



# A Decade of Collaboration: Charting the Path Forward through Partnerships in M&E

THE 10<sup>th</sup> M&E NETWORK FORUM

29 November 2023 | Seda Vertis North, Quezon City

 [fb.com/StrategicMandE](https://fb.com/StrategicMandE)

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# IMPACT EVALUATION STUDY OF THE Z3R HOUSING PROJECT ON THE SOCIOECONOMIC RECOVERY OF ZAMBOANGA SIEGE VICTIMS



# IMPACT EVALUATION OF

## THE Z3R (HOUSING PROJECT) ON THE SOCIOECONOMIC RECOVERY OF ZAMBOANGA SIEGE VICTIMS

Background and  
Rationale of the study

Evaluation Objectives,  
Purpose, and Scope

Data sources and  
Methodology

Comparative Assessment of the  
Socioeconomic Indicators (Baseline)

Preliminary Results based on Field  
Monitoring and PSS conducted



# **Background and Rationale**

# Zamboang Peninsula Regional Development Plan Framework 2023-2028

## SUSTAINABLE ECONOMIC TRANSFORMATION FOR A PROSPEROUS, INCLUSIVE, AND RESILIENT ZAMBOANGA PENINSULA

### DEVELOP AND PROTECT CAPABILITIES OF INDIVIDUALS AND FAMILIES



**PROMOTE HUMAN AND SOCIAL DEVELOPMENT**

- BOOST HEALTH
- IMPROVE EDUCATION AND LIFELONG LEARNING
- ESTABLISH LIVABLE COMMUNITIES



**INCREASE INCOME-EARNING ABILITY**

- INCREASE EMPLOYABILITY
- EXPAND EMPLOYMENT OPPORTUNITIES
- ACHIEVE SHARED LABOR MARKET GOVERNANCE



**REDUCE VULNERABILITIES AND PROTECT PURCHASING POWER**

- ENSURE FOOD SECURITY AND PROPER NUTRITION
- STRENGTHEN SOCIAL PROTECTION

### TRANSFORM PRODUCTION SECTORS TO GENERATE MORE QUALITY JOBS AND COMPETITIVE PRODUCTS



**MODERNIZE AGRICULTURE AND AGRI-BUSINESS**




**REVITALIZE INDUSTRY**



**REINVIGORATE SERVICES**

- PROMOTE TRADE AND INVESTMENTS
- ADVANCE R&D, TECHNOLOGY, AND INNOVATION
- ENHANCE INTER-INDUSTRY LINKAGES

### PRACTICE GOOD GOVERNANCE AND IMPROVE BUREAUCRATIC EFFICIENCY



**ENSURE PEACE, SECURITY, AND PUBLIC SAFETY AND ENHANCE ADMINISTRATION OF JUSTICE**

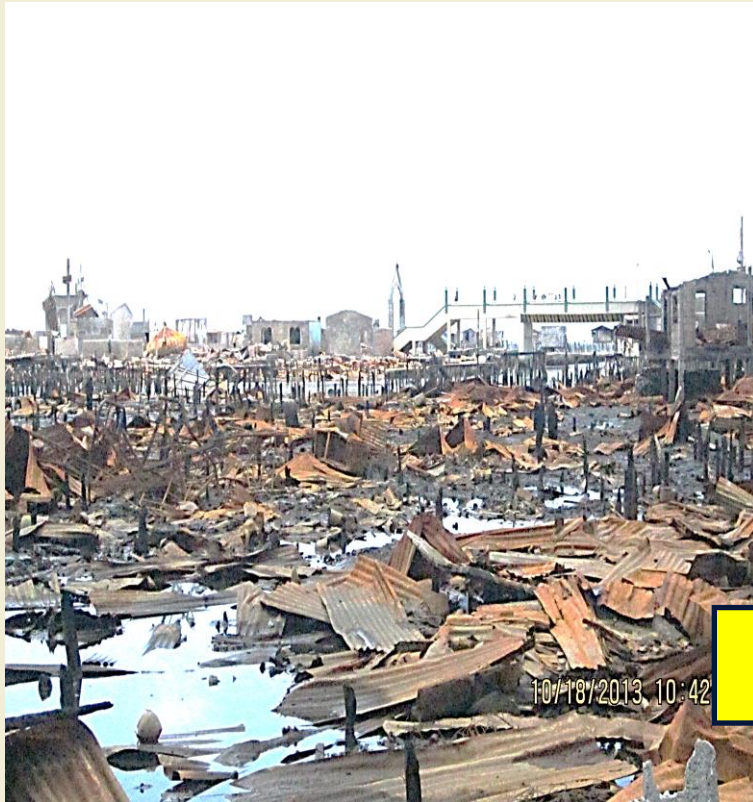
### PROMOTE FINANCIAL INCLUSION AND IMPROVE PUBLIC FINANCIAL MANAGEMENT



**EXPAND AND UPGRADE INFRASTRUCTURE**



**ACCELERATE CLIMATE ACTION AND STRENGTHEN DISASTER RESILIENCE**



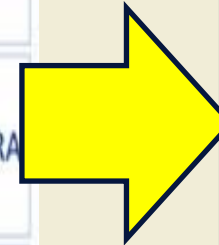
**Zamboanga Siege**  
**September 9-29, 2013**

**(IDENTIFICATION OF AFFECTED FAMILIES)**

**A. The most vulnerable families**

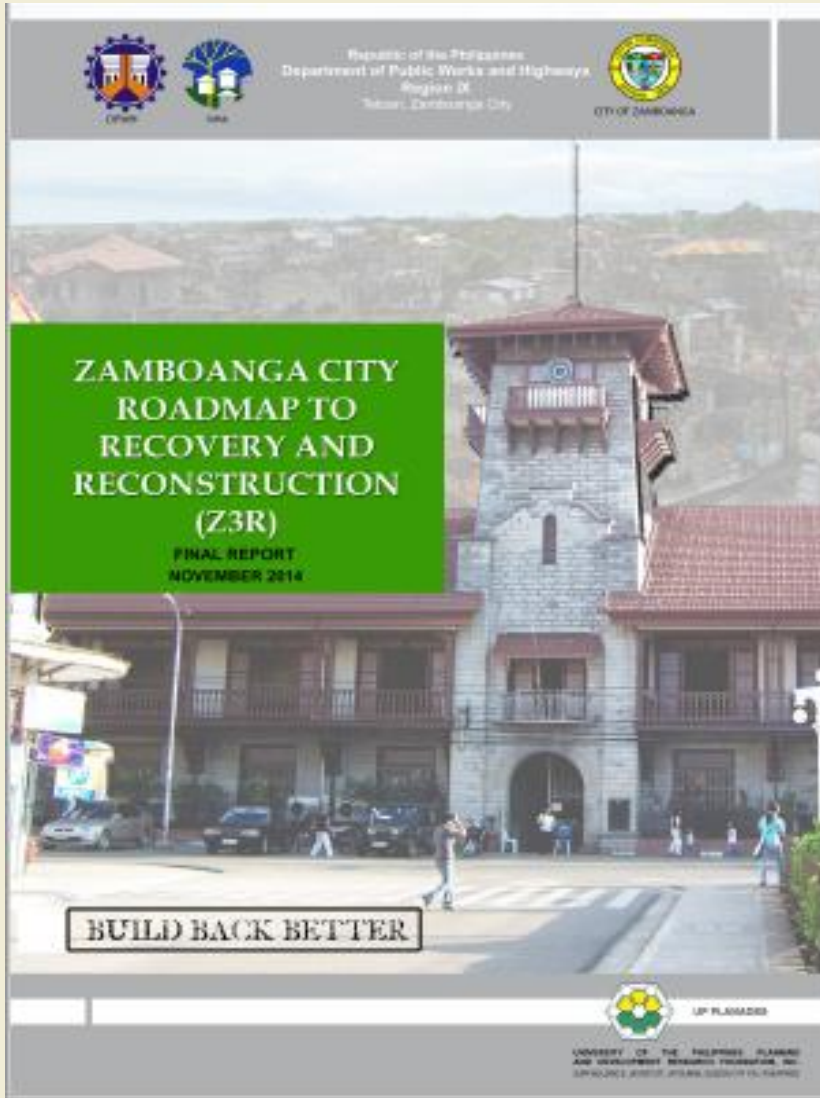
1. Fire victim families
2. Families whose dwelling units were heavily affected by bullets and mortars.
3. Families residing on areas declared as "No Return Zone", including those residing on danger zones per RA 7279 and within the coverage of Z3R.
4. Families whose houses are affected by the Road Right of Way (RROW), drainage, waterway and other legal easements.

**Census/Tagging and Spot Mapping of Affected Families**



**Zamboanga City**  
**Roadmap to Recovery and Reconstruction (Z3R)**

# Z3R Objectives

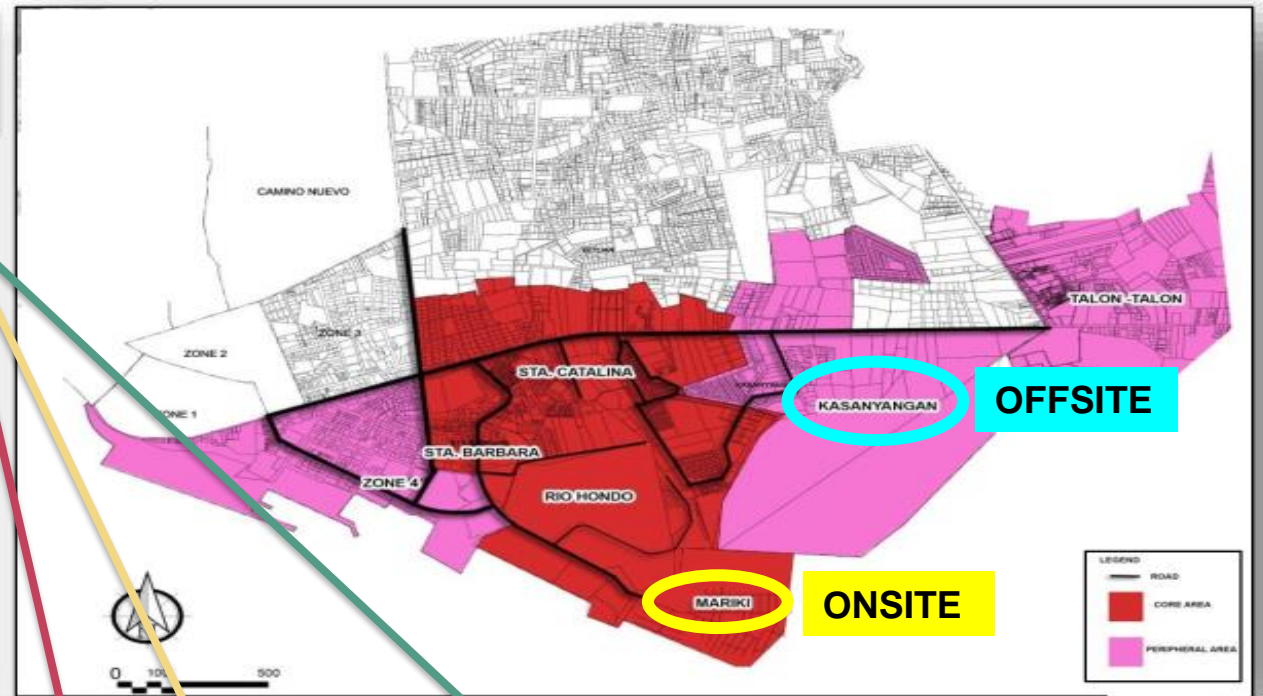


1. Improve the overall environment of the affected communities
2. Minimize adverse social impacts on housing and relocation
  - a. Prioritize onsite housing rehabilitation*
  - b. Ensure culturally-sensitive housing development for IPs (houses-on-stilts)*
3. Improve public safety and security of the community

## Zamboanga City Roadmap to Recovery and Reconstruction (Z3R)

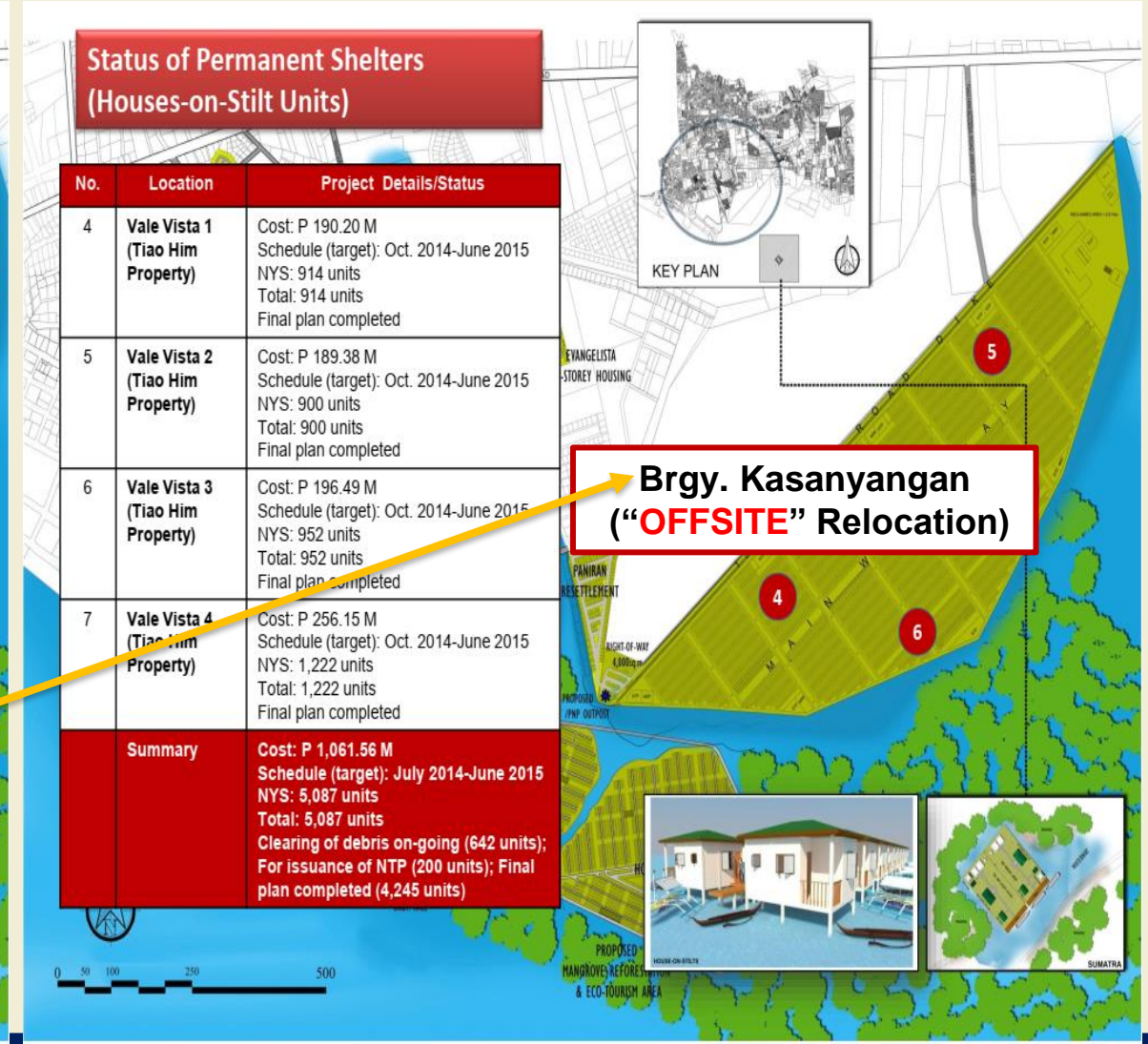
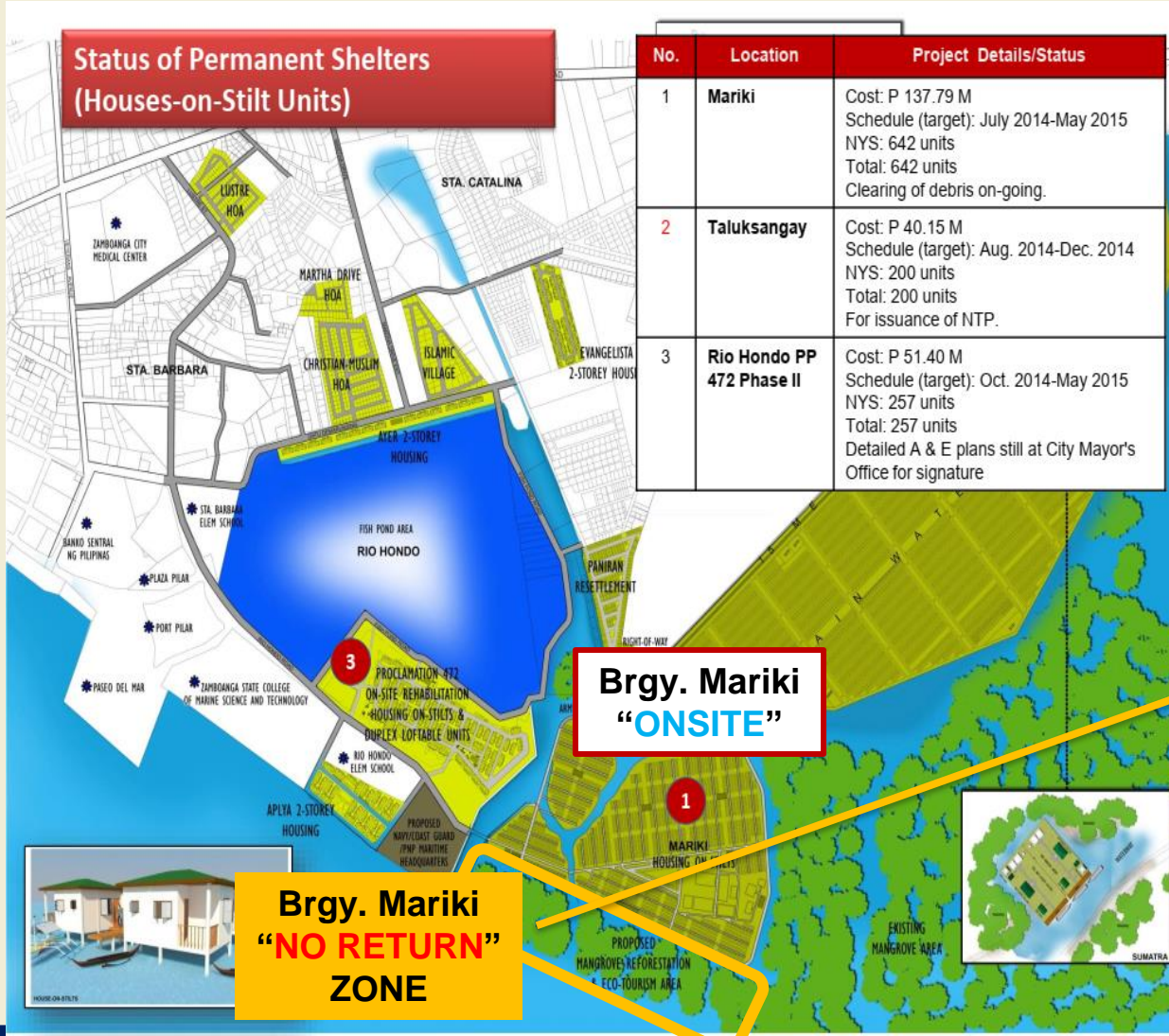
- Shelter Assistance (P1.39 billion) **~40%**
- Land acquisition for housing sites and right-of-way for road/drainage (P258.2 million)
- Land development covering road and drainage, housing site development, fishpond fencing, flood gates, and mangrove reforestation (P648.9 million)
- Security covering land acquisition, land development, and construction (P143.7 million)
- Rehabilitation of damaged infrastructure, assistance to small and medium enterprises, agriculture, and culture (P821.0 million)
- Other assistance to 5,587 families (P55.9 million)
- Contingency (P184.1 million)

**Grand Total: PhP3.5 billion**





# Around 75 percent or PHP1.06 Billion of the Z3R Shelter Assistance are Houses-on-Stilt Units



# Evaluation Objectives, Purpose, and Scope



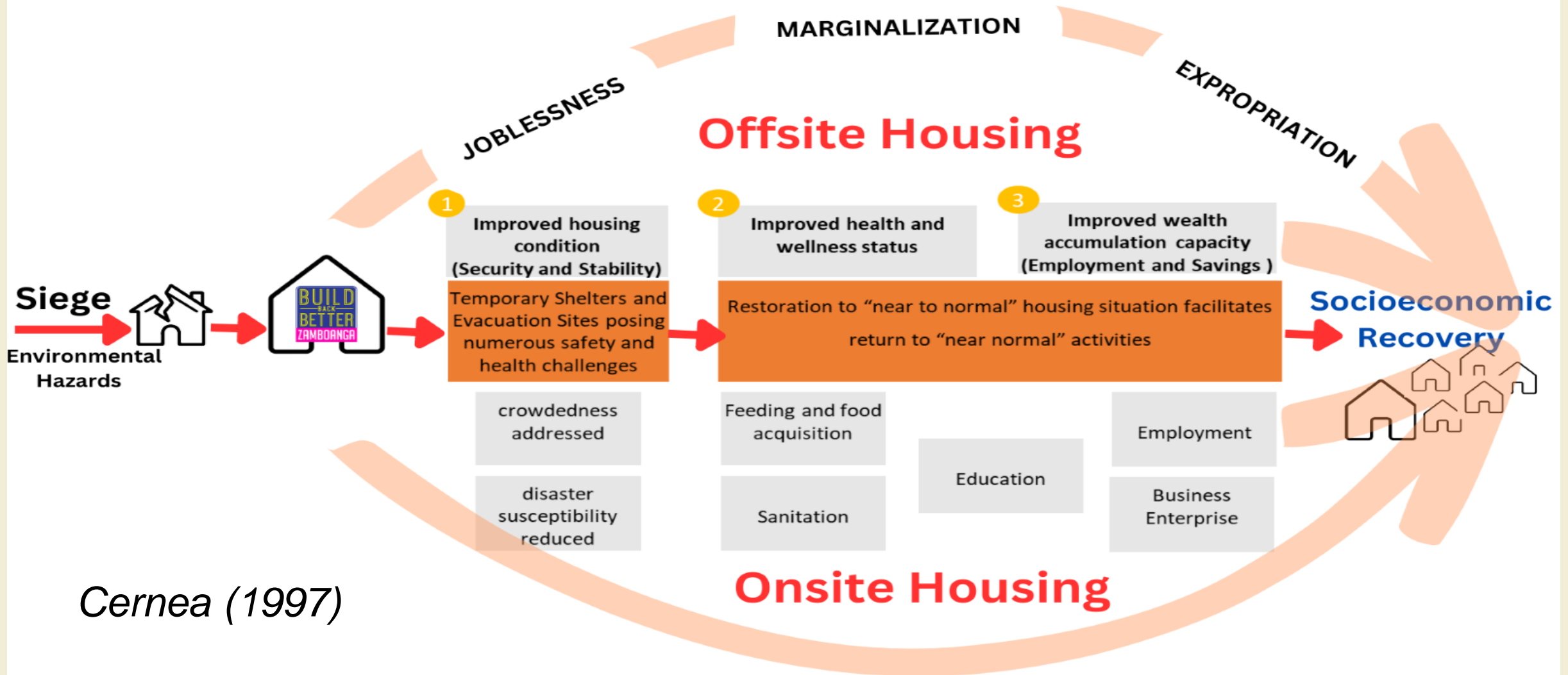
Question:

“Is there a difference on the socioeconomic recovery of the internally displaced peoples (IDPs) resettled “**Onsite**” and “**Offsite**”?”

The study aims to determine the **average treatment effect of the treated (ATT)** of the Z3R Stilt Housing Relocation on the IDPs.

House-On-Stilt Beneficiaries	No. of Households
ONSITE – Control (Brgy. Mariki)	642
OFFSITE – Treatment (Brgy. Kasanyangan)	398 “No Return Zone” Policy
<b>TOTAL</b>	<b>1,040</b>

# RESEARCH FRAMEWORK



# Housing impacts on development goals



Adapted from Kissick et al 2006.

## Housing as a Driver of Economic Development

### Developed Economies

- Macroeconomic impacts of housing account for a significant portion of annual GDP
- Housing generates expenditures outside the housing sector
- Housing and real estate asset classification leads to greater market efficiency, stability, and liquidity

### Developing Economies

- Housing construction in low-income neighborhoods is a stimulus to creation of small businesses
- People are more likely to use their homes as places of employment
- Cultural and personal value of housing
- Microfinance for housing that may be bundled with loans for business development

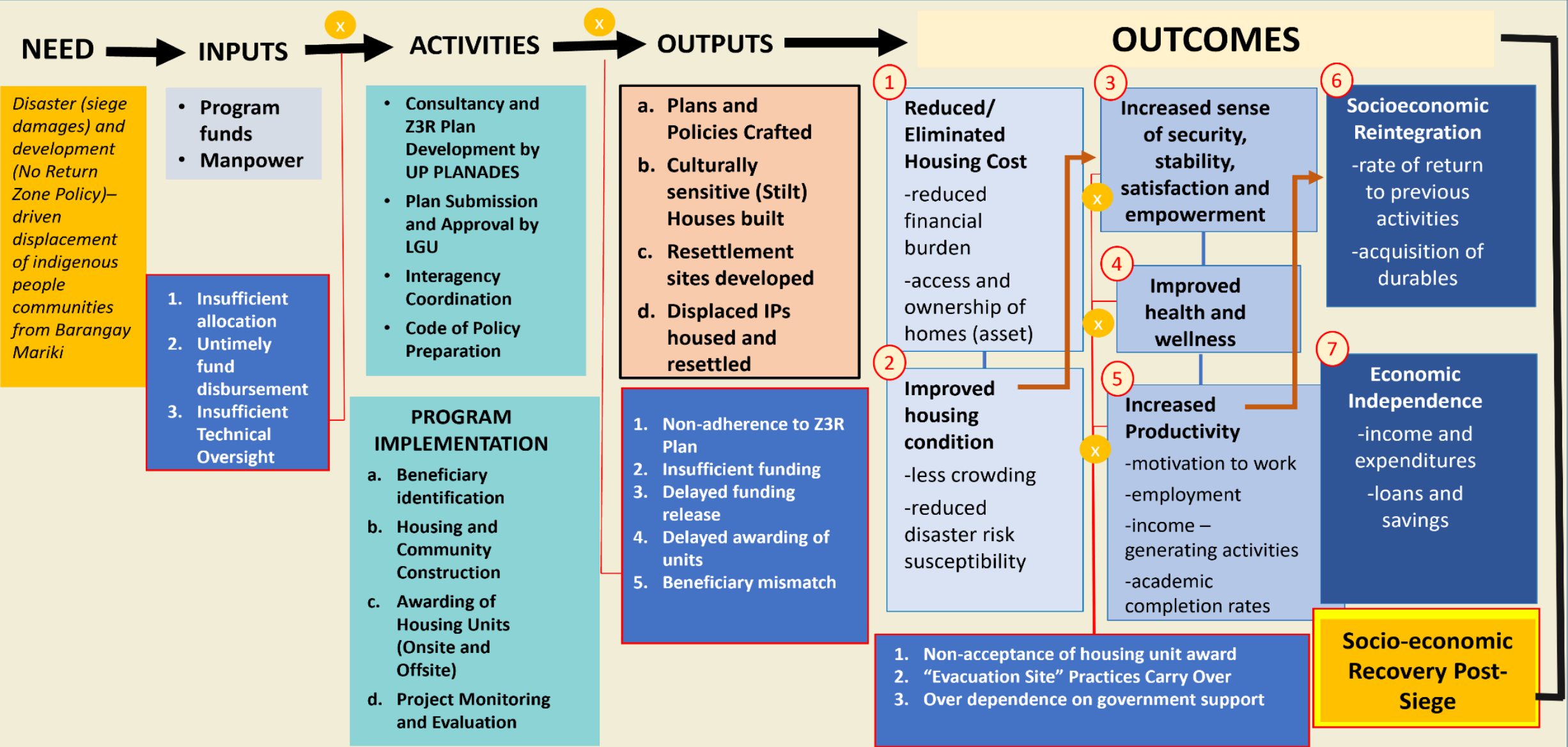
## Housing as a Key to Poverty Alleviation, Health, Humanitarian Relief, and Reconstruction

- Poverty Alleviation
  - ✓ Strong motivator for savings and investment
  - ✓ Extra income from rental housing
  - ✓ Housing may bring people to jobs
  - ✓ Asset base for rural poor with few other resources
  - ✓ Absorption of rural immigrants
- Health
  - ✓ Healthy children need healthy homes
  - ✓ Clean housing is critical to prevention and care of AIDS, tuberculosis, and malaria
  - ✓ Overcrowded homes are crucibles for disease
- Humanitarian Relief and Reconstruction
  - ✓ Recovery from natural and man-made disasters
  - ✓ Reconstruction and economic recovery

## Housing as a Foundation for Democracy, Governance, and Security

- Community and Public Participation
  - ✓ Housing needs catalyzes civic activism
  - ✓ Stimulus for community-based organizations
  - ✓ Empowering women
- Decentralization and the Democratic Process
  - ✓ Experience for elected leadership
  - ✓ Local government capacity building
- Security
  - ✓ Economic security
  - ✓ Social security
  - ✓ Community stability
  - ✓ Alternative dispute resolution

# THEORY OF CHANGE



# Data sources and Methodology

Republic of the Philippines  
**OFFICE OF THE CITY MAYOR**  
 Housing and Land Management Division  
 City of Zamboanga

**FAMILY INFORMATION INTAKE SHEET**  
 (Site Inspection/Background Investigation Report Form)

Control No.: \_\_\_\_\_ TAG NO.: \_\_\_\_\_  
 Location: \_\_\_\_\_ (Specific Area) \_\_\_\_\_  
 Barangay: \_\_\_\_\_ Date: \_\_\_\_\_ mm/dd/yyyy

**FAMILY HEAD** NAME AGE PLACE OF ORIGIN  
 LASTNAME FIRSTNAME MIDDLE NAME  
 \_\_\_\_\_

**WIFE** (Maiden Name): LASTNAME FIRSTNAME MIDDLE NAME  
 \_\_\_\_\_

Date of Residence: \_\_\_\_\_  
 No. of yrs. in the affected area: \_\_\_\_\_ Year(s)  
 Previous Residence/s: \_\_\_\_\_

**REASONS FOR TRANSFER**  
 Please Check (✓)  
 Ejection  
 Demolition  
 No Security Land Tenure  
 Danger Zone  
 Gov't Infrastructure Projects  
 Natural/Man made Calamity/s  
 Others : \_\_\_\_\_

**MEMBERS OF THE FAMILY:**

No.	Name	Relation to Family Head	Age	Occupation	Monthly Income
01.					P
02.					P
03.					P
04.					P
05.					P
06.					P
07.					P
08.					P
09.					P
10.					P
11.					P
12.					P
<b>TOTAL:</b>					P

**STATUS OF HOUSE/STRUCTURE OWNERSHIP**  
 Please Check (✓)  
 Owner  
 Renter — Name of Houseowner : \_\_\_\_\_  
 Renter-Free/Sharer — Name of Houseowner : \_\_\_\_\_  
 Caretaker — Name of Houseowner : \_\_\_\_\_

**STATUS OF LAND OCCUPANCY**  
 Please Check (✓)  Owner  Informal Dwellers  
 Name of Land Owner : \_\_\_\_\_

**LAND OWNERSHIP**  
 Please Check (✓)  Yes  No  
 TCT No. \_\_\_\_\_

REMARKS : \_\_\_\_\_  
 SIGNATURE OF CLIENT (Over Printed Name) \_\_\_\_\_  
 Noted by: *Rodrigo S. Pagotaisidro*  
**RODRIGO S. PAGOTAISIDRO**  
 Housing & Homeless Regulation Officer V

SIGNATURE OF WORKER (Over Printed Name) \_\_\_\_\_

City Government Complex, Pettis Barracks  
 Rizal St., Zamboanga City  
 Tel. No.: (062) 992-2572  
 Revised Family Information Intake Sheet 01-31-2022

## Relocation for IP Siege Victims

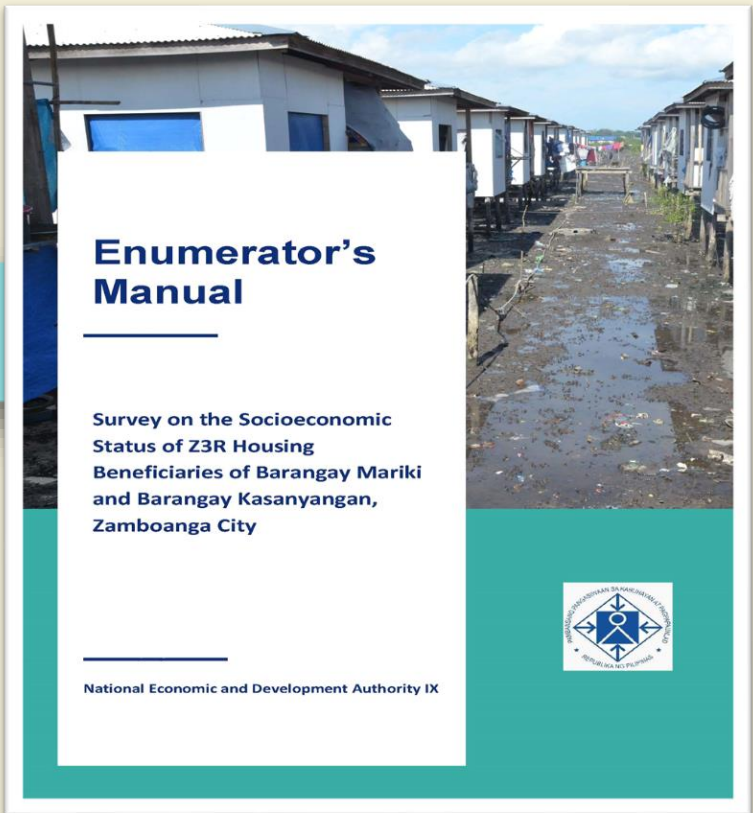
- Z3R Plan
- Z3R Code of Policy

1. Research Framework
2. Theory of Change

### Data Collection and Analysis Plan

- Primary Data**
- Survey (Questionnaire and Interview)
  - GIS Mapping
  - Focus Group Discussion (FGD)
  - Key Informant Interview (KII)

- Secondary Data**
- Project Status and Monitoring Reports (NHA and LIAC)
  - Family Intake Information Survey (LGU-HMLD)
  - Social Welfare and Development Indicators (DSWD & CSWDO)
  - Spot Maps

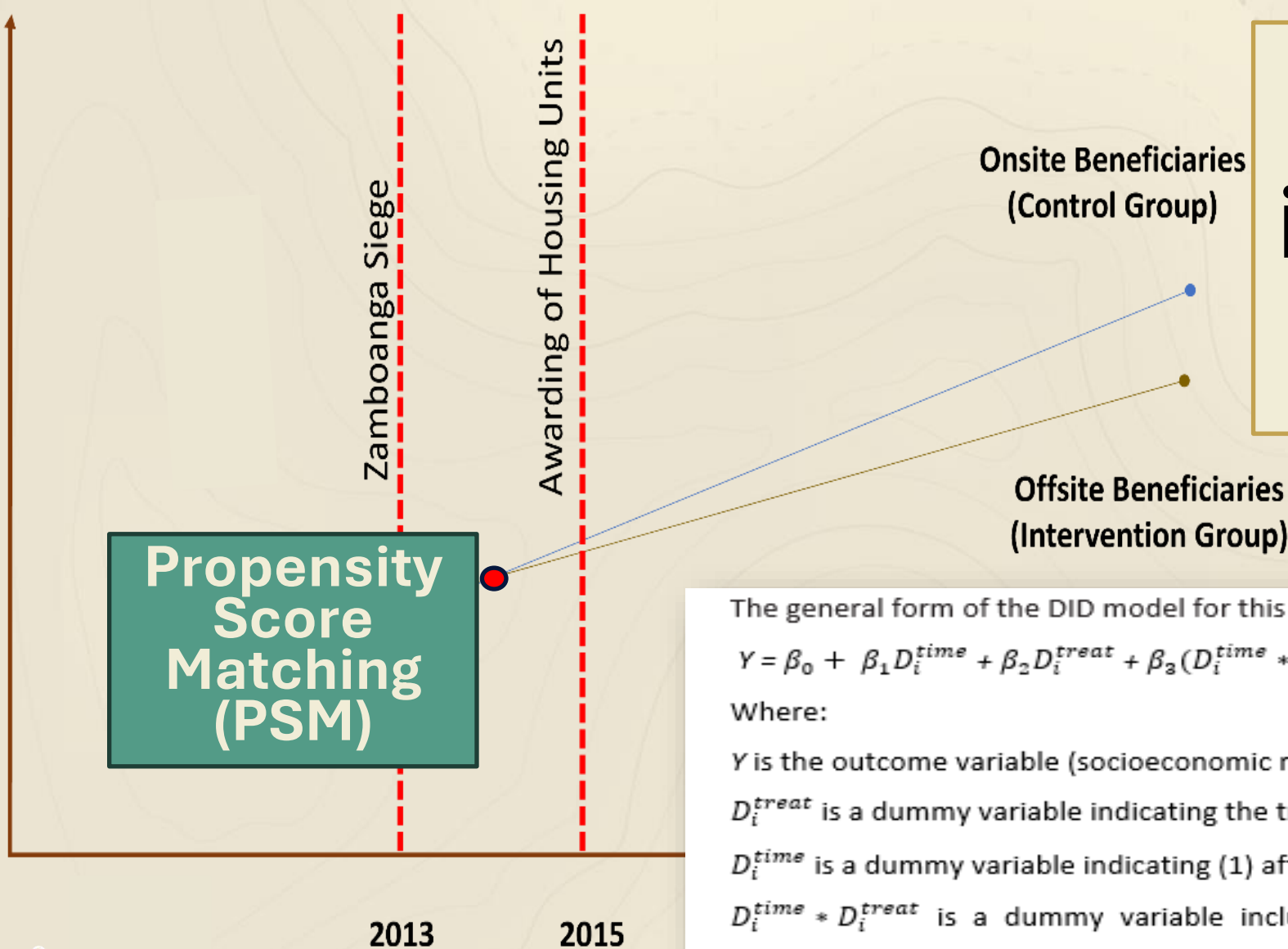


- a. Perception, Behaviour, and Actuals (security, stability, satisfaction, empowerment & motivation, disease incidence and medical services availed, employment and income-generating activities, restoration & reintegration in the community)
- b. Housing award and distances (displacement and residence time)
- c. Housing condition (crowding and cost of repair)
- d. Durables, Income & Expenditure, Loans & Savings

- a. Stilt houses built and awarded
- b. Displaced IPs housed & resettled
- c. Baseline and Current Socioeconomic Status

# Difference-in-Difference (DID) Model

Socioeconomic Indicators



The general form of the DID model for this impact evaluation study

$$Y = \beta_0 + \beta_1 D_i^{time} + \beta_2 D_i^{treat} + \beta_3 (D_i^{time} * D_i^{treat}) + \varepsilon_i$$

Where:

$Y$  is the outcome variable (socioeconomic recovery)

$D_i^{treat}$  is a dummy variable indicating the treatment (1) and control (0) group.

$D_i^{time}$  is a dummy variable indicating (1) after intervention (2023), 0 for baseline (2013).

$D_i^{time} * D_i^{treat}$  is a dummy variable including whether the outcome is observed in the treatment group and it was observed after the intervention (1) or any other case (0)



# Comparative Assessment of the Socioeconomic Indicators (Baseline)



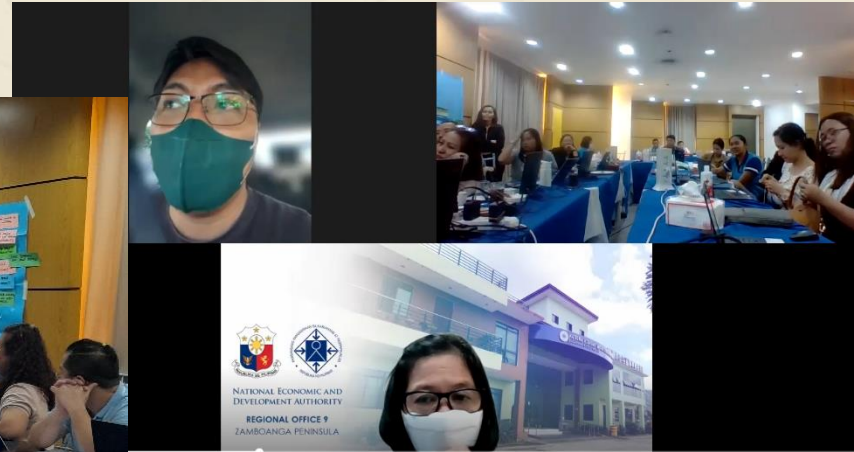
Baseline Data (2014 FIIS)	Sample HHs	Age Group	Family Size	Length of Occupancy	Monthly Income	Per Capita Income
ONSITE (Mean)	232	43.845	6.750	15.735	9,385.90	1,484.86
OFFSITE (Mean)	160	45.425	5.619	13.894	7,551.84	1,441.78
t-Critical (two-tail)		2.5914	2.5889	2.5885	2.5888	2.5907
t Stat ( $\alpha = 0.01$ )		<b>-1.1131</b>	<b>4.5156</b>	<b>1.4623</b>	<b>1.8506</b>	<b>0.2497</b>

In summary, the t-values with less than the critical values suggest that there is no significant differences were observed in the **household age**, **length of occupancy**, **mean monthly income** and **per capita monthly income** between the “onsite” and “offsite” groups.



# IE Study Activities

## Brainwriting Workshop July 4-5, 2023



sharepoint.com is now full screen

**STAKEHOLDERS MEETING**  
CONSULTATION ON THE IMPACT EVALUATION STUDY OF Z3R HOUSING PROJECT  
Audio-Visual Room, Administration Building,  
Zamboanga State College of Marine Sciences and Technology (ZSCMST)  
Barangay Rio Hondo, Zamboanga City

ORDER OF BUSINESS		
DATE/TIME	ACTIVITY	RESPONSIBLE PERSON
July 21, 2023		
8:00 AM	REGISTRATION	
9:00 AM	PRAYER	JUNE KERR BALCE EDS 1, NEDA IX
9:05 AM	INTRODUCTION OF PARTICIPANTS	ZSCMST
9:15 AM	OPENING REMARKS	MARIA FELICIDAD R. GUERRERO Assistant Regional Director, NEDA IX
9:20 AM	RATIONALE OF THE ACTIVITY	ELVIE D. MAISOG Supervising EDS, NEDA IX
9:30 AM	a. Introduction to Impact Evaluation Studies	DR. RUFA LARA MENDEZ Vice President for Research and Innovation, ZSCMST

## Stakeholders Meeting July 21, 2023

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# IE Study Activities

## IE Team – ZSCMST and NRO 9 Coordination Meeting August 25, 2023

The estimated impact of the intervention using panel data from two time periods using Difference in Difference is:

$$\hat{\beta}_{DID} = (\bar{Y}_{1a} - \bar{Y}_{1b}) - (\bar{Y}_{2a} - \bar{Y}_{2b})$$

Where:

- $\hat{\beta}_{DID}$  represents the effect of the 3ZK considering the pre-existing differences between the treatment and control groups.
- $(\bar{Y}_{1a} - \bar{Y}_{1b})$  is the mean difference between after and before the treatment groups;
- $(\bar{Y}_{2a} - \bar{Y}_{2b})$  is the mean difference between after and before the control groups;

The general form of the DID model for this impact evaluation study

$$Y_1 = \beta_{10} + \beta_{11}D_1^{time} + \beta_{12}D_1^{treat} + \beta_{13}(D_1^{time} \cdot D_1^{treat}) + \gamma_1X + \epsilon_1$$

$$Y_2 = \beta_{20} + \beta_{21}D_2^{time} + \beta_{22}D_2^{treat} + \beta_{23}(D_2^{time} \cdot D_2^{treat}) + \gamma_2X + \epsilon_2$$

$$Y_3 = \beta_{30} + \beta_{31}D_3^{time} + \beta_{32}D_3^{treat} + \beta_{33}(D_3^{time} \cdot D_3^{treat}) + \gamma_3X + \epsilon_3$$

Where:

- $Y_1$  = household asset index
- $Y_2$  = Number of medical services availed by a household

$D_1^{time}$  is the time dummy with respect to the household asset index  
(1 for after intervention (2023), 0 for baseline (2013));

$D_1^{treat}$  is the treatment group dummy with respect to the household asset index  
(1 for after intervention (2023), 0 for baseline (2013));

$D_2^{time}$  is the time dummy with respect to the medical services availed  
(1 for after intervention (2023), 0 for baseline (2013));

$D_2^{treat}$  is the treatment group dummy with respect to the medical services

Comments:

- You need to establish and explicitly mention the assumption that nothing else influenced the outcome apart from the intervention (or better yet the difference in intervention) itself and the control and treatment groups do not self-select themselves. It is not clear in the write up.
- Then you need to be clear why the assumption may be too strong (or unrealistic) in this case. Then you propose a different methodology (but have different assumptions, hopefully relevant assumptions).
- You need to state why you are employing DID? What do you want to address that cannot be addressed by DID alone, please look at the notes.
- DID doesn't work if post period, 0 otherwise. DID should be 1 if treated, 0 otherwise. Why do we have DID? And why do we have 3 equations? You can just use 1, isn't it being outcome variable representing different outcomes. It is a random variable to begin with, so could represent a basket of outcomes, etc.
- Medical services? More like housing support right?

## IE Team Consultation Meeting with Dr. Arlan Brucal August 30, 2023



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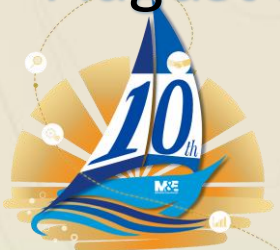
# IE Study Activities



IE Team Coordination Meeting  
August 29, 2023

TIME	ACTIVITY	RESPONSIBLE PERSON
03:00 P.M.	PRAYER	GARYL JAY N. PEPITO EDS II, NEDA IX
	PURPOSE OF THE ACTIVITY	LETICIA LOBREN Chief EDS, NEDA IX
	UPDATES	JORDAN B. SALI Senior EDS, NEDA IX
	HIRING AND PROCUREMENT	KARYL KRISTAL M. VILLEJO Chief Administrative Officer, NEDA IX
	NEXT STEPS	ELVIE D. MAISOG Supervising EDS, NEDA IX
	FEEDBACK / UPDATES	RUFA L. MENDEZ Vice President for Research, Innovation and Extension, ZSCMST
	ANNOUNCEMENTS	
	ADJOURNMENT	

IE Team - ZSCMST and NRO 9  
Coordination Meeting  
September 05, 2023



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# IE Study Activities

## Gathering of Secondary Data – LGU-Zamboanga City Visit September 28, 2023



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Ch

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REPUBLIKA NG PILIPINAS

EVALUATION  
NETWORK PHILIPPINES



# IE Study Activities



IE Online Refresher Course  
October 6, 2023



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# IE Study Activities

Site Visit  
Barangay Mariki,  
Zamboanga City  
October 23, 2023



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MONITORING & EVALUATION  
NETWORK PHILIPPINES



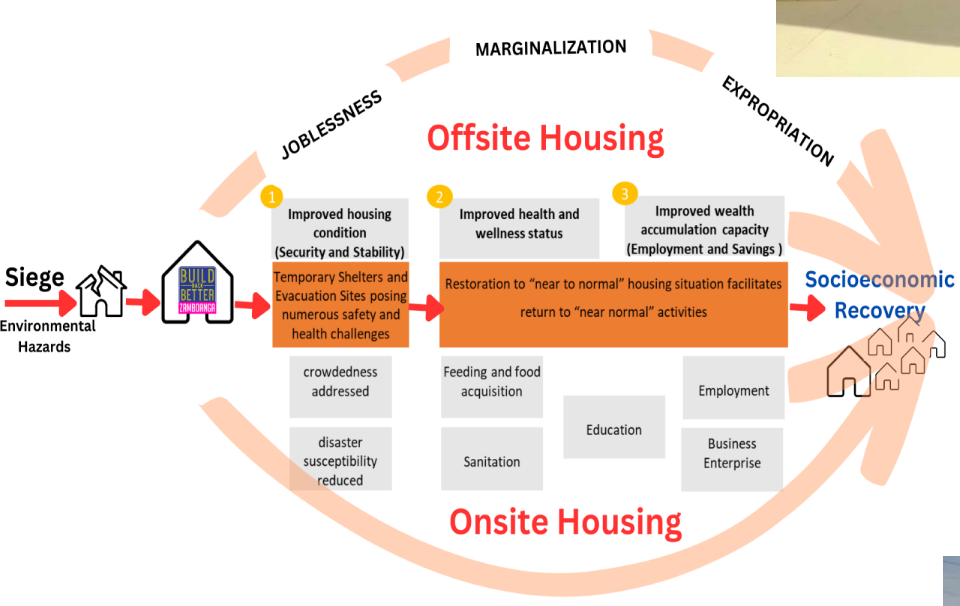


- **Ensure the order and maintenance of the common areas (i.e., boardwalk, mangrove and other open spaces).**

- **Propagation of the mangrove forest will protect the houses-on-stilts against tidal surge.**



# So far...

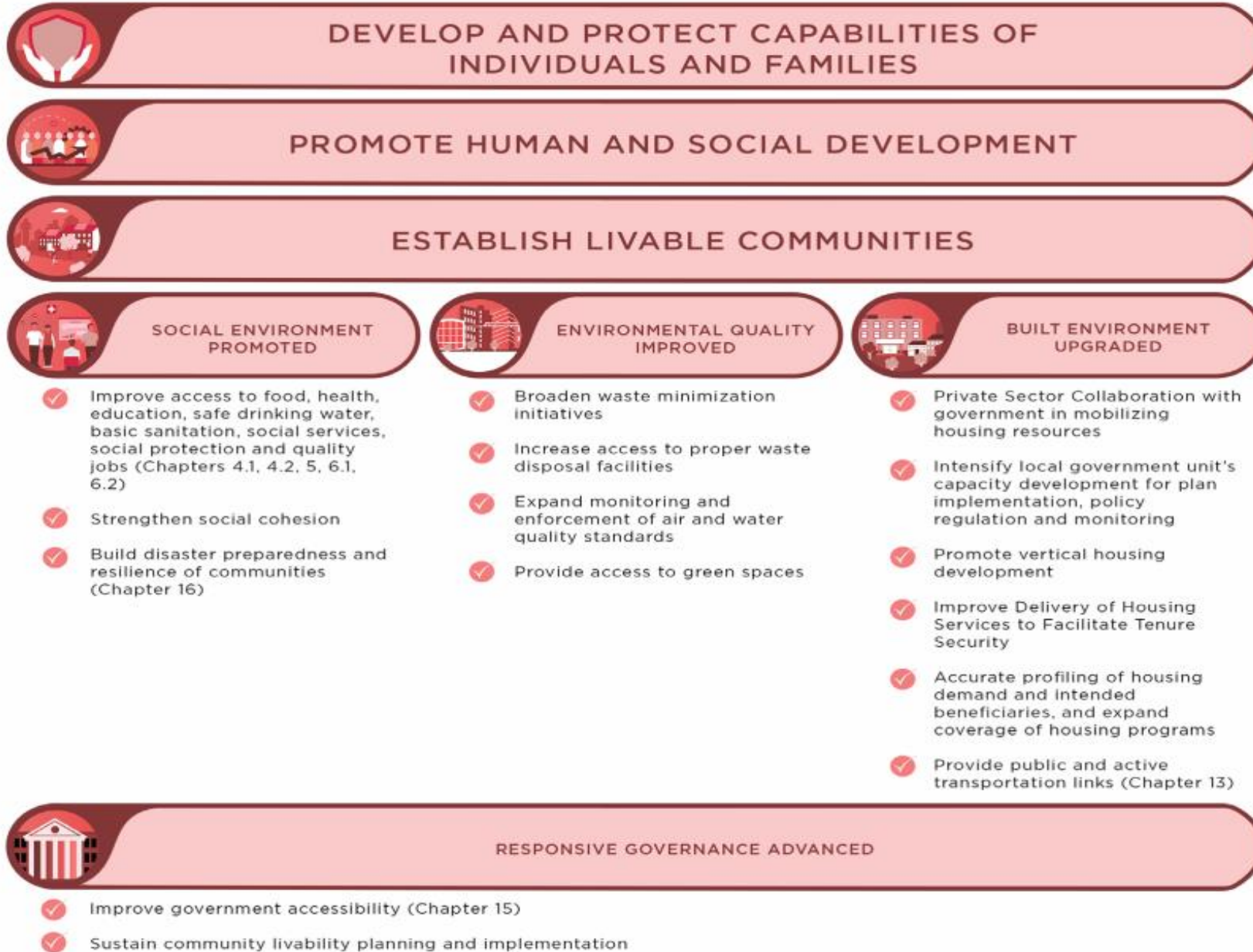


While housing relocation is canonically associated with poor uptake due to the previously identified impoverishment risk factors, our preliminary investigation revealed **lower attrition** for offsite housing, **higher income diversification**, and **higher frequency** for **housing expansion**.





## Strategy Framework to Establish Livable Communities



# 11 SUSTAINABLE CITIES AND COMMUNITIES



THE LIFE OF ALL FILIPINOS BY 2040

*Matatag, Maginhawa,  
at Panatag na Buhay*

## Capacity Development on **Impact Evaluation**

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# THANK YOU!