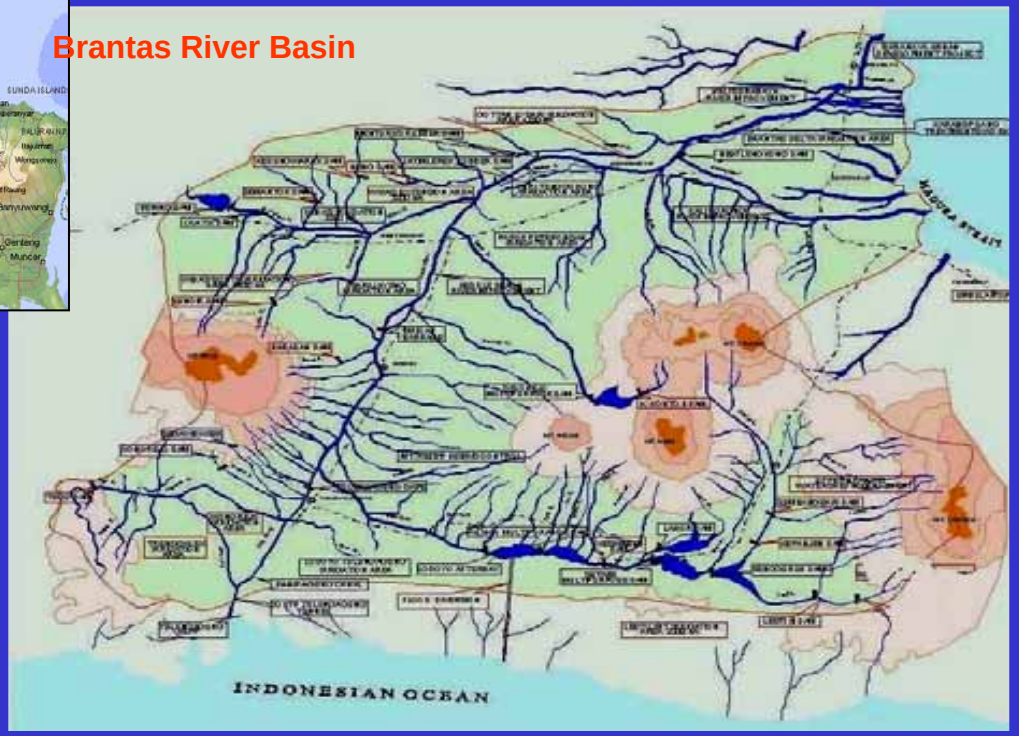
PANNEL DISCUSSION ON DEVELOPING CAPACITY IN RBOs

Tjoek W. Subijanto

Description of Brantas River Basin

- Basin Area : 11,800 km^2 (25% of E. Java)
- Population (2003) : 15.5 million (43% of E. Java)
- Average Rainfall : 2,000 mm/year
- Water Potentials : 12 billion m^3/year
- River Length : 320 km



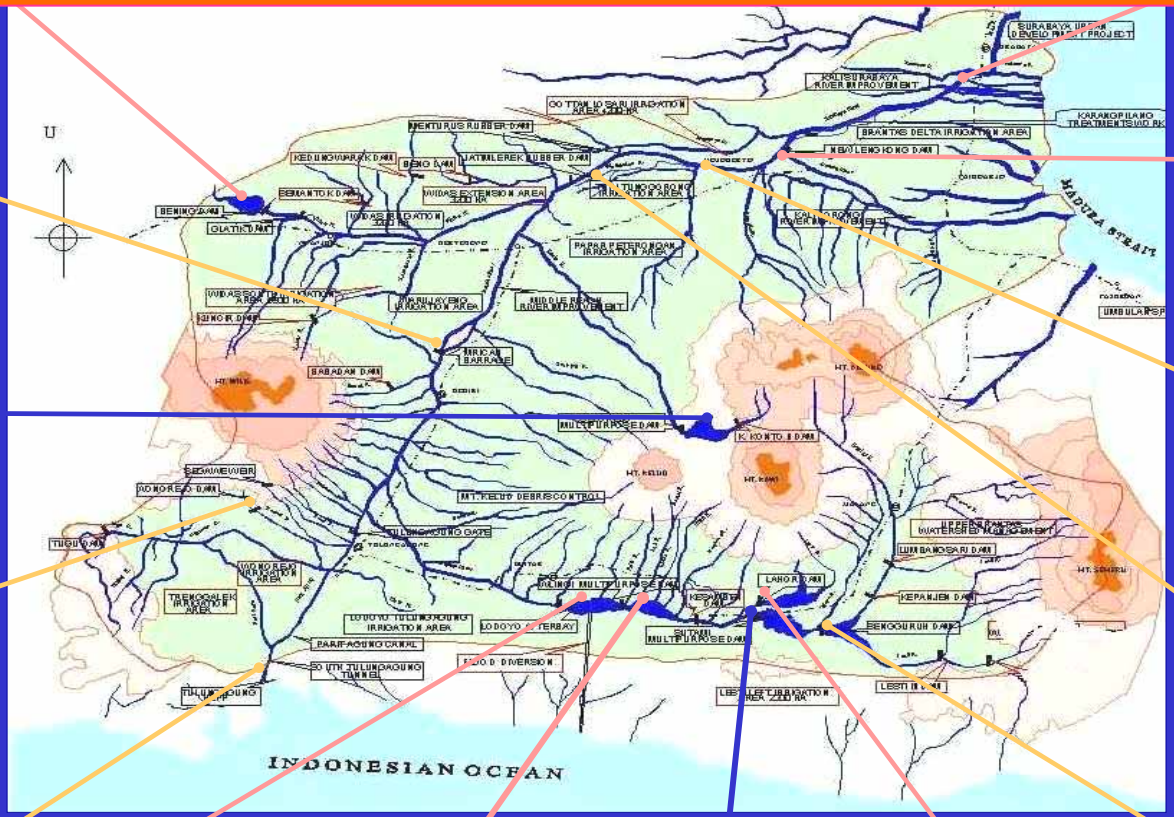
- Active volcanoes: Mt. Kelud & Mt. Semeru
- Land Use (2004) :
  - paddy field 39.0%
  - dry land 12.0%
  - plantation 22.0%
  - forest 11.0%
  - settlements 12.0%
  - others 4.0%

Development of Brantas Basin

Master Plan II (1974 - 1985)

Master Plan III (1986 - 2000)

Total investment (1960-2001) : 7.3 trillions Rp.
(US $ 0.097 billions, ¥ 78,8 billions, 258.9 billions Rp.)




Bening Dam (84)

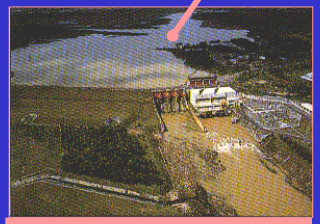

Waru-Turi B. (92)


Selorejo Dam (72)


Wonorejo Dam (00)


T.Agung Tunnel (91)


Lodoyo Dam (83)


Wlingi Dam (78)


Sutami Dam (72)


Lahor Dam (77)


Sengguruh Dam (88)


Gunungsari B. (81)


New Lengkong B (74)


Menturus R.D (93)


Jatimlerek R.D (93)

Development Benefits

Beneficiaries	Unit	1960	1990	2004
- Flood Control	Inundated areas	Flooding every	None	None
		year (60.000 ha)		(main stream)
- Irrigation	Cropping Intensity	0.8 x / year	1, 8 / year	2.2 x / year
				(244%)
- Hydropower	Million kWh/year	170 [a)]	910	1.000
				(588%)
- Raw Water for	Million m^3/year	73 [b)]	125	245
Domestic				(305%)
- Raw Water for	Million m^3/year	50 [c)]	115	135
Industries				(270%)

Note:

a) Mendalan and Siman HEPP,

b) Ngagel I dan II Domestic Water Treatment Plants,

c) Sugar factories

59% GRDP of E. Java

Sustainability of Water Resources Management

- Institutional sustainability : ability of management institution to maintain the river system with planning, implementation and operational capacity.
- Financial sustainability : achievement of funding requirements for the water resources development and management.
- Social sustainability : financial participation and positive social control, from stakeholders and the public as general.
- Technical sustainability : balance between water and demand supply, and between pollution load and assimilative capacity.
- Economic sustainability: support to external and internal development aspects.
- Environment sustainability: lesser negative impacts on long-term development and well environment supporting preservation of water resources.

Institutional Sustainability

Problems:

(1) Global climate change which cause change in normal rainfall pattern

(2) Lack of experience in water resources development for the young engineering staffs

Needs:

(1) Training on Applied Technology for weather forecasting

(2) Personnel exchange in RBO who has dam development project under construction

Social Sustainability

Problems:

Less awareness of the community in water resources management

Needs:

Exchange of information in strategy & program for effective public participation

Financial Sustainability

Problems:

Less financial support from the beneficiaries for O&M Cost Recovery (collected fund is reaching only 40% of normal budget required).

Needs:

Beneficiaries Pay Principle :

- User Pay Principle : Exchange of information tariff system and cost allocation
- Polluters Pay Principle : Exchange of information in the development & implementation of pollution fee system

Government Obligation Principle : Exchange of information in the policy & strategy of cost allocation between Central & Local Gov.