Project II: Water Resources Modelling for Citarum Watershed

Project description

- Citarum watershed is the largest and longest river basin in west Java-Indonesia (718,268.53 Ha, 269 km main river and 14,346 km including tributaries)
  - 12 sub-watershed and 3 great Basin/ Dam (Saguling, Cirata, Jatiluhur)
  - Source of irrigation of 300,000 ha agriculture irrigation water
  - Sources of drinking water for the city of Bandung, Cimahi, Cianjur, Purwakarta, Jakarta.
  - Sedimentation rate 25.52 tons/ha/year
- Replicable for other watershed in Indonesia

Project II: Water Resources Modelling for Citarum Watershed

Objective:

- Modeling and projection of Citarum watershed water resources up to the year of 2100
- Establish strategic planning of Citarum watershed up to year 2010 to adapt the impact of climate change
- Establish the pilot project
- Implementation the strategic planning

Methodology:

- Using the Geographic Information System (GIS)
- Selected the best soft wear
- Alternative soft wear: Modflow, Powersim, ArcView GIS, FJ. Mock, NRECA

Project II: Water Resources Modelling for Citarum Watershed

Step of Activities:

- Year I:
  - Collect secondary data
  - Survey of rainfall, hydrogeology, water quantity & quality, social economy
  - Establish expert networking
- Year II:
  - Modeling and projection until year 2100
  - Establish Strategic planning of water management in Citarum watershed for scenario 2015, 2050 and 2100
- Year III:
  - Dissemination
  - Pilot project for water management
- Year IV
  - Implementation the strategic planning

Project II: Water Resources Modelling for Citarum Watershed

Project Cost:

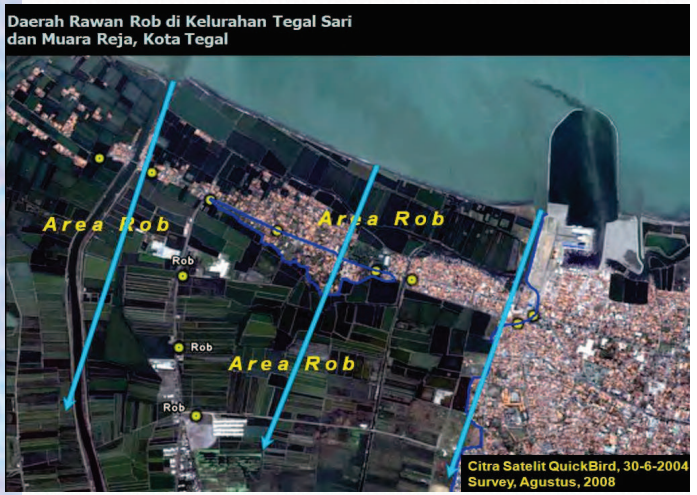
- Year I: US$ 100,000
- Year II: US$ 800,000
- Year III: US$ 500,000
- Year IV: Depend on the projects implemented

TOTAL COST FOR 3 YEARS: US$1.4 M

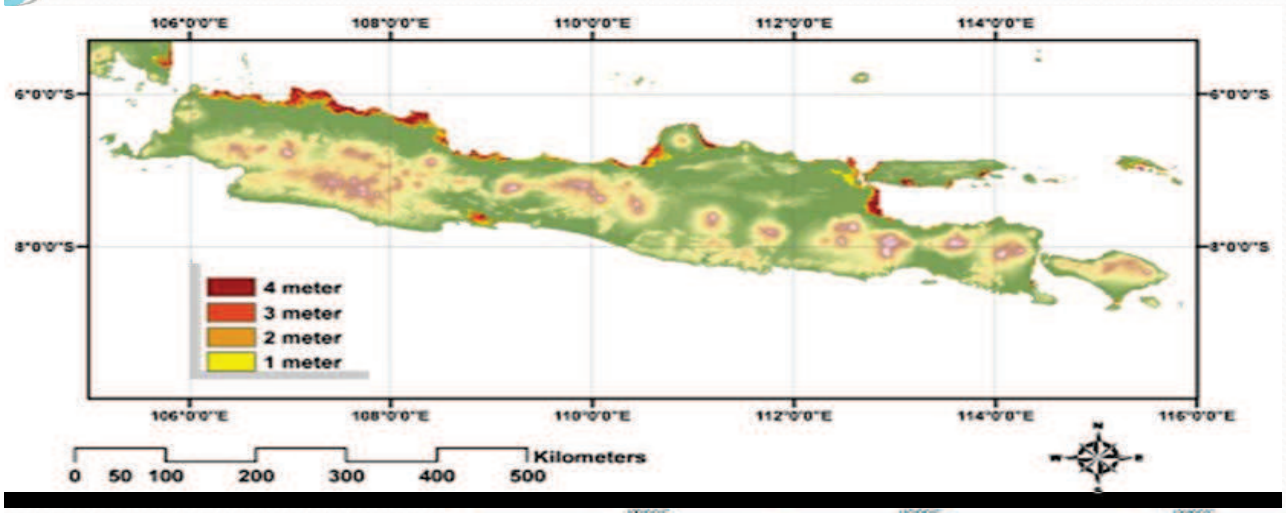
Project III: Coastal Protection and Reclamation

Project description:

- Most of big cities in Indonesia are located in coastal area
- Rising of sea level may result inundation in coastal area in Indonesia
- The highest vulnerable are in some parts of Java's north coast, southern cost of central Java and bali
- Priority location in Tegal and Pemalang
- Replicable for other location

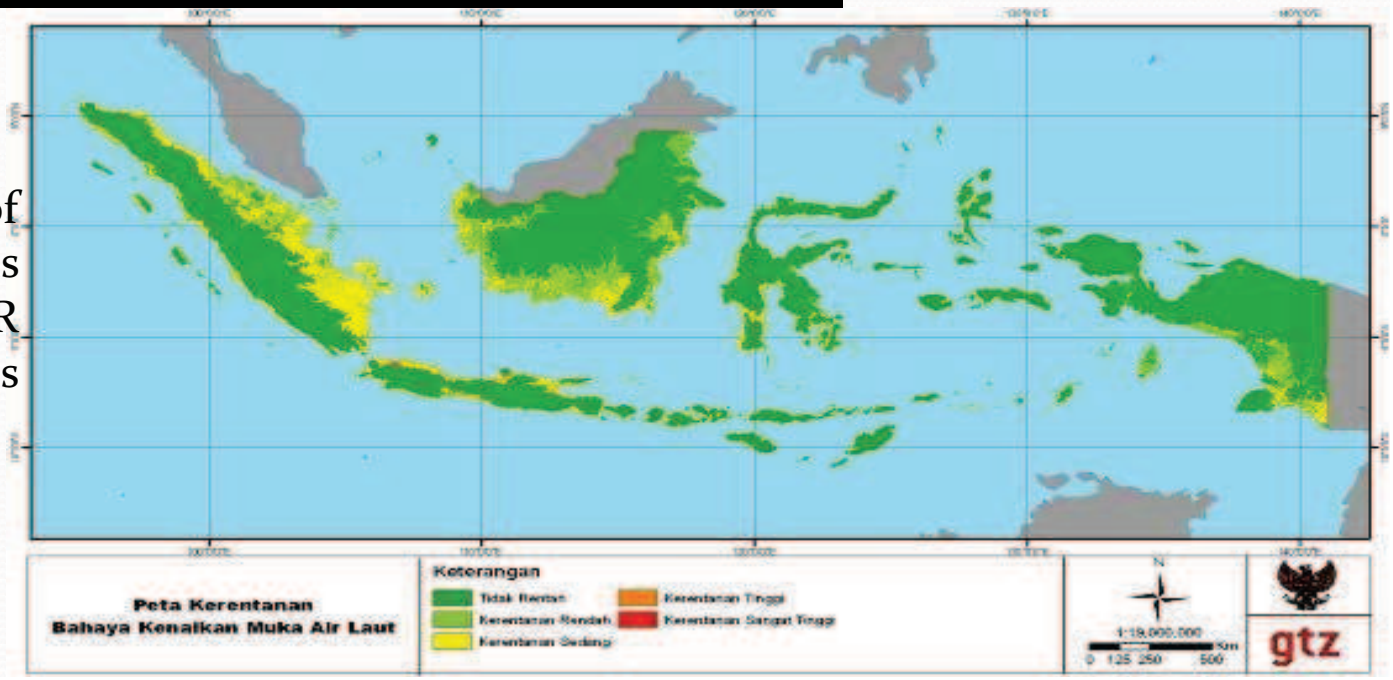


Project III: Coastal Protection and Reclamation



Simulation of coastal inundation in Java-Madura-Bali (ICCSR, 2009)

Vulnerability maps of sea level-rise hazards in Indonesia (ICCSR marine and fisheries sector, 2010)



Project III: Coastal Protection and Reclamation

Step of activities:

First year:

- Vulnerability assessment
- Assess the suitable technology

Second year

- Funding and economic analysis
- Establish Master plan and Feasibility Study
- Detail Engineering design

Third year

- Construction
- Monitoring

Project III: Coastal Protection and Reclamation

Project Cost (estimate):

First year:

- US$ 1.0 M

Second year

- US$ 3.0 M

Third year

- 1.5 – 7.0 M/ km for seawall and revetment

Thank you