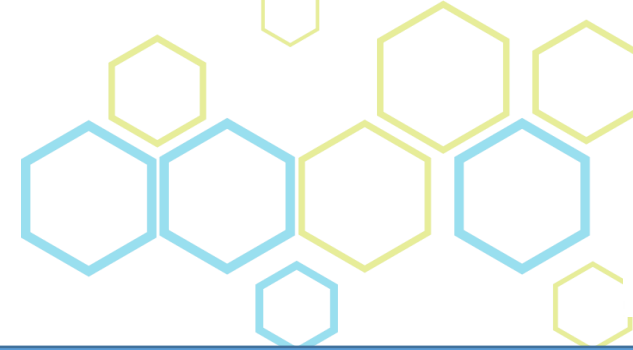




**Asia-Pacific
Housing Forum
Manila**



Organized by



SOCIALIZED HOUSING, LAND USE AND CLIMATE CHANGE

“BUILDING THE RESILIENCE OF COMMUNITIES”

By : Ar/EnP. Maria Benita O. Regala, Asean Architect, Fuap

July 29-31, 2019 | Manila, Philippines





SOCIALIZED HOUSING, WHERE ARE WE NOW?

A QUICK OVERVIEW

GLOBAL AND NATIONAL MANDATES

- SDG 11 : SUSTAINABLE COMMUNITIES
- THE PHILIPPINE DEVELOPMENT PLAN FOR 2017-2022, AMBISYON 2040
 - CHAPTER 11 : REDUCING VULNERABILITIES
 - CHAPTER 12 : BUILDING SAFE AND SECURE COMMUNITIES
 - “Sub-Sector Outcome 1.2 : Access to affordable, adequate, safe and secure shelter towards well planned communities expanded”



Vision of the Filipinos for themselves

“In 2040, we will all enjoy a stable and comfortable lifestyle, secure in the knowledge that we have enough for our daily needs and unexpected expenses, that we can plan and prepare for our own and our children’s future. Our family lives together in a place of our own, and we have the freedom to go where we desire, protected and enabled by a clean, efficient, and fair government.”

Vision of the Filipinos for their country

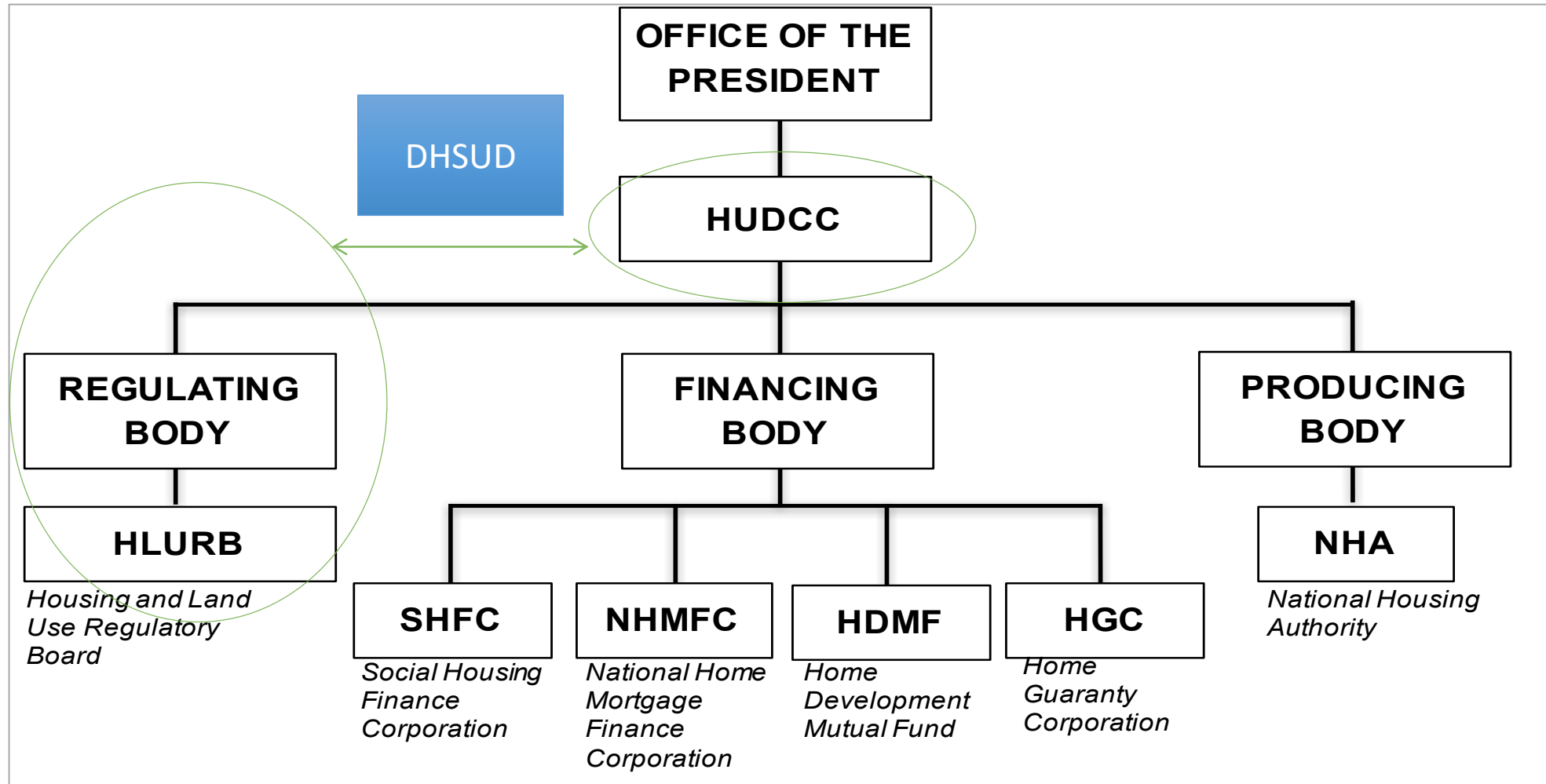
“The Philippines shall be a country where all citizens are free from hunger and poverty, have equal opportunities, enabled by fair and just society that is governed with order and unity. A nation where families live together, thriving in vibrant, culturally diverse, and resilient communities.”



NATIONAL CLIMATE CHANGE ACTION PLAN

THEORY OF CHANGE ON HUMAN SECURITY

- ULTIMATE OUTCOME :
 - ENHANCED ADAPTIVE CAPACITY OF COMMUNITIES
 - ENHANCED RESILIENCE AND STABILITY OF NATURAL SYSTEMS
 - SUSTAINABILITY OF THE BUILT ENVIRONMENT TO CLIMATE CHANGE
- HUMAN SETTLEMENTS AND SERVICES ARE CLIMATE CHANGE ADAPTIVE
 - CCA DRR MITIGATION AND ADAPTIVE ACTIONS FOR COMMUNITIES, HEALTH SECTOR, AND HUMAN SETTLEMENTS IMPLEMENTED



IRR FOR THE DHSUD WAS SIGNED ON JULY 19, 2019

ESTIMATED HOUSING NEED

FROM 2017-2022

Source: HUDCC

Region/Area and Major Component of Housing	Total Housing Need 2017-2022
PHILIPPINES	6,571,387
Total Housing Needs	
A. Accumulated Needs	1,439,550
1. Total HHs in Unacceptable Housing Units	865,408
Rent-Freed without consent of owner	581,178
Homeless	5,969
Dilapidated/Condemned	99,377
Makeshift/Salvage Materials	178,884
2. Doubled-Up HHs in Acceptable Housing Units	574,142
B. Future / Recurrent Needs	5,129,021
1. Allowance for inventory losses	2,117,303
2. Newly formed HHs (likely afford to own/Rent HU)	3,011,718

- **“Providing adequate, safe, and affordable housing and ensure the availability of basic services, community facilities, and access to social and economic opportunities to homeless low-income families”**
- NHA commitment to the National Development



- Housing need of some 6.7 Million units, including those for about 1.5 Million ISFs for 2017-2022.
- NG has been able to build an average 192,000 units on average annually in the past 6-7 years
- HUDCC targeting 30% increase: to build some **250,000 units annually**, starting July 2017
- In 5 years, government to build **1.5 Million to 2.0 Million units**



Eduardo Del Rosario
Chairman, HUDCC
Business Mirror
31 July 2017



*True to my commitment as a public servant, I will, to my utmost ability, help steer this agency toward a **more improved, effective and efficient public-service delivery. Laying down fundamental changes, developing more responsive housing programs, building a culture of quality and initiating innovations** in how we do things at the NHA is my pledge and commitment.*



MARCELINO P. ESCALADA, JR.
General Manager, NHA

552,755 Housing Units/Assistance for ISFs and Low-income Sector

- 2017-2022 projected need is **6.57 million units** which represents **accumulated needs** for **socialized, economic, low-cost** and the **open market**. Per NEDA projections, the government sector must contribute at least 1.50 Millions housing units, with NHA to contribute a total of 552,755 for this period, MORE than one third of the government target.
- AS OF END OF 2018, NHA HAD ACCOMPLISHED 138,000 UNITS FOR THIS PERIOD OR 24.96% OF ITS TARGET, WITH 2.5 YEARS TO GO. TO DATE, JANUARY TO JUNE 2019, NHA HAD COMPLETED AN ADDITIONAL 26,000 UNITS = 164,000

**NHA Production
Target: Completions
2017-2022**

NHA Housing Programs

- **Programs for ISFs Living along Danger Areas in Metro Manila (In-City and Near City)**
- **Programs for ISFs Affected by Infra Projects and those in Nearby Projects**
- **Regional Resettlement Programs: LGUs and Indigenous Peoples**
- **Vertical Development: LRBs and MRBs**
- **AFP/PNP, Government Employees Housing**
- **Permanent Housing for Calamity-affected Families**
- **High-Impact Projects: Mixed Use Development**



Today's Overview : Creating the Balance

1

- **Reality** :socialized housing is budget driven

2

- **Challenges** : Burgeoning Population, disaster resilience, climate change, green solutions, accessibility, affordability, clamor for livelihood opportunities, High cost of development

3

subsidies

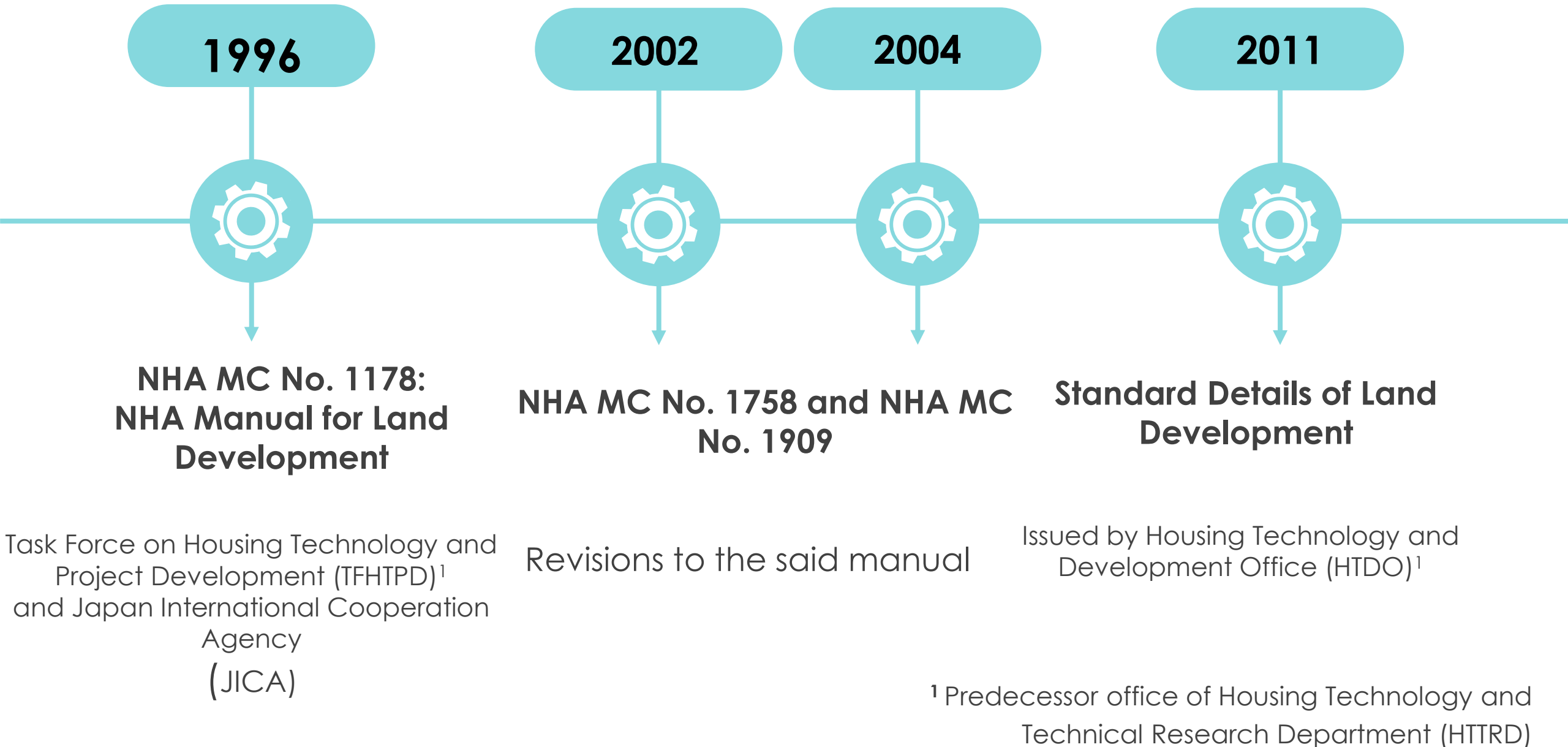
- **Response** : Meeting new challenges and customer needs, through innovative technologies and approaches

BUILDING RESILIENCE OF COMMUNITIES

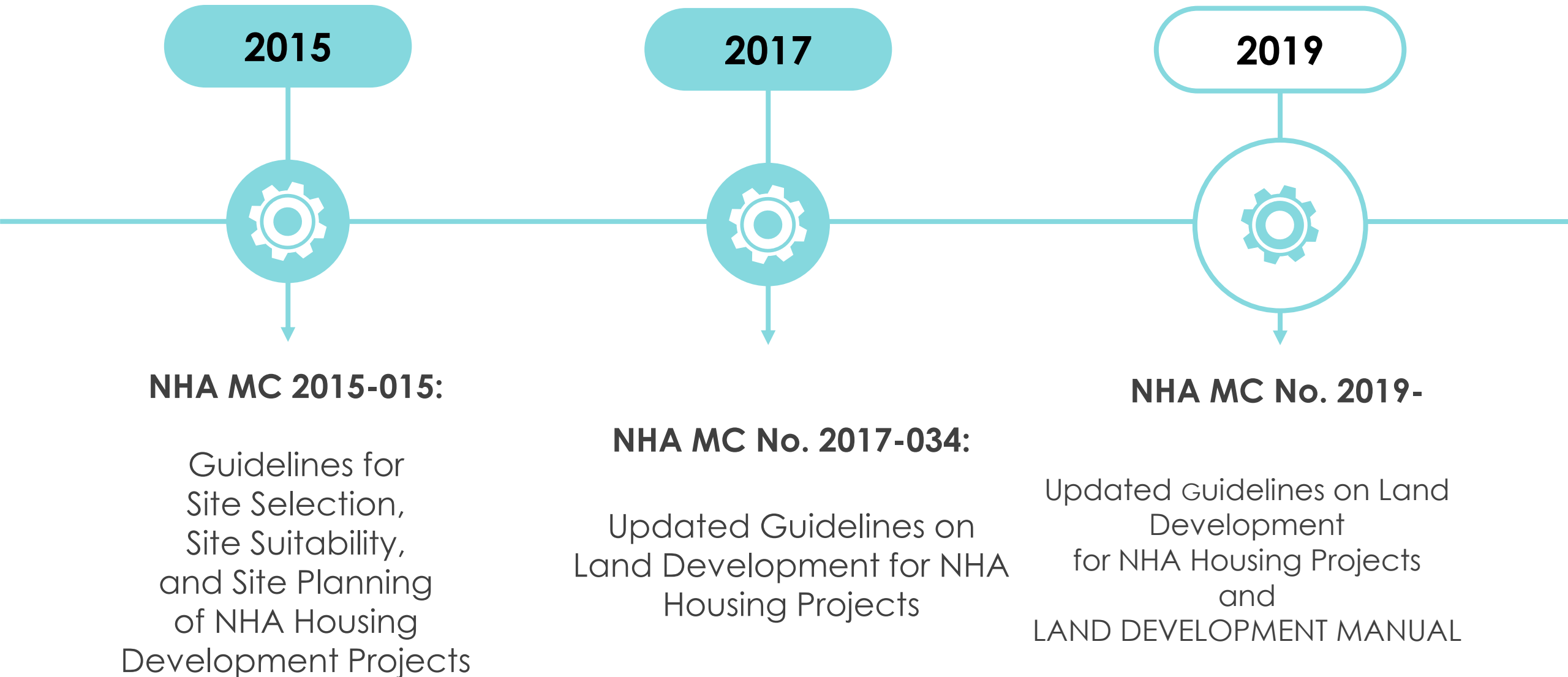


Planning
Standards need to be
reviewed and updated to
adjust to changing times !

BACKGROUND

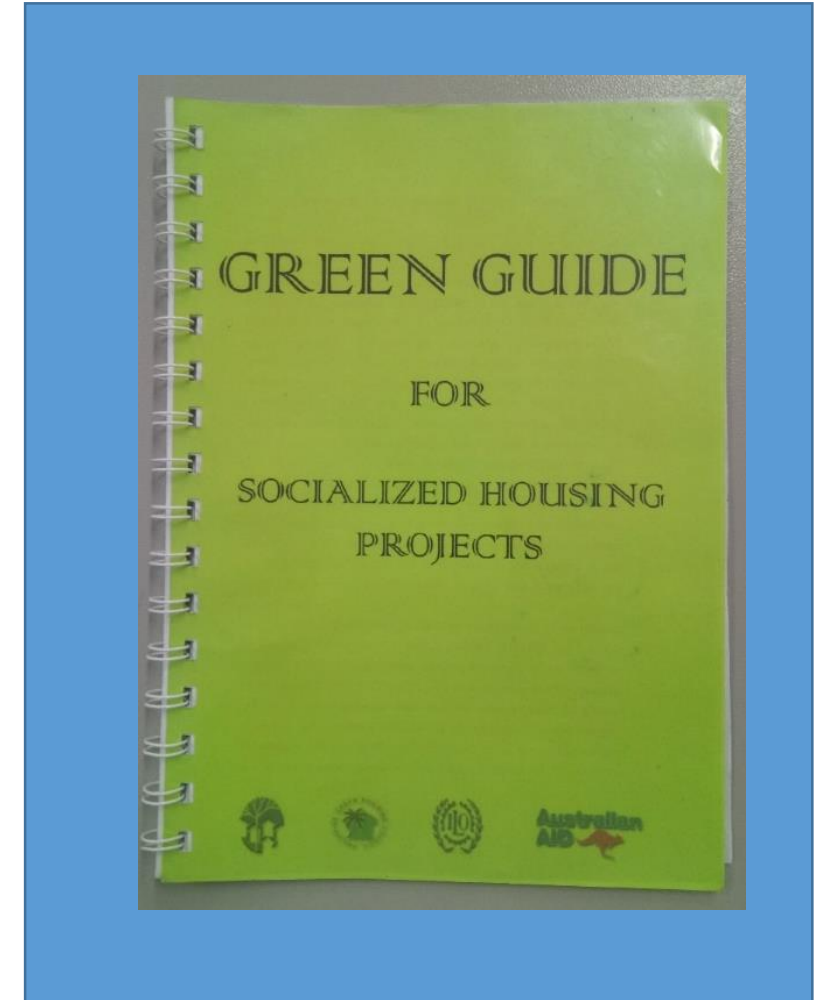


• BACKGROUND



Green Guide for Socialized Housing Projects

- Building Green Program – Technical Working Group (February 27, 2013)
- The development of a **Green Guide for Socialized Housing Projects** in the Philippines (Green Guide) is part of the Green Jobs Promotion in the Socialized Housing Sector Project of the International Labour Organization (ILO) under the Green Jobs in Asia Project funded by the Australian AID, in collaboration with the Philippine Green Building Council.





Guidelines for Site Selection, Site Suitability and Site Planning of NHA Housing Development Projects (MC 2015-015)

The guidelines are set to have a unified approach, processes and minimum requirements in selecting and planning sites for housing projects, and to establish these with a common understanding among NHA planners.



OFFICE OF THE PRESIDENT
NATIONAL HOUSING AUTHORITY

NHA-MC-2015-0015

GUIDELINES FOR SITE SELECTION, SITE SUITABILITY, AND SITE PLANNING OF NHA HOUSING DEVELOPMENT PROJECTS

1.0 BACKGROUND AND PURPOSE

This Memorandum Circular is issued as guidelines for the processes of Site selection, Site Suitability, and Site Planning in the implementation of various housing development programs and projects of the National Housing Authority. These entail the selection and planning of sites for housing with the objective of rationalizing the land use of the NHA housing projects considering the many environmental and social issues on housing development vis-à-vis the existing government rules and regulations.¹

2.0 COVERAGE

These guidelines shall cover all housing development projects of NHA, for urban or rural environment, and applicable for a range of densities in housing development, horizontal or vertical, occupied or vacant. Site selection process, however, may be skipped for sites proposed by other entities for consideration by NHA, but which shall still be subjected for review as to its suitability for housing and as to propriety of its site planning if conducted.

3.0 FRAMEWORK

The general parts of these guidelines are divided into three: 1) Site Selection, 2) Site Suitability, and 3) Site Planning and Detailed Architectural and Engineering Design, corresponding to the processes in preparing and planning any site for housing development. A framework showing relationships of the processes and the responsible units, deliverables, timeline and approval requirement is illustrated in the diagram below:

¹ The guidelines are developed with the contributions from NHA planners who participated in the Site Selection and Site Planning workshop organized by HTDO in June 2015, and from the Envision Urban and Regional Planners and from Matthew Doolan, an Australian town planner.

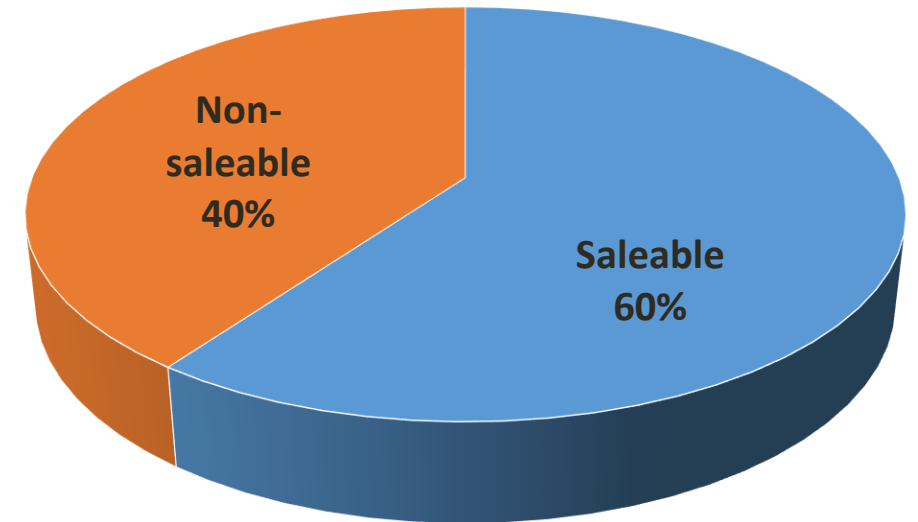
LAND USE ALLOCATION PER SITE

60% Saleable-

- Residential housing development
- Areas for Store spaces

40% Non-Saleable

- Circulation / Road Network
- Parks and Playgrounds
- Community Facilities



**UNDER PD 957 , THE MAXIMUM SALEABLE AREA SHOULD BE 70%,
WHILE THE MINIMUM NON-SALEABLE AREA SHOULD BE 30%.**

Land Use and Density as a Tool

“ All else being equal (however), higher –density developments do mitigate sprawl in several ways. Because they place more people on less land, they help to preserve open space.”

(Source : The Smart Growth Manual, from the authors of Suburban Nation : Andres Duany and Jeff Speck with Mike Lydon)

Land Use Comparison

(One Hectare Project)

Model/ Typology	Density (no. of units/hectare)	Saleable land	Non-saleable land (open space,circulation,parks, etc)	Remarks { increase in No. of Units Over RH & L
RH Model 36sqm/57 sqm Lot)	105	60%	40%	-
3-Storey	168	26%	74%	60.00%
5-Storey	280	26%	74%	166.67%
7-Storey	392	26%	74%	273.33%
10-Storey	560	26%	74%	433.33%

**Building Footprint and size of units used are the same for all models;
no. of units/bldg varies based on the no. of storeys used**

Model/Typology	Total Project Cost Per Hectare (PhpM)	Cost per Unit (PhpM)	Increase in Cost Over RH & Lot Package/cost of unit
RH & L Package	128.62	1.22	-
3-Storey	251.40	1.50	22.95%
5-Storey	391.92	1.40	14.75%
7-Storey	666.35	1.70	39.34%
10-Storey	1,024.44	1.83	50.00%



Project Cost Per Hectare

Model/ Typology	NO. OF UNITS PER HECTARE	increase in No. of Units Over RH & L	Total Project Cost Per Hectare (PhpM)	Cost per Unit (PhpM)	Increase in Cost Over RH & Lot Package /Cost of Unit
RH & L Package	105	-	128.10	1.22	-
3-Storey	168	60.00%	252.00	1.50	22.95%
5-Storey	280	166.67%	392.00	1.40	14.75%
7-Storey	392	273.33%	666.40	1.70	39.34%
10-Storey	560	433.33%	1,024.80	1.83	50.00%

Summary of Cost and Land use

BLOCK AND LOT ORIENTATION

Maximum of 8 units per row of full block RHs

End lots of RH should face the wider RROW



- RHs of maximum of 8 units must
- be segregated by at least 2.00mts
- linear park / pocket garden to
- promote better air circulation

NHA DESIGN CONFERENCE ON DISASTER RESILIENT PARAMETERS



DISASTER RESILIENT HOUSING STRUCTURAL DESIGN STANDARDS

DESIGN PARAMETER	ONE-STOREY	TWO- STOREY	3-STOREYS OR MORE
WIND LOAD	250 KPH	250 KPH	250 KPH
STRENGTH OF WALL AND SUPERSTRUCTURE	3,000 PSI	3,000 PSI	3,000 PSI
SOIL BEARING CAPACITY	95 KPA	95 KPA	95 KPA
SEISMIC LOAD	ZONE 4	ZONE 4	ZONE 4
LOADINGS	50 PSF	50 PSF	50 PSF
FIRE RESISTANCE	2 HOURS	2 HOURS	2 HOURS

This is one of the outputs generated from the consultation meetings of the NHA TWG on Disaster-Resilient Housing in November to December 2013.



- The 22.00 sqm Loftable, expandable to 33 sqm. Row-house Model was conceptualized to provide privacy as a result of FGDs conducted nationwide

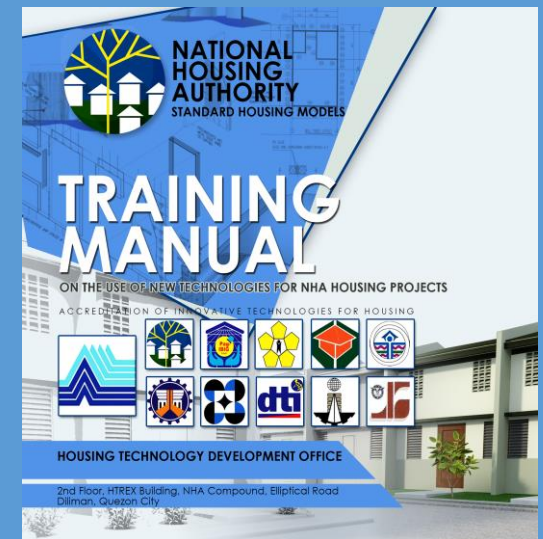
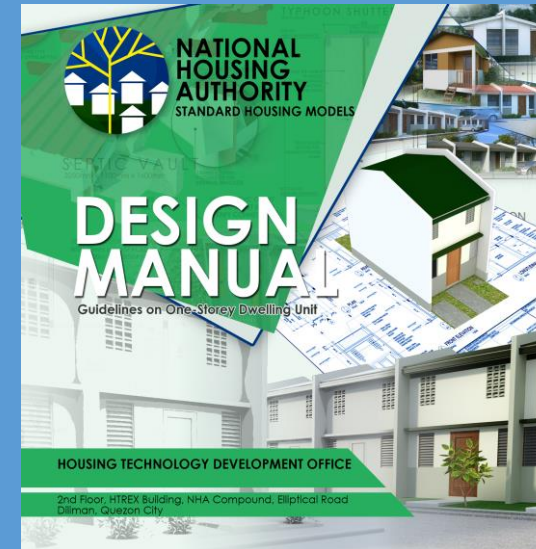


- **33.00 sqm Rowhouse with Loft and Store space**
Provision to encourage home based livelihood activities.

PUBLISHED DESIGN MANUALS IN 2017

NHA published two manuals, in collaboration with the DPWH, Build Change and the Aitech Committee to guide planners and builders on disaster resiliency principles and construction methodologies

On September 2019, NHA will launch the **END-USERS MANUAL** to guide homemakers on the proper improvement of their units using new technologies





PROMOTING WALKABLE COMMUNITY

- Reduced transport costs
- Additional planting strips
- Improved air quality

• Water Supply and Sanitation

Rainwater Harvesting

Significant potable water consumption reduction may be achieved with this.

Drainage Improvement

Storm drainage and sewerage system are separately designed for better treatment of sewage and efficiency.



Anaerobic Baffled Reactor

Standard design applicable for every 300 units.

More economical and compliant to DENR and DOH parameters.

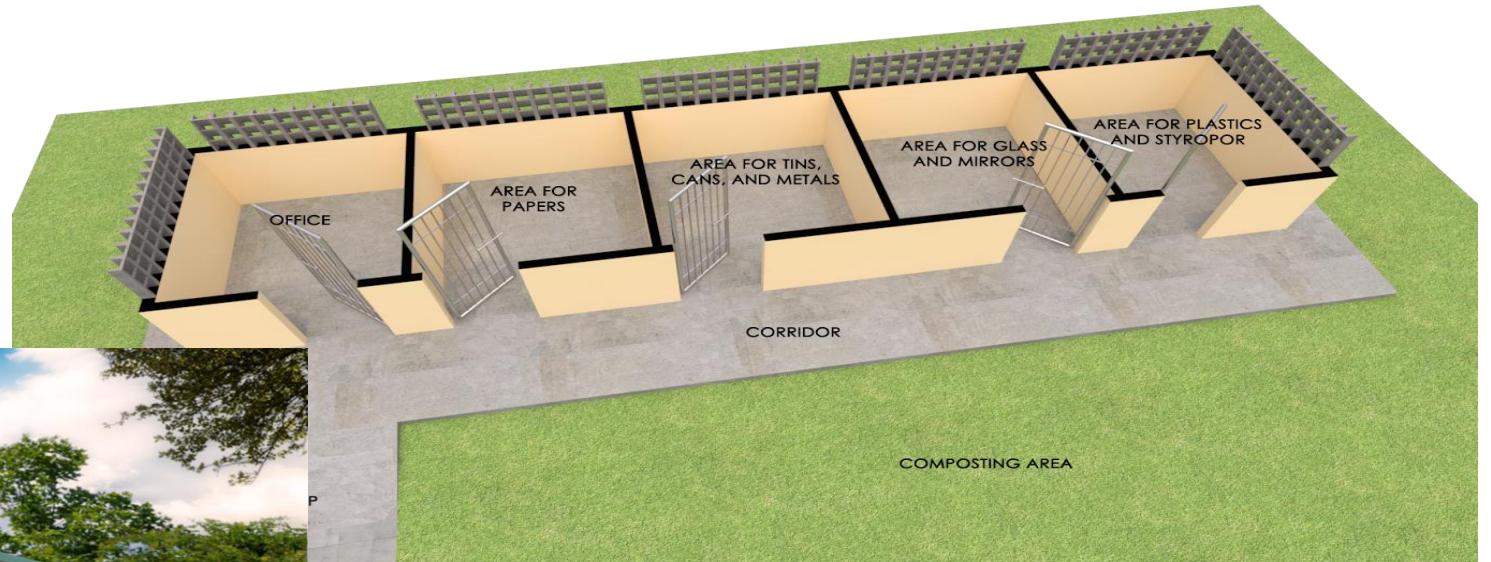
Material Recovery Facility

Every project shall have an onsite MRF for better waste management



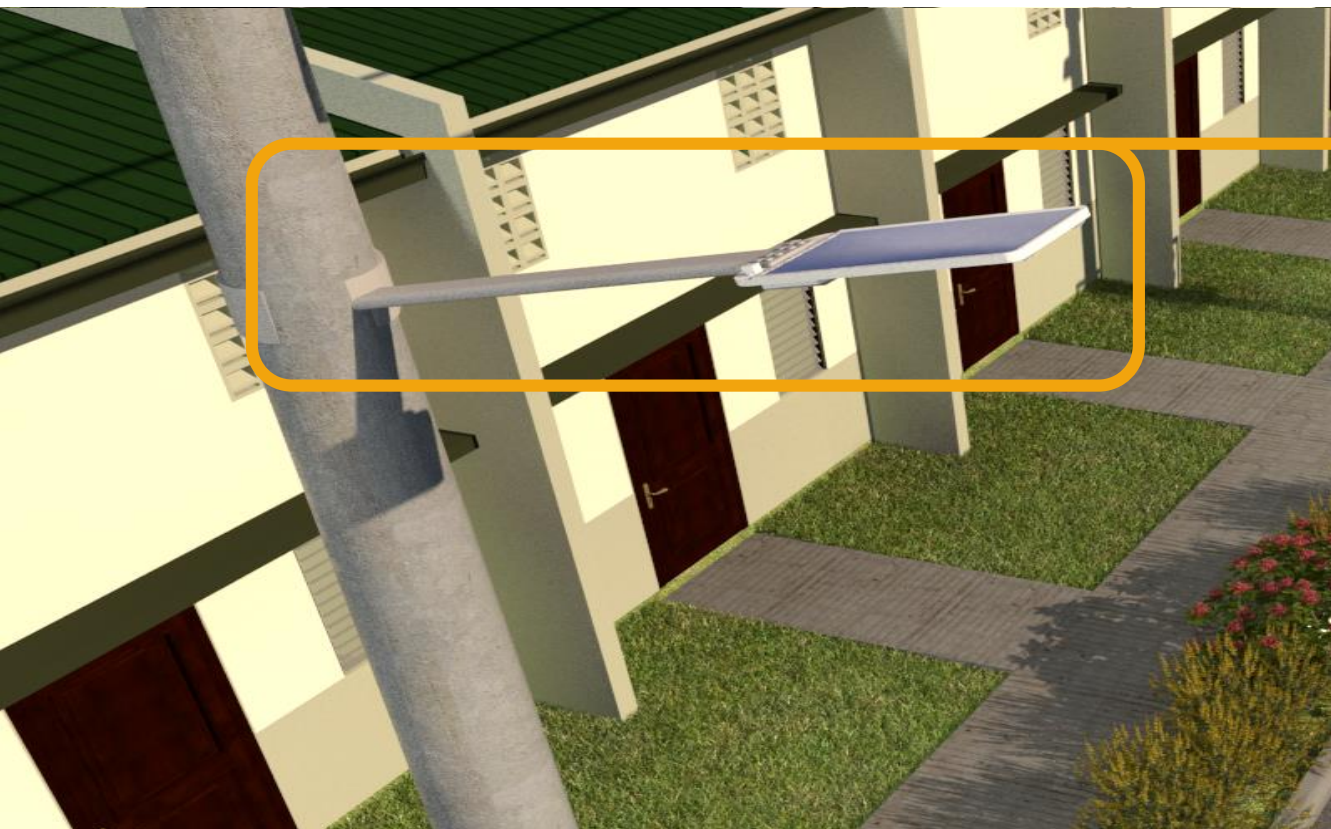
RAINWATER HARVESTING

MARAWI TRANSITORY SHELTER



MATERIAL RECOVERY FACILITY

The MRF is provided in every resettlement site to promote better solid waste management in partnership with the HOA and LGUs.



SPECIFICATION FOR INTEGRATED SOLAR STREET LIGHT

**SOLAR PANEL:60W MONO
BATTERY:LITHIUM
CAPACITY:20AH / 11.1V**

**LED LAMP POWER:30 WATTS
LUMEN:3000-3600 LM
VIEWING ANGLE:120°**

**MOUNTING HEIGHT:6M
WORKING TEMP. RANGE:-25°C TO 65°C**

**ARM/BRACKET:
STAINLESS STEEL SCHEDULE 40**

**CONNECTING FLANGE:STAINLESS STEEL
SCHEDULE 40**



SOLAR STREET LIGHTS

Estimate = 26,712.00/unit

BUILDING RESILIENCE OF COMMUNITIES



**Empowering
Communities
through Capability
Building seminars
and workshops**

COMMUNITY EMPOWERMENT THROUGH GENDER AND DEVELOPMENT PROGRAMS

- BASIC SEMINAR ON DISASTER RISK REDUCTION AND MANAGEMENT ; CONDUCTED SEVERAL SESSIONS NATIONWIDE
- SEMINAR ON ENVIRONMENTAL PROTECTION PROGRAM FOR TYPHOON YOLANDA PROJECTS AND IN MINDANAO
- ORGANIZATION OF CALAMITIES OPERATIONS PROJECT ENGAGEMENT TEAMS NATIONWIDE (COPE)
- FIRE PREVENTION AND INFORMATION EDUCATION
- SOLID WASTE MANAGEMENT
- BAMBOO PROPAGATION
- URBAN GARDENING
- COCO COIR TWINING AND WEAVING



SV 3, MUNTINLUPA



Banig Water Lily Weaving



ASTIG KARPINTERO TRAINING

In partnership with James Hardie



SV8, RODRIGUEZ, RIZAL



URBAN GARDENING

Project beneficiaries are encouraged to utilize portion of their lots for backyard gardening and other agri-based related activities.

SJDM HEIGHTS, CSJDM





UNLAD BUHAY PROJECT



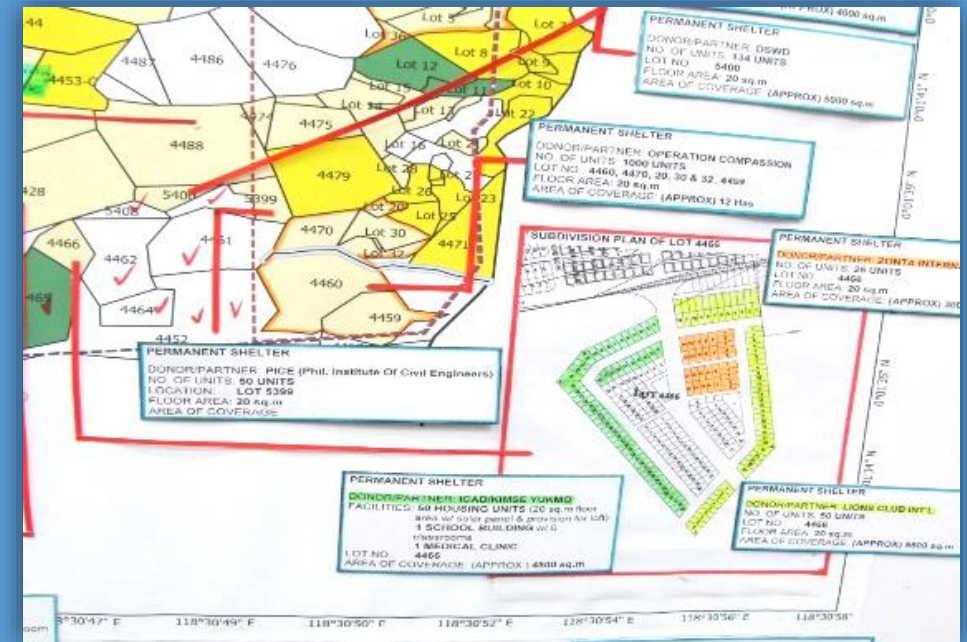
- CHALLENGES :
- COST OF IN-CITY HOUSING AGAINST OFF-CITY RELOCATION AND RESETTLEMENT
 - HIGH CAPITAL INVESTMENT WITHIN THE CITIES FOR LOW-RISE TO HIGH-RISE BUILDINGS OR VERTICAL HOUSING DEVELOPMENT, INCLUDING HIGH COST OF LAND IN URBAN AREAS
 - OFF-CITY PROJECTS WITH HOUSE AND LOT PACKAGES ARE FAVORED BUT BECOME UNSUSTAINABLE IN THE LONG TERM, WITH THE LOSS OF LIVELIHOOD DURING THE INITIAL STAGES OF RELOCATION AND RESETTLEMENT





- **CHALLENGES :**

- LACK OF SUITABLE LANDS FOR HOUSING :
HOUSING FOR THE POOR OR FOOD SECURITY ?
AGRICULTURAL LANDS ARE CONVERTED TO
HOUSING PROJECTS
- ABSENCE OF A COMMON SUBSIDY FRAMEWORK
THAT SHOULD SUPPORT SOCIALIZED HOUSING
PROGRAMS ACROSS AGENCIES
- GUIDELINES ARE NOT ALWAYS FOLLOWED, GAPS
IN IMPLEMENTATION.



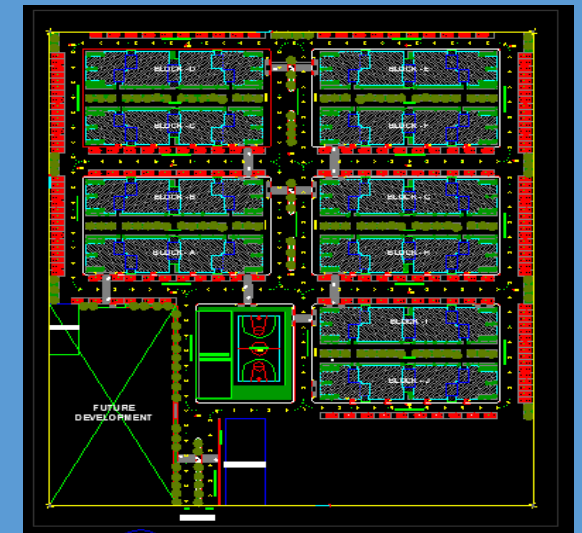
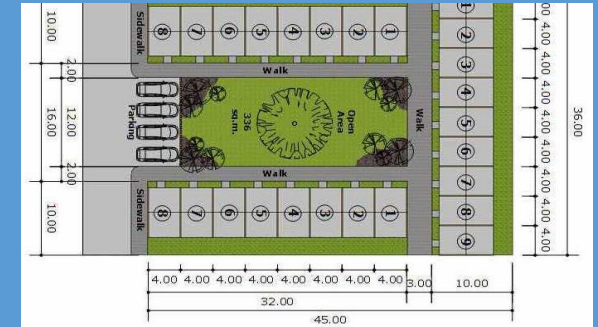
- **THE NEED FOR PARADIGM SHIFT :**
- ADOPTION OF THE LOW-RISE TO HIGH RISE HOUSING DEVELOPMENT AND MIXED USE/ MIXED INCOME/ RENTAL HOUSING IN HIGHLY URBANIZED AREAS ; TO SAVE ON LAND AND AT THE SAME TIME MEET THE HOUSING DEMAND,
- LOW-INCOME PEOPLE MUST BE ENCOURAGED OR CONVINCED THAT LOW-RISE BUILDINGS OR VERTICAL HOUSING ARE ALSO PERMANENT SOLUTIONS TO HOUSING. HOWEVER, THEY MUST BE TAUGHT ON HOW TO LIVE IN SUCH ENVIRONMENT.
- MAINTENANCE AND ADMINISTRATIVE FUNDS MUST BE PROVIDED BY THE GOVERNMENT AT THE INITIAL STAGES, WITH NGOS TAKING PART IN VALUES FORMATION AND BUILDING MANAGEMENT

Success Case: Hong Kong Public Rental Housing
professional estate management, mixed-use



SLIDE SOURCE : HUDCC

- PLACING SUBSIDIES AND INCENTIVES AT THE RIGHT PLACES WILL HELP PROMOTE COMPLIANCE AND COOPERATION AS WELL AS PROGRAMS FOR COMMUNITY BUILDING AND ENHANCING CAPACITIES COUPLED WITH WELL- DEFINED MONITORING SYSTEM
- CCA AND DRR MUST BE INTEGRATED IN THE HOUSING SECTOR POLICIES AND PROGRAMS, PLANNING AND DESIGN AND IMPLEMENTATION
- ADVOCATE FOR MORE GOVERNMENT FUNDS AND PRIVATE SECTOR PARTICIPATION TO SUSTAIN AND PROMOTE AWARENESS OF THE EFFECTS OF CLIMATE CHANGE AND GLOBAL WARMING BOTH AT THE HOUSEHOLD AND NEIGHBORHOOD LEVELS. LIKE PROPER GARBAGE DISPOSAL, URBAN GARDENING, TREE PLANTING, USE OF ENERGY EFFICIENT FIXTURES AND SYSTEMS, WATER CONSERVATION, ETC.



CONCLUSION

Aligning with the Philippine Development Plan, and with all the directives pertaining to disaster preparedness and resiliency, climate change and all the other laws affecting the housing sector, it is imperative to design and implement innovative and responsive policies, programs and projects.

The greater challenge though is in the actual implementation of these initiatives in an environmentally sustainable manner. Given the projections and the already existing demand for the socialized and low-income housing, there is a significant opportunity to promote sustainable development measures through this sector, particularly at the household level and on how to secure its scalability.



“It takes hands to build a house, but only hearts can build a home.”





- **“Don’t’ be afraid to start over, it is a chance to build something better this time.”**

End of Presentation