PROMISE INDONESIA

Program for Hydro-Meteorological Risk Disaster Mitigation in Secondary Cities in Asia

FINAL REPORT
Period Covered: February 2008 – July 2009

1. BACKGROUND

Indonesia is one of the biggest archipelago located within the region that exhibits various extreme activities of natural hazard, i.e. geological hazard (earthquake, volcano, landslide, tsunami etc.) and hydro-meteorological hazards (flood, drought, rob, swell, sea level rise etc.), causing to many devastating disaster that affected on people life and their built environments in terms of life, property and material losses.

Beside the geological hazards, the existence of hydro-meteorological hazard has become significant issues in this decade due to severe flood occurrences and issues related to climate change. In these past few years, not only excessive rainfall have caused extreme perennial and five-yearly flood, torrential flood and flash flood; but also extreme rob and swell have inundated the low-lying coastal area. The number of urban areas experienced economic and social losses due to recurrent hydro-meteorological events has been increasing from year to year. Billion of opportunity loss and communities suffering have also affected some major and secondary cities during this extreme flood.

These hydro-meteorological devastated urban-centered disasters are generally subject to some critical vulnerability factors. They are uncontrolled demographic growth, poor land use planning, lack of understanding among city stakeholder and communities about potential hazard and its disaster risk, degree of knowledge about disaster reduction initiatives and community's awareness and preparedness in anticipating such disaster. These kind of urban-centered disaster should be taken into consideration in the national and local development planning, especially for the recurrent hydro-meteorological hazard and mainly for those primary/secondary cities where the concentration of population density are high. Consequently, efforts in raising awareness, preparedness and disaster risk reduction based development become essential as the intervention strategy for Indonesian Cities.

For the purpose of PROMISE (Program for hydro-meteorological Risk Mitigation in Secondary Cities in Asia) implementation in Indonesia, Jakarta was selected to be the target with the rationale on the high exposure of DKI Jakarta toward perennial and five year flood caused by meteorological hazard that has made multi-risk factors considered in the Jakarta process development as the capital of Republic Indonesia. Since the 1996 flood firstly inundated access road of Jakarta International Airport, there have been intensive studies and disaster risk reduction (DRR) initiatives done by JPG, central government agencies, as well as other stakeholders including NGOs/IGOs to mitigate Jakarta flood risks in these last two decades. However, the five yearly and perennial floods remain the unsolved problem of Jakarta, especially for those who inhabited the low land and riverbank area. Many experts believe that solving the flood problem of Jakarta City may take years. There should be

structural and non-structural mitigation intervention conducted simultaneously with exhaustive target of the intervention.

From facts finding and discussion with Jakarta Provincial Government (JPG) there were some potential activities that were expected to fill the gap of the flood problem especially from the non-structural mitigation point of views. The needs for improving coordination with central government agencies and other local government bodies became necessary issues, since decentralization/local autonomy has brought a need to advocate for flood mitigation with other autonomous municipalities.

Though the JPG has been able to respond to flood disaster through their formal emergency response system and mechanism, there were still problem remains in every flood occurrences due to the urban complexity and necessity.

Therefore, it had been expected that PROMISE project activities to be able to link up with the Jakarta Provincial Government needs and current program on Flood Disaster Management, excluding the Illegal re-settlements initiatives.

- MOU of JPG and Bogor Municipality to build an upstream dam of Ciliwung River in Gadog to contain 30 million m^3 to reduce flood at the downstream area (Jakarta), while Bogor Municipality would mutually benefits from secondary function of the dam for drinking water supply, irrigation and tourism. This showed windows of opportunity for PROMISE project in Jakarta to address non-structural mitigation for downstream communities, especially for those inhabited in riverbank downstream Ciliwung River and low-land area.
- JPG crisis centre's ability for real time disaster monitoring system has been an opportunity for PROMISE project activities in Jakarta to address the development and establishment of End-to-End emergency response system for JPG, by enhancement of city SOPs for emergency response through table top exercises, development of community and school action planning, and conducting regular end to end drill.
- Annual Jakarta Disaster Risk Reduction Week as part of UN-ISDR International Disaster Reduction Day has been an opportunity for PROMISE project in Jakarta to address and promote public awareness and preparedness initiatives for flood mitigation.

Taking the above consideration, the Bapeda - Planning Department of Jakarta Provincial Government and USAID Jakarta Office have recommended to PROMISE Indonesia Team and ADPC to implement PROMISE demonstration project in DKI Jakarta, funded by the USAID/OFDA with ITB (LPPM and CDM) as the assisting institution. Focal points or experts from national institution such as from BNPB (National Disaster Management Agency), BMKG (National Meteorological, Climatology and Geophysical Agency) and other stakeholders have also encouraged the project activities. These support and encouragement would provide opportunity to facilitate the replication the case study to other area of DKI Jakarta as well as to other municipalities surrounded Jakarta and elsewhere.

2. JAKARTA HYDRO METEOROLOGICAL DISASTER PROFILE

Jakarta Metropolitan City is the capital of Republic Indonesia, known as DKI Jakarta, which is correspondent to DKI Jakarta Province. It was established over 460 year ago, in 1527 previously called Batavia, later during World War II called Jakarta. Currently it has called with its popular name,

i.e. Jakarta Metropolitan City. The 13 rivers-systems passing through the City is part of 27 water systems consisting of rivers/drains/canals of Jakarta, which are used for water sources, fishery and urban businesses. The 13 rivers system consists of Ciliwung, Kali Baru Barat, Kali Baru Timur, Krukut, Cipinang, Grogol, Sunter, Buaran, Kramat Jati, Pesanggrahan, Cakung, Angke and Mookervart rivers. They are under the authority of National Government, i.e. Ministry of Public Works. Meanwhile the rest of water system is under the authority of JPG. See also figure 1.

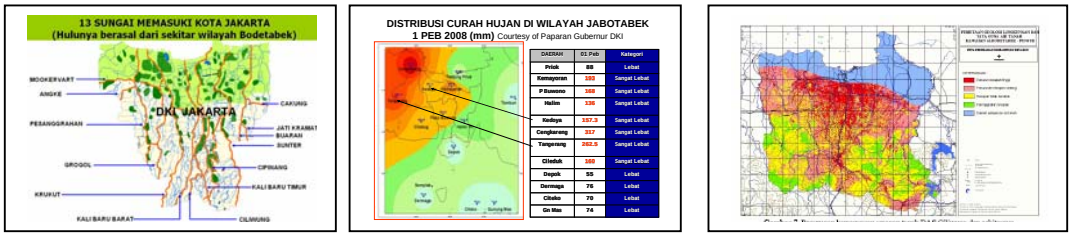


Figure 1. Geographical and Climate Condition of Jakarta

Geographically DKI Jakarta is very prone toward any type of perennial and five-year inundation due to excessive rainfall and flash flood. This inundation is often aggravated by the onset of swell, a long wave influenced by storm during monsoon that could reach up to 2m - 4m in the Jakarta coastal area. The city is also exposed to rob, an inundation due to the combination of sea level rise and/or high tide during full moon with land subsidence caused by the decrease of ground water table and some other collateral factors. These hydro-meteorological hazards has affected damages on the coastal area very badly, where almost 40% of the Jakarta area inundated and the Jakarta residents living near the river bank becoming the frequent victims. See also figure 1.

Jakarta has suffered billions USD investment and opportunity lost in every five year flood occurrence since 1996 that badly inundated the CBDs in North Jakarta and access road of Jakarta International Airport. During the five-year flood in 2002 and 2007 and the 2008 perennial flood, the impacts were even worse. Many CBD areas were collapsed and the airport activities were disturbed due to inundated access road.

During 2002 and 2007 Jakarta flood, the total area and volume of inundation in Jakarta have increased in certain area. It has not only affected the squatter area, but also many residential area of middle-class to upper-class income. Figure 2 shows condition and situation of the 2002 and 2007 flood. Classical problem of those *communities at risk* is that frequent recurrent hydro-meteorological hazard has made them ignorant to be prepared for future disaster, they become skeptical and tend to blame whoever blamable, such as blaming to the government, real estate developer and even their own neighborhood or environment.

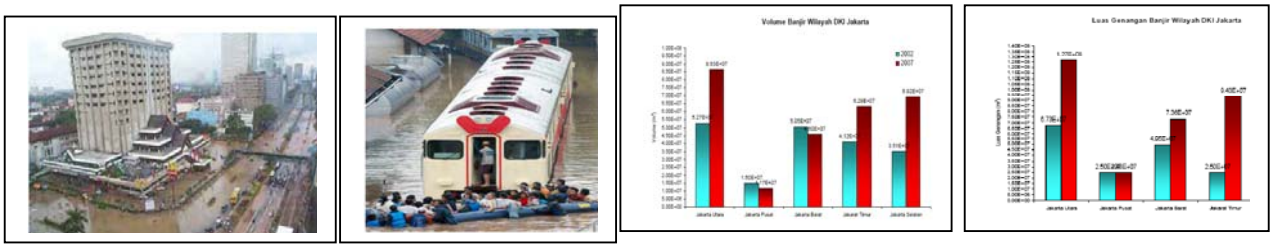


Figure 2. Jakarta 2002 and 2007 Flood

The number of legal and illegal inhabitant live surrounding riverbank and the growth of congested area contribute the vulnerability of Jakarta City. The low environmental friendly attitudes of those communities at risk, i.e. habit to dumping off the domestic garbage to the river, have decreased the body of rivers and canals. Figure 3 below shows the condition where rivers/canal bodies have been filled up by domestic waste either from riverbank communities as well as upstream inhabitants of outside Jakarta, i.e. Bandung and Bopuncur (Bogor, Puncak and Cianjur). These have caused billions rupiahs for the Jakarta Provincial Government to maintain and clean up the water body not only for flood purposes but also for reducing sanitation problem. However, the conditions are worsened due to the facts that there is dual river-system management under different authority, i.e. JPG and Ministry of Public Works.

Figure 3. People attitude vs. problem of the rivers / canal bodies and the number of households in the rivers' bank

The exposure of DKI Jakarta toward perennial and five year flood caused by those meteorological hazard discussed above has made those multi-risk factors should be considered in DKI Jakarta process development as the capital of Republic Indonesia. Since the 1996 flood firstly inundated access road of Jakarta International Airport, there have been intensive studies and disaster risk reduction (DRR) initiatives done by JPG, central government agencies, as well as other stakeholders including NGOs/IGOs to mitigate Jakarta flood risks in these last two decades. However, the five yearly and perennial floods remain the unsolved problem of Jakarta, especially for those who inhabited the low land and riverbank area. Many experts believe that solving the flood problem of Jakarta City may take years. There should be structural and non-structural mitigation intervention conducted simultaneously and exhaustive target of the intervention.

3. PROJECT DESCRIPTION

PROMISE Indonesia (Program for Hydro-Meteorological Risk Disaster Mitigation in Secondary Cities in Asia) is implemented within the collaboration among Asian Disaster Preparedness Center Foundation (ADPC), Bangkok – Thailand and Center Disaster Mitigation – Institut Teknologi Bandung (CDM-ITB) and

funded by a grant from USAID OFDA. The PROMISE Indonesia, which took the City of Jakarta as its case city, involved various relevant agencies and community in case study areas.

PROMISE Indonesia was run under the Grant Agreement No. PROMISE-Indonesia-UDRM-1-00, under the USAID Agreement No. DFD-G-OO-05-00232-00 for the Program for Hydro-Meteorological Risk Mitigation in Secondary Cities in Asia (PROMISE), effective project date from 1st February 2008 to 31st July 2009.

4. OBJECTIVE OF THE PROJECT

The goal of the PROMISE Indonesia is to reduce vulnerability of urban communities through enhanced preparedness and mitigation of hydro-meteorological disasters in South and South East Asia.

The objectives of the PROMISE Indonesia were the following:
1. Adoption of specific hydro-meteorological disaster preparedness and mitigation measures to manage hydro-meteorological disaster risk by stakeholders in targeted cities.
2. Increased stakeholder involvement and further enhancement of strategies, tools and methodologies related to community preparedness and mitigation of hydro-meteorological disasters in urban communities.
3. Enhanced coordination with USAID Missions to promote sustainability and ensure program activities accord with USAID country and regional strategies.
4. Strengthen networks and regional links among relevant risk management institutions/organizations for improving potential and capacity for application and dissemination of lessons learned.

In order to achieve the objectives of the program, PROMISE Indonesia has program strategy to increase adoption of public and private sector mechanisms for community preparedness and mitigation of hydro-meteorological disaster risk in urban areas of South and South East Asia, which will measurably alleviate human suffering, prevent loss of life, and reduce the potential for physical and economic damage.

5. PROJECT PARTNER AGENCIES

The organizations involved in the PROMISE Indonesia consist of government and non-government organizations:

A. National Level Government Organizations
- BMKG (Badan Meteorologi Klimatologi dan Geofisika): Meteorology, Climatology and Geophysical Agency
- BNPB (Badan Nasional Penanggulangan Bencana): National Disaster Management Agency

B. Jakarta Provincial Goverment
- BAPPEDA (Badan Perencanaan Pembangunan Daerah): Jakarta Regional Planning and Development Agency
- DINAS PU (Dinas Pekerjaan Umum): Jakarta Public Work Department
- DINSOS (Dinas Sosial) : Jakarta Social Department

- DINKES (Dinas Kesehatan) : Jakarta Health Department
- Dinas Pemadam Kebakaran dan Penanggulangan Bencana (Jakarta Fire Brigade and Disaster Management Department)
- SATKORLAK (Satuan Koordinasi Pelaksana) : Disaster Coordination Unit at Province Level
- SATPOL PP (Satuan Polisis Pamong Praja) : Disaster Coordination Unit at City Level
- Crisis Center of DKI Jakarta

C. City Level Government

- Pemerintah Kota Jakarta Selatan (City Government of South Jakarta)

D. Sub District Level Government

- Pemerintah Kecamatan Tebet (Sub District Government of Tebet)

E. Sub Sub District Level Government

- Pemerintah Kelurahan Kebon Baru (Sub Sub District Government of Kelurahan Kebon Baru)

F. Non Government Organizations

- Palang Merah Indonesia (PMI-Jakarta Chapter)
- CBO (Yayasan Empati Sesama)

G. School

- SMAN 8 Jakarta (Sekolah Menengah Atas Negeri 8) : Senior High School at Kelurahan Bukit Duri

H. Community Level

- Community of RW 1, 2, 3, 4, 8, 9 and 10 of Kelurahan Kebon Baru
- Community's Council member of Kelurahan Kebon Baru

6. PREPARATION PROCESS

After signing the contract agreement for PROMISE Indonesia project, there were two courtesy meeting and Kick Off Workshop for project initiation.

The first courtesy visit to Jakarta Provincial Government was done on 4 February, 2008. The meeting was conducted at the project partner office, i.e. Bapeda DKI –Regional Planning Board of Jakarta Provincial Government (JPG). Some issues related with the Jakarta flood mitigations were identified. The discussion emphasized on non-structural mitigation issues, which were expected to be accommodated in the PROMISE Project Activities.

Meanwhile the second courtesy visit to USAID Jakarta Office was conducted on 6 February 2008 and attended by USAID Jakarta Office, USAID-OFDA Asia Pacific, ADPC and ITB team. Some works on flood hazard mapping and flood mitigation initiatives done by Central Government and international agencies were identified. To avoid redundant efforts in PROMISE Indonesia, possible linkages would be facilitated by USAID Jakarta Office.

To identify project location for PROMISE Indonesia case study implementation, there ware a Kick Off Workshop conducted as a technical scoping and project orientation workshop. In this workshop, four candidate project locations were proposed based on some criteria discussed, they were Kelurahan Bukit Duri (Tebet Subdistrict-Eastern Jakarta), Kelurahan Kebon Baru (Tebet Subdistrict-Eastern Jakarta), Kelurahan Bidara Cina (Jatinegara Subdistrict-Eastern Jakarta), and Cipinang Muara (Jatinegara Subdistrict-Eastern Jakarta); The Technical Working Group established to support the implementation the PROMISE Indonesia. From the four candidate project locations proposed above, the Working Group recommend the concentration of implementing all PROMISE project activities related to communities should be conducted in Kelurahan Kebon Baru (Tebet Subdistrict-Eastern Jakarta) and Kelurahan Bukit Duri (Tebet Subdistrict-Eastern Jakarta). The decision was based on number of squatter cluster, favorite schools, amenities, lifelines, utilities and consideration of the least number of mitigation initiatives.

7. PROJECT COMPONENT

7.1 Overview

The activities of PROMISE Indonesia has consisted of four major project component i.e. Participatory Hazard, Vulnerability and Risk Assessment; Mitigation and Preparedness; Training and Public Awareness; and Advocacy for Mainstreaming Disaster Risk Management (DRM) in Urban Governance.

In the Participatory Hazard, Vulnerability and Risk Assessment project component, a pilot project of risk assessment has been conducted at Kelurahan Kebon Baru and Kelurahan Bukit Duri with result of the flood hazard, vulnerability and risk maps.

Mitigation and Preparedness initiatives has focused on capacity building of community at grassroots level, school community and local governance in flood disaster risk reduction. In order to synchronize and enhance the knowledge, as well as increasing the skill of the project stakeholders in conducting participatory risk assessment and action planning for both City and Community level, a TOT on Capacity Building for Local Government and Community in Flood Early Warning System in Jakarta was conducted. At the end of the whole activities, an End to End Flood Early Warning System Simulation (Flood Drill) was conducted. The implementation of this activity was able to bridge the gap between city level and community level. The Drill was also used to test the three main EWS components simultaneously, i.e. readiness of the Flood EWS, responsive actions of task forces of Satkorlak of Jakarta City related to emergency response and preparedness of *communities at risk* from designated Kelurahan, and to find out readiness of EWS infrastructure developed at community level during the PROMISE project.

The training programs were implemented in training and public awareness project component, i.e. training for first responder with participants from community at Kelurahan Kebon Baru. The training was expected to increase knowledge, skill, preparedness and capacity of communities in emergency response matter such as management at the post the disaster, post disaster health response, continuing emergency raft and safety water rescue. Meanwhile public awareness activity was conducted through the development of education material on flood disaster in the form of leaflet, calendar poster and e-book.

The Advocacy for Mainstreaming Disaster Risk Management (DRM) in Urban Governance project component has focused on establishment of TWG to fully involve in development of Integrated Flood Early Warning System for DKI Jakarta and to provide advocacy to Jakarta Provincial Government in brainstorming or initiating the development of DRRMP (Disaster Risk Reduction Master Plan). The initial activity was the establishment of Technical Working Group then conducted serial meeting to formulate Flood Early Warning System for DKI Jakarta as well as providing advocacy in brainstorming and initiating the development of DRRMP (Disaster Risk Reduction Master Plan). Additional activity in this component was participation of PROMISE Indonesia in exhibition Disaster Reduction Week in Jakarta. At the end of the project, PROMISE Indonesia was also conducted lesson learned workshop to socialize the results of PROMISE Indonesia implementation and discuss on possibility of project replication in other area.

The project component of PROMISE Indonesia is summarized in Figure below.

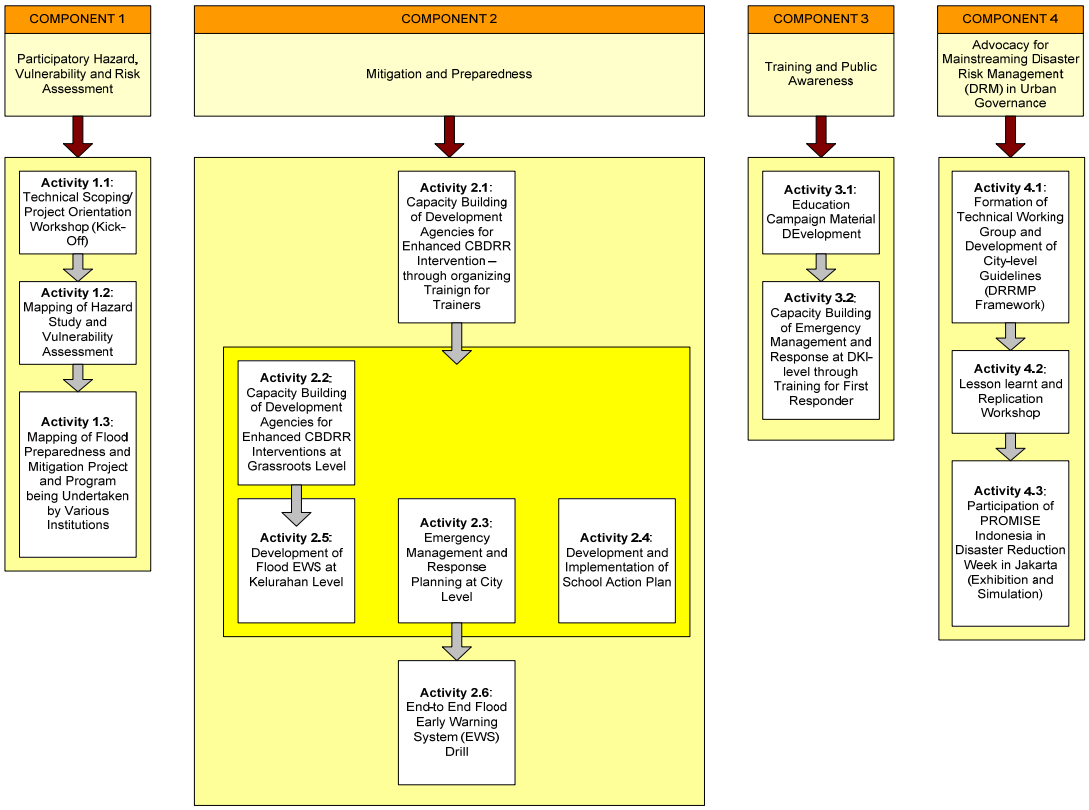


Figure 4 : PROMISE Indonesia Project Component

7.2 Participatory Hazard, Vulnerability and Risk Assessment

Activities under the Participatory Hazard, Vulnerability and Risk Assessment Project component follow:

Activity 1.1. : "Technical Scoping/Project Orientation Workshop (Kick Off)"

Objective:

- To introduce the project objective and component of PROMISE Indonesia for DKI Jakarta
- To discuss the role and responsibilities of each stakeholder and
- To obtain input from stakeholders to improve and refine the proposed project component activities.

Scope of Work:

- The selection of pilot study area
- Jakarta Provincial Government involvement in the selection of pilot study area
- To conduct communication and coordination with all relevance agencies to disaster management in Jakarta Provincial Government to build partnership and networking for PROMISE Indonesia implementation
- To conduct workshop as a media to socialize and to promote PROMISE Indonesia activities in DKI Jakarta and to obtain input for program implementation

Implementation:

In order to prepare project initiation as part of this activity, a courtesy visit to Jakarta Provincial Government had been conducted on 4 February 2008, followed by courtesy visit to USAID Jakarta Office on 6 February 2008, with brief description as follows:

Courtesy visit to Jakarta Provincial Government : Some urgent issues related with the Jakarta flood mitigations were identified. The discussion emphasized on non-structural mitigation issues, which were expected to be accommodated in the PROMISE Project activities.

Courtesy visit to USAID Jakarta Office : Some works on flood hazard mapping and flood mitigation initiatives done by Central Government and some international agencies were identified. To avoid redundant efforts during implementation of PROMISE Indonesia, possible linkages would be facilitated by USAID Jakarta Office.

The official kick off workshop was conducted on 15 February, 2008 and inaugurated by the Secretary of Bapeda DKI (JPG). The workshop was attended by 40 officials of JPG's Agencies and its stakeholders, representative of USAID Jakarta, and PROMISE Indonesia team. The workshop was very fruitful, some nonstructural mitigation initiatives were recommended by the forum, i.e. disseminating and constructing biopore, e-books, increasing the community's preparedness in emergency response. Based on some criteria discussed, four candidate project locations were proposed at kelurahan level, i.e. Kelurahan Bukit Duri (Tebet Subdistrict-Eastern Jakarta), Kelurahan Kebon Baru (Tebet Subdistrict-Eastern Jakarta), Kelurahan Bidara Cina (Jatinegara Subdistrict-Eastern Jakarta), and Cipinang Muara (Jatinegara Subdistrict-Eastern Jakarta).

Output (Product):

- Input for the selection of pilot study location
- Input for non structural mitigation initiatives to be accommodated at the program

Activity 1.2. : "Mapping of Hazard Study and Vulnerability Assessment"

Objective:

- To identify existing city-level FHM conducted by various national/international institutions
- To conduct rapid vulnerability assessment for sub-district-level and/or municipality-level of selected project site

Scope of Work :

- Data collection through study literature and survey
- To conduct hazard, vulnerability and capacity assessment covered Kelurahan Kebon Baru and Bukit Duri
- To conduct risk analysis covered Kelurahan Kebon Baru and Bukit Duri
- TWG meeting to socialize Flood Risk Map of Kelurahan Kebon Baru and Bukit Duri

Implementation:

Data collecting as part of activity 1.2 Mapping of Hazard Study and Vulnerability Assessment had been conducted through collecting secondary data. Parallel with collecting data activity, survey for project site selection also had been conducted on four candidate project location. Flood hazard map is developed using mathematical model. DUFLOW software, developed by DELFT, is chosen for the purpose. The design flood for the map is the 2007 flood. The hydrology data of the 2007 flood was used as the model input along with the topography map and drainage system and capacity within the area. The simulation result is calibrated and verified with field data. The following image is flood hazard map, from the simulation for the 2007 flood.

Figure 5 : Flood Hazard Map

Figure 6 : Flood Hazard Index

The river bank areas are flooded up to more than 2 meters depth. 4 RW in Bukit Duri (9,10,11,12) and 7 RW in Kebon Baru (1,2,3,4,8,9,10) were flooded. The flood hazard map is indexed per RW using the following criteria:

- Index 4: more than 80% area are flooded more than 2 meters deep
- Index 3: 40%-80% of area are flooded
- Index 2: 10%-40% of area are flooded
- Index 1: less than 10% of area are flooded

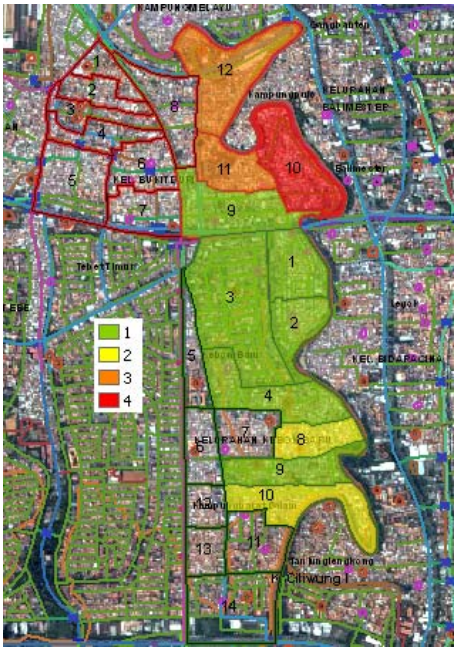
Several parameters for capacity index are used in the analysis. Each one is given weight of importance defining the significant of the parameter to the capacity. The following parameters is assessed for the capacity analyses,

1. Pumps (existing condition) (50%)
2. Levees (existing condition) (50%)
3. Intervention (intervention condition)

The risk map is assessed using GIS. The hazard map index, vulnerability index and capacity index are overlaid and superimposed using the following formula:

Risk = Hazard index x Vulnerability index / Capacity index

As has been stated previously that the capacity index are assessed using two scenario, existing and intervention scenario. Therefore the risk map is also assessed using the same scenarios. The results are as follows:

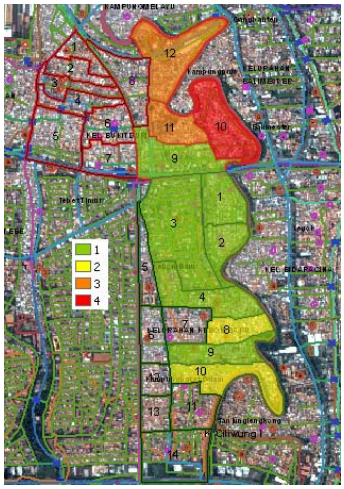


- Index 4
  Extremely high risk
- Index 3
  high risk
- Index 2
  moderate risk
- Index 1
  low risk

Figure 7 : Risk Map Index (Existing Scenario)

Risk Map Index (Itervention Moderate Optimistic Scenario)

- Index 4
  Extremely high risk
- Index 3
  high risk
- Index 2
  moderate risk
- Index 1
  low risk



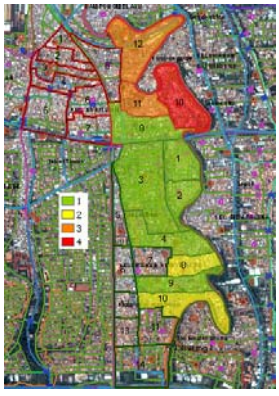


Figure 8 : Risk Map Index (Intervention Moderate Pessimistic Scenario)

The intervention (moderate optimistic scenario) shows that the risk is significantly decreasing in several areas. However, the risk index for intervention (moderate pessimistic scenario) does not show significant improvement compare to the existing condition.

Flood risk map of Kelurahan Kebon Baru and Bukit Duri was socialized through Technical Working Group (TWG) meeting at Jakarta Provincial Government (JPG) on 11th July 2008 at the Auditorium of JPG Bapeda. The meeting was attended by 17 participants representatives the related departments of Jakarta Provincial Government as well as Agency of Meteorological and Geophysics as our partner in PROMISE implementation has also participated in this TWG activity. Around 17 participants are attended in this TWG. The JPG showed interest to replicate the development of detailed Risk Map for all Jakarta Province.

Figure 9 : Technical working group at Bapeda Jakarta Provincial Government, with the main of agenda socializing the Flood Risk Map of Kelurahan Kebon Baru and Bukit Duri

Output (Product):

- Flood Hazard Map for 14 RW at Kelurahan Kebon Baru and 12 RW at Kelurahan Bukit Duri
- Vulnerability Map for 14 RW at Kelurahan Kebon Baru and 12 RW at Kelurahan Bukit Duri
- Capacity Map for 14 RW at Kelurahan Kebon Baru and 12 RW at Kelurahan Bukit Duri
- Flood Risk Map for 14 RW at Kelurahan Kebon Baru and 12 RW at Kelurahan Bukit Duri

Activity 1.3. : "Mapping of Flood Preparedness and Mitigation Project and Program being Undertaken by Various Institutions "

Objective :

- Road mapping any initiatives on preparedness and mitigation for Jakarta flood done by various local, national and international institutions

Scope of Work :

- Study literature regarding flood disaster risk reduction initiatives in DKI Jakarta
- Secondary data collecting
- Survey
- Interview
- Focus Group Discussion

Implementation :

Initial activity of this component was mini-workshop of TWG meeting. Technical working group was conducted at April 30, 2008 attended by the PROMISE Indonesia team with JPG, focal NGO and local CBO. The objective of the TWG mini-workshop is to identify the flood preparedness initiatives done in the region of Jakarta and to clarify the information obtained in previous works related with the initiatives done. The TWG was conducted at the Jakarta PMI (Indonesian Red Cross) Headquarter in Jakarta, and attended by 15 people representing ITB team, Secretary to Regional Planning Board of JPG and team, Vice Chairperson, Board member and technical team of PMI, Coordinator of CBO and team.

The PMI (Indonesian Red Cross) as one of focal NGOs has worked in Jakarta Flood area for quite a long time especially in response and some preparedness initiatives on the grass root. During the TWG, PMI Jakarta Board Members and their technical team have shown deep interest to support and join the PROMISE project especially in selected project location, i.e. Kelurahan Bukit Durit, since they do not have any preparedness initiatives in the selected Kelurahan. The Bukit Duri CBO leader and the team have also shown deep interest and show appreciation toward the PROMISE project approach for their area.

During the TWG, the groups have identified some flood preparedness initiatives and local champions from Kelurahan Bukit Duri, South Jakarta and the Jakarta Province and clarified some initiatives done in the area including the windows of opportunity to support the project implementation.

To obtain primarily on Flood a TWG was conducted on 7 May 2008 at the Jakarta PMI (Indonesian Red Cross) Headquarter in Jakarta. The forum was attended by ITB Team, Secretary to Regional Planning Board of JPG and its TWG members, PMI board of trustee (Chairperson, Vice Chairperson, Board member and technical team of PMI DKI Jakarta) and its stakeholders (from provincial level to sub-district level), and representative of CBO with its focal member at the field. The purpose of the forum is to discuss the flood DRR initiatives done by other institutions as well as the PMI and CBO in Jakarta. Further discussion was focused on the DRR initiatives done in South Jakarta and Tebet Sub-District. Some initiatives found were not directly related to DRR efforts however, they are still useful to support the project, such as extensive water sanitation training and implementing at communities of Pasar Minggu Sub-district. The existing flood early warning program conducted in South Jakarta including in the two kelurahan, i.e. Kelurahan Kebon Baru and Kelurahan Bukit Duri, were not done holistically. They just relied on the warning mechanism, such as the use of Mosques' speakers. It was also found during the TWG that those activities was not sustainable, since there is no strong foundation that link the community's DRR activities for flood and the JPG's flood management program. Therefore the TWG concluded that PROMISE program is expected to be able to bridge this gap in establishing the strong foundation for Community Based Flood Early warning System that in line with the JPG program.

During the period of June, collecting data related to mapping of flood preparedness and mitigation initiatives and program done by various institution and organizations has been done by the Activity 1.3 team through literature study and FGD. This FGD was conducted on 25th June 2008 at the auditorium of city planning agency of Southern Jakarta and participated by local governments at both city and provincial level, UNTWG members and school communities. Local governments at city and provincial level were represented by health departments, local and regional planning agencies, civil defense and civil protection, social welfare department. UNTWG members consisted of: Indonesian Red Cross, UNDP, UNOCHA, UNESCO and some others NGO. Through this FGD, the participants have been able to identify what they have been doing before, during and after disaster especially for flood

An ITB expert and team had conducted the works of this activity through an exhaustive survey and desk study to produce a city-level road map for disaster-risk-reduction initiatives and had been discussed by a TWG through a mini-workshop. The FGD forum aims to identify further 'who does what in which areas', to obtain better understanding of government institution role and areas for cooperation with other stakeholder, and to identify the gaps and possibilities of mobilizing resources by others.

Output (Product):

- Mapping on flood preparedness and mitigation initiatives in DKI Jakarta Province

7.3 Mitigation and Preparedness

Activity 2.1. : "Capacity Building of Development Agencies for Enhanced CBDRR Intervention - through organizing a Training for Trainers (TOT)"

Objective:

- To synchronize and increase the knowledge about flood to related stakeholders at city government and community level, in developing flood disaster risk assessment and action plan.
- Disseminating information/education material about flood disaster, preparedness and emergency response toward flood disaster and also learn how to assess flood risk assessment including the action plan at city and community level.
- Transferring knowledge on flood disaster, mitigation and preparedness to the participants in order to increase their capacities and skill so they can continue transferring the knowledge to the wider community.
- To give guidelines on how to develop action plan and contingency plan at city, community and school level toward flood disaster.

Scope of Work:

- Training preparation covered the activities as follows :
  - The development of training curriculum
  - The development of module/training material
  - Contact and coordination with instructors and facilitators
- Implementing Training for Trainer on Capacity Building for Local Government and Community in Flood Early Warning System in DKI Jakarta which is expected to produce number of trained, skilled and motivated participants with ability to bridge the gap between government, community, CBO (Community Based Organization) and NGO (Non Government Organization).

Implementation:

The development of the curriculum and Module for training material was implemented during the month of May to June 2009. Besides that, the other preparation such as designing training agenda, determining instructors and facilitators, venue and inviting the participant was also done during that time. TOT on Capacity Building for Local Government and Community in Developing Flood Early Warning System in Jakarta had been conducted on June 8 to 11, 2008 in PKK Building (South Jakarta

City). The training was attended by 40 participants, consist of Community Based Organization (CBO), community leader from Sub sub District of Kebon Baru and Bukit Duri; teachers (SMAN 8), RedCross (PMI) at provincial, city, sub district and sub sub district level; Satkorlak (Disaster Coordination Task Force at Provincial Level) and also observers from west java province. The purpose of the training implementation is to create the trainers for the community in disaster risk reduction in Jakarta, especially in South Jakarta City, Tebet Sub District, and Bukit Duri and Kebon Baru Sub Sub District. Several institutions such as Jakarta Provincial Planning Agency (Bapeda Jakarta), Public Work Agency (Dinas PU), Fire Department, Public Defense Agency (Trantib), Health Agency (Dinas Kesehatan) and Social Agency (Dinas Sosial), were also involved in the training. In the opening ceremony, representative of DKI Jakarta Provincial Government, Ibu Ir. Tuty Kusumawati, MM; South Jakarta RedCross, Bpk Irwan Hidayat; CBO, Ibu. Netty Prasetiyani were also invited and gave a speech in the event.

To achieve the TOT program goal and objective, the mechanism of disseminating and conveying the information was divided into 4 types of strategies which are lecture class, simulation, group discussion and movie show. In the lecture class, the materials given to participants are related to introduction of PROMISE program; integrated flood management; the challenges and problem of flood disaster management in Jakarta; meteorological early warning system in Indonesia; assessing flood risk both from scientific and community based perspectives; flood disaster mitigation; and also how to develop action plan and contingency plan at city and community level. The simulation sessions


Figure 10 : Several activities conducted in TOT

were designed to practice and support the materials that were given in the lecture class session and also to discuss the problem on flood disaster. Meanwhile the purpose of movie show is to give lesson learned on how to build integrated early warning system.

The training agenda was divided into 3 main agendas; they were the ceremonial agenda, the main agenda and supporting activities. The detail of training agenda implementation could be described as follow:

Figure 11 : Opening and Introduction Session

Main Agenda of the Training

Figure 12 : Group Discussion

As described before, that the mechanism of information in the training was divided into three strategies which are movie show, lecture class and simulation. Topic of lecture class and simulation is developed based on the designed curriculum. In the implementation, the designed schedule especially on lecture class had some modifications due to the availability of the speakers. The main agenda was conducted during at 7.30 am until 8.00 pm. In simulation session, participant will conduct discussion and worked as a group. In the next day, they had to performed group presentation and took examination about material given in the lecture class and simulation. The objective of the examination is to find out the level of participant's understanding on the training material. The result of the examination is also use to select the best participant and group in the training.

The participants were also taught how to use GPS. In the early morning starting at 5.30 am until 6.30 am, the participant had morning exercise such as marathon, aerobic etc. The detailed schedule of the training could be seen in attachment of the report. In the training, there are 10 speakers for lecture class. They are Harkunti P. Rahayu, Mohammad Bagus Adityawan, Muhammad Farid, Endro Santoso, Suhardjono, Zulrizka Iskandar, Teti Argo, Soleh Hadisutisna, Agus Bastian and Harry Harsono. Meanwhile, there are 4 facilitators who facilitating the simulation in the training and they are Budi Priyanto, Fitri Suhariyadi, Mardhiatul Asparini and Anin Utami.

Output (Product):

- Curriculum Developed
- Number of module/training material developed
- Number of instructors and facilitators involved
- Number of trained, skilled and motivated participants to support PROMISE Indonesia implementation under Project Component 2 and 4 (Activity 2.2 : *Capacity Building of Development Agencies for Enhanced CBDRR Interventions at Grassroots Level;* 2.3 : *Emergency Management & Response Planning at City Level;* 2.4 : *Development and Implementation of School Action Plan ;* 2.5: *Development of Flood EWS at Kelurahan Level* ; and 4.1 : Formation of Technical Working Group and Development of City-level Guidelines (DRRMP Framework).
- Number of trained participants with ability to bridge the gap between government, community, CBO (Community Based Organization) and NGO (Non Government Organization)

Modification

In overall, there is no significant modification in activity 2.1. But there is additional activity needed to be performed, which is monitoring and evaluation of the trained participant during implementation of PROMISE Indonesia both at government, community and School level which are described at the next sub section.

Additional Activities Performed

The additional evaluation of TOT implementation was basically emphasized on the performance of trained participants including the sustainability of the program through its snowballing impact. It is hoped that after training, the participants will become trainer in the community. The trained participant will also act as local facilitators to support CDM ITB in implementing PROMISE program both in Kelurahan Kebon Baru and Kelurahan Bukit Duri.

Based on the monitoring and evaluation to the trained participants after the training, it is found that the training was successfully to be able to build bonding between participants although they came from different background. However, it has been found further that not all participants (trainee) actively contributing the PROMISE program as trainer in their community, i.e. about half of the trainees who were still involved actively and supported PROMISE after the training. It was observed that only 16 trainees who were very active involved, 18 trainees can be classified as moderately involved and 6 trainees were not active at all.

There were several reasons found as the cause why the trainees were not active at all. First is that they live far away from Kelurahan Kebon Baru as project area. Most of them are also still young (student), work as newspaper agent, unemployment and volunteer. It seems that they do not have any confidence to be a trainer in their community. Second reason is almost of all participants from CBO "Yayasan Empati Sesama" were also act as political organization members and were also busy with their organization program (especially in political program). In the future, it is highly recommended that the sustainability of the program will be more successful if community leaders could also participated in the training and being actively involved as trainer/local facilitator in PROMISE activity.

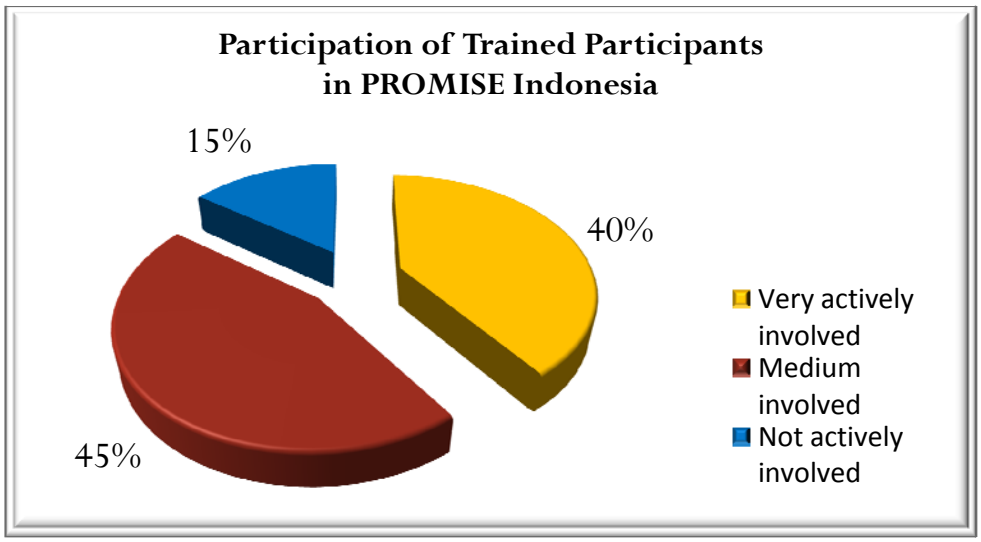


Figure 13 : Participation of Trained Participants in PROMISE Indonesia

Activity 2.2. : "Capacity Building of Development Agencies for Enhanced CBDRR Intervention – at Grassroot Level"

Objective:

- To assist the local government officers, community leaders, school communities and local NGOs in conducting their own risk assessment and developing their own action plans.

Scope of Work:

- There will be two stages of CBDRR activities under Activity 2.2, i.e. *town watching* and *action planning*. The *town watching* is a *participatory risk assessment (PRA)* mechanism for assessing the hazard, vulnerability and capacity of the communities.
- Result of community risk mapping and action planning will be reviewed and discussed through FGD workshop at the local level and observed by City-level officials and some invited observers.

Implementation:

Before implementing activity 2.2., there was conducted survey on 8th August 2008 aimed for town watching exercise and site selection. Coordination with head of Kelurahan Kebon Baru, Bapak Adam Cholid was also done regarding the plan of town watching implementation.

As preparation in conducting participatory flood risk assessment with town watching method, on 13th August 2008 Technical Working Group (TWG) meeting had been carried out at PMI Jakarta (Indonesian Red Cross) Headquarter. This TWG was attended by 15 person that are consist of ITB team, vice chairperson of PMI, secretary of PMI, Board member and Technical Team of PMI, vice head and council of Kelurahan Kebon Baru. This meeting discussed about preparation of Town watching implementation at Kelurahan Kebon Baru as method in developing participatory flood risk assessment

and the target participants in this event. They were communities from Kelurahan Kebon Baru consisted of TOT (Training for Trainers) alumni, member of PKK (Family Welfare and Empowerment), member of Kelurahan council, Youth organization (Karang taruna), School community, and member of Indonesian Red Cross at community level. As the meeting agreement, first town watching was carried out on 16th August 2008 with the starting point at Aula of Kelurahan Kebun Baru Office.

- **Mentoring and Implementation of Town Watching**

Town watching is a participatory risk assessment (PRA) mechanism for assessing the hazard, vulnerability and capacity of the community's method. The meeting and first town watching was conducted on 16th August 2008, attended by 40 participants. This event was opened by head of Kelurahan Kebon Baru, Bapak Adam Cholid, and continued with introduction of PROMISE Indonesia including the program and progress by Ibu Harkunti P. Rahayu, Explanation of hands on of the Townwatching and PRA methods by Anin Utami.

The 40 participants represented all of the RW (Rukun Warga) such as RW 1,2,4,5,6,8,9 and 10, most of them come from RW 1,2,4,8,9 and 10 as the flood prone area in Kelurahan Kebon Baru.

At this first supervised town watching conducted on 16th August 2008, the 40 participants were divided into 4 groups. Each group conducted survey on potential vulnerability and capacity toward flood disaster risk at designated RW, namely RW 1, 2, 4 and 8, among the 6 flood prone area, namely 1,2,4,8,9 and 10. At the end of the day, the group has been guided to develop the Flood Risk Map using participatory approach.



Figure 14 : Town watching event to assess community hazard, vulnerability and capacity toward flood disaster

Second round of town watching was conducted on 23rd august 2008, with the main agenda was to finalize the result of first town watching, including mapping the evacuation route and shelter using the base map.

- **Developing Participatory Community Action Plan (CAP)**

Figure 15 : Community meeting for developing participatory action plan at karang taruna youth center of RW 1, Kelurahan Kebon Baru

Participatory community action plan (CAP) was developed based on the participatory flood risk mapping developed through town watching and several others PRA methods for RW 1 and RW 2. The first action planning was conducted on 20th September 2008 at karang taruna Youth Center of RW 1 Kelurahan Kebon Baru. During the process of community action planning, the community from the RW 1 and RW 2 were facilitated by TOT alumni with the assistance from PROMISE Team.

Several actions effort to reduce flood disaster risks were highlighted by communities based on their primary needs, such as: Water Search and Rescue (SAR) Training, Emergency response equipment and Flood early warning system.

During the month of October, community at RW 1 and RW 2 continued develop detailed participatory community action plan. While other flood prone area RWs, such as RW 4, 8, 9 and 10 were at the initial stages of the process, at 18th October 2008, PROMISE Team conducted the mini workshop that taken place at Karang Taruna Center with main agenda to socialize Community Action Plan for RW 1 and RW 2. The mini workshop was attended by community of RW 1 and RW 2 and facilitators who's TOT alumni, with technical support and assistance from PROMISE team and facilitator. The completed action plan of RW 1 and RW 2 were authorized by the chairman of each RW. The mini workshop was also attended by Padma Karunaratne from ADPC Bangkok and Ibu Harkunti P. Rahayu as PROMISE coordinator.

Figure 16 : Activities of community in developing their flood risk map and action plan

At 19th October 2008, Focus Group Discussion was conducted at Kelurahan Kebon Baru Office to discuss participatory flood risk map and community action plan for Kelurahan Level. The participants were from kelurahan council, member of PKK (empowerment and family welfare), and member of karang taruna (youth organization). FGD which was attended by Padma Karunaratne from ADPC Bangkok, Harkunti P Rahayu and M. Syahril B. Kusuma from PROMISE Indonesia, was participated by 35 people. With technical support from PROMISE team The Kelurahan had agreed there were two primary evacuation shelters for 6 flood prone RW. They are RW 3 to accommodate evacuee of RW 1, 2 and 4 while RW 7 to accommodate evacuee from RW 8, 9 and 10.

On 12th November 2008, PROMISE team conducted monitoring and coordination with the local facilitators at community of RW 1 and RW 2 and community of RW 10. Besides coordination, PROMISE team also monitored the occurrence of flood in RW 4, 9 and 10 with inundation height reaching 100 cm. During the month of November, the activities in the community for capacity building of development agencies for enhanced CBDRR interventions at grassroots level had been completed. Community flood risk map of RW 1, 2, 4, 8, 9 and 10 were developed and community action plan of RW 1, 2, 4, 8, 9 and 10 had been developed as well.

Figure 17 : Flood condition at RW 4 and RW 10

Figure 18 : Community Based Hazard, Vulnerability and Risk Mapping

The result of community action plan at RW level in Kelurahan Kebon Baru could be seen as follow:
1. Cleaning their neighborhood and the river
2. Conducting training for first responder
3. Providing emergency response equipment such as life vest, genset, public kitchen equipments, boats, tent etc)
4. Developing flood early warning system in their RW (flood referencing)
5. Conducting Flood EWS drill

Output (Product):

- Community Based Flood Risk Map
- Community Action Plan

Activity 2.3. : "Emergency Management & Response Planning at City Level"

Objective:
- Developed Emergency Response Plan (Contingency Plan) at the City level,
- Establishment of framework of Emergency Response Plan or Contingency Plan for Jakarta that accommodate the city-level flood early warning systems and city-level emergency response plan, SOP for Emergency Operational Centre and it should be improve of city-level emergency services.

Scope of Work:

- Data collection through literature study and interview
- *Technical Working Group* meeting to complete the result and obtained information related to the study
- Communication and substances simulation for testing disaster management SOP of Crisis Center involved institution at national level i.e. BMKG, BNPB, provincial level i.e. Crisis Center, public works agency and kelurahan level i.e. Posko Kelurahan.

Implementation:

The first activity was conducted technical working group at Bapeda (Regional Planning Board) of JPG on 16th October 2008. The TWG meeting was attended by ITB and PROMISE partners such as: Jakarta Provincial Government, Meteorology and Geophysics Agency and Indonesia Red Cross. In this meeting, the role of crisis center, mechanism of warning and status of risk frame as a decision support tool for disaster management especially in respond phase were discussed.

As part of the activities in Emergency management & response planning at city level, the development of integrated flood EWS and development of Standard Operation Procedures for EOC (Crisis Center DKI) especially in responding dissemination of flood early warning was conducted on 19th January and 22nd January 2009. Those meetings are discussed about the final rundown of FEWS and as draft the standard operation procedures for integrated flood EWS, communication mechanism and tools used in integrated FEWS, preparation for the integrated flood EWS simulation that will be conducted on 1st February 2009.

The socialization of integrated flood EWS to the other institution of JPG involved in disaster management was conducted on 30th January 2009 at Bappeda Office. The meeting also focused on the sharing responsibility for FEWS simulation.

On 13th February 2009, the technical working group was carried out at Hotel Harris, South Jakarta, attended by 15 people come from ITB team, BMKG team, Crisis center team, Public work agency, Health agency, Spatial planning and environmental and Jakarta Indonesian Red Cross. The purpose of the meeting was to improve the city-level emergency services, i.e. to increase the capacity of Crisis Center DKI as the heart of the disaster management in DKI. Through this meeting, the team has also evaluated the integrated flood EWS conducted on 1st February 2009 in terms of the Crisis Center performance. Result of this meeting was planning to develop SOP for Crisis Center and to conduct communication and information simulation as a part of integrated flood EWS mechanism.

TWG meeting on 13th February 2009 was carried out for preparation to conduct communication and information simulation. Crisis Center had set up standard communication for warning dissemination with designated fax line and telephone line. Protocol content material for warning and information dissemination was also prepared by related institution i.e BMKG and Public work agency with coordination with PROMISE team.

The simulation was conducted on 1 July 2009 to test personnel preparedness and capability in response emergency situation specially Crisis Center personnel at provincial level until Kelurahan level. The simulation also involved BMKG and Public work agency as institution issued the warnings.

Output (Product):

- SOP Crisis Center on communication mechanism in responding Flood Early Warning System

Activity 2.4. : "Development and Implementation Of School Action Plan"

Objective:

- To enhance the capacity of school in reducing the flood risk at school area.
- To increase school preparedness through disaster risk reduction efforts which is conducted by

school community itself

- To understand flood hazard threat condition, vulnerability and capacity of school toward flood disaster
- To increase knowledge and skill of school community in developing school based action plan

Scope of Work:

- To maintain collaboration with the school in developing School action plan
- To conduct participatory school-based risk assessment through town watching and the development of school-based action plan
- To facilitate implementation of selected initiative in School Based Action Plan

Implementation:

Preliminary coordination to site location i.e SMAN 8 as school pilot project was carried out on 8th August 2008. This coordination was conducted as opportunity approach in implementing school program in PROMISE activities at SMAN 8.

The 13th August 2008 TWG, Pak Hamid the alumni of TOT and has representing teacher from SMAN 8 attended the TWG meeting conducted at Jakarta Indonesian Red Cross head office for further coordination.

During the town watching and mentoring on 16th August 2008, the SMAN 8 representatives (i.e. 4 students and 2 teachers from SMAN 8) participated in the town watching implementation which is conducted at Aula of Kelurahan Kebon Baru Office.

A follow up coordination meeting at school had been conducted on 20th September 2008. Team PROMISE were accepted by the vice of Headmaster for infrastructure and Public relation sector, Bapak Purwanto and Bapak Yani. During the coordination meeting, several finding related flood disaster were found such as:

- ✓ Total school area 6,600 M2, building coverage area 6,000 M2 and consisting 50 class room with total school population about 2,000 students.
- ✓ School building had been heightening and retrofitted by three times to anticipate future flood;
- ✓ The school fences was made of holes brick wall with to channel out the flood water
- ✓ Good drainage system connected to the Ciliwung River
- ✓ Designated the laboratories and others electronics facilities in second or third floor, while the first floor only as class activities
- ✓ There was a student's scientific group at the school, who won the national science competition by developing flood detection tool.

Figure 19 : School DRR Initiatives on : Holes at the wall fences around the school and drainage system connected to Ciliwung River

After coordination on 8th August 2008 and the survey on 20th September 2008, the workshop with agenda developing school action plan in facing flood disaster was conducted on 18th October 2008 at SMAN 8. The opening ceremony of the workshop was attended by Padma Karunaratne from ADPC Bangkok, Harkunti P. Rahayu and vice of headmaster Yani Bayani. The participants were teachers, students and the school administration staffs potential vulnerability and capacity of school toward flood. Followed by development of risk mapping was action plan. Some town watching approach was conducted to identify Results of this activity were School Flood Risk Map and draft of School Action Plan.

Figure 20 : Padma Karunaratne and Headmaster of SMAN 8 displayed the flood disaster risk mitigation poster from PROMISE Indonesia and several activities at SMAN 8 in developing flood risk map and action plan for school

Draft School Action Plan in anticipating flood disaster which is formulated on October 18, 2008, always improved by school and consulted to CDM team. The result of school action plan improvement was informed and communicated by SMA 8 coordinator (Bpk. Hamid) to CDM team.

CDM team reviews the school action plan to make priority initiatives which will be implemented and funded by PROMISE Indonesia. Initiatives selection was based on several criteria on the following :

1. Relevancy of the initiatives to the whole PROMISE Indonesia program
2. Level of Priority initiatives in action plan which has selected by the school based on their time availibility
3. Duration of program implementation was not long time needed (related to the PROMISE Indonesia will finish on July 2009)
4. Willingness and aspiration of SMA 8 Jakarta for implementing action plan initiatives under PROMISE Indonesia framework

Based on the above criteria, the implementation of action plan initiatives was conducted under PROMISE Indonesia framework i.e. "Development of Education Material on Flood Disaster Early Warning System and Disaster Risk Reduction Efforts which patched in School Information Board". Process of initiative implementation was conducted on July 2009 through conducting several steps were the following :

1. Coordination with the school to obtain information about school information system and existing facilities for supporting flood early warning system
2. Coordination with the school on the rule of the school in Integrated Flood Early Warning System.
3. Developmet of poster on flood early warning system in the school
4. Development of design and lay out of education material which is patched in school information board
5. Development of School Information Board
6. Delivery of School Information Board

Output (Product):

- School Action Plan

- Poster on Early Warning School
- Information Board contain Disaster Risk Reduction effort and Early Warning System

Modification :

The implementation of school action plan initiatives was conducted under PROMISE Indonesia framework was second priority i.e. "Development of Education Material on Flood Disaster Early Warning System and Disaster Risk Reduction Efforts which patched in School Information Board". In the CDM ITB review, there was important to implement school based action plan initiative in the first priority i.e. "Being a part of Integrated Flood Early Warning System in DKI Jakarta". However, until the end of June the school SOP has not been ready yet, due to many school activities at the end of school year, such as exams, report distributions and 3 weeks holidays and preparation of acceptance for new students. Based on mutual aggrement between CDM ITB and School, implementation of initiative was modified to second priority in school action plan.

Activity 2.5. : "Development of Flood EWS at Kelurahan Level"

Objective:

- To assist the establishment of community level flood referencing system,
- To increase the community understanding on Early Warning message
- To assist the installation of flood marks and billboards at designated Kelurahan,
- To provide communication equipment for base station (community crisis center) at designated Kelurahan,
- To assist the establishment of data recording and data display methodology, and
- To assist the development of emergency response planning at community level.

Scope of Work:

- Prior to the implementation, a TWG mini-workshop will discuss the design of community-based action plan, followed by socialization through FGD workshop. The FGD aims for identifying further the responsible person and improving the establishment of Flood EWS at Kelurahan Level.
- During the implementation, the experts of ITB will assist and provide technical guidance as well as to facilitate the development of action plan. To implement all of these activities at the Kelurahan level, a sum of fund will be allocated from the PROMISE project budget for assisting the establishment of emergency response plan (contingency plan) at community level, installation of flood marks and billboards, communication equipment to enhance the community crisis center, and establishment of data recording and data display methodology.

Implementation:

On 8th November 2008, PROMISE team conducted a coordination meeting with local facilitators in order to develop flood reference as community-based flood EWS at 6 RW's which are prone to flood in Kelurahan Kebon Baru i.e: RW 1, 2, 4, 8, 9 and 10. In this meeting, several ideas about development flood reference were discussed. There were:

- ✓ Designing the type of Flood Reference, the color and the meaning of each color, as well as the height of each color;
- ✓ Standard operation procedures of each color;
- ✓ The selection of Flood Reference location;
- ✓ The number of Flood Reference needed for each RW.

Table Top Simulation on 30th November 2008

The development of draft of standard operation procedure of integrated flood EWS at Kelurahan Kebon Baru was conducted on 30th November 2008 through the table top simulation. This event was conducted in order to identify to responsible party in managing flood disaster, as well as the communication and coordination should be done. Several RW has been able to develop standard communication and coordination in FEWS at RW's level. Through the table top simulation, the FEWS was developed and simulated with role of each kelurahan stakeholder, such as: Lurah (head of Kelurahan), kelurahan council member, the chairman of RW and RT and the field coordinator in each RW's. In this event, simulation of FEWS was facilitated by PROMISE team from ITB, representation from health department as member of disaster management unit of JPG. The event was attended by 15 participants.

Figure 21 : Table top simulation at Kelurahan Kebon Baru office

The second table top simulation at the community level conducted on 20th September 2008 at aula Kelurahan Kebon Baru was attended by 30 participants including: head of Kelurahan Kebon Baru, kelurahan council, chairman of RW and RT, field coordinator in each flood prone RW, kelurahan coordination post and Indonesian Red Cross. During this event, the flood EWS mechanism in kelurahan level was discussed; available tools for dissemination of warning, information and coordination, and the protocol content of information. Table top simulation of integrated flood EWS at kelurahan level were simulated using coloring threads showing the difference of flow of warning, information and coordination.

The third and final table top simulation was conducted on 11th January 2009 at aula Kelurahan Kebon Baru as a preparation for integrated EWS flood simulation and finalization of SOP (standard operation procedure) for early warning system at kelurahan level. The table top simulation was attended by 30 participant incharged for FEWS at Kelurahan Kebon Baru, i.e. head of Kelurahan Kebon Baru, Kelurahan council, the chairman of RW and RT and staffs of kelurahan coordination post of RW 1, 2, 3, 4, 6, 7, 8, 9 and 10. It was agreed that the simulation will be concentrate on the RW 1, 2, 3 and 4. While other RW will learn.

Assisting the development of emergency response planning at community level

During process in planning of community action plan implementation, PROMISE team and community intensively conducted meeting and coordination. One of the meeting coordination was conducted on 11th December 2008, with main agenda to discuss the existing emergency response mechanism during the flood disaster and the problems.

On 5th February 2009, Focus Group Discussion was conducted at Kelurahan Kebon Baru with the agenda to develop Standard Operation Procedure (SOP) for Public kitchen (mass cooking) at Kelurahan and RW level.

Implementation DRR activities in Kelurahan: Installation of flood marks and billboards

Flood reference as tool in integrated flood EWS at community level was built during this month. With assistance from PROMISE team and input from the community, flood references consisted of 5 colors with each color has their own standard operation procedure. The colors were green, yellow, orange, blue and red. Green means for securing valuable things to the higher place; yellow means for starting to evacuate the children, elderly, pregnant and illness; orange means for evacuating all the people lived at first floor; blue means for evacuating for all the residents including stay at second and third floor. During on 16 – 20th December 2008, two flood references were built for each RW 1, 2 and 10 and located at the lowest land in each RW as well as at the river bank.

Figure 22 : Flood Reference in Kebon Baru

First Rehearsal for Integrated Flood EWS

As preparation for integrated flood EWS simulation on 1st February 2009, first rehearsal was conducted on 25th January 2009. This event also to test the Standard operation procedure for integrated floods EWS at kelurahan level. The rehearsal was participated by 50 people, i.e head of kelurahan, kelurahan council, chairman of RW and RT which are prone to flood, field coordinator for coordination post in each RW and kelurahan as well as Jakarta provincial governments organization members of disaster coordination agencies participated in this rehearsal were Health department and Social department. Health department was demonstrated health simulation such as triage and field hospital, while Social department simulated mass cooking together with members of Family Welfare and Empowerment as the assistant.

Other institution participated on this rehearsal were BMKG (Meteorology, Climatology and Geophysics Agency) that issued the extreme weather as flood early warning and Indonesian Red Cross that simulated water safety and rescue in Ciliwung River.

Figure 23 : Mass cooking and water rescue demonstration

Figure 24 : Basic emergencies equipment from PROMISE Indonesia

As part of Simulation preparation, on 11 – 16th January 2009, some flood reference were built at RW 4, 8 and 9. Each RW had 2 flood references built at both the lower level and river bank. The completion of building flood references was delayed because of the flood occurrences in the pilot study area, Kelurahan Kebon Baru.

PROMISE Indonesia has provided a basic necessary flood emergency equipment for each RW, they are: megaphone for warning dissemination, life vest, boot, flashlight, emergency bag with the standard medicines, rope for rescue and mass cooking equipments.

Establishment of Data Recording and Data Display Methodology

On 5th February 2009, emergency response tools such as: safety life jacket, boot, flashlight, emergency bag with standard drug, rope for rescue and mass cooking tools has been provided for RW 8 and RW 9 and 10.

During the month of February 2009, coordination with Kelurahan Kebon Baru still continued. Coordination as monitoring and evaluation with field coordinator of RW was carried out for preparations develop flood reference in flood plain of the Ciliwung River at their RW area, such for RW 1, 2, 4, 8, 9 and 10. Meanwhile monitoring and evaluation regarding the emergency response tools providing also continued. Providing RW 4 with boot for evacuation and post flood disaster were considered. Other coordination conducted by PROMISE team was the assessment to provide the communication for warning dissemination as a part of integrated flood EWS mechanism at Kelurahan level.

Output (Product):

- SOP of Flood Early Warning System at Kelurahan level
- Installation of Flood Reference
- Basic emergencies equipments for each flood prone RW in Kelurahan Kebon Baru
- Communication equipment (fax machine) to support dissemination of FEWS
- Establishment of AirOne (community group on Disaster management in RW 1 Kelurahan Kebon

Baru)

Modification

In this activity, there are several modification activities such as mentoring and implementation of townwacthing and development of community action plan was conducted and revised for several times; additional field surveys during flood disaster in Kelurahan Kebon Baru. Meanwhile establishment of data recording and display methodology was modificated to providing basic emergency equipments and communication equipment (telephone/facsimile machine).

Additional Activities Performed

Coordination meeting with community was conducted many times based on need and community request. Therefore there are many additional activities performed in order to finalize the implementation of townwatching and development of community action plan. During the project, flood disaster had occurred in Kelurahan Kebon Baru several times, and CDM ITB conducted field survey to documentation, monitor and evaluate the readiness of the related stakeholder in the area. Establishment of the data recording and display methodology was modificated due to the community already has the personal computer/laptop in crisis center Kelurahan level and billboard in each RW flood post. Based on the community action plan, they proposed for providing the basic emergency equipment such as life vest, mass cooking equipment, boots, flashlight, and etc. Meanwhile to support dissemination of the FEWS in Kelurahan Kebon Baru, PROMISE Indonesia provided faxcimile machine.

Activity 2.6. : "End To End Flood Early Warning System (EWS) Drill"

Objective:

- To test the three main EWS components simultaneously, i.e. readiness of the Flood EWS, responsive actions of task forces of Satkorlak of Jakarta City related to emergency response and preparedness of *communities at risk* from designated Kelurahan.

Scope of Work:

- Prior to the implementation of the drill, some preparation works will cover the readiness of community crisis center with its appointed personnel, the readiness of existing JPG Crisis Center and the response of first responder of both city and community level, as well as the post disaster related task forces of Satkorlak PB. These works will carried out by the ITB team and discussed through TWG mini-workshop.
- End-to-End Flood EWS drill will be conducted at designated *kelurahan (sub-sub-district)* and participated by approximately 250 people. It covers the whole stage of early warning mechanism, i.e. disseminating warning from BMG to the City EOC followed by the response of City Incident Commander to activate the Crisis Center and disseminating warning to the community crisis center. At the community crisis center, the designated person in charge should

convey the warning to the community by using the warning mechanism identified and developed during the PROMISE Project.

Implementation:

Prior to the implementation of the drill, some preparation works will cover the readiness of community crisis center with its appointed personnel, the readiness of existing JPG Crisis Center and the response of first responder of both city and community level, as well as the post disaster related task forces of Satkorlak PB. These works had been carried out by the ITB team and discussed through TWG mini-workshop on January 30 to 31, 2009. Coordination and final rehearsal involved participants about a hundred persons from Kelurahan Kebon Baru, implementing unit from South of Jakarta and member of disaster coordination unit for DKI Jakarta such as Health department, Public work department, Social department, Civil defense and Crisis Center DKI. Coordination with the national institution related with FEWS, i.e. BMKG and BNPB were taken place.

Integrated Flood EWS was carried out on 1st February 2009 in Jakarta, using the End to End concept starting from the national level, Jakarta level up to community level. At the community level it was conducted at Kelurahan Kebon Baru. The whole End To End Simulation have involved PROMISE team, member of Disaster Management Unit such as Public work department, Health department, Social department and Jakarta Indonesian Red Cross; Crisis Center DKI Jakarta and Coordination Post of Kebon Baru; national institution i.e BMKG and BNPB. Each of the participants has their own role. (See the Integrated Flood EWS mechanism).

Figure 25 : The inauguration of End To End Integrated Flood EWS simulation by The Governor of Jakarta, Fauzi Bowo and his dialog with the communities at simulated refugee camp in Kelurahan Kebon Baru

This event was inauguration with The Governor of Jakarta, Fauzi Bowo and participated by 700 people consisting of Staff and head of institution of Jakarta Provincial Government, and communities at Kelurahan Kebon Baru.

Figure 26 : Mass cooking simulation by Social agency and Kebon Baru's PKK member

Early warning dissemination from BMKG informed the potential extreme weather, while information of river water level was issued by Public work Department of JPG to the designated agency such as Crisis Center DKI, Coordination Post of Kelurahan Kebon Baru and BNPB as interface agency was implemented using fax and phone. The warning was then being responded by series of response activity according to SOP of Flood Reference at community level, i.e. starting from packing and evacuation through designed evacuation route, refugee camp establishment, water safety and rescue, mass cooking, and field hospital.

Health Department, Social Department and Jakarta Indonesian Red Cross was involved in the simulation of emergency response activity such as: health simulation like triage and first aid by Health agency team, simulation of mass cooking by social agency team and water rescue by Jakarta Indonesian Red Cross team.

The participated community of RW 1, 2, 3 and 4 as well as other flood prone RW (RW 7, 8, 9, 10) was successfully shown by their enthusiasm to follow the community SOP in flood warning response. The leadership of Lurah and Head of those RW that has been collaborated with PROMISE team very closely, has contributed significant role in attracting the participation of those community.

Figure 27 : Collaboration between water rescue team from PMI and Health agency in handling victim

Output (Product):

- 300 trainers (Local Government and Community level) for disseminating SOP Integrated Flood Early Warning System in DKI Jakarta
- Scenario of End to End Flood Drill

Modification

In the implementation of the End to End Flood Drill, there is modification on the number of participant that involved in the drill. It is approximately more than 700 persons participating in the event. After the drill, PROMISE Indonesia and other stakeholder was also conducted evaluation for the drill.

Additional Activities Performed

Figure 28 : Drill Evaluation Meeting

In the afternoon, after the simulation finished, PROMISE-Indonesia team and all committees conduced evaluation meeting in BLK Telkom. Based on the review on implementation of integrated flood early warning system in DKI Jakarta Simulation, it is founded that the communication using Handy Talky between Officer on Duty in Crisis Center at Kelurahan Kebon Baru and Lurah in Starting Point was disconnected due to there was no signal. Besides that, the mechanism of flood early warning was quite different with the scenario due to it was adjusted with the allocated duration of time.

7.4 Training and Public Awareness

Activity 3.1. : "Education Campaign Material Develpment"

Objective:

- To increase knowledge and understanding of community abour flood disaster phenomena.
- To increase community knowledge on what should be done before, during and after disaster.
- To overcome misunderstanding and apathy of community toward the flood disaster phenomena so that they could preared by knowing what should do before, during and after flood disaster.
- To develop user friendly education material on flood disaster so that the community could understand easily.

Scope of Work:

- Literature Study
- Defining the type of media for disseminating education material on flood disaster
- Review material used criteria defined
- Defining the theme for education material
- Development of model prototype for disseminating education material on flood disaster
- Review model prototype by resource person/experts
- Revised model prototype
- Disemination education material on flood disaster

Implementation:

Literature study was collection and review various literatures related to flood disaster. The type of literatures which was collected was books, leaflets, poster and online literaturw both from Indonesia and overseas. Several literature was used in supporting activity 3.1. was the following: Banjir ! Cerita tentang peran masyarakat saat terjadi banjir, Yayasan IDEP; Petunjuk praktis : partisipasi masyarakat dalam penanggulangan Banjir, Unesco, Desember 2007; Integrated Flood Management, The Associate Programme on Flood Management, 2004; Kesiapsiagaan Bencana Berbasis Masyarakat Strategi dan Pendekatan, Palang Merah Indonesia Pusat, Mei 2006; Dynamic Flood Warning System : An Integrated Approach to Disaster Mitigation in Bangladesh, Farah Aziz, ACRoRS, ; FEMA, After a Flood; FEMA, Before a Flood; FEMA, During a Flood; FEMA, Flood; FEMA For Kids Disaster Supply; FEMA For Kids Floods; Pedoman Teknis Manajemen Banjir, Sekretariat TKPSDA, 2003; Pedoman Penanggulangan Bencana Banjir, Bakornas PB, 2007/2008 etc.

There were three type of media used for disseminating education material were poster calendar, leaflet and e-book. The theme delivered in three kind of medias were similar but different in amount of information and detail information was conveyed. Poster calendar used in disseminating education material because this one of familiar type/media for community. Meanwhile leaflet used because has simple form (only one exemplar) and could print mass production and could be giving directly to the target community. Poster calendar could be patched on the strategic place so the community could read easily. Meanwhile e-book was developed because based on the existing data; almost 80% schools in Jakarta have internet connection. The e-book could be uploading on the CDM-ITB website, Jakarta Provincial Government and ADPC. The target of community in flood education material dissemination are public community and school community.

The literature was collected in the previous stage, was reviewed. The criteria of information selection were that the information conveyed was base information on flood disaster phenomena and its occurrence, also information on measures that should do before, during and after flood disaster. Specifically for the e-book, because information conveyed more detail, the material selected were related to disaster management cycle from prevention, mitigation, preparedness, early warning and recovery toward flood disaster. All the material collected was selected based on update information and were suitable with target community. The material was identified and classified based on general material, easy to understand and easy to apply by target community.

After classifying information, then were defined the themes education material for each type of media. The themes are the following :

a. Calendar poster : Flood and hydrological cycle; Characteristics of flood prone area; Flood disaster and the cause; Type of flood; Flood Disaster Management; Government efforts before, during and after flood; The measures that must be done by community before, during and after flood disaster; Emergency Kits; and flood disaster risk reduction through environment education.
b. Leaflet : Simulation on Integrated Flood Early warning System in DKI Jakarta; *Flood Reference*; Products of PROMISE Indonesia that could be accessed by community.
c. E-book : Knowing Flood Disaster; Knowing on Flood Disaster Risk Assessment; Flood Disaster Management (flood disaster risk reduction through mitigation and preparedness toward flood disaster, response during flood disaster and recovery after flood disaster); Knowing on How to Develop Community Based Action Plan.

In developing prototype of the model education campaign material, some communication strategies were taken. Developments of education campaign material have considered the method that will be easily accepted and understood by the target community. Thus the development of the material considers such factors : visualization, illustration and text. In developing prototype model, it is important to integrate the content of material, visualization, illustration and text so easily understood by target community

Model prototype was review covered contain information, visualization, illustration and text. The experts were Harkunti P. Rahayu, M. Syahril B. Kusuma and Dr. Hadi Kardhana. The process of reviewed were from first draft, draft until final prototype of each type of media education material on flood disaster such as leaflet, calendar poster and e-book.

After obtaining input from resource person/experts about content information, visualization, illustration and text, model prototype was finalized and reproduced. The leaflet was reproduced as 500 exemplar and Calendar Poster as 10 set. Meanwhile e-book was uploaded into CDM homepage.

Education material on flood disaster was disseminated in PROMISE Indonesia such as Disaster Preparedness Exhibition at Lapangan Monas on 21-25 October 2008. Beside dissemination also was conducted through :

- **Leaflet** : disseminated to community of Kelurahan Kebon Baru Jakarta Selatan specifically RW 1 and RW 2 in various activities such as community meeting, religious lectures and other PROMISE activities (table top simulation at kelurahan level, rehearsals of simulation on Integrated Flood Early Warning System in DKI Jakarta).

- **Calender Poster** : ware gave to several parties to patch in strategic public places in order to community was informed on flood education material. The parties were accepted calendar poster were the following: SMA 8 Jakarta; Flood Observation Post of RW 1 (Posko Banjir RW 1); Flood Observation Post of RW 2 (Posko Banjir RW 2); Flood Observation Post of RW 3 (Posko Banjir RW 3); Flood Observation Post of RW 4 (Posko Banjir RW 4); Flood Observation Post of RW 8 (Posko Banjir 8); Flood Observation Post of RW 9 (Posko Banjir 9); Flood Observation Post of RW 10 (Posko Banjir 10); Flood Observation Post of Kelurahan Kebon Baru (Posko Banjir Kelurahan Kebon Baru).

- **E-book** : was uploaded on CDM-ITB website (http://pmb.itb.ac.id) so the community that could access internet could read the e-book as one of reference of education material on flood disaster.

Output (Product):

- Leaflet
- Calendar Poster on Flood and its mitigation
- E-book on Flood and its mitigation

Activity 3.2. : "Capacity Building of Emergency Mangement and Response at DKI Level through Training For First Responder"

Objective:

- To increase preparedness and capacity toward flood disaster among the first responder in Kelurahan Kebon Baru, South Jakarta
- To prepare 30 adequate skilled personnel in emergency response during disaster
- To give guidance for participants in responding emergency situation during flood disaster
- To disseminate information about flood disaster so that it will increase capacity in responding emergency situation during flood disaster

Scope of Work:

- To maintain collaboration with the parties involved in the training such as instructor from various agency, participants from various community representative (lurah, sub sub district board, commando post and other)
- To implement the training for first responder which involved 40 participants, they were representing first responder when emergency situation during disaster in Kelurahan Kebon Baru

Implementation:

Training for first responder was conducted in two days, 29 – 30th November 2008. The training material consisted of: theory and practice on mass cooking management at the post the disaster, post disaster health response, continuing emergency raft and safety water rescue. The material was conveyed by instructors from various institutions (ITB, Health Agency, Social Agency-Dinas Bintal Kesos, and Indonesian Red Cross).

This training was attended by 45 participants, from member of PKK, youth group, field disaster coordination, school community of SMAN 8 and observers from head of Kelurahan Kebon Baru, kelurahan council members, chairman of logistic stock piling, chairman of RW and crisis center of kelurahan. The training was also attended by observer and TOT trainee alumni as local facilitator. Beside as a participant, observer and local facilitator were also observed and gave input to CDM ITB to improve other training program.

Figure 29 : Activities during training for first responder, 29 -30th November 2008

This activity was not only one of PROMISE component project, but also a follow up activity to cover community expected in Action Plan which is developed in other activity of PROMISE component project.

In overall, it can be said that implementation Training for First Responder on Flood Preparedness at Kelurahan Kebon Baru, South Jakarta considered to be successful. The participants have learned several tings to fulfill their expectation in their Action Plan. The good responses are shown from the observation form circulated to the observer. Several aspect in training material, training participants and general training implementation obtained high score/value from the observers.

Output (Product):

- Trainer
- Training material

Modification:

There was several modifications in implementing Training for First Responder due to community request and fulfill community expectation in their action plan. Modifications were such as training

material, number participant, place of the training and number of days.

Additional Activities Performed:

Training for First Responder was replicated by community in RW 1 Kelurahan Kebon Baru by using their own resources, sponsors and also support by PROMISE. The training materials are focused on water rescue and basic life needs. The training was conducted on 11th January 2009 in Youth Office in RW 1 and involving about 60 participants. The instructors are from Indonesian Red Cross (PMI) of South Jakarta. In this event, the Chief of RW 1 was also declaired a youth organization for Flood Disaster Management that is called "*Air One Rescue Team".*

Figure 30 : Activities in Training for First Responder that Conducted by Community in RW 1

The personnel of *"Air One Rescue Tim"* are all participants from the training that consist of youth organization, women organization (PKK), staffs of RW and Field Coordinator of RW Post/Crisis Centre. They also will be involved in rehearsal of End to End Flood Early Warning System Drill on 25th January and the drill itself on 1st February 2009.

7.5 Advocacy for Mainstreaming Disaster Risk Management (DRM) in Urban Governance

Activity 4.1. : "Formation of Technical Working Group and Development of City-level Guidelines (DRRMP Framework)"

Objective:

- To form a Technical Working Group for providing advocacy for :
  a) To identify inter-sector roles to develop a sector based framework for integrating DRR in routine functions and to develop comprehensive guidelines for DRR integration into sector based work culture
  b) To identify courses of action to integrate disaster risk reduction in the city development plan

Scope of Work:

- Data collection through study literature and interview
- Establishment of Technical Working Group
- Technical working group meeting to identify courses of action to integrate disaster risk reduction in the city development plan

- Technical working group meeting to identify inter-sector roles to develop a sector based framework for integrating DRR in routine functions and to develop comprehensive guidelines for DRR integration into sector based work culture
- Focus group discussion to obtain input and socialize the result
- Conducting survey to identify courses of action to integrate disaster risk reduction in the city development plan

Implementation:

The initial activity of this component was establishment of Technical Working Group consisted of key City Officials and experts. The serial intensive meetings had conducted to achieve the objectives activity. The TWG member was fully involvement in process to identify courses of action to integrate disaster risk reduction in the city development plan. The team worked to identify inter-sector roles, developed a sector-based framework for integrating DRR in routine functions, and developed comprehensive guidelines for DRR integration into sector based work culture through establishment of sub-committees with inputs from experts and other stakeholders' organization. The teams were from Crisis Center, Regional Planning and Development Agency (BAPPEDA), Health Agency, Social Agency, Civil Defense, Indonesia Red Cross Jakarta Chapter, Public Works, Fire brigade and Disaster Management Agency and etc. Besides that group, there was also an expert team consists of National Agency for Disaster Management (BNPB), Meteorology Climatology and Geophysical Agency (BMKG), ITB and JPG officer that working together to develop the SOP FEWS and DRR guideline through a series of meetings. Result of activity socialized through a FGD mechanism. The following paragraphs will describe the implementation of TWG meeting for each objective.

Objective a : to identify inter-sector roles to develop a sector based framework for integrating DRR in routine functions and to develop comprehensive guidelines for DRR integration into sector based work culture

The six TWG members has conducted intensive coordination meeting after during they attended a Regional training course on Mainstreaming Disaster Risk Reduction in Local Government conducted on 1st – 5th September 2008 at Manila. After the training hour, the six TWG members were from Regional Planning Board of DKI Jakarta Province (Vera Revinasari), Crisis Center of DKI Jakarta Province (Bobby Aryono), Meteorology and Geophysics Agency (Suhardjono), Indonesian Red Cross (Irwan Hidayat), and Harkunti P. Rahayu and Mardhiatul Asparini from Institute Technology Bandung (ITB) discussed on the role of Crisis Center and existing mechanism of flood early warning system, as well as the new mechanism of Flood Early Warning System (FEWS) proposed to JPG. TWG Team tried to develop an efficient and effective mechanism of Flood EWS with empowering all the existing system of Crisis Center DKI.

Continued the meeting in Manila, on 13th September 2008, the second meeting of TWG was conducted at BMG regional II. The participants of the meeting are from ITB, BMG Regional II, Public Defense and Public Protection of JPG, Infrastructure Administration Office of JPG and Indonesia Red Cross. The TWG meeting had also discussed the capability of the existing BMG devices on monitoring the meteorological situation and condition.

Figure 31 : TWG meeting and radar data at BMG regional II which is give information of rainfall prediction and its intensity

On 20th October 2008, a Focus Group Discussion (FGD) to discuss about role of crisis center, mechanism of flood warning and flood initiative by JPG were carried out at DKI Province. The participant consists of PROMISE team from ITB, the local government of DKI Jakarta from province until kelurahan level, Meteorological and Geophysics Agency (BMG) and Jakarta Indonesian Red Cross. The FGD was conducted through plenary discussion as well as two focused discussion leaded by M. Syahril B. Kusuma from ITB and Suhardjono from BMG (Meteorology and Geophysics Agency). The first group discussed about the flood initiative in government program, such as at Public Work Department, Social Welfare Department and Regional Planning Board, while the other group discussed about the role of EOC (Emergency Operation Center) of JPG in term of Crisis Center. The FGD was attended by Padma Karunaratne as the PROMISE senior program manager of ADPC.

Figure 32 : Focus group discussion at Regional Planning Board of JPG on 20th October 2008

On 8th November 2008 TWG meeting for the flood EWS mechanism were discussed, warning dissemination and the tool that will be used as dissemination tools. The meeting attended by 14 participants from ITB, BMG regional II, civil defense of JPG, health department, administration office of JPG and FORBI (Federation of Indonesia Disaster Radio Operator).

Figure 33 : Technical working group meeting at BMG Regional II

To build a sound FEWS mechanism, a series of in depth data collecting and survey to the JPG departments involved in Disaster management were conducted on social welfare department, crisis center of JPG and public work department. These surveys were conducted on 20th November and 28th November 2008.

On 16th December 2008, coordination was conducted with public work department, health department and social welfare department of JPG to obtain further products and works in order to develop standard operation procedure of integrated flood EWS. During this time, PROMISE team obtained information about the duties and function for each JPG institution in facing the flood disaster.

On 17th December 2008, TWG meeting was conducted at crisis center DKI to develop integrated flood EWS rundown for flood simulation which was then be used to base development of standard operation procedure for integrated flood EWS. During the meeting, member of TWG discussed about available communication tools used in disseminating the warning and information as well as coordination between the institution and the stakeholder involved in integrated flood EWS.

Figure 34 : Technical working group meeting at Crisis center of JPG

During the month of January 2008, intensive meeting, coordination and courtesy to JPG were conducted in order to finalize the guideline of integrated flood EWS for DKI Jakarta. The meetings were conducted on 3rd January 2009 at Institute for Research and Community Service, ITB Bandung with 18 participants from ITB (Bandung Institute of Technology), BMKG (Meteorology, Climatology and Geophysics Agency), BNPB (National Disaster Management Agency), Jakarta Provincial Governments officials and Jakarta Indonesian Red Cross.

Figure 35 : Situation during technical working group PROMISE on 3rd January 2009 at LPPM, ITB

Courtesy to head of BMKG was conducted during this period. Harkunti as PROMISE coordinator and Suhardjono from BMKG regional II had courtesy call to the Director General of BMKG on 19th January 2009 to formally proposed the BMKG involvement in integrated flood EWS for DKI Jakarta. In the scheme of dissemination flood early warning, BMKG is a national institution who issues the warning on potential extreme weather in the area and the updated information in six hourly on hourly basis, which depend on the situation of weather.

General coordination with national institution, i.e. BMKG and BNPB, Jakarta Provincial Government especially the member of disaster coordination unit participated in integrated flood EWS for DKI Jakarta until level Kelurahan Kebon Baru were conducted on 27th January 2009 by PROMISE team. The coordination was for the preparation among of the parties that involved in integrated flood EWS DKI simulation.

In depth coordination with Pak Widada Sulistya as head of the center for data system and meteorology information of BMKG conducted on 29th January 2009. The coordination was focused on the communication mechanism and dissemination information of potential extreme weather warning from BMKG to designated institution.

Courtesy to BNPB especially to the BNPB's Pusdalops (Control and Operation Center) was conducted too on 29th January 2009 with the agenda for the preparation of the simulation of flood EWS, BNPB is one of the interface agencies for warning dissemination in integrated flood EWS mechanism.

The SOP tested on the simulation of Integrated Flood Early Warning System in DKI Jakarta on 1st February 2009 used end to end approach.

Objective b : To identify courses of action to integrate disaster risk reduction in the city development plan

On 10th June 2009, the first TWG meeting to identify courses of action to integrate disaster risk reduction in the city development plan has been conducted in Tempo Doeloe JPG Office. In the meeting, the team discussed about mainstreaming DRR and Disaster Risk Management in DKI Jakarta. The meeting was opened by Bpk. Achmad Harjadi as Deputy of Governor, Spatial Planning and Environment Division. In his speech, Bpk Achmad Harjadi mentioned that in their new spatial planning regulation, the disaster risk issues had not been covered yet. Whereas this regulation will be effectively use for next 25 years and will be revised in each five years. Coordinator of PROMISE Indonesia, Ibu Harkunti P Rahayu also provided presentation on disaster risk reduction and its related issues. In her presentation, Ibu Harkunti described the need for formulating DRRMP in Jakarta based on National Regulation (UU) No.24/2007 about Disaster Management. The outline of developed DRRMP should follow the BNPB's guidelines No. 4/2008 related to Development of DRRMP. The guidelines also describe that the development of DRRMP is one of BNPB and BPBD's responsibility. The outline of DRRMP should be cover seven sections consist of : (1) Introduction (background, objectives, scope of work, base Regulation, definition, methodology), (2) General Description Area (Physical Condition,

Social Economic Condition, Policy and Regulation related to Disaster Management), (3) Disaster Risk Assessment (Hazard, Vulnerability/Capacity, Risk Assessment), (4) Disaster Risk Reduction Initiatives (Pre-disaster, during emergency response, and post disaster), (5) Disaster Management Mechanism (Pre-disaster, during emergency response, post disaster and disaster management mechanism), (6) Responsibilities and Resource Allocation (programs, implementer, funding), and (7) Conclusion. Besides that, the explanation about of flood hazard, vulnerability/capacity and disaster management was also given in the session.

Figure 36 : TWG meeting on 10th June 2009 at Tempoe Doeloe JPG Office

BNPB as one of expert in TWG represented by Bpk. Siswanto gave presentation related to organization of disaster management and establishment of Regional Agency for Disaster Management. He said that the existing organization of disaster management in DKI Jakarta is still called Satkorlak. Based on the National Regulation (UU) No. 24/2007, this organization should be reformed as BPBD in the future. Meanwhile the structure organization of BPBD is almost same with BNPB but there is no logistic and equipment division. In the last session, Bpk. Suhadjono representative of BMKG described about role and responsibilities of Crisis Center in Disaster Management. In discussion session, the participants facilitated by Ibu Harkunti discussed four issues i.e. best and bad practices of implemented program from each institution, indentifying of institution action plan, and integration strategy into development planning. The TWG meeting was closed by Bapak Priyadi Priyautama as Secretary of BAPPEDA Jakarta Province.

On 1st July 2009, the second TWG meeting was also conducted in Tempo Doloe Room in JPG Office. The topic discussion was about evaluation the performance of Crisis Center Jakarta Province and its revitalization concept. In the morning before the meeting was implemented, PROMISE and TWG team also conducted dissemination of communication and substance FEWS simulation. Many stakeholders related to Jakarta Provincial disaster management (Satkorlak) attended the meeting. It is hoped that all the participants could give input for the revitalization of Crisis Center in the future.

Figure 37 : TWG meeting on 1st July 2009 at Tempoe Doeloe JPG Office

Beside conducted intensive TWG meetings, the PROMISE team also conducted survey by interviewing and distributing questionnaire to the related stakeholder in Satkorlak to support TWG team in developing DRRMP. The purpose of this survey was to collect information related to disaster risk

reduction initiatives that had been implemented by each institution in local government.

Output (Product):

- A technical working group at Jakarta Province level
- DRR guidelines (TWG meeting's material)
- SOP on Integrated Flood Early Warning System for DKI Jakarta

Activity 4.2. : "Lesson Learned and Replication Workshop"

Objective:

- To promote and to share the best practices of the case study to other kelurahan in DKI Jakarta, as well as to share the experience from DKI Jakarta in implementing the PROMISE project to other surrounding Municipality or Provinces.
- Sharing information and experience regarding PROMISE-Indonesia implementation which was conducted in DKI Jakarta with Kelurahan Kebon Baru and SMAN 8 (Kel. Bukit Duri) as case study areas.
- Identifying critical factors contributing to the success or otherwise of PROMISE-Indonesia implementation (lesson learnt from PROMISE-Indonesia in each case study area)
- Discussing and socializing SOP Integrated Flood Early Warning System in DKI Jakarta to other stakeholders
- Discussing the opportunity and advantages in replicating PROMISE-Indonesia to other areas of DKI Jakarta as well as to other municipalities surrounded Jakarta and elsewhere.

Scope of Work:

- The development of workshop material including providing the instructures and facilitators
- Implementing lesson learnt and replication workshop of PROMISE Indonesia

Implementation:

The Lesson Learnt Workshop was conducted on 26th June 2009 at Tempo Doeloe Hall, Regional Planning and Development Board of JPG (Bappeda DKI), where most critical activities of the PROMISE Indonesia have been completed. In general, the aims of the workshop were to disseminate the works done by PROMISE Indonesia, to share the best and bad practices during process development and implementation of PROMISE-Indonesia activities, to get feedback from the stakeholders and to identify the opportunity and strategy for replication to other flood prone Kelurahan as well as other Municipality.

The workshop was attended by 50 participants, from 60 invitees, representing the project stakeholders and other potential focal points. About 18 representatives came from Jakarta Provincial Government, i.e. Deputy of Governor for Spatial Plan and Environment, secretary of Bappeda, Bureau of Organization and Planning, Bureau of City Planning, Health Department, Social Department, Fire Department, Civil Defense, Crisis Center, Public Works Department, Building Department, and Community Empowerment. Two representatives were from National Agncies, i.e. BMKG and BNPB.

About 20 representatives came from Kelurahan Kebon Baru's stakeholders (Lurah, chairman of community council, head RWs, Posko and community leaders), 7 other Kelurahan in South and Central Jakarta Municipality that are flood prone and located along the Ciliwung River bank, as well as community from other river system in North Jakarta Municipality. About 5 representatives from International organization, i.e. USAID Jakarta, INGO, i.e. Danish Red Cross, and local NGOs, i.e. PMI Jakarta and Mercy Corps. Then, 4 representatives were from ADPC and 6 from ITB.

Figure 38 : Group Photo session of Lesson Learned Workshop

The workshop was inaugurated and officially opened by Deputy of Governor for Spatial Plan and Environment, Achmad Harjadi. The opening and welcome speech were presented by M. Syahril B Kusuma from LPPM ITB, NMSI Arambepola from ADPC, Yusak Oppusunggu from USAID Jakarta Office. The morning session consisted of the PROMISE Indonesia lesson learned presentation by Harkunti P Rahayu as PROMISE Indonesia Coordinator, followed by panel discussion session with topics covered the lesson learnt from the PROMISE implementation and experience in managing flood disaster in Jakarta, Indonesia as well as other PROMISE country project. The panel session was chaired by Danang Susanto from Health Department of JPG, and the panelists were Padma Karunaratne from ADPC, Wisnu Widjaja from BNPB, Suhardjono from BMKG and Adam Cholid Lurah Kebon Baru.

The afternoon session was a Focus Group Discussion with the topic on "the needs and strategy for Replication of PROMISE-Indonesia activities in other flood prone Kelurahan and Municipalities". The participants were divided into 3 discussion groups, i.e. group 1 representing government officials from Province level up to Kelurahan level, group 2 representing communities, and group 3 representing NGOs and INGOs. The Focus Group Discussion was initiated by the presentation of Priyadi Priyautama, secretary of Bappeda of DKI (Regional Planning and Development Board of JPG) on the challenges and opportunity of replication in Jakarta from the perspectives of government. This is followed by group discussion. The group 1 was chaired by Priyadi Priyautama himself supported by Danang Susanto; group 2 was chaired by Bambang, head of Community Council of Kelurahan Kebon Baru; and group 3 was chaired by Irwan Hidayat, secretary of PMI Jakarta.

Figure 39 : Situation during Lesson Learned Workshop

The workshop was officially closed by M. Syahril Badri Kusuma, deputy of LPPM ITB, as the partner of USAID and ADPC in PROMISE implementation in Indonesia. After the closing ceremony, the participants visited Crisis Center DKI Jakarta to have direct explanation about the role of Crisis Center and the function of Crisis Center facility, infrastructure and personnel on duties in disaster management especially in flood disaster, who were enhanced during PROMISE activities.

Output (Product):

- Lesson Learnt and Replication Workshop's material

Activity 4.3. : "Participation of PROMISE Indonesia in Disaster Reduction Week in Jakarta (Exhibition and Simulation)"

Objective:

- To take part in the occasion by promoting the initiatives done through the exhibition or other possible activities identified later through a TWG mini-workshop

Scope of Work:

- To follow coordination meetings for exhibition preparation
- To collect and develop design and exhibition material
- To participate in Disaster Awareness Week exhibition

Implementation:

Exhibition as part of the activity Disaster Awareness Week conduct by JPG every year. Preparation of PROMISE Indonesia participation on Disaster Awareness Week was conducted on 21st – 27th September 2008. The first coordination meeting at DKI Jakarta province was conducted on 23rd September 2008. The meeting was identified the target participants for the exhibition taken place at Monas Jakarta on

21st – 25th September 2008. PROMISE Indonesia was one of the target participants.

The fifth Disaster Awareness Week was conducted on 21st – 25th October 2008. During the exhibition, PROMISE Indonesia showed the product such as: Flood risk map for Kelurahan Kebon Baru and Bukit Duri, South of Jakarta, poster of Flood disaster management and several reports of the activity that have been done, like Flood risk map and TOT on Increasing Capacity of Local Government and Community in Flood Early Warning System at DKI Jakarta.

Figure 40 : The exhibition of Disaster Awareness Week 2008

Output (Product):

- Exhibition material

8. PROJECT IMPACT ON THE CITY AND COMMUNITIES

The implementation of PROMISE Indonesia in DKI Jakarta gave valuable impacts both at the JPG's and communities as follows :

A. Increased DRR (Disaster Risk Reduction) awareness and preparedness
B. Increases DRR (Disaster Risk Reduction) initiatives
C. Increased capacity building on human resources and institution
D. Bridge the gap between community and government

Increased DRR Awareness and Preparedness

PROMISE Indonesia has increased awareness and preparedness on Disaster Risk Reduction countermeasures especially at government official level in Jakarta Provincial Government. These issues was sounded in the meeting on the preparation of Flood Early Warning System simulation on 30 January 2009 at Bappeda Office. The meeting was attended by all relevance disaster management agencies/departments in DKI Jakarta. These issue were then followed up in the Focus Group Discussion workshop on 10 June 2009. The FGD workshop discussed on Mainstreaming Disaster Risk Reduction in the development process of DKI Jakarta. All the participants of FGD which were came from disaster relevance agencies in DKI Jakarta positively supported the efforts to increase Disaster Risk Reduction Awareness and preparedness among Jakarta Provincial Government. As individual, they were willing to sound on importance of the awareness to their colleague in their offices.

Other than that, many project component in PROMISE Indonesia both at government and community level have also contributed to the increase of the awareness and preparedness on disaster risk

reduction countermeasures. Through their participation and contribution in developing and implementing the PROMISE Indonesia activities/programs, they have been able also to learn teoritically and practically to organize disaster risk reduction initiatives.

Increases DRR (Disaster Risk Reduction) initiatives

Recently, many cities in Indonesia focus on response inititatives to manage disaster. Along with many disaster occurrence in Indonesia which have caused many victims and losses, these disaster situation and condition has increased city government awareness on the importance to conduct disaster risk reduction initiatives. The implementation of PROMISE Indonesia in DKI Jakarta has been able to stimulate and pace up the increase of disaster risk reduction initiatives and practices. The project component of PROMISE Indonesia for government level has indicated that there have been willingness among the government key officials to integrate disaster risk reduction initiatives into local regulation. The existing regulation i.e. Spatial Plan Local Regulation has not been taking account disaster risk countermeasure. Through activity 4.1. Formation of Technical Working Group and Development of City level Guidelines (DRRMP Framework), there were several intensive meeting in the format of TWG meetings and FGD workshop to accommodate mainstreaming disaster risk reduction countermeasures into local regulation. The Focus Group Discussion workshop on 10 June 2009, specifically conducted to facilitate these issues. In the keynote speech of Deputy Governor for Spatial Plan and Environment, he stated that it is necessary to form disaster risk reduction master plan for DKI Jakarta. The current disaster situations in surrounding Jakarta has put the needs for having DRRMP as the main priority. The FGD has also issued discussion on necessity to establish Regional Agency for Disaster Management (BPBD) for DKI Jakarta. The issue and needs for establishment of BPBD have been followed up by intensive discussion among JPG task force on disaster management with BNPB, with the urgent priority in establishing "Regional Disaster Management Implementing Unit", as sub ordinate institution of BNPB which links with BPBD/Satkorlak at province level. The discussion work has been take place on 22 and 30 July 2009 where Harkunti P. Rahayu as PROMISE Coordinator has been requested as facilitator.

At the community level, PROMISE program implementation has also increased the promotion of disaster risk reduction initiatives. The community in RW 1 Kelurahan Kebon Baru have replicated program in PROMISE Indonesia. With their own resources, they conducted Training for First Responder and establihed AirOne as first responder team during disaster occurrence.

Increased capacity building on human resources and institution

All the project component of PROMISE Indonesia were basically aimed to increase capacity building on human resources and institution both for government level and community level. The capacity building on human resources aspects, have been conducted through several activities such as 2.1 Capacity Buidling of Development Agencies for Enhanced CBDRR Intervention through Organizing a Training for Trainers (TOT), 2.2. Capacity Buidling of Development Agencies for enhanced CBDRR Intervention – at Grassroot Level, 2.3. Emergency Management & Response Planning at City Level, 2.4. Development and Implementation of School Action Plan, 2.5. Development of Flood EWS at Kelurahan Level, 2.6. End To End Flood Early Warning System (EWS) drill, 3.2. Capacity Building of Emergency Management and Response at DKI level through Training for First Responder and 4.1.

Formation of Technical Working Group and Development of City Level Guidelines (DRRMP Framework). The the involvement of government official and community in activities above has directly increased their capacity to prepare, organize and implement all the initiatives related to disaster management. Specifically for government officials, it has been also improving their capacity to execute their roles and functions as government officials who has high responsibility to manage disaster.

Meanwhile from the institutional point of view, there has been an increase of capacity building through the development of Integrated Flood Early Warning System, Standard Operating Procedure for Integrated Flood Early Warning System in DKI Jakarta, Standard Operating Procedure for Crisis Center and Standard Operating Procedure for Flood Disaster Management at Kelurahan Level, RW, RT and Individual. These SOP's were resulted from activity 2.3. Emergency Management & Response Planning at City Level, 2.5. Development of Flood EWS at Kelurahan Level, 2.6. End To End Flood Early Warning System (EWS) drill and 4.1. Formation of Technical Working Group and Development of City Level Guidelines (DRRMP Framework).

Bridge the gap between community and government

Prior the implementation of PROMISE Indonesia in Jakarta, the facts showed that there were a big gap between community and government of Jakarta that has created distrust in working out the flood disaster risk mitigation issues. No matter good the initiatives endorsed by the government, people were skeptical and doubt about the benefit for them. To tame these problem, several approaches have been used to bridge the gap between community and government during implementation of PROMISE Indonesia activities, i.e. TWG (Technical Working Group) and FGD (Focus Group Discussion). Good relationship and solid teamwork effort among members of Technical Working Group consisted of experts and government officials have been able to support the implementation of PROMISE Indonesia and achieved many outputs. The results of Technical Working Group Meetings have been brought into Focus Group Discussion which involved communities and other stakeholder as participants. Through these mechanism, all the activities in PROMISE Indonesia has been implemented successfully and accepted well by both government and community.

9. LESSONS LEARNED

During its implementation, the PROMISE Indonesia has involved many participants from various organizations under the local government as well as the national level institutions. It has also involved community at grassroots level. This section discusses various issues related to the experience which characterized the lessons learned from the PROMISE Indonesia implementation. A lessons-learned workshop conducted in 26 May 2009 has involved participants representing the project stakeholders and other potential focal points. The result of the workshop described further in the following paragraphs.

The good practices were found in the implementation of PROMISE Indonesia. City government, national/local NGOs, CBOs and community established good collaboration specifically in improving the flood warning mechanism through the development of Integrated Flood Early Warning System.

There were several key success factors during PROMISE-Indonesia implementation both at Government level and community level, they were as follows :

- Methodology :
    - PROMISE Indonesia has implemented an integrated study from science based study in the form of disaster risk assessment until community based activity in the form of CBDRM (*Community Based Disaster Risk Management*)
    - PROMISE Indonesia has considered important aspects of disaster management
    - *End To End Approach* in the development and testing the Integrated Flood Early Warning System for Jakarta
- Involment of disaster management stakeholder
    - Involved the entire stakeholder from government until community
    - Obtained good support and response from government and community at national level and local level in program implementation
    - Active participation from multi-stakeholder in playing their roles and responsibility in program implementation.
    - Empowering multi-stakeholder responsibility for program implementation.
- Approach and Implementation
    - Reguler and routine meetings were conducted at government level and community level
    - Considered local aspiration
    - Involved local facilitator actively
    - Using discussion method through TWG (Technical Working Group) and FGD (Focus Group Discussion) for briging the gap between community and government
- Impact of The Program
    - Increased disaster risk reduction awareness and preparedness at both government and community
    - Increased disaster risk reduction initiatives at both government and community
    - Increased capacity of community, government, CBO and school in disaster management
    - There were willingness to develop masterplan of disaster risk reduction and to establish Regional Agency for Disaster Management
    - The community have replicated the program with their own resources
    - Established AirOne as one of community initiative in RW 01
    - Availability Standard Operating Procedure for Integrated Flood Early Warning System in DKI Jakarta and Standard Operating Procedure for Flood Disaster Management at Kelurahan Level, RW, RT and Individual

There were some innovative elements found in the implementation of PROMISE Indonesia such as Jakarta Provincial Government used information from BMKG on potential of extreme weather as early warning for flood disaster. Meanwhile at the community level, a standard procedures of flood reference as community based flood early warning rely on the water level were developed.

The workshop also identified some hindrance factors, as the following:

- Difficulties in conducting meeting agenda due to the time availability of WG members were limited because their daily routine jobs.
- There was needs for consistent effort to bridge the gap between government and community
- Commitment of TWG members were ranging from very strong to moderate

Meanwhile opportunity after completing PROMISE Indonesia were as the following :

- Sustainability of the PROMISE Indonesia program in the project location.
- Replication of the PROMISE Indonesia program at Kelurahan level along Ciliwung River bank as well as other river banks, at the city level in DKI Jakarta and other provinces
- Embedded the Program of the Jakarta development especially in Disaster Crisis Center and disaster management activities

10. SUSTAINABILITY

At the end of the PROMISE Indonesia intervention during the programs implementation, two main issues need to be considered, i.e. Mechanism for sustainability and Exit strategy.

Mechanism for Sustainability

The PROMISE Indonesia Team defines sustainability of the program as the continuous embedding of disaster risk reduction principles and activities into the development processes in DKI Jakarta. The approaches have been used by the government and community level activities which accommodates disaster risk reduction countermeasures. Thus, the sustainability issues are related directly to whether the project has been successfully motivated and encouraged project stakeholders to continue the program in their perspective and their own resources.

Jakarta Provincial Government has priority list in the development process, this leads to the issue sustainability becomes a big challenge and opportunity at once. A FGD on Mainstreaming Disaster Risk Reduction on June 10, 2009 is a chance and good signal for sustainability of the program because the discussion have resulted several issues on disaster risk reduction initiatives. However, embedding the program into development process has not been an easy tasks, it will need strong commitments from local government officials who are PROMISE partner and availability resources to sustain the program.

Thus, after careful considerations and evaluation from PROMISE Indonesia team, the sustainability of PROMISE Indonesia for the future can be approached by several mechanism below :

1. End to End approach;
   Through this approach, all project stakeholder (from government to community level) were involved in the process development and testing/simulation the Integrated Flood Early Warning system. The lesson learned in participating and contributing to the program, will generate experiences and capability to conduct similar program in the future.
2. Participatory approach in development program as well as the implementation of the program;
   This mechanism has also enhanced and increased capacity of all project stakeholder to continue disaster risk reduction initiatives. Through participatory approach, development and implementation PROMISE Indonesia has considered local aspiration and existing resources so that the program run smoothly.
3. Bridging the gap mechanism through Focus Group Discussion;
   Focus Group Discussion is a mechanism which try to bring paper concept to practical experiences. In this mechanism, communities was involved to decide the program implementation and gave valuable input for sucecffull the programs. Through these mechanism, all the activities in PROMISE Indonesia has implemented and accepted both by government and community.

Exit Strategy and Recipients Responsibility

At the end of PROMISE Indonesia implementation, there were several actual output could be used by several project stakeholder. These mechanism was exit strategy used by PROMISE Indonesia i.e. :

1. DRR Guideline (TWG meeting material)
   The guideline was one of output from activity 4.1. Formation of Technical Working Group and Development of City Level Guidelines (DRRMP Framework). It could be used by TWG team (Bappeda DKI Jakarta (Regional Planing and Development Agency) as coordinator) for developing DRRMP for DKI Jakarta. The guideline explain on mainstreaming disaster risk reduction, policy/regulation in disaster management and establishment of Regional Agency for Disaster Management (BPBD).
2. SOP Integrated Flood Early Warning System in DKI Jakarta
   The SOP was other output from activity 4.1. Formation of Technical Working Group and Development of City Level Guidelines (DRRMP Framework). Many institution from Jakarta Province level (Crisis Center as leading institution) to Kelurahan level could used the SOP to increase flood disaster preparedness both at government level and community level. The SOP could simulate and refine continously periodically.
3. SOP Crisis Center
   The SOP was output from activity 2.3. Emergency Management & Response Planning at City Level. The Crisis Center DKI Jakarta could used the SOP to increase their capability in responding flood early warning issued from BMKG and Public Work Agency and disseminating the warning to the identified agency (including community). The SOP could also simulate and refine continously periodically.
4. SOP of Community Based Flood Disaster Mitigation

11. REPLICABILITY

The PROMISE Indonesia program replication is definitely possible and highly recommended for the other flood prone area. There are three options for program replicability :

1. The minimum options : The program will be replicated at all the Kelurahan located in Ciliwung River Banks;
2. The optimum options : The program will be replicated at the area of the 13 rivers banks in DKI Jakarta;
3. The ideal options: The program will be replicated at other prone flood area of other provinces

In the replication program, there are several further references based on the implementation of PROMISE-Indonesia are the following :

- It is important to involve other NGO in order to replicate similar program with PROMISE-Indonesia in the flood prone areas specifically the areas that are not yet implement disaster risk reduction efforts. These initiatives can be done through embedding in the existing NGO's programs.
- To replicate program of PROMISE-Indonesia in other area, it is necessary supports from government at provincial level until Kelurahan (sub distrit) level and support from community. At the community level, it is important to involve community leaders such as Head of Local Neigbourhod Unit (RW).
- In replication program, the NGO which is involved could have a role as government partner and community facilitator in order to build collaboration and optimalization of potency and capacity of cmmunity

- It is necessary to give sustainable training and legalization for the trainer/local facilitator from community so the facilitator could continue the program.
- It is necessary to look for community leader who can empower and mobilize community in preventing and managing disaster. The leader should have social spirit and high dedication and also could communicate with every strata of community and government official.

12. FINANCIAL PROFILE

The PROMISE Indonesian was funded by USAID OFDA under Grant Agreement No. PROMISE-Indonesia-UDRM-1-00, under the USAID Agreement No. DFD-G-OO-05-00232-00 for the Program for Hydro-Meteorological Risk Mitigation in Secondary Cities in Asia (PROMISE), effective project date from 1st February 2008 to 31st July 2009.

Under this Grant Agreement, the total project cost was RP. 1.213,117,500. This Grant was made based on an estimated exchange rate of RP. 9,200 to US $ 1.00

The overall budget summary is shown bellow:

Line Items	Obligation to Date	Expenditure	Planned Inkind Contribution	Actual Contribution
Component 1: Participatory Hazard, Vulnerability and Risk Assessment	134,250,000	133,403,950	13,900,000	38,600,000
Component 2: Mitigation and Preparedness	552750,000	548,296,900	87,950,000	171,700,00
Component 3: Training and Public Awareness	72,300,000	63,981,090	4,000,000	4,000,000
Component 4: Mainstreaming Disaster Risk Management	118,750,000	134,703,875	15,750,000	56,300,000
Operational Support	277,300,000	251,171,742	144,000,000	121,050,000
Indirect Cost	57,767,500	-	-	-
Total	**1,213,117,500**	**1,131,557,557**	**265,600,000**	**391,650,000**

13. IN KIND CONTRIBUTIONS

The PROMISE Indonesia implementation in DKI Jakarta has produced significant results both for the city and community. In part this was due also to the organizations that gave in kind contributions to the PROMISE, which showed their support and appreciation toward disaster risk reduction efforts. In kind contribution came from institution and person at national level and local level.

As the implementer of the programs, The Center for Disaster Mitigation - Institut Teknologi Bandung (CDM-ITB) contributed with resources (personnel; office space and its facilities such as computer, printer, internet connection, meeting room; services like electricity, water etc).

At the national level, institutions such as BNPB and BMKG contributed by providing personnel and their expertise, using their facilities to implement several activities of PROMISE Indonesia i.e. Simulation on Integrated Flood Early Warning System (Tent, Machine Boat, etc).

Meanwhile at the local level i.e. Jakarta Provincial Government and Kelurahan Government supported PROMISE Indonesia activities by providing staffs time, office space, meeting place, and the facilities to implement Simulation on Integrated Flood Early Warning System.