432,000	85,212	795,312
Sixth Income	Developed land which includes concrete roads, underground drainage, septic vaults, electrical connection With 36 sqm single-detached complete house	90	129	2,000	258,000	700	90,300	13,000	468,000	97,956	914,256
<p>Notes:</p> <p>1) Sum up all the hectares needed by the first to the sixth income groups to arrive at the total land requirement for all income groups, which is 60.55 hectares in the example (see Table 10).</p> <p>2) For computations of lot size, total land need, and floor area of the First Income Group, see Box 29.</p>											

Table 7

Low-rise buildings and medium-rise buildings have higher indirect cost because of expenses related to the maintenance of common areas, such as the lobby, hallways, and stairways.

The total cost of the various affordable housing options will depend on site location, level of land development to be introduced and the housing design. For instance, the construction of a macadam road with covered canal drainage and a communal-piped water system would be cheaper than a paved road with underground drainage and individual-piped water connection; the construction of an unpartitioned row-house is cheaper than a single-detached complete house, even if their floor area is the same.

Best-cost estimates may be inquired with practicing engineers, architects, contractors, and developers of housing projects in the locality.

- Table 7 shows examples of affordable housing option for each income group. The objective of this portion of the plan is to ensure that the Total Unit Cost of the proposed housing options and that the does significantly exceed the computed housing loan affordability especially for the lower income groups. For the first income group, a Low-Rise Housing (LRH) Unit with a floor area of 20 sqm costing Php 401,949.60 is proposed. Note that in this example, the affordability level of this group is only up to Php 66,072.00 but the offered option costs Php 401,949.60.
- To make this housing option affordable, one strategy was to offer these units either through usufruct, long-term lease, rent-to-own scheme, or long-term loan with graduated amortization. For instance, the monthly rent or amortization can start at Php 400 or based on the first income group's monthly potential cost for housing. The rent or amortization will then be increased in subsequently the succeeding years in anticipation of an increase in the income of the target beneficiaries until the total amount is fully paid. (A sample schedule of amortization is in Annex 12). The sample housing option proposed for the second income group is a 40 sqm lot with a 20-sqm shell row-house with acost of Php 150,395.84. In this example, the policy is that the only the cost of the materials for the housing unit, will be paid by the beneficiary in the form of "sweat equity" similar to some NGO-initiated projects. Thus, this will reduce the cost of the housing unit. For the third income group, a similar shell row-house-and-lot package is offered as a possible housing option. The housing unit is slightly bigger, at 54-sqm lot and 24-sqm floor area. However, unlike in the second income group, the beneneficiary will be fully charged of the cost of housing unit. The fourth income group is offered a 60-sqm lot with a 32-sqm loftable housing unit. This provides an additional floor area once the loft is installed. The total cost is at Php 522,144.00.

- The fifth income group is estimated to be able to afford a loan for a 72-sqm lot with a 36-sqm loft able duplex. With the loft, the floor area expandable to up to 60 m<sup>2</sup>. This costs Php 795,312.00.
- The sixth income group is estimated to be able to afford a 90-sqm lot with a 36-sqm single-detached complete house, costing approximately Php 914,256.00.

All these options, which feature serviced lots, are affordable to the respective income groups. This means that no equity is required.

Note:

These computations and numbers are just examples. The LSP planners are encouraged to be creative and resourceful and to come up with their own affordable housing options applicable to the local situation.

#### Computation: The "Affordable Option for the Third Income Group" (See Table 7)

Computing for Land Cost: Total Land Need multiplied by Land Cost Per Square Meter  
 Land Cost = 77.15 sqm x Php1,000.00 = Php77,150.00

Computing for Land Development Cost:  
 Total Land Need multiplied by Land Development Cost Per Square Meter  
 Development Cost = 77.15 sqm x Php500.00 = Php38,575.00

Computing for House Construction Cost: Floor area multiplied by Construction Cost Per Square Meter  
 House Construction Cost = 24 sqm x Php8,000.00 = Php192,000.00

Computing for 12% Indirect Cost: Add Land Cost, Land Development Cost, and Construction Cost. And then compute for 12%.  
 Indirect Cost = Php77,150.00 + Php38,575.00 + Php192,000.00 = Php307,725.00 x 12% = Php36,927.00

Computing for Total Unit Cost: Add Land Cost, Land Development Cost, House Construction Cost, and Indirect Cost.

Total Unit Cost = Php77,150.00 + Php38,575.00 + Php192,000.00 + Php36,927.00 = **Php344,652.00**

Box 12

Use **LSP Worksheet No. 5 in Annex 4** for formulating "Affordable Housing Options."

- Explore the possibility of using alternative technologies and materials, which may be climate-change resilient and may cost the same or even less than the conventional ones.
- **Due to constraints in land resources for housing, especially in urban areas, low rise housing are being promoted as an option.** Models on LRHs, row-house, and incremental housing (expandable houses) can be found in **Annex 10**.
- Rental housing should be considered as an alternative, especially for the lowest income group, which may not be qualified to avail of a housing loan. The monthly rent, however, should start at a level within the computed affordability of the target beneficiaries.

### **Task 5:**

#### *Assess resource requirements vis a vis the resources available for housing*

The identification of local resources for housing is a key task of the LGU. The LGU must conduct an inventory and assessment of its available local resources such as land, infrastructure, budget, manpower, sources of construction materials, facilities, services, equipment and supplies, etc. The LGU should also list down other resources and programs of national government agencies, civil society organizations and private sector as well as international organizations that the LGU can potentially access through partnerships and networking to address the resources required for implementing the housing projects earlier identified in the situational analysis.

The LGU should also decide how it can access and mobilize these resources for the provision of land and infrastructure requirements for housing purposes. The LGU may also opt to use its power to influence the supply of or access to these resources in addressing its housing requirement.

### **Task 6:**

#### *Compute for Land Needed for Housing*

Land is the most critical among the resources required for a shelter program because it is a scarce resource and housing competes with other land uses. Current policies of the national government stress the need to conserve agricultural lands, especially irrigated or irrigable land. In the light of climate change, some tracts of land have been determined “non-buildable” or not

In compliance with RA 7279, available land should be identified for all income groups for present and future needs.

suitable for residential purposes due to the presence of hazard risks. (after Commercial and industrial activities also contend with housing requirements for land use in general. Moreover, high-income housing also competes with low-income housing with regard to land use. Thus, it is a challenge but a necessity for LGUs to identify and allocate suitable and affordable lands for socialized or low cost housing in its land use plan.

the LGU Planners have to determine the total land area needed to address the identified housing need and match this with available suitable land.

In computing the land requirement, the LGU planners should consider the affordability and preference of target beneficiaries. This will most likely vary between urban and non-urban areas.



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Shelter plan must ensure good mix of land use.

Land need for the duration of the planning period should be estimated on the basis of the different housing options as well as present design standards. The minimum lot sizes specified under Batas Pambansa 220 (BP 220) and/or under the Subdivision and Condominium Buyer's Protective Decree (PD 957), whichever is applicable, should be used as reference. For non-multilevel dwellings, at most 70% of the land area is reserved for residential lots.

Under BP 220, a 70%:30% standard ratio of saleable to non-saleable lots is the minimum standard. In certain cases less than 70% of the land area can actually be saleable due to highly sloped terrain and areas identified as high-risk or danger zones.

LGUs are encouraged to go beyond the minimum 30% allocation for open or public space. Advance and pro-active planning anticipates that a neighborhood will grow in terms of population and economic activities. Thus provision for adequate public or open space of at least 40% is recommended. This would prove to be more sustainable in the long-term in maintaining good circulation, environmental stability, and a healthy social mix. The World Health Organization recommends at least 9 square meters open space per person and should be accessible within 15 minutes' walk.

In Table 6, the total land need for all income groups is **60.55 hectares**. The process of computing the 60.55 hectares is illustrated in Box 15 below. This is computed based on the PD 957 minimum ratio of 70% : 30% vis-à-vis saleable lots to open space, for housing units with a **Floor Area Ratio (FAR) of 1**.

**Example for the Second Income Group  
(Refer to Table 9. Affordability Analysis and Land Need Calculation)**

**Solve for Land Need Per Unit**

**Formula:** Total Land Need Per Unit = Lot size ÷ 70%

**Given:** Lot Size is 40 sqm.

**Solution:** Total Land Need Per Unit = 40 sqm ÷ 70% = 57.14 sqm

**Solve for Total Land Need for Second Income Group**

**Formula:** Total Land Need (hectares) for Second Group = Total Land Need Per Unit x No. of Units Needed for 2nd Income Group ÷ 10,000 sqm

**Given:** Total Land Need Per Unit = 57.14

No. of Units Needed for 2nd Income Group = 2,567

**Solution:** Total Land Need for Second Income Group =  $\frac{57.14 \text{ sqm} \times 2,567}{10,000 \text{ sqm}}$  = 14.67 hectares

Notation: The computation above was based on the use of floor area ration (FAR) of 1. In a rapidly urbanizing city or in a high-density built area (e.g., 15,000 people per km<sup>2</sup> or 150 people/hectare or more), the recommendation is to use FAR of 2 at the minimum. In this way, the use and value of land is maximized and more housing units are produced. The maximum height of residential buildings should follow the National Building Code and the local Zoning Ordinance.

**Sample computation using FAR of 2**

Identify the available land: e.g., 12 hectares, assuming that 100% of the available land is buildable

Deduct the required area for public/open space and other uses

12 hectares less 60% (allocation for public/open space, and other common uses):

12 hectares x 0.4 = 4.8 hectares

Convert the unit to square meters (m<sup>2</sup>)

4.8 hectares x 10,000 = 48,000 m<sup>2</sup>

Deduct another 40% for common spaces (lobby, stairways, corridors, stair landing area, etc.)

48,000 m<sup>2</sup> x 0.6 = 28,000 m<sup>2</sup>

Divide by the average size of dwelling unit: 28,000 m<sup>2</sup> ÷ 30 m<sup>2</sup> = 960 units (private)

At FAR of 2: 960 units x 2 = 1,920 units

At FAR of 3: 960 units x 3 = 2,880 units

At FAR of 4: 960 units x 4 = 7,680 units

Box 15

In computing for the land need low-rise buildings,( LRBs) which are usually two to five floors, the open space should be bigger than the aggregate area of the building's footprint.

For a one-hectare lot, the ratio ranges from 30% : 70 % to 40% : 60% vis-à-vis building to open spaces and community facilities. This means that 3,000 to 4,000 sqm pertain to the building, and 6,000 to 7,000 sqm pertain to open spaces and community facilities (roads, parks, parking spaces, playground, chapel, day care center, school, health center or other facilities).

The 3,000 to 4,000 sqm area allotted for the building is further segregated into **private areas**, or dwelling units (60% or 1,800 to 2,400 sqm), and **common areas** such as hallways/corridors, lobby, stairways, and stair landings (40% or 2,400 to 2,800 sqm).

The process of computing for the land area needed for LRBs is demonstrated in Box No. 16.

Computing for the Land Need for LRBs (See Table 6: Affordability Analysis and Land Need Calculation First Income Group)	
For a one-hectare area: Six 4-story LRBs with 16 units per floor at 20 sqm floor area per unit	
30% (3,000 sqm)	<b>Housing units or private area (64% of 3,000)</b> = 1,920 sqm + 6 buildings + 16 units/floor = 20 sqm per unit or 384 units per hectare (16 units x 4 floors x 6 buildings.)
	<b>Common area: (36 % of 3000)</b> = 1,080 sqm + 6 buildings = 180 sqm per bldg for the hallways/corridors, lobby, stairways, stair landing, etc.
70% (7,000 sqm)	Open space and community facilities (parking, roads, parks, etc.)

Box 16

Sum up all the land area needed by the first to the sixth income groups to arrive at the total land requirement for all income groups.

**Steps**

**1. List Land Available for Housing**

In making an inventory of land available and suitable for housing, the LGU Planners should look at the following considerations::

**Topography.** Less earth-moving and less earth-filling to minimize the cost of land development.

**Environmental considerations.** Lands have to be buildable, as certified by the Mines and Geosciences Bureau of the Department of Environment and Natural Resources (DENR-MGB) and Department of Science and Technology (DOST) (PHIVOLCS and PAG-ASA).

**Provision of basic services.** Relatively near main power and water lines; has drainage outfall and the like.

**Access to employment opportunities and relevant institutions.** Preferably near employment or livelihood, schools, places of worship, public market, and health facilities.

**Transportation opportunities and cost.** Must be walkable or merely one ride away from the places of livelihood and community facilities indicated above.

**Land classification.** Prime agricultural land, particularly irrigated and irrigable rice lands, should NOT be included.

**Vacant.** Count only the vacant portions because such land will be used for new housing sites (relocation and new subdivisions).

The list of available land should indicate the location, land area and remark on the status or condition of the land i.e. whether vacant or partially occupied, current land use or notable feature for planning purposes.

Table 8 is an example of a filled-up worksheet on land identified as available and suitable for housing.

**INVENTORY OF AVAILABLE SUITABLE LANDS FOR HOUSING, 2012**

OWNER	LAND AREA (hectares)	LOCATION	REMARKS/ SUITABILITY/ CONDITIONS
Silay LGU	22	Bonbon, Barangay E. Lopez	Vacant
Silay LGU	1	Hda. Consolacion, Barangay Guinhalaran	Vacant
DBP	5	M&J, Barangay 5	Vacant
Gonzaga, Chona	30	Hda. Chona, Barangay Lantad	Vacant/sugarcane
Gonzaga, Paz	2	Hda. Paz, Barangay Rizal	Vacant/sugarcane
Jison, Elisa	1	Barangay E. Lopez	Vacant/sugarcane
Javellana, Ana Maria	5	Guinsang-an, Barangay Hawaiian	Vacant/sugarcane
Lacson, Stephen Michael, et. al.	5.20	Barangay Bagtic	Vacant/sugarcane
Bautista, Benjamin	12	Barangay Guimbalaon	Vacant/sugarcane
ALM Group of Farms	1.90	Barangay Rizal	Vacant/sugarcane
<b>TOTAL</b>	<b>85.10</b>		

Table 8

Use **LSP Worksheet No. 6.1 (Inventory of Available Suitable Lands for Housing, 2012)** in **Annex 4** for Land Resource Analysis

## 2. Compare Land Requirement Vis-à-vis Land Available

The LGU planner should now compare the land requirement of each of the housing projects as identified in the previous steps with the list of land available.

Table 9 is an example of a filled-up worksheet on the comparison of residential land requirement and availability. It can be noted that in this example, the land available and suitable for housing is bigger than the land requirement. This indicates that the LGU will most likely have no problem in allocating land for its identified housing projects.

### COMPARISON OF LAND NEED AND AVAILABLE SUITABLE LAND FOR HOUSING

Comparison Of Land Need And Available Suitable Land For Housing			
TOTAL LAND NEEDED (Hectares)	TOTAL LAND AVAILABLE (Hectares)	DIFFERENCE (Hectares)	REMARKS
Below Poverty Threshold = 13.83	85.10	24.55	Land is sufficient
Economic = 46.72			
TOTAL = 60.55			

Table 9

In case when available land is insufficient to cater to the housing options proposed, the LGU planners may opt to choose housing options that cater to higher densities (e.g., low-rise buildings) or strategize on how to increase the supply of available land (i.e., joint-venture projects with landowners and developers).

Use **LSP Worksheet No. 6.2 in Annex 4** for Comparison of Land Need and Available Suitable Land for Housing.

### 3. Estimate the Need for Infrastructure And Basic Services For Housing

The UDHA mandates the LGU and the NHA, together with private developers and concerned agencies, to provide basic services and facilities (infrastructure) for socialized housing and resettlement areas. These basic services and facilities include the following:

- Potable water;
- Power and an adequate power distribution system;
- Garbage collection and disposal
- Sewerage facilities and sanitation systems;
- Access to primary roads and transportation facilities;
- Drainage system

The housing needs and affordability assessment provides the basic information needed to estimate present and future basic services required for socialized housing and resettlement areas. From the earlier calculations on affordability, the potential demand for different housing options can be identified.

The identification of the **Infrastructure and Basic Services Resources Needed for Housing** should be based on two things: first, the computed number of new units due to accumulated housing need and population growth, and; second, infrastructure upgrading needs.

New units to be built or produced due to accumulated housing need and population growth will need all-new infrastructure: new roads, new drainage, new power and water lines, etc. On the other hand, the need for an upgrading of infrastructure will vary. Some households may need only one or a combination of the various infrastructure requirements for upgrading.

Both new units and upgrading needs are to be programmed annually. Thus, the basis for the annual infrastructure need is the number of units programmed to be produced or the number of households to be provided with such services per year. This is reflected in the computations in LSP Worksheet No. 2: Assessment of Shelter Needs, in Annex 4.

**The Infrastructure and Basic Services Available for Housing** is estimated based on the following:

- the capacity of the service providers, such as the utilities companies, for power and water
- the capacity of the LGU for garbage collection and disposal, sanitation, roads, and drainage systems within the housing sites

### 4. Compare Infrastructure and Basic Services Required for Housing vis-à-vis What is Available

A comparison of need versus available infrastructure resources and basic services is reviewed annually. Some service providers may have sufficient resources to address the need, but others may not be able to respond to the volume of the service as programmed by the LSP planners. These problems should be clearly identified so that strategies on how to solve the deficiencies will be generated.

**Table 10** presents an example of an analysis of the capacity of the electric utility provider to supply power to households within the 10 year planning period. It shows that the electric utility provider has the capability to supply power to 32,000 households, which is more than sufficient to meet the need of **22,962**.

But if assessed on an annual basis, the capacity for the period 2013 to 2016 is not sufficient to respond to the need. The LSP planners can strategize by either delaying the program period of those needing power upgrading to a later period, or by lengthening the program period for the upgrading of power facility from 4 years to 7 or 8 years. This way, the service provider is given the wherewithal to cope with or address the need.

**Use LSP Worksheet 7.1 (Assessment of Power Need vs. Capacity of Power Provider) in Annex 4 and as basis for filling out worksheets for water, sanitation, drainage, roads, and garbage.**

#### ASSESSMENT OF POWER NEED VS. CAPACITY OF POWER PROVIDER

Year	Service Provider	Capacity Of Service Provider Annually (Number Of Households Served)	Number of Units Needed Annually			REMARKS
			NEW UNITS Refer to filled-out Worksheet 2.3: Total New Units Needed Due to Backlog and Population Growth	UNITS FOR UPGRADING Please refer to filled-out Worksheet 3: Summary of Upgrading Needs	TOTAL ANNUAL NEED	
2013	Ceneco	2,500	1,024	2,789	3,814	
2014	Ceneco	2,500	869	2,790	3,659	
2015	Ceneco	3,000	798	2,790	3,588	
2016	Ceneco	3,000	838	2,790	3,628	
2017	Ceneco	3,500	904		904	
2018	Ceneco	3,500	1,151		1,151	
2019	Ceneco	3,500	1,342		1,342	
2020	Ceneco	3,500	1,347		1,347	
2021	Ceneco	3,500	1,844		1,844	
2022	Ceneco	3,500	1,686		1,686	
		<b>TOTAL = 32,000</b>	<b>11,803</b>	<b>11,159</b>	<b>22,962</b>	

*Note: LSP worksheets 7.2 (water), 7.3 (sanitation), 7.4 (drainage), 7.5 (roads), and 7.6 (garbage) will be filled out similarly.*

Table 10

Similar tables and treatment of data and assumptions should be applied in analyzing **water** and **garbage** disposal. This recommendation is made since the provision of power is akin to that of water: their provision is highly dependent on the capacity of the provider. Garbage disposal is similarly dependent on the capacity of the LGU to collect the garbage and the capacity of the existing dump site or sanitary land fill to accommodate the garbage.

The provision of **drainage** and **sanitary facilities, however**, should be treated as upgrading needs. Roads are computed as upgrading need factored in with the provision of access roads, if applicable.

**Note that the drainage, roads, and sanitary facility in new sites or new units should no longer be gauged against the capacity of the provider. This is because roads and drainage costs were embedded in the estimated cost of land development. Also, the sanitary facility is already factored in the cost of house construction.**

Table 11 is an example of a table for sanitary facility resource analysis. It is shown that the total capacity of the service provider, which is **4,800** within the span of 6 years, is more than sufficient to meet the need, which totals **4,148**.

**ASSESSMENT OF SANITARY FACILITY NEED VS. CAPACITY SERVICE PROVIDER**

YEAR	SERVICE PROVIDER	CAPACITY OF SERVICE PROVIDER ANNUALLY (Number of HHs served)	NUMBER OF UNITS NEEDED ANNUALLY			REMARKS
			NEW UNITS Please refer to filled-out Worksheet 2.3: Total New Units Needed Due to Backlog and Population Growth	UNITS FOR UPGRADING Please refer to filled-out Worksheet 3: Summary of Upgrading Needs	TOTAL ANNUAL NEED	
2013	LGU	800	None (All new units are with housing component. The sanitary facility is already included in the estimated cost of house construction)	691	691	
2014		800		691	691	
2015		800		691	691	
2016		800		691	691	
2017		800		692	692	
2018		800		692	692	
<b>TOTAL = 4,800</b>				<b>4,148</b>	<b>4,148</b>	

Table 11



Financial resources to build affordable houses are considered in the shelter plan.

## 5. Estimate Housing Finance Requirement

The estimated housing finance requirement is arrived at by calculating the amount of funds needed to implement the housing component of the shelter plan for the following (see Table 12):

- land acquisition
- land development, including installation of basic services
- house construction

The total value of financing required to meet the housing needs of all income groups can be calculated using the data on affordable options. By identifying the sources of these funds, the value of assistance required under different government housing programs can be assessed.

**Table 12** is an example of a filled-up table for assessing the Financial Requirements for New Housing. It reveals that the total amount needed to respond to the new units needed by **11,803** households within the 10-year planning period amounts to **Php4,162,178,294.08**. This is derived by multiplying the number of units for each income group with its corresponding unit cost. The sum of all these is the Total Estimated Financial Requirement.

**Use LSP Worksheet No. 8.1 (Estimated Financial Requirements for Housing Provision, 2013-2022) in Annex 4.**

Table 12 is an example of a filled-up worksheet on housing finance requirements.

**ESTIMATED FINANCIAL REQUIREMENTS FOR HOUSING PROVISION, 2013-2022**

Estimated Financial Requirements for Housing Provision, 2013-2022				
Income Group	Option	Number of Units	Unit Cost (Php)	Total Cost (Php)
1st	<ul style="list-style-type: none"> <li>Public rental 5-storey low-rise housing (LRH)</li> <li>Approximately 64 residential units per building (total for 2nd to 5th floors, ground floor for commercial use)</li> <li>Floor area: 20 sqm</li> </ul>	5,311	401,949.60	2,134,754,325.60
2nd	<ul style="list-style-type: none"> <li>Developed land which includes concrete roads, covered drainage, septic vaults, electrical connection</li> <li>With 20 sqm shell row house</li> </ul>	2,567	150,395.84	386,066,121.28
3rd	<ul style="list-style-type: none"> <li>Developed land which includes concrete roads, covered drainage, septic vaults, electrical connection</li> <li>With 24 sqm shell row house</li> </ul>	3,010	344,652.00	1,037,402,520.00
4th	<ul style="list-style-type: none"> <li>Developed land which includes concrete roads, underground drainage, septic vaults, electrical connection</li> <li>With 32 sqm loftable row house</li> </ul>	572	522,144.00	298,666,368.00
5th	<ul style="list-style-type: none"> <li>Developed land which includes concrete roads, underground drainage, septic vaults, electrical connection</li> <li>With 32 sqm loftable duplex</li> </ul>	248	795,312.00	197,237,376.00
6th	<ul style="list-style-type: none"> <li>Developed land which includes concrete roads, underground drainage, septic vaults, electrical connection</li> <li>With 36 sqm single-detached complete house</li> </ul>	95	914,256.00	86,854,320.00
<b>TOTAL = 11,803</b>				<b>4,140,981,030.88</b>

Table 12

**6. Identify Potential Sources of Housing Finance**

Table 13 below can be used to present the agencies that can be access for financing, their respective programs, and the program components. The column on “Cost” is optional since this may be dependent on the proposal submitted and approved, or on the ceiling for each program or project component. Examples of programs and their components are also shown below.

**POTENTIAL SOURCES OF FUNDS FOR SHELTER PROVISION**

Agency/Organization	Name Of Program	Component	Cost (Optional)
LGU	LDRRMF (RA 10121) Annual budget GAD fund	Site development (drainage, embankments, early warning systems); Trainings (EWS, GAD); Land banking; Climate-resilient and GAD-sensitive LSP process	
NHA	Resettlement Assistance Program for LGU Local housing program (district housing) Housing materials assistance	Land development; House construction	
HDMF	Developmental loan Home improvement Individual land purchase	Land development; House construction	
SHFC	Localized Community Mortgage Program	Lot purchase; Land development; House construction/improvement	
ODA, MFIs, Foreign Assistance	Shelter-related programs	Housing; House construction; Technology support; Training; Site development; Basic services; Facilities	
DSWD	Core housing program	Materials; House construction loan	
GFIs	MDF Other shelter-related programs	Land acquisition; Basic services for MDF; Housing; House construction; Technology support; Site development; Facilities	
Developers	Balanced housing compliance		
Beneficiaries/families	Equity	Cash; Labor	
Private Sector	CSR		
Others (specify)			
<b>TOTAL</b>			

Table 13

**Use LSP Worksheet 8.2 in Annex 4 (Potential Sources of Funds for Shelter Provision)** in identifying possible sources of housing finance.

## 7. LSP Steps in a Post-disaster Context

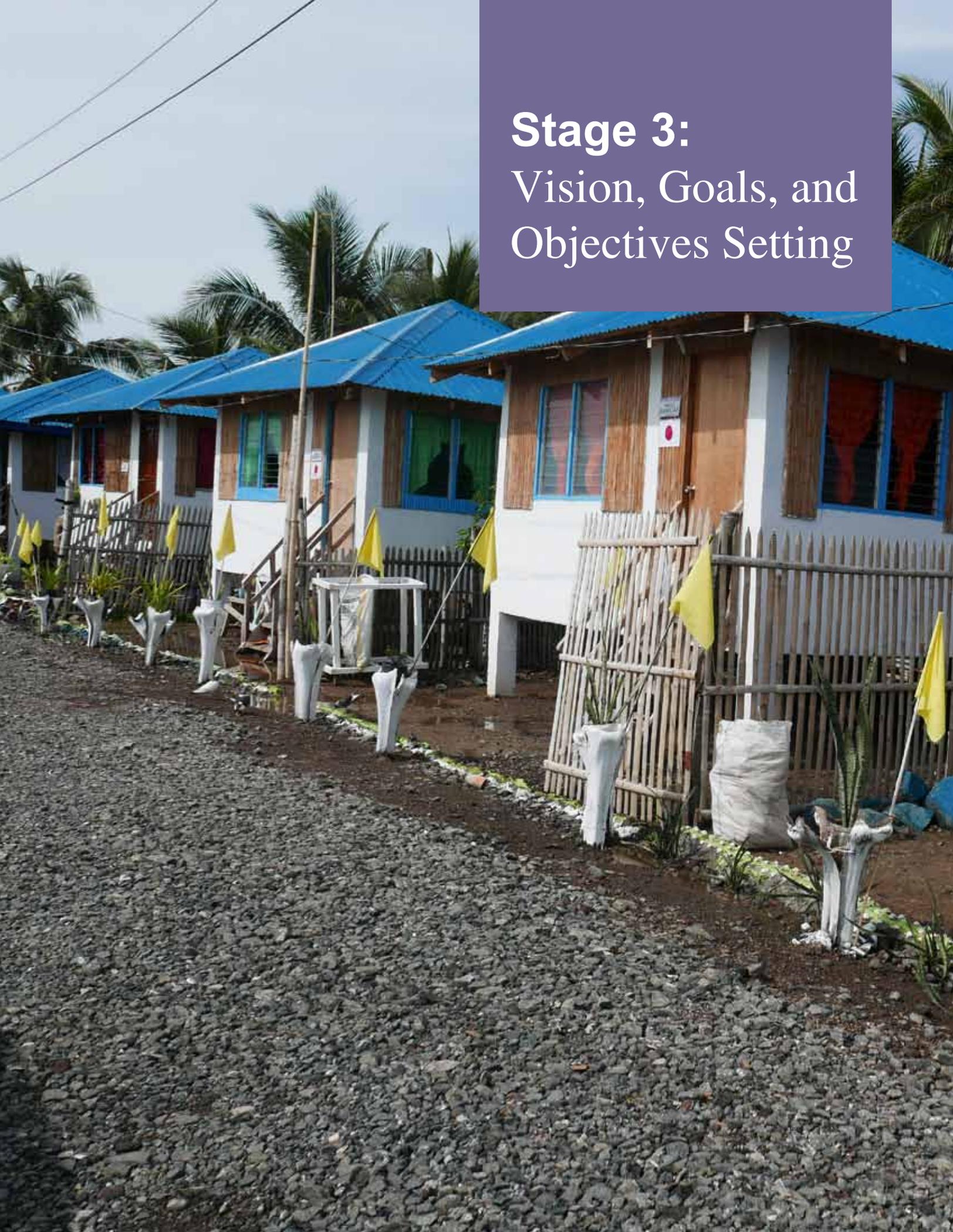
**SUGGESTED TOOL**

(Process: Could be desk work for the technical working/planner or answered in a workshop)

ADAPTIVE CAPACITY ASSESSMENT CRITERIA (EXAMPLE)	YES	NO	WHY
<b>AWARENESS</b>			
Are stakeholders in the area /sector aware that there are current/potential impacts of climate change?			
Is there an ability to communicate directly with the sector/area affected (e.g., basic communication infrastructure, a designated key point of contact, regular interaction, etc.)?			
Are decision makers aware of a.) climate change and b.)potential impacts in your jurisdiction?			
<b>KNOWLEDGE</b>			
Has this area/sector undertaken previous efforts to study or address the climate change driver and potential impact?			
Are there existing processes that you can integrate with?			
Are there existing area/sectoral plans, including emergency response plans, that can be referred to?			
Are people in this area/sector literate , or do they require oral communication methods (e.g., radio programs, door to door campaigns, announcements at community gatherings)?			
<b>RESOURCES</b>			
Do you have adequate staff and allocated time to plan and implement adaptation actions?			
Do you have access to adequate financial resources and funding?			
Do people in the affected area have access to safe, clean drinking water in the event of a hazard occurrence?			
Is there political willingness to allocate resources to build adaptive capacity?			
Do the people in the affected area have resources to respond to a climate related hazard (e.g., access to basic transportation, adequate rations, ability to relocate temporarily, basic shelter)?			
<b>SKILLS</b>			
Are there specific agencies, community groups, and/or NGOs that have the mandate and skills to focus on the specific sector/area?			
Are there trained emergency response teams for this sector/area?			
Are there notable community/neighbourhood “leaders” that can quickly organize people in the event of a hazard occurrence?			
Are there adequate medical services in close proximity?			
<b>INFRASTRUCTURE &amp; RESOURCES</b>			
Is there adequate transport, water infrastructure, sanitation, energy supply and management?			
Are major infrastructure and/or facilities located in hazard prone areas?			

Box 17

# Stage 3: Vision, Goals, and Objectives Setting



## STAGE 3: Vision, Goals, and Objectives Setting

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*The LSP can be attendant to the CLUP, especially since it will be using the same data, baselines, and sectoral studies as the CLUP. But it also remains a standalone process, which delves intricately into long-term housing computations, projections, affordability analysis, and needs.*

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**R**eferencing and/or reviewing the LGU development vision and goals as stipulated in the Comprehensive Land Use Plan (CLUP) shall be done at this stage. This will allow for the calibration of the shelter development targets (that would be defined in this stage) and action plan with the LGU's overall vision, existing development agenda and priorities (as stated in its CLUP and CDP and/or its Executive Legislative Agenda and other related plans). This is an essential step in preparing the LSP because it provides the LGU planners and evaluators of the housing program with a clear perspective of the desired change in the community, the processes involved and the contribution of the various stakeholders

Guided by the analysis of the housing situation (specifically the identified and computed shelter needs) and the analysis of affordability and resources, the LGU planners will now proceed to the setting of goals/ objectives on addressing shelter needs. Note that the goal(s) should be anchored on the overall vision of the city or municipality.

Early and sustained consultation with concerned stakeholders in the preparation of the LSP is important to ensure that target communities understand, contribute to, and support the housing goals and objectives for their community. Likewise, this will be a venue to generate support from industry and government stakeholders in the LSP implementation.

## Vision, Goals and Objectives



### VISION

In crafting the Local Shelter Plan, the vision stated in the Comprehensive Land Use Plan (CLUP) will be used as a primary input since the LSP is one of the subsector plans of the CLUP and CDP in the context of safe and resilient housing. The vision provides for “descriptors” such as in the example below:

**People of Silay City.** Caring, family-oriented, and peace-loving people who are proud of their cultural heritage and enjoying access to adequate public services.

**Silay City.** A modern, progressive, world-class city.

**Economy and environment.** A vibrant economy and a sustainable environment.

### GOAL

A **goal** is the end aimed at, the point toward which efforts are directed. Goals are broad, long-term aims geared toward the realization of a vision and may not be strictly measurable or tangible. A goal is formulated based on the “descriptors” mentioned in the vision.

Based on the descriptors in the example below, two goals related to **shelter** were formulated. It is deemed that these goals, once met, will contribute to the realization of the vision of the city.

**Example**

**VISION**

Silay City – a modern, progressive, world-class city with a caring, family-oriented, and peace-loving people who are proud of their cultural heritage, and enjoying a vibrant economy, a sustainable environment, and access to adequate public services.

**GOALS**

To provide decent, affordable, and disaster risk-resilient and climate change-adaptive shelter with adequate facilities toward the formation of a livable and socially responsible residential community.

To institutionalize the mechanism which will implement the Silay City Shelter Plan and other re-lated programs, projects, and activities.

**OBJECTIVES**

An objective is something that one's efforts or actions intend to attain or accomplish. They can be short-range to mid-term. With regard to the LSP formulation, objectives can be synonymous to targets that are specific, quantifiable, realistic, and measurable over a specified period of time. While goals are anchored on the vision, objectives are geared toward the attainment of the associated goal.

Below are examples of objectives formulated based on the preceding examples on Shelter Needs Assessment, Affordability and Resource Analysis.

**Goal No. 1.** To provide decent, affordable, and disaster risk-resilient and climate change-adaptive shelter with adequate facilities toward the formation of a liveable and socially responsible residential community.

**Objectives related to Goal No. 1:**

1. To develop 60.55 hectares of land for housing and resettlement from 2012 to 2020;
2. To reduce the displaced households, as targeted annually between 2013 and 2022 ;
3. To reduce the doubled-up households by no less than 51 units annually, from 2016 until 2022;
4. To bring down the number of households needing land tenure upgrading, as targeted annually from 2013 to 2017;
5. To upgrade existing roads or provide access roads, as targeted annually from 2014 to 2016;
6. To upgrade existing drainage systems or provide drainage, as targeted annually from 2014 to 2016;
7. To provide access to power connection to 22,962 households from 2013 to 2016;
8. To provide or upgrade access to potable water to 19,012 households from 2013 to 2018;
9. To provide or upgrade sanitation facilities to 691 households annually from 2013 to 2018;
10. To ensure proper garbage disposal of all households, starting 2013, and;
11. To encourage the structural upgrading of 230 units per year of dilapidated and condemned houses as well as houses needing major repair, from 2013 to 2022.

Note: Refer to examples of Annual Targets in Annex 4 (Worksheets) :  
 LSP Worksheet No. 2.1 - Displaced Households  
 LSP Worksheet No. 3.0 - Households Needing Tenure Upgrading, Road and Drainage Upgrading

There may be additional objectives in line with Goal No. 1, but the 11 objectives above should be included. It can be reworded or enhanced, and the targets and schedules can be revised in line with the program period set by the LSP planners for each item (doubled-up, displaced, homeless, infrastructure, tenure and structures).

The LSP planners are encouraged to make specific targets (objectives) per year based on the area or project, as prioritized. If the data are not area-specific or project-specific, however, the annual target may be derived by dividing the total need by the number of years (program period) needed to address the need.

If there is more than one goal, objectives related to the rest of the goals may be formulated in line with the intended aims.

# Stage 4: Strategies Generation



## STAGE 4: Strategies Generation

**A**fter a thorough analysis of the local housing and urban development concerns and the determination of the shelter needs of the locality, the LGU planners can now proceed to designing strategies to address the identified housing needs, taking into consideration the resources available and the affordability level for housing of the communities.

In formulating shelter strategies, the planners should consider the following

1. **Institutional Mechanism.** What is the process for the approval of the LSP? Does the LGU have an operational Local Housing Board or similar body that will approve the LSP and address related housing and urban development policies and concerns? Is there a local housing office or designated local housing official or staff that will be responsible in developing, implementing and monitoring the implementation of housing policies, programs, projects and activities of the LGU?
2. **Budget.** Where will the LGU source the funds and other resources needed to implement the housing programs and projects? What is the process in order for the LGU to source and/or allocate funds and other resources for identified housing programs and projects?
3. **Policies and Programs.** What local policies, programs and guidelines need to be enacted or developed to implement or support the housing strategies identified? How can the LSP be incorporated or harmonized with the other local plans such as the CLUP, CDP and the Annual Investment Plan of the LGU?
4. **Stakeholders.** Who are the priority beneficiaries? How will the LGU prioritize and coordinate with the target beneficiaries to engage their participation in the housing projects and activities? Which government agencies, civil society organizations or private sector groups can be tapped as partners in the implementation of the housing programs and projects?

**Strategy Formulation** refers to the process of choosing the most appropriate course of actions for the realization of the city or municipal shelter sector development goals and objectives, and thereby contributing to the overall vision of the city/municipality.

A good strategy must include a clear idea of **what** is to be achieved and **how** it is to be achieved.

Strategies include policies, plans, programs, projects and activities that will lead to the realization of the targets and objectives set by the LGU. They must be feasible, realistic, and achievable by the LGUs concerned in order to be implementable and sustainable.

The options on the housing strategies that are available or applicable for each local government will depend on local circumstances. For instance, highly urbanized cities will have a totally different environmental setting and shelter needs that will require different shelter strategies compared to those of urbanizing cities or rural municipalities. As such, each LGU will have to develop its own approach to addressing the housing needs of its constituents that considers local dynamics.

In the formulation of shelter strategies, it will be best for the LGU to study the implementation of previous and existing development programs and research on international and local best practices that may be applicable to the local situation.

The strategies to be formulated should be anchored with and should result in the attainment of targets/objectives set earlier. The strategy should detail the process to attain the objectives which includes the identification and deployment of resources to implement the strategy selected.



STRATEGY FORMULATION CONCEPTUAL PROCESS:



Graph 2

Let us use the following objective in the example in the previous chapter.

**Objective 1: To develop 60.55 hectares of land for housing and resettlement from 2012 to 2020;**

To attain the objective, development of 60.55 hectares of land;, the LGU may employ various strategies to include land inventory, land access, access to financing and design of housing typologies.

- a. Land Inventory.** The LGU may need to do land research using secondary data (i.e. review of tax mapping, LGU multi-hazard maps) , conduct site evaluation of existing communities for resettlement, and identify future residential areas to that are suitable areas for housing and resettlement purposes, and undertake profiling and prioritization of housing sites for development.
- b. Land Access.** The LGU will have to decide how to avail the land to be developed for housing and resettlement. The strategies may include land banking, direct purchase, lease or usufruct, joint venture agreement with land owners or even expropriation.
- c. Access to financing.** This includes assessment of the various options available to the LGU to finance the housing project from local budget and through partnerships with other national agencies, private sector and other stakeholders.

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*Using existing land access laws as a springboard for local shelter planning, it becomes incumbent on LGUs to develop strategies that address any gaps or challenges within these laws.*

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It is important that local housing strategies are closely linked to the city/municipal council’s processes or incorporated in existing strategic processes and plans of the LGU. In case housing issues are not confined within the city/municipality, it may make sense to collaborate with other concerned LGUs to develop complementary responses to housing needs at the provincial or regional level.

In the formulation of shelter strategies, it will be best to undertake consultations with various stakeholders to know their issues and concerns, get their inputs on the proposed project, secure community acceptance, even develop partnership with the community on the project implementation to promote community ownership of the proposed projects.

The table below enumerates some of the strategies that LGUs may employ to attain this housing objectives depending on the local circumstances.

STRATEGY	PROGRAM/PROJECT/ACTIVITY
<b>Establishment of Institutional Mechanisms</b>	<ul style="list-style-type: none"> <li>• Creation/Reactivation of the Local Housing Board (LHB)</li> <li>• Creation of a Local Housing Office/ Designation of a Local Housing Officer/s</li> <li>• Capacity building of the Local Housing Board, housing committees, housing officials, project management teams</li> <li>• Research and data gathering</li> </ul>
<b>Formulation of Local Housing Policies in support of the LSP</b>	<ul style="list-style-type: none"> <li>• Approval and adoption of the LSP by the City/Municipal Council</li> <li>• Inclusion of identified housing programs and projects in the City Development Plan and Annual Investment Plan</li> </ul>
<b>Public Consultation/Participation</b>	<ul style="list-style-type: none"> <li>• Beneficiary Registration</li> <li>• Social preparation and mobilization</li> <li>• Information and education campaign (IEC)</li> </ul>
<b>Identification and Acquisition of Land for housing and resettlement</b>	<ul style="list-style-type: none"> <li>• Land Inventory <ul style="list-style-type: none"> <li>- Land Research and Data gathering</li> <li>- Profiling and Prioritization</li> <li>- Screening/initial site assessment for suitability and feasibility for acquisition and housing development</li> </ul> </li> <li>• Land Banking</li> <li>• Land Acquisition <ul style="list-style-type: none"> <li>- Direct Purchase of Land</li> <li>- Land Donation</li> <li>- Dacion En Pago</li> <li>- Land Swapping</li> <li>- Expropriation</li> <li>- Usufruct</li> <li>- Proclamation</li> <li>- Special Patent</li> <li>- Developers' compliance to 20% Balance Housing</li> <li>- Joint Venture Agreement with Province/other Government agencies/Private Sector</li> </ul> </li> </ul>
<b>Provision of Upgrading Programs for Informal Settler Families in safe areas</b>	<ul style="list-style-type: none"> <li>• Upgrading of Tenure Security <ul style="list-style-type: none"> <li>- SHFC 's Community Mortgage Program</li> <li>- Pag-IBIG's Group Land Acquisition and Development (GLAD) Program/ Group Housing Loan Program</li> <li>- Residential Free Patent under RA 10023 s. 2009</li> <li>- DENR Special Land Use Permit</li> </ul> </li> <li>• Site Upgrading <ul style="list-style-type: none"> <li>- Reblocking</li> <li>- Provision of basic community facilities and amenities (i.e., power, water, roads and drainage)</li> <li>- Implementation of climate change adaptation technologies</li> </ul> </li> <li>• Structural Upgrading <ul style="list-style-type: none"> <li>- Incremental housing development (i.e., CMP Phase 3, home improvement)</li> <li>- Pag-IBIG end-user financing</li> <li>- Housing Microfinance</li> </ul> </li> </ul>
<b>Financing Housing Construction and Development</b>	<ul style="list-style-type: none"> <li>• LGU Financed Housing Projects (locally financed thru Annual Investment Plan, imposition of special taxes such as socialized housing tax, etc.)</li> <li>• Accessing Financing Programs of Shelter Agencies and other Government agencies: <ul style="list-style-type: none"> <li>- NHA: Resettlement Assistance for LGUs</li> <li>- SHFC: Community Mortgage Program</li> <li>- HDMF: Group Housing Program</li> <li>- Land Bank: Development Loan</li> <li>- DSWD: Core Shelter Assistance Program</li> </ul> </li> <li>• Partnerships with civil society organizations, local and international NGOs and Development Agencies <ul style="list-style-type: none"> <li>- UN Habitat</li> <li>- Gawad Kalinga</li> <li>- Habitat for Humanity</li> </ul> </li> <li>• Availing of Developers' compliance to 20% Balanced Housing requirement</li> <li>• Joint Venture with Private Developers</li> </ul>

STRATEGY	PROGRAM/PROJECT/ACTIVITY
<b>Implementation of different housing typologies</b>	<ul style="list-style-type: none"> <li>• Row-house/Duplex</li> <li>• Low Rise/Medium Rise Building</li> <li>• Mixed-Use Development</li> <li>• Horizontal development</li> <li>• Public Rental Housing</li> </ul>
<b>Project Planning and Coordination with various stakeholders</b> <ul style="list-style-type: none"> <li>• Infrastructure and Basic Services</li> </ul>	<ul style="list-style-type: none"> <li>• Coordination with local power and water providers on basic services</li> <li>• Inclusion in the CDP and AIP</li> <li>• Inclusion in NGAs and provincial development plans</li> <li>• Partnership with NGOs and development agencies</li> </ul>

### Access to Land Suitable for Housing

**LAND BANKING** – According to Section 3 of the Urban Development and Housing Act of 1992, “land banking” refers to the acquisition of land at values based on existing use in advance of actual need to promote planned development and socialized housing programs

**JOINT-VENTURE BETWEEN THE LGU AND THE LAND OWNER** – If the LGU does not have sufficient land for housing nor funds to purchase the same, it may opt to go into joint-venture projects with private landowners in developing sites for housing purposes. This way, the housing needs of its constituents are addressed jointly by the LGU and the private sector.

**EXPROPRIATION** – “the act of officially taking away private property from its owner for use by the government”

Expropriation is usually the last recourse of the LGU in acquiring land because it entails litigation. This necessitates spending time and money. This also results in a strained relationship between the landowner and the LGU.

Box 20

### Housing Finance

**Impose social housing tax.** The LGU may impose an additional one-half percent (0.5%) tax on the assessed value of all land in urban areas in excess of Fifty Thousand Pesos (P50,000.00) as provided for under Section 43 of RA 7279. The proceeds can be used to fund housing projects.

**Establish efficient estate management to ensure sustainable cash flow.** To make housing programs sustainable, the projects must not be doled-out. Cost recovery must be practiced in order to sustain the finances of the LGU. This can be done if an efficient estate management is in place.

**Partner with housing agencies** such as the NHA, SHFC, institutions such as banks, micro finance institutions (MFIs), and international organizations - The LGUs may have an enormous housing need, which may require a huge amount of investment. The funds to address these needs do not have to come solely from the LGU’s coffers. There are many agencies and organizations that may be tapped by the LGU to finance its housing projects/programs. It is imperative to forge partnerships with these financing bodies.

Box 21

## Affordable Housing

**Incremental Housing Strategy** – Gradual improvement of a dwelling unit. It may start with a core house or a shell house without ceiling, partitions, and finishing, but with enclosed bath and toilet as well as windows and doors. The occupants are safe inside the shell house even with minimum basic amenities. The unit may be improved in due time. This option lowers the cost of initial house construction. Improvements may be introduced whenever the homeowners have the requisite resources.

### Example:

#### Project Type:

- 1) Urban planning design strategy
- 2) Architecture

#### Project Mission/Goal:

- 1) Improve the human spirit;
- 2) Respond to our growing need for clean water, power, shelter, health care, and education, and;
- 3) Address humanitarian crises.

#### Project Description:

The design firm Urban Nouveau partnered with the Society for the Promotion of Area Re-source Centres (SPARC) and Prasana Desai Architects to assist the latter in the initial concept design and community outreach in the city of Pune, India aimed at gaining support for in-situ slum rehabilitation.

This strategy of slum upgrading steers clear of wholesale clearance and rebuilding, favoring a more precise, urban acupuncture style of rebuilding. Individual houses are demolished and rebuilt, allowing the residents to continue filling in the building as their family or business grows. This methodology preserves the social fabric and connections that residents have cultivated, often over decades of living within the same community.

#### Project Details:

Location: Yerawada slum, Pune, India

Date: 2008–11

Target: 750 dwellings

Implementing Agencies: National Slum Dwellers Federation, the Society for the Promotion of Area Resource Centres

Design Firms: Prasanna Desai Architects (building design and construction); Urban Nouveau (community plan and concept design)

Community Consulting Team: Filipe Balestra, Rafael Balestra, Guilherme de Bivar, Carolina Cantante, Sara Göransson, Mahila Milan, Urban Nouveau, Martinho Pitta, Remy Turquin, and SPARC

Contractor: SPARC Samudaya Nirman Sahayak

Major Funder: National Urban Renewal Program

Cost: €4500 /USD \$6250

Area: 25 sqm/269 sqft per dwelling

Units: 156 completed

Source: <http://openarchitecturenetwork.org/>

### Subsidy For Lower Income Groups

To respond to the need of the lower income households for decent and affordable shelter, the LGU may provide subsidies. Sometimes, land development cost (the cost of putting up the roads, drainage, power and water lines) are subsidized fully or partially since these are considered as a public good that needs to be provided by the LGU. At times, the land cost is subsidized. In the long run, these subsidies are actually recovered by the LGU indirectly by way of property taxes and diminished cost of health services (i.e., poor drainage and lack of potable water usually result in health problems).

Box 23



Everyone has a right to decent and affordable shelter.

### Example: Use of Innovative or Indigenous Housing Materials (To Lower The Cost Of House Construction)

Article from *Business Mirror*

"11 Philippine Proponents of Green, Innovative Housing Technology Get Accreditation"  
03 Aug 2013

By Recto Mercene

VICE President Jejomar Binay, also the housing czar [*at the time of the article's publication—ed.*], on Tuesday accredited 11 proponents of green and innovative technology after they passed the Accreditation of Indigenous Technologies for Housing (Aitech) evaluation.

The newly accredited technologies are Onduline Roofing, Acasys Eco Homes System, Alufix and Mammut Formworks, Eco-Key Fireproof Panel Board, Plastered Precast Panels, JC Wall Slab System, Smart Masonry Building System, Precast Prestressed "C-Joist," WeidaPolystor (Water Storage Tank), Fiberglass Reinforced Plastic Roofing and Panelflex Building System.

Their accreditation qualifies them for developmental housing loans with the government's financing institutions, including Pag-IBIG Fund's end-user financing that is extended to homebuyers.

The technologies may also be used in government housing projects subject to bidding processes.

So far, 31 accredited technologies have valid accreditation. Six of these technologies are being used in the National Housing Authority's (NHA) low-rise building projects.

"The continued accreditation of Filipino developers shows there is no lack of indigenous technology that we can use in constructing sturdy homes with lower cost of materials," Binay said.

The housing czar has been urging the use of environment-friendly and cost-effective technologies for urban development.

"To those who shall answer this call, you can be assured that we will support developers who provide or use such solutions; and we will continue to educate communities on how these innovations are critical if we wish to secure a sustainable future," Binay said during a convention of the United Architects of the Philippines in April.

Aitech is a committee tasked to evaluate and accredit various innovative technologies/systems for housing. It also acts as a review and approving body for applications for accreditation of innovative technologies appropriate for housing.

Aitech is composed of representatives from the Housing and Urban Development Coordinating Council and the key shelter agencies—the University of the Philippines-Bureau of Research and Standards, Construction Industry Authority of the Philippines, Philippine Council for Industry, Energy and Emerging Technology Research and Development of the Department of Science and Technology, Department of Public Works and Highways- Bureau of Research and Standards, and Bureau of Product Standards of the Department of Trade and Industry.

The NHA plans to construct a building inside the NHA Compound showcasing and promoting indigenous materials and green technologies accredited by Aitech.

It has approved the allocation of P24 million for the construction of the Aitech Center. The center is expected to be completed by 2014.

<http://www.businessmirror.com.ph/>

Box 24

## Four Pillars of Housing

### Pillar 1: Land Access

The mandated provision of land for housing is currently at 2.8% and, as such, should pose little threat to agricultural lands. Below are three laws already in place that should be sufficient to provide land for housing.

**Striplands Law (Presidential Decree 399)** limits the use of strips of land along public highways and main roads (500 meters to the left and 500 meters to the right) to "human settlement sites, land reform, relocation of squatters from congested urban areas, tourism development, agro-industrial estates, environmental protection and improvement, infrastructure and other vital projects in support of the socio-economic development program of the Government."

*Source: [http://creba.ph/online\\_library/files/land/Striplands-PD399%281974%29.pdf](http://creba.ph/online_library/files/land/Striplands-PD399%281974%29.pdf)*

The **Urban Development and Housing Act** has a provision for balanced housing development stipulating that "developers of proposed subdivision projects shall be required to develop an area for socialized housing equivalent to at least twenty percent (20%) of the total subdivision area or total subdivision project cost, at the option of the developer, within the same city or municipality, whenever feasible, and in accordance with the standards set by the Housing and Land Use Regulatory Board and other existing laws.

The **Local Government Code** grants zoning power to LGUs, where a certain percentage of land is earmarked for housing and highly accessible public centers.

These laws make it possible to provide housing on lands that are highly accessible and, as a result, lands that will appeal to people because of their proximity to urban centers and opportunities.

### Pillar 2: Funding

Funding for socialized housing and its allocation also have mandated provisions in existing laws and government systems.

The **Agri-Agra Reform Credit Act (RA 10000)** stipulates that "banks shall set aside at least twenty-five percent (25%) of their total loanable funds for agriculture and agrarian reform credit in general, of which at least ten percent (10%) of the total loanable funds shall be made available for agrarian reform beneficiaries."

*Source: <http://www.bsp.gov.ph/downloads/regulations/attachments/2011/c736.pdf>*

While many banks have exhibited a preference for paying penalties over compliance, the Monetary Board has taken steps towards stricter enforcement of this law.

The **Government Service Insurance System (GSIS)** and the **Social Security System (SSS)** are mandated to allot a certain percentage of their funds for housing. Safeguards can be put in place that can help generate enough funds for housing. Limitations may be put, for example, such as prohibiting use of the funds on administrative costs or development funding, and for the funds to be a purely direct lending provision. Banks that invest in GSIS and SSS may be provided a guarantee and fixed interest rate.

Box 25

### **Pillar 3: Regulation**

The Housing and Land Use Regulatory Board is active in updating and regulating; though it would be ideal if it could work with LGUs to come up with localized housing standards tailor-made to fit the LGUs' specific contexts and needs.

LGUs can also serve as the principal location of clearance – where a lot of housing processes get stalled. LGUs can play an active and innovative role in facilitating and expediting clearances. Standards and regulations come from the HLURB, but LGUs are also empowered to develop custom standards with respect to CMPs and other socialized housing programs.

Welfare housing is sometimes hindered by failure to meet standards set by BP220. But there are instances where BP220 standards are not applicable to certain localities, welfare housing sites, and contexts. And so it becomes the LGUs' option and prerogative to develop localized housing standards applicable to their areas and contexts, in close collaboration with HLURB regional offices. LGUs also have the power to develop local legislation to support and justify these standards, as long as it doesn't contradict the national building code.

While localized standards should not contradict existing laws, the local context should be substantially considered. Local governments should be granted the flexibility for it to develop its own localized standards which take into account its own local conditions, affordability, and subculture.

Case in point: In provincial rural areas, it is not practical to enforce house construction materials such as cement when wood is more abundant and affordable; and it is preferable to allocate bigger lots to accommodate small-scale husbandry that may be common to rural households.

### **Pillar 4: Governance**

LGUs have to make full use of the prerogative, flexibility, and authority afforded them by the Local Government Code of the Philippines.

Housing programs' success can hinge on the capacity of LGUs to meet housing needs that are unique to their respective localities and situations.

In many cases, LGUs that are able to acquire land don't see socialized housing as best use. They often approach private real estate developers.

A possible solution to this would be for LGUs to implement Section 18 compliance as in-city compliance, with the premise that the developer already has funds for the planned development in-city. LGUs can require the developer to earmark land within the city for Section 18 compliance. If the developer cannot find land to earmark, it can instead provide 20% off the total cost as compliance. So the LGU is able to acquire funds from that 20%.

Another way is to engage land owners for socialized housing programs, where LGUs play the role of enabler in terms of expediting clearance procedures that the land owner needs to undergo in order to develop the housing project. The LGU can shoulder the sub-elements of the housing project, which are already deemed basic services (e.g., access roads, drainage). The housing itself can be funded through financing such as Pag-IBIG.

## Five Ways Government Can Support Enhanced Lending Downmarket

(Excerpt from *Housing the Poor in African Cities – Quick Guide 5: Housing Finance*, a publication by UN-Habitat and Cities Alliance on housing finance for the poor, that may be applicable and customizable for the Philippine setting on both national and local levels.)

Making the housing finance sector work for the entire population is a critical job for government. Governments who do this stand a much better chance of seeing their populations enjoy access to adequate housing. The housing finance sector does not exist in isolation, however. It sits within a much wider macroeconomic framework that is subject to market forces. Policy makers would do well to understand these forces, so that they can guide them appropriately to enhance the development of the sector.

### 1. Get the macroeconomic environment right

The development and prospects of housing finance sectors across Africa are inextricably tied up with the development of the specific countries' economies. Macroeconomic factors are fundamental determinants of the structure and health of housing finance sectors – choices made by a country's macroeconomic decision makers influence choices available to lenders, investors and housing finance practitioners.

One of the most important things a government can do is reduce the interest rate it pays on Treasury bills. When Treasury bill rates are high, investors put their money in Treasury bills to get the high return. When Treasury bill rates are low, investors look for other ways to get a high return, and become more likely to consider investment in housing finance.

### 2. Get the housing supply picture right

A second, critical factor in the development of housing finance sectors is the structure and scale of the housing supply sector: Housing finance is only useful if there is something to buy. If the housing supply sector is not operating at scale, or if it is not delivering housing goods that are affordable and adequate to the population, there will be less demand for housing finance and fewer people will have access to adequate housing. Of course, the

#### Rental Housing Projects as a Financially Viable Option for Urban Centers

Medium-rise rental housing (roughly 5 to 6 floors) may be a viable option for highly urbanized areas where land is expensive but people choose to stay because of income opportunities nearby. The cost of land becomes manageable when shared among floors, then shared further among the units per floor. The local government earns from taxes by tenants and possibly even from business taxes from commercial tenants at the lower floors. When security systems are in place for the housing structure and its surroundings, peace and order are promoted. Tenants delinquent in paying rent may be denied entry by the building administration. Given a 25-year timeline, government breaks even and may start earning profit by approximately the 10th year.

Developers of the structure may find these projects profitable and financially viable if the local government works closely with them in expediting clearances and through special tax breaks.

One such successful case study of residential medium rise buildings for socialized housing can be found in Cubao, helmed by the Chamber of Real Estate and Builders' Associations (CREBA) with the local government of Quezon City. A number of units are for rental housing, while others are for sale. Tenants should be Quezon City employees. Teresita Oliva P. Bautista, who sits on the Board of Directors and Officers of CREBA says that, notwithstanding extensive compliance and clearance procedures, the project has been profitable so far.

Multisectoral partnerships and joint ventures can help alleviate local governments of the burden of cost for such projects.

Box 28

relationship between the supply of housing and the supply of finance is a complex one; each depends on the other in a chicken-and-egg sort of way. The availability of housing finance may well stimulate the supply of appropriate housing products. In Uganda, housing demand has been constrained by inadequate financial resources for both real estate developers and borrowers wanting to buy finished products. Understanding that housing finance is about finance to the developer to build the house, as well as to the end user to buy the house, and ensuring that the environment is conducive for both, is one way governments can support sector development.

### Pros and Cons of Community Financing

Sometimes take-off of community mortgage programs and other community-based financing takes long or fails altogether when issues arise among individual members that prevent the community from coming to a collective decision. The collective responsibility of a community is also challenged upon the delinquency of some of its members to pay the monthly amortization for the land or housing. When one or more members in the community defaults, the entire community defaults. Sometimes, some community members take on the burden of shouldering the payments of delinquent members just to ensure that the program pushes through.

But communities and community organizations can add value to housing solutions that harness the strength of the community to support each other, when the project extends beyond shelter provision and includes community building or development.

UN-Habitat helped implement a Post-Yolanda housing project in Roxas with 28 CMP communities and multiple partners and stakeholders. The housing project had a grant component, which enabled all of them 100% of the household partners to pay their monthly dues for the land. But before the project's implementation, there was palpable rate of delinquency. But the project, which was designed for the beneficiary families and communities themselves to drive the process, helped grant the community a sense of ownership and accountability, which in turn reenergized the community to actively engage.

Community mortgage programs or projects require a strong community. And while there will always be a risk of these kinds of programs not working due to a lack of cohesiveness, there have been instances where they have worked. And when they work, they work tremendously well.

### 3. Encourage existing lenders to extend their mortgage loans downmarket

While the income distribution in cities across Africa may suggest that non-bank, non-mortgage options are most appropriate, attention to the better targeted structuring of the mortgage market is also critical. As it currently stands, middle- and high-income earners in most African countries must still finance their housing with cash. This means that property markets are not functioning as they should. Only very rich clients are able to access mortgage finance. Extending access to mortgage finance to a wider range of earners, even if this is still the minority of the entire population, will not only enhance the efficiency of their individual housing processes, but will also stimulate the economy and promote filtering in the housing market, progressively making more housing available also to lower-income earners. Governments can encourage lenders to go further downmarket by subsidizing the elements that normally undermine participation, such as the high administrative costs involved in working with lower-income clients.

### 4. Promote alternative forms of housing finance:

**Community-based self-finance.** With the help of NGOs and some government organizations, many poor communities are increasingly building and managing their own collective finance mechanisms through community savings and credit activities. Besides saving for livelihood, emergencies and housing, these savings groups have also strengthened the communities they operate in by providing people with a

simple, regular mechanism for building collective management skills, cooperation and mutual assistance.

This is while they build the community's own financial resource base and support enhanced access to adequate housing.

### **Housing microfinance and other non-mortgage products.**

The potential for non-mortgage products is substantial, given the scope of demand across African cities. However, the methods that lenders apply must be different, to suit their particular contexts. For example, in a context where a substantial portion of the population is informally employed, paperwork should be kept at a minimum, and repayment requirements should be kept flexible. Loan products that understand and work with this reality can tap into an otherwise unserved market. A key challenge that non-mortgage lenders face, however, is access to capital. Governments can help build this market by developing appropriate and enabling legislation (as has been done in Morocco), providing wholesale finance directly through a revolving fund (as has been done in South Africa), or otherwise supporting investor participation in this market (for example, through the provision of guarantees).

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*LGUs, through existing housing co-operatives, can play the role of guarantor for low-income families seeking housing loans. This helps ensure continuing available funds for housing developers. An effective model of communal pooling of resources worth looking into is the kibbutz\* movement.*

*\*Kibbutz - (in Israel) a type of farm or factory where a group of people live together and share all the work,*

*decisions and income*

*(Source: Oxford Dictionaries [http://www.oxforddictionaries.com/us/](http://www.oxforddictionaries.com/us/definition/learner/kibbutz)*

*definition/learner/kibbutz)*

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## **5. Data, data, data**

A relatively simple, but critically important thing that governments can do, is collect, analyze and distribute data about the housing needs and affordability parameters of people in their country. All private sector players depend on data to make decisions about where they are going to invest their money and where they are going to target market development. The more they work in a particular market, the more data they have, and this makes it easier for them to modify their products to suit demand, and to price their products appropriately. Lenders don't have data for new markets, however, and this lack of data translates into risk. Risk translates into cost, or an access constraint. If a lender doesn't have data about a particular market it will either avoid that market altogether, or price its products in that market higher to make sure that it isn't exposed to loss.

The kinds of data that lenders would need include household income and expenditure, employment and wage data (segmented by region and city), levels of indebtedness, income tax revenues, and even data on the levels of rates and services payments at suburb level. Data on current housing situations, and macroeconomic planning information on areas of growth and development, are also needed.



Community financing is one way of enhancing access to adequate housing.

Governments can encourage lenders to go downmarket by providing them with data regarding the opportunities and risks of that market. Too often, governments feel that data are things that should be hoarded and protected. By sharing the data that it does have, government can encourage market development.

Another way governments can promote the availability of data is by subsidizing others to provide this. In many countries, NGOs and community-based organizations already collect data. The compilation, analysis and distribution of such data could be subsidized as a way of contributing to market development.

The ultimate goal of government is to create a housing finance system that will manage challenges and maximize opportunities as efficiently as possible. Across Africa, housing finance systems are still in their infancy, and are dependent on the traditional housing finance instrument, the mortgage, notwithstanding the affordability limitations of the majority of their populations. This will change over time, as governments and housing finance practitioners develop new and innovative approaches to meet the desperate and diverse need for housing finance on the continent.

Source: <http://unhabitat.org/?wpdmact=process&did=NDEyLmhvdGxpbnms=>

## Six Ways To Reduce Housing Costs

(Excerpt from *Housing the Poor in African Cities – Quick Guide 5: Housing Finance*, a publication by UN-Habitat and Cities Alliance on housing finance for the poor, that may be applicable and customizable for the Philippine setting on both national and local levels.)

The majority of people living in Africa's cities cannot afford formally built housing as it is currently provided. Reducing the cost of producing housing, therefore, is one way of enhancing access to adequate housing. The main components of housing are land, the house itself, and infrastructure services. There are many ways of providing these different components, or reducing their costs – altogether or separately.

### 1. Reducing housing costs through design

One of the best ways of reducing the cost of housing is to use a variety of design and construction strategies, which lower the unit construction costs and make more efficient use of the land.

For example:

Design tight housing layouts that allow as many households as possible to occupy a limited amount of land. This also saves on infrastructure connection costs because the distance to connect (metres of pipe, road, wire, etc.) is less.

Design housing units of a smaller size, or units that can be expanded incrementally.

Use community and household labour to build the houses, to reduce labour costs.

Use alternative, recycled or cost-saving materials to bring down materials costs (like community-made blocks or building components, recycled doors and windows).

Buy materials collectively to get bulk discounts on bricks, blocks, cement, steel, roofing sheets and sand.

Build housing collectively to make use of 'economies of scale' to bring down per unit costs.



Housing programme should maximize local workforce development and employment.

## 2. Mass-producing housing units on a large scale

There are many variables in any housing construction process, and the amount of cost-saving in a mass-produced housing process will depend on the current availability and costs of land, labour, materials and equipment. In addition, the time it takes for a developer to make the development happen, getting the necessary government approvals together, can have a surprisingly significant impact on the cost. Most mass produced, developer-built housing falls into two categories:

High- or mid-rise blocks of apartments, where land costs are brought down by building more units on a small piece of land, and by standardizing the housing units and reducing construction costs through economies of scale. However, the savings that might be achieved on land may be used up in the higher building costs that accompany multi-storey dwellings.

Detached or semi-detached houses, where building the same standard unit many times reduces costs by making use of economies of scale. Mass-produced housing projects can only proceed with the participation of the local city council or municipality. To promote this kind of development, municipalities could set up a fast-track approvals process and offer developers special support in making sure their development meets all the necessary regulations.

### 3. Reducing housing costs through internal cost subsidies

Another strategy that governments, developers and communities have used to make low-income housing affordable to the target market is to cross-subsidize the low-income housing through profits from the sale of market-rate housing units within the same development. This is not a way to address the housing backlog in the city: the cost of the market-rate units will never be high enough to subsidize enough low-income units. However, this approach, which has been tried successfully in South Africa and Zambia, can promote integration and socioeconomic diversity in new settlements.

### 4. Self-building by people

Supporting people to build their own housing is one of the best ways of reducing costs, making housing affordable to low-income households, and creating a vibrant housing stock in the city. Self-building allows households to build flexibly and incrementally, as and when they have a need or have the funds. Self-building remains the chief means for poor households to bring down the costs of their housing.

Don't take the term 'self-built' too literally, though. Many urban poor households are too busy earning their living to build their own houses, or they don't have the skills to build a good house. So, thriving markets of small, informal contractors, masons, carpenters, plumbers, electricians and materials suppliers tend to blossom in every city to serve this low end of the housing market. Even if they aren't doing the work themselves, the house-owners have to manage the process and remain in control of all aspects of their housing production. The house-building process is not an easy one, and even households who contract other service providers may struggle to manage the process efficiently. For example, they could miscalculate the materials required to finish a particular part of the construction process, or could run out of money.

This could lead to short cuts in the building process and ultimately could undermine the safety (and value) of the structure. In some cases, households may have to do the work over again, wasting their valuable resources to fix problems they hadn't imagined could ever occur. Some governments have supported self-builders by providing core housing, or even developing sites-and-services schemes in which only plots are provided and the households can build and improve their housing gradually, at their own pace and using their own means.

Bringing the provision of serviced plots to scale will enable wide access to land and infrastructure that consequently can stimulate self-building and decentralized housing solutions. City governments can help self-builders in other ways as well. They can provide free advice and building support – an advice office, for example – where self-builders could go to solve problems they've encountered in the building process, or get tips to pre-empt problems from occurring. They can also provide approved, sample house plans so that self-builders don't have to hire an architect to get a formal plan for their construction.

## **5. Introducing more practical, more realistic and more flexible building standards**

Many argue that one of the reasons why housing in our cities is unaffordable to so many is because housing and building standards are too high: roads are too wide, plots are too big, setbacks eat up too much space, engineering standards are too conservative, and service levels are too high. If all these well intended regulations were actually followed, housing of a very high standard might result, but it would be too expensive for most people in the city to afford. Many of the urban housing standards in African cities are based on those in developed countries, and date from the colonial era.

Some people joke, for instance, that roof pitch requirements in African cities are the same as those in European cities that suffer snow for half of the year! While it is reasonable to have standards that ensure the health and safety of the people who use the building, standards that are too high simply exclude more people from accessing adequate housing, because the meeting the standard becomes too expensive.

Of course, what happens in many cases is that when the rules are inappropriate, people don't follow them. In cities like Lagos, Abidjan, Nairobi or Luanda, settlements are built incrementally with little or no attention to the requirements of the official building standards. This can put them at risk of flooding, fires, or other disasters that the housing was not designed to withstand.

Some authorities also use failure to meet building standards as a reason to evict people and destroy their housing. The land is then reallocated to those who can afford new housing built to higher construction standards, and the poor are excluded again.

One way to reduce housing costs is to introduce more appropriate and more flexible building standards which better match the needs and realities of poor households and the topography and climatic conditions in which they live. City and national governments should think more carefully about the minimum health and safety requirements that their country's climate, topography and other conditions require. Then, they should consult with local communities about how they address health and safety in their building, and identify where local solutions might replace the standards of the past. They will also need to meet with the banking industry to ensure that building standards for mortgage loans are also set appropriately for the local context. Another way is to replace the conventional system of strict building inspection and control mechanisms with a system of facilitation and support. It is important to remember that the purpose of building standards is not to punish households but to improve their housing and make it more safe and productive.

## **6. Introducing standardized building components and appropriate technologies**

Another way to reduce building costs is to introduce and help popularize the production and use of standardized building components, such as pre-cast beams, column piles, roof tiles, ceiling panels, door frames and septic tanks in the construction industry, so that a household can purchase them off the shelf and assemble them on the site.

These components are mass-produced and enjoy similar economies of scale to mass-produced housing. This kind of mass production of simple building components can also be set up on a smaller scale, within poor communities themselves, by local entrepreneurs, with a little bit of training and technical assistance.

*Source: <http://unhabitat.org/?wpdmact=process&did=NDEyLmhvdGxpbnms=>*



## Stage 5: Implementation Plan Formulation

## STAGE 5: Implementation Plan Formulation

Institutionalizing the Local Shelter Plan can be done by making it a mandated component of the LGU's updated CLUP, which should include the LGUs' earmarked lands for socialized housing and where the LSP's situational analysis serves as the basis for the LGU's shelter strategies.

In the previous chapter, the formulation of shelter strategies, which respond to the question- "What needs to be done?" (towards achieving the shelter goals and objectives) was tackled.

This chapter discusses the operationalization of the strategies identified.

The **Implementation Plan** provides the details on how the strategies adopted will be carried out. It includes the **required action, responsible persons, target dates of accomplishment, implementation tools, and materials and resources required to undertake the activity.**

The LGU is the plan owner and is responsible for operationalizing the Implementation Plan. Hence, the office and or person/s to be named responsible for the specific actions in the Implementation Plan must be from within the LGU. Other agencies, groups, or persons external to the LGU that will be essential to the implementation of the identified strategies are categorized as part of the "Resources Required" and should not be named as responsible person/s because agencies external to the LGU may not be aware of their role or stake in the LSP unless officially informed by the LGU.

### Example: If the LGU needs assistance from the NHA

**Activity:** request the National Housing Authority (NHA) for technical and financial assistance to develop a resettlement site

**Responsible Agency:** Office of the Mayor

**Resources Needed:**

Type: Technical and financial assistance

Source: NHA

Amount: P12 M

Box 26

At each step of the way, each component of the strategy needs to be discussed, debated, and consulted with stakeholders. The extent of consultations and the participants involved will vary with each step.

The following steps may be taken in formulating the Implementation Plan:

1. List each strategy.
2. For each strategy, specify the activities to be implemented.
3. Identify and quantify the resources needed to undertake each activity, e.g., (additional human resources needed, funds, materials).
4. Identify the main implementers (office/officials in the LGU, other agencies) for each activity.
5. Determine the timetable for each activity.

Table 14 below is the recommended framework for developing an Implementation Plan.

**IMPLEMENTATION PLAN, 2013 - 2022**

Objective	Strategy	Program/Project/ Activity	Responsible Agency	Resources Needed			Schedule (When?)	
				What? How many?	How much?	Fund source		
1.	1.1	1.1.1						
		1.1.2						
		1.1.3						
	1.2	1.2.1						
		1.2.2						
		1.2.3						
		1.2.4						
		1.2.5						
	<b>TOTAL RESOURCES NEEDED=</b>							

Table 14

**Notation:** Use Annex 4, Worksheet No. 9: Example of Implementation Plan. Make sure that the programs, projects, and activities identified in the Implementation Plan are in line with the strategies. Likewise, see to it that the strategies lead toward the realization of the objectives. (Please see the example of a filled-up worksheet in **Annex 4.**)



Families in Pawa, Capiz gather during the turnover of core houses under the Post-Yolanda Support for Safer Homes and Settlements project, which is implemented by UN-Habitat Philippines together with the Government of Japan, the Department of Social Welfare and Development, the Housing and Urban Development Coordinating Council, the Social Housing Finance Corporation), and Base Bahay, Inc .

## Avoiding Implementation Pitfalls

In order for the implementation plan to succeed, stay away from the following pitfalls:

- **Lack of ownership:** The most common reason a plan fails is lack of ownership. If people don't have a stake and responsibility in the plan, it'll be business as usual for all but a frustrated few. Hence, it will be best to engage the target communities and other stakeholders from national agencies and private sector who can also help push for the approval of the programs and projects by decision-makers.
- **Lack of communication:** If the plan doesn't get communicated to concerned decision makers stakeholders, and they will not be implemented. In other words, it will get lost in the many other plans and priorities of the LGU.
- **Getting mired in the day-to-day:** The LGU, consumed by daily operating problems, lose sight of long-term goals especially if the plan is treated as something separate and removed from the management process.
- **An overwhelming plan:** The goals and actions are too numerous because the LGU failed to prioritize. The LGU doesn't know where to begin.

- **A meaningless plan:** The vision, mission, and value statements are viewed as fluff and not supported by actions or don't have a buy-in.
- **The LSP is seen as an end in itself.** Once the LSP is prepared, it is forgotten just like many other plans required of the LGU. Housing projects are again implemented on a piece-meal basis rather than a component of an overall strategy.
- **No progress report:** There's no method to track progress, and the plan only measures what's easy, not what's important. No one feels any forward momentum.
- **No accountability:** Accountability and high visibility help drive change. This means that each measure, objective, data source, and initiative must have an owner.
- **Lack of empowerment:** Although accountability may provide strong motivation for improving performance, the designated local housing officials must also have the authority, responsibility, and tools necessary to impact relevant measures. Capacity building must be regularly conducted to equip and empower the Local housing board and local housing office and other stakeholders.

# Stage 6: Designing a Monitoring and Evaluation System



## STAGE 6: Designing a Monitoring and Evaluation System

This stage facilitates the identification of milestones, the determination of the timeframe and manner by which actions should be monitored and the desired results or outcomes to be measured.

Monitoring and Evaluation (M&E) will provide the implementers relevant information on the targets indicated in the Work and Financial Plan component of the LSP that would help ensure the effective and efficient delivery of shelter and shelter-related services. Planning and implementing the M&E mechanism will facilitate sharing of learnings and knowledge among stakeholders, which is crucial in ensuring the sustainability of actions. The results of the M&E will be key considerations when revisiting or revising the LSP.

It is important for the LGU to monitor the implementation of the shelter strategies and programs. Regular reports evaluating the progress will provide the basis for the review of the shelter plan. Inside Table 15 are samples of formats for monitoring different housing needs.

This section of the manual gives the LGU Planners examples of monitoring forms and schemes that can be used in assessing the progress of the implementation of the major activities, projects, and programs stated in the Local Shelter Plan.

UPGRADING OF TENURIAL STATUS				
LOCATION	NUMBER OF HOUSEHOLDS	ACTIVITY REQUIRED	STATUS OF ACTIVITY	SPECIAL CONSIDERATIONS

RELOCATION OF HOUSEHOLDS FROM DANGER AREAS				
LOCATION	NUMBER OF HOUSEHOLDS	ACTIVITY REQUIRED	STATUS OF ACTIVITY	SPECIAL CONSIDERATIONS

DEVELOPMENT OF NEW HOUSING AREAS				
LOCATION	NUMBER OF LOTS	ACTIVITY REQUIRED	STATUS OF ACTIVITY	SPECIAL CONSIDERATIONS

Table 15

Summary tables of activities should be prepared and compared with the plan. Revisions to the plan and the annual program should be guided by past performance. The plan will provide the basis for the detailed annual budget request. The plan will also assist the LGU in seeking representation with concerned agencies as regards budget commitments.

The review of the first year of the program should ideally be completed by March of the succeeding year to ensure that a revised budget can be requested in time for the preparation of the Annual Investment Program (AIP) and budget call for the following year. This cycle is likewise suggested for the succeeding years, until the termination of the program/project.

**Sample Summary Table**

Identify each key result area that needs to be monitored and evaluated in order to determine whether the plan is being realized or not.

EXAMPLE

LGU: \_\_\_\_\_

DATE: \_\_\_\_\_

OBJECTIVE #2: Decrease the displaced households by 4,660 between 2015 and 2023

Program Period	Number Of Households Targeted For Assistance	Actual Number Of Households Assisted	Percentage (%) Of Accomplishment	Source Of Funds	Remarks (e.g., hindering factors, facilitating factors, explanation for variance)
2015	600		150% (if exceeds 600, for instance)		
2016					

Table 16

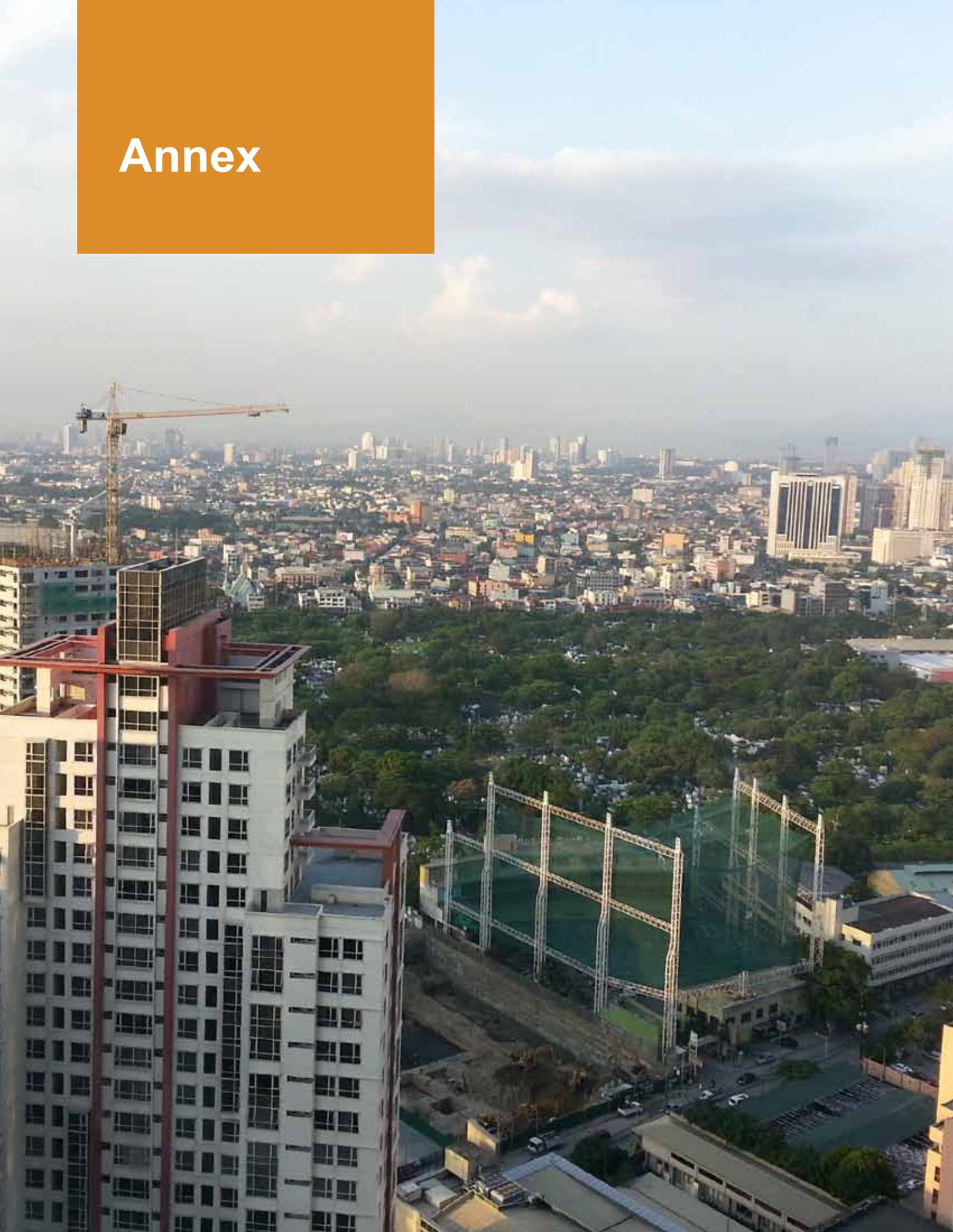
The performance during the first year of the plan will affect the proposal for the succeeding years. That is why a review after the initial year of implementation is necessary.

For example, the plan set forth a 15-year program to solve the accumulated housing need due to lack of secure tenure. The target is that 200 households will receive their CMP loans every year during the program period. If only 50 households received these loans during the first year, the 150 unserved households must be carried over into the succeeding years of the program. This backlog can be addressed by either dividing the number throughout the remaining 14 years (an additional 11 units per year) or by adding an extra year to the program period.

It is important to keep the LSP updated and relevant. It is unwise to spend time and resources to develop a plan only to park it in some forgotten shelf in the office. Keep it relevant through measurement and review of objectives and outcomes and measures that are cascaded into performance management at all levels of the organization, as well as through annual planning exercises where stakeholders are asked whether there are major aspects of the plan that should be readdressed in light of changes in the internal and external environment. No plan will remain unchanged during its implementation period – the world changes too fast and even with the most carefully considered planning, there are aspects of the plan that will need to be adjusted.

It is highly recommended that to make the Local Shelter Plan useful and meaningful, the LGU should submit it for review to the Local Housing Board, the Sanggunian and resource persons from the HUDCC. To institutionalize and ensure sustainability of the Local Shelter Plan beyond the term of office of local officials, the LSP should be enacted by a local ordinance.

# Annex



## ANNEX 1

## Local Government Units' Tasks As Mandated In R.A.

Below are tasks as enumerated for local government units (LGUs) in the Urban Development and Housing Act (in all cities and those municipalities which are urban or urbanizing):

Prepare a **comprehensive land use plan** aimed at achieving the objectives of the UDHA; (Sec. 6 and 39)

Conduct an **inventory of all lands and improvements** thereon within their respective localities in coordination with the Housing and Land Use Regulatory Board (HLURB) and with the assistance of the appropriate government agencies; (Sec.7) Update the inventory every three (3) years and furnish the Housing and Urban Development Coordinating Council (HUDCC) a copy of its inventory including updated ones for planning purposes; (Sec. 7)

Identify, in coordination with the National Housing Authority (NHA), the HLURB, THE National Mapping and Resources Information Authority (NAMRIA), and the Land Management Bureau (LMB) of the Department of Environment and Natural Resources (DENR) **lands for socialized housing and resettlement areas for the immediate and future needs of the underprivileged and homeless** in urban areas; (Sec. 8)

Certify as to the blighted status of lands, which shall be considered as one of the factors in the **evaluation of the market value of land for socialized housing**; (Sec. 13)

Identify and **register all qualified socialized housing beneficiaries** within their respective localities; (Sec 17)

In pursuit of balanced housing development, **enter into joint venture projects with private developers**; (Sec. 18)

**Provide basic services and facilities** (potable water, power/electricity and an adequate power distribution system, sewerage facilities and an adequate solid waste disposal system, and access to primary roads and transportation facilities) in the socialized housing or resettlement areas in cooperation with the private sector and concerned agencies; (Sec. 21)

Provide the program beneficiaries or their **duly designated representatives**, in coordination with the President Commission for the Urban Poor (PCUP) and concerned government agencies, the opportunity to be heard and to participate in the decision-making process over matters involving the protection and promotion of their legitimate collective interests; (Sec. 23)

In cooperation with the Philippine National Police (PNP), the PCUP and PCUP-accredited urban poor organization in the area, adopt measures to **identify and effectively curtail the illegal activities of professional squatters and squatting syndicates**; (Sec. 27)

Implement, in coordination with the NHA, the **relocation and resettlement of persons living in danger areas** such as esteros, railroad tracks, garbage dumps, riverbanks, shorelines, waterways and in other public places such as sidewalks, roads, parks and playgrounds; (Sec. 29) Provide, in coordination with the NHA, relocation or resettlement sites with basic services and facilities, and access to employment and livelihood opportunities sufficient to meet the basic needs of affected families; (Sec. 30)

**Prevent the construction of any kind of illegal dwelling** units or structures within their respective localities; (Sec. 30)

Assist the National Home Mortgage Finance Corporation (NHMFC) in initiating the **organization of Community Mortgage Program (CMP) beneficiaries**; ( Sec. 33)

Promote, in coordination with the HUDCC, NHA, the Technology Resource Center (TRC), Department of Science and Technology (DOST), and other concerned agencies in the production and **use of indigenous, alternative, and low-cost construction materials and technologies** for socialized housing; (Sec. 34)

**Submit a detailed annual report**, with respect to the implementation of the Act, to the President and House of Representatives; (Sec. 41)

**May impose an additional one-half percent (0.5%) tax on the assessed value of all lands** in urban areas in excess of Fifty Thousand Pesos (P50,000.00). (Sec.43)

## ANNEX 2

## Data Gathering Methods

The first task in shelter planning entails familiarization with the characteristics of available housing and related basic services that cater to the present population. It includes an assessment of the nature of shelter problems and issues, where these problems are located and the number of families affected.

A reconnaissance survey of the municipal and a review of the Census of Population and Housing and other related housing statistics published by the National Statistics Office (NSO) should be sufficient to give the planning team an overview of existing housing provisions. This quick scanning of the problem areas should lead to a more detailed survey of specific areas of concern.

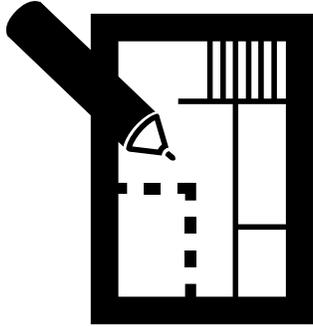


### Reconnaissance Survey

This survey requires the conduct of field observation and inventory of existing housing. Doing this survey with a vehicle (“windshield survey”) is recommended as this would enable the planners to cover the entire municipality in a shorter time. The survey team should make notes on perceived problems and records on a map impressions and observations made.

The large scale map (1:20,000 – 1:10,000) used for land planning is appropriate for the reconnaissance survey. The use of a previously prepared zoning map is also recommended since this can guide the survey team in pinpointing existing and proposed residential areas.

Whatever base map used, the survey team should ensure that this is updated by plotting-in new roads and other development not previously reflected. This is done as the survey is being conducted.



The reconnaissance survey is conducted to derive quick answers to the following questions:

- a. Where are the existing built-up residential areas located?
- b. How are the people housed? What are the housing types and physical conditions of the houses?
- c. Where are the informal settlements located? The survey team should check danger areas such as long esteros, riverbanks, earthquake faults, etc. and make a rough estimate of the number of houses in such places.
- d. What are the environmental conditions in the residential areas identified? Which areas are without drainage, potable water, sewage disposal system, etc. Inquire about flooding in these areas.
- e. What are the conditions of streets within the residential areas? Are there sufficient access roads to these areas? Are these areas served by public transportation?
- f. What other facilities and services are available (electricity, parks, health center etc.) within the area?
- g. Where are the vacant non-agriculture lands located? Which of these areas are suitable for housing?
- h. All other information that may be collected through visual observation that will give the planning team an initial understanding of the existing housing situation.

## Secondary Sources

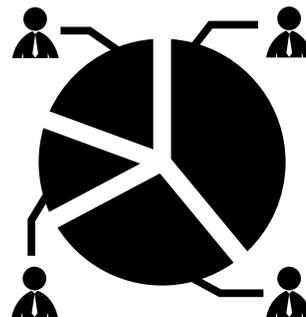
The National Statistics Office (NSO) conducts periodic surveys and studied on the various socio-economic sectors which is publishes. The publications which are basic sources of information for shelter planning are as follows:

- a. 1990 Census of Population and Housing (CPH), National Statistics Office
- b. 1995 Family Income and Expenditure Survey, NSO
- c. Others

Unless the pace of development in a municipality is too fast to render available NSO figures obsolete, or if the data is proven to be highly inaccurate and incomplete, the conduct of a primary survey is not recommended and should be avoided as this is time consuming and expensive. Statistical tools and methods to do updates and projections should be sufficient.

## Other Methods

Other methods for data gathering are the use of interviews and the use of aerial photography. Interviews can be conducted with knowledgeable representatives of a particular community in relation to present situations. The use of aerial photography can be undertaken, as it can provide a quick analyses/overview of a particular area.



## ANNEX 3

## Disaster Risks and Climate Change Vulnerability and Adaptation Assessment For Shelter And Settlement Areas

Two significant national policies with substantial bearing on local shelter development are now in effect.

Republic Act 9729, otherwise known The Philippine Climate Change Act of 2009, was signed into law in October 2009 while the Disaster Risk Reduction and Management Act (Republic Act 10121) was signed in 2010.

Both laws as well as their respective implementation frameworks have consistently promoted that disasters are reflections of people's vulnerability and that an integrated approach to social and human development is crucial to reduce risks and vulnerability. Towards action, the two laws have mandated local government units to develop and implement a local climate change action plan and disaster risk reduction programs.

Given the unique demand and requirements of the shelter sector and settlements area on climate change adaptation and risk management, the LSP should now integrate and mainstream the new mandated tasks as promoted by RA 9729 and RA 10121. It then could be considered a sectoral action plan on climate change. This could be done by conducting a Risks and Climate Change Vulnerability and Adaptation Assessment as part of the situational analysis.

**Risks and Climate Change Vulnerability and Adaptation Assessment** for the shelter sector is a process by which the climate change exposure, sensitivity, and adaptive capacity of the sector are assessed and risks are considered to influence the development of sector strategy and highlight adaptation requirements.

### Climate Change Exposure Assessment

**Climate change (CC) exposure** is a measure describing the external stress brought about by climate change threats (sea level rise, change in temperature, change in precipitation and extreme weather events) in relation to population, resources and property.

*Data Source: City Climate/Weather Data, PAGASA*

Questions to include:

- How is the weather changing in the locality?
- How has climate changed overtime?
- Is there a localized CC projection (model-based) available?
- Given the climate and weather changes how will the shelter sector be affected?

1	2	3
Climate Indicator (Current and future exposure scenario)	Relative Effects to the Shelter Sector (List in this column biophysical effects relative to the climate change exposure indicator in column 1. The biophysical effects are mainly the climatic-induced conditions that may trigger disaster events or alterations in local shelter activities, i.e., drought, flooding, landslide, strong cyclones, etc.)	Reference or Sources (For Answers in Columns 1 & 2)
<b>Temperature</b>		
<ul style="list-style-type: none"> <li>Establish the long term trend (observations of 30 years – ideally indicating seasonal variations and extremes) from the secondary data and FGDs/KIIs.</li> <li>What is the present average temperature?</li> </ul>	List/characterize here effects of historic temperature variations as well as the positive and negative effects (to the shelter sector) of the present temperature levels	List down here and in each cell below the sources/reference of the answers listed in column 1 and 2 of every row
<ul style="list-style-type: none"> <li>What is the projected change in mean temperature (and extremes)?                             <ul style="list-style-type: none"> <li>2020</li> <li>2050</li> </ul> </li> </ul>	Given the projected change in the left cell, what risks could it further bring relative to the past and current accounts (refer to above cell)	
<b>Rainfall</b>		
<ul style="list-style-type: none"> <li>Long term trends (observations of 30 years – ideally indicating seasonal variations and extremes)</li> <li>Present average annual rainfall</li> <li>Present seasonal variations and extremes</li> </ul>	List/characterize here effects of historic rainfall variations as well as the positive and negative effects of the present rainfall volume	
<ul style="list-style-type: none"> <li>Projected change in rainfall                             <ul style="list-style-type: none"> <li>2020</li> <li>2050</li> </ul> </li> </ul>	Given the projected change in the left cell, what risks could it further bring relative to the past and current accounts (refer to above cell)	
<b>Tropical Cyclone</b>		
<ul style="list-style-type: none"> <li>Present historical data (number of tropical cyclones per year/averages per decade). Present trends in strength of cyclones.</li> </ul>	List the risks/hazards which were triggered by previous typhoons/cyclones	
<ul style="list-style-type: none"> <li>Projected change in tropical cyclone occurrences</li> </ul>	How would the risks/hazards listed in the above cell be exacerbated due to the projected change? List other risks/hazards that may arise due the projected change.	
<b>Sea-level Rise</b>		
<ul style="list-style-type: none"> <li>Present sea-level (historical data over last 30 years)</li> </ul>	List the risks/hazards brought by rising sea level over the years? What conditions were observed?	
<ul style="list-style-type: none"> <li>Projected Sea-level Rise (globally, locally)</li> </ul>	How would the risks/hazards listed in the above cell be exacerbated due to the projected change? What conditions could further change?	

## Climate Change Sensitivity Assessment

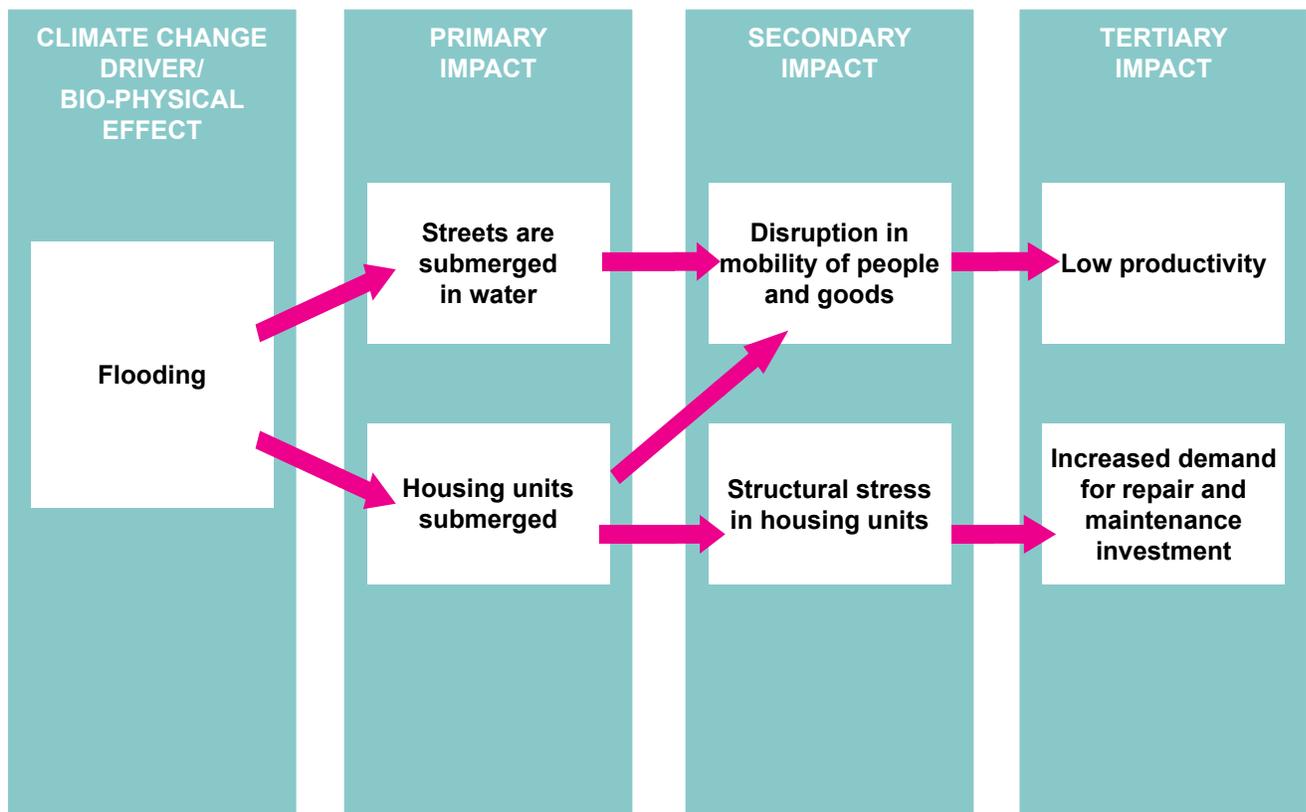
**Climate Change (CC) Sensitivity** here is defined as the degree to which a system is affected by the biophysical impact of climate change. It considers the socioeconomic context of the system being assessed.

Questions to include:

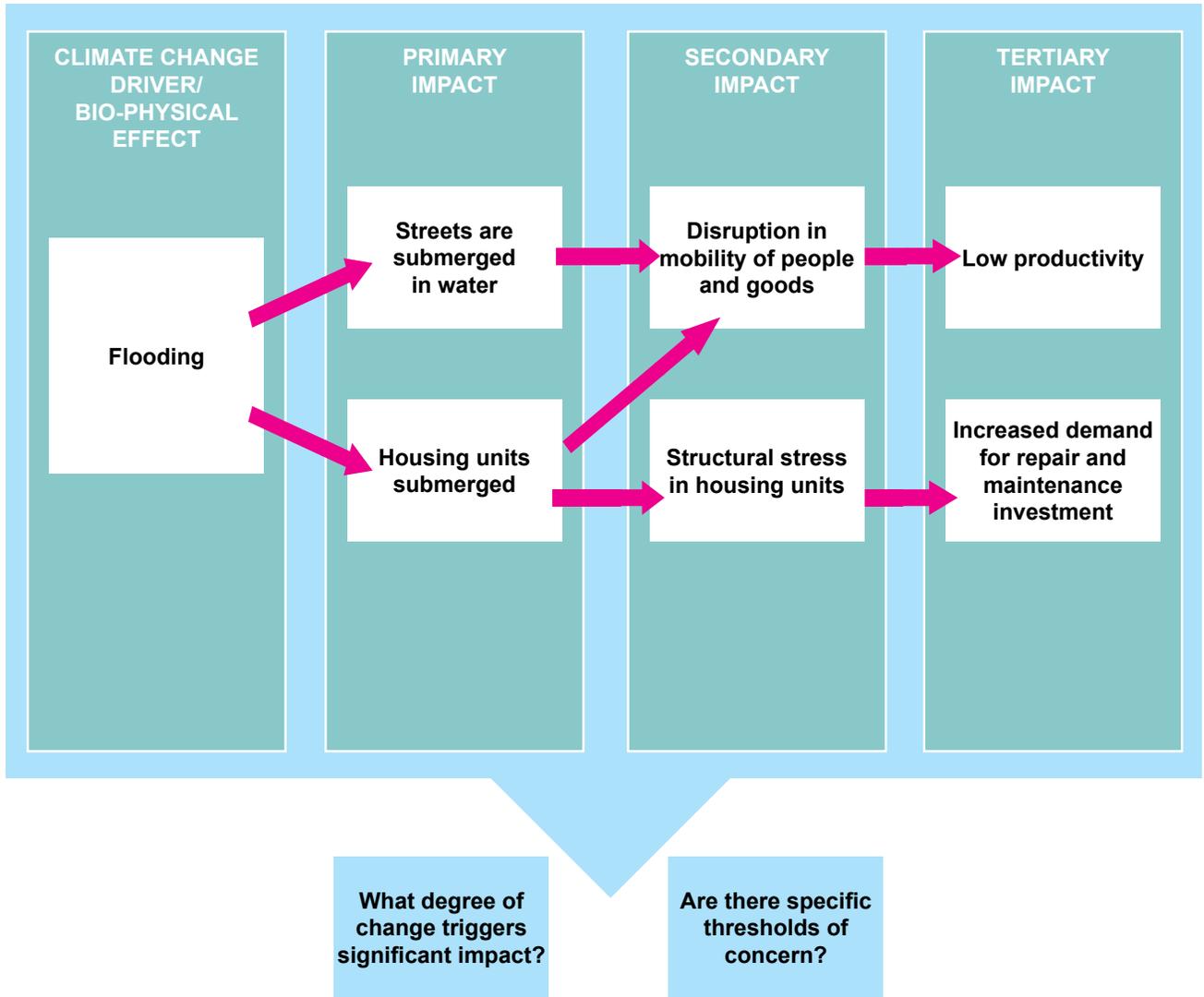
- What CC biophysical effect (“driver”) impacts housing and settlements?
- What degree of change triggers significant impact?
- Which specific locations are most at risk to the impacts associated with key climate change drivers?
- Who lives in risk prone areas, and what resources do they have available? What are the vulnerable sectors/livelihoods (e.g., women, the poor, etc.)?

The questions could be answered through the exercises below which could be accomplished through focus group discussions/workshops.

### EXERCISE 1: Influence/Impact Diagram (example)



**EXERCISE 2: Determine degree of change that triggers significant impact/determine the threshold?**



*Data Source: Damage/incident reports from previous disasters from DRRMO; CBMS; barangay profiles*

Summarize the answers using the table below:

CLIMATE CHANGE DRIVER	AREAS AT RISK	CURRENT COPING MECHANISM	THRESHOLD LEVEL	AT-RISK POPULATION/ HOUSEHOLDS	
				Threshold Level 1	Threshold Level 2
FLOODING	Community A Community B	???	???	???	???
STRONG WINDS DUE TO TYPHOON					
DROUGHT					
SEA LEVEL RISE					
LANDSLIDE					
ETC.					

### Climate Change Adaptive Capacity Assessment

**Adaptive Capacity** is the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.

There are various ways of doing this assessment which could range from highly technical to a very simple knowledge, skills, and attitude scanning process. What is critical is for this part of the assessment to be able to identify the capacity of the shelter sector to adjust and be resilient given the projected impacts. It is supposed to help identify the key actions/strategies needed to develop/incorporate in the shelter strategy and action plan.

**SUGGESTED TOOL**

(Process: Could be desk work for the technical working/planner or answered in a workshop)

ADAPTIVE CAPACITY ASSESSMENT CRITERIA (EXAMPLE)	YES	NO	WHY
<b>AWARENESS</b>			
Are stakeholders in the area /sector aware there are current/potential impacts?			
Is there an ability to communicate directly with the sector/area affected (e.g., basic communication infrastructure, a designated key point of contact, regular interaction, radio service, etc.)?			
Are decision makers aware of a.) climate change and b.)potential impacts in your jurisdiction?			
<b>KNOWLEDGE</b>			
Has this area/sector undertaken previous efforts to study or address the climate change driver and potential impact?			
Are there existing processes that you can integrate with?			
Are there existing area/sectoral plans, including emergency response plans, that can be referred to?			
Are people in this area/sector literate , or do they require oral communication methods (e.g., radio programs, door to door campaigns, announcements at community gatherings)?			
<b>RESOURCES</b>			
Do you have adequate staff and allocated time to plan and implement adaptation actions?			
Do you have access to adequate financial resources and funding?			
Do people in the affected area have access to safe, clean drinking water in the event of a hazard occurrence?			
Is there political willingness to allocate resources to build adaptiv capacity?			
Do the people in the affected area have resources to respond to a climate related hazard (e.g., access to basic transportation, adequate rations, ability to relocate temporarily, basic shelter)?			
<b>SKILLS</b>			
Are there specific agencies, community groups, and/or NGOs that have the mandate and skills to focus on the specific sector/area?			
Are there trained emergency response teams for this sector/area?			
Are there notable community/neighbourhood “leaders” that can quickly organize people in the event of a hazard occurrence?			
Are there adequate medical services in close proximity?			
<b>INFRASTRUCTURE &amp; RESOURCES</b>			
Is there adequate transport, water infrastructure, sanitation, energy supply and management?			
Are major infrastructure and/or facilities located in hazard prone areas?			

## ANNEX 4

# Examples of Filled-out LSP Worksheets

## WORKSHEET 1

## LOCATION &amp; NUMBER OF AFFECTED FAMILIES/HHS

1. FAMILIES/HOUSEHOLDS IN DANGER/HAZARDOUS AREAS			
Type of danger/hazard (flood, landslide, etc.)	Location	Land owner of occupied lot	Number of families/ households
Flood	Barangay 1	LGU	154
Flood	Barangay 4	A. Golez	254
Flood	Barangay 5	LGU	126
Flood	Barangay Rizal	Gillera	404
Sea level rise	Barangay Balaring	V. Gaston	515
Landslide	Barangay E. Lopez	J. Javellana	759
Landslide	Barangay Hawaiian	Public land	1,893
2. FAMILIES/HOUSEHOLDS TO BE AFFECTED BY INFRASTRUCTURE PROJECTS			
Type of infrastructure project	Location	Land owner of occupied lot	Number of families/ households
Road widening	Barangay Lantad	National government	909
Road widening	Barangay 2	National government	274
Road widening	Barangay 3	National government	20
3. THOSE NOT AFFECTED BY 1 & 2 BUT WITH COURT ORDER FOR DEMOLITION/EVICTION			
Name of homeowners association (HOA)	Location	Land owner of occupied lot	Number of families/ households
None	None	None	None
4. THOSE NOT AFFECTED BY 1, 2, AND 3 BUT WITH PENDING OR THREATS OF DEMOLITION/EVICTION			
Name of homeowners association (HOA)	Location	Land owner of occupied lot	Number of families/ households
Guinhalaran HOAI	Brgy. Guinhalaran (LGU has started negotiation with landowner for possible sale of the property under LCMP)	LMC Corporation	104
5. THOSE NOT AFFECTED BY 1-4 AND WHOSE LAND OWNERS ARE WILLING TO SELL PROPERTY TO OCCUPANTS			
Name of homeowners association (HOA)	Location	Land owner of occupied lot	Number of families/ households
	Barangay 1	LGU	119
	Barangay Lantad	S. Ledesma	538
	Barangay Balaring	Ramon Margarito	215
	Barangay E. Lopez	Caridad Magbanua	459
	Barangay Mambulac	LGU	1,145
San Rafael HOAI	Barangay 5	Gina Adriano	89
Sunset View HOAI	Barangay Rizal	Mario Samillano	41
6. POTENTIAL FOR DISPLACEMENT DUE TO CLIMATE CHANGE			
Potential cause of displacement	Location	Land owner of occupied lot	Number of families/ households
Sea level rise	Barangay Mambulac	Public land	1,439
Sea level rise	Barangay Guimbalaon	Public land	157
Sea level rise	Barangay Guinhalaran	Public land	1,121
7. OTHERS (PLEASE SPECIFY)			
Particulars	Location	Land owner of occupied lot	Number of families/ households

## WORKSHEET 2.1

## BASIC DATA AND ASSUMPTIONS

Population in 2010	120,999	Households/Dwelling Unit	1,0131
Annual Population Growth (NSO 2000 and 2010)	1.17%	Displaced Units	8,025
Household Size	4.5	Homeless	28
Housing Stock	27,138		

## NEW HOUSING UNITS NEEDED (DUE TO BACKLOG)

	TOTAL	ANNUAL	PROGRAM PERIOD
<b>DOUBLED-UP (1.31% OF HS)</b>	<b>356</b>	<b>51</b>	<b>2016–2022 (7 yrs)</b>
<b>HOMELESS</b>	<b>28</b>	<b>14</b>	<b>2014–2015 (2 years)</b>
<b>DISPLACED</b>	<b>8,025</b>		<b>2013–2022 (10 yrs)</b>
Barangay 1	154	702	2013
Barangay 2	274		
Barangay 3	20		
Barangay 4	254		
Barangay 5	126	530	2014
Barangay Rizal	404		
Barangay Lantad	909	454	2015
		455	2016
Barangay Balaring	515	515	2017
Barangay E. Lopez	759	759	2018
Barangay Hawaiian	1,893	946	2019
		947	2020
Barangay Mambulac	1,439	1,439	2021
Barangay Guinhalaran	1,121	1,278	2022
Barangay Guimbalaon	157		
	<b>TOTAL: 8,409</b>		

WORKSHEET 2.2

POPULATION PROJECTION

	BASE DATA	BASE YEAR	1ST PLANNING PERIOD		2ND PLANNING PERIOD	3RD PLANNING PERIOD
	2010	2012	2013	2015	2018	2022
Population	120,999	123,847	125,296	128,245	132,799	139,124
Households	26,889	27,522	27,844	28,499	29,511	30,916
Average household size	4.5	4.5	4.5	4.5	4.5	4.5
Housing stock	26,541 (HOMELESS=0)	27,138				

NEW UNITS NEEDED DUE TO FUTURE NEED (POPULATION GROWTH)

	TOTAL	ANNUAL
I. Planning Period 2013-2015 (3 years)	977	326
II. Planning Period 2016-2018 (3 years)	1,012	337
III. Planning Period 2019-2022 (4 years)	1,405	351
<b>TOTAL: 3,394</b>		

## WORKSHEET 2.3

TOTAL NEW UNITS NEEDED ANNUALLY DUE TO BACKLOG AND  
POPULATION GROWTH

Year	Doubled-up	Displaced	Homeless	Population Increase	Annual Total	Total for the planning period
2013		702		325	1,027	2,691
2014		530	14	326	870	
2015		454	14	326	794	2,893
2016	50	455		337	842	
2017	51	515		337	903	
2018	51	759		338	1,148	6,219
2019	51	946		351	1,348	
2020	51	947		351	1,349	
2021	51	1,439		351	1,841	
2022	51	1,278		352	1,681	
						11,803

SUMMARY OF NEW UNITS NEEDED  
(DUE TO BACKLOG AND POPULATION GROWTH)

PLANNING PERIOD		HOUSING UNITS NEEDED			
		Due to Backlog	Due to Population Growth	Total	%
1st Planning Period	2013–2014	1,714	977	2,691	22.80
2nd Planning Period	2016–2018	1,881	1,012	2,893	24.51
3rd Planning Period	2019–2022	4,814	1,405	6,219	52.69
TOTAL		8,409	3,394	11,803	100

## WORKSHEET 3

## SUMMARY OF UPGRADING NEEDS

UPGRADING NEEDS	% OF HOUSING STOCK	TOTAL	ANNUAL	PROGRAM PERIOD
<b>1. Tenure Need /Location</b>	<b>10.00</b>	<b>2,710</b>		<b>2013 – 2017</b>
Barangay Mambulac		1,145	572 573	2013 2014
Barangay E. Lopez		459	459	2015
Barangay Lantad		538	538	2016
Barangays 1, 5, Rizal, Balaring and Guinhalaran		568	568	2017
<b>2. Infrastructure Need</b>				
<input type="checkbox"/> Households without electricity	<b>41.12</b>	<b>11,159</b>	<b>2,790</b>	<b>2013–2016</b>
<input type="checkbox"/> Households without adequate potable water supply	<b>70.05</b>	<b>19,012</b>	<b>3,169</b>	<b>2013–2018</b>
<input type="checkbox"/> Households without adequate sanitation	<b>15.28</b>	<b>4,148</b>	<b>691</b>	<b>2013–2018</b>
<input type="checkbox"/> Households without drainage system	<b>14.77</b>	<b>4,008</b>	<b>1,336</b>	<b>2014–2016</b>
22 CMP Take-out (in 12 poblacion barangays)		2,034	2,034	<b>2014</b>
LTAP Take Out (Barangay Milibili)		190	1,080	<b>2015</b>
MMP take-out (Barangay 5)		102		
6 pre-PCL CMP (Barangay 7, 8, & 9))		659		
Tanque Datiles		31		
Tanque Isla Bonita		49		
Barangay 6 (Sitio Cuadra)		49		
Mabini Altavas (Baybay)		142	894	<b>2016</b>
Alba Village Dinginan		207		
SitioLuyo, Culasi		73		
Barangay Libas		37		
Barangay Bolo		200		
La Salle (Banica-Asis)		179		
BLISS Cagay		56		
<input type="checkbox"/> Households without adequate road access	<b>14.77</b>	<b>4,008</b>	<b>The same as in upgrading of drainage</b>	<b>2014–2016</b>
<input type="checkbox"/> Households without regular garbage collection	<b>16.05</b>	<b>4,356</b>	<b>1,089</b>	<b>2013–2016</b>
<b>3. Structural improvement need</b>	<b>8.49</b>	<b>2,304</b>	<b>230</b>	<b>2013-2022</b>
<b>Housing Stock = 27,138</b>				

## WORKSHEET 4

## AFFORDABILITY ANALYSIS &amp; LAND NEED CALCULATION

Income Group	1st	2nd	3rd	4th	5th	6th
<b>Monthly income in Philippine pesos (minimum, maximum)</b>	8,000 and below	8,001–15,000	15,001–30,000	30,001–45,000	45,001– 60,000	Over 60,000
<b>% of new units</b>	45%	21.75%	25.5%	4.85%	2.10%	0.80%
<b>Number of units 11,803</b>	5,311	2,567	3,010	572	248	95
<b>Typical monthly income</b>	5,000	11,500	22,500	37,500	52,500	65,000
<b>Potential % of income for upgrading or new housing</b>	8%	8%	10%	10%	12%	12%
<b>Potential capital cost for housing:</b>						
<b>Monthly</b>	400	920	2,250	3,750	6,300	7,800
<b>Annual</b>	4,800	11,040	27,000	45,000	75,600	93,600
<b>Loan Terms</b>						
<b>Interest rate</b>	6%					
<b>Repayment period, years</b>	30					
<b>Affordable housing loan</b>	66,072.00					
<b>Affordable option</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
	Rent-to-Own scheme of a 5-story LRH Ground floor for commercial use Floors for 2–5 or residential use Floor area: 20 sqm. About 64 residential units per building Land development cost at Php600/sqm Housing unit cost at Php14,000/sqm. Indirect cost for documentation and building maintenance: 20% Total Unit Cost = Php401,949.60 per unit Monthly rent or amortization starts at Php400 and will be re-priced every 3 years (see Annex 12 for schedule of amortization)	40 sqm developed land which includes concrete roads, covered drainage, septic vaults, electrical connection  With 18 sqm shell row house costing Php150,395.84	54 sqm developed land which includes concrete roads, covered drainage, septic vaults, electrical connection  With 24 sqm shell row house costing Php344,652	60 sqm developed land which includes concrete roads, underground drainage, septic vaults, electrical connection  With 32 sqm complete row house costing Php522,144	72 sqm developed land which includes concrete roads, underground drainage, septic vaults, electrical connection  With 36 sqm complete duplex costing Php795,312	90 sqm developed land which includes concrete roads, underground drainage, septic vaults, electrical connection  With 36 sqm single-detached complete house costing Php914,256

## WORKSHEET 4 (continued)

Income Group	1st	2nd	3rd	4th	5th	6th
Land Area per unit	7.81*	57.14	77.15		103	129
Lot size	26.033 sqm*	40	54	60	72	90
Required land (in hectares)	13.83	14.67	23.22	5.00	2.60	1.23
Land requirement for those below poverty threshold (assume Php8,000 as poverty threshold): <b><u>13.83 hectares</u></b>						
Total land need for all income groups in 2013–2022 = <b><u>60.55 hectares</u></b>						
<i>*Note: For computations of land area per unit and lot size of the First Income Group, please refer to Box 29.</i>						

## WORKSHEET 5

## AFFORDABLE HOUSING OPTIONS

Income Group	Main Options	Lot Size (m <sup>2</sup> )	Total land need / unit (m <sup>2</sup> )	Land cost (Php)		Land development cost (Php)		House construction cost (Php)		Indirect cost /unit	Total Unit Cost (Php)
				/m <sup>2</sup>	/unit	/m <sup>2</sup>	/unit	(Php)	/unit		
First Income	Rent-to-own scheme of a 5-storey LRH Ground floor for commercial use 2nd to 5th floors for residential use Floor area: 20 sqm Estimated at 64 residential units per building Total unit cost: Php405,940.80 per unit Rent or amortization starts at Php400 a month and will be re-priced every 3 years (see Annex 12 for schedule of amortization)	7.81	26.033	Land cost will not be recovered since only the units will be sold		600	15,618	14,000	319,340	66,991.60	401,949.60
						Complete amenities including shared parking area			20 sqm floor area + 2.81 sqm common area = 22.81 sqm x Php14,000	20% Indirect cost for documentation and building maintenance.	
Second Income	Developed land which includes concrete roads, covered drainage, septic vaults, electrical connection With subsidized 20 sqm shell row house	40	57.14	800	45,712	500	28,570	3,000 for materials	60,000	12%	150,395.84
								With housing unit either from Gawad Kalinga, Habitat for Humanity, or other similar organizations where beneficiaries are charged only for the housing materials cost but the labor is through "sweat equity" rendered by the homeowner.		16,113.84	
Third Income	Developed land which includes concrete roads, covered drainage, septic vaults, electrical connection With 24 sqm shell row house	54	77.15	1,000	77,150	500	38,575	8,000	192,000	36,927	344,652
Fourth Income	Developed land which includes concrete roads, open drainage, septic vaults, electrical connection With 32 sqm loftable row house	60	86	1,000	86,000	700	60,200	10,000	320,000	55,944	522,144

WORKSHEET 5 (continued)

Fifth Income	Developed land which includes concrete roads, open drainage, septic vaults, electrical connection  With 36 sqm loftable duplex	72	103	2,000	206,000	700	72,100	12,000	432,000	85,212	795,312
Sixth Income	Developed land which includes concrete roads, underground drainage, septic vaults, electrical connection  With 36 sqm single-detached complete house	90	129	2,000	258,000	700	90,300	13,000	468,000	97,956	914,256
<p>Notes:</p> <p>1) Sum up all the hectares needed by the first to the sixth income groups to arrive at the total land requirement for all income groups, which is 60.55 hectares in the example (see Table 10).</p> <p>2) For computations of lot size, total land need, and floor area of the First Income Group, see Box 29.</p>											

## WORKSHEET 6.1

## INVENTORY OF AVAILABLE SUITABLE LANDS FOR HOUSING, 2012

OWNER	LAND AREA (hectares)	LOCATION	REMARKS/ SUITABILITY/ CONDITIONS
Silay LGU	22	Bonbon, Barangay E. Lopez	Vacant
Silay LGU	1	Hda. Consolacion, Barangay Guinhalaran	Vacant
DBP	5	M&J, Barangay 5	Vacant
Gonzaga, Chona	30	Hda. Chona, Barangay Lantad	Vacant/sugarcane
Gonzaga, Paz	2	Hda. Paz, Barangay Rizal	Vacant/sugarcane
Jison, Elisa	1	Barangay E. Lopez	Vacant/sugarcane
Javellana, Ana Maria	5	Guinsang-an, Barangay Hawaiian	Vacant/sugarcane
Lacson, Stephen Michael, et. al.	5.20	Barangay Bagtic	Vacant/sugarcane
Bautista, Benjamin	12	Barangay Guimbalaon	Vacant/sugarcane
ALM Group of Farms	1.90	Barangay Rizal	Vacant/sugarcane
<b>TOTAL</b>	<b>85.10</b>		

## WORKSHEET 6.2

## COMPARISON OF LAND NEED AND AVAILABLE SUITABLE LAND FOR HOUSING

Comparison Of Land Need And Available Suitable Land For Housing			
TOTAL LAND NEEDED (Hectares)	TOTAL LAND AVAILABLE (Hectares)	DIFFERENCE (Hectares)	REMARKS
Below Poverty Threshold = 13.83	85.10	24.55	Land is sufficient
Economic = 46.72			
TOTAL = 60.55			

WORKSHEET 7.1

ASSESSMENT OF POWER NEED VS. CAPACITY OF POWER PROVIDER

Year	Service Provider	Capacity Of Service Provider Annually (Number Of Households Served)	Number of Units Needed Annually			REMARKS
			NEW UNITS Refer to filled-out Worksheet 2.3: Total New Units Needed Due to Backlog and Population Growth	UNITS FOR UPGRADING Please refer to filled-out Worksheet 3: Summary of Upgrading Needs	TOTAL ANNUAL NEED	
2013	Ceneco	2,500	1,024	2,789	3,814	
2014	Ceneco	2,500	869	2,790	3,659	
2015	Ceneco	3,000	798	2,790	3,588	
2016	Ceneco	3,000	838	2,790	3,628	
2017	Ceneco	3,500	904		904	
2018	Ceneco	3,500	1,151		1,151	
2019	Ceneco	3,500	1,342		1,342	
2020	Ceneco	3,500	1,347		1,347	
2021	Ceneco	3,500	1,844		1,844	
2022	Ceneco	3,500	1,686		1,686	
		<b>TOTAL = 32,000</b>	<b>11,803</b>	<b>11,159</b>	<b>22,962</b>	

*Note: LSP worksheets 7.2 (water), 7.3 (sanitation), 7.4 (drainage), 7.5 (roads), and 7.6 (garbage) will be filled out similarly.*

## WORKSHEET 8.1

## ESTIMATED FINANCIAL REQUIREMENTS FOR HOUSING PROVISION, 2013-2022

Estimated Financial Requirements for Housing Provision, 2013-2022				
Income Group	Option	Number of Units	Unit Cost (Php)	Total Cost (Php)
1st	<ul style="list-style-type: none"> <li>Public rental 5-storey low-rise housing (LRH)</li> <li>Approximately 64 residential units per building (total for 2nd to 5th floors, ground floor for commercial use)</li> <li>Floor area: 20 sqm</li> </ul>	5,311	401,949.60	2,134,754,325.60
2nd	<ul style="list-style-type: none"> <li>Developed land which includes concrete roads, covered drainage, septic vaults, electrical connection</li> <li>With 20 sqm shell row house</li> </ul>	2,567	150,395.84	386,066,121.28
3rd	<ul style="list-style-type: none"> <li>Developed which includes concrete roads, covered drainage, septic vaults, electrical connection</li> <li>With 24 sqm shell row house</li> </ul>	3,010	344,652.00	1,037,402,520.00
4th	<ul style="list-style-type: none"> <li>Developed land which includes concrete roads, underground drainage, septic vaults, electrical connection</li> <li>With 32 sqm loftable row house</li> </ul>	572	522,144.00	298,666,368.00
5th	<ul style="list-style-type: none"> <li>Developed land which includes concrete roads, underground drainage, septic vaults, electrical connection</li> <li>With 32 sqm loftable duplex</li> </ul>	248	795,312.00	197,237,376.00
6th	<ul style="list-style-type: none"> <li>Developed land which includes concrete roads, underground drainage, septic vaults, electrical connection</li> <li>With 36 sqm single-detached complete house</li> </ul>	95	914,256.00	86,854,320.00
<b>TOTAL = 11,803</b>				<b>4,140,981,030.88</b>

WORKSHEET 8.2

POTENTIAL SOURCES OF FUNDS FOR SHELTER PROVISION

Agency/Organization	Name Of Program	Component	Cost (Optional)
LGU	LDRRMF (RA 10121) Annual budget GAD fund	Site development (drainage, embankments, early warning systems); Trainings (EWS, GAD); Land banking; Climate-resilient and GAD-sensitive LSP process	
NHA	Resettlement Assistance Program for LGU Local housing program (district housing) Housing materials assistance	Land development; House construction	
HDMF	Developmental loan Home improvement Individual land purchase	Land development; House construction	
SHFC	Localized Community Mortgage Program	Lot purchase; Land development; House construction	
ODA, MFIs, Foreign Assistance	Shelter-related programs	Housing; House construction; Technology support; Training; Site development; Basic services; Facilities	
DSWD	Core housing program	Materials; House construction	
GFI	MDF Other shelter-related programs CISFA	Land acquisition; Basic services for MDF; Housing; House construction; Technology support; Site development; Facilities	
Developers	Balanced housing		
Beneficiaries/families	Equity	Cash; Labor	
Private Sector	CSR		
Others (specify)			
<b>TOTAL</b>			

## WORKSHEET 9

## EXAMPLE OF IMPLEMENTATION PLAN OF STRATEGIES

Objective	Strategy	Program/Project/Activity	Responsible Agency	Resources Needed			Schedule (When?)	
				What? How many?	How much?	Fund source		
3. To reduce the displaced households by no less than 1030 units annually between 2015-2022.	3.1 Validate inventory of displaced households	3.1.1 Secure data on location of danger areas, infra projects, and those w/ eviction orders from CSDWO, Engr.'s Ofc., CRRDMC, PCUP and courts	City Housing Office (CHO)	<ul style="list-style-type: none"> <li>Funds for meetings and field work</li> <li>Fees &amp; photocopies</li> <li>Gas</li> </ul>	15,000	LGU	1st Quarter 2013	
		3.1.2 Conduct HH survey in identified barangays to determine displaced households	<ul style="list-style-type: none"> <li>Barangay officials</li> <li>CHO</li> <li>CPDO</li> <li>CSWDO</li> </ul>	<ul style="list-style-type: none"> <li>Survey forms</li> <li>Supplies</li> <li>Gas</li> </ul>	30,000	LGU	2nd Quarter 2013	
		3.1.3 Masterlisting of qualified beneficiaries	CHO	<ul style="list-style-type: none"> <li>Supplies</li> </ul>	10,000	LGU	4th Quarter 2013	
	3.2 Provide shelter for displaced households	3.2. Coordinate with NHA to access technical and financial assistance	<ul style="list-style-type: none"> <li>Office of the Mayor</li> <li>CHO</li> <li>CEO</li> </ul>	—	—	LGU	1st Quarter 2013	
		3.2.2 Process titling of newly bought land to prepare it as counterpart to NHA's Resettlement Program	<ul style="list-style-type: none"> <li>City Legal Office</li> </ul>	<ul style="list-style-type: none"> <li>Funds for document processing, taxes</li> <li>Gas</li> <li>Supplies</li> </ul>	1 million	LGU	1st Quarter 2013	
		3.2.3 Make development Plans thru guidance of NHA & process its approval	<ul style="list-style-type: none"> <li>CHO</li> <li>CEO</li> </ul>	<ul style="list-style-type: none"> <li>Supplies</li> </ul>	10,000	LGU	2nd Quarter 2013	
		3.2.4 Develop the resettlement site	<ul style="list-style-type: none"> <li>CEO</li> </ul>	<ul style="list-style-type: none"> <li>Development funds</li> </ul>	36 million	NHA	4th Quarter 2014	
		3.2.5 Relocate displaced households	<ul style="list-style-type: none"> <li>CHO</li> <li>Barangay officials</li> </ul>	<ul style="list-style-type: none"> <li>Gas</li> <li>Supplies</li> </ul>	5 million	LGU	1st Quarter. 2015 onwards	
	<b>TOTAL =</b>				<b>42,065,000</b>			

## Data Requirements

TO DETERMINE	DATA REQUIREMENTS	SOURCE	DATA
<b>Housing Needs</b>			
Future Need (new units needed due to population increase)	Total population Population growth rate	NSO or LGU survey (C/MPDC) NSO	
Backlog: Doubled-up Households	Average Household size House/dwelling unit Housing Stock (occupied dwelling units)	LGU (C/MPDC) NSO NSO or LGU (C/MPDC)	
Displaced Units: Relocation Need	Households or ISFs residing in: <ul style="list-style-type: none"> <li>• danger areas (current and projected) Climate Change Projections, Risks and Hazard Mapping</li> <li>• areas where priority infrastructure projects will be implemented</li> <li>• areas covered by court order for demolition</li> </ul>	LGU primary survey City Vulnerability and Risk Assessment, MGB, PAGASA DPWH or local engineering office PCUP, local courts, UPAO, local housing office	
Projections using FAR	<ul style="list-style-type: none"> <li>• Current Population</li> <li>• Population growth rate</li> <li>• Projected population after XX years</li> <li>• Average HH size</li> <li>• Average housing floor area/family</li> <li>• Housing backlog</li> <li>• Public space plus other areas (%)</li> <li>• FAR factor</li> </ul>	NSO Data	
Homeless Population	Homeless households and individuals (not a member of household)	C/MSWD	
Upgrading needs: Tenure Upgrading	Households residing in areas with inadequate security of tenure and/ or those with already ongoing negotiation with the land owners for the acquisition of land they are presently occupying	Local housing office, PCUP, UPAO, HLURB, SHFC	

TO DETERMINE	DATA REQUIREMENTS	SOURCE	DATA
Infrastructure Upgrading	Households lacking access to one or more basic services and utilities, i.e., water, power, sanitation, solid waste facility, roads, and drainage.  Number of households targeted to be supplied with basic services (e.g., power, water, sanitation, solid waste, roads, and drainage) by utility providers/LGUs per year	Ocular, baseline survey, utility companies, city engineer, general service office, interviews and observation  Utility companies, city engineer, general service office	
Structural improvement	Households whose housing units are made of temporary materials e.g. barong-barong units or it otherwise needs to be repaired to minimum acceptable level (can protect the occupants from the elements, i.e., rain, wind, temperature and the like).	LGU (primary survey, ocular inspection)  NSO (CPH), M/CDRRMC	
<b>Affordability For Housing</b>	Income group distribution Typical (median income)	NSO (family income and expenditures survey), M/CSWDO, National HH Targeting System (DSWD)	
	Poverty threshold & poverty incidence	NEDA	
	% of income for capital costs of housing	NSO (FIES)	
	Loan terms of gov't housing loans	HUDCC, SHFC, HDMF	
	Monthly rental of existing housing	Local survey or interview of renters	
<b>Main Housing Option With Land Need And Costs, Infrastructure And Building Cost</b>			

RESOURCE REQUIREMENTS  Land	Land cost	Municipal Assessor's Office	
	Cost of building materials and labor	Developers, architects, engineers, contractors, DTI, DOLE	
	Estimates of various levels of land development cost per square meter	Developers, architects, NHA, engineers, contractors	
	Estimates of construction cost of various types of houses per square meter	Developers, architects, NHA, engineers, contractors	
	Housing standards and regulations: minimum design standards (average floor area, minimum lot requirement);	HLURB, LGU, BP 220, PD 957	
	Risk values for settlements	City survey and local risk data, M/CDRRMC	
	Innovative technologies & materials for housing	AITECH-NHA	
	Present land use Zoned land uses	City/Municipal Assessor's Office  Zoning Administration, Zoning Ordinance  CPDO, HLURB, CLUP	
	Available residential land Vacant land suitable for housing	CLUP  Primary survey, CPDO, Assessor, Zoning Administration	
	Land owner	Register of Deeds, Assessor	
Infrastructure provision	Annual infrastructure provision capacity (water, electricity, sewerage, road access, drainage, waste collection)	City engineer, CPDO, developers, public utility companies	
Finance	Available developmental financing	HDMF, NHA, banks, private developers (joint-venture), NGOs	
	Available buyers' financing and government/nongovernment housing programs	HDMF, SHFC, private banks, subdivision owners/developers	
	Available local government funds for housing	LGU	
Other requirements: Hazard map, street map, map of location of the ISF, tenure upgrading sites, and available land suitable for housing			

## ANNEX 6 - WORKSHEETS

## Location &amp; Number Of Affected Families/Households:

1. Families/HHs in danger /hazardous areas				Sex of Household Head	
Type of Danger/Hazard (Flood, landslide, etc.)	Location	Land Owner of occupied lot	No. of Families/ Households	Number of Males	Number of Females
2. Families/HHs to be affected by infrastructure projects					
Type of infra project	Location	Land Owner of occupied lot	No. of Families/ Households		
3. Those not affected by 1 and 2 but with court order for demolition/eviction					
Name of homeowners association (HOA)	Location	Land Owner of occupied lot	No. of Families/ Households		
4. Those not affected by 1, 2, and 3 but with pending or threats of demolition/eviction					
Name of homeowners association (HOA)	Location	Land Owner of occupied lot	No. of Families/ Households		
5. Those not affected by 1,2,3, and 4 and whose land owners are willing to sell property to occupants					
Name of homeowners association (HOA)	Location	Land Owner of occupied lot	No. of Families/ Households		
6. Potential for displacement due to climate change					
Potential Cause of Displacement	Location	Land Owner of occupied lot	No. of Families/ Households		
7. Others (please specify)					
Particulars	Location	Land Owner of occupied lot	No. of Families/ Households		

**Basic Data And Assumptions**

Population in 2010		Households/Dwelling Unit	
Annual Population Growth		Displaced Units	
Household Size		Homeless	
Housing Stock			

**New Housing Units Needed (Due To Backlog)**

	Total	Annual	Program Period
Doubled-up (___ % of Households)			
Homeless			
Displaced			
<b>TOTAL</b>			

**Population Projection**

	Base Data	Base Year	1st Planning Period	2nd Planning Period	3rd Planning Period
Population					
Households					
Average HH size					
Housing stock					



Summary of Upgrading Needs

UPGRADING NEEDS	% of housing stock	Total	Annual	Program Period
<b>1. Tenure Need</b>				
<b>2. Infrastructure Need</b>				
<input type="checkbox"/> Units without electricity				
<input type="checkbox"/> Units without adequate potable water supply				
<input type="checkbox"/> Units without adequate sanitation				
<input type="checkbox"/> Units without drainage system				
<input type="checkbox"/> Households without adequate road access				
<input type="checkbox"/> Households without regular garbage collection				
<b>3. Structural improvement need</b>				
<b>Housing Stock = _____</b>				

Note: Additional rows may be added to accommodate more entries.

## Affordability Analysis and Land Need Calculation

Income Group	1st	2nd	3rd	4th	5th	6th
Income (minimum, maximum)						
% of new units						
Number of units						
Typical monthly income						
Potential % of income for upgrading/new housing						
Potential capital cost for housing:						
Monthly						
Annually						
<b>Loan Terms</b>						
Interest rate						
Repayment period, years						
Affordable housing loan						
Affordable option						
Land Area per unit						
(Lot size)						
Required land (in hectares)						
Land Requirement For Those Below Poverty Threshold:					_____ Hectares	
Total Land Need For All Income Groups In 2013–2022:					_____ Hectares	

**Affordable Housing Options**

Income Group	Main Options	Lot Size (m2)	Total land need/unit (m2)	Land cost (Php)		Land development cost (Php)		House construction cost (Php)		Indirect cost /unit	Total Unit Cost (Php)
				/m2	/unit	/m2	/unit	(Php)	/unit		
First											
Second											
Third											
Fourth											
Fifth											
Sixth											

**Inventory of Available Suitable Lands for Housing**

Owner	Land Area (In Hectares)	Location	Remarks/ Suitability/ Conditions
<b>TOTAL</b>			

**Comparison of Land Need and Available Suitable Land for Housing**

Total Land Needed (Hectares)		Total Land Available (Hectares)		Difference (Hectares)		Remarks
Socialized	=	Socialized	=	Socialized	=	
Economic	=	Economic	= _____	Economic	= _____	
<u>        </u>	=	TOTAL	=	TOTAL	=	
<b>TOTAL</b>	<b>=</b>					

### Assessment of Power Need vs. Capacity of Service Provider

Year	Service Provider	Capacity Of Service Provider Annually (Number of Households Served)	Number Of Units Needed Annually			Remarks
			New Units (Refer To LSP Worksheet No. 2.3: Total New Units Needed Due To Backlog And Population Growth)	Units For Upgrading (Refer To LSP Worksheet No. 3: Summary Of Upgrading Needs)	Total Annual Need	

### Assessment of Water Need vs. Capacity of Service Provider

Year	Service Provider	Capacity Of Service Provider Annually (Number of Households Served)	Number Of Units Needed Annually			Remarks
			New Units (Refer To LSP Worksheet No. 2.3: Total New Units Needed Due To Backlog And Population Growth)	Units For Upgrading (Refer To LSP Worksheet No. 3: Summary Of Upgrading Needs)	Total Annual Need	

### Assessment of Sanitation Need vs. Capacity of Service Provider

Year	Service Provider	Capacity Of Service Provider Annually (Number of Households Served)	Number Of Units Needed Annually			Remarks
			New Units (Refer To LSP Worksheet No. 2.3: Total New Units Needed Due To Backlog And Population Growth)	Units For Upgrading (Refer To LSP Worksheet No. 3: Summary Of Upgrading Needs)	Total Annual Need	

**Assessment of Drainage Need vs. Capacity of Service Provider**

Year	Service Provider	Capacity Of Service Provider Annually (Number of Households Served)	Number Of Units Needed Annually			Remarks
			New Units (Refer To LSP Worksheet No. 2.3: Total New Units Needed Due To Backlog And Population Growth)	Units For Upgrading (Refer To LSP Worksheet No. 3: Summary Of Upgrading Needs)	Total Annual Need	

**Assessment of Roads Need vs. Capacity of Service Provider**

Year	Service Provider	Capacity Of Service Provider Annually (Number of Households Served)	Number Of Units Needed Annually			Remarks
			New Units (Refer To LSP Worksheet No. 2.3: Total New Units Needed Due To Backlog And Population Growth)	Units For Upgrading (Refer To LSP Worksheet No. 3: Summary Of Upgrading Needs)	Total Annual Need	

**Assessment of Garbage Collection & Disposal Need vs. Capacity of Service Provider**

Year	Service Provider	Capacity Of Service Provider Annually (Number of Households Served)	Number Of Units Needed Annually			Remarks
			New Units (Refer To LSP Worksheet No. 2.3: Total New Units Needed Due To Backlog And Population Growth)	Units For Upgrading (Refer To LSP Worksheet No. 3: Summary Of Upgrading Needs)	Total Annual Need	

### Estimated Financial Requirements for Housing Provision, 2013–2022

Income Group	Option	Number of Units	Unit Cost (Php)	Total Cost (Php)
1st				
2nd				
3rd				
4th				
5th				
6th				
<b>TOTAL</b>				

### Potential Sources Of Funds For Shelter Provision

Agency/Organization	Name of Program	Component	Cost (optional)
<b>TOTAL</b>			

Objective	Strategy	Program/ Project/Activity	Responsible Agency	Resources Needed			Schedule (When?)
				What? How many?	How much? (Php)	Fund source	
				<b>TOTAL =</b>		_____	

## ANNEX 7

## Salient Provisions Of BP 220

An act authorizing the ministry of human settlements to establish and promulgate different levels of standards and technical requirements for economic and socialized housing projects in urban and rural areas from those provided under presidential decrees numbered nine hundred fifty-seven (957), twelve hundred sixteen (1216), ten hundred ninety-six (1096), and eleven hundred eighty-five (1185).

### Project Location

Within suitable sites for housing and outside potential hazard prone and protection areas  
Land Allocation for Projects One Hectare and Above

- Saleable Area – Variable
- Non-saleable Area – Mandatory allocation for parks and playgrounds and area for community facilities

### Parks & Playgrounds Requirement

Density (lots/dwelling units per hectare)	% of Gross Area for Parks & Playgrounds
150 & below	3.5%
151 - 160	4.0%
161 - 175	5.0%
176 - 200	6.0%
201 - 225	7.0%
Above 225	9.0%

- An addition of 1% increment for every 10 or fraction thereof above 225.
- In no case shall an area allocated be less than 100 square meters. The same shall be strategically located within the subdivision project.

### Area for Community Facilities Requirement

Density (lots/dwelling units per hectare)	% of Gross Area for Community Facilities
150 & below	1.0%
151 - 225	1.5%
Above 225	2.0%

Mandatory provision of area for neighborhood multipurpose center both for economic and socialized housing projects with an area of one hectare and above. These areas are non-saleable. However, the developer may provide areas for community facilities such as schools and convenience/retail centers in excess of the mandatory requirement set in the rules which shall be deemed saleable. The use of the said area shall be indicated in the plan and annotated in the title thereto.

**Community Facilities Allocation**

Number Of Saleable Lots And/Or Dwelling Units	Neighborhood Multipurpose Center *	Convenience Retail Center **	Elementary School **	High School **	Tricycle Terminal *
10 & BELOW	-	-	-	-	-
11-99	-	-	-	-	-
100-499	X	-	-	-	-
500-999	X	-	-	-	-
1000-1499	X	-	-	-	-
1500-1999	X	X	X	-	X
2000-2499	X	X	X	X	X
2500-3000	X	X	X	X	X
* Mandatory provision of area			** Optional	Saleable	

**Minimum Lot Areas**

	ECONOMIC HOUSING	SOCIALIZED HOUSING
Single Detached	72 square meters	64 square meters
Duplex/Single Attached	54 square meters	48 square meters
Rowhouse	36 square meters	28 square meters

Saleable lots designated as duplex/single attached and/or rowhouse lots shall be provided with housing components.

Prices of saleable lots intended for single detached units shall not exceed 40% of the maximum selling price for house and lot package.

## Minimum Lot Frontage

	ECONOMIC HOUSING	SOCIALIZED HOUSING
Single Detached		
– Corner lot	8 meters	8 meters
– Regular lot	8 meters	8 meters
– Irregular lot	4 meters	4 meters
– Interior lot	3 meters	3 meters
Single Attached/Duplex	6 meters	6 meters
Rowhouse	4 meters	3.5 meters

## Length Of Block

Maximum length of block is 400 meters. However, blocks exceeding 250 meters shall be provided with a 2-meter alley approximately at mid-length.

Project Size Range	Economic			Socialized		
	Major (in meters)	Collector (in meters)	Minor (in meters)	Major (in meters)	Collector (in meters)	Minor (in meters)
2.5 hectares & below	8	–	6.5	8	–	6.5
Above 2.5–5 hectares	10	–	6.5	10	–	6.5
Above 5–10 has	10	8	6.5	10	–	6.5
Above 10–15 hectares	10	8	6.5	10	8	6.5
Above 15–30 hectares	12	8	6.5	10	8	6.5
Above 30 hectares	15	10	6.5	12	10	6.5
	ROW	Carriageway		ROW	Carriageway	
Motor Court	6	5		6	5	
Alley	2	–		2	–	
Pathwalk	–	–		3	–	

## Road Right of Way

- The minimum right-of-way of major roads shall be in accordance with the preceding table. However, in cases where the major road will serve as interconnecting road, it shall have a minimum right of ay of 10 meters. It shall have a 15-centimeter mix gravel (pit run) base course on well compacted subgrade.
- Major roads shall maintain a uniform width of road right-of-way. Tapering of road width shall not be allowed.
- Minor road shall have a minimum right of way of 6.5 meters.
- Interior subdivision project must secure right of way to the nearest public road and the right of way shall be designated as Interconnecting Road with a minimum right of way of 10 meters. This fact shall be annotated on the title of the said road lot and must be donated and deemed turned over to the LGU upon completion of the said interconnecting road.

## Setback Requirement Along Main Public Road

### Road Right of Way

- Contiguous projects or projects to be developed by phases shall be provided by interconnecting road with a minimum right of way of 10 meters.
- Alley shall have a width of 2 meters intended to break a block and to serve both pedestrians and for emergency purposes, both ends connecting to streets. It shall not be used as access to property.
- Pathwalk shall have a width of 3 meters intended only to provide pedestrian access to property for socialized housing projects. It shall have a maximum length of 60 meters.

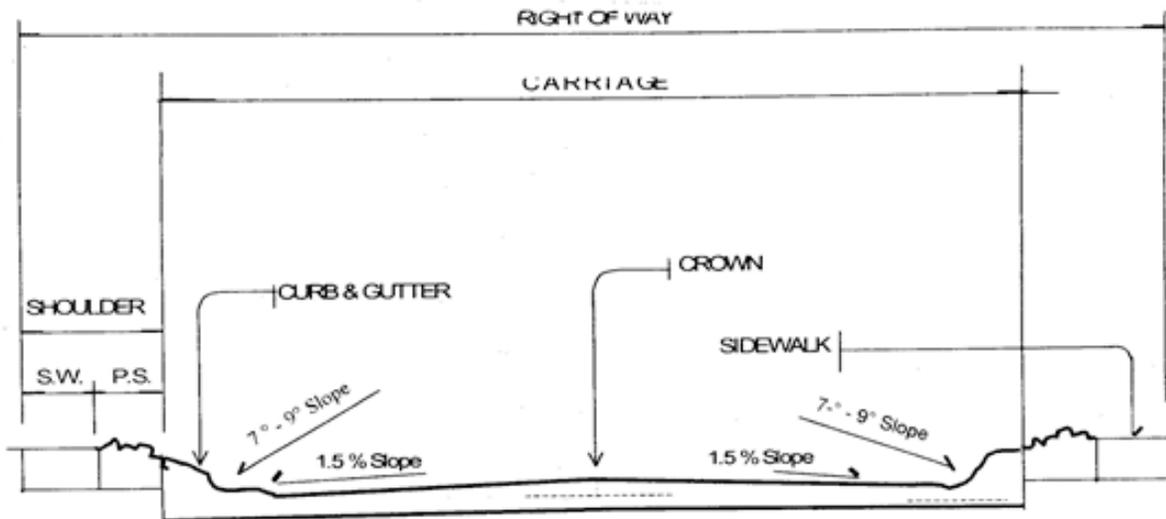
## Hierarchy of Roads Per Project Size Range

2.5 hectares & below	Major, minor, motor court, alley	Major, minor, motor court, pathway
Above 2.5 – 5 hectares	Major, minor, motor court, alley	Major, minor, motor court, pathway
Above 5 – 10 hectares	Major, collector, minor, motor court, alley	Major, minor, motor court, pathway
Above 10 – 15 hectares	Major, collector, minor, motor court, alley	Major, collector, minor, motor court, alley
Above 15 – 30 hectares	Major, collector, minor, motor court, alley	Major, collector, minor, motor court, alley
Above 30 hectares	Major, collector, minor, motor court, alley	Major, collector, minor, motor court, alley

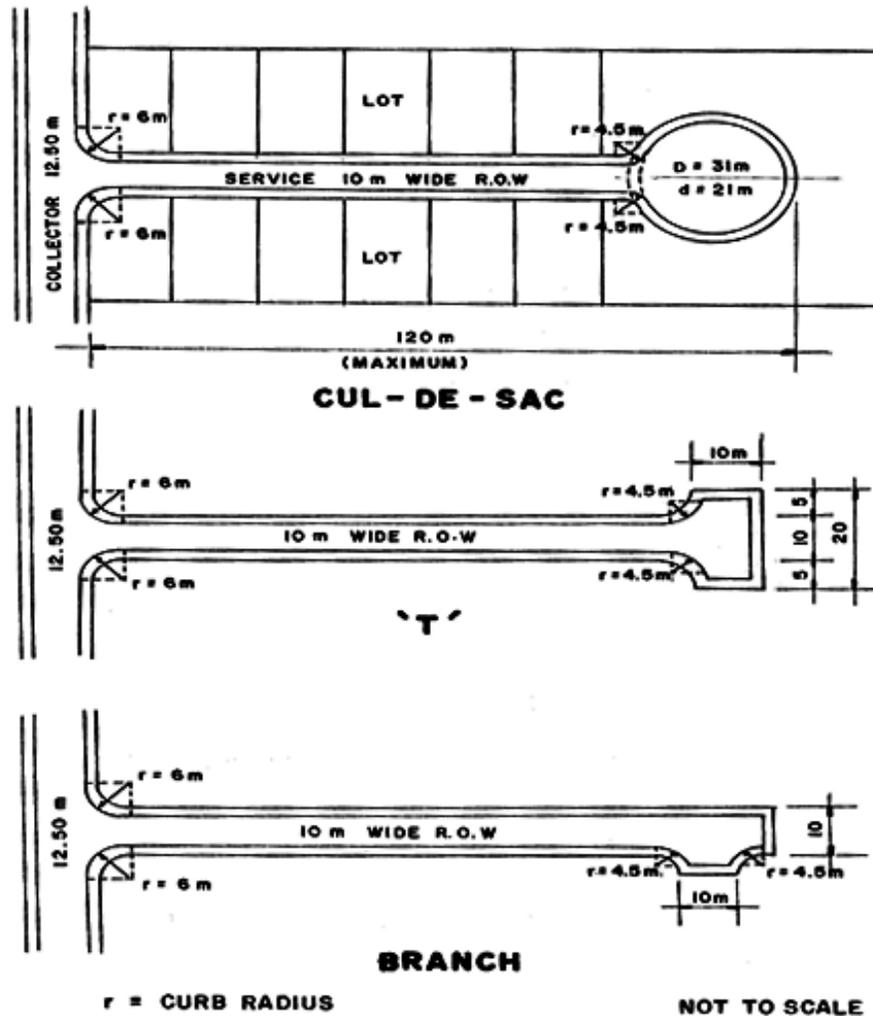
## Road Specifications

ROW	PS	SW	CW
15.0 meters eters	1.30 meters	1.20 meters	10
12.0 meters eters	0.80 meters	1.20 meters	8
10.0 meters eters	0.80 meters	1.20 meters	6
8.0 meters eters	0.40 meters	0.60 meters	6
6.5 meters eters	optional	0.50 meters	–

## Road Section



## Road Intersections



Curb Radii Dimension

## Road Pavement

Major	Concrete/Asphalt
Minor	Concrete/Asphalt
Motor Court	Macadam
Sidewalk	Macadam
Pathwalk/Alley	Macadam

Concrete road pavement shall have a minimum thickness of 150 millimeters and a minimum compressive strength of 20.7 MPa at 28 days. Asphalt pavement shall have a minimum thickness of 50 millimeters.

## Water Supply

- Mandatory connection to appropriate public water system. Each subdivision shall have at least an operational deepwell and pump sets with sufficient capacity to provide ADD to all homeowners provided further that a spare pump and motor set is reserved. Water supply shall be potable and adequate.
- Minimum water supply requirement is 150 liters per capita per day for household connection
- Provision for fire protection facilities shall comply with the requirements of the Fire Code of the Philippines

## Electrical Power Supply

- Mandatory individual household connection to primary and alternate sources of power if service is available in the locality.
- Mandatory provision of street lighting per pole if 50-meter distance; and at every other pole, if distance is less than 50 meters.
- Electric bills shall be proportionately shouldered by the users prior to issuance of COC and turn over of open space to LGU
- Installation practices, materials and fixtures shall be in accordance with the provisions of the Philippine Electrical Code and local utility company.

## Drainage System

- The drainage system for economic and socialized housing projects shall be made of concrete lined canal with adequate capacity and load bearing cover.
- The drainage system must conform with the natural drainage pattern of the subdivision, and shall drain into appropriate water bodies, public drainage system or natural outfalls
- If applicable, underground drainage system shall be provided with adequate reinforced concrete pipes (RCP), catch basins, manholes/inlets and cross drains for efficient maintenance. Minimum drainage pipe diameter shall be 300 millimeters.

## Sewage Disposal System

- Individual septic tank conforming to the standards of the Sanitation Code of the Philippines must be provided.
- Construction of individual septic tanks shall conform to the standards & design of said Code.
- Whenever applicable, connection shall be made to an approved public or community sewer system subject to the requirements and provisions of the Sanitation Code and other applicable rules and regulations.

## Garbage Disposal System

- Project should be provided with sanitary and efficient refuse collection and disposal system whether independently or in conjunction with the local government garbage collection and disposal services

## Shelter Component

Minimum Floor Area		
	Economic	Socialized
Single Detached	22 square meters	18 square meters
Duplex/Single Attached	22 square meters	18 square meters
Rowhouse	22 square meters	18 square meters

Mandatory provision of firewall for duplexes/single attached units and at every unit for rowhouses. The number of rowhouses shall not exceed 20 units per block/cluster but in no case shall this be more than 100 meters in length

## Minimum Level of Completion

	Economic	Socialized
Single Detached	Complete house (based on submitted specifications)	Shell House (with doors & windows to enclose the unit)
Duplex/Single Attached	-same-	-same-
Rowhouse	-same-	-same-

## Setback/Yard

Front Setback	1.5 meters
Side Yard	1.5 meters
Rear Yard	2.0 meters
Abutments	May be allowed per requirement of the National Building Code of the Philippines

## Salient Provisions of the Amended Implementing Rules and Regulations of Section 18, RA 7279 Balanced Housing Development

(RA 7279 took effect on March 29, 1992 while the old implementing rules of Section 18, RA 7279 took effect on July 2, 1992. The new IRR took effect on October 12, 2012)

Sec. 18 of RA 7279 requires developers of proposed subdivision projects to allocate 20% of its total project area or 20% of its total project cost for socialized housing.

Price Ceiling for Socialized Housing:

- Lot Only - not more than Php180,000
- House and Lot Package - Php450,000 (effective December 18, 2013)

This is regardless of the area of the lot and floor area of the housing unit

Socialized Housing Counterpart General Rules and Policies

- Applies to all **economic, medium cost, and open** market residential subdivisions
- Should be at least 20% of the total project area or 20% of the total project cost
- Intended for the underprivileged and homeless
- If feasible, should be situated within the same municipality/city

### Manners Of Compliance

#### A. Development Of:

- Socialized housing project
- Socialized condominium project equivalent to at least 20% of either total subdivision **area** or total subdivision project **cost**.

What do you mean by the phrase total project area in Sec. 18 RA 7279?

- For Subdivision Projects **without housing component**, this means **gross developed land area**
- For Subdivision Projects **with housing component**, this means **gross developed land area, PLUS aggregate floor area of all its housing units**

### **Sample Computation**

Basis: Total Project Area

For subdivision projects without housing component  
Gross developed land area

If total area of main subdivision project is 20,000 square meters or 2 hectares

Compute for 20% of 20,000 square meters

$$(0.20 \times 20,000) = 4,000 \text{ square meters}$$

Required socialized housing counterpart = 4,000 square meters should be allocated and developed by the main project developer for socialized housing

For subdivision projects with housing component  
Gross developed land area, **plus** aggregate floor area of all its housing units

If total area of main subdivision project is 20,000 square meters or 2 hectares  
and aggregate floor area for housing units is 2,000 square meters

Compute for 20% of 20,000 square meters (land area) and 20% of 2,000 square meters (aggregate floor area of housing units)

$$= (0.20 \times 20,000) + (0.20 \times 2,000)$$

Required socialized housing counterpart:

Options:

**a)** Developer shall develop at least 4,000 square meters of land area and housing units with aggregate floor area of 400 square meters for socialized housing

OR

**b)** Developer shall develop at least 4,400 square meters of land area for socialized housing

How about TOTAL PROJECT COST?

- For subdivision projects without housing component:
  - » Base the cost on the zonal value of the land at the time of application for subdivision development permit PLUS
  - » land development cost (cost of putting up subdivision facilities)
- For subdivision projects with housing component:
  - » Base the cost on the zonal value of the land at the time of application for subdivision development permit PLUS
  - » Estimated land development cost PLUS
  - » Estimated housing construction cost
- For subdivision projects without housing component:
  - » Base the cost on the Zonal Value of the land at the time of application for subdivision development permit PLUS
  - » Estimated land development cost (cost of putting up subdivision facilities)
- For subdivision projects **without housing component**
  - » If total area of main subdivision project is 2 hectares with a zonal value of Php2 million and total land development cost of Php10 million

Compute for 20% of Php2 million & 20% of Php10 million

$$0.20 \times 2,000,000 = \text{Php}400,000 \text{ and } 0.20 \times 10,000,000 = \text{Php}2,000,000$$

Required socialized housing counterpart:

A socialized housing project with zonal value and land development cost of at least Php2,400,000 should be allocated and developed by the main project developer for socialized housing.

- For subdivision projects **with housing component**
  - » Zonal value of the land at the time of application for subdivision development permit PLUS
  - » Estimated land development cost PLUS
  - » Estimated housing construction cost
  - » Non-combination of compliance: combination of project area and project cost as basis for computation of a single compliance is not allowed
  - » Certificate of compliance of the main subdivision shall be issued only upon completion of the compliance project
  - » Effect of non-completion: CR/LS application anywhere in the Philippines shall not be accepted

If total area of main subdivision project is 2 hectares with a zonal value of Php2 million

If total land development cost is Php10 million

If total housing construction cost is Php20 million

Compute for:

a. 20% of Php2 million	= (0.20 x 2,000,000)	= Php400,000
b. 20% of Php10 million	= (0.20 x 10,000,000)	= Php2,000,000
c. 20% of Php20 million	= (0.20 x 20,000,000)	= Php4,000,000

Total main subdivision project cost: Php32 million (sum of a, b, and c)

Required socialized housing counterpart : A socialized housing project with zonal value and land development cost/housing construction cost of at least Php6,400,000 should be allocated and developed by the main project developer for socialized housing.

***B. Development Of New Settlements Equivalent To At Least 20% Of The Main Subdivision Project Cost Through:***

- JV with subsidiary or other HLURB accredited developers
- Contribution in new SH projects of HLURB accredited NGOs through the provision of educational facilities, health facilities, productivity/livelihood centers & other basic amenities/facilities

Combination of Compliance: In order to complete the required compliance, developer may have other forms of compliance but the same should all be based on cost.

Certificate of Compliance shall be issued to the developer of the main project only upon completion of the compliance project

Effect of Non-Completion: CR/LS application anywhere in the Philippines shall not be accepted

***C. Contribution To The NHA Zonal Improvement Program Or Slum Improvement & Resettlement Program For Slum Upgrading Or Renewal Of Areas For Priority Development Equivalent To At Least 20% Of The Main Subdivision Project Cost Through:***

- Purchase of Socialized Housing Unit of Participation (SHUP)
- OR
- Provision of educational facilities, health facilities, productivity/livelihood centers, and other basic amenities/facilities

Combination of Compliance: In order to complete the required compliance, developer may have other forms of compliance but the same should all be based on cost.

Certificate of Compliance shall be issued upon presentation of MOA with NHA

Effect of Non-Completion: CR/LS application anywhere in the Philippines shall not be accepted

***D. Joint Venture With LGUs Or Any Of The Government Housing Agencies Wherein Developers' Participation Shall Be Equivalent To At Least 20% Of The Main Subdivision Project Cost***

- Joint Venture WITH LGU FOR:
  - » Development of socialized housing or resettlement project
  - » Provision of educational facilities, health facilities, productivity/livelihood centers, and other basic amenities/facilities
  - » Only joint ventures with an LGU with updated and approved CLUP and zoning ordinance designating areas or zones for socialized housing shall be allowed and considered as socialized housing compliance
- Joint Venture With Any Of The Government Housing Agencies For:
  - » Development of socialized housing or resettlement project
  - » Rehabilitation of non-performing socialized housing assets of any of the housing agencies

- » Combination of Compliance: In order to complete the required compliance, developer may have other forms of compliance but the same should all be based on cost.
- » Certificate of Compliance shall be issued upon presentation of MOA with NHA
- » Effect of Non-Completion: CR/LS application anywhere in the Philippines shall not be accepted

***E. Participation In A CMP Project Wherein Developers' Participation Shall Be Equivalent To At Least 20% Of The Main Subdivision Project Cost***

- Modes Of Participation In A Cmp Project:
  - » Providing a parcel of land to an off-site CMP project
  - » Providing and developing a right of way or access to public transportation lines to an on-site CMP
  - » Allocating an amount to a CMP HOA which shall be applied to its outstanding loan
  - » Introducing improvements, amenities, facilities or other forms of development in an existing CMP project.
  - » Combination of Compliance - In order to complete the required compliance, developer may have other forms of compliance but the same should all be based on cost.
  - » Effect of Non-Completion: CR/LS application anywhere in the Philippines shall not be accepted

Socialized housing shall be located within the same city or municipality as the main subdivision project, whenever feasible, and in accordance with the standards set by HLURB and other existing laws. Otherwise, such socialized housing shall be allowed elsewhere in the Philippines

*When should Applications for Socialized Housing Counterpart be filed?*

- Except for advance credit form of compliance, main project should be **simultaneously** approved with socialized housing counterpart .
- For main projects with **offsite** socialized housing counterparts, proponents should present the socialized housing counterparts' original development permit or certificate of registration and license to sell .
- This is for the purpose of annotating the assigned socialized housing credits in the development permit or certificate of registration and license to sell

*Incentives for developers complying with Section 18, Republic Act No. 7279 to benefit areas affected by calamities:*

- **Affected communities** refer to regions, provinces, cities, and municipalities where properties, infrastructures, and houses have been damaged or destroyed by calamities and declared as such by competent government agencies.
- For a minimum **initial proof of compliance equivalent to 5%** of either the total subdivision area or total subdivision project cost of the main subdivision project, the **license to sell** of the main subdivision project may be issued provided that such compliance or compliance project shall benefit or be located in calamity affected areas.

- To further **expedite the issuance of certificate of registration or license to sell** of the main subdivision project, in lieu of the annotated license to sell of the socialized housing project or the issued building permit of the facility, center or amenity to be developed or provided to benefit an area affected by a calamity, the developer may instead submit, together with the other documentary requirements the **site development or building plan, work program and bill of materials of the project as initial proof of compliance**.
- Subject to the minimum requirement of **5% for the developer's initial compliance**, a compliance or compliance project benefiting or located in areas affected by calamities may be simultaneously utilized as initial compliance by more than one subdivision project.
- All regional field offices of HLURB shall issue a **certificate of initial compliance** and shall prioritize its issuance and the processing of the certificate of registration or license to sell of both the main and the compliance projects intended to benefit areas affected by calamities

### ***Completion of proof of compliance***

Within the first half of the period of completion of the main subdivision project as fixed by the HLURB, the developer shall submit the required proof of compliance with Section 18 of UDHA equivalent to at least 20% of either the total subdivision project area or total subdivision project cost including the issued and annotated license to sell of the socialized housing project or the building permit of the facility, center or amenity utilized as initial compliance. The developer shall likewise submit the issued license to sell of the main subdivision project for the annotation thereon of the submitted proof of full compliance.

### ***Substitution of the initial compliance***

This shall only be allowed prior to the issuance of the license to sell of the main subdivision project. Thereafter, substitution may only be allowed if the substitute compliance shall likewise benefit those affected by calamities, and provided further that if the substitution shall take place during the second half of the period of completion of the main subdivision project, its license to sell shall either remain suspended or be immediately suspended and shall only be lifted upon submission of proof of compliance in accordance with the guidelines.

## Table Of Annuity Factor

ANNUITY FACTOR														
Present value interest factor of an (ordinary) annuity of P1 per period at i% for n periods														
Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	1.713	1.690	1.668	1.647
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	2.444	2.402	2.361	2.322
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	3.102	3.037	2.974	2.914
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	3.696	3.605	3.517	3.433
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	4.231	4.111	3.998	3.889
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	4.712	4.564	4.423	4.288
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	5.146	4.968	4.799	4.639
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	5.537	5.328	5.132	4.946
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	5.889	5.650	5.426	5.216
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606	7.191	6.811	6.462	6.142
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824	7.379	6.974	6.604	6.265
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022	7.549	7.120	6.729	6.373
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201	7.702	7.250	6.840	6.467
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365	7.839	7.366	6.938	6.550
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.818	9.129	8.514	7.963	7.469	7.025	6.623
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.823	9.077	8.422	7.843	7.330	6.873
30	25.808	22.396	19.600	17.292	15.372	13.765	12.409	11.258	10.274	9.427	8.694	8.055	7.496	7.003

**Example Of Alternative Process Of Computing For Affordable Loan and Monthly Amortization Using Excel**

COMPUTING FOR LOAN	
Monthly Income	Php42,000.00
% Of Income For Housing	20.0%
Affordable Monthly	8,400
Loan Terms	
Interest Rate	6.5%
Loan Period	10
Annuity Factor	7.18883
Maximum Loanable Amount	Php739,775.40

COMPUTING FOR MONTHLY PAYMENT	
Loan Amount	Php739,775.40
Loan Terms	
Interest Rate	6.5%
Loan Period	10
Monthly Amortization	8,400.00

## ANNEX 10

## Housing Prototypes

### Prototype 1: Low-Rise Buildings

#### **Standard Low-Rise Housing (LRH) Project of NHA**

- 1 Building = 60 Units  
(12 units for commercial use at the ground floor and 48 units for residential use at the 2nd to 5th floors)
- Approximately 6 buildings per hectare; 12 units per floor
- Floor area per dwelling unit = 18 square meters
- Number of dwelling units per building = 48
- Total number of units in 1 hectare = 288 dwelling units and 72 commercial units
- Total Cost Per Unit = Php583,000.00

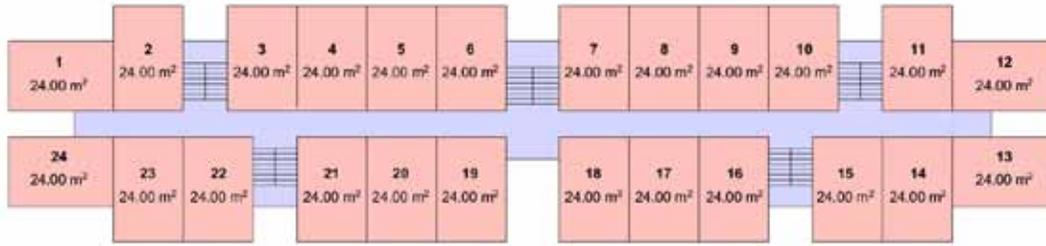
#### **Comparable Costing of LRH/LRB of NHA and Private Developers**

NHA vs. Private Sector Medium-Rise Buildings (MRBs) 5-Story MRB (with exemptions on minimum design standards)			
Item/Description	NHA (18 square meters) (in Php)	Private Sector (NCR, Metro Cebu/Davao) (18 square meters) (inPhp)	Private Sector (Highly Urbanized Cities) (18 square meters) (in Php)
<b>A. Basic Cost</b>			
Raw land/sqm.		150,000	100,000
Lan development/sqm.	20,850	8,333.33	8,333.33
Sewerage treatment plant	15,000		
Fire code requirements	35,000		
House/building construction	(26,667.67/sqm) 480,000	(15,126.60/sqm.) 272,332.80	(15,126.60/sqm.) 272,332.80
<b>Subtotal</b>	<b>550,850</b>	<b>430,666.13</b>	<b>380,666.13</b>
<b>B. Other Cost</b>			
Water and Power	6,000		
Community Facilities		16,800	16,800
Relocation Cost	7,000	Not applicable	Not applicable
<b>Subtotal</b>	<b>13,000</b>		
Socio-Eco and Environmental	1,300		
<b>C. Program Administration</b>			
	17,850	126,000	112,500
<b>Total Cost Per Unit</b>	<b>583,000</b>	<b>573,466.13</b>	<b>509,966.13</b>
<b>Proposed Selling Price</b>		<b>840,000</b>	<b>750,000</b>
<b>Net Profit</b>		<b>266,533.87</b> (32%)	<b>240,033.87</b> (32%)

**Camarin 2 — Caloocan City**



**PERSPECTIVE**



**TYPICAL FLOOR PLAN**

<p><b>Typical Floor</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f8cbad; border: 1px solid black; margin-right: 5px;"></span> Typical Saleable Area: 576.00 m<sup>2</sup> (81.06%)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #cfe2f3; border: 1px solid black; margin-right: 5px;"></span> Typical Common Areas: 134.50m<sup>2</sup> (18.85%)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #fce4d6; border: 1px solid black; margin-right: 5px;"></span> Typical Gross Floor Area: 710.50 m<sup>2</sup> (100%)</li> </ul> <p>Total Units per Floor: 24</p>	<p><b>Typical Building (5 Storeys)</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f8cbad; border: 1px solid black; margin-right: 5px;"></span> Saleable Area: 2,880.00 m<sup>2</sup> (67.55%)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #cfe2f3; border: 1px solid black; margin-right: 5px;"></span> Common Areas: 672.50 m<sup>2</sup> (- roof deck)(32.44%)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #fce4d6; border: 1px solid black; margin-right: 5px;"></span> Gross Floor Area: 4,263.00 m<sup>2</sup> (+ roof deck)(100%)</li> </ul> <p>Building Footprint: 3,552.5 m<sup>2</sup>                  Roof Deck: 710.50 m<sup>2</sup>                  Total Units per Building: 120</p>
<p><b>Project Data</b></p> <p>Total Buildings: 10                  Total Units: 1,200                  Total Saleable Area (10 Bldgs.): 28,800.00 m<sup>2</sup> (67.55%)                  Total Common Area (10 Bldgs.): 13,830.00 m<sup>2</sup> (32.44%)                  Total Gross Area (10 Bldgs.): 42,630.00 m<sup>2</sup> (100%)</p>	<p><b>Project Costs</b></p> <p>Total Building Cost: PhP. 610,524,162.30 (100%)                  Site Development Cost: PhP. 22,842,478.00 ( 3.74%)                  Total Building Construction Cost: PhP. 587,681,684.30 (96.26%)                  Total Gross Floor Area (10 Bldgs.): 42,630.00 m<sup>2</sup>                  Building Construction Cost per square meter (10 Bldgs.): <u>PhP. 13,785.00/m<sup>2</sup></u>                  Bldg. Const. &amp; Site Dev. Cost per square meter (10 Bldgs.): <u>PhP. 14,321.00/m<sup>2</sup></u></p>

### MMDA Depot Area Phase 1

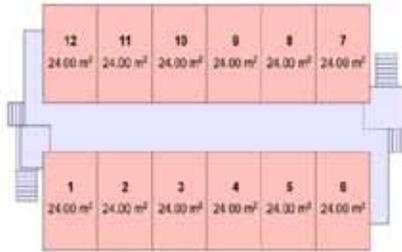
Brgy. Sta. Lucia, Eastbank Rd. Manggahan Floodway, Pasig City



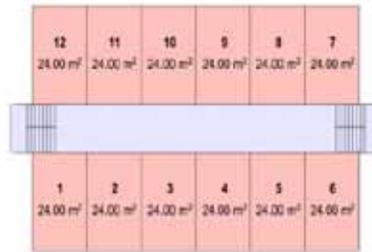
<p><b>Ground Floor</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f4a460; border: 1px solid black; margin-right: 5px;"></span> Saleable Area: 288.00 m<sup>2</sup> (72.56%)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #a4c6ff; border: 1px solid black; margin-right: 5px;"></span> Common Areas: 108.89 m<sup>2</sup> (27.43%)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f4a460; border: 1px solid black; margin-right: 5px;"></span> Gross Floor Area: 396.89 m<sup>2</sup> (100%)</li> </ul>	<p><b>Typical Floor</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f4a460; border: 1px solid black; margin-right: 5px;"></span> Typical Saleable Area: 288.00 m<sup>2</sup> (77.89%)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #a4c6ff; border: 1px solid black; margin-right: 5px;"></span> Typical Common Areas: 81.72 m<sup>2</sup> (22.10%)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f4a460; border: 1px solid black; margin-right: 5px;"></span> Typical Gross Floor Area: 369.72 m<sup>2</sup> (100%)</li> </ul> <p>Total Units per Floor: 12</p>
<p><b>Typical Building (5 Storeys)</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f4a460; border: 1px solid black; margin-right: 5px;"></span> Saleable Area: 1,440.00 m<sup>2</sup> (76.76%)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #a4c6ff; border: 1px solid black; margin-right: 5px;"></span> Common Areas: 435.77 m<sup>2</sup> (23.23%)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f4a460; border: 1px solid black; margin-right: 5px;"></span> Gross Floor Area: 1,875.77 m<sup>2</sup> (100%)</li> </ul> <p>Building Footprint: 396.89 m<sup>2</sup> Total Units per Building: 60</p>	<p><b>Project Data</b></p> <ul style="list-style-type: none"> <li>Total Buildings: 2</li> <li>Total Units: 120</li> <li>Total Saleable Area (2 Bldgs.): 2,880.00 m<sup>2</sup> (76.76%)</li> <li>Total Common Area (2 Bldgs.): 871.54 m<sup>2</sup> (23.23%)</li> <li>Total Gross Area (2 Bldgs.): 3,751.54 m<sup>2</sup> (100%)</li> </ul>
<p><b>Project Costs</b></p> <ul style="list-style-type: none"> <li>Total Project Cost: PhP. 59,073,887.33 (100%)</li> <li>Site Development Cost: PhP. 2,929,778.14 ( 4.96%)</li> <li>Total Building Construction Cost: PhP. 56,144,109.19 (95.04%)</li> <li>Total Gross Floor Area (2 Bldgs.): 42,630.00 m<sup>2</sup></li> <li>Building Construction Cost per square meter (2 Bldgs.): <u>PhP. 14,965.00/m<sup>2</sup></u></li> <li>Bldg. Const. &amp; Site Dev. Cost per square meter (2 Bldgs.): <u>PhP. 15,746.00/m<sup>2</sup></u></li> </ul>	

**Tala 2 LRB**

Tala Estate, Caloocan City



**GROUND FLOOR PLAN**



**TYPICAL FLOOR PLAN**



**PERSPECTIVE**

- Ground Floor**
- Saleable Area: 288.00 m<sup>2</sup> (72.56%)
  - Common Areas: 108.89 m<sup>2</sup> (27.43%)
  - Gross Floor Area: 396.89 m<sup>2</sup> (100%)

- Typical Floor**
- Typical Saleable Area: 288.00 m<sup>2</sup> (77.89%)
  - Typical Common Areas: 81.72 m<sup>2</sup> (22.10%)
  - Typical Gross Floor Area: 369.72 m<sup>2</sup> (100%)
- Total Units per Floor: 12

- Typical Building (5 Storeys)**
- Saleable Area: 1,440.00 m<sup>2</sup> (76.76%)
  - Common Areas: 435.77 m<sup>2</sup> (23.23%)
  - Gross Floor Area: 1,875.77 m<sup>2</sup> (100%)
- Building Footprint: 396.89 m<sup>2</sup>  
Total Units per Building: 60

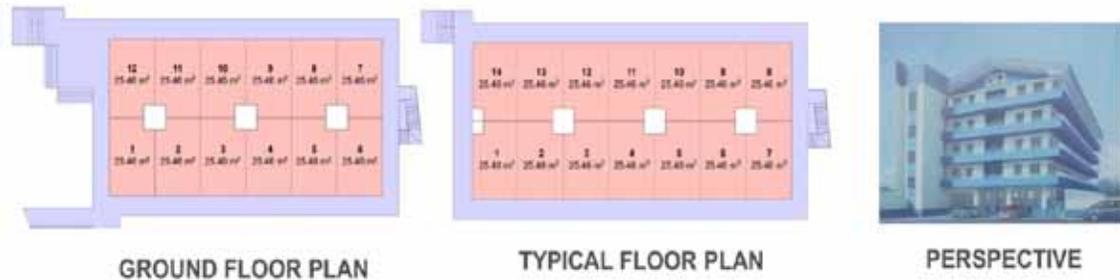
- Project Data**
- Total Buildings: 8
  - Total Units: 480
  - Total Saleable Area (8 Bldgs.): 11,520.00 m<sup>2</sup> (76.76%)
  - Total Common Area (8 Bldgs.): 3,486.16 m<sup>2</sup> (23.23%)
  - Total Gross Area (8 Bldgs.): 15,006.16 m<sup>2</sup> (100%)

**Project Costs**

- Total Project Cost: PhP. 266,494,115.15 (100%)
- Site Development Cost: PhP. 21,130,622.30 ( 7.92%)
- Total Building Construction Cost: PhP. 245,363,492.36 (92.07%)
- Total Gross Floor Area (8 Bldgs.): 15,006.16 m<sup>2</sup>
- Building Construction Cost per square meter (8 Bldgs.): PhP. 16,350.00/m<sup>2</sup>
- Bldg. Const. & Site Dev. Cost per square meter (8 Bldgs.): PhP. 17,758.00/m<sup>2</sup>

### Fabella Housing Project

Fabella Rd., Brgy. Addition Hills, Mandaluyong City



<b>Ground Floor</b>		<b>Typical Floor</b>	
	Saleable Area: 305.52 m <sup>2</sup> (62.01%)		Saleable Area: 356.44 m <sup>2</sup> (68.58%)
	Common Areas: 187.16 m <sup>2</sup> (37.98%)		Common Area: 163.25 m <sup>2</sup> (31.41%)
	Gross Floor Area: 492.68 m <sup>2</sup> (100%)		Gross Floor Area: 519.69 m <sup>2</sup> (100%)

#### Project Data:

Total Buildings: 1

Total Units: 68

Total Saleable Area (1 Bldg.): 1,731.28 m<sup>2</sup> (67.32%)

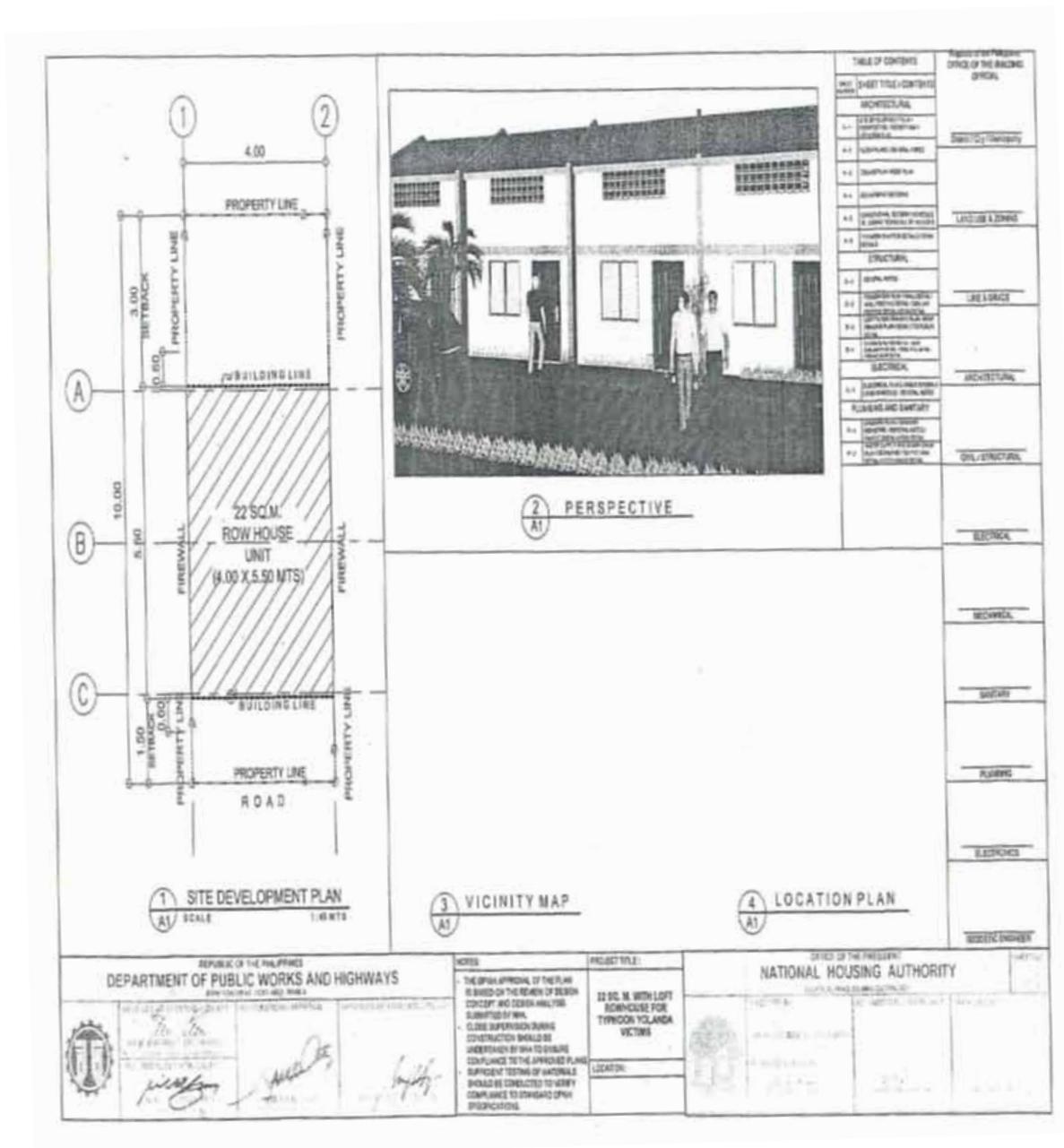
Total Common Area (1Bldg.): 840.16 m<sup>2</sup> (32.67%)

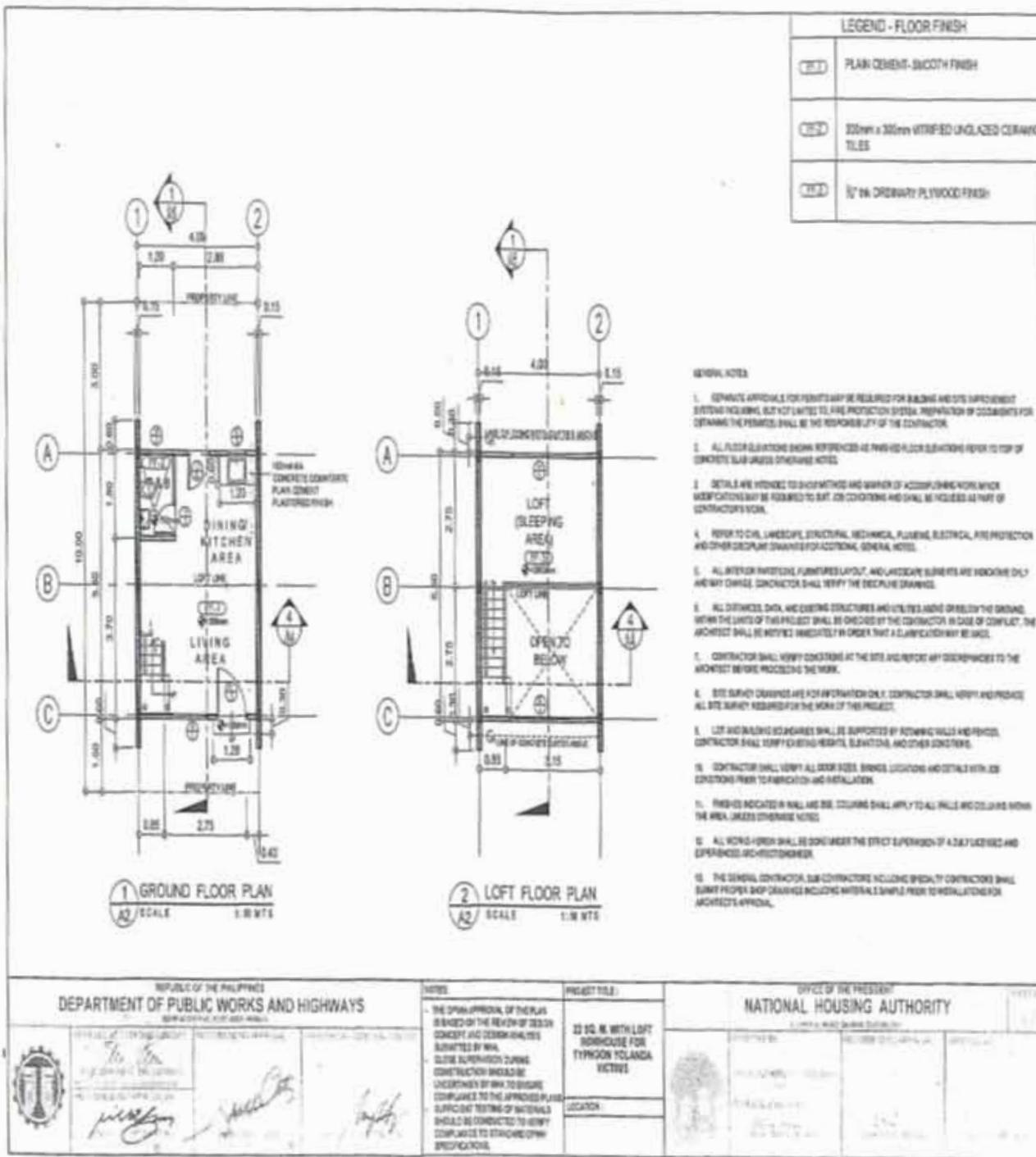
Total Gross Area (1 Bldg.): 2,571.44 m<sup>2</sup>(100%)

**Construction Costs Summary**

Project	Number of Storeys	Total Units	Number of Buildings	Saleable Area	Common Area	Gross Floor Area	Building Cost Per Square Meter (Php)	Building & Site Cost Per Square Meter (Php)
Camarin 2	5	1,200	10	28,800	13,830	42,630	13,785	14,321
Mmda	5	120	2	2,880	871	3,751	14,965	15,746
Tala	5	480	8	11,520	3,486	15,000	16,350	17,758
Fabella	5	68	1	1,731	840	2571	12,585	14,581

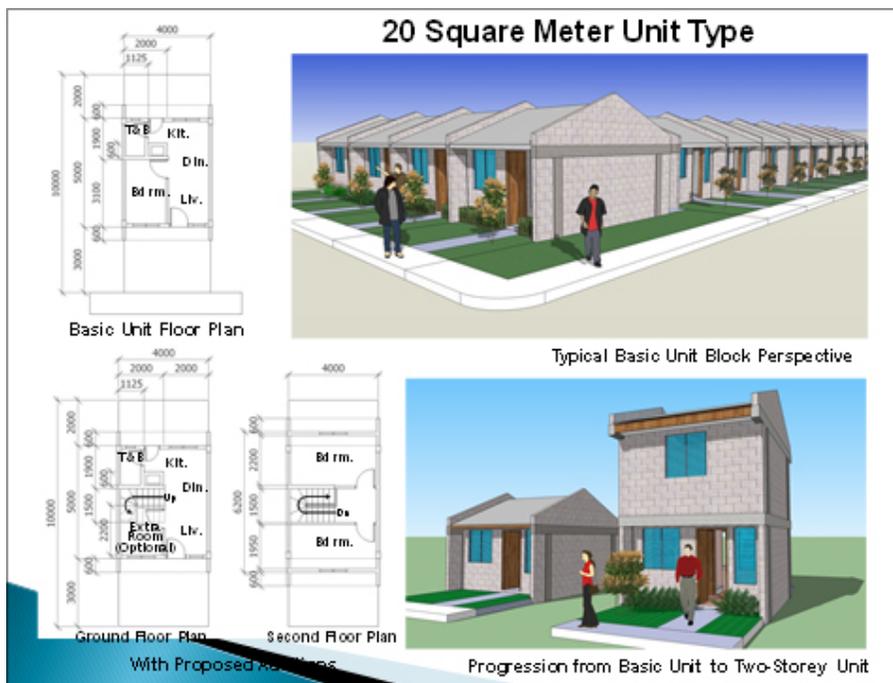
**Prototype 2: Lofted Row House**





### Prototype 3: Housing Units—A Menu Of Options

- Design Considerations
  - » Functions/Uses
  - » Habitability /Safety/Privacy
  - » Flexibility for Expansion
  - » Open System of Construction
  - » Cost Consideration vis-a vis Specifications
  - » Tropical Climate
- 18 square meter Rowhouse with Roof Deck
- 18 square meter Rowhouse with Loft Expansion
- 24 square meter Rowhouse Loftable Design



### 18 sqm Unit Loft Type Expandable to 28 sqm



### 24 sqm Unit Type Expandable to 34 sqm



Proposed Schedule Of Amortization For The Php210,000 House And Lot Package – 30 Years To Pay At 6% Per Annum

Year	Monthly Amortization (Php)	Number of Months to Pay
1st–5th	300	60
6th–10th	500	60
11th–15th	900	60
16th–20th	1,500	60
21st–25th	2,100	60
26th–30th	2,450	60



Concrete alleys in between row houses can be made into vegetable/ornamental garden strips.



## ANNEX 11

## Key Housing Agencies' Assistance To Local Government Units

Assistance from the Housing and Urban Development Coordinating Council (HUDCC) and key housing agencies such as the Housing and Land Use Regulatory Board (HLURB), National Housing Authority (NHA), National Home Mortgage Finance Corporation (NHMFC), Social Housing Finance Corporation (SHFC), **HIGC**, and Home Development Mutual Fund (HDMF) or Pag-IBIG to local government units (LGUs) is based on the Urban Development and Housing Act (UDHA) as well as mandates of these agencies.

### ***Housing and Urban Development Coordinating Council (HUDCC)***

- Technical assistance in the formulation of Local Shelter Plans
- Technical assistance in the establishment of Local Housing Boards and Local Committee Against Squatting Syndicates and Professional Squatters
- Packaging of application for presidential proclamations reserving parcels of land for housing purposes

### ***Housing and Land Use Regulatory Agency (HLURB)***

#### Planning

- Technical assistance in CLUP preparation
- Review of CLUP
- Approval of CLUP for highly urbanized cities and LGUs in Metro Manila
- Approval of the Provincial Physical Framework Plans

#### Regulation

- Licensing and monitoring of subdivisions & condominium projects
- Registration of home owners associations
- Registration of Real Estate Brokers, Dealers and Salesmen

#### Adjudication

- Adjudicates on disputes between subdivision lot or condominium buyer and developer
- Adjudicates on disputes among registered homeowners
- Decides on Appeals from decisions of Local Zoning Bodies

### ***National Housing Authority (NHA)***

- In partnership with LGUs, implements relocation of households living in danger areas or public places or where government infrastructure projects are to be implemented
- In cooperation with the LGUs, provides basic services for socialized housing and resettlement
- Acquisition and disposition of national government lands for socialized housing
- Joint-ventures with LGUs
- Promotion of the use of indigenous and/or innovative materials and technologies for housing
- Technical support and other forms of assistance in the implementation of urban development and housing programs upon the request of LGUs
- Possible on-the-job training on project planning and management for LGU staff in NHA field offices
- Technical and financial assistance in the implementation of the Resettlement Program

### ***Social Housing Finance Corporation (SHFC)***

- Partners with the LGUs under its Local Community Mortgage Program (LCMP)
- CMP related activities, such as selection and accreditation of originators for the CMP

### ***Home Development Mutual Fund (Pag-IBIG)***

- Local Government Pabahay Program
- Group Land Acquisition & Development (GLAD) Program
- Group Housing Loan Program for LGU employees and other similar groups

### ***National Home Mortgage Finance Corporation (NHMFC)***

- Into secondary mortgage market and the private developers and subdivisions owners are their usual client under the Housing Loan Receivables Purchase Program (HLRPP)

## ANNEX 12

## Proposed Schedule of Graduated Rent or Amortization for Option 1

Year of Implementation	Monthly Rental	Total (in Php)	Remarks
Year 1–3	Php400.00 x 36 months	14,400	40% increase every three years
Year 4–6	Php560.00 x 36 months	20,160	
Year 7–9	Php784.00 x 36 months	28,224	
Year 10–12	Php1,097.60 x 36 months	39,513.60	
Year 13–15	Php1,536.64 x 36 months	55,319.04	
Year 16–18	Php2,151.30 x 36 months	77,446.80	
Year 19–21	Php3,011.82 x 36 months	108,425.52	
Year 22–24	Php4,216.54 x 36 months	151,795.44	
Year 25–27	Php5,903.17 x 36 months	212,514.12	
Year 28–30	Php8,264.43 x 36 months	297,519.48	
		<b>TOTAL: PHP1,005,318.00</b>	

Cost of unit when constructed is Php405,940.80.

After 30 years, the LGU can collect Php1,005,318.00.

There is a gain of P 599,377.20.

If this is spread out in 30 years, effective interest rate is only 4.9%.

$$\text{Php1,005,318} - \text{Php405,940.80} = 599,377.20 \div \text{P405,940.80} = 1.47 \times 100 = 147\% \div 30 \text{ years} = 4.9\%$$

The incremental interest rate increase of 40% every three years is not a standard. This is just for demonstration purposes to show that this strategy can be used to make the option affordable to low-income groups.

## ANNEX 13

## Excerpts from Issuances Relevant to Location of Housing Projects (Buildable & Non-Buildable Areas)

### B.P. 220 – RULE V: MISCELLANEOUS PROVISIONS

#### **Section 19. Definition of terms**

##### ***Park/Playground***

That portion of the subdivision which is generally not built on and intended for passive or active recreation.

#### **Section 5. Technical Guidelines and Standards for Subdivisions**

In determining whether an economic and socialized housing shall be allowed, the following guidelines shall be considered.

##### A. Site Criteria

- **Availability of Basic Needs**  
The prioritized basic needs cited earlier shall preferably be available within reasonable distance from the project site, but where these are not available, the same shall be provided for by the developer.
- **Conformity with the Zoning Ordinance or Land Use Plan of the City/ Municipality**  
Generally, housing projects should conform with the zoning ordinance of the city/ municipality where they are located, thus, shall be in suitable sites for housing. However, where there is no zoning ordinance or land use plan, the predominant land use principle and site suitability factors cited herein shall be used in determining suitability of a project to a site.  
Furthermore, if the project is undoubtedly supportive of other land uses and activities (e.g., housing for industrial workers) said project shall be allowed.
- **Physical Suitability**  
A potential site must have characteristics assuring healthful, safe and environmentally sound community life. It shall be stable enough to accommodate foundation load without excessive site works. Critical areas (e.g., areas subject to flooding, land slides and stress) must be avoided.
- **Accessibility**  
The site must be served by a road that is readily accessible to public transportation lines. Said access road shall conform to the standards set herein of these Rules to accommodate expected demand caused by the development of the area. In no case shall a subdivision project be approved without necessary access road/right-of-way constructed either by the developer or the Local Government Unit.

B. Planning Considerations

- Area Planning
- Site Preservation/Alteration
- Easements

Subdivision projects shall observe and conform to the provisions of easements as may be required by:

- » Chapter IV, Section 51 of the Water Code of the Philippines on water bodies
- » National Power Corporation (NPC) on transmission lines
- » Fault traces as identified by PHIVOLCS per Resolution No. 515, series of 1992
- » Right-of-way of other public companies and other entities.
- » For projects abutting national roads (primary roads) adequate easement shall be provided for road including loading and unloading as may be required by national/local government units.
- » Other related laws

**Site Criteria**

Slope

Flat to rolling terrain (0% to 5%) are preferable but housing development may take place up to 15% slopes, with flat lands (below 5%) for high density development and sloping area (5%–15%) for low to medium density development. The latter slopes, however, should be capable of being developed for habitation at reasonable cost with assurance of stability for vertical construction.

=====

The above criteria used to be part of BP 220 but is no longer included in the latest revision. However, this can still be used as guide in site selection.

## ANNEX 14

## Examples of Basic Data, Definitions and Assumptions

- Planning Period is 2013 – 2022 (10 years). This should be in tune with the coverage of the CLUP.
- The population growth rate is 1.17% based on NSO 2000 and 2010 population data and will remain constant throughout the planning period.
- Data on housing stock is needed for computing the doubled-up households. If the number of housing stock in the base year is not available, it can be counted by subtracting homeless households from the number of households and dividing this by number of households per dwelling unit. Please refer to the example below for reference.

Housing stock is computed to be 27,138 This is derived from the number of households (27,522) minus homeless households (28) and divided by the ratio of households per dwelling unit (1.0131). Ratio of HH/DU is based on 2007 NSO data.

## Computation for Housing Stock (Occupied Dwelling Units)

**Given:**

Households = 27,522

Homeless = 28

Households/dwelling unit in base year = 1.0131

**Formula:**

$$\text{Housing Stock} = \frac{\text{Number of households in base year} - \text{Homeless}}{\text{Household per dwelling unit}}$$

**Solution:**

$$\text{Housing Stock} = \frac{27,522 - 28}{1.0131} = 27,138$$

- Household size of 4.5 based on NSO 2007 data, will remain the same throughout the 10-year planning period.
- There are 28 homeless households in the City.
- Number of households needing relocation (displaced units) totals to 8,02 They are found in the following areas:

Barangay 1	154
Barangay 2	274
Barangay 3	20
Barangay 4	254
Barangay 5	126
Barangay Rizal	404
Barangay Lantad	909

Barangay Balarang	515
Barangay E. Lopez	759
Barangay Hawaiian	1,893
Barangay Mambulac	1,439
Barangay Guinhalaran	1,121
Barangay Guimbalaon	157

- Adequate land tenure refers to lands that are being owned, amortized, and covered by lease or usufruct agreements.

- Number of households needing tenurial upgrading totals to 2,710 . They are composed of both onsite and offsite qualified recipients of LGU housing assistance through direct purchase, CMP/LCMP and other housing strategies and programs of the government, non-government organizations and private entities.

Barangay 1	119	Barangay Balaring	215
Barangay 5	89	Barangay E. Lopez	459
Barangay Rizal	41	Barangay Mambulac	1,145
Barangay Lantad	538	Barangay Guinhalaran	104

- Adequate power supply is defined as having the presence of primary and secondary lines of a legitimate power provider in the area.
- Adequate potable water supply is water from the local water district, government-installed deep wells, and licensed commercial water re-filling stations.
- Adequate sanitary facility refers to water-sealed toilet with depository that is exclusively used by a household.
- Regular garbage collection by the garbage trucks (twice a week) and the Material Recovery Facility (MRF) in the urban barangays, and composting in the upland and interior barangays, are considered as adequate garbage disposal system.
- Units needing upgrading of drainage system are the following:

Location	Number of Units/ Households		
In 12 Poblacion Barangays (22 CMP Take-out)	2,034	Barangay 6 (SitioCuadra)	49
Barangay Milibili (LTAP Take Out)	190	MabiniAltavas (Baybay)	142
Barangay 5 (MMP take-out)	102	Alba Village Dinginan	207
6 pre-PCL CMP (Brgys. 7, 8 & 9))	659	SitioLuyo, Culasi	73
TanqueDatiles	31	Barangay Libas (LEFVA)	37
Tanque Isla Bonita	49	Barangay Bolo	200
		La Salle (Banica-Asis)	179
		BLISS Cagay	56
		<b>TOTAL</b>	<b>4,008</b>

- Units needing road access/upgrading of roads are the following:

Location	Number of Units/ Households		
In 12 Poblacion Barangays (22 CMP Take-out)	2,034	Barangay 6 (SitioCuadra)	49
Barangay Milibili (LTAP Take Out)	190	MabiniAltavas (Baybay)	142
Barangay 5 (MMP take-out)	102	Alba Village Dinginan	207
6 pre-PCL CMP (Brgys. 7, 8 & 9))	659	SitioLuyo, Culasi	73
TanqueDatiles	31	Barangay Libas (LEFVA)	37
Tanque Isla Bonita	49	Barangay Bolo	200
		La Salle (Banica-Asis)	179
		BLISS Cagay	56
		<b>TOTAL</b>	<b>4,008</b>

- Units needing structural upgrading refer to unacceptable housing units such as dilapidated or condemned housing structures which do not have proper roofing, walling and flooring materials.

Number of households needing structural upgrading are as follows:

- The target household beneficiaries' income groupings are based on the information gathered by the city assessor's office when they surveyed the areas for reassessment of real properties in 2008. Below are the assumed income groups and its composition:
  - » 1st Income Group  
Families of sugar cane farm workers/trisikad/ tricycle drivers /small fisherfolks/odd jobs earning Php8,000 and below monthly
  - » 2nd Income Group  
Families of tricycle operators/ casual workers, small businessmen/ vendors earning Php8,001–Php15,000 monthly
  - » 3rd Income Group  
Families of permanently employed skilled laborers earning Php15,001–Php30,000 monthly
  - » 4th Income Group  
OFW-supported families receiving Php30,001–Php45,000 monthly
  - » 5th Income Group  
Families of professionals/ supervisors earning Php45,001–Php60,000 monthly
  - » 6th Income Group  
Families of highly paid professionals and entrepreneurs whose monthly earnings exceed P60,000.

BarangayParaiso	1,264
BarangaySingkang	95
BarangayMalipayon	945
<b>Total</b>	<b>2,304</b>

- Potential percentage of income for upgrading or new housing is estimated as follows:
  - » 1st Income Group: 8%  
(house rental 5%, alcoholic beverage 1%, gifts 1%, tobacco 1%)
  - » 2nd Income Group: 8%  
(house rental 4%, alcoholic beverage 1%, gifts 1%, tobacco 1%, special occasion 1%)
  - » 3rd Income Group: 10%  
(house rental 5%, alcoholic beverage 1%, gifts 1%, tobacco 1%, special occasion 1%, other expenditure 1% )
  - » 4th Income Group: 10%  
(house rental 5%, alcoholic beverage 1%, gifts 0.5%, tobacco 0.5%, special occasion 1%, other expenditure 2%)
  - » 5th Income Group: 16%  
(house rental 8%, alcoholic beverage 1%, gifts 1.5%, tobacco 1.5%, special occasion 2%, non-durable equipment 2%)
  - » 6th Income Group: 12%  
(house rental 10%, house repair and maintenance 2%)

## Formula

**Growth Rate (%)**

**Where:**  
 P1: Population 2000 = 107,722      P2: Population 2010 = 120,999      t: time = 10 years

---

**Formula:**  $r = \text{Antilog} \left\{ \frac{\text{Log} \frac{P2}{P1}}{t} \right\} - 1 \times 100$

**Computation:**  $r = \text{Antilog} \left\{ \frac{\text{Log} \frac{120,999}{107,722}}{10} \right\} - 1 \times 100$

**r = 1.169% or 1.17%**

**Population Projection**

**Where:**  
 Growth rate = 1.17%  
 Population 2010 =  $P_{2010}$  = 120,999  
 n = time \*  
 Population 2012 =  $P_{2012}$  = ?

**Formula:**  
 $P_{2012} = P_{2010} (1 + r)^n$

**Computation:**

$P_{2012} = 120,999 (1 + 0.0117)^2 = 123,847$   
 $P_{2018} = 120,999 (1 + 0.0117)^8 = 132,799$

\*2 years if projecting for 2012, 8 years if projecting for 2018

## ANNEX 15

## Computing Land Need for Low Rise Buildings (LRBs)

Shown in Table 6.

Affordability Analysis and Land Need Calculation, First Income Group

For a one-hectare area: Six (6) 4-story LRBs with 16 units per floor at 20 square meters of floor area per unit	
30% (3,000 square meters)	Housing units or private area: 64% of 3,000 = 1,920 square meters ÷ 6 buildings ÷ 16 units per floor = 20 square meters per unit or 384 units per hectare (16 units x 4 floors x 6 buildings)
	Common area: 36% of 3,000 = 1,080 square meters ÷ 6 buildings = 180 square meters per building for hallways /stairways/landing
70% (7,000 square meters)	Open space and community facilities (parking, roads, parks, etc.)
<p><b>Solve for the following:</b></p> <ol style="list-style-type: none"> <li><b>Lot size per unit</b> (private area)</li> <li><b>Land need per unit</b> (private and communal areas inclusive of hallways, stairways, and community facilities; e.g. parking, etc.)</li> <li><b>Land need for First Income Group</b></li> </ol> <p><b>Given:</b> Residential area is 30% of 1 hectare or 3,000 square meters Total number of units in 1 hectare = 384 (16 units x 4 floors) Note: 2nd to 5th floors only; ground floor is for commercial use</p> <p><b>Solution:</b></p> <ol style="list-style-type: none"> <li><b>Lot size per unit</b> = (private + communal area) = 5 + 2.81 square meters = <b>7.81 square meters</b>  <b>Private area/unit</b> ÷ number of floors = 20 square meters ÷ 4 floors = <b>5 square meters</b>  <b>Common Area</b> = <math display="block">\frac{\text{Total Common Area per unit}}{\text{Number of Units Per Building}}</math> <math display="block">\frac{1,080}{6 \text{ buildings}} = \frac{180 \text{ square meters per building}}{4 \text{ floors}} = \frac{45 \text{ square meters}}{16 \text{ units}} = 2.81 \text{ square meters}</math></li> <li><b>Land need per unit</b> = lot size ÷ 30% = 7.81 sqm ÷ 30% = <b>26.033sqm</b></li> <li><b>Land need for First Income Group</b> = <math display="block">\frac{\text{Number of units needed} \times \text{Land need per unit}}{10,000 \text{ square meters}}</math> <math display="block">= \frac{5,311 \text{ units} \times 26.033 \text{ square meters}}{10,000 \text{ square meters}} = \mathbf{13.83 \text{ hectares}}</math></li> </ol>	
<p><b>NOTE</b> To check if number of hectares needed is correct: Number of units needed by an income group ÷ Number of units in a hectare E.g., 5,311 units needed by first income group ÷ 384 units in a hectare = 13.83 hectares</p>	

# GLOSSARY

## **Accumulated housing need**

The number of dwelling units needed at the beginning of the planning period due to doubled-up households (HHs), displaced units, and homeless HHs/individuals.

## **Adaptation**

The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

## **Adequate shelter**

As defined in the UN-Habitat Agenda, adequate shelter means more than a roof over one's head. It also means adequate privacy; adequate space; physical accessibility; adequate security, and; security of tenure. Moreover, adequate shelter includes structural stability and durability; adequate lighting, heating, and ventilation, and; adequate basic infrastructure, such as water-supply, sanitation, and waste-management facilities. The term also takes into account suitable environmental quality and health-related factors, as well as adequate and accessible location with regard to work and basic facilities.

Adequate shelter must also be at an affordable cost. Adequacy should be determined together with the people concerned, bearing in mind the prospect for gradual development. Adequacy often varies from country to country, since it depends on specific cultural, social, environmental, and economic factors. Gender-specific and age-specific factors, such as the exposure of children and women to toxic substances, should be considered in this context. This definition applies equally to the term "affordable housing."

## **Affordability**

The potential amount of income that can be made available for housing investment, after excluding basic necessities such as food, clothing, education, medical expenses, transportation, income tax, and recurrent costs of housing (electricity, water, garbage disposal).

## **Displaced units (also, Relocation need)**

Housing units located in danger areas, such as extended esteros (canals), railroad tracks, garbage dumps, riverbanks, and flood-prone areas. Also, households/individuals living in public places (such as sidewalks, roads, parks, or playgrounds), or in areas where government infrastructure projects are to be implemented, or in areas where there is a court order for eviction and demolition.

**Base year**

The year before the first planning period, or the last census year.

**Capacity**

A combination of all strengths and resources available within a community, society, or organization that can reduce the level of risk, or effects, of a disaster. Capacity may include infrastructure and physical means, institutions, societal coping abilities, as well as human knowledge, skills, and collective attributes such as social relationships, leadership, and management. Capacity may also be described as capability.

**Climate change**

Refers to shifts in climatic conditions observable or persisting over an extended period, typically through decades or even longer. These shifts or transformations are a result of either natural variability or human activity.

**Disaster**

A serious disruption of the functioning of a community or a society involving widespread human, material, economic, or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources. Disasters are often described as a result of the combination of the exposure to a hazard; the conditions of vulnerability that are present, and; insufficient capacity or measures to reduce or cope with the potential negative consequences. Disaster impacts may include loss of life, injury, disease, and their negative effects on human, physical, mental, and social well-being, together with damage to property, destruction of assets, loss of services, social and economic disruption, and environmental degradation.

**Disaster mitigation**

Minimizing or limiting the adverse impacts of hazards and disasters. Mitigation measures encompass engineering techniques and hazard-resistant construction as well as improved environmental policies and public awareness.

**Disaster prevention**

The outright avoidance of adverse impacts of hazards and disasters. It expresses the concept and intention to completely avoid potential adverse impacts through action taken in advance, such as the construction of dams or embankments that eliminate flood risks; land-use regulations that do not permit any settlement in high-risk zones, and; seismic engineering designs that ensure the survival and continuing function of structures when earthquakes strike.

**Disaster risk reduction**

The concept and practice of reducing disaster risks through systematic efforts that analyze and manage the causal factors of disasters, i.e., reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

**Doubled-up households**

Also known as double occupancy, doubled-up households exist when one dwelling unit is shared by two or more households.

**Economies of Scale**

Economies of scale are factors that cause the average cost of producing something to fall as the volume of its output increases. <sup>1</sup>

**Exposure**

The degree to which the elements at risk (i.e., communities) are likely to experience hazard events of different magnitudes.

**Hazard**

A dangerous phenomenon, substance, human activity, or condition that may cause loss of life, injury, or other health impacts, property damage, loss of livelihood and services, social and economic disruption, or environmental damage.

**Future need**

Refers to the number of new dwelling units needed to supply the demand of new households formed due to population increase.

**Homeless**

Individuals or households living in such public places as parks or along sidewalks, and all those without any form of shelter.

**Homeless individuals**

Individuals who are not members of any household.

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<sup>1</sup> "The Economies of Scale and Scope," 20 October 2008, The Economist, <http://www.economist.com/node/12446567>

### **Homeless households**

To get the number of homeless households, subtract the number of homeless individuals from the total homeless population and divide by the average household size.

### **Household**

Defined by the National Statistics Office (NSO) as a social unit consisting of a person or a group of persons sleeping in the same dwelling unit and having common arrangements for the preparation and consumption of food.

### **Housing**

In this document, this term is used at a number of levels as a multi dimensional concept. It refers to the activity or a process of residing as well as to the objects of dwellings and their environment. The main attributes of housing as a dwelling are its physical structure, location (determining access to livelihood), tenure arrangements, and cost. Housing is a physical as well as a social structure, functioning at different spatial scales (homes, neighborhoods, cities and other settlements, regions, and countries). It is also a sector of the economy and an important category of land use in cities and in other settlements. Linkages with the national economy and with the overall urban system are an integral part of the understanding of the concept of housing.

### **Housing stock**

The number of occupied dwelling units at the beginning of the first planning period. To compute this figure, count the number of households during the beginning of the first planning period and subtract the number of homeless households and/or individuals, and then divide the difference by the number of households per dwelling unit.

### **Inclusive cities**

Refers to cities that promote growth with equity and urban areas where everyone, regardless of their economic means, gender, race, ethnicity, or religion, is enabled and empowered to participate fully in the social, economic, and political opportunities that the urban landscape offers. Participatory planning and decision-making are at the heart of an inclusive city. Promoting inclusiveness is not only socially just but is also good for growth and central to sustainable urban development. Inclusive urban development and governance reduce inequality and social tension; incorporate the knowledge, productivity, and social and physical capital of the poor and the disadvantaged in city development, and; increase local ownership of development processes and programs.

### **Incremental development**

The gradual expansion and improvement of individual houses, infrastructure and services, and neighborhoods as a whole. Incremental development increases affordability by spreading construction expenditures over a longer period of time. It also allows for increased flexibility and adaptability to new needs and opportunities that may emerge during the extended construction period. At the same time, it minimizes the risk of defaults in times of downturns in the family economy.

### **Informal settlements**

Human settlements that have been built illegally, without the consent of the planning authorities, usually without infrastructure and services, and often without fully secure tenure. In most cases, informal settlements are built for, and often by, the low-income population. In some countries, the term also includes housing for middle-income and even high-income families that takes advantage of land prices that are usually much lower than in a fully formal market. Housing in such areas often improves over time, as do the services and infrastructure. Among the important challenges in informal settlements are the absence of a proper layout and the need for an adequate planning framework.

### **Local shelter plan**

A document which includes an analysis of the present local housing situation, i.e., the identification of housing problems, upgrading and future housing needs, household's affordability and local resources such as land, provision of basic services, and finance. After analysis and comparison of the available resources and needs, the LGU formulates the main shelter strategies. An implementation plan will complete the local shelter plan.

### **Planning period**

The duration needed to realize the housing vision of the LGU.

#### **Program period**

The time frame set by the LGU to meet the target housing needs due to backlog, population growth, and upgrading needs.

### **Public Space**

Public spaces are typically places with minimal restrictions and with access to everyone where people can gather, interact, and hold activities. These are your streets, plazas, parks, market places, the front steps of libraries, city hall front lawns, university quadrangles, and the like.

## **Resilience**

The ability of a system, community, or society exposed to hazards to resist, absorb, accommodate, and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

## **Shelter**

Pertains to living quarters of people.

## **Slums**

Defined, at the household scale, as a group of individuals living under the same roof in an urban area who are deprived of one or more of the following: (1) durable housing of a permanent nature that protects against extreme climate conditions; (2) sufficient living space, which means not more than three people sharing the same room; (3) easy access to safe water in sufficient amounts at an affordable price; (4) access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people, and; (5) security of tenure that prevents forced evictions.

## **Slum upgrading**

Refers to improving the physical and environmental conditions, as well as the provision of infrastructure and services, in areas considered to be slums, and incorporating them into the mainstream city. It usually begins with a survey of actual conditions, followed by the planned rationalization of layouts of individual plots (land readjustment) in order to enable the introduction of streets and land required for the infrastructure and services. This is combined with some means of ensuring the security of tenure (regularization). To be successful, the process must be community-driven and fully participatory.

## **Slum prevention**

Refers to a set of measures providing viable, and preferable, alternatives to the creation of new slums. It requires ensuring the availability of a highly diversified supply of affordable housing solutions, matching the diversity of housing demand in terms of locations, tenure types, costs, and standards. It requires comprehensive and forward-looking urban planning, appropriate and effective legal and regulatory frameworks, timely provision of affordable serviceable land, and availability of finance. It also requires demand-responsive mechanisms for the introduction of infrastructure and basic services, and the availability of adequate and affordable construction materials and components.

**Shelter needs**

Refers to 1) the new housing units needed (lot, basic services, and dwelling unit), and; 2) the upgrading needs (land tenure, some basic services, or structural improvement of a housing unit—or a combination of any of these).

**Shelter strategy**

A plan of action that identifies the objectives for the development of shelter conditions; the resources available to meet the objectives, and; the means by which resources can be utilized in a most cost-efficient manner. It also sets out the responsibilities and time frame for implementing the various measures.

**Tenure**

Security of tenure is the certainty associated with the absence of violent forced evictions. It can be obtained through collective ownership (community land trusts), rental agreements, and temporary occupancy rights as well as individual freehold or leasehold title.<sup>2</sup>

**Upgrading need**

The need for improving land tenure status (e.g., the provision of minimum security of tenure as in a written contract to possessing a title to the land); access to basic services (e.g., from macadam road to paved road); and house condition (e.g., from a semi-permanent structure to a permanent one).

**Vulnerability**

Pertains to the characteristics and circumstances of a community, system, or asset that make it susceptible to the damaging effects of a hazard. Vulnerability may arise from various physical, social, economic, and environmental factors, such as poor design and construction of buildings, inadequate protection of assets, lack of public information and awareness, limited official recognition of risks and preparedness measures, and disregard for wise environmental management.

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<sup>2</sup> <http://ww2.unhabitat.org/campaigns/tenure/documents/conceptpaper2.pdf>

## REFERENCES

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