

“Concluding Report”

Roadmap toward Effective Flood Hazard Mapping in Indonesia

by
Heru Setiawan



Ministry of Public Works
Directorate General of Water Resources
Directorate Water Resources Management and Planning

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Name : Heru Setiawan

*Name of Organization : Directorate Water Resources Management and Planning,
Directorate General of Water Resources,
Ministry of Public Works*

E-mail : heru1719@yahoo.com

Objective

Most of flood in Indonesia are due to overflowing of huge mass of water overtopping of river banks and inundating low lands areas in adjacent of river banks. Velocity of water overflowing over low land areas depend on the terrain of the lands and the height of accumulated water on the river. Anything on low land areas, they can be urban centers, commercial districts or agricultural areas can be inundated for couple hours and even a couple days (2 - 5 days). Three determinant conditions are heavily influence flood events, these are: 1) the intensity and duration of rainfalls, 2) the condition of river channels, and 3) the existence of low land areas.

As a result of growing population pressure and intensity of economic development that has significant contribution in poverty eradication program by providing job opportunity throughout Indonesia, land-related issues of efficiency, sustainability and equity have become increasingly important. On the other hand, poverty makes situation worse through deforestation and overexploitation of natural resources. The rapid expansion of urban areas results in less than optimal land use densities and efficiency in the provision of infrastructures. Population growths create the high demands of human settlements. Therefore, the flood retention basin and the topographically depressed and even river channel or flood way have been destroyed by the housing development projects and other urban support facilities such as shopping centre, sport centre, etc., that are impacted by economic development, wet lands that use to be a flood retention basin for surrounding are became less and less, also because the development activities.

There are problem to be solved in relation to mitigate flood disaster, such as: 1) lack of reliable and continuous record and data on impact of flood disaster, such as accurate information on areas, depth, frequency and time/ period of inundation; 2) lack of accurate and continuous data on victims and damages of infrastructure, such as number of people missing, injuries, and evacuated especially; 3) lack of reliable and continuous information on weather forecast and hydro-meteorological data, such as rainfall, river flows, and river discharge especially during floods.

Questions & Answer :

Which parts of the curriculum were most impressive/ insightful/ relevant to me?

“Procedure for Flood Hazard Mapping” and “Distribution and use of Flood Hazard Maps”.

From that curriculum, I can learn by doing and getting experience in:

- 1) Understanding on the effectiveness of Flood Hazard Map and on the way to disseminate and utilize it for people.
- 2) Promote public awareness to mitigate flood damage.
- 3) Understanding on the way of producing and applying the Flood Hazard Map for my country/ my region.

What do you think your country or organization needs to do for effective flood disaster mitigation?

- 1) Strengthening the role of The National Strategy for mitigate flood disaster
- 2) Strengthening the establishment of effective Flood Hazard Map and early warning systems on selected rivers that pass through urban areas.
- 3) Improving services to community, such as: public campaign to show the people/ community on the existence of the nearest temporary emergency shelters to accommodate people to be evacuated from inundated area.

My Concrete action that will be possible to initiate in my country regarding to Flood Hazard Map:

In Short and Long Term:

- 1) Collecting reliable and continuous record and data on impact of flood disaster, such as accurate information on areas, depth, frequency and time/ period of inundation.

- 2) Collecting accurate and continuous data on victims and damages of infrastructure, such as number of people missing, injuries, and evacuated especially.
- 3) Collecting reliable and continuous information on weather forecast and hydro-meteorological data, such as rainfall, river flows, and river discharge especially during floods.

In Middle and Long Term:

Getting participates from local residents/ community with kind activities can be done, such as:

- Educational activities by using simple Flood Hazard Map as teaching material.
- Encourage the local residents/ community to actively participate in development Of Flood Hazard Map through discussion with the relevant local municipality staff on what actions should be taken during a flood occurrence.

What advice/ suggestions can you provide for more effective flood management in Japan?

As we know that Flood Management refers to the overall process involved in mitigating the extend of flooding and the resulting damaged by flooding.

Two approaches are important in Flood Management, that are :

- 1) Structural approaches to flood management-dams, levees, dikes, floodway etc.
- 2) Non-Structural approaches to flood management comprise activities, which are planned to eliminate or mitigate effects of flooding without involving the structure construction.

I think for Flood Management in Japan must be giving more attention in Non-Structural measures.

Why?

Because under some river basin conditions, the introduction of Non-Structural methods to limit flood damage may alone be more cost-effective than alternatives involving structural methods.

What advice/ suggestions can you provide for more meaningful for next training course?

I hope if it has more time for the activity in Group Field Survey and understanding on the way of producing and applying in Flood Hazard Map, because the participants can understanding the lesson learned from the successes and failures of the implementation of Flood Hazard Map.