Wednesday September 30, 2009. Padang city, and the surrounding, located in West Sumatera province was devastated by earthquake at magnitude 7.6 Richter Scale. The undersea epicenter location was Lat.: 0.84°S ; Long.: 99.65°E ; epicenter depth was 80 km, and ± 57 Km north-west of Padang city which have ± 900,000 inhabitants
The death toll from the earthquake was more than 800 people. Around 200 people were reported missing and more than 2000 people got injured. This is excluded more than 600 people who were buried by the earthquake-triggered landslides happened in four villages located in the mountaineous areas surrounding the city of Padang.

More than 133,000 houses, shops, offices were destroyed while over 110,000 others suffered damages. Some large commercial buildings, hospitals, hotels, mosques and churches were even completely destroyed.

Many infrastructures such as roads and bridges were fractured and brought down. This isolated people in remote areas, and broke supply lines of food, drinking water and medical to this people.
Some basic needs such as electricity, telephone lines have been recovered. However distribution of food, water, and medicine to the people is still have a big problem.

The government now received a lot of food but found it difficult to distribute because the government had little information of the earthquake victims whereabouts.

The reconstructions of infrastructures to open access to people in isolated areas are also another work to do.
The National Coordinating Agency for Surveys and Mapping (BAKOSURTANAL) of Indonesia took a quick response to this disaster.

BAKOSURTANAL along with other government agencies and private sectors agreed to supply geo-spatial data and information to be utilized in Padang for disaster management.

Three maps needed for this purpose:
- Disaster Prone Areas Map,
- Emergency Quick Response Map,
- Rehabilitation and Reconstruction Map.
The Disaster Prone Areas Map will be used before the disaster happened, because in the map there is regulation for making or not making human activities in the designated areas.

The Emergency Quick Response Map is produced and used just after the disaster to help save the people trapped in the destroyed buildings and to distribute food, water, medical supplies. This map is produced on-site by mapping all damaged objects in the field, location of food supply, drinking water and medical supply.

The third map is a map that is used for rehabilitation and reconstruction of the disaster area.
BAKOSURTANAL few days after the disaster established a mapping team and immediately sent the team to Padang.

The team was designed to perform coordination with other local and international institutions and organizations, to produce the emergency quick response map by collecting casualties, damaged buildings and infrastructure data, processing the data and producing into maps and distributing the maps.
National Coordinating Agency for Surveys and Mapping (BAKOSURTANAL),
National Agency for Mitigating of Disaster (BNPB),
Regional development and Planning Board (BAPPEDA),
Regional Public Works Office,
WANADRI (Mountain and Jungle Explorer Association),
WAINDO-RSGIS Forum,
Department of Energy and Mineral Resources,
National Space and Aeronautics Agency (LAPAN),
Bureau of Central Statistics,
World Bank,
Non-Government Organizations such as MapAction and ArchNova.
Field Surveys of geographic location of damages buildings and infrastructures, buried villages, food supply, and medical supply were carried out by WANADRI and BAKOSURTANAL.

The survey and mapping activities that was carried out in Padang area consisted of:

- Inventory of number of casualties and damaged areas in cities and villages,
- GPS surveys of damaged buildings and infrastructures,
- Coordination meeting,
- Data processing and map production,
- Data dissemination,
- Tabular data of damaged infrastructure (roads, bridges) from Regional Public Works Office.
- Topographic maps of 1:250,000, 1:50,000, 1:10,000 scales, from BAKOSURTANAL.
- Atlas maps from BAKOSURTANAL.
- Village admin boundary map and population distribution from BAPPEDA and BPS.
- Satellite imageries IKONOS of Padang from LAPAN.

**Data Sources To Produce The Emergency Quick Response Map**
Data Products: The Emergency Quick Response Map

1. Village boundary maps of Padang Pariaman and Agam districts.
2. Casualty and physical damaged map Padang Pariaman district.
3. Casualty and physical damaged map of Pariaman city.
4. Aggregate Casualty Map consisting themes:
   - number of casualty,
   - number of damaged houses,
   - number of destroyed health facilities,
   - number of broken schools,
   - number of damaged roads, bridges, and irrigation infrastructures.

Kerusakan Bangunan Seputar Kelurahan Pondok

© 2009 BAKOSURTANAL
Data Users: The Emergency Quick Response Map

- Foreign and Local Non-Governmental Organization,
- International and Local Media,
- National Agency for Mitigating of Disaster,
- Police, and Regional and local Government.
- Most of the foreign and local non-governmental organizations are humanitarian aid organization to distribute the aids they received from the community.
During the first week after the earthquake, the city of Padang had no electricity that made communication in the area cut off. It was then not possible to see maps stored in computers or browse from internet. Printed map proved to be a much better solution to use the geospatial information.

The number of people understanding of geospatial in the disaster area should be considerably sufficient, because map reading ability of the domestic humanitarian aid organizations is low.

Disaster is not a new happening, but the response of the region to the disaster is not sufficient so that the socialization, exercise, training, of managing of disaster need to be implemented regularly and more frequent.
For mapping purposes, since maps is the first thing, people needs to response the disaster, the emergency quick response mapping should be improved, in particular the budget for the mapping should be made available promptly and at sufficient amount.

The regional government along the predicted disaster regions should provide disaster maps showing areas prone to disaster, so that there will be no human activities in the areas.
THANK YOU . . . . .