

Appendix-12: Supporting document  
for the DILG Manual

# Evacuation Planning for LGU level

JICA Study Team

## Objective

- The contents of this presentation is to provide guidelines to assist the Local Disaster Risk Reduction and Management Officers (LDRRMO) in preparing evacuation plan from the LGU level.
- In behalf of the support from the LGU to the Barangay Level on evacuation planning, it is necessary that the LGU should aim community awareness if who are those needed to evacuate outside of their Barangays.
- From the experience of Typhoon Yolanda, it should be the LGU's duty to consider smooth and safe evacuation planning , especially if the whole area of the Barangay is affected. The community should have an idea on "Where to go" in case they need to evacuate.
- To address this situation, it is the LGU's obligation to prepare their evacuation plan that will serve as a guide for the barangay's evacuation plan.
- As a result, simple steps of evacuation planning for LGU level will be introduced in this power point presentation.

## Importance of Evacuation

Evacuation is the most effective precautionary measures for disaster survival.

In case of large scale disaster, like Typhoon Yolanda, smooth evacuation is very important.

Role of LGU

For smooth evacuation, each individual must know “how”, “where” and “when” to go in times of disaster. Massive evacuees will move in lesser timeframe, appropriate coordination should be prepared in advance.

Need to Prepare by LGU

### Composition of Evacuation Planning

Evacuation plan consist of two steps.  
Step 1, basic idea for “where to evacuate” is planed.  
Step 2, “How to evacuate” is planed.

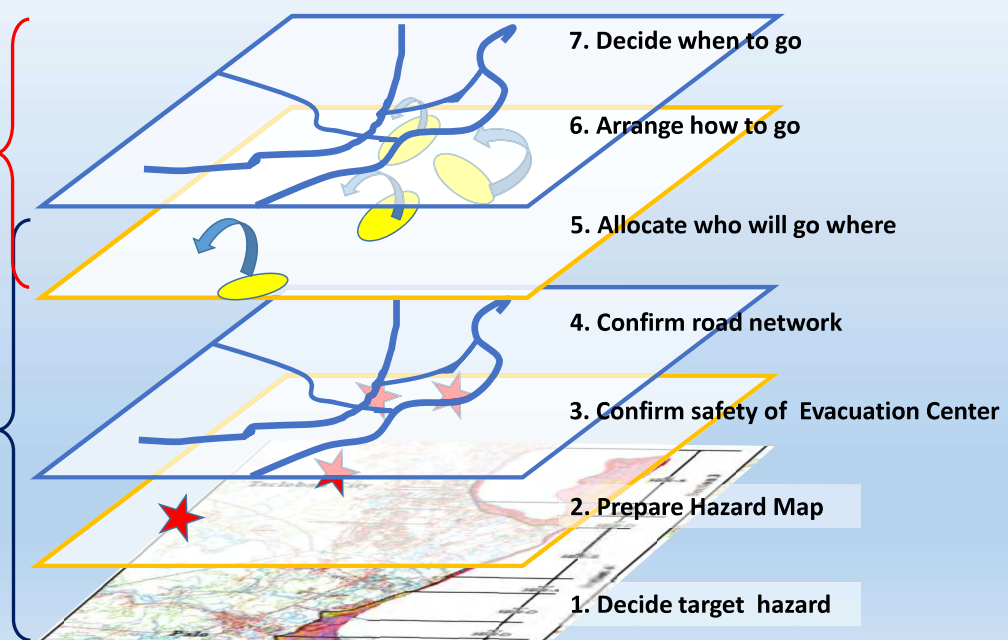
#### Step 2

Action plan with timeframe



#### Step 1

Basic preparation

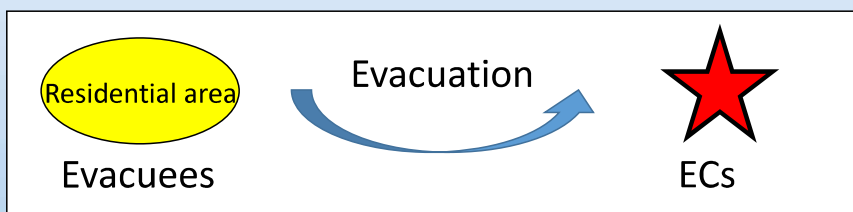


**Step 1**

**Basic preparation**

1. Decide target hazard
2. Prepare hazard map
3. Confirm safety of evacuation center
4. Confirm road network
5. Allocate evacuees to evacuation center (EC)

*Through the process of 1 to 5, which barangay evacuate to which Evacuation center or barangay will be considered.*

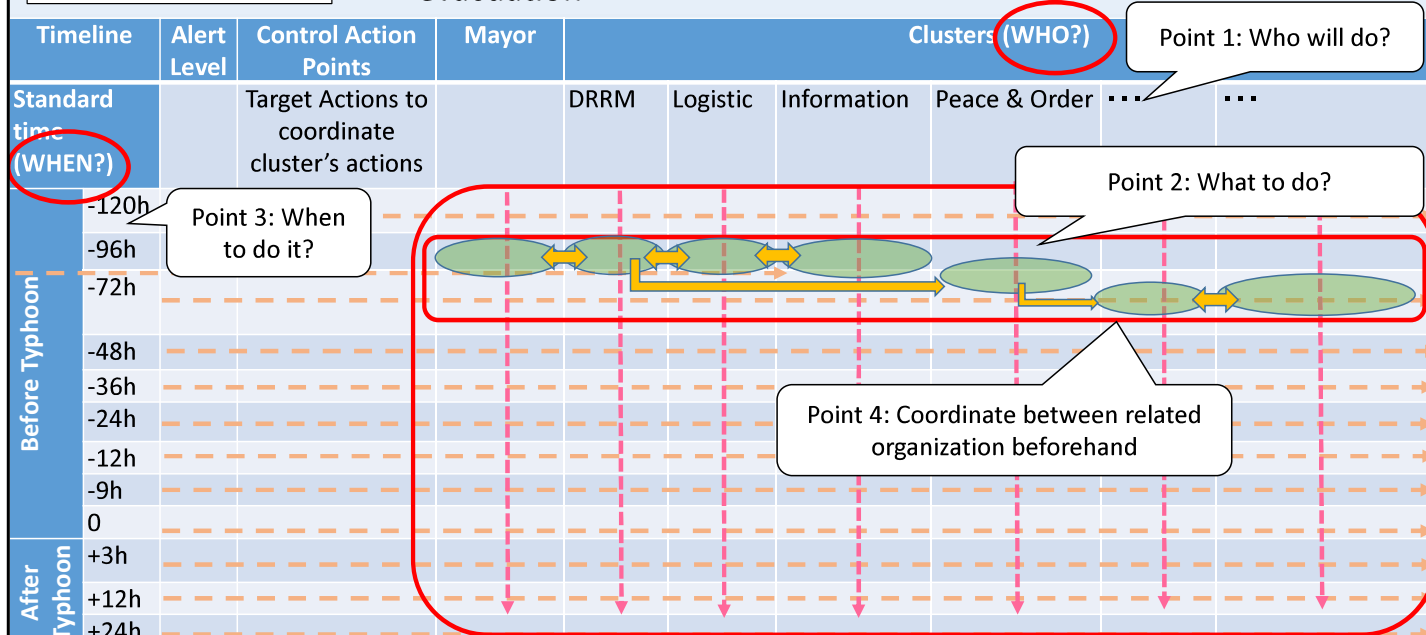


**Step 2**

**Action plan with timeframe**

6. Arrange method for evacuation
7. Decide timeframe for evacuation

*After decided "where to evacuate", "how to evacuate" should be prepare. To consider the concrete plan, "who", "what" "when" should be prepare. And coordination among these actions are important.*



## Process of Evacuation Planning of LGU Level

### Step 1

1. Decide target hazard
2. Grasp capacity of ECs in LGU
3. Estimate the number of evacuee's in each Barangay
4. Confirm the location of ECs on the hazard map
5. Consider allocation of evacuees to Evacuation Center, and confirm on the map
6. Show the LGU's evacuation policy to the Barangays
7. Designate BRGYs which need to evacuate outside of their BRGY
8. Coordinate evacuee BRGYs and Receiver BRGYs

### Step 2

We call this part as

**"Timeline Action Plan"**

9. Confirm required roles and activities before, during and after calamity
10. Confirm the relationship of each Clusters
11. Show control action points
12. Prepare action plan of DRRM and Logistic cluster based on the control action points
13. Prepare action plans of each cluster based on the DRRM and Logistic cluster
14. Coordinate all action plans

Coordination with BRGY evacuation plans

## LGU Level and Barangay Level

After preparation of evacuation plan of LGU Level, evacuation plan of Barangay level will be prepare based on the LGU Plan.

### Evacuation Plan of LGU Level

#### Step 1

Basic Preparation

#### Step 2

Timeline Action Plan



Coordinate with Barangay Level Plan

Coordination for smooth evacuation

### Evacuation Plans of Barangay Level

- More detail and more concrete plan
- Character of the area and situation of the community will be refracted

In case of huge scale disaster, since some barangays should evacuate to other barangay, coordination between Evacuee barangay and Receiver barangay are also needed

Coordinate between Barangays

# STEP 1

## Basic Preparation

### 1-1. Decide Target Hazard or Natural Phenomenon

#### I. Confirm character of hazards in the LGU






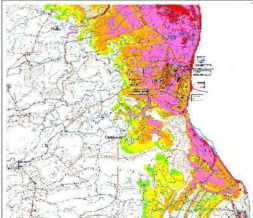
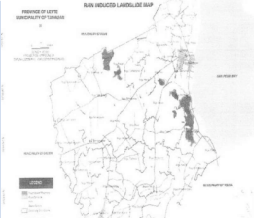
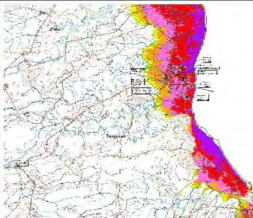
*Using hazard map or disaster historical map etc., the hazard character such as frequency, impact, affected area etc. are organized from the view of LGU.*

#### II. Decide target hazard for evacuation planning

*Prioritize hazard for evacuation plan.*

*For LGUs, evacuation plan should focus on the hazard that will have huge impact on the community and majority of the Barangay might be affected.*

## 1-2. Sample of “Confirm Character of Hazards in the LGU”

Hazard	Flood	Storm Surge	Land slide	Tsunami
Image				
Character	<ul style="list-style-type: none"> <li>- Inundation area is huge but the depth is almost less than 1 m</li> <li>- The water subside mostly within 24 hours except some areas</li> </ul>	<ul style="list-style-type: none"> <li>- Coastal barangay inundate wide and deep</li> <li>- Poblacion area including municipality hall also inundated</li> </ul>	<ul style="list-style-type: none"> <li>- Hilly area exist in the municipality</li> <li>- Since steep slope also exist, there is risk for landslide</li> <li>- Landslide had occurred last Dec. 2014 during typhoon Senyang.</li> </ul>	<ul style="list-style-type: none"> <li>- According to the inundation map by READY Project, inundation area is smaller than storm surge, but time for evacuation is very short.</li> </ul>
Hazard map				

## 1-3. Sample of “Decide Hazards in the LGU”, Leyte and Samar Cases

Tacloban ▪ hazard map <b>Storm Sage</b>	Basey ▪ hazard map <b>Storm Sage</b>	Guiuan ▪ hazard map: <b>Tsunami</b>
Palo ▪ hazard map <b>Storm Surge + Flood</b>	<u>Characteristics</u> •Municipalities of Palo and Tanauan took the precautionary measures against storm surge and <b>frequent flooding</b> , which occur every year with <b>serious damages</b> . ▪ Guiuan Municipality’s design of evacuation plan is based on the tsunami hazard map, due to the damage seemed more serious than storm surge.	
Tanauan ▪ hazard map <b>Storm Surge + Flood</b>		

## 2-1. Grasp Capacity of Evacuation Center

To begin with, safety of the evacuation centers are confirmed

- *Safety against hazards*
- *Structure of the building*
- *Number of stories of the building*
- *Capacity that can be accommodated in the ECs*

### 1. Selection of Evacuation Center

• *Evaluate the safety*

No.	Evacuation Center	Safety against Risks				Structure of the Building			No. of Stories	Capacity of Persons In the Building	Evaluation	Remarks
		Flood	Storm Surge	Tsunami	Landslide	Steel	Concrete	Lumber				
TAN-001	XXX High School	No	No	No	No	Yes	Yes	Yes	3	1500	OK	Sample
TAN-002	YYY Elementary School	Yes	Yes	Yes	No	Yes	Yes	No	1	100	No	Sample

## 3-1. Barangay's Estimated Evacuees

Thereupon, to come up with an estimate number of evacuees from the LGU to grasp the scale of evacuation

- *Total population*
- *Percentage of hazard area*
- *Compute the number of evacuees*

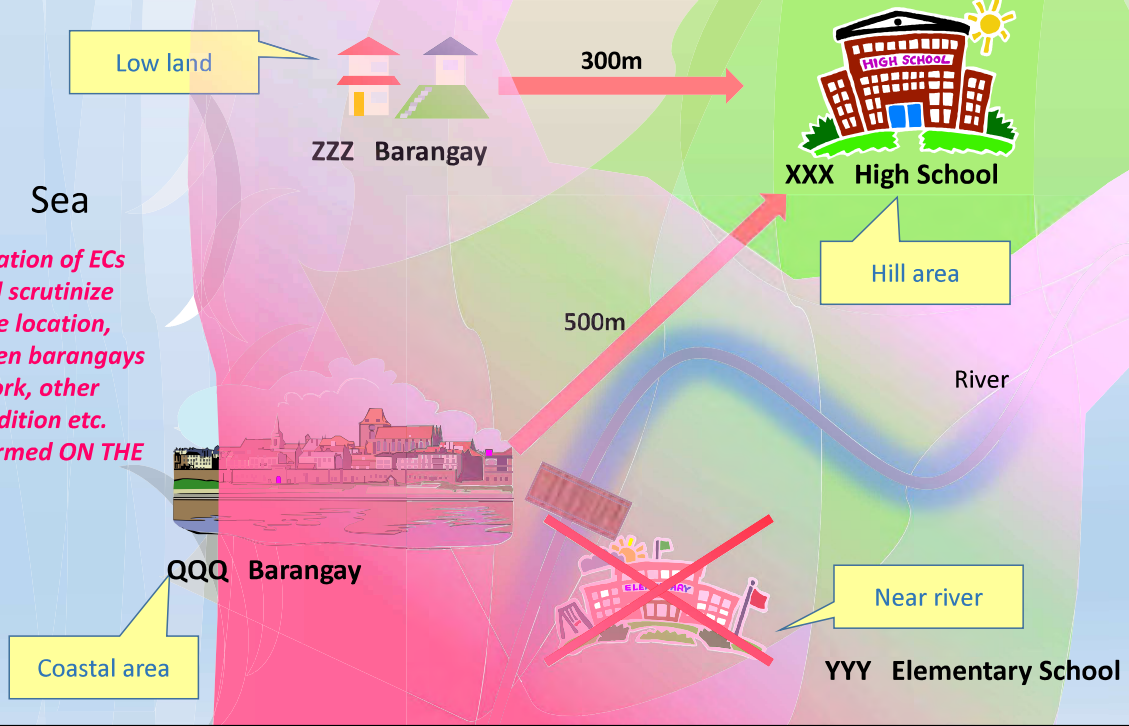
### 2. Estimation of Evacuee No. of Barangay

No.	Barangay	Total Population	Hazard Area (%)				Estimated No. of Evacuees (Pop×Max %)
			Flood	Storm Surge	Tsunami	Max %	
1	ZZZ	700	30.0%	60.0%	40.0%	60.0%	420
2	QQQ	1500	20.0%	100.0%	90.0%	100.0%	1500



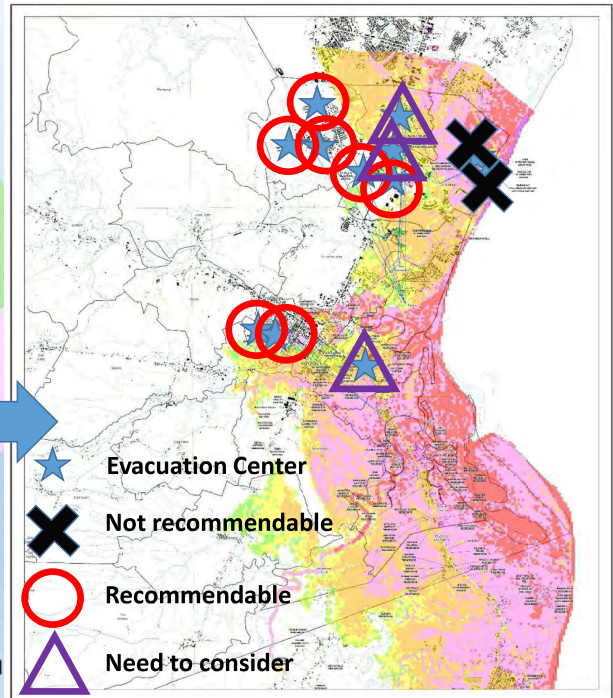
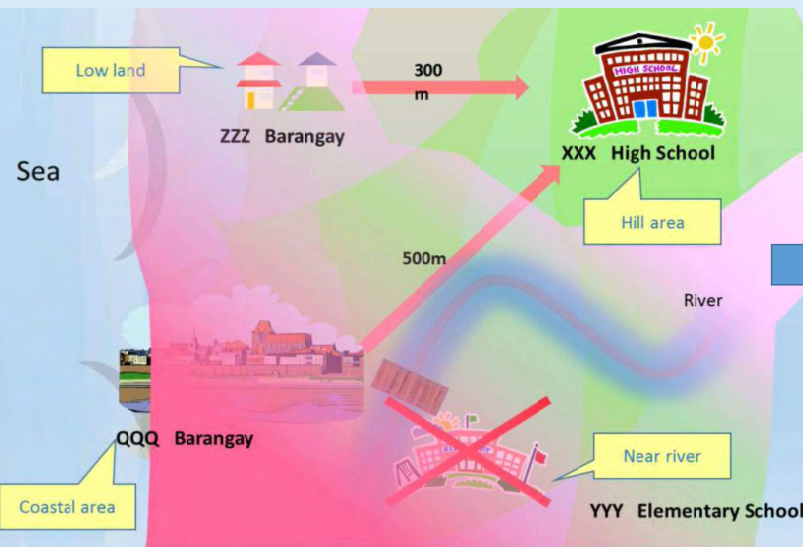
### 4-1. Confirm the Location of Evacuation Center on Hazard Map

Confirm the location of ECs on the map and scrutinize the safety of the location, distance between barangays and road network, other geographic condition etc. should be confirmed ON THE MAP



### 4-2. Sample of “Confirm the Location of ECs on Hazard Map”

Overlay the Location map of ECs and hazard map. Then consider the possibility of the ECs.



## 5-1. Consider Allocation of Evacuees to Evacuation Centers

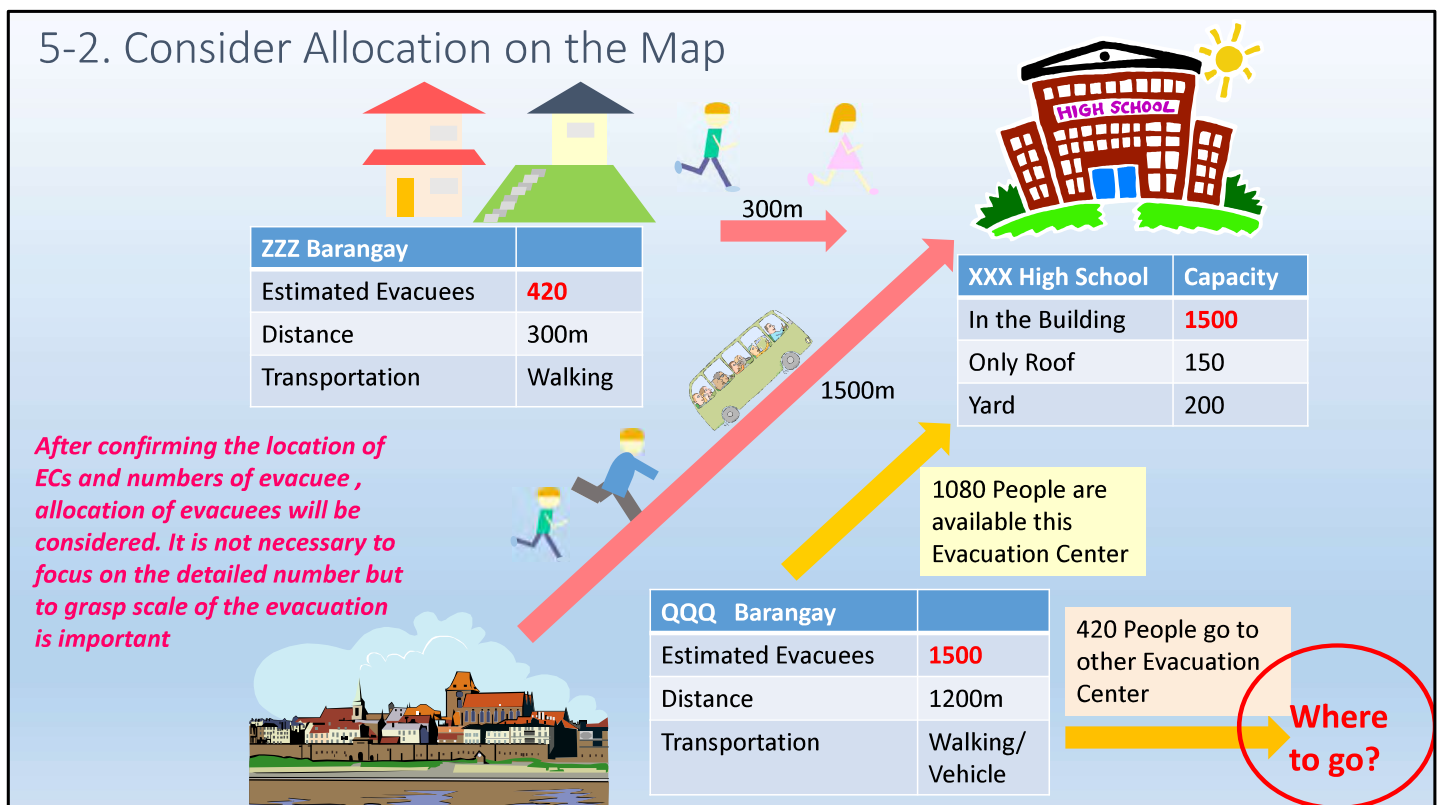
### Allocate evacuees to the ECs

- *Check the distance*
- *Compare the capacity of ECs and number of evacuees in Barangay*
- *Consider the distribution of evacuees*

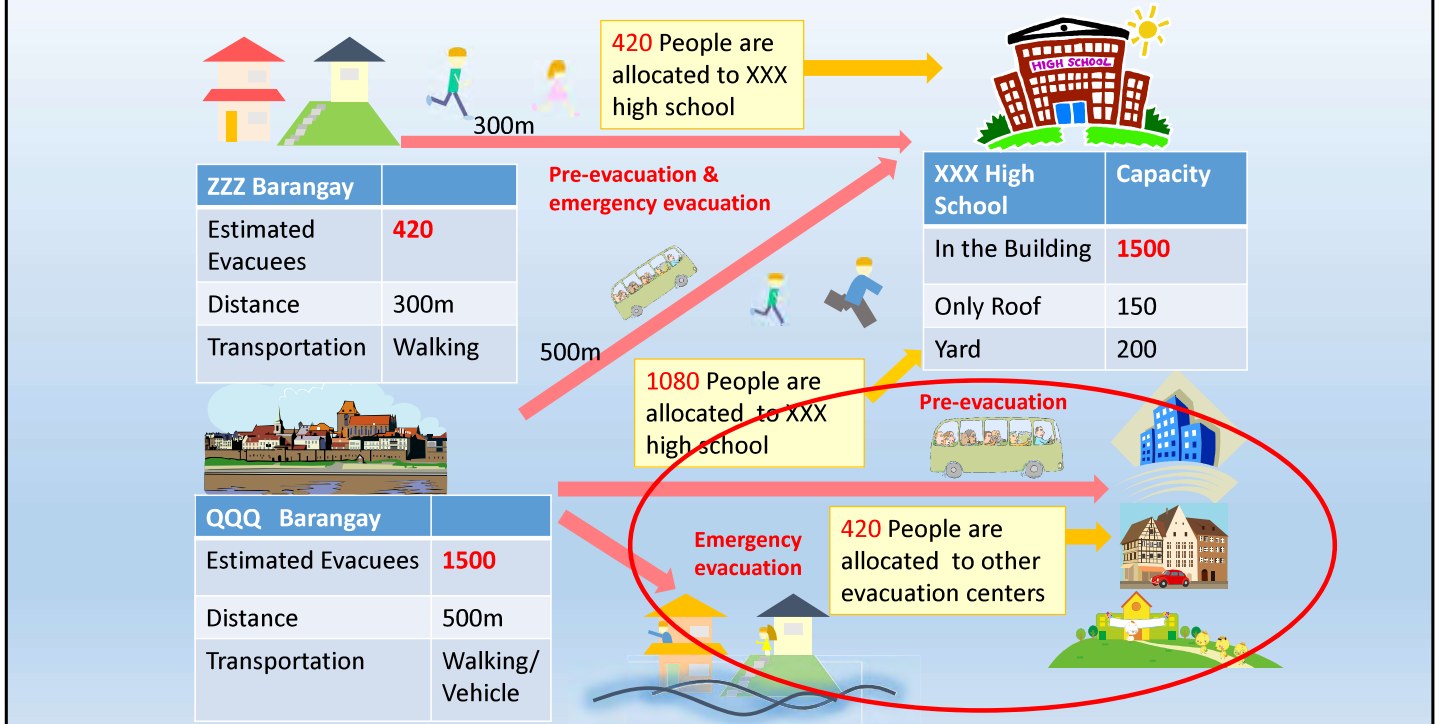
### 3. Evacuation Place for Barangay

No.	Evacuation Center	Capacity of Persons	Barangay			Transportation		Needs for consideration			Evaluation
			Name	No. of Evacuees	Distance (km)	Walking	Vehicle	Provide Transportation	Emergency evacuation	Others	
TAN-001	XXX High School	1500	ZZZ	420	0.3	Yes	Yes	No	No		
			QQQ	1500	1.2	Yes	Yes	Yes	Yes	Only 1080 is available	Find EC for 420 People

## 5-2. Consider Allocation on the Map



### 5-3. Continue to Consider Allocation on the Map



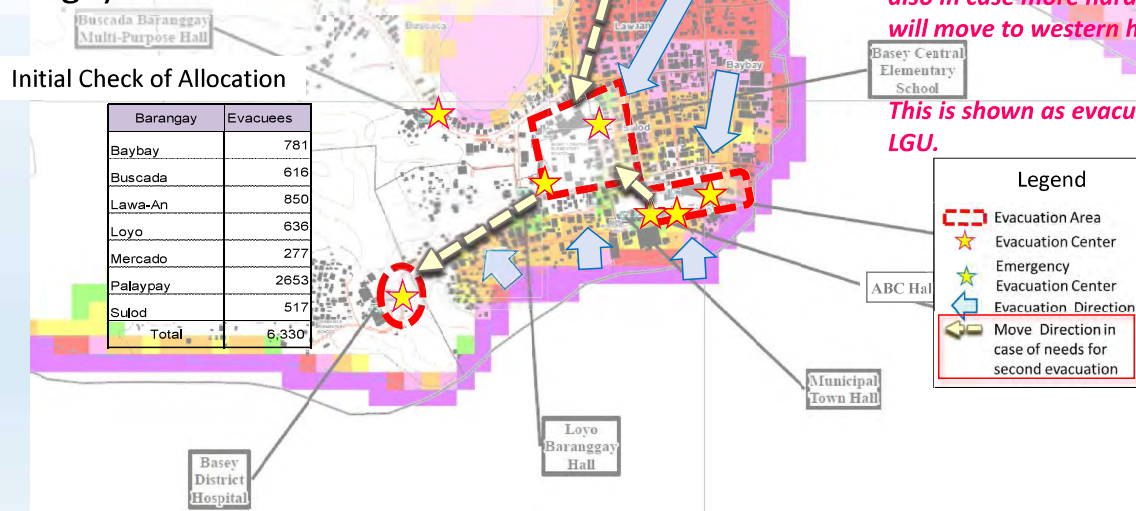
### 5-4. Image of Allocation of Evacuees to Evacuation Centers





## 6-2. Sample of Evacuation Policy to Barangays

- Target hazard: Storm Surge
- Evacuation direction
- Coordination between Barangays and evacuation centers



In this case, the target hazard is shown "Storm Surge". And Evacuation direction was shown by using the map. Since this Poblacion area has river in the north, the storm surge water will come from the river also. Therefore people stay near the river evacuate to the southern hill, not to the west. And also in case more harder situation, they will move to western hill area.

This is shown as evacuation policy of LGU.

## 7-1. Designate BRGYs Which Need to Evacuate Outside of Their BRGY

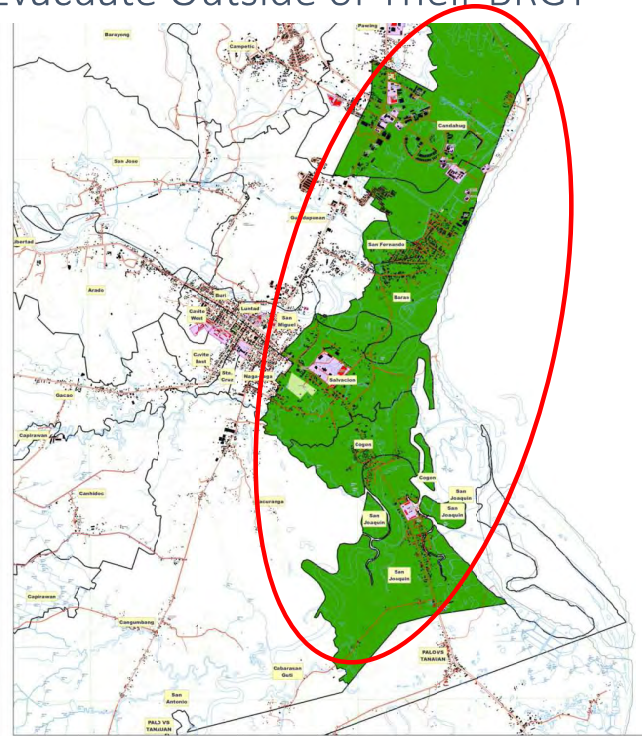
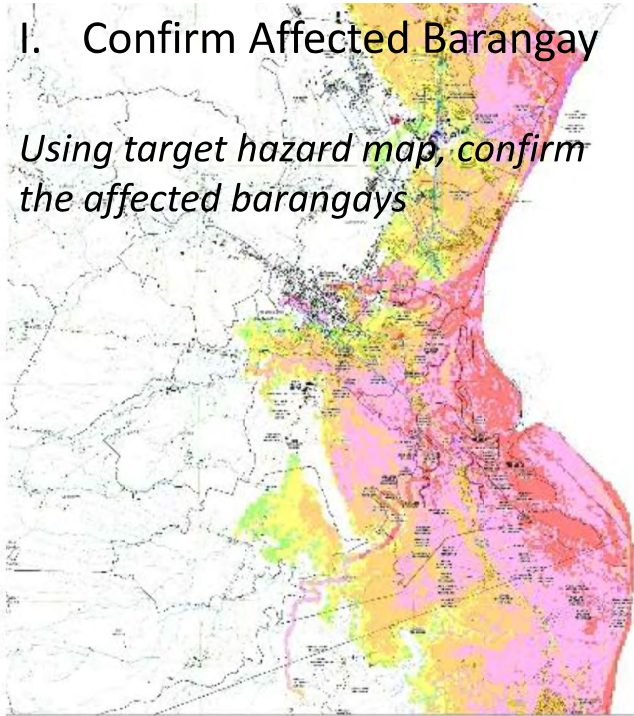
LGUs should envision the evacuation planning and will serve as a guide to the Barangay level.

- I. Based on the target hazard map, confirm affected Barangays.
- II. Considering other hazard areas, designate Barangays which are needed to evacuate outside of their Barangay
- III. As the LGU, it is essential to support the Barangays through coordination between Barangay evacuees and receiver Barangays.

### 7-2. Designate BRGYs Which Need to Evacuate Outside of Their BRGY

#### I. Confirm Affected Barangay

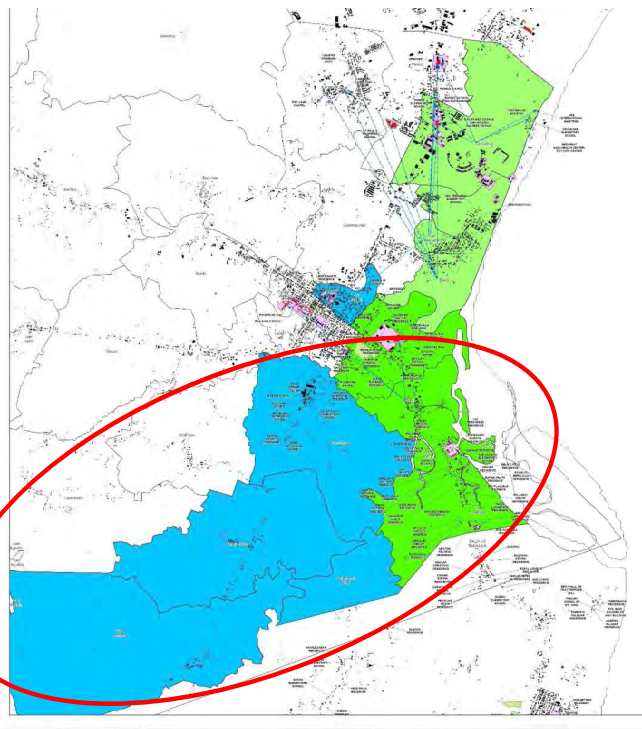
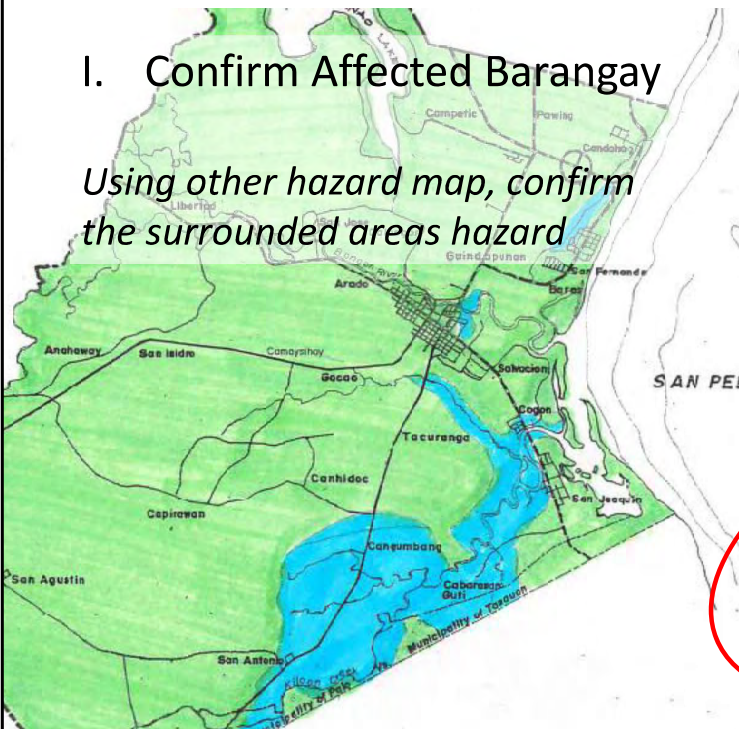
*Using target hazard map, confirm the affected barangays*



### 7-3. Designate BRGYs Which Need to Evacuate Outside of Their BRGY

#### I. Confirm Affected Barangay

*Using other hazard map, confirm the surrounded areas hazard*

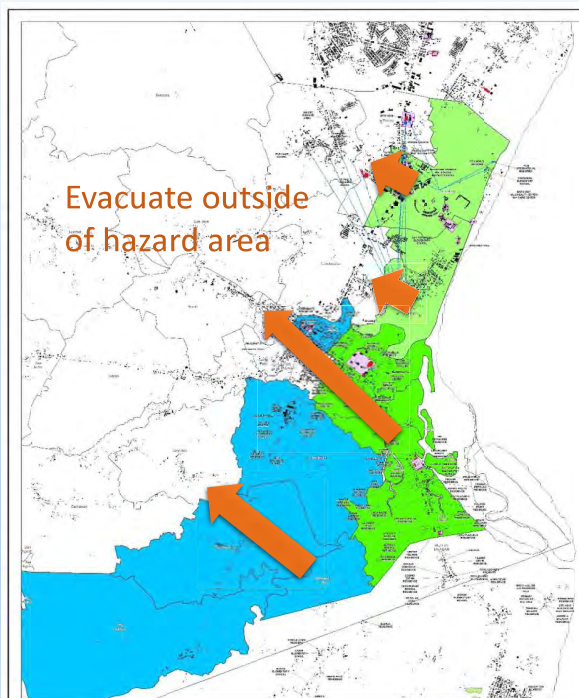


## 7-4. Designate BRGYs Which Need to Evacuate Outside of Their BRGY

### II. Designate Barangays

*Designate Barangays whose people need to evacuate outside of their Barangays*

*Essentially, the people in the hazard area should evacuate outside of the hazard, specially those barangays that might be totally affected by the hazard. Affected Barangays should coordinate with the safer Barangays for evacuation policy. Before long, other hazard which has possibility of occurring simultaneously should be considered. In this case, storm surge and flood might occur at the same time, the coastal barangay and flood prone Barangays should be evacuated.*

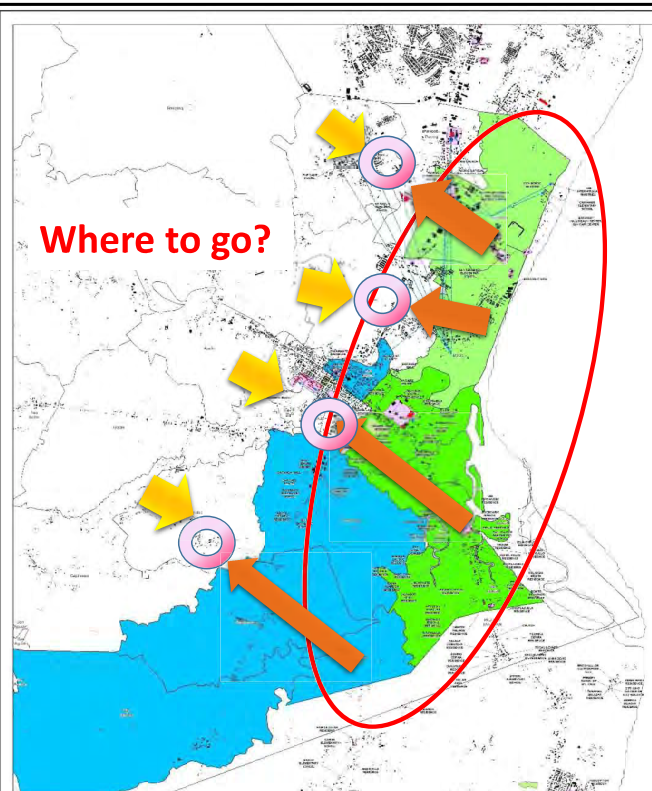


## 8-1. Coordinate evacuee BRGYs and Receiver BRGYs

### III. Barangay coordination

- LGU supports by coordinating in between the Evacuee Barangay and receiver Barangay
- LGU designates collaboration of the Barangays officially

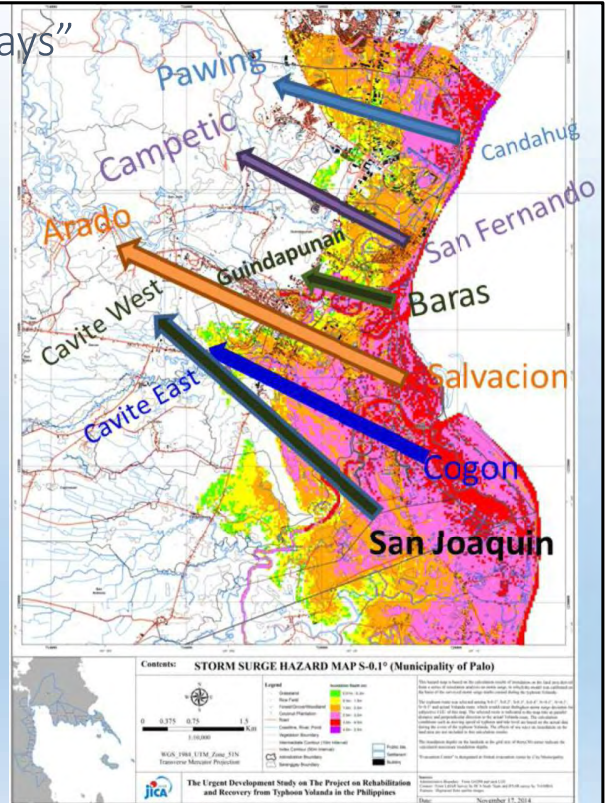
*After designation of the evacuee barangays, they need to find where to evacuate. Since they have to evacuate outside of their barangay, they need support from the LGU to find other barangay which can provide ECs for them. This coordination is the role of LGU. And the barangays agree the corporation, then it is recommended to have MOU officially.*



## 8-2. Sample of “Coordination with Barangays”

*In this example, LGU proposed one receiver barangay fo each barangay evacuee o avoid confusion on where to go.*

Evacuee Brgy.	No. of Household	Receiver Brgy.
Candahug	377	Pawing
San Fernando	391	Campetic
Baras	980	Guindapunan
Salvacion	550	Arado
Cogon	754	Cavite East
San Joaquin	531	Cavite West



# STEP 2 Timeline Action Plan



## Importance of Timeline Action Plan

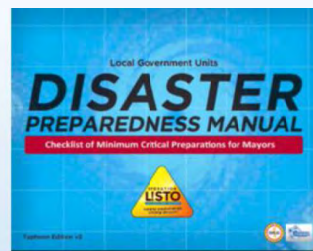
### 3 Important points to consider

1. Where to evacuate
  2. Who will evacuate
  3. Which evacuation center
- After preparing the list of the evacuation centers, next step is to identify the names of evacuees and their assigned evacuation center.
  - This arrangement should be prepared by the Barangays to consider their situation.
  - The role of the LGU is to formulate a plan on WHAT, WHO and HOW to support the community in smooth evacuation.

## Disaster Preparedness Manual

In the DILG Manual, the necessary actions are specified.

In this PPT, the familiarity of development of these actions with timeframe is called “timeline action plan” which is being introduced.



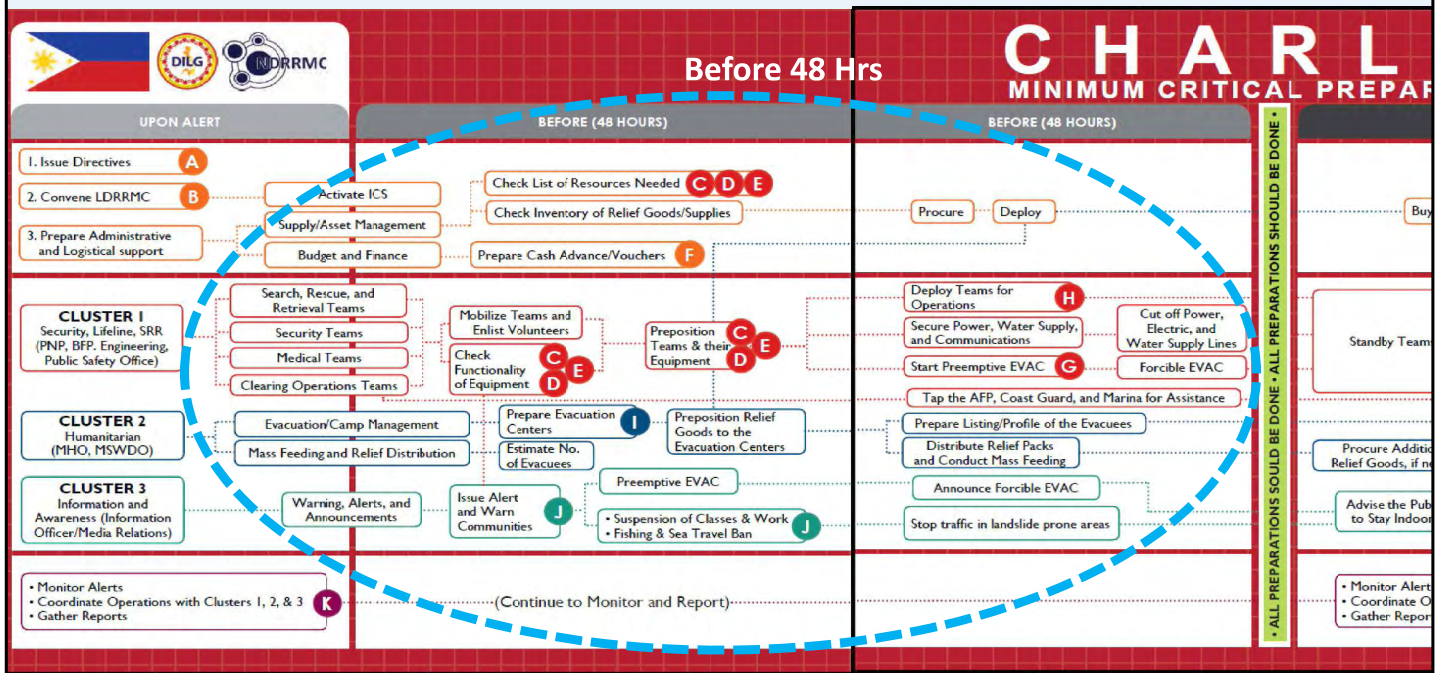
Before, 48 hours and After



REFERENCE BOOKS AND CHECKLISTS									
BOOK	REQUIRED RESOURCES	BOOK	BOOK	BOOK	BOOK	BOOK	BOOK	BOOK	BOOK
BOOK 1	BOOK 2	BOOK 3	BOOK 4	BOOK 5	BOOK 6	BOOK 7	BOOK 8	BOOK 9	BOOK 10
BOOK 11	BOOK 12	BOOK 13	BOOK 14	BOOK 15	BOOK 16	BOOK 17	BOOK 18	BOOK 19	BOOK 20

## Formulate Timeline Action Plan

In the DILG Manual, it is specified activities during the 48 hours. In the actual case, since detailed activities with timeframe is seriously important, the experience of development of "Time Action Plan" based on these contents is introduced in this PPT.



## What is the Timeline Action Plan?

### Objective

Establish systematic action plans to support smooth evacuation by visualizing actions thru timeframe

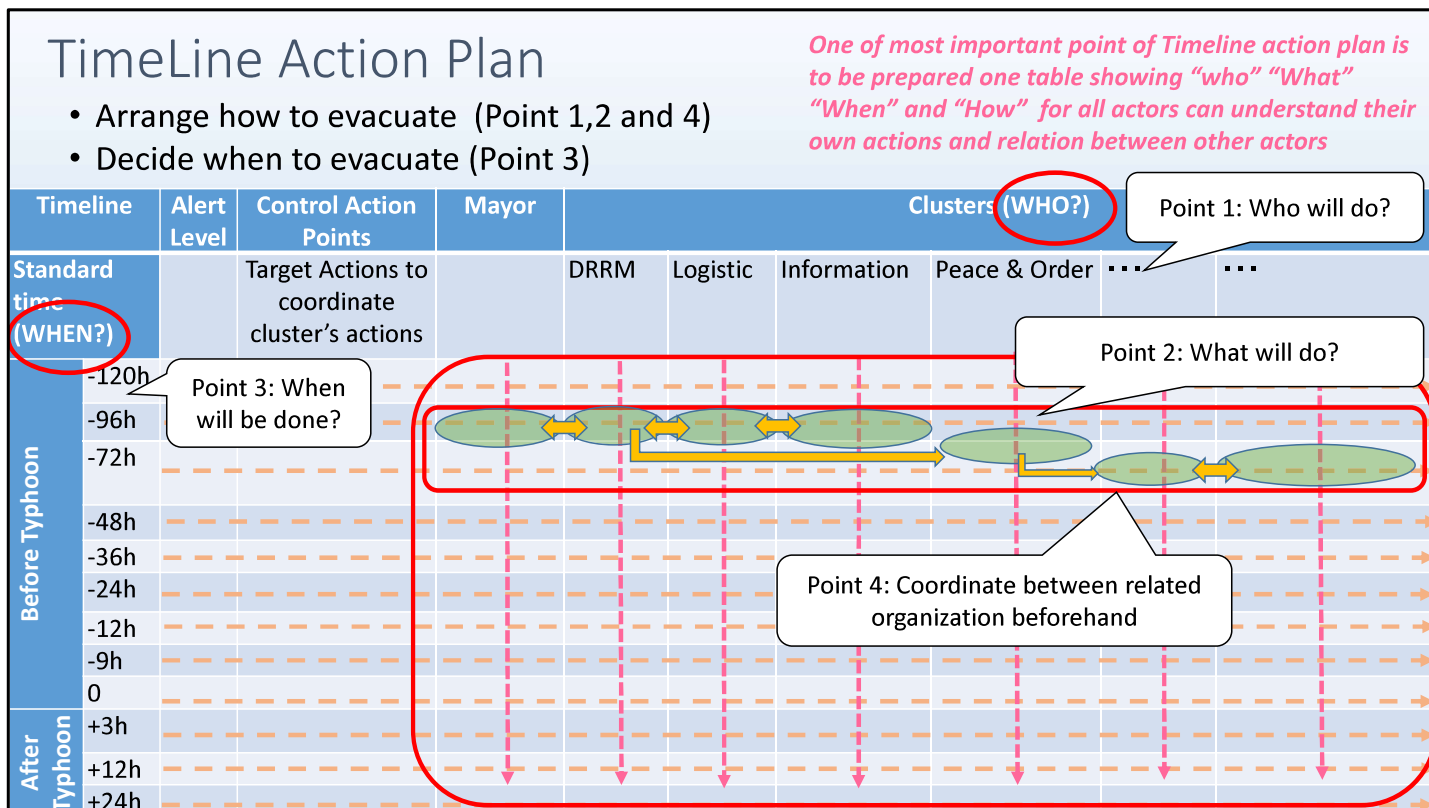
Since the timing of action will be clear, coordination of the actions among clusters will be easier

### Benefits of Timeline Action Plan

- Identify relation among each response group of actions by visualizing in one table;
- Utilize as checklist for each action;
- Make action without decision making;

Since those activities are confirmed beforehand, this would be useful as checklist

Since those actions are confirmed in advance among response group, each actor just follows the actions without waiting any decisions.



## 9. Confirm required role and activities during calamity

- To comprehend smooth evacuation, it is needed to organize "who" will function and "how".
- To classify above actions, it is necessary to make clear each roles and responsibilities and set their functionalities.
- The roles and activities were adapted based on the activity list specified in the DILG Manual.

### 9-2. Sample of "Confirm required role and activities during calamity"

- In this case, the LGU level has 12 clusters with this type of calamity, roles and responsibilities of each cluster were confirmed during the meeting.
- The LGUs has its own cluster with their particular role, and it was confirmed that it was utilized based on their experience.

		General Roles and Responsibilities	
EMERGENCY SUPPORT FUNCTION (WHO?)	CLUSTER 1	Mayor	1. Monitor Alerts 2. Coordinate operations with clusters 3. Gather Reports
		CDRRM	1. Monitor Alerts 2. Coordinate operations with clusters 3. Gather Reports 4. Issue heightening response and early warning
CLUSTER 2	Logistics	MOTOR POOL, PRIVATE CONT & TRANS, PROCUREMENT	
	Search & Rescue	TACRU, BFP, TCPO, Green, Delta, Chamber and others, PARA, PRC, AFP, PCG, Coast Guard	1. Report to command center and coordinate with key institutions 2. Report to the IC and provide updates 3. Ensure safety and security of responders 4. Directs and controls all rescue activities within affected areas 5. Preserves life though proper medical treatment a. Organizes search and rescue committee b. Adopt the registration card system
CLUSTER 2	Peace & Order	TCPO, TACLOBAN SEC, TOMECO, BJMP, AFP	1. The overall responsible of addressing the security concerns 2. Maintain liaison with the CDRRM/CCPCEN 3. Maintains peace and order in affected areas 4. Provide security to identified evacuation centers a. Come up with a list of evacuation centers, V b. Organizes Peace and Order committee
	Shelter/ Infrastructure	CITY HOUSING, CFO, CAO, CPDO, CEO CITY DILG, CSWD, CHO	1. Organized Engineering and Reconstruction
CLUSTER 2	C. CAMP MANAGEMENT	CSWD, BRGY, AFFAIRS, CITY DEPED, CSO/FBO, TOMECO	1. Coordinate the local officials and private sectors to provide a systemized course of action in relation to the movement of rescue teams and equipment, rescued persons and/or evacuees, casualties, emergency and utility crew, transport of relief goods, medical supplies and basic commodities, prohibition of facilities needed in the evacuation center throughout the period of impending calamity 2. Make sure food, water, shelter, electric power and portable toilets are available at evacuation centers a. Assign evacuation centers, with info on capacity and catchment areas b. Assign personnel and volunteers per evacuation center (adopt the system used during elections) c. Organizes Relief Service committee d. Facilitate systematic distribution of vehicles to the requesting party e. prioritize vulnerable sectors f. Assist in matters related in the evacuation centers
	E. HEALTH &	WASH, NUTRITION EMERGENCY, DISEASE PREV, MENTAL HEALTH, GAD	1. Supervise the sanitary conditions of the community during and after an emergency 2. Ensures that the local health system are preserved and access to health care including drugs and vaccines is guaranteed 3. Provide medical treatment areas for victims of disaster 4. Monitor and isolate persons with communicable diseases a. Provide a Task Unit not involved in the preparation for the Papal Visit to facilitate Disaster Related activities

Based on the existing groups, the roles is organized

Based on the DILG manual, contents of the role for each actors are confirmed.

### 9-3. Sample of "Confirm required role and activities during calamity"

Checklist of Disaster Preparedness Manual (DILG)		Mayor	DRRM	Logistic: Search & Rescue	.....	.....	.....	.....	.....	.....	.....
Before (48 hours)	Activities										
	P-1.1	Issue sirens									
	P-1.2	Coordinate with DILG									
	P-1.3	Activate IC									
	P-1.4	Prepare administrative and logistical support									
	P-1.5	Supply assist transportation									
	P-1.6	Check list of resources needed									
	P-1.7	Check in motor pool, private cont, transport									
	P-1.8	Check in									
	P-1.9	Check in									
	P-1.10	Check in									
	P-1.11	Check in									
	P-1.12	Check in									
	P-1.13	Check in									
	P-1.14	Check in									
During and After	Cluster 1	Security, Welfare, SRR									
	C1-1	Search, rescue and retrieval teams/ Security teams/ Medical teams/ Cleaning operations teams									
	C1-1.1	Mobile teams and other volunteers									
	C1-1.2	Check functional equipment									
	C1-1.3	Proposition teams & their equipment									
	C1-1.4	Propose teams for operations									
	C1-1.5	Check power, water supply and communications									
	C1-1.6	Check power, electric and water supplies									
	C1-1.7	Check power, water supply and communications									
	C1-1.8	Check power, water supply and communications									
	C1-1.9	Check power, water supply and communications									
	C1-1.10	Check power, water supply and communications									
	C1-1.11	Check power, water supply and communications									
	C1-1.12	Check power, water supply and communications									
	C1-1.13	Check power, water supply and communications									

Clusters

Activities specified in the DILG Manual

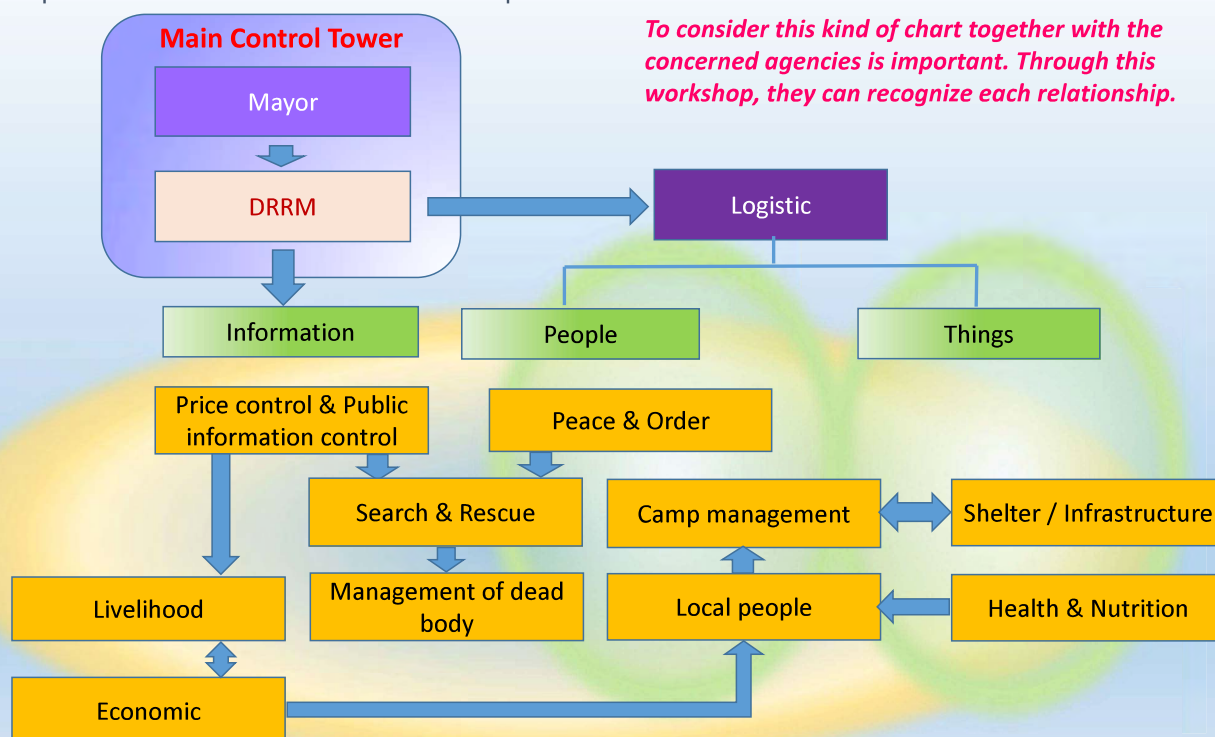
The format was prepared to check which actor will take which activities.

Roles of each cluster is confirmed

## 10-1. Confirm Relationship of Clusters

- To achieve good coordination among clusters for timeline action plan, it is important that cluster members need to understand relationship of each clusters
- To consider how to accomplish smooth mobilization of the “**COMMUNITY, SUPPLIES** and **INFORMATION**” is important.
  - ✓ Supplies means; food, vehicle, equipment, etc.
- Center of this structure:
  - DRRM as Control tower
  - Logistics as the management tower for mobilization of Community and supplies

## 10-2. Sample of "Confirm Relationship of Clusters"



## 11.-1 Set Control Actions

**Control Action Point is an action associated to all the clusters with target time.**

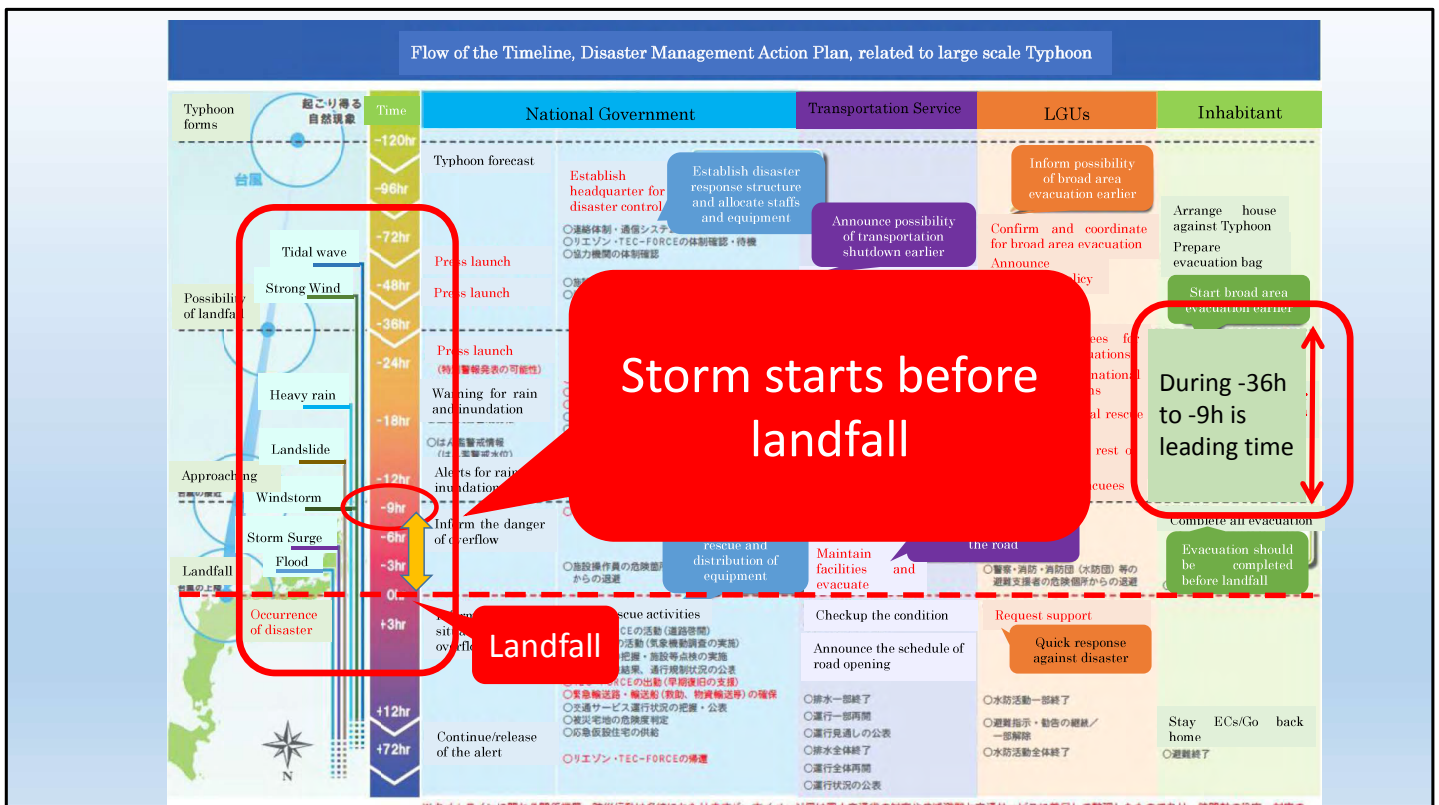
E.g., When to establish the Operation Center,  
 When to start the evacuation, When to finish and etc.



Based on these control actions, each cluster must classify on their their functions.

Note:

- 6h before landfall, storm surge might occur
- Final time limit is up to 9h



## 11-2. Set Control Actions

### ◆ Prepare contingency plan in all possible cases

Action points should be set based on the actual time, however, possible scenarios should be considered

- There are people who do not evacuate after “Finish evacuation” points
- There are cases that some of the Ecs are being affected by the typhoon after the people has already evacuated



- After establishment of ideal case, LGU should prepare contingency plan in all possible scenarios that might occur. .

## 11-3. Sample of “Set Control Actions”

Control Time	Control Action			Control Time	Control Action		
	Information	People	Things		Information	People	Things
- 120h	Convene MDRRMC		Prepare evacuation center	- 120h	Establish of DRRMC		
- 96h				- 96h			Establish evacuation center
- 72h				- 72h		Start evacuation	
- 48h	Confirm the weather situation Advise evacuation by Mayor	Start pre-emptive evacuation		- 48h		Finish evacuation	
- 36h				- 36h	Confirm the weather situation Advise evacuation by Mayor		
- 24h				- 24h	Advise to public to stay indoors		
- 12h	Advise to public to stay indoors	Finish evacuation		- 12h	Confirm the situation		
- 9h	Confirm the situation	Standby		- 9h		Standby	
+ 3h	Start to confirm the damage situation			+ 3h	Start to confirm the damage situation		
+ 12h				+ 12h			
+ 24h				+ 24h			



Control Action is set by LGU





### 14-1 Coordinate all action plans and image of Timeline action plan

