APLICANT PROFILE

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EDUCATION RECORD :

1. MASTER OF ENGINERING Specializing in Hydroinformatics, IHE, DELFT, NETHERLAND

2. CIVIL ENGINEER (GRADUATE), BANDUNG INSTITUTE OF TECHNOLOGY, WEST JAVA – INDONESIA

EMPLOYMENT RECORD :

1. OFFICER OF DIRECTORATE GENERAL OF WATER RESOURCES, MINISTRY OF PUBLIC WORKS (JUNE1992 – NOW)

2. ENGINEER OF CONTRACTOR COMPANY (PT.KUMAGAI-KADI JO, 1991-1992)

JOB DESCRIPTIONS :

My jobs in organization actually are not related with the flow of water but more in the flow of data/information. However based my opinion the flow of data is more important than the flow of water. Because of responsibility of my organization are related of river management so the flow of data of the water usage and all the effect including hazard of flood will become my concern for now and for the future. I am an engineer, who was de facto decision-makers and problems-solver, is another reason why I proposed this course.

COURSE AFTERMATH

Indonesia has 3 types of flood i.e.:

Tsunami flood (time scale of event in minutes),
Flash flood (time scale of event in minutes),
Slower/gradually flood (most common, time scale of event in hours)

Extra ordinary tremendous Tsunami flood just happened 2 month ago, at 26 December 2004, in Aceh and Nort Sumatera. The flood is generated by earthquake with 9 Richter scale. 11 m high of sea water hit along western part coastal line of Aceh and Nort Sumatera. Water level in the center ((3 km from coastal line) of Banda Aceh, capital city of Province Nangroe Aceh Darusalam is about 3 m. About 60 km along costal area western part of Aceh is completely destroyed. Besides debris the flood brings a lot of material, which is come from destructed building due to earthquake $\pm$ 30 minutes before. More than 113.000 people died and more than 132.000 still missing. The question is why so many people died?
Based on analysis, besides the event itself can be categorized as a very big disaster; this is the first experience of Tsunami in this area after very long time period. When people still sock/surprise due to the earthquake people do not aware the bigger hazards come, threaten to his/her life.
Besides Tsunami, there is a kind flood that relatively new in Indonesia namely "man-made flood". These floods happen are caused by over exploitation of upper area of river basin, upstream of a river, i.e. Illegal logging (Cutting tree of the forest without permission), developing settlement etc. This kind of flood is usually preceded by erosion. This flood can be categorized as a flash flood (The time scale of event is minute, even second). This flood is occurred in 2003 in North Sumatra, 2004 in East Java and 2005 in West java.
In these 2 flood situations what can do with flood hazard map? Nothing, Static Flood Hazard Mapping is made based on just 1 scenario, scenario that is happen before, so, no experience before then no flood hazard map.
As I got from the lecturer, based on the number of scenario we can categorize flood hazard map into 2 types: 1st is static flood hazard map and the 2nd is dynamic flood hazard map. The 2nd one is FHM that what I imagine before training. The dynamic flood hazard map is the end target of my courses. The static one can be produced from the dynamic that mean efficient and effective.
However we need static flood hazard map because in the case for publication, education, socialization and basic of production, continuity and consistency of information reach a lot of people especially people with not good enough in socio-economic culture like many developing country static FHM will be more effective. But Static Flood Hazard Mapping should be created from dynamic flood hazard map + experienced, so historical case can be recorded.

Even in static form, FHM may be not enough for country with socio-economic like Indonesia. For people that still suffer due to economical crisis like Indonesia FHM still very expensive. The main problem in Indonesia is slump area along the both river site (Flood plain, embankment). This slump area growth very fast at the time crisis happened. A lot of people still just care to what will eat tomorrow, not Flood Hazard Map. Even when warning system alert 1 hour before flood, they are reluctant to move away (escape). They said every year flood so what special in this flood? People awareness of environment still becomes no.1 priority. In this matter static flood hazard map can help very effective for people education. Social-economical conditions still become the main constrain.
From the point of my own perspective, I care of FHM but the dynamic one; my feeling said I have almost enough ability, to make this dynamic, in long-term agenda of course (2-3 years ahead).

ANSWER THE QUESTIONS

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

- The dynamic flood hazard map, this part is very challenge. From hydrological data collecting, data verification, 1D and 2D hydrodynamic modeling, calibrating model, until how the system can support decision maker show that this is the real target. So, Static FHM is the starting point and dynamic FHM is the end target.
- Part of the static, just in what information should be added and how to make people involve (People participatory)

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

Like to do in Japan: Give information the dangerous area, educate people as soon /early as possible, early warning system etc. All of them should be on the basic institutional approach (Systemic) not on the base on project approach, that why the dynamic FHM is become the main target. I am sure dynamic FHM still very expensive especially in the 2D hydrodynamic modeling.
“Domo Arigato Gozaimasu”, you let me learn from your experiences in building the system.

What actions are you going to take, after going back to my country? List the actions that will be possible within timeframe below:

To continuo my agenda:
Related to FHM the concept is:
STARTING FROM STATIC FHM (AS PROJECT APROACH), DIRECTED TO THE DYNAMIC FHM AS THE FINISHING POINT (AS SYSTEMIC /INSTITUTIONAL APROACH).

Time	Everyday works	Related FHM
1st year	Producing at least 2 software	Collecting data: • Hydrological data, water level, cross-section of Jakarta Rivers (All data above are exist now). • Basic digital map (scale 1:5000) still underproduction. Developing software (Systemic approach/ DBMS) to manage the data
Short-term 2-3 year	Developing at least 1 software Disseminate some software	Try to make 1D and 2D (after getting a good basic map) hydraulics model based on Jakarta data. That why I ask: Is it possible I get the procedure/subroutine of 2D modeling calculation? This routine is better to be published (Open system). Moving to quasy-2D model may be become one option.
Long-term 5 year	Consistent to try building a system	Completion of Jakarta Dynamic Flood hazard Map Building system based on the established model (loop back of building model)

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

My suggestion is make dynamic FHM success as soon as possible and use this as a basic of DSS and developing system. (Systemic/institutional base not project base). And consistently and persistently involve people to handle every disaster. However, disaster is human life responsibility, no exception. Disaster is the enemy of mankind existence.

What advice/suggestion can you provide for a more meaningful training course?

The longer fieldtrip may be better. And about Tokyo, look so much better than Tsukuba? So, 2 weeks in Tsukuba, 1 week in Tokyo and 1 week fieldtrip is the most ideal schedule…….?

Will be continued……..in the next course?

Training Report on the Group Training Course in FLOOD HAZZARD MAPPING 2005

WISNU SUBARKAH DWIWIBOWO

Country
INDONESIA

Organization
DIRECTORATE GENERAL WATER RESOURCES
MINISTRY OF PUBLIC WORKS

Expectation of The Training

The proposed training, Flood Hazard Mapping, will be very-very benefits to me because in this program I will get more experience. Experiences will deliver me become an expert. I need learn to the expert, make comparative study to express my creativity, broaden my view, and grab ideas from the new atmosphere evolved in the course.