

Proposal Report  
Flood Hazard Mapping Project in Philippines

Flood Forecasting Branch

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Contents:

1) Back ground and Objective of the planned projects

- do not state just general objectives of FHM. Be specific about the projects objectives based on your country's needs.

To provides information on inundation (predicted inundation areas, inundation depth, etc.), as well as on evacuation (location of evacuation refuges, evacuation routes, dangerous spots on evacuation routes, etc.) in an easy-to-understand format. The goal is to quickly evacuate local residents in a safe and proper manner in the event of floods. To learn how to produced and publicized through a joint effort by those in charge of disaster prevention and those in charge of rivers and hydrology in the respective local municipalities.

2) target area

( Including current status of flood prevention countermeasures and request or complaint from the residents in the target area )

September 13th, 2007

Yesterday there was a big flood at Cebu City. The cause of the flood was from the rain at the mountain side. The rain there was so heavy and so flood came to Cebu City. Flood rich over 30 feet and many houses were flooded and mud all over the place. After the flood gone, the mud rich 2 feet and people are busy cleaning up. Before here in my home town the flood isn't so big, but this one is much bigger. Neighbors of mine are taking care of their things at home so the flood won't destroy any important appliances. My other neighbors are calling by standers at my vicinity to get paid for cleaning their home. Other's have no time to call by standers because they don't have enough money to pay.

the Luyang Bridge clogged up. Yule Cuizon, foreman of Ven Ray Construction, said they have started clearing the road that serves as detour to allow the waters to pass through and solve the clogging problem.

Her death, along with P15 million in property damage in 11 barangays caused by Wednesday afternoon's rains, underscored the recurring threat of inadequate drainage in urban Cebu.

The Cebu City Council declared a state of calamity in 11 barangays, mostly in the southern district, which suffered flooding.

Mayor Tomas Osmeña said he wanted to build at least 20 mini-dams scattered around the city as a long-term solution to flooding because that's what the city government could afford at present.

"The solution to flooding problems is not to widen the existing drainage system but to slow down the flow of floodwater from the mountains," he said.

A 2003 drainage master plan calling for major improvements in the sewage system of Cebu City over a 15-year period remains unimplemented due to the high cost of infrastructure, an estimated P600 million.

As an immediate response to Wednesday's flooding, the mayor ordered the demolition of houses built along the city's rivers. The same directive is given each rainy season but with limited effect on impoverished families who persist in living in rent-free shacks by the waterways.

"We need to exercise political will on this, otherwise, lives will be at risk," said Councilor Gerry Carillo, chairman of the Cebu City Disaster and Coordinating Council. Vice Mayor Michael Rama said demolitions could not be done on a massive scale. He said at least 10,000 families would be displaced and the city lacked funds to assist all of them or pay them a disturbance fee.

He appealed to barangay captains instead to ensure that no more structures would be illegally built along the riverbanks.

In 2003, following a destructive flood that hit Cebu City and forced 4,000 families to evacuate, the city government commissioned a drainage master plan.

The city government paid P16.4 million to Genson-TCGI-Woodfields-Spaces Joint Venture to make the master plan. Consultants said it would cost at least P600 million to implement all infrastructure they identified was needed over the next 15 years.

The master plan already identified projects to slow down the flow of runoff water from the mountains and how to channel the water to effective outlets before being discharged to the sea.

They also recommended the demolition of many shanties along and near creeks and rivers.

Yesterday, Mayor Osmeña said that for now, the city could only afford to build mini-dams that are much “cheaper” and a practical alternative to drainage improvement works.

He said that he has also come to realize that when the city government spent for drainage improvements in the hilly lands, these efforts channeled floodwater down to urban barangays.

“We have lowland in Cebu City (urban barangays) and we are barely above sea level. When the tide is up, the ability to rush water to the seas is slowed down,” he said. The mini-dams would hold water and slowly release it without having to cause the existing drainage system to overflow, Osmeña said. Mini-dams could be built in barangay Busay to prevent rainwater from flooding low-lying barangays like Apas and Lahug. A mini-dam may also be built in barangays Guadalupe and Kalunasan.

Councilor Carillo said at least P15 million worth of properties were destroyed in

Wednesday's flooding that affected at least 11 barangays and destroyed 12 shanties built along the riverbanks of barangays Guadalupe, Sambag I, sitio Locana in Kalunasan and Sapangdaku.

**Province of Cebu Projects**

- Mactan Drainage and Sewerage Project
- Geohazard Mapping Project
- Water Desalinization Project
- Irrigation Project in Carcar and Balamban
- Cebu Water Resources Study
- Retrieval of Drainage System Project
- Metro Cebu Sewerage and Sanitation Project
- Build 20 mini-dams scattered around the city



3) project schedule

	1 month	2 month	3 month	4 month
task	-Flood Data gathering -map -site survey & interviews	-Preliminary map analysis -Verification survey	-Finalization of flood hazard map	-Flood Hazard Map dissemination -Information education campaign

4) Concrete implementation items of the schedule.

Implementation schedule of the target area is visible, schedule at 2008, target area is already proposed. Data gathering is dependent on availability and funding release is on process.

5) Expected benefits and progress for residents and administrators

The benefit of Flood hazard Map is to provide residents and community officials or administrators information about flood hazards and how to mitigate flood risk and damages.

6) Approximate cost estimate (usd)

Required	Quantity	Duration	Amount/Salary
Personnel	3	4 months	\$ 2,500
Computer	2		\$ 2,500
Global Positioning System	2		\$ 1,500
Map data's	2		\$ 250
Survey and travel expenditures			\$ 3,000
Materials use			\$ 250
		total	\$ 10,000

7) Suggestions and opinion for FHM training course

Flood Hazard maps are very compatible with GIS. The GIS is very useful in arranging a high volume of data necessary to produce a hazard map. It is also has capability used for analysis of places of refuge. Three-dimensional representations are available for comprehensive analysis. Digital cartography is also available for creating an easy to read hazard map

Flood hazard mapping training course in japan is very educational and entertaining, jica and icharm give us comfort and hospitality on our stay, every participant develop international relationship and comradeship in other country.