
Preface

As the recognition of importance of IWRM has been surging, the lack of the network to assist RBOs in Asia in their work of introducing and implementing IWRM approach came to light.

With this background, the Third World Water Forum was held in Japan in March 2003. At the forum, JWA, ADB and ADBI signed a Letter of Intent to jointly launch NARBO in recognition of the need to cooperate and support RBOs in order to promote IWRM in Asia. Subsequently, the three organizations made inquiries to governmental agencies, RBOs and other related organizations in Asia about their intention to participate in NARBO

and solicited their cooperation. After the inaugural NARBO General Meeting was held after the Inception Meeting in Chiang Mai, Thailand in November 2003, NARBO was established in February 2004 with 43 member organizations.

Three years have been past, the number of members and pre registered members are 56 and 3 respectively, as of February 1, 2007.

Various NARBO activities had been conducted from January 2006 to January 2007 and those activities are summarized in this 2006 NARBO annual report.

1. General Information of NARBO

(1) Introduction

The world community has recognized the importance of managing water resources in a more integrated manner. Over the past decades, a series of regional and global water conferences, including the World Water Forums in 1997, 2000, and 2003, have underlined the need to adopt and operationalize the approach of integrated water resources management (IWRM), which is defined by the Global Water Partnership as *“a process to improve the planning, conservation, development, and management of water, forest, land, and aquatic resources in a river basin context, to maximize economic benefits and social welfare in an equitable manner without compromising the sustainability of vital environmental systems.”*

By focusing on the management of water and related resources in a river basin context, it is implied that IWRM will be undertaken with the involvement of stakeholders at the basin level. The water conference in Dublin in 1992 referred to the need for management of water resources at the lowest appropriate level. This has become one of the basic principles underpinning the IWRM approach, and it has led to increased recognition that river basin organizations (RBOs) can realize IWRM at the basin level. Since Dublin, the world community has also recognized the importance of promoting gender and development work as part of the IWRM approach to ensure that women participate in water management at all levels.

“Many forms of RBOs have been established in recent decades, and countries have developed various governance approaches for RBOs, for example, river basin commissions in the People’s Republic of China, river basin parliaments in France, river basin committees in Australia, river basin authorities in the United States and Sri Lanka, a lake basin development authority in the Philippines, water resources public corporations in Japan and Indonesia, inter-state RBOs like the river basin tribunals in India and the Murray-Darling Basin Commission in Australia, and international RBOs in the Mekong basin, the Syr and Amu Darya basins, and in the Tumen basin.

Some RBOs were established decades ago and have ceased to exist, while many new RBOs have been established recently. Some RBOs have a large technical capacity, employing thousands of staff, while others may employ just a handful, like the newly established river basin committees in Southeast Asia. While there are many differences between these RBOs, they share a common mission, which is to operationalize IWRM in their respective river basins.

A network to assist RBOs in Asia in their work of introducing and operationalizing the IWRM approach does not yet exist. Consequently, RBOs lack opportunities for exchanging information and experience on their operations, and access for their staff to training and capacity building that draws on the

technical and non-technical experience in managing water resources in Asia.

The need for partnerships for action to achieve IWRM was recognized at the 3rd World Water Forum held in Kyoto, Osaka, and Shiga, in the Lake Biwa and Yodo River Basin, Japan, in March 2003, where it was noted that several developed and developing countries in Asia have already established RBOs to implement IWRM. The 3rd World Water Forum highlighted the need to support these RBOs through knowledge sharing and capacity building, especially in developing countries.

The 3rd World Water Forum also emphasized the contributions that IWRM can make to improving the water security of the poor, by incorporating the needs of the poor explicitly in water policies and management practices at all levels.

Recognizing the need for networking and capacity building in the implementation of IWRM, the Water Resources Development Public Corporation of Japan (recently reconstituted as the Japan Water Agency), the Asian Development Bank, and the Asian Development Bank Institute decided at the 3rd World Water Forum in March 2003 in Kyoto, Japan, to collaborate in launching a Network of Asian River Basin Organizations (NARBO), and a letter of intent was signed at the Forum on 21 March 2003. After the forum, the three organizations made inquiries to governmental agencies, RBOs and other related organizations in Asia about their

intention to participate in NARBO and solicited their cooperation. The inaugural NARBO General Meeting was held after the Inception Meeting in Chiang Mai,

Thailand in November 2003 and the Preparation Meeting for NARBO General Meeting in Tokyo, Japan in January 2004.

(2) Purposes

The goal of NARBO will be to help to achieve IWRM in river basins throughout Asia.

NARBO's objective will be to strengthen the capacity and effectiveness of RBOs in promoting IWRM and improving water governance, through training and the exchange of information and experience among RBOs and their associated water sector agencies and knowledge partner organizations in Asia and to advise the establishment of RBOs in Asia."

To promote IWRM in Asia, the focus of NARBO's activities will be as follows:

1) Activities for the whole of NARBO

The activities joined by all members of NARBO will be as follows:

- Advocacy and raising awareness for IWRM among RBOs, water sector apex bodies, and leading water sector agencies in the region, mainly through regional workshops.
- Sharing of information, good practices, and lessons learned for IWRM among the participating organizations, mainly by operating databases and a web site for IWRM exchanging information, and by sending a newsletter by e-mail as well as posting on the web site and holding (sub) regional workshops

2) Activities for regional areas of NARBO

RBOs, national and federal governmental organizations with expertise in IWRM, regional and interregional knowledge partner organizations for IWRM, and bilateral and multilateral development cooperation agencies, will be requested to support RBOs in Asia in the following types of activities.

- Supporting NARBO members to improve water governance, including the enabling policy, institutional, and legal framework for IWRM, and the formulation of the action plans.
 - Building capacity of RBOs in implementing IWRM, mainly through staff exchange and training among participating organizations.
 - Supporting RBOs with technical advice in regard to the planning, conservation, development, and the proper and efficient operation and maintenance of water resources facilities, to improve IWRM.
 - Fostering regional cooperation for improved management of water resources in transboundary river basins.
- 3) The scope of IWRM activities to be supported by NARBO will be approved by the NARBO General Meeting.
- 4) NARBO's activities will initially focus on the monsoonal areas of Asia.

(3) Charter

NARBO Charter is like a constitution because it stipulates NARBO organization and activities. The charter was presented and explained by NARBO Secretariat on February 23, 2004, the first day of the First General Meeting, then it was duly approved without change. The charter consists of introduction and five sections. These five sections are as follows

“Section 1. Denomination and Working Language”, “Section 2. Goal and Objective”, “Section 3. Activities”, “Section 4. Organizations” and “Section 5. Resources”.

The secretariat revised the charter partially in August 2005 and February 2006 (At the Second General Meeting) in an effort to make it to be complete.

About the whole NARBO Charter, please refer to Appendix 1

(4) Action Plan

The action plan 2006-2007 was formulated by eight principles based on the lessons learnt in the past 2 years' activities. And some of the activities were prioritized to tackle with them more

intensively. The action plan was proposed by the secretariat at the 2nd General Meeting on February 16, 2006. The prioritized activities are as follows.

- Activities for Sharing / Exchange of information
- IWRM Training Program
- Performance Benchmarking
- Thematic Workshop
- Twinning Program
- Discussion for Case Study on Site
- Charting IWRM Progress in Asia
- Facilitating IWRM Investment Project

About the whole NARBO Action Plan (2006-2007), please refer to Appendix 2

(5) Members

At the First General Meeting, 43 organizations from 11 countries signed the Agreement to Membership in NARBO and 8 organizations signed the Expression of Interest for Membership in

NARBO.

After the First General Meeting, 11 organizations newly joined NARBO and one organization withdrew (It was abolished in the organizational reform in

its country) and another 3 organizations joined NARBO at the Second General Meeting (February 14-16, 2006) in Indonesia.

As of February 16 2006, the number of members is 56 and the number of countries is 12. (Bangladesh, Cambodia, India, Indonesia, Japan, Korea, Laos, Malaysia, Philippines, Sri Lanka, Thailand

and Vietnam)

If an organization wants to become a member, that organization gets the application form from NARBO web-site.

All they need is the recommendation letter from the existing member and send it to the Secretary General. The membership fee is not collected for the time being.

[The list of NARBO members]

As of June 8, 2007

	Member		Interest
	Formal Member	Pre-registered member	
River Basin Organization (RBO)	16	0	2
Government Organization (GOV)	21	2	4
Regional Knowledge Partner (RKP)	15	1	1
Inter Regional Knowledge Partner (IRKP)	3	0	0
Development Cooperation Agency (DCA)	1	0	0
Total	56	3	7

River Basin Organizations (RBOs)

Classification	Country/Region		Organization
Member	RBO	Bangladesh	M Bangladesh Water Development Board
		Indonesia	M Jasa Tirta I Public Corporation
		Indonesia	M Jasa Tirta II Public Corporation
		Indonesia	M Jragung-Tuntang Basin Water Resources Management Unit (BWRMU) (Balai PSDA Jragung-Tuntang)
		Japan	P Japan Water Agency (JWA)
		Korea	M Korean Water Resources Corporation (K water)
		Lao PDR	M Nam Ngum River Basin Development Sector Project
		Malaysia	M Selangor Water Management Authority
		Philippines	M Laguna Lake Development Authority (LLDA)
		Sri Lanka	M Mahaweli Authority of Sri Lanka
		Vietnam	M General Office for RBOs in Vietnam
		Vietnam	M Cuu Long & Dong Nai River Basin Organization
		Vietnam	M Red River Basin Organization
		Vietnam	M Day River Basin Organization
		Vietnam	M Vu Gia Thubon River Basin Organization
Mekong region	M Mekong River Commission Secretariat		

Governmental Organizations (GOVs)

Classification	Country/Region		Organization
Member	GOV	Bangladesh	M Local Government Engineering Department, Ministry of Local Government, Rural Development and Cooperatives
		Cambodia	M Ministry of Water Resources and Meteorology
		Cambodia	M Department of Hydrology and River Works
		Indonesia	M Directorate General of Water Resources
		Indonesia	M West Nusa Tenggara Regional Office of Settlement and Regional Infrastructure (Dinas Kinitraswi Provinsi NTB)
		Indonesia	M Bengawan Solo River Basin Development Project
		Indonesia	M Jeneberang River Basin Project
		Indonesia	M River Basin Water Resources Managenet Unit Pekalan Sampean(PSDA)
		Indonesia	M Balai Pengelolaan Sumber Daya Air Cijung-Ciliman Banten (BPSDA)
		Indonesia	M Sermo Water Resources Management Unit (BPSDA)
		Indonesia	M River Basin Water Resources Managenet Unit Citarum(PSDA)
		Japan	M Water Resources Department, Land and Water Bureau, Ministry of Land, Infrastructure & Transportaton
		Lao PDR	M Water Resources Coordination Committee Secretariat
		Malaysia	M Department of Irrigation and Drainage
		Philippines	M National Water Resources Board
		Philippines	M Department of Environment and Natural Resources
		Sri Lanka	M National Water Resources Authority
		Thailand	M Department of Water Resources, Ministry of Natural Resources and Environment
		Vietnam	M Department of Water Resources Management, MoNRE (General Office for RBO, WRD MARD))
		Vietnam	M Sub Institute for Water Resources Planning
Vietnam	M Department of Natural Resources and Environment of Dong Nai Province		

**Regional Knowledge Partner (RKP), Interregional Knowledge Partner (IRKP),
Development Cooperation Agency (DCA)**

Classification		Country/Region		Organization	
Member	RKP	Southeast Asia	M	Global Water Partnership (GWP) SEARWP (Malaysia)	
		South Asia	M	Global Water Partnership (GWP) SAS RWP (Sri Lanka)	
		South Asia	M	South Asia Network of River Basin Organization (SASNET-RBO)	
		Bangladesh	M	Institute of Water Modeling (IWM)	
		Thailand	M	Thailand Water Resources Association (TWRA)	
		Indonesia	M	Indonesia Water Partnership	
		Indonesia	M	The Foundation on Water Affairs ADHI EKA	
		Indonesia	M	Faculty of Engineering, Brawijaya University	
		Indonesia	M	Research Institute for Water Resources	
		Indonesia	M	Center for Environment & Civil Engineering Research	
		Indonesia	M	Post Graduate Study on Water Resources Management Faculty of Engineering Gadjah Muda University	
		Indonesia	M	Sembrani Foundation	
		Australia	M	The World Wildlife Fund International (WWF International)	
		India	M	CapNET South Asia	
		Thailand	M	IUCN - The World Conservation Union	
	Japan	M	JAWA-Japan Water Resources Association		
		IRKP	Japan	P	Asian Development Bank Institute
			Sri Lanka	M	International Water Management Institute (IWMI)
			Japan	M	Asia Pacific Association of Hydrology and Water Resources (APHW)
		DCA	Philippines	P	Asian Development Bank

About the whole NARBO members' list, please refer to Appendix 3

(6) Chairperson, Vice-Chairperson and Secretariat

1) Chairperson



Chairperson: Dr. Basuki Hadimuljono
(From February 24, 2004)
(Director General, Agency for Research
and Development, Ministry of Public
Works, Indonesia)

2) Vice-Chairperson



Former Vice Chairperson: Mr. Piyadasa
Koralevidana
(From 16 February, 2006 to 30 October, 2006)
(Director General of Mahweli Authority of Sri
Lanka)



Vice Chairperson: Mr. K. W. Ivan de Silva
(From 31 October, 2006)
(Director General of Mahweli Authority of Sri
Lanka)

3) Secretariat

a) Secretary General



Former Secretary General: Dr. Masafumi Fukuda
(From February 24, 2004 to September 31, 2006)
(Executive Director: Japan Water Agency (JWA))



Secretary General: Mr. Yasutaka Hamada
(From October 1, 2006)
(Executive Director: Japan Water Agency (JWA))

b) Vice Secretary General

Dr. Takeyoshi Sadahiro (Until 16 February, 2006)
(JWA)
Mr. Hiroyuki Shindo (From 16 February, 2006 to
31 March, 2007)
(Director, International Affairs Division, JWA)
Mr. Michio Oota (From 1 April, 2007)
Mr. Wouter Lincklaen Arriens
(Lead Water Resources Specialist, ADB)
Mr. Toru Tatara
(Special Advisor to the Dean, ADBI)

c) Secretariat

NARBO Secretariat consists of JWA, ADB and
ADB. The headquarters of the secretariat is in
JWA.

2. The Second General Meeting

(1) Summary

The Second General Meeting (GM) was held from February 14 to 16 for three days at Jatiluhur (The organization : Jasa Tirta II public corporation (PJTII)), Indonesia with thirty-nine organizations from nine countries attended and ended very successfully. Various kind of pragmatic activities would be organized in accordance with the action plan 2006-2007 that was endorsed on this occasion. In this GM, the NARBO forest program was launched in the site visit.

At the reception on 13 evening, NARBO Forest Initiative was launched in cooperation with NARBO chairperson and PJT II with witness of Director General of Water Resources, Ministry of Public Works, Indonesia.

During the field trip on 14 February, participants planted seedlings of Rambutan, Avocado and Mango with local school kids in the vicinity of the Jatiluhur Dam (around 100 trees in the 20,000m²) as practical IWRM activities in collaboration with the Indonesian program "National Partnership on Water

Resources Area". Thanks to PJT II, participants recognized site is our field. It is expected to expand this activity to all NARBO members.

On February 15, the first day, more than fifteen papers presented in four sessions, i.e., session on water quality, flood, finance and benchmarking.

On February 16, the last day, the secretariat reported the activities in the past two years, proposed the revision of the charter and the action plan for the coming two years (2006-2007). The revision of the charter and the action plan were approved by applause. At the same time, the secretariat announced that fourteen organizations joined NARBO and one organization was eliminated from the member due to merged organization and it was also approved by applause.

Finally, new NARBO constitutional body was selected.

(2) Field Visit (February 14)

Participants visited three Jasa Tirta II water resources development facilities, namely Ir. H. Djuanda Dam, Walahar Weir and Curug Barrage. These facilities are the important component of Jatiluhur water resources system in Citarum River Basin.

The Citarum River Basin and Regional Water District (extended river basin) are located in West Java Province in Java

Island of Indonesia. The annual rainfall is

3,000 mm in the mountain area and 2,500 mm in the lowland.

The Citarum River Basin and Regional Water District measures over 11,000 km². The Citarum River is 270km long and there are three large multi-purpose dams in the Citarum River, namely Saguling, Cirata and Ir. H. Djuanda (Jatiluhur) Dam. These three

dams regulate the flow of the Citarum River.

Due to its location and its available resources, the Citarum River Basin can play the major role in the development of the rapidly growing West Java region, in which Jabotabek and Bandung are major centers of economic activity. Considerable investments in infrastructure have already

been made to support irrigation development, hydropower production, flood control, and domestic municipal and industrial water supply.

However, the expected socioeconomic development of the region forms a considerable challenge for water management.

1) Ir. Djuanda Dam (Jatiluhur Dam)

Ir. H. Djuanda multi-purpose dam was constructed in 1957 and is located in Jatiluhur Purwakarta, West Java. The type of dam is rock-fill, the height is 100m, the reservoir area is 83 km² and the reservoir volume is 36 billion m³.

Benefits of Jatiluhur Dam are,

a) Flood every year inundated and endanger fertile area (20,000 ha) could be

controlled and minimized.

b) Technically irrigated of agricultural area of 240,000 ha with two crops annually.

c) Hydropower electric generation with installed capacity of 187.5 MW.

d) Raw water supply for domestic, municipal and industry.

Participants visited Ir. H. Djuanda Dam hydropower plant, after the visit of the dam.



At the dam site of Ir. H. Djuanda Dam



At the entrance of hydropower plant

2) NARBO Forest

NARBO Forest that is located within the green belt area of Ir. H. Djuanda (Jatiluhur) Reservoir under initiative of NARBO secretariat and PJTII, was established on land area owned and managed by PJTII. In addition for conservation purpose, this

pilot forest has also the aim that planted fruits trees (rambutan, avocado and mango) will benefit to community around the area.

In this cooperation, NARBO will give advocacy, increase awareness, sharing

information, good practice, lessons learned and technical advice on the

All participants visited NARBO Forest site before going to Walahar Weir and planted those fruit trees with local school students.



Inscription of NARBO Forest

sustainable aspect of watershed function.



Planting fruit trees in the site

3) Walahar Weir and Curug Barrage

After participants finished planting fruit trees in NARBO Forest, they visited other two facilities, Walahar Weir and Curug Barrage.

Walahar Weir has 4 single gate weir of 20m width and 7.5m height of each, besides one gate used to accommodate exclusive vessels from upstream to downstream of the weir. The weir maintains water elevation at 18.0 mean

sea level and diverted water for North Tarum irrigation system of 80,000 ha.

Curug Barrage is located in Citarum River of the Jatiluhur Tailrace, stands as the main distribution structure of water for multipurpose in north plan of West Java include Jakarta Capital City. At Curug Barrage, water coming down from Ir. H. Djuanda Dam is being diverted into the north canal, east canal and west canal.



Walahar Weir



Intake of west canal at Curug Barrage

(3) Workshop (February 15)

Workshop was held on February 15 and it consisted of 4 sessions, namely “Water Quality”, “Flood”, “Water Finance” and “Benchmarking”.

At the “Water Quality” session, there were 4 papers presented from members in Philippines, Sri Lanka and Indonesia titled “Water Quality Management for the Laguna De Bay Region” by Lagna De Bay Development Authority, “Water Quality Management of Kala-Oya Basin in Sri Lanka” by Mahaweli Authority of Sri Lanka, “Monitoring and Studies on Water Quality in some Rivers and related Water Bodies” by Indonesian Water Partnership and “Water Quality Management for the Citarum River Basin” by Jasa Tirta II.

At the “Flood Management” session, there were 7 papers presented from members in Japan, Thailand, Vietnam, Philippines and Bangladesh titled “Brief review on results of investment for flood damage” and “Experiences on effective dam operation for flood in Japan” by Japan Water Agency, “IF Net and GFAS (Global

Flood Alert System) by Dr. Sadahiro, “Report from Thailand” by Department of Public Works and Town & Country Planning, “Report of Vietnam” by Red River Basin Organization, “ADB’s experience in flood management in Indonesia” and “Report of Bangladesh” by Bangladesh Water Development Board.

At the third session, “Water Financing”, there were 3 papers presented from members in Indonesia, Philippines titled “The Concept of Financial Sustainability of Water Resources Management in a River Basin” by PJT I, “Financing Water Investments” by Asian Development Bank and “Raw Water Charges in the Philippines” by National Water Resources Board.

At the last session, “Performance Benchmarking”, Asian Development Bank made the presentation titled “Indicators and Definitions” and “Next Steps” and International Water Management overviewed and demonstrated the prototype system.



(4) The 2nd General Meeting (February 16)

The General Meeting started with the opening remarks by the high-ranking officials from the Ministry of Public Works who substituted for the Minister and there were some provincial officials attended the meeting.

The General Meeting consisted of three sessions, namely "The report of NARBO activity 2004-2005", "NARBO Charter and Action Plan 2006-2007" and "Selection of NARBO constitutional body".

1) The report of NARBO activities 2004-2005

At the first session, the Secretary General overviewed and summarized two-year activities by "The lessons learnt", which is as follows.

-The achievement of the action plan

Having carried out many activities according to the action plan is the big success. However, some of the activities did not get started. Considering this, identifying priorities in the activities is recommended.

-The expansion of the network

Nine organizations joined in NARBO in the past two years and there were not new RBO members joined. Therefore making efforts to increase the number of NARBO members, especially RBO members, is quite important.

-Members' positive participation in NARBO activities

NARBO activities such as training courses and workshops were organized in

various countries with effort of host organizations. This is the big success of NARBO as the network activity.

However, it is unfortunate that members' involvement in providing information and members' participation in NARBO activities are still not enough.

-The practical activities

The secretariat has been promoting activities for members from the practical and useful point of view. It is important to study the present situation / issues of river basins / members' organizations, to evaluate them and to reflect the results on future NARBO activities.

-Financial resources for NARBO activities

Presently, the secretariat supports the most part of the costs needed for the activities, however the financial resource is limited. In order to use the limited financial resources into many activities effectively, we should not have the gorgeous events and should save the cost for each activity as much as possible. The secretariat is also highly expecting all members to make every effort for finding other financial resources.

-The secretariat activity

The secretariat has been supporting activities under the guidance of the Chairperson and Vice-Chairperson. There are some issues left like lacking of close contact with members and the secretariat is expected to solve these issues.

After the Secretariat General, JWA NARBO secretariat reviewed last 2 years' activities quickly. Then, KOWACO explained IWRM training courses in detail and Indonesian NARBO and KOWACO explained the twinning programs conducted between JWA and Indonesian NARBO, KOWACO and Indonesian NARBO thoroughly. Finally, Mr. Nakai from ADBI explained the 1st Thematic Workshop finely.

2) Approval and withdrawal of NARBO member, proposal and approval of revised charter

In the afternoon, at the "NARBO Charter and Action Plan 2006-2007" session, first, JWA NARBO secretariat announced that one member withdrew from NARBO and 9 organizations joined NARBO. On top of those 9 organizations which sent the application forms to the secretariat before the 2nd General Meeting, around a half dozen organizations showed their intentions to become a member, so 5 organizations became a member in the end.

After this, also JWA NARBO secretariat proposed some revisions of the NARBO charter regarding an extraordinary General Meeting and the application for membership. These proposed revisions were approved by applause from the attendees. Prior to the 2nd General Meeting, also some provisions of the charter concerning the venue of a General Meeting, Chairperson and Vice-Chairperson were revised by exchanging opinions by e-mails.

3) Action Plan 2006-2007

Following those two matters, the Secretary General mentioned the principles of the action plan 2006-2007. According to the principles, some of the activities got the priority, then JWA NARBO secretariat explained them in detail. The principles and the prioritized activities are;

Principles

- To implement activities suggested in the action program 2004-2005 more actively identifying priorities in the activities
- To minimize additional new activities
- To bring more positive participation of NARBO members to various activities
- To encourage member organizations to take initiative of various activities
- To emphasize activities taking advantage of characteristic networking system
- To carry out practical activities
- To make effort to increase the number of NARBO members, especially RBO members.
- To strive to minimize cost for each activity in order to make the most effective use of financial resource

Prioritized activities

-Activities for Sharing / Exchange of Information

To promote activities for sharing and exchange of information via web site, database and newsletters. For this, all member organizations are requested to provide information actively.

-IWRM Training Program

To promote IWRM training program in order for member organizations to develop their capacities. With an advantage of NARBO network, it is expected to diversify

training resources among members and others. Member organizations are expected to propose to be a host organization of the training.

- Performance Benchmarking

To establish a performance benchmarking system for RBOs, supported by peer reviews, to stimulate performance improvement of RBOs and allow practical exchange of experience.

-Thematic Workshop

To hold thematic workshops in order to deepen discussion on specific themes concerning water resources management suggested by members

-Twinning Program

To facilitate twinning program for closer relations among NARBO members. Various forms of the program highly recommended such as information exchange, staff exchange and exchange visit.

- Discussion for Case Study on Site

To give much importance to discussion for case study on site with the aim of more pragmatic activities.

- Charting IWRM Progress in Asia

To undertake a study of practical progress of implementing IWRM in river basins in the region, supported by ADB and IUCN, to improve exchange of information and experience, build capacity, present a region-wide perspective on the progress of IWRM, identify further actions needed, and expand NARBO activities.

- Facilitating IWRM Investment Projects

To help NARBO members promote investments and financing for IWRM in their river basins, by getting advice from other members and partners in identifying and preparing river basin projects

At the final session, the new NARBO officials were chosen as mentioned in “(6) Chairperson, Vice-Chairperson and Secretariat”, in “1. General Information of NARBO” and each official delivered their short resolutions.



The Secretary General was summarizing two-year activities



A participation stating his opinions

About the detailed program, please refer to Appendix 4

3. Record of activities 2006-2007

(1) Table of activities

Year	Month	Name of the activity	Outline of the activity
2006	February	The 2nd General Meeting	-It was held from February 14 to 16 for 3 days. Around 90 members gathered
		Newsletter	The 7th Issue
	March	The 4th World Water Forum	-It was held in Mexico City from March 16 to 22 and Dr. Basuki, the chairperson of NARBO, Mr. Shindo, the vice Secretary General and some other members attended the forum.
	May	Twining Program	- JWA dispatched 4 staffs to Indonesia from May 14 th – 25 th .
		Newsletter	The 8th issue
	June	The 2 nd Thematic Workshop on Water Allocation and Water rights	- It was held from June 5 to 9 in Manila, Philippines. - There were 26 participants from 7 countries.
		Twining Program	NARBO dispatched 4 staffs to Japan from June 11 th – 25 th .Through this program.
	October	The 1st peer review under benchmarking initiative.	- It was held from October 31 to November 3 in Jatiluhur, Indonesia. - There were 15 senior officials from 8 river basin organizations were certified as the peer reviewer.
		Newsletter	The 9th issue
	November	The 4 th Training Course on IWRM	- It was held from November 6 to 10 in Colombo, Sri Lanka. - There were 18 trainees from 7 countries.
The 3 rd Thematic Workshop on Water Allocation and Water Rights.		- It was held from November 27 to December 1 in Bangkok, Thailand. - There were 35 participants from 7 countries.	
2007	January	The 4 th Thematic Workshop on Water Allocation and Water Rights.	- It was held from January 23 to 26 in Saitama, Japan. - There were 13 participants from 7 countries.

(2) Website <URL: <http://www.narbo.jp>>

The website is being administered by one of the secretariats (JWA secretariat). From the viewpoint of the recognition that website is the important tool for sharing and exchange of information among

members and it is needless to say that members' contribution is crucial. The number of average access per month is approximately 1,350 in 2006, a significant increase from 817.4 in 2005.

NARBO Network of Asian River Basin Organizations

What's NARBO | NARBO Activities | Database | Newsletter | Links

search in NARBO.jp Normal Search (free text search) Advanced Search

The 4th Thematic Workshop on Water Allocation and Water Rights was completed - 6 February 2007 -
The 4th Thematic Workshop on Water Allocation and Water Rights, held on January 23-26, 2007, in Saitama, Japan, was completed. 13 participants from 7 countries attended the workshop, and they gave presentation on the drafted final action programs on improving water allocation issues and discussed them. In addition, we could share some important information on water resources management in Japan through site visits. >> More details

Event >> See more

- 28 March 2007 **Deadline : 25th April, 2007**
Thematic Workshop on Sustainable Management for Water Resources Infrastructures
The 1st Thematic Workshop will be held from 11th to 14th June 2007 in Vietnam. >> More details
- 20 November 2006
The 4th NARBO training program in Sri Lanka was completed
The 4th NARBO training program in Sri Lanka, held on November 6 - 10 in Sri Lanka, was successfully completed. Materials relevant to the training are available from the database. (ID & Pass needed)

Focus

- NARBO ANNUAL REPORT
- Registration form for joining NARBO
- Benchmarking
- Twinning Program
- Action Plan [PDF/77KB]
- NARBO Charter [PDF/35KB]
- New IWRM Concept for monsoon Asia
- Pictures
- Scholarship Programs
- Link to useful network
- Other Information

Topics >> See more

- 24 March 2007 **New!!**
NARBO Action Plan was updated. [PDF/77KB]
- 07 March 2007
NARBO newsletter No.10 issued. [PDF/450KB]
- 15 January 2007
Member's Annual Report 2006.
Every member must turn in their annual report by the end of March by filling in the format.

NARBO Person

To Trung Nghia
- Chief of the Red - Thai Binh RBO Office -
Dr. To Trung Nghia is a senior engineer with 35-year experiences in river basin water resources planning and management in Viet Nam... (See more)

Appointment of the Acting Vice-Chairperson Photo added
Mr. K.W. Ivan de Silva, the Director General of Mahaweli Authority in Sri Lanka, got appointed as the Acting Vice-chairperson on October 31. >> See more

Appointment of the Acting Director General of the Secretariat
Dr. Masafumi FUKUDA, the Secretary General of NARBO, left his post of the Executive Director at Japan Water Agency on August 1, 2006 and he conveyed his resignation as the Secretary General to the secretariat. After his resignation, the secretariat nominated Mr. Yasutaka HAMADA, Executive Director at Japan Water Agency, as the new Acting Secretary General and he was appointed the NARBO Acting Secretary General by the Chairperson according to the NARBO Charter "Article 4.4 Secretariat (3) (b)". Mr. HAMADA took his office as the Acting Secretary General on October 1 and the secretariat is happy to introduce him to all members on this occasion. >> Message from Mr. Hamada

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- NARBO Activities Plan and records of NARBO
- Database It includes NARBO annual

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NARBO Website

(4) Twinning Program

1. Brief report on twinning program

The twinning program which is one of the main activities of NARBO for sharing information was implemented between Japan Water Agency (JWA) and Indonesian NARBO this year. In the program of this year, firstly JWA dispatched 4 staffs to Indonesia from May 14th – 25th, and then Indonesian NARBO dispatched 4 staffs to Japan from June 11th – 25th. Through this program, the elaborate action for improvement of the water resources management in both has been formulated concretely.

Following year of 2005, the twinning program had been implemented. The aim of this program in 2006 is to promote the improvement of system of sharing experiences for water resources management and technology by the close

collaboration of practitioners of both. For this, the site visit to know the actual situation was concentrated in the program. Staffs dispatched from JWA visited site in Jakarta, Bandung, Semarang and Yogyakarta, whereas staffs from Indonesia visited sites of Tone weir, Urayama dam and Toyo canal project. Through these visits, the background of current and future issues has been made clear, and we recognized we would continue the collaboration for both. Especially, both have installed appropriate technology to meet the needs of peoples at the practitioners' point of view.

We are convinced that this program will give much profit to others. Your joining to this program will be anticipated.

1) From JWA to Indonesian NARBO

Mr. SHINDOU Hiroyuki	Director, International Affair Division
Mr. ISHIMURA Shinobu	Vice Resident Representative of Chiba Canal Project Office
Mr. OCHII Yasuhiro	Director, 2nd Design Division, Chubu- Regional headquarter
Mr. SUGIURA Masahiro	Senior Engineer, International Affair Division

2) From Indonesian NARBO to JWA

Mr. Irwan Syafri	Researcher in River Engineering, Research Centre for River engineering, Directorate General for Research and Development, Ministry of Public Works
Aris Harnanto	Chief of Research and Development Bureau, Jasa Tirta I Public Corporation
Herman Idrus	Chief of Research and Development Bureau, Jasa Tirta II Public Corporation
Bekty Sudarmanto	Chief of WR Institution Section, Directorate of Water Resources Management, Directorate General of Water Resources, Ministry of Public Works



**Mini-hydropower generation
Developed Research Center of Water
Resources (RCWR) in Bandung**



Intake Weir in Semarang



**Group Photo with staff of Balai PSDA
in Yogyakarta**



Field Visits to Tone Canal



In the Gallery of Urayama Dam



**At entrance of Toyogawa Canal
Project Office**

(5) Thematic Workshop on Water allocation and Water Rights

1) The 2nd Thematic Workshop in Philippines

The Network on Asian River Basin Organization (NARBO) conducted its 2nd Thematic Workshop on Water Allocation and Water Rights on June 5-9, 2006 in the Philippines. Twenty six (26) participants from seven (7) Asian countries such as Thailand, Indonesia, Vietnam, Lao PDR, Sri Lanka, Philippines and Japan participated in the said event which was held at La Mesa Guest House, La Mesa Dam Eco-Park in Quezon City. The La Mesa Dam is an earth dam centrally located in Nvaliches, Quezone City, Metro Manila. It as first erected in 1929 and then further raised in 1959 to a maximum water storage capacity 505 million cubic meters (MCM). Its overflow level is an elevation of 80.15 meters. It is a vital line to the water requirements of 12 million residents of Metro Manila considering that 1.5 million liters of water pass through this reservoir everyday. The venue was purposely chosen as it is conducive to the theme of the workshop which is water allocation and water rights.

Japan Water Agency (JWA), Asian Development Bank (ADB) and Asian Development Bank Institute (ADBI) sponsored the said event and was hosted by the Philippines' National Water Resources Board (NWRB) and the Laguna Lake Development Authority (LLDA).

The 5-day Workshop covers presentations and discussions of the issues; effects of the issues; their importance, as well as the cause of the issues which each participating countries had encountered on

water allocation and water rights system. At the end of the workshop session, each country participants again presented proposals, recommendations and evaluations on the issues previously presented in the fist part of the workshop. Also, part of the workshop were field visits at Laguna Lake in the Province of Laguna which is at the southern part of Metro Manila and at the Angat Dam and Reservoir in Norzagaray, Bulacan which is at the northern part of Metro Manila.

Angat Reservoir in the Angat River has a catchment area of 568 sq meters and has a storage capacity of 850 MCM and regulates an average annual inflow of 1700 MCM. The means annual rainfall in the area is about 4,000 millimeter. The Reservoir has a multi-purpose functions: to provide irrigation to some 28,000 hectares of farmland; to supply domestic water requirement to some 12 million people living in Metro Manila; to generate hydro-electric power to fee the Luzon grid; and reduce flooding to downstream towns and villages.

Angat River is the principal drainage way which originates from the Sierra madre Mountain Range, flows down across the towns of Bulacan, then joins the Pampanga River at the town of Calumpit and finally discharges to the Manila Bay at Hagonoy, Bulacan. The basin has a total drainage area of 936 sq.km where in the Angat Dam/Reservoir was constructed at about 60km northeast of Metro Manila.

As a finale of the thematic workshop, a social party was given for the departing participants to mark the end of a successful workshop. Some participants gave song renditions while others just have conversation with fellow participants.

The party lasted until 9:00 in the evening after which participants were brought back to Sulo Hotel where they were billeted. Next day each one went back to their respective countries.



Opening Remarks by Mr.Alikpala



Session in the Workshop



Group Photo in Front of the La Mesa Guest House

About the detailed program, please refer to Appendix 6

2) The 3rd Thematic Workshop in Thailand

The 3rd thematic workshop on water allocation and water rights was held on November 27 - December 1, 2006 in Bangkok, Thailand (at Century Park Hotel). The 3rd host organization was the Department of Water Resources (DWR), the Ministry of Natural Resources and Environment (MONRE). 35 participants from 7 countries (Thailand, Vietnam, Philippines, Indonesia, Sri Lanka, Lao PDR, and Japan) discussed each session theme actively, and we could reach the refined outcomes about the improvement for water allocation issues. In addition, we could obtain some important information on current status of river basin management in Thailand through the site visit.

The main objectives of the 3rd workshop were (i) to review of the 1st and 2nd thematic workshops, and (ii) to make proposals for approach to improving water allocation issues. In line with the objectives, we held 5 sessions (on 27 & 29 November and 1 December), in which participants gave presentations and we made discussions for clarifying how to approach to improvement of water allocation issues in each participant's country. Thanks to the participants' efforts, we were finally able to



Group Discussion

reach refined outcomes, which will be the basis for the final action programs of the workshop.

Also, 2 presentations were given from Japan side (on 27 November). One is "Outline of groundwater management", presented by Mr. Masayuki Sato, Deputy Director, Water Resources Policy Division, Water Resources Department, Ministry of Land, Infrastructure and Transport; and the other is "Outline of the River Law", presented by Michitaro Nakai, ADB Institute. Many participants seemed to have keen interest especially in groundwater management affair, thus participants made a lot of questions and discussions about that.

In addition, we made site-visit in the Bang Pakong river basin (on 30 November), going to the 2 venues (i) The Water Resources Regional Office 6 in Prachin Buri Province, and (ii) The Khlong Tha Dan Dam Project in Nayok Province. Especially in the site visit for the Water Resources Regional Office, we could obtain information on the River Basin Commission and the Water Evaluation and Planning System (WEPS), which are quite useful.



Site-Visit (Khlong Tha Dan Dam)

About the detailed program, please refer to Appendix 7

3) The 4th Thematic Workshop in Japan

The 4th thematic workshop on water allocation and water rights was held on 23-26 January, 2007 in Saitama, Japan (at Japan Water Agency (JWA) Headquarters). The 4th host organization was JWA. 13 participants from 7 countries (Thailand, Vietnam, Philippines, Indonesia, Sri Lanka, Lao PDR, and Japan) participated in the workshop.

In this 4th workshop, we mainly focused on holding presentations on drafted action programs for approach to improvement of water allocation issues by each participant. Thus, participants gave presentations on their action programs based on the outcomes of the previous workshop intensively, and made discussions actively (on 24 & 26 January). Participants' drafted action programs, which are to be the workshop outcome, could become more polished ones through the discussions



Making a Presentation on the Action Program

among participants.

Also, special lecture was given by Professor Tsuneaki Yoshida, Graduate School of Graduate Science, University of Tokyo (on 23 January). The theme of the lecture is "Japan's Experience in Water Resources Development - A Case Study on the Aichi Canal Project financed by the World Bank".

In addition, we visited 3 water-related projects within the Tone and Ara river basins, the Tone Canal Project in Saitama Prefecture (on 24 January), the Kasumigaura Lake Development Project in Ibaraki Prefecture, and the Inba-Marsh Development Project in Chiba Prefecture (On 25 January). In the field trip in Chiba Prefecture, we held the discussion session with members of the Water User Association (Inba-Marsh Land Improvement District).



Site-Visit (Tone Canal)

About the detailed program, please refer to Appendix 8

4) Conclusion

Thanks to the participants' efforts, we could complete the 1st series of thematic workshop successfully. Also, we could reach excellent outcomes through the workshop, which will be posted onto the NARBO website in the near future, <http://www.narbo.jp/>. Also, we could obtain important information on water allocation and water rights issues in participants' countries through discussions and field trips, which must be useful for the future NARBO activities.



With JWA Staff (Chiba Canal Comprehensive Project Office)

(6) The peer review under benchmarking initiative

NARBO has its first batch of certified peer reviewers under its benchmarking initiative following the orientation and training held in Jatiluhur, Indonesia on October 31 to November 3, 2006. Fifteen senior officials from eight river basin organizations (RBOs) have been certified.

The NARBO performance benchmarking service was launched in Bali, Indonesia in September 2005 with the demonstration of the web-based application. This was followed by a presentation to the general NARBO membership at its second General Meeting in Jatiluhur in February 2006. Eleven RBOs volunteered to pilot the performance benchmarking service.

As a background, NARBO has identified performance benchmarking system with peer review process as one of its priority activities. In 2004, the Asian Development Bank (ADB) and the International Water Management Institute (IWMI), in collaboration with NARBO member organizations, spearheaded the development of the NARBO performance benchmarking service for river basin organizations (RBOs) with peer review process, through a series of benchmarking activities. The performance benchmarking service for RBOs is a management support tool that enables the organization to: (i) track its progress; (ii) compare performance with similar organizations; and (iii) improve

the efficiency and effectiveness of service delivery and achieve the highest level of performance.

The peer review process is viewed as a mechanism for improving the performance of organizations and for strengthening the cooperation among members. It consists of member RBOs visiting each other to discuss and review performance. The process involves self-evaluation where an RBO first assesses its performance using the NARBO benchmarking framework which covers the organization's mission, stakeholder concerns, internal business processes, learning and growth, and financial aspects. The peer review process is expected to: (1) provide an opportunity for dialogue and exchange of experiences, good practices and information among similar organizations, (ii) build capacity, and (iii) create synergy within the sector. It is also expected to build convergence, commitment, cooperation, confidence, and credibility through a transparent process, and replace a culture of assessments by external specialists with a process of learning together in partnership with respect and trust.

Given these expectations from peer review process and effectively the certified RBO peer reviewers, only the participants who met the following criteria and were highly recommended by their RBO heads were invited and accepted:

- hold a senior management position, i.e., make or influence decisions, possess a high degree of technical and administrative skills, knowledgeable of the activities and operations of the RBO including client needs, and able to contribute and foster knowledge-sharing during deliberations of the peer review team, and able to develop critical evaluations and strategies as necessary.
- have extensive experience in river basin work, i.e., with several years of river basin planning and management experience, substantial knowledge of the water resources challenges and needs of

the river basin, and able to apply technical skills to advise and support, and to develop critical analysis and strategies.

Twenty three (23) senior officials from eleven (11) river basin organizations in Indonesia, Thailand, Vietnam, Philippines, Sri Lanka, South Korea, including one NARBO secretariat representative participated in the activity. Three staff from the Asian Development Bank (ADB) joined while one staff assisted the three staff from the International Water Management Institute (IWMI), who conducted the Orientation and training. Of the total participants, fifteen were certified:

Certified NARBO Peer Reviewers				
November 3, 2006; Jatiluhur, Indonesia				
Title	Name	Country	Designation	Organization
Ir	Subijanto, Tjoek Walujo	Indonesia	Director for Operations	Jasa Tirta I Public Corporation
Mr	Gurusinga, Djendam	Indonesia	President Director	Jasa Tirta II Public Corporation
Mr	Idrus, Herman	Indonesia	Head of R&D Bureau/Water Resources Specialist	Jasa Tirta II Public Corporation
Mr	Hutagalung, Waldemar	Indonesia	Director of Administration and Finance	Jasa Tirta II Public Corporation
Mr	Nurlaila	Indonesia	Head of Quality Management Bureau	Jasa Tirta II Public Corporation
Mr	Trihariono, Bambang	Indonesia	Senior Adviser, Quality Management Bureau	Jasa Tirta II Public Corporation
Mr	Quintos, Cesar	Philippines	Division Chief III	Laguna Lake Development Authority
Engr	de Silva, Ivan	Sri Lanka	Director General	Mahaweli Authority of Sri Lanka
Engr	Jayasinghe, J.A.S.A.	Sri Lanka	Executive Director, River Basin Planning & Management Division	Mahaweli Authority of Sri Lanka
Mr	Wellappili, Chulananda	Sri Lanka	Director, Planning & Monitoring Unit	Mahaweli Authority of Sri Lanka
Mr	Suaydee, Chamroon	Thailand	Chairman	Bang Pakong-Prachinburi River Basin Committee
Ms	Thongpook, Supaporn	Thailand	President	Ping River Basin Organization
Dr	Jompakdee, Wasan	Thailand	Chairman	The Coordinating Committee for the Protection of Ping River Basin and Environment
Dr	Nguyen Tat, DAC	Vietnam	Senior Project Manager	Dong Nai River Basin Organization, Southern Institute for Water Resources Planning
Mr	Thai Gia, Khanh	Vietnam	Water Resources Engineer, Chief of Technical Division	Red River Basin Organization

These Certified Peer Reviewers are expected to: (a) be available to conduct peer reviews, (b) visit other RBOs, (c) work with other peer reviewers, (d) review other RBO self-assessment reports, (e) interview the top management, staff and stakeholders of RBOs being reviewed,

(f) hold dialogues with other RBO Self-Assessment teams, (g) write reports and present findings and recommendations to other RBO top managements, and (h) submit final peer review reports to the boards or top managements of RBOs reviewed.



Benchmarking meeting in Jatiluhur, Indonesia

About the detailed program, please refer to Appendix 9

(7) Training Course on IWRM

● The 4th Training Course

The 4th training course was held in Sri Lanka from November 6 to 10 for 5 days with great cooperation with Mahaweli Authority of Sri Lanka. The training course was participated by 18 persons from Bangladesh (2), Indonesia (2), Pakistan (1), Philippines (1), Viet Nam (5) and Sri Lanka (4). Also 2 JWA's staff and 1 ADBI's staff took part in the training course. The theme of the training course was "Water For All –Lessons Learnt and Meeting Future Challenges" which was very timely theme and relevant to all the South east Asia and South Asian Countries. The first day was devoted to giving some clear understanding about Past-Present & Future of Hydraulic Civilization of Sri Lanka and Current Water Management in Sri Lanka-Overview, by presentations

made by 2 eminent resource persons from Sri Lanka. Then country paper presentation was made by each organization participated. The 2nd and 3rd were devoted to Fields Program which was planned to visit Victoria-Randenigala-Rantembe complex and meet Farmers Organization to have very close interaction to understand the grass-roots level situation of Water Management. The 4th and 5th day programs were very attractive for them to actively participate for the sessions and final concluding ceremony. The training course was definitely a good opportunity for the participants to learn from Sri Lanka experiences with water-related sector issues.



Group Presentation



Visiting Farmers Organization

About the detailed program, please refer to Appendix 10

(8) Others

1) The 4th World Water Forum (NARBO Chairperson made presentations)

Dr. Basuki, NARBO chairperson, made three presentations and attended the lunch seminar for news reporters at the 4th World Water Forum that was held at Banamex Center in Mexico from March 16 to 22 for 7 days which attracted almost 20 thousand participants from 141 countries and regions.

The program of the forum consisted of 5 frameworks, namely “Water for Growth and Development,” “Implementing IWRM,” “Water Supply and Sanitation,” “Water Management for Food and the Environment” and “Risk Management. Each day (from 17th to 21st) was allocated one of those frameworks. On the first day, March 16, the opening ceremony, Hasan II Great World Water Prize awarding ceremony and other events were taken place. On the last day of the forum, the ministerial declaration was adopted which reiterated the importance of the water for the sustainable development to eradicate the poverty and the starvation.

Dr. Basuki delivered his first

presentation on March 18, the second one in the morning on March 20 and last one in the afternoon on March 20. On top of the sessions, he attended the lunch seminar which was held on March 20 to answer the questions from the reporters. Each session title he made the presentation was “Public Participation and Solidarity in Basin Management,” “Launching Session for the CSD WAND-Follow up for the CSD 13 and PWA Initiatives- and “Effective Use of Irrigation Water through Participatory Irrigation Management (PIM).” The sessions were convened by INBO (International Network of Basin Organizations) and others, JBIC (Japan Bank for International Cooperation) and others, and MLIT (the Ministry of Land, Infrastructure and Transport in Japan) and others respectively.

Through his presentations and answers to reporters’ question, he reiterated the importance of NARBO and the network in which water resources management organizations in different countries cooperate with each other to promote IWRM.



Dr. Basuki at presentation (March 20)



Dr. Basuki at lunch seminar (March 20)

2) Report on the participation in the APHW Conference

- Introduction

The 3rd APHW Conference was held in Bangkok, Thailand during October 15th – 19th, 2006. Mr. Minoru Arai of NARBO Secretariat participated in the conference and made the presentation titled "Outline of NARBO and the activities". He emphasized the importance to strengthen the relationship between NARBO and APHW for the purpose of promoting IWRM in Asia.

- About APHW

The Asia Pacific Association of Hydrology and Water Resources (APHW) is non-governmental organization founded in September 2002. The Association is an Inter Regional Knowledge Partner of NARBO, which provides a forum and acts as a catalyst for a discussion on education research, and policy development in the fields of hydrology and water resources management. APHW activities consist of promotion of hydrological studies in Asia Pacific region, research on water utilization and management methodologies, organization of conferences and workshop, establishing education programs, data and information sharing, and publication of journals.

- Outline of the Conference

The conference was held in cooperation

with the National Research Council of Thailand (NRCT) under the theme entitled " Wise Water Resources Management Towards Sustainable Growth and Poverty Reduction".

In parallel with the conference, an International Symposium on "Managing Water Supply for Growing Demand" was organized at the same venue by Thai National Committee for IHP-UNESCO, Thailand National Commission for UNESCO and Ministry of Natural Resources and Environment, Thailand.

- Appeal from NARBO

The conference began with the opening speech by Dr.Musiake Secretary General of APHW. Following the opening session, the special sessions divided into every theme were held.

Mr.Minoru Arai of NARBO Secretariat attended the special session 6 titled "Asian Initiatives and Predictions of Hydrology and Water Resources – Predictions in Ungauged Basins" and made an oral presentation entitled "NARBO Practice of IWRM with River Basin Organization (Activities and Standpoint of NARBO)" in the session. He explained the "Thematic Workshop" as one of the representative NARBO activities and made an appeal for the importance to strengthen the relationship between NARBO and APHW for the purpose of promoting IWRM in Asia.



Opening Session



Presentation by Mr.Arai

4. NARBO members' information (Summary)

If you want to read more, please see NARBO website.

[URL: <http://www.narbo.jp/data/db.htm>; ID: narbo; Password: narbomember]

(1) Asian Development Bank Institution (ADBI)

1. About the organization

(1) Number of staff

As of July 2006, 36 people work at ADBI: 14 Japanese administrative staff, including temporary staff, 12 internationally recruited staff, 1 visiting fellow, 3 visiting researchers, and 6 research and capacity building associates. There are also some on- and off-site consultants.

(2) Amount of the annual budget in 2006

The approved budget for 2006 was \$14.2 million, which was funded by the Government of Japan.

(3) Key events in 2006

The Institute carried out numerous events relating to research and capacity building and training activities. With regard to the events, please see the Institute's website. [<http://www.adbi.org/>].

2. About NARBO activities

(1) Activities your organization implemented in 2006 as the member

- Placement of JWA staff

In order to promote the NARBO activities and research to propose future action plans for NARBO, ADBI accepted the placement of a staff from Japan Water Agency (JWA), Michitaro Nakai. He has served at ADBI as NARBO Associate since May 2005. The NARBO Associate contributes not only to the research activities on water resources management in the Asia-monsoon region but also to the capacity building activities such as the NARBO Thematic Workshop on Water Allocation and Water Rights.

- NARBO General Meeting (13–15 February 2006, Indonesia)

The Institute selected Tatara Toru (Special Advisor to the Dean) and Michitaro Nakai (NARBO Associate) as delegates to attend the NARBO General Meeting.

- NARBO Thematic Workshop on Water Allocation and Water Rights

ADBI organized the second (5–9 June, 2006) and third (27 November–1 December, 2006) NARBO thematic workshops on Water Allocation and Water Rights in Manila, Philippines and Bangkok, Thailand, respectively, in collaboration with ADB, JWA, and some NARBO member organizations (National Water Resources Board and Laguna Lake Development Authority of Philippines, and Department of Water Resources of Thailand).

(2) Resolutions and expectations for NARBO activities in 2007

1) Your organization's resolutions

Following the activities of 2006, the Institute will continue to perform the role of secretariat with NARBO.

2) Expectations of NARBO activities

The Institute expects more interactive activities for sharing information and experiences among NARBO member countries, which will promote regional cooperation in the relevant area.

(2) Japan Water Agency (JWA)

1. About the organization

(1) Outline of the organization

- 1) Number of staff
1657 (As of April 1, 2006)
- 2) Amount of the annual budget in 2006
About ¥ 269 billions

(2) Big events in 2006

- 1) Project implementation plans for Koishigawara Dam Construction Project and Ryochiku-heiya Canal Construction project in Chikugo River System were approved by the minister in charge in January and March respectively.
- 2) Construction work of diversion tunnel started in Oyama Dam Construction Project.
- 3) Tokura Dam Construction Project was totally canceled.
- 4) Tokuyama Dam's test filling in Kiso River System started on September 25.

2. About NARBO activity

(1) Activities your organization implemented in 2006 as the member

Japan Water Agency played a key roll in NARBO activities as the main secretariat together with ADB and ADBI and also one of the members.

As the main secretariat

- Administration of the web-site with frequent update.
- Issuance of newsletter (No.7, No.8, No.9 in February, May and October)
- Issuance of NARBO annual report 2005 in May.
- The 4th IWRM training course in Sri Lanka from November 6 to 10.
- Workshop on "Water Allocation and Water Right"
(The 2nd in June and the 3rd from late November to early December)

As the member

- Member's annual report in March
- Twinning program between JWA and Indonesian NARBO
(JWA dispatched 4 staff to Indonesia from May 14 to 25 and Indonesian NARBO dispatched also 4 members to JWA from June 11 to 25)

(3) Jasa Tirta I Public Corporation (PJT I)

1. About Organization

1.1. Number of staff

The number of staff as of December 31st, 2006 is 622.

1.2. Amount of Annual budget in 2006

- O & M cost for 2006 = Rp 41,825,000,000.00
- Water Resources Conservation cost for 2006 = Rp 1,350,000,000.00

(Data from RKAP 2007, the official finance report is being audited by authorized auditor)

1.3. Big events in 2006

- The eruption of a mud volcano in Sidoarjo, East Java that triggered by the drilling of a nearby exploration borehole (Banjar Panji-1) by PT. Lapindo Brantas. The eruption causes environment and social problems in Brantas Lower Reach.
- The coordination in term of clear cut of job description between PJT I and "Balai Besar", Directorate General of Water Resources.
- The drought problems by the global effect of El Nino caused drier-than-average conditions over portions in Indonesia.

2. About NARBO Activities

2.1. Activities your organization implemented in 2006 as the member

- NARBO 2nd General Meeting and Workshop, Jatiluhur Purwakarta, Indonesia, 14-16 February 2006
- Piloting NARBO's Performance Benchmarking Tool and Peer Review Process, Jatiluhur Purwakarta, Indonesia, 30 October – 3 November 2006

2.2. Resolutions and expectations for NARBO activities in 2007

(1) Your organization's resolutions

PJT I will involve and participate actively in implementing NARBO activities in 2007 in order to reach 1) the goal of NARBO i.e. to help achieve IWRM in river basins throughout Asia, and 2) the objective of NARBO i.e. to strengthen capacity and effectiveness of RBOs in promoting IWRM and improving water governance, through training and the exchange of information and experience among RBOs and their associated water sector agencies and knowledge partner organizations in Asia and to advise on the establishment of RBOs in Asia.

(2) Expectations of NARBO activities

Exchange and sharing of information, good practices and lessons learned for IWRM among the NARBO members, training workshop, staff exchange, etc. should be continued and advanced.

(4) Jasa Tirta II Public Corporation (PJT II)

1. About Organization

1.1. 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.

1.2. 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).

1.3. 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.

2. NARBO Activities

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).

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.

2.2. Resolutions and expectations for NARBO activities in 2007

(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) 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.

(5) Mahaweli Authority of Sri Lanka (MASL)

1. About the organization

- (1) Number of staff
4600 Nos.
- (2) Amount of the annual budget in 2006
US \$ 35.0 Million
- (3) Big events in 2006
Organized and Conducted 4th NARBO Training Programme on "Water for All - Lessons Learnt & Meeting Future Challenges" 6th - 10th November 2006, Colombo, Sri Lanka.

2. About NARBO Activity

- (1) Activities your organization implemented in 2006 as the member
 1. Attended for the 2nd General Meeting of NARBO and made a presentation on Water Quality Management of Kalaoya Basin in Sri Lanka , 13-17 February, 2006 in Jatiluhur, West Jawa, Indonesia.
 2. Organized and Conducted 4th NARBO Training Programme on "Water for All - Lessons Learnt & Meeting Future Challenges" 6th - 10th November 2006, Colombo, Sri Lanka.
 3. Participated for " Piloting of the Performance Benchmarking Tool for RBOs & the Peer Review Process, 12th - 15th December 2006 in Sri Lanka..
 4. Attended for the 3rd Thematic Workshop on Water Allocation & Water Rights, November 28th - December 1st 2006, Bangkok, Thailand.
- (2) Resolutions and expectations for NARBO activities in 2007
Sharing experience among member countries through Training Programmes, Twinning Arrangements, Thematic Workshops, Peer Review of RBO etc., Also willing to organization Training Programmes in Sri Lanka too.

(6) Mekong River Commission (MRC)

1. About the organization

1.1. Number of staff

There are approximately 130 staffs at the Secretariat in Vientiane, Lao PDR and around 30 in the Regional Flood Management and Mitigation Centre in Phnom Penh, Cambodia.

1.2. Amount of the annual budget

US\$12-13 million

1.3. Big events in 2006

In 2006 the MRC finalized approval and implementation of its new Strategic Plan 2006-2010. The MRC Council members signed the Procedures for the Maintenance of Flows on the Mainstream – an important agreement on water use in the Mekong. The MRC launched two new programmes – the Drought Management Programme and the Information and Knowledge Management Programme. The MRC participated in the expo and made several presentations at the 4th World Water Forum in Mexico City. Dr Olivier Cogels, the CEO of MRCS attended the Asia-Pacific Water ministerial conference at the forum and participated in formulating the joint statement. Dr Cogels made the keynote address and representatives of MRC programmes participated in Asia 2006, a major hydropower conference held in Bangkok. It launched a joint initiative with the WWF Living Mekong Initiative and the ADB on environmental criteria in hydropower.

2. About NARBO activity

2.1. Activities your organization implemented in 2006 as the member

We did not implement any specific activities but representatives of our Member States participated in the NARBO 3rd thematic workshop.

2.2. Resolutions and expectations for NARBO activities

Your organization's resolutions

To reflect the NARBO goals of helping to achieve IWRM in river basins throughout Asia, while strengthening the capacity and effectiveness of RBOs in promoting IWRM and improving water governance, through training and exchange of information and experiences among RBOs and their associated water sector agencies and knowledge partner organizations.

Expectations for NARBO activities

Continued networking and information exchange with River Basin Organisations in Asia as well as participation in joint events, RBO exchange visits and staff exchange programs, where possible. Fostering regional cooperation for improved management of water resources in transboundary river basins.

(7) Red – Thai Binh River Basin Organization (RRBO)

1. About the organization



1) Number of staffs

RRBO comprises 50 members, including:

- Chairman: Mr. Nguyen Ngoc Thuat, Vice Minister of Agriculture and Rural Development
- Vice Chairmen: Dr. Pham Xuan Su, Director of Irrigation Department (MARD) and a director of the water resources department of Ministry of Natural Resources and Environment
- Members: directors of Department of Irrigation, Institute of Water Resources Planning, Department for Dike Management and Flood Control, directors of provincial Department of Agriculture and Rural Development (DARD) in the Red-Thai Binh river basin, and directors of relevant departments of ministries of Natural Resources and Environment, Industries, Fishery, Construction, Transport, Health, National Defense, and General Services of Hydro-meteorology.

2) Amount of the annual budget in 2006

Funds for operation of RRBO are provided from the State budget upon approval by Ministry of Agriculture and Rural Development (MARD). In 2006, total operation funds provided for the RRBO were 252 million VND in equivalence to 15,750 USD, in which Day Sub RBO were 51.677 million VND in equivalence to 3,230 USD. Generally, the operation funds are very limited resulting difficulties and unimplemented works. Equipment and facilities of the RRBO and its Office are very poor.

3) Big events in 2006

1. Day sub-RBO established according to the Decision No. 3365/QD-BNN/TCCB by Minister of Agriculture and Rural Development on December 1, 2005 was official come into sight on May 5, 2006 gathering representatives of 6 member provinces and city (Ha Tay, Ha Nam, Ninh Binh, Nam Dinh, Thai Binh and Hanoi).
2. Decision on Cau sub-RBO establishment was made on May 11, 2006 by Minister of Agriculture and Rural Development according to the Decision No. 1363/QD-BNN/TCCB. The first meeting of Cau sub-RBO was held on July 5, 2006 with presence of representatives of 6 member provinces and city (Thai Nguyen, Bac Kan, Vinh Phuc, Bac Giang, Bac Ninh and Hanoi).
3. The preparation of the operation procedures for multi-reservoirs on Da and Lo rivers was completed in collaboration with the Ministries of Industry, Natural Resources and Environment, and Electricity of Viet Nam. The aim is to ensure safety and socio-economic development.
4. Ongoing implementation and completion of water resources development planning projects for the Red-Thai Binh river basin, for the North Coast Region, for the resettlement areas of Son La Hydropower Plant, for the intercalated areas between the Red and Hoa rivers, for the Bac Hung Hai irrigation scheme, and Red river Floodway planning project.
5. Good cooperation with the Department of Water Resources (Ministry of Agriculture and Rural Development) in working out measures against severe droughts in 2006.
6. Good coordination with the Department of Dike Management and Flood Control (Ministry of Agriculture and Rural Development) in flood and storm prevention control in 2006, particularly the prompt joint activities and measures after typhoons Nos. 6 and 7 which destroyed the sea dikes of Quang Ninh, Hai Phong, Thai Binh, Nam Dinh and Ninh Binh provinces.
7. In coordination with relevant ministries and sectors, and provincial Department of Agriculture and Rural Development especially, the RRBO Office proposed investment projects with government bonds and ADB loans for the Ministry approval for the 2006-2007 plan.
8. Field visits to Hai Duong, Hai Phong, Thai Binh and Hung Yen provinces.

2. About NARBO activity

(1) Activities your organization implemented in 2006 as the member

The RRBO received and guided the JWA mission in their working visit from 19 to 21 February 2006 to understand IWRM situation, especially flood control and water management in Viet Nam.

In 2006, representatives of the RRBO Office participated in NARBO events including the 2nd NARBO General Meeting (Indonesia, February), 2nd and 3rd NARBO thematic workshops on Water Allocation and Water Rights (Philippines, June and Thailand, November), Pilot benchmarking workshops (Indonesia, October and Sri Lanka, December), 4th NARBO training course (Sri Lanka, November).

(2) Resolutions and expectations for NARBO activities in 2007

1) Your organization's resolutions

The RRBO will maintain a regular and close cooperation with the NARBO and active participation in NARBO activities.

2) Expectations of NARBO activities

- study tours on river basin management for RBOs to learn experiences from China, Japan, and from each others;
- Advanced training course on river basin management for the RRBO Office and RRBO members;
- Staff exchange among RBOs to stimulate experience exchanges;
- Capacity building for the RRBO in particular and for new RBOs in general in the field of water resources management and allocation as well as water legislations
