

Foreword

This report is the annual report of the Jasa Tirta Public Corporation of the year 2006, a part of the activities of the Company as member of the Network of Asian River Basin Organization (NARBO). The report compiles the Company's activities specifically related to the NARBO activities, and resolutions and expectation for the NARBO activities in the year 2007. Besides all that, the description about the Company is also viewed, particularly in term of our tasks in managing the river basin.

Human resources development is one of the components to support the implementation of integrated management of river basin successfully. Therefore, in the year 2006, the activities of the PJT in the NARBO was focused on actively participating in several trainings to increase our employees understanding in the philosophy of managing integrated river basin management (IWRM) for the management level officers and practical trainings for the staff members such as Benchmarking, Self Assessment and Peer Review.

For the next year resolutions, besides still focusing on the human resources development, the Company will also focus on Pilot and Demonstration Activity for Indonesia : Development of a Water Quality Management System for the West Tarum Canal of Citarum River Basin in West Java Province and work together with K-water from Korea as part NARBO activity as part of NARBO activities.

The report is intended to exchange the information about the Company activities among the members of the NARBO, to regularly monitor the process in conducting the IWRM, and to support the management in implementing the IWRM.

Jatiluhur, February 26th, 2007

JASA TIRTA II PUBLIC CORPORATION
President Director,

Ir. Djendam Gurusinga, Dipl. HE
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Executive Summary

1. Organization

Jasa Tirta II Public Corporation (PJT II) is a river basin organization to manage water resources and its related infrastructures in the Citarum River Basin, the largest river basin in the West Java Province in Indonesia. The Company's tasks combined the managerial aspect as a company to make profits and social tasks to deliver water for different purposes especially for irrigation, operate and maintain the infrastructures, and water resources conservation. The PJT II is established based on the Government Regulation (GR) No. 94 of the year 1999.

The infrastructures managed by the PJT II consists of the Jatiluhur Dam and its reservoir including the hydroelectric power generation, the irrigation infrastructures to supply water for 240,000 ha of rice fields, and raw water supply to Jakarta Municipality. The average of water resources managed by the PJT II is about 5.7 billion m³ annually. The area of river basin is about 13,000 km².

To operate and maintain the infrastructures and manage the water resource in general, the PJT II has 1,600 employees that are distributed into 5 operational divisions and head office. The PJT II is also coordinated with other institutions to obtain the water requirements and formulate the reservoir operation and water conservation. The tasks are supported by the financial budget of IDR.177 billion (around USD 19.2 million, 1 USD=IDR.9,200) for the year of 2006.

The company's projects mainly are dedicated to the operation and maintenance of the infrastructures, such as the canals rehabilitation, dam's safety operation, funding for water conservation, water quantity and quality monitoring, etc. In 2006, the budget for physical construction was around IDR 24 billion (equal to USD 22 million, 1 USD = IDR. 9,200).

2. NARBO Activities

During 2006, the PJT II involved in a couple of NARBO activities, those were:

For the year 2007, the outline activities of the PJT II focus on the human resources development as capacity building, to improve the efficiency on water quantity management, to increase effectiveness of coordination with other institutions particularly in water quality monitoring and water conservation.

The expectation of the PJT II to NARBO activities are:

3. Contacts

The PJT II's web-site is www.jasatirta2.co.id. The contact person of PJT II for the NARBO activities is:

- Herman Idrus, CES, currently the head of Planning Bureau.
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- The mobile phone is +62 811 837964
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Chapter 1

Organization

1.1. Name of the Organization

The name of the organization is Jasa Tirta II Public Corporation or Perusahaan Umum Jasa Tirta II (Perum Jasa Tirta II) in local language and PJT II in short. The PJT II manages the Citarum River Basin, the largest river in the West Java Province of Indonesia.

1.2. Historical background of the organization

In 1956 Ir. H. Djuanda, the Prime Minister of Indonesia declared the commencement of Jatiluhur Multipurpose Project. The main aim of the project was to enhance the rice production to achieve self-supporting national staple food. The project comprised of two major activities, namely, construction of a dam across Citarum River to create a reservoir with impounding capacity of 3.0 billion m³, including the hydroelectric power plant with the install capacity of 150 MW, and to develop technically irrigation system over 240,000 ha of paddy field in the north plain of West Java Province. The project finished in 1967, since then the dam, the reservoir and the power plant were named Ir. H. Djuanda.

The benefits reveal upon the completion of the project, among other: (1) flood occurs during rainy season that inundated 20,000 ha of fertile land in the North plain could be minimized, (2) farmers have the opportunity to cultivate paddy with technically irrigated system over an area of 240,000 ha, two crops per year, (3) raw water supply for domestics, municipalities and industries especially for Jakarta the Capital City of Indonesia, (4) hydropower plant with the installed capacity of 150 MW, (5) fresh water as well as brackish water fisheries development in coastal area, and (6) beautiful scenery surrounding the reservoir for tourism and water sport.

After the construction period was finished in 1967, the Government of Indonesia (GOI) through the Ministry of Industry established the Jatiluhur State-own with the Government Regulation No. 8/1967 dated 24 July 1967. This company was intended to optimize the Jatiluhur Hydro Electric Power Plant generation. As a corporation, the Jatiluhur State-own Company was aimed to gain profit. Thus the operation of reservoir was designed to obtain the maximum revenue, neglecting the water requirement in the downstream of reservoir for the social purpose especially irrigation. Consequently, the conflictingly management of water was occurred.

Based on the above reason, in 1970, the GOI established Jatiluhur Authority Public Corporation (POJ). The POJ incorporated the institutions and projects that their tasks and obligations related to the goals, tasks, and business of POJ. Those institutions were Jatiluhur Irrigation Project (under Ministry of Public Work), Jatiluhur Tertiary Irrigation Project (under

Ministry of Home Affairs), Jatiluhur State-own Company (under Ministry of Industry), and West Java Public Work Official for Purwakarta Region (West Java Province).

The POJ has tasks and responsibilities to maintain sustainability of water resources in the basin and extends operation and maintenance of water resources infrastructures and the hydroelectric power plant. The entity also collected the contribution from the beneficiaries of water services for running the operation and maintenance of the system. In the year 1999 the name of the entity was changed to Jasa Tirta II Public Corporation with the tasks and responsibilities remain the same.

The summary of the historical development of the PJT II is shown in **Table 1**.

Table 1 Historical Development of the PJT II

Name of the organization	Period / Legal	Tasks
Jatiluhur Multipurpose Project	Construction Period (1956 -1967)	To construct and develop the Jatiluhur dam, its reservoir and hydroelectric power generation including the irrigation infrastructures downstream of the dam
Jatiluhur State-own Company	Operation and Maintenance Period (1967-1970)	To manage the Jatiluhur dam and its reservoir especially the hydroelectric power generation
Jatiluhur Authority Public Corporation	Operation and Maintenance Period Based on GR: <input type="checkbox"/> No. 20/1970, 23 Mei 1970 <input type="checkbox"/> No. 35/1980, 13 Oktober 1980 <input type="checkbox"/> No. 42/1990, 23 Agustus 1990	Incorporates the company purposes for profit making besides the social tasks of managing the water resources supply system downstream of the dam.
Jasa Tirta II Public Corporation	Operation and Maintenance Period Based on GR: <input type="checkbox"/> No. 94/1999, 13 Oktober 1999	Managing water resources in the Citarum river basin based on the integrated water resources management principles.

1.3. Purposes and roles of the organization

Citarum River Basin is located in the West Java Province, Java Island, Indonesia. There are two seasons every year, Wet Season or Rainy Season mostly from October to March and Dry Season from April to September. The annual precipitation depth of 3,000 mm is occurred in the mountainous area and 2,500 mm in the lowland. Normally, 70% of precipitation occurs during rainy season and 30% during dry season. The average relative humidity is 80% and the daily temperature of 25⁰ C in the low land and of 18⁰ C in the mountainous area.

There are 9 (nine) rivers traversing the area from mountainous range in the South to the North and terminated to Java Sea. Citarum River is the biggest one as the main source of water. The water flows from its spring in Wayang Mountain (El. 2,200 m) down to Java Sea about 300 km length. At the elevation of El. 26.50 m, about 80 km from its estuary Citarum is connected with 4 (four) rivers to the West and 4 (four) other rivers to the East by man-made canals named West Tarum Canal (WTC) and East Tarum Canal (ETC) respectively and formed a unit hydrological boundary of Citarum Integrated River Basin. The average annual flow of water in the basin is $12.95 \times 10^9 \text{ m}^3$ and by exploiting the existing water resources infrastructures the water that can be regulated is about $7.65 \times 10^9 \text{ m}^3$ annually.

The basin covers 9 (nine) District administration and 3 (three) Municipalities of West Java and Jakarta Provinces. Most of the sources of water is initiated from West Java Province and is utilized for irrigation, domestics, municipalities and industries in West Java Provincial area. Moreover, it also supplies the raw water for Jakarta, the Capital City of Indonesia. It means that the basin is a trans-boundary river basin and considered as a strategic river basin.

Based on the GR No. 94 in the year of 1999, the PJT II has tasks and responsibilities at the Citarum river basin on:

1. Operation and maintenance of the water resources infrastructures and hydroelectric power plant,
2. To carry on business on water resources and hydroelectric power generation,
3. To conduct the river basin management, i.e., conservation, development, and utilization of the water resources,
4. To do the rehabilitation on the hydroelectric power plant.

1.4. Outline of the Organization

1.4.1. Organizational chart

The organizational chart is presented in **Figure 1**. The board of directors consist of President Director, Administration and Finance Director, Technical Director, and Operation and Management Director. The Technical Director is in charge on supervising and managing the technical aspects of the Company represented by the bureaus, namely the Planning Bureau, the Business Management Bureau, and the Utilization and Conservation of Water Resources Bureau. The operational divisions are led by the Director of Operation and Management to implement the operation and maintenance procedures in the fields. There are five operational divisions to cover the water resources management within the working area including one operational division to manage and operate the hydroelectric power plant.

The Ministry of Public Works give technical guidance as well as the Ministry of Finance related to financial aspect. The corporate is owned and guided by the government through the Ministry of State-own Company. The board of supervisors give the PJT II guidance of the corporate plan and operation. The board of supervisors consist of the element from the ministerial of public works, finance, and agriculture.

1.4.2. Number of staff

The number of employees of Jasa Tirta II Public Corporation as per December 31st, 2006 is 1,632 employees. This comprises of 313 employees are working at the head office and 1.315 employees are working at the operational divisions.

The number of employees PJT II based on Education is shown in **Table 2**.

Table 2. The Number of Employees PJT II based on Education

No.	Description	Amount
1	Masters	26 employees
2	Post Graduate	188 employees
3	Bachelor Degree	129 employees
4	High School	498 employees
5	Junior High School	286 employees
6	Elementary School	505 employees
	Total	1632 employees

1.5. Annual budget in 2006

As mentioned from the tasks and responsibilities of the PJT II, to carry on business, the PJT II generates income from:

1. Raw water supply for domestics, municipals, and industries, hydroelectric power generation, agriculture, seaport, flushing, and other requirements that utilize water,
2. Selling of the Ir. H. Djuanda hydroelectric power (HEP) production and other HEP generation,
3. Tourism, engineering consultation service, and land leasing,
4. Other businesses that support the aim and objectives of the corporation based on the agreement from Ministry of State-own Company.

From the business that PJT II carries on, the revenues obtained in 2006 as follow:

1. Hydroelectric power generation with average annual production of 808,73 million kWh. The electricity is sold to State Electric Enterprise with average tariff of Rp. 134,-/kWh (USD 0.014). The revenue from the electricity production is Rp 118.5 Billion (equal to USD 10,9 million. 1 USD = Rp. 9,200).
2. Raw water supply service. The PJT II delivered water about 793,60 million m³ per year. The tariffs are divided into 3 different scheme, for Jakarta Municipality, for other Municipality, and for industries, Rp. 100/m³, Rp. 40/m³, and Rp. 50/m³ respectively. The revenue obtained is about Rp 57.6 Billion (equal to USD 6.3 million, 1USD = Rp. 9,200).
3. Other services optimizing the asset potential of the corporation (tourism, land leasing, sand mining, heavy equipments, laboratory and engineering consultancy services) with the revenue of Rp 11.8 Billion (equal to USD 1.3 million, 1 USD = Rp. 9,200).

The total revenue of the Corporation in the year 2006 is about IDR. 203,4 Billion (equal to USD 18 million).

1.6. Projects

1.6.1. Ongoing Project

As a public corporation, the PJT II has two general mandates to accomplish, social tasks for delivering water services for irrigation and operation and maintenance of the infrastructures, meanwhile, the revenues generated from carrying on business are also used to run the overall cost of the corporate operation.

The projects consist of routine activities on operation and rehabilitation of the infrastructure. The activities related on the rehabilitation of water resources infrastructures such as irrigation canals, irrigation structures (diversion structures, intake, gate, weir, ditch, etc), infrastructures for delivering water to domestics, municipals, and industries, such as pumps, pipes, intakes, etc.

The operation of the infrastructures comprise of routine operation on irrigation water allocation, monitoring water discharge for irrigation over an area of about 287,000 ha during rainy season and 258,000 ha during dry season (two crops per year). Furthermore, the PJT II made coordination with other institutions in accordance with flood monitoring, reservoir operation, watershed management, and irrigation water requirements.

The environmental aspect on the river basin consists of monitoring of the water quality in the river flow covered 900 points of observation per year, monitoring of the effluent discharge from industry, pollution sources identification, research on environmental impact assessment in the Jatiluhur area and the mercury content at fisheries and water in the Jatiluhur reservoir, monitoring of the fisheries population at the Jatiluhur reservoir, and enhance environmental awareness to the community and industry.

To increase the employee capability on the job, the corporation made courses and trainings on the field of hydroelectric power plant operation, dam safety procedures, irrigation operation, etc.

From the income generated by the PJT II, the PJT spent about Rp. 28 Billion (USD 3 million, 1 USD = IDR. 9,200) for the irrigation operation and maintenance as part of the social tasks, and IDR. 140 Billion (USD 15,2 million, 1 USD = IDR. 9,200) for running the corporate operation including the operation and maintenance of the water resources infrastructures, and hydroelectric power plant rehabilitation. IDR. 57 Billion (USD 6,2 millions, 1 USD = IDR. 9,200) out of IDR. 140 Billion (USD 15,2 million, 1 USD = Rp. 9,200) were used to fulfil the employee expense.

1.6.2. Big events in 2006

Most projects done by PJT II were basically routine tasks of operating and maintaining the infrastructures, such as grass cutting, trash and sediment excavating, rehabilitation of irrigation intakes, trash rack, electricity and pumps routine maintenance (i.e. overhaul of hydraulic pumps at Curug main diversion structure), etc.

The big events occurred during 2006 were:

1. Host of the second General Meeting of Network of Asian River Basin Organizations (NARBO) on 14th – 16th of February 2006.
2. Self-assessment Orientation of Jasa Tirta II Public Corporation, on 28th July, 2006.
3. NARBO Peer Reviewer Orientation and Certification and Jasa Tirta II Public Corporation Peer Review, on 31st of October until 3rd of November, 2006.

Chapter 2

NARBO Activity

2.1. Activities your organization implemented in 2006 as the member

During 2006, the PJT has participated in the following activities:

1. Host of the second General Meeting of Network of Asian River Basin Organizations (NARBO), on 14th – 16th of February, 2006.
2. Self-assessment Orientation of Jasa Tirta II Public Corporation, on 28th July, 2006.
3. NARBO Peer Reviewer Orientation and Certification and Jasa Tirta II Public Corporation Peer Review, from 31st of October until 3rd of November, 2006.
4. The 2nd Thematic Workshop on Water Allocation and Water Right, Manila – Philippines, 5th – 9th of June, 2006.
5. As participant on the Twinning Program of NARBO between Indonesia and Japan Water Association (JWA), Japan, on 12th – 25th of June, 2006.
6. As participant on NARBO 4th Training Program “Water for all – Lessons Learnt and Meeting Future Challenge”, 6th – 10th of November, 2006, Sri Lanka.
7. As team on Peer Review of Mahaweli Authority of Sri Lanka, Sri Lanka, 12th – 15th of December, 2006.
8. Developing and take care of the NARBO Forest in Jatiluhur Purwakarta, Indonesia (launching on February, 14th 2006).

2.2. The contact person and organization’s website

2.2.1. Contact person

The contact person of the PJT II related to the NARBO activities is Herman Idrus, CES, currently the head of Planning Bureau. The detail information as follow:

Phone number : +62 201972
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2.2.2. Organization’s web-site

The PJT II web-site is www.jasatirta2.co.id (URL: <http://jasatirta2.co.id>)

2.3. Resolutions and expectations for NARBO activities in 2007

2.3.1. Organization's resolutions

The IWRM application is believed as a process and needs step by step implementation. The continuation of capacity building to increase awareness among employees is considered as important aspect. Sharing experience, regular communication among NARBO members, capacity buildings will increase the awareness of the IWRM.

In IWRM, basically the numbers of institutions are abundant. Therefore, capacity building and close coordination with other institutions is a key a successful program.

2.3.2. Expectations of NARBO activities

The PJT II has been working since 1967 to manage the river basin. In the beginning of the operation, the management of PJT II is focused on the management of the Jatiluhur Irrigation System and the reservoir. Further, in 1999, the tasks of PJT II have been extended to include the management for the entire basin. In the basin itself, there are several institutions related to management of the basin, in the term of water quality resources management, land conservation, water quantity management, and operation and management of water resources infrastructures.

The latest issue is a newly born institution that has the same mandates as PJT II. The main different principle of the institutions is the source of finance. The PJT II is an independent self finance institution that generates their own revenue from managing water resources and its infrastructures to run the corporate. The new institution, Balai Besar Wilayah Sungai Citarum is depended on the national budget to operate and maintain the same infrastructures in the same area.

At present, the roles and responsibilities (policy setting, standards, permits, regulation, enforcement, O&M, monitoring, etc) of the various levels of Government appear to a large extent identified and allocated. However, a further clarification and integration is needed regarding the various management tasks, which at present are scattered and un-clarified among different government agencies. Therefore, spreading the IWRM principles to other institutions are also needed to make a better coordination among the institutions.

Chapter 3

Questionnaires about NARBO Web-Site

1. **Whether you can access the NARBO website (<http://www.narbo.jp>)**

Yes

2. **Whether you can access to the ADB's web-site (<http://www.adb.org/>) and the ADBI's web-site (<http://www.adbi.org/>)**

Yes

3. **Who can access NARBO web-site usually?**

The PJT II provides Local Area Network (LAN) within the head office of PJT II. The LAN access is distributed into the lowest administrative level in the office. Thus, basically every officer in the head office has access to the NARBO web-site. The numbers of employees who can access the internet are about 295.

At the operational divisions, one operational division out of five has access to the internet connection, about 24 employees.

4. **How often do you access to the NARBO web-site on the average?**

Twice a month

5. **What content are you interested in most and what information do you want to get from the NARBO web-site?**

NARBO's prospective activities, reports and publications, up-to-date information about water related problem in the world.

6. **What do you think we need to do to get more hits to the NARBO web-site?**

- Provides link to the universities in the world that has programs related to water resources engineering and management.

7. **What do you think we need to do to stimulate information exchange among members through the NARBO web-site?**

Make a forum dialog page in the website.