

# INTEGRATED CITARUM WATER RESOURCE MANAGEMENT INVESTMENT PROGRAM

By Team INDONESIA

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# BACKGROUND

- The Citarum River Basin (CRB) is the most strategically-important river basin in Indonesia:
  - covers more than 13,000 km<sup>2</sup>;
  - inhabited by  $\pm$  9 million people;
  - poverty rate above the national average, 8 of 11 districts with poverty levels of 25% or above in 2000;
  - there are major industrial centers including Indonesia's fourth largest city and provincial capital of West Java, Bandung, and satellite industrial parks to the west of Jakarta;
  - the Citarum River supplies  $\pm$  80% of Jakarta's raw water and is the site of three major dams and three large multipurpose reservoirs.

# BACKGROUND (2)

Biodiversity resources found within the Citarum River Basin:

- 160 plant species;
- 24 mammals (20 protected, 3 endemic and 1 scarce species);
- 72 birds (60 protected, 10 endemic, 2 scarce species);
- 11 protected reptiles;
- 2 protected fish species

# BACKGROUND (3)

Prominent species found:

- globally threatened Surili Leaf monkey (*Presbytis comata*);
- endemic Javan Gibbon (*Hylobates moloch*);
- leopard (*Panthera pardus*), quite widespread but with its range and numbers diminishing rapidly;
- endemic bird Javan Tesia (*Tesia superciliaris*);
- Green Spectacled Pigeon (*Treron oxyura*);
- Sunda Thrush (*Zoothera andromedae*);
- Javanese Hawk-eagle (*Spizaetus bartelsi*), one of the rarest birds in the world and possibly one of the most endangered, occurs in lowland forests and numbers as few as 50 pairs;
- Javan Scops-owl (*Otus angelinae*), observed only on a few occasions.

# BACKGROUND (4)

The West Java flora:

- Endemic tree Rasamala (*Altinea excelsa*);
- Jamuju (*Dacrycarpus imbricatus*);
- Puspa (*Schima walichii*);
- Pasang (*Lithocarpus* sp);
- Kihiur (*Castanopsis javanica*);
- Kihujan (*Engelhasdia spicata*);
- Huru (*Litsea* sp);
- Riung Anak (*Castanopsis accuminatissima*);
- rare trees Baros (*Magleeta galuce*);
- Kiputri (*Podocarpus neriifolius*);
- Kimerak (*Podocarpus amara*), have high economic value for building materials.

# THREATS

- Forest fires,
- illegal logging,
- removal of wood for carving and firewood,
- forest conversion,
- encroachment into forest areas for a variety of human uses,
- trade in wildlife,
- hunting,
- dumping of rubbish.

# BARRIERS

- weak institutions,
- limited awareness,
- lack of data,
- insufficient financing,
- limited stakeholder involvement,
- pervasive poverty.

# OBJECTIVES

- to achieve clean, healthy and productive catchments and rivers, while conserving globally and locally significant biological diversity and bringing about sustainable benefits to all people of the Citarum River Basin through collaborative efforts between government and the community.



# OUTCOMES

Project outcomes are directed toward addressing gaps found during management effectivity tracking tools (METT) analysis conducted during the surveys. Summary of the project outcomes are outlined below:

- Effective coordination of protected areas (PAs) management (enhanced capacity for PAs management; mainstreaming biodiversity conservation into IWRM; master plan for basin management including PAs; regulatory mechanisms
- Enhanced biodiversity conservation within the CRB (PA management planning; biodiversity conservation in production landscapes through integrated spatial planning; payment for environmental services (PES))
- Empowered local communities through participation in planning and managing the conservation of biodiversity in PAs and production landscapes (education and awareness programs; pilot projects for sustainable livelihood-cum-conservation; PES)

# OVERVIEW MAP OF CITARUM RIVER



Stakeholders: Central Government (National Planning Body, Min. of Forestry, Min. of Agriculture, Min. of Public Works, Min. of Health, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (National and Local); Universities; Press Entities

# THE SOURCE OF CITARUM RIVER: CISANTI LAKE



Stakeholders: Central Government (Min. of Forestry, Min. of Agriculture; Local Government (Province of West Java, Regency); NGOs (Local)



# PROBLEMS:

## Land Conversion & Encroachment



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# PROBLEMS:

## Industrial Area & Settlements



Stakeholders: Central Government (National Planning Body, Min. of Public Works, Min. of Health, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (Local); Universities; Press Entities

# PROBLEMS: Sedimentation



Stakeholders: Central Government (National Planning Body, Min. of Public Works, Min. of Health, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (Local); Universities; Press Entities

# PROBLEMS:

## Flood



Stakeholders: Central Government (National Planning Body, Min. of Public Works, Min. of Health, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (Local); Universities; Press Entities



# PROBLEMS:

## Ox-bow Lake Phenomena & Its Encroachment



Stakeholders: Central Government (Min. of Agriculture, Min. of Public Works, Min. of Health, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (Local); Universities

# PROBLEMS:

## Water Hyacinth Invasion



Stakeholders: Central Government (National Planning Body, Min. of Forestry, Min. of Agriculture, Min. of Public Works, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (National and Local); Universities; Press Entities



# PROBLEMS: Fisheries Culture



Stakeholders: Central Government (Min. of Agriculture, Min. of Public Works, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (Local); Universities

# PROBLEMS:

## Water Pollution from Industrial Area



Stakeholders: Central Government (National Planning Body, Min. of Health, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (Local); Universities; Press Entities



# PROBLEMS:

## Water Pollution from Settlement Area



Stakeholders: Central Government (Min. of Public Works, Min. of Health, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (Local); Universities; Press Entities

# PROBLEMS: Sanitation



Stakeholders: Central Government (National Planning Body, Min. of Public Works, Min. of Health, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (National and Local); Universities; Press Entities

# PROBLEMS:

## Estuary Conversion (Fish & Shrimp Ponds)



Stakeholders: Central Government (National Planning Body, Min. of Forestry, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (National and Local); Universities



# PROBLEMS:

## Irrigation & Freshwater Provider System



Stakeholders: Central Government (National Planning Body, Min. of Agriculture, Min. of Public Works, Min. of Environment); Local Government (Province of West Java, Regencies along the Citarum River Basin); NGOs (National and Local); Universities



# FUNDING

- LOAN (from ADB): USD 4 Billions for 15 years (implemented by Min. of Public Works, Min. of Agriculture, Min. of Health, Min. of Environment, National Planning Body)
- GRANT 0216-INO (from GEF through ADB): USD 3.75 Million for 4 years (implemented by Min. of Forestry)

## GRANT 0216-INO:

### Citarum Watershed Management & Biodiversity Conservation

- Implemented by the Ministry of Forestry of Indonesia as the Executing Agency (EA)
- 3 Program Implementing Units (PIU):
  - Directorate of Conservation Area & Protected Forest Management
  - Natural Resources Conservation Office of West Java
  - Gunung Gede Pangrango National Park
- 8 conservation area involved

# SUB COMPONENTS

1. GIS/MIS (Management Information System) and Biodiversity Inventory;
2. Habitat Restoration & Rehabilitation;
3. Development of Sustainable Financing through Payment for Environmental Services (PES);
4. Mainstreaming Conservation on the Production Landscape;
5. Project Management (by the 3 PIUs).

# PROGRESS/FINDINGS

- Development of MIS system for the PIUs through web-based system (still in trial stage);
- PRAs for the 12 villages (completed on 8 villages);
- Designation of local facilitators (completed);
- Re-finding of endemic/rare species of fauna and finding new species (confirmation with scientific authorities, universities or experts);
- Rehabilitation of encroached/damaged conservation area (creation of tree seedlings and designation of the rehabilitation spots);
- PES development (still in discussion stage with stakeholders);

# PROGRESS/FINDINGS (2)

- Preparation for Biodiversity Campaign (will be conducted in Bandung and Jakarta);
- New procedures for managing conservation area (improvement from the ones already in place);
- Developing skills for conservation area officers through training and field discussion (aiming for developing merit system)

THANK YOU

TERIMA KASIH