IWRM IMPLEMENTATION & CAPACITY BUILDING IN RBO

Case of Brantas River Basin East Java - Indonesia

NARBO IWRM Training 8th

Sri Lanka, 27 Nov. – 04 Dec. 2013

Presented by:

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JASA TIRTA

ISO 9001 SGS

Sertifikat No. Q9755

IWRM

Experience in Brantas RB

Curriculum Vitae

Tjoek Walujo Subijanto

3. NARBO (Feb. 2004 – up to now)

- May'13 – now :Senior Advisor of NARBO
- Nov'10 – May'13 :Vice President of NARBO
- Apr'04 – Nov'10 : Member of NARBO

2. Jasa Tirta Public Corporation (April'91 – Nov'12)

- Nov'07 – Nov'12 :President Director (retired 23 Nov'12)
- Nov'01 – Nov'07 :Director of Operation for Brantas River Basin
- Jan'93 – Nov'01 :Chief of R&D Bureau
- Apr'91 – Jan'93 : Chief of Bureau on Management System & Water Business

1. Brantas River Basin Development Project (Dec'72 – Apr'91)

- Jul'88 – Apr'91 :Chief of Program Implementation Bureau
- Oct'85 – Jul'88 : Chief of Technical Planning Bureau on Dam, Electricity & Utilities
- Mar'82 – Oct'85 : Project Manager of Parit Agung Canal
- May'81 – Mar'82 :Deputy Manager of Planning & Programming,
- Mar'78 – May'81 :Electronic Data Processing Centre
- Dec'72 – Mar'78 : System & Procedures

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Structures of Presentation

I. Introduction
II. The Brantas River Basin
III. Capacity Building Adopted by PJT I
IV. Water Resources Management Implementation in the Basin
V. PJT I's Performances
VI. Conclusions

I. Introduction

1.1 IWRM





- Water is the most basic needs for human covers cross sector, generation, administrative boundaries
- *Water resources are under increasing demands and faces more delicate problems caused by CC*
- Size of extreme water events will more powerful, intense, and longer affecting water functions for food, energy and other economic activities
- *Competition and conflict will increase significantly.*
- *IWRM is a process integrates the DM of water, land & other resources to maximize social, economic and env. benefits in harmony & sustainable manner, implemented through collaborative - participatory process of all stakeholders.*

I. Introduction

1.2. Basic Function of WRM

CapNet, 2008. *IWRM for RBO: Training Manual*

- Functions of WRM very complex tasks conducted by different players in a different level
- No single organization can implement effectively all WRM functions

I. Introduction

1.3 Key Success factor of Effective IWRM Implementation





- Adaptive - collaborative process through participatory mng. involving stakeholders is *one of basic essence of IWRM and it will be the key success factor of effective IWRM implementation*.
- High quality of participation needs capability to positive participation i.e. active and constructive participation
- WRM Coordination bodies should be established as a platform for stakeholder liaison and an advisory body, as a forum for coordination and consultation, integration and synchronization of all interests in WRM.
- *Effective implementation of IWRM will:*
  1) promote transparent and efficient WRM;
  2) facilitate effective conflict resolution;
  3) encourage better water conservation and demand mng.;
  4) develop ownership of stakeholders; and helps to maintain the sustainability of water resources

I. Introduction

1.4 Capacity Development in RBO for IWRM Implementation





- GWP – Tool Box:

  RBO deal with the WRM issues in a river basin. Their functions vary from water allocation, resource management and planning, to educate the basin communities, to develop the natural resources management strategies and programs, to build consensus building, facilitation and conflict management.

- *Successful RBOs are supported by*:
  - An ability to establish trusted technical competencies;
  - A focus on serious recurrent problems such as flooding or drought or supply shortages, and the provision of solutions acceptable to all stakeholders;
  - An ability to generate some form of sustaining revenue and capacity to collect fees, and attract grants and/or loans;
  - Clear jurisdictional boundaries and appropriate powers.
  - A broad stakeholder involvement, catering for participation at a basin-wide level.

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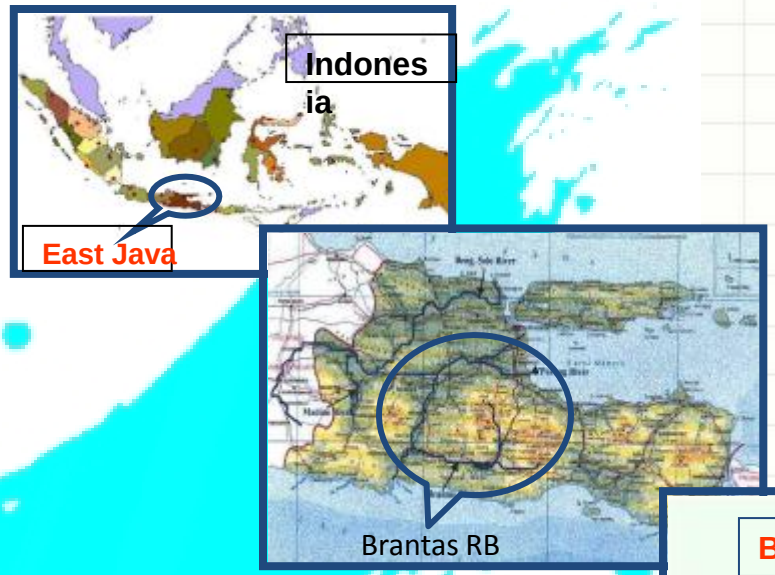
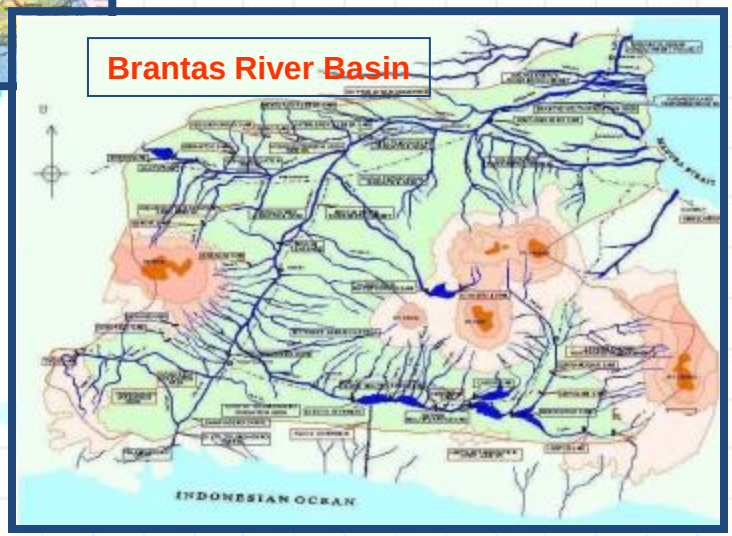
Experience in Brantas RB

II. The Brantas River Basin

2.1. Geographical Features of the Brantas River Basin



- Catchment area : 11,800 Km2 (25% East Java) covers 14 regencies
- Population : 16.0 million (2010) (43% East Java)
- Precipitation : 2,000 mm/year
- Potential flow : 12 billion m3/year
- River length : 320 km



The Brantas travels past all the major volcanic ranges in the basin. Mount Semeru (3,676 m) is constantly active. While Mount Kelud has erupted on a large scale on an average of once every 15 years: 1901, 1919, 1951, 1966, and 1990.

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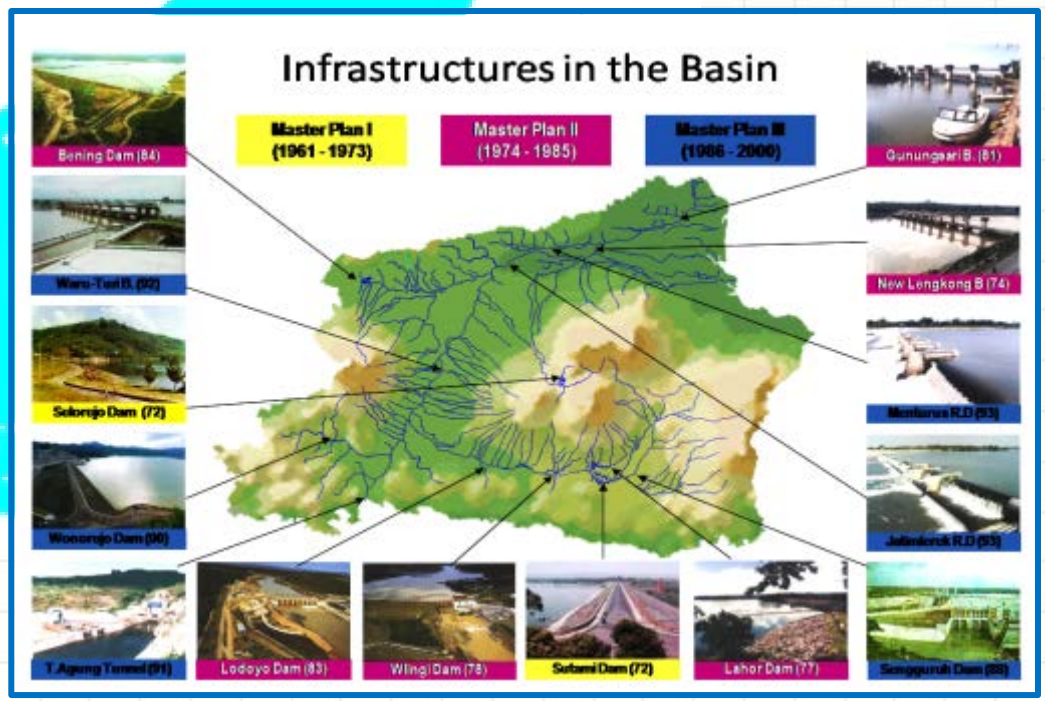
Experience in Brantas RB

II. The Brantas River Basin

2.3. Brantas River Basin Development (1/2)

- Modern WRM in Brantas RB was introduced after the GoI requested the GoJ to prepare a comprehensive WRD Plan (1960)
- During 30 years, WRD in the basin resulted into 7 (seven) dams and reservoirs, 4 (four) river-improvement-schemes, 6 (six) barrages and gates, and 3 (three) rubber dams etc.



II. The Brantas River Basin

2.3. Brantas River Basin Development (2/2)





- It is a comprehensive multipurpose project uses dams and reservoir for development of WR resulting benefits in flood control, irrigation, power generation, DMI water supply.
- WRD done by Brantas RB Development Project (Brantas Project)
- In 1990: flood had been controlled in main stream, W/S for irrigation, hydropower, D&I was increased by 225%, 535%, 171% and 230% respectively from those in 1960, but water quality degradation occur, less maintenance of WR infrastructures

Benefit	Unit	Before Development (1960)	After Development (1990)
Flood control	Inundation area	Flooding annually (60,000 ha)	Controlled
Irrigation	Harvest intensity	0.8 x / year	1.8 times / year (225%)
Electricity	Million kWh	170	910 (535%)
Domestic water supply	Million m^3	73	125 (171%)
Industrial water supply	Million m^3	50	115 (230%)
Water quality	Average BOD/year	-	12 – 16 mg/lt
Infrastructure facilities	Condition	-	Less maintained

II. The Brantas River Basin

2.4. Problems After Construction Period





- Construction phase aims to realize physical infrastructures as a means to realize the intended benefits.
- After construction, it had to deal with a period to achieve the objectives of the project. It is the period of O&M of the infrastructures.

- After almost 30 years period of constructions (1960 – 1990) in the era of WR Development, Brantas River Basin encountered specific problems: no institutional perform O&M, not sufficient financial sources for O&M and degradation of WR infrastructures.
- To realize the development objectives, it needs permanent and neutral institution supported by professional staffs and adequate & sustainable budget to perform effective O&M of the systems

II. The Brantas River Basin

2.5. Jasa Tirta I Public Corporation





- Legal basic of establishment: GR No. 5/1990 replaced by GR 93/1999 and newly updated by GR 46/2010
- The tasks and responsibilities of PJT I are related to:
  1) conducting business on water resources in the basins, and
  2) conducting part of tasks and responsibilities of the Government on WRM: O&M of water resources and its infrastructures in Brantas RB (40 rivers) and Bg. Solo RB (20 rivers)
- PJT I not responsible in:
  1) irrigation system (managed by PWRSA);
  2) water pollution control (responsibility of Governor delegated to Provincial Environmental Agency);
  3) watershed management (Ministry of Forestry: forest areas, Local Government outside of forest area);
- Government can give special assignments to perform PSO (compensated through reimbursement mechanism)
- PJT I is intended to participate in water resources infrastructures investment based on Public – Private Partnership System

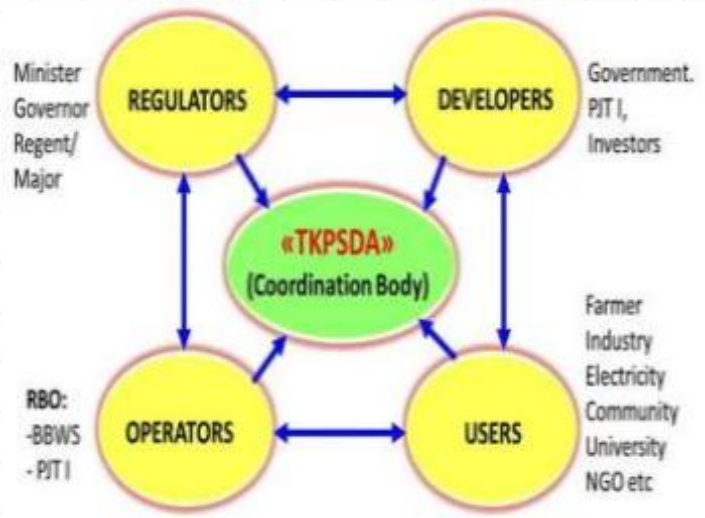
II. The Brantas River Basin

2.6 Institutional Framework (1/2)





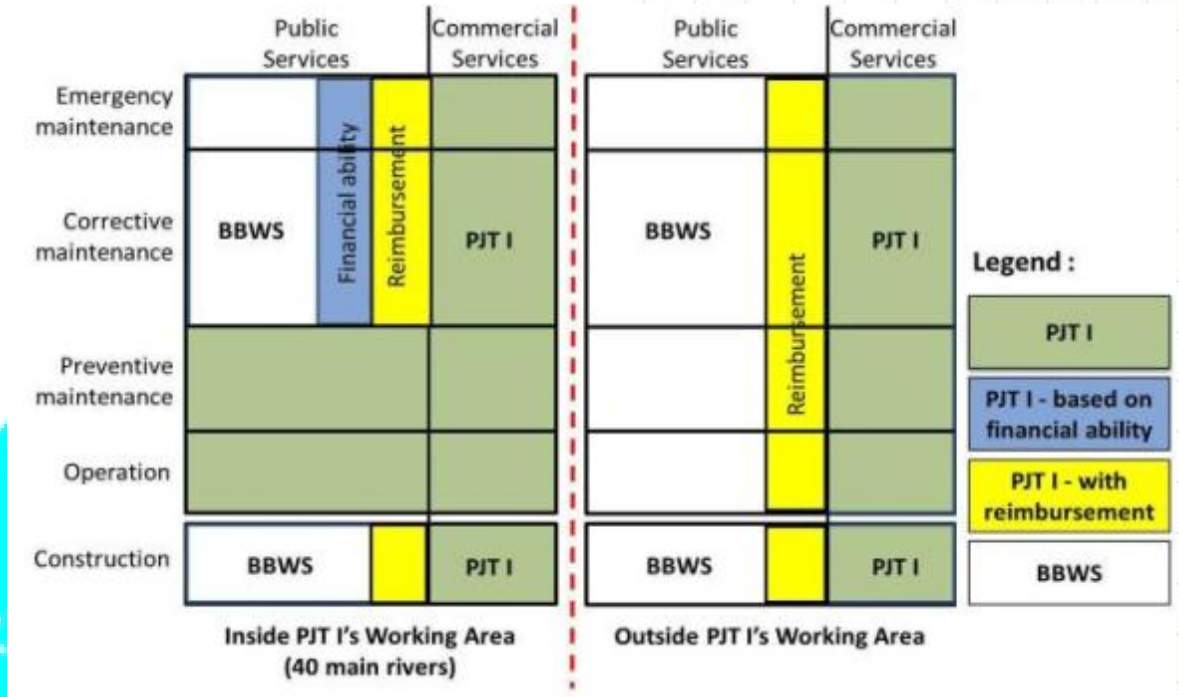
- Main institutions have direct responsibility in RB WRM:
  - **Regulators**: MPW, Governors and Regents/Mayors
  - **Operators**: *BBWS* (Brantas Project) and PJT-I;
  - **Developers**: Governments (through BBWS), PJT I, Investors
  - **Coordinating body**: *TKPSDA* (WRM Coordination Team).



- Basin WRM Coordination:
  - Brantas Basin WRM Coordination Team – TKPSDA (MPW Decree No. 248/KPTS/M/2009 to replace PTPA): 44 members (50% from Government Institutions, 50% from Non Government Institutions), supported by Secretariat and 4 Commissions: (a) WR Utilization, b) Conservation, c) Water Hazard, and d) Institution and Information System).

II. The Brantas River Basin

2.6 Institutional Framework (2/2)



- Clear cut the tasks and responsibilities between BBWS and PJT I:
  1) BBWS (public type RBO): water related public services
  2) PJT I (corporate type RBO): water service delivery to business activities. For public services in 40 rivers, PJT I conduct: a) O&M preventive, and b) emergency maintenance (on request and financial availability)

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III. Capacity Building Adopted by PJT I

Basic Concept of CD (1/3)

Capacity has been defined as the ability of individuals and organisations or organisational units to perform functions effectively, efficiently and sustainably. This implies that capacity is not a passive state but part of a continuing process and that human resources are central to capacity development. (UNDP, 1998)

CB consists of 3 basic elements

- Creation of an enabling environment with appropriate policy and legal frameworks;
- Institutional development, incl. community participation; and
- Human resources development and the strengthening of managerial systems

(Alaerts et.al., 1991):

- Capacity is usually associated with the "*ability*" of individuals, organizations and society to perform their functions efficiently, effectively and sustainably;
- CD for organizations is a continues and complex process of transformative change and it depend on the dynamic challenges of the organizations.

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Experience in Brantas RB

III. Capacity Building Adopted by PJT I

Basic Concept of CD (2/3)

- *Willingness* and *motivation* are the key to the success of effective utilization of competencies and strong leadership is a major factor to build willingness, motivation, and ownership to ensure the success of the CD program.
- The achievement of organization to do their roles & functions and their tasks and responsibilities depend on the ability the organization to develop and manage their CD.
- PJT I's strategies are:
  1) get political support & appropriate legal frameworks;
  2) develop appropriate mng. system and technical competences;
  3) gain customer's satisfaction to generate adequate & sustainable source of funding and utilize effective, efficient and accountably; and
  4) empowerment the stakeholders to promote their positive participation.

It is conform with NARBO RBO Performance Benchmarking

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Experience in Brantas RB

III. Capacity Building Adopted by PJT I

Basic Concept of CD (3/3)

- *RBO Critical Performance Areas*
  - **Stakeholder**: to achieve our vision and implement effectively our mission, how should we engage with our stakeholders? **Stakeholders/Customer Focus Policy**

- **Learning and Growth**: to achieve our vision and implement effectively our mission, how will we sustain our ability to change? **Learning Organization**
- **Business Processes**: to satisfy our stakeholders, what business processes must we excel at? **Effective and Continuous Improvement of Technical Competencies and Management System**
- **Financial**: to succeed financially how should we appear to our stakeholders? **Transparent, Accountable, Effective and Efficient Financial Management**

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Experience in Brantas RB

III. Capacity Building Adopted by PJT I

3.1 . Political Support and Legal Frameworks





- As a pilot of corporatization in WRM, Gov. support continuously the successful of PJT I:
  - Consistent political support by facilitating required political decision for the improvement of PJT I performances;
  - Issuance of legal product required (GR & Ministerial Decree and Provincial Regulation & Governor Decrees);
- Effective supervision by MSoC (corporate aspects), MPW (WRM technical aspects) and Governors (operational aspects);
  - MPW, MSOC, 1 of other Ministry and Provincial Gov. have representative in the Supervisory Board (SB) I to facilitate rapidity and consistency of required political decisions and actions;
  - SB supported by 1) Committee of GCG & Audit and 2) Committee of Investment, Risk Management, Remuneration & Nomination;
  - Member of SB: MPW (as Head of SB), MSOC (as member and Head of 1st Committee), MRT (as member and Head of 2nd Committee), Provincial Government (PG) of East Java and PG of Central Java

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III. Capacity Building Adopted by PJT I

3.2 . Quality Management System ISO 9001

- PJT I introduced ISO-9001 based QMS since 1997 for continues improvement on WR and corporate management to gain government trust and stakeholders satisfaction;
- A well-documented, transparent and predictable operation has generated to improve performance and higher stakeholder satisfaction
- The benefits are:
  1) operational of the company not affected by change of employed workforce;
  2) stakeholders' complaints are better handled and anticipated;
  3) main tasks are undertaken more efficient and effectively;
  4) easier to implement GGCG principles; and
  5) better relationship between stakeholders and beneficiaries;

IDENTITAS KARENA KUALITAS

JASA TIRTA

Identity by Quality

III. Capacity Building Adopted by PJT I

3.3 . Transformational Leadership





- CD is a continuous process of transformative changes (individuals and organizations);
- Generating change requires transformational leaders who has ability to:
  1) develop a new charismatic and great vision;
  2) gather support from individuals and teams;
  3) inspire the staff by empathetic communication;
  3) promote ownership, motivation and confidence: ***we can do it, we can solve it, we can achieve it***;
  4) generate new challenges to promote innovative measures for better performances;
  5) improve relationships to create warmer and closer teams that feel the presence of the leader in all ways; and
  5) guide the organization through a transformative phase.

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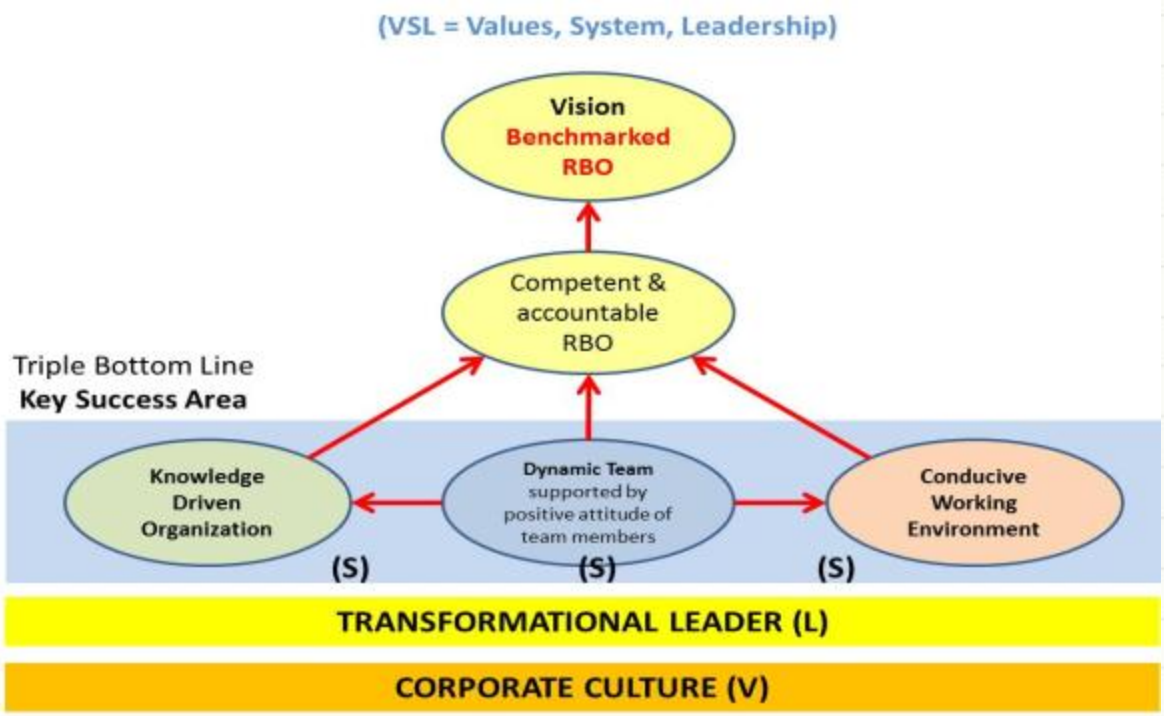
Experience in Brantas RB

III. Capacity Building Adopted by PJT I

3.4. Challenging Vision (1/2)



- Vision 2025: *"To be one of the Best RBO in Asia Pacific by 2025"* (Best RBO = Benchmarked RBO).
- 3 (three) Key Success Areas to achieve the vision supported with strong transformational leaders and corporate culture;

III. Capacity Building Adopted by PJT I

3.4. Challenging Vision (2/2)





- **To be Knowledge-driven RBO:**
  1) is a learning organization;
  2) has a knowledge-based corporate culture; and
  3) Invest knowledge in business processes and service delivery.
- **Having the Dynamic Team**:
  1) loyalties, ownership, and pride to be part of the organization;
  2) positive contributions of each individual team member; and
  3) spirit of innovation, openness, willingness to learn, share the experiences and spirit of solid team work.
- **Creating & maintaining conducive working environment**:
  1) clear documented policies and minimizing the occurrence of decisions inconsistent w/ corporate written rules and policies;
  2) SOP and code of conduct;
  3) standard of competencies;
  4) open management; and
  5) performance based salary & appropriate incentives schemes.

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Experience in Brantas RB

III. Capacity Building Adopted by PJT I

3.5 . Brantas Spirit and Corporate Culture

- Nurture and maintain the "Brantas Spirit":
  - spirit of ambition & desire to achieve the goals and not give up easily,
  - spirit of openness to accept new things, varied, and challenging,
  - spirit to learn and accept, give and share opinion & experiences, and spirit to have new challenges;
  - spirit of responsibility, ethics, integrity, initiative and pioneering; and spirit of solid team work.
- Incorporated the Brantas Spirit into PJT I Corporate Cultures: ***PINTU AIR*** (the water gate).
- This vision and corporate culture was resulted from serial discussions and communication involving managements and staffs at all level to build the ownership and commitment

Box 4 **PJT I's corporate culture**

The PINTU AIR (the water gate)

P - Professionalism
I - Innovation
N - Neutrality
T - Tanggap (responsiveness)
U - Uswah/Keteladanan (model to be referred to)
A - Adil (fair and equitable services)
I - Ikhlas (sincerity, honesty)
R - Rasa memiliki (ownership)

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Experience in Brantas RB

III. Capacity Building Adopted by PJT I

3.6 . Sustainable Funding Sources





- PJT I is authorized to collect, receive and use the revenue from WRMSF to finance the tasks and responsibilities:
  - Law No. 11/1974 & GR No. 6/1981; replaced by Law No. 7/2004 & GR No. 46/2010: Funding sources for WRM can be derived from: (i) Gov. budget; (ii) private budget; and (iii) income from WRMSF
  - WRMSF is levied for business activities, i.e. domestic water supply, industry and hydroelectric power generation (irrigations, the biggest water users, are exempted to pay WRMSF).
  - Gain on Gov. trust and customer satisfaction are main priority to have sustainable and increasing revenue;
- Optimization of Corporate assets to increase Non Water Business Revenues: consulting and contracting services, tourisms, laboratory services, equipment and land rental, Eco-business, etc
- Develop new Strategic Business: (GR 46/2010 on PJT I): Hydropower plant ; Regional Drinking Water Supply; manage water resources and water related infrastructures in other strategic and potential river basins

IV. WRM Implementation

4.1. River Basin Planning (1/2)





- IWRM is evolutionary, evolves over time, as new demands and needs emerge, and innovative solutions are added at each stage.
- The WRM of the Brantas Basin, was done stage-wise based on a Master Plan (MP) that was periodically reviewed in order to update the plans in accordance to the basin's emerging issues and the national development requirements;
- Priorities were selected within each of the different stages of development, which in turn will lead to the subsequent stages;
- The MP is an integrated, comprehensive and sustainable manner of MP based on the principle of **One River** (Basin)**, One** (Integrated) **Plan, and One** (Coordinated System of) **Management**);
- It is a multipurpose development uses dams and reservoir for development of WR resulting benefits in flood control, irrigation, and power generation, DMI W/S.

IWRM

Experience in Brantas RB

IV. WRM Implementation

4.1. River Basin Planning (2/2)

- The 1st plan was known as the Brantas Plan (1958), which was later consolidated as the Master Plan – 1 (MP – 1) of the Brantas River Basin (1961). Flood control was the main priority of MP – 1 while irrigation development became the main priority of MP – 2 (1973), with domestic and industrial water supply the priority in MP – 3 (1985). The MP – 4 (1998) emphasized on conservation and basin effective WRM – institutional approaches for proper water governance.

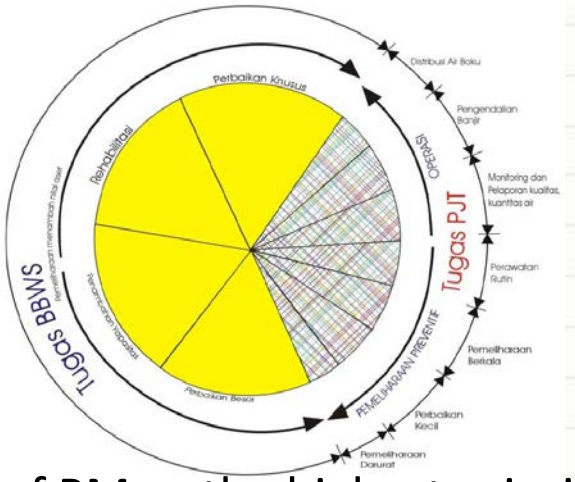
IWRM

Experience in Brantas RB

IV. WRM Implementation

4.2. O&M of WR Infrastructures

- Adequate O&M activities are necessary to be performed to maintain the function of the WR infrastructures and to ensure the optimum benefit at their planned lifetime
- Preventive Maintenance (PM) is the most important aspect. When done properly, PM could avoid further damage that require a big amount of repair cost and potential disrupt bulk water delivery and flood control.



- The corporation put implementation of PM as the highest priority.
  - has periodical check mechanism to verify the WR infrastructures condition and collaborate with communities in getting information.
  - Any unfavorable condition occurs which requires repair and maintenance, the Water Service Division take immediate action.
  - In Management Review Meeting the effectiveness of PM actions is one of the most priority to be evaluate

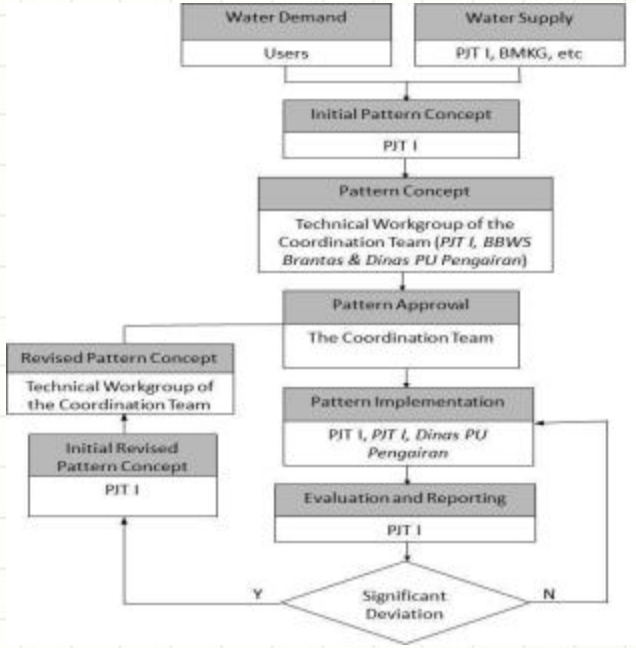
IV. WRM Implementation

4.3. Water Quantity Management (1/2)





- PJT I prepare water allocation plan to be discussed with and to be approved by the stakeholders in WRM Coordination Team. The plan is prepared based on the water demand proposed by the sector's users and supply capacity prediction for the next 6 (six) months (dry season and rainy season).



- The corporation operate WR infrastructures in order to distribute water according to the agreed allocation plan. PJT I utilizes real time telemetry facilities to control the distribution.
- In case any deviation > 15% of the plan during 2 consecutive decades, PJT I prepare the Draft of Revised Water Allocation Plan and call the TKPSDA to discuss and approve the New Plan.

IV. WRM Implementation

4.3. Water Quantity Management (2/2)





- The Lower Division is the "***internal – user***" of the Upper Division. The upper Division always tries to reduce Non-Conforming Product (NCP) on water service delivery to the downstream internal users. Attention will be paid on recurrent NCP and take action for the solutions for improvement.
- If required, PJT I and *Badan Pengkajian dan Penerapan Teknologi – BPPT* (Agency for Assessment and Application of Technology) conduct cloud seeding to generate artificial rain after getting approval from the Governor based on BWRMCT recommendation.
- Periodical advisory visit to the users and related agency are conducted to get their inputs and their perception on service delivery from the corporation. Result of this visit is used to improve the delivery service system.
- Stakeholders and customer satisfaction survey (done every year) shows that the stakeholders and customers, in general, satisfy on PJT I delivery services.

IV. WRM Implementation

4.4. Flood Management (1/2)





- PJT I prepare Flood Control Management Plan (FCMP). The FCMP is discussed at and approved by the BWRMCT before rainy season.
- PJT I perform flood mng by monitoring hydrological observation using telemetry equipment (FFWS) preparing flood prediction, and controlling the flood by operating the infrastructures.
- PJT I disseminate information on river conditions at every stage of flood (every 3 hours for H-alert, 1 hours for K-alert and 30 minutes for M-alert) to the related institutions and people living along the river based on a predefined mechanism.
- The FFWS telemetry equipment was installed in 1989. FFWS is the "*heart*" and key success factor in FC and water distribution. Maintaining the function of the telemetry has to be carried out properly in order to have reliable facilities.
- Improved CD to produce, install and maintain the "GSM" telemetry system using available product and technologies.

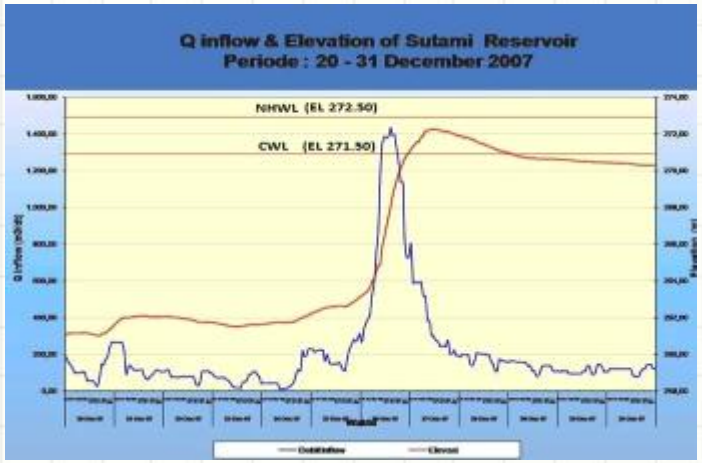
IWRM

Experience in Brantas RB

IV. WRM Implementation

4.4. Flood Management (2/2)

- Effective flood control done by PJT I resulted no flood in main stream of Brantas River, even during extreme flood in Dec' 2007.
- PJT I introduced Controlled Water Level (CWL*) System as parts of adaptation measure on CC



*) CWL System: EL 1,0 m below NHWL to be maintained as max EL up to 1 month before rainy season

- PJT I has also develop simple facility of Community Based Early Warning System (CBEWS) to strengthened local capabilities in making timely and accurate decisions during flood season.
- The communities decide where the instruments are installed and when the instruments give the alert and warn.

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Experience in Brantas RB

IV. WRM Implementation

4.5. Watershed Management (1/2)

- Reservoir sedimentation is one of the major challenges in the basin. It is originated largely from the basin's active volcanoes, rapid deforestation, and uncontrolled agricultural development.
- The Ministry of Forestry, the Ministry of Agriculture and Local Government are ultimately responsible for handling forest deforestation and soil conservation issues.
- In April 2005, the President of RI launched National Movement of Water Conservation Partnership (*Gerakan Nasional Kemitraan Penyelamatan Air – GNKPA*) to invite participation of communities and private sectors in water conservation program.
- PJT I participate actively by giving financial support for he water conservation and sediment control works.
- In 2010, the President of the RI launched the Indonesian Movement on One Billion Trees Planting in 2010. The Government asks private sectors to participate in this program.

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Experience in Brantas RB

IV. WRM Implementation

4.5. Watershed Management (2/2)

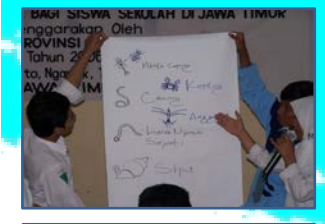
- PJT I established a subsidiary company (*Bhakti Usaha Menanam Nusantara Hijau Lestari II* - BUMN-HL2) supported by 7 other SoCs as shareholders .
- BUMN-HL2 collaborate w/ the communities to develop "*community-forest*" based on eco-business agreements. The peoples who participate share their lands and BUMNHL2 share all the cost of production. The farmers can plant short term crops and serve as the workers.
  - For their daily revenue: receive their wages as the worker.
  - For short term: have short term crops revenue.
  - For long-term: have (40-60)% of co-business agreement profit.
- BUMN-HL2 gained thrust from the SoCs who allocate their CSR Fund. In 3 (three) years, BUMN-HL2 carry out re-greening of 1,626,000 trees, covering 2,735 ha of community land, and involving 3,792 farmers.
- The trees planted by PJT I increase significantly: increased by 8,5X in 3 years from 239,400 trees (2009) to 2,038,900 trees (2012).

IWRM

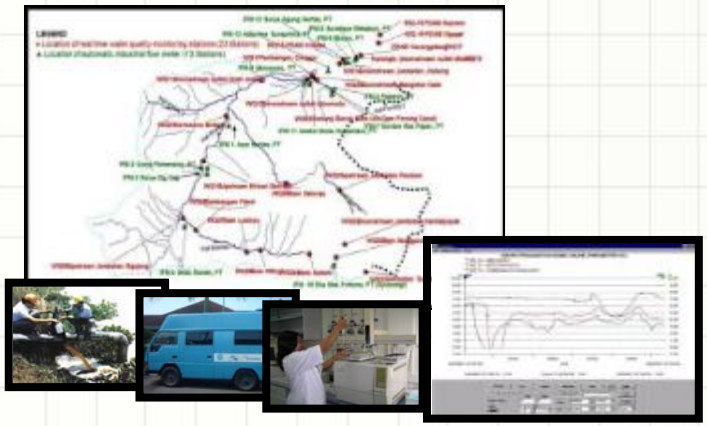
Experience in Brantas RB

IV. WRM Implementation

4.6. Water Quality Management



- Water pollution control responsibility lies with the governor (GR No. 20/1990). The Governor delegate responsibility to the Head of the Provincial Environmental Agency (Prov. Reg. No. 2/2008).
- PJT I is responsible in monitoring, evaluating, reporting, giving recommendation and preparing technical recommendation for the issuance of effluent discharge licenses.
- In collaboration with Indonesian Institute of Science, PJT I installed water quality telemetry system and accredited ISO 17025 Water Quality Laboratory in Malang and Mojokerto.
- Report on monitoring result, evaluation and recommendation prepared by PJT I are submitted periodically to Local Government (Province and Districts) for further actions by related agencies



IV. WRM Implementation

4.7. River Environment Management





- *River Corridor Management* is an effort to control the utilization of river corridor in order to keep the river corridor function as the buffer zone for safeguarding the river functions.
- Managing the river corridor is the responsibility of many entities. It's hard and complex social problems, especially in the city area. PJT I participate in:
  - preparing corridor land use patterns based on both local and regional spatial plans as references in prepare technical recommendation for the issuance of river corridor land use permit by the authorized institutions.
  - Cooperate with local government, PJT I develop tourism in Mas River (Surabaya City) as a pilot area for river tourism to build people awareness and help keep clean, healthy and function the river system.


IWRM

Experience in Brantas RB

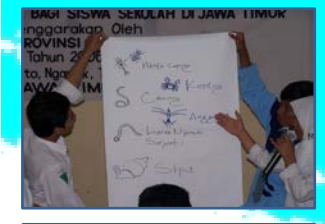
IV. WRM Implementation

4.8. Data Network and Communication

- PJT I as one of WR data center is a member of Hydrological Data Monitoring Network.
- Dbase in PJT I had been linked to the dBase of MPW and other related institutions using data communication protocol.
- PJT I is proactive in providing information on WRM and issues:
  - Staffs disseminate brochures and participate in exhibitions each year at local and national level in events;
  - Through local TV and Radio to explain water issues and open discussion forums;
  - Maintain PJT I website with real-time information concerning water and pollution levels assessed at various locations of the basin;
  - Senior management and junior staffs actively participate in national, regional and international trainings, workshops, seminars and conferences as speakers as well as participants to provide information and highlight issues related to IWRM. Actively promote the best practices gathered from other basins.

IV. WRM Implementation

4.9. Public Involvement & Awareness Campaign (1/2)

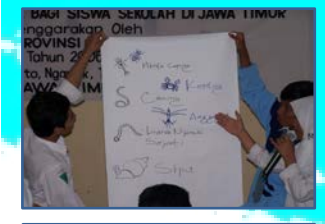


❑ **Youth awareness**

- PJT I in collaboration with State University of Malang and teachers of 26 Senior High Schools established *Jaring-Jaring Komunikasi Pemantauan Kualitas Air – JKPKA* (Water Quality Monitoring Communication Networks) on June 27, 1997;
- **Objectives**: to raise awareness of the students on WR and environment by developing extra curricula activities.
- **Activities**: training for teachers and students (bio-assessment. e-learning, etc.), Water Olympic, camping, river cleaning, campaign on river conservation, competition on re-greening in school environment, competition on WR conservation, seminar and workshop, etc.
- In Sept. 2013, the member of JKPKA is 112 Senior High Schools (including Bg. Solo RB). Nowadays, some river basins established JKPKA in their basin to promote the youth awareness in WRM.

IV. WRM Implementation

4.9. Public Involvement & Awareness Campaign (2/2)



❑ **Communities Participation**

- PJT I promote and facilitate the establishment of "*jogo tanggul*" groups (Levee Safeguarding Group).
  - It is proactive and positive participation of the communities surrounding the river to safeguarding the levees for their safety.
  - The roles of the Group is to give information to PJT I on the condition of river and river related infrastructures and participate in the preventive maintenance financed and supervised by PJT I.
  - This participation resulted awareness and ownership of the communities on the river and river related infrastructures.
- Communities in upper catchment area participate in water conservation program of the National Movement on Water Conservation and One Billion Trees Planting. It is an implementation of "*Downstream – Upstream Partnership*".
- A number of universities participate in the water sector decision making process through expert advice or providing consultancy.

IWRM

Experience in Brantas RB

V. PJT I's Performances

5.1. WRM Performances (1/2)

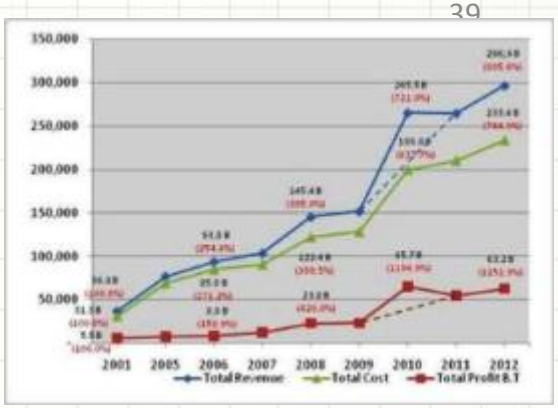




- Achieving Gov. trust resulting:
  - Gov. political decision to put corporatization on WRM as the end goals of WRM institutions in RB level;
  - Government intention to scaling up PJT I as National Wide Corporate RBO to manage national strategic river basins (Asahan RB, Serayu-Bogowonto RB and Jratunseluna RB)
- Gov. trust and customer satisfaction support increasing tariff of WRMSF:
  - Water business revenue increased by 8.8 X;
  - Budget allocated for O&M increased by 7.4X;

Box 3 **Corporate RBO: the end goals of Indonesian RBO**

"Indonesia may share its experience in dealing with the two-types of river basin organization, public typed and corporate typed RBO. We are embarking on a process to move the public type of river basin organizations into quasi-corporate river basin organization. If in the future, the financial aspect of the quasi-corporate river basin improves, they will be transformed into corporate-type of RBO" (MPW - GoI, 2011)



IWRM

Experience in Brantas RB

V. PJT I's Performances

5.1. WRM Performances (2/2)





- Consistent implementation of O&M resulted optimum utilization of WR, effective flood control, minimize the communities and users complaints and well functioned the WR infrastructures;
- Comparing to 1990 (PJT I establishment as initial benchmarked conditions), WRM performances increase significant. The augmentation of WRM direct benefits are:

Benefit	Unit	Before managed (1990)	After managed (2000)	After managed (2010)
Flood control	Inundation	Controlled	More Controlled	More Controlled
Irrigation	Harvest intensity	1.8 times / year	2.2 times / year	2.2 times / year (122 %)
Electricity	Million kWh	910	1,024	1,315 (145 %)
Domestic water supply	Million m^3	125	204	315 (252 %)
Industrial water supply	Million m^3	115	144	181 (157 %)
Water quality	Average BOD/year	12 – 16 mg/lt	3 - 14 mg/lt	3 ,2 – 7,5 mg/lt
Infrastructures	Condition	Less maintained	Maintained	Maintained

Brantas River Basin = **25%** area of East Java Province
GRDP Brantas River Basin = **59%** GRDP in the East Java Province (as of 2005)

V. PJT I's Performances

5.2. Corporate Performance (1/2)





- Better corporate performance based on the assessment of external auditor assigned by MSoC.
  - The company health performance score of PJT I (2001 – 2010)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Score	93,9	91,5	90,0	91,0	93,0	92,3	94,6	95,0	95,6	97,3
Health Level	Sehat AA	Sehat AA	Sehat AA	Sehat AA	Sehat AA	Sehat AA	Sehat AA	Sehat AA	Sehat AA	Sehat AA

Note: Sehat = Healthy

  - The assessment of management performance, Key Performance Indicator (KPI) of PJT I start by the letter of State Owned Company Minister No. 676/MBU/2004 on 22 December 2004, the performance of the year 2005 – 2010 as follow:

	2005	2006	2007	2008	2009	2010
Score	120,0	134,4	111,4	118,4	122,5	122,6
Performance	Baik ~ A2	Baik ~ A3	Baik ~ A2	Baik ~ A2	Baik ~ A2	Baik ~ A2

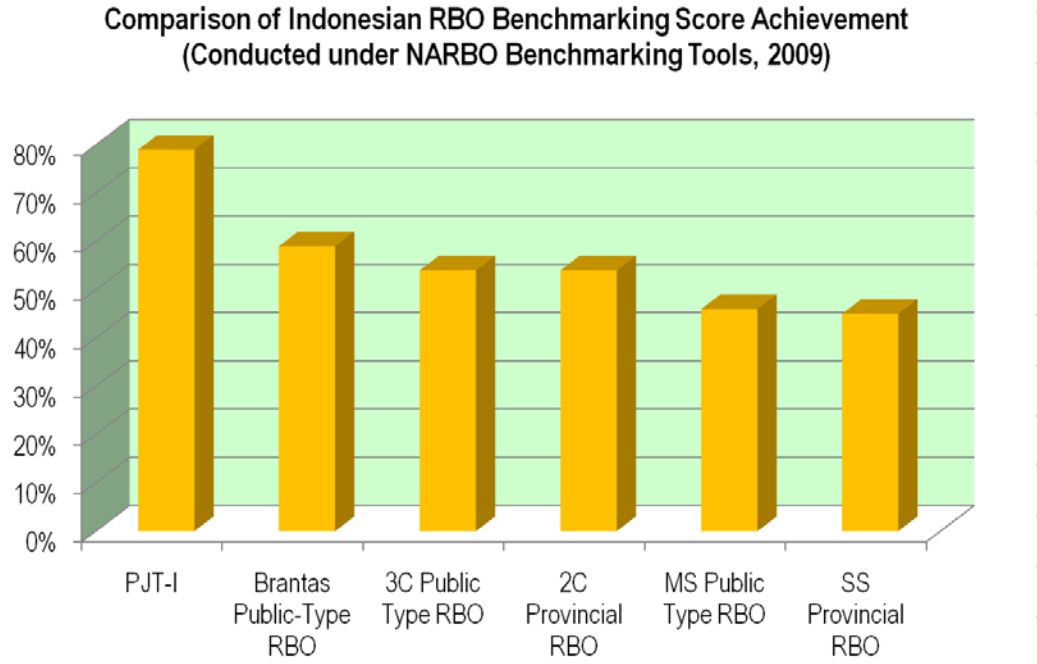
Note: Baik = Good

- PJT I is awarded as one of the best SoC Corporate Performance in 2012 (by Info Bank Magazine, Indonesia, Agust 2013)

V. PJT I's Performances

5.2. Corporate Performance (2/2)

- PJT I getting the highest score of NARBO – RBO Performance Benchmarking resulted from Pier Review by other RBOs in 2009. PJT I becomes one of benchmarked RBO in the region.



VI. Conclusions

(1/2)

- WRM should be undertaken integrated, comprehensive and sustainable manner based on principle of **One River** (Basin)**, One** (Integrated) **Plan, and One** (Coordinated System of) **Management**;
- Achievements to do tasks and responsibilities depend on ability to develop and manage CD. Strategies adopted by PJT I:
  1) Gain gov. thrust to get political support & appropriate legal frameworks;
  2) Develop appropriate mng. system and technical competences;
  3) Gain customer satisfaction to generate adequate & sustainable source of funding and utilize effective, efficient and accountably;
  4) Empowerment the stakeholders to promote their positive participation.
- Ownership and consistent implementation of CD program supported by dedicated staffs and management, solid team and "Brantas Spirit" resulting a good performance in effective implementation of IWRM basic functions

VI. Conclusions

(2/2)





- Although PJT I does not responsible in watershed management, water quality management and pollution control, PJT I proactive participating in these activities resulting strategic roles of PJT I on this basin issues;
- PJT I believe that 3 (three) bottom line of key success areas:
  - becoming knowledge driven organization;
  - having dynamic team; and
  - maintaining the conducive working environment condition

  supported by strong leadership and corporate cultures will lead the organization to move forward to realize their vision:

  "To be One of the Best RBO in Asia Pacific by 2025".

Thank you for your attention