PROPOSAL REPORT

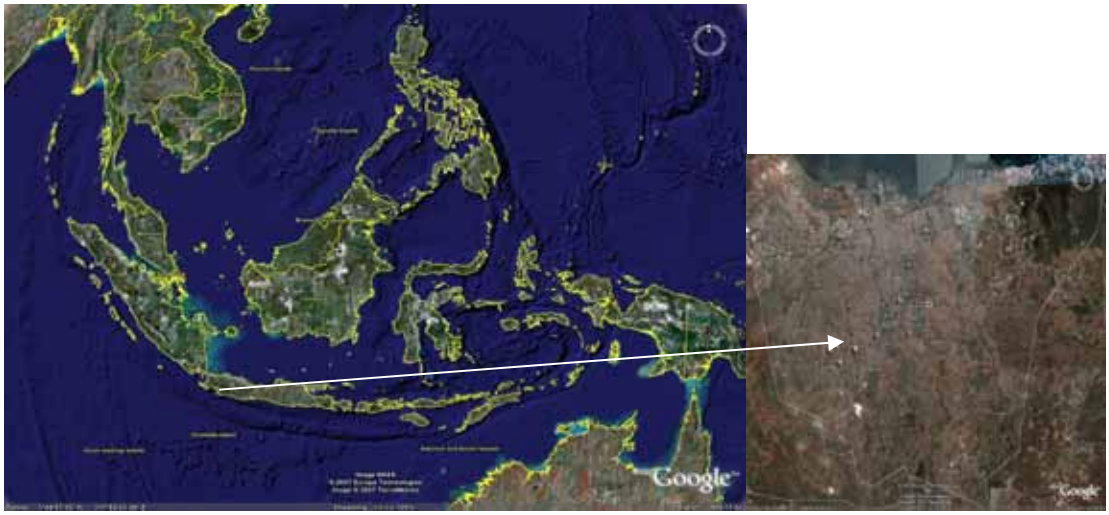
FLOOD HAZARD MAPPING PROJECT IN CILIWUNG RIVER BASIN (INDONESIA)

PRESENTED BY

TRI DJOKO SRI MARGIANTO
DUDI GARDESI ASIKIN
NOVI WIDYASTUTI

TSUKUBA - IBARAKI KEN, JAPAN
NOVEMBER 29TH, 2007

1. BACKGROUND AND OBJECTIVE OF THE PLANNED PROJECTS



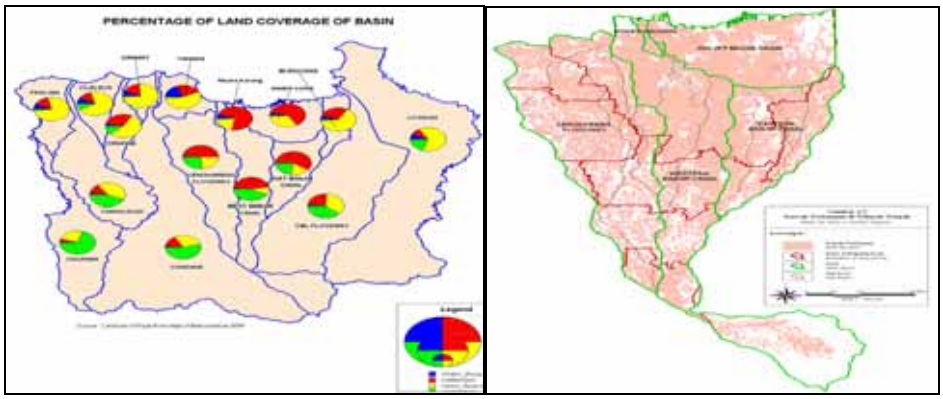
Jakarta

Population

Jakarta is the national capital of the central government where the main commercial and administrative centers are located. Between 1961 and 1980, the population of Jakarta has almost doubled, and was about 15% (8.2 million) of Indonesia's urban population in 1990. This urbanization has outgrown the administrative boundaries of Jakarta with an expansion of industrial and residential developments.

Land Use and River Basins

River basins in Ciliwung area is shown in Figure below.



Conversion of land into urban use may extend beyond the limits proposed in the spatial plan without top level policy commitment of all local and provincial governments concerned and due enforcement. It has the worst impact on flooding problems. It is expected though that the local governments will soon prepare their own spatial plan, so that the urban growth may then be regulated and controlled.

Objective

The purpose of this proposal is basically to produce Flood Hazard Mapping in Ciliwung River Basin. The FHM is to mitigate and direct physical and policy-wise, and in the short and medium term, to manage and reduce inundated areas and in order to improve environmental quality throughout the entire Jakarta area. A strategic FHM, defining the overall flooding and environmental issues and recommending firstly, and most importantly, a series firm project related proposals for management and reduction of the inundation problems were conducted in this proposal.

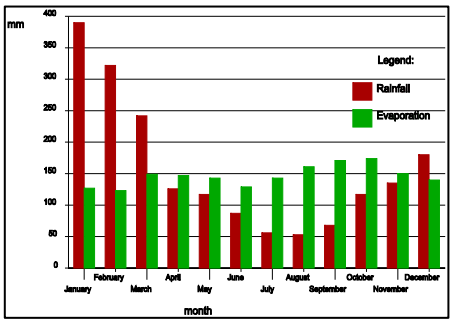
The FHM also defined and offered local and regional policy solutions to some of the wider and more structural issues, encroachment within the floodplains in the Jakarta area, strengthening the institutional and economics of the provincial and mayoralty institutions responsible for flood mitigation.

Improve the environmental conditions of a number of specific, high priority localities. In order to arrive at a comprehensive solution for the flooding and inundation problem in the Jakarta, medium term measures were developed in line with the previous plans and to improve performance of the urban system in Jakarta area in sustainable way.

The overall objective of the FHM is to assist Jakarta Government to review and update the existing master plan for DKI Jakarta to select the most favorable methods to improve the performance of the urban system in the Jakarta area as well as to prepare and to put into practice.

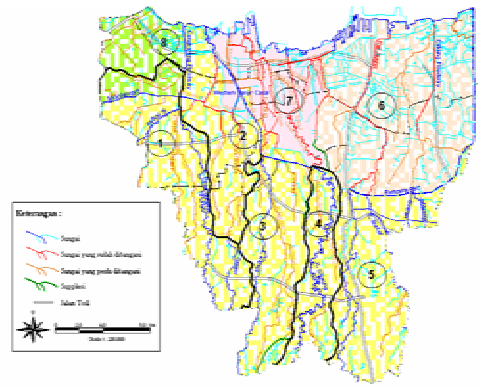
FLOOD IN JAKARTA, PEBRUARY 2007

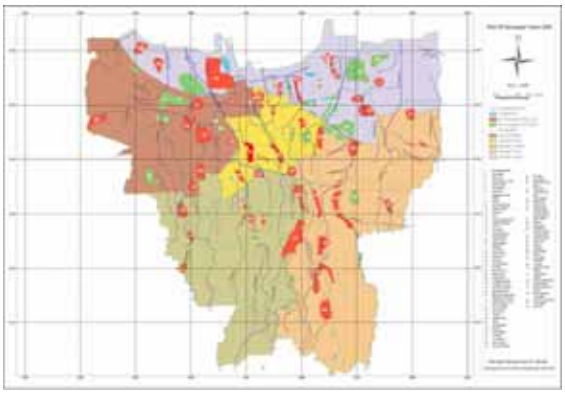
2. TARGET AREA



The average monthly rainfall for Jakarta is presented in figure below. In the same figure, average monthly evaporation data are presented. It is obvious that the rainfall is unevenly distributed over the year. The difference between the average wettest and the average driest month is considerable. In the months January, February, March and December rainfall exceeds the evaporation.

In 2002, sources of flooding in the identified inundation areas are either from regional floods (due to overtopping of adjacent macro/river channels and backwater effects) or from local stormwater runoff (due to insufficient drain capacity). Figure below show the frequent and severe flooding and inundation area are located in northern parts and along waterway of the city and 5 Jakarta Municipalities.





Since 2002, Central and Provincial Government is constructing water related infrastructures, such as: river training, pumping station, dredging, etc. The development is planned to be finish in 2010. However, 2007 flood is occurred and it much bigger than 2002.

http://www.ri.go.id
http://www.adrc.or.jp/countryreport/IDN/2004/index.html
http://www.pu.go.id/infostatistik/Internal%20departemen/sda/sungai.asp
http://www.pu.go.id/infoStatistik/bencana/Lap_Benc/banjir%20des06.xls

3. PROJECT SCHEDULE

The proposed Project is plan to be implemented for 2 years starting in fiscal year 2009 up to 2010, because the project proposal could not be submitted into 2008 fiscal year, since the deadline for 2008 fiscal year already closed .

The preparation works will be taken place about 4 months' starting in July 2008. During this period, many activities are including; preparation of Terms of Reference, draft budget proposal, preparation for the organization/staff required and discussion with other agencies relating with the annual budget.

After budget for 2009 fiscal year are approved by the concerned agencies, the works for preparation Flood Hazard Map (FHM) are started with the main focus on development of FHM on February 2009 and calibrate with condition in the field in the mid of August to the end of 2009.

During calibration FHM with the condition in the field, many finding in the field will be included in the map, i.e.; route for excavation, possible danger place, etc. After calibration process is completed, the FHM will be disseminating to the other agencies concerned to get feedback for improvement. At this stage, gaining the input from public will be conducted.

In July 2009, preparation for the proposed works in 2010 will be focus in the dissemination of FHM to the public along the Ciliwung River who will be exposed to the flood hazard problems. Dissemination the FHM to the public will using many forms of activities including meeting with the community, TV and interactive dialogue in radio, news papers and fliers.

During dissemination activities in 2010, feedback from the community to improve the quality of FHM to meet their need will be taken into consideration in the next revised FHM. Evaluation of the FHM as a toll to mitigate the flood control and improvement of the FHM to fulfill the requirement both for community and for government itself will be conducted during 2010. Since this kind of activities is relatively new, the dissemination of FHM to the community will be conducted again in 2011.

4. CONCRETE IMPLEMENTATION ITEMS OF THE SCHEDULE

The project implementation schedule in detail as follows:

1. Preparation project.
    a. Preparing Terms of Reference (TOR). (May 2008)
    b. Inventory the available data and map (May – June 2008)
    c. Discussion with others agencies concerned (June – August 2008)
    d. Preparing the project and budget proposal (July – Sept. 2008)
    e. Submission the project and budget proposal (Oct. 2008)

2. Development of FHM
    a. Purchasing the GIS software (Feb. 2009)
    b. Training GIS and HEC-RAS (March-April 2009)
    c. Development of FHM (May-August 2009).
    d. Discussion the contents of FHM with others agencies (June-August 2009)
    e. Preparing the project and budget proposal for 2010 (July-Sept. 2009)
    f. Calibration/Field checking/town watching (Sept-0ct. 2009)
    g. Improvement of FHM (Nov. 2009)

3. Dissemination of FHM to the Public/community.
    a. Preparing the material and method of dissemination (March 2010).
    b. Public campaign on FHM (April – Sept 2010)
    c. Evaluation of FHM (August - Oct 2010)
    d. Revised/modified FHM (Oct - Nov2010)

5. EXPECTED BENEFITS AND PROGRESS FOR RESIDENTS AND ADMINISTRATOR

The main expected benefits for residents and administrator for having FHM are that FHM would help them in reducing the number of death toll and property loss.

The Flood Hazard Mapping will provides fundamental information to help both residents and administrator during and after flood occurs.

6. APPROXIMATE COST ESTIMATE

1.	Preparation project.	**(US $ 10.000)**
	a. Preparing Terms of Reference (TOR).	
	b. Inventory the available data and map	
	c. Discussion with others agencies concerned	
	d. Preparing the project and budget proposal	
	e. Submission the project and budget proposal	
2.	Development of FHM	**(US $ 137,000)**
	a. Purchasing the GIS software	(US $ 50,000)
	b. Training GIS and HEC-RAS	(US $ 5,000)
	c. Development of FHM	(US $ 50,000)
	d. Discussion the contents of FHM with others agencies	(US $ 1,000)
	e. Preparing the project and budget proposal for 2010	(US $ 1,000)
	f. Calibration/Field checking/town watching	(US $ 20,000)
	g. Improvement of FHM	(US $ 10,000)
3.	Dissemination of FHM to the Public/community.	**(US $ 135,000)**
	e. Preparing the material and method of dissemination	(US $ 20,000)
	f. Public campaign on FHM	(US $ 100,000)
	g. Evaluation of FHM	(US $ 5,000)
	h. Revised/modified FHM	(US $ 10,000)
	TOTAL……..	**(US $ 282,000)**

7. SUGGESTION AND OPINION FOR FHM TRAINING COURSE

The Flood Hazard Mapping Training Course is very important course and gives many benefits for us as participants and also our country to create our own Flood Hazard Mapping. Due to increasing this FHM training course, we have several suggestions:

a. The length of Flood Hazard Mapping course is not enough to understand all the material given by the lecturer, especially in exercise such as HEC-RAS, GIS, IFAS, and also town watching.

b. Time table and train arrangement for the town watching trip should be given at least two days before trip, because as a new visitors, we are very confuse especially in rush hours.

c. Town watching is very important and we proposed to extend the length of stay in the field.

d. The schedule for lecture is better in the morning and the exercise in the afternoon, the arrangement of weekly schedule should be variant.

e. More time should be allocated to carry out analysis e.g. rainfall run off analysis, hydraulic modeling etc.

.

Special Thanks!

We would like to thank to Japan International Cooperation Agency (JICA) and ICHARM (PWRI) for allowing us to participate in the Flood Hazard Mapping course. All the guidance's, support, consideration and willingness to assist the participants from other countries to produce the Flood Hazard Map are highly appreciated. Our sincere gratitude and appreciation also goes to JICA Tsukuba for a wonderful and great hospitality. We would like to thank to Mr. Kono, Mr. Tanaka and Mr. Tokioka for taking good care of us.