



NARBO ANNUAL REPORT

Network of Asian River Basin Organization

2006



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MESSAGE FROM THE CHAIRPERSON



The implementation of NARBO Action Plan 2006-2007 has been implemented in order to achieve the goals and objectives.

In the year of 2006, it has been implemented some important activities such as NARBO 2nd General Meeting and Workshop held in Jatiluhur Purwakarta (February 2006), River Basin Organizations (RBOs) Performance Benchmarking, Training for Capacity Building and Thematic Workshop.

The performance benchmarking initiative is to provide a flexible framework of performance indicators and a supporting system with objective of achieving high performance organizations responsible for management of river basin. Establishment of Performance Benchmarking system for RBOs is supported by Peer Review. There are 2 (two) pilot RBOs, Jasa Tirta II Indonesia and Mahaweli Authority of Srilanka.

According to the outcome of the research in 2004, NARBO secretariat recognized that the NARBO members had keen interest in the issues on water allocation and water rights. Thus, the issues were taken up as the theme of Thematic Workshop. The 3rd Thematic Workshop on Water Allocation and Water Rights held in Bangkok, Thailand (November – December 2006).

During the preparation of next Action Plan 2007-2008, I consider that we still facing many constraints in managing water resources in a sustainable manner, so we still need to keep our commitment to enhance our cooperation by increasing NARBO Members' participation in this network.

Hopefully, NARBO Annual Report of 2006 and the information inside could become input in evaluating our efforts in continuing the next program.

Chairperson of NARBO



Dr. M. Basuki Hadimuljono

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MESSAGE FROM THE CHAIRPERSON

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AFTERWORD FROM THE SECRETARY GENERAL

REPORT

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 Ciujung-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
ADBI. 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

sustainable aspect of watershed function.

Planting fruit trees in the site

3) Walahar Weir and Curug Barrage

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 Weird



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	Twinning 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.
		Twinning 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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Introduce of NARBO, activities
- NARBO Activities
Plan and records of NARBO
- Database
It includes NARBO annual

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(3) Newsletter

Newsletter is recognized as another useful vehicle for NARBO activities along with website and JWA is in charge of newsletter. In the same manner, members' positive involvement regarding information gathering is essential. JWA

has issued the 7th, 8th, 9th issue in February, May, October 2006, respectively. All newsletters were posted on NARBO website to make it possible for all members to see easily.



The 7th Issue



The 8th Issue



The 9h Issue

About all back issues, please refer to Appendix 5

(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 first 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

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.



Group Discussion



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 (ADB)

1. About the organization

(1) Number of staff

As of July 2006, 36 people work at ADB: 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.adb.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, ADB accepted the placement of a staff from Japan Water Agency (JWA), Michitaro Nakai. He has served at ADB 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

ADB 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

APPENDIX

Appendix 1

NARBO Charter

February 2004

(Revised February 2006)

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 at basin level with the involvement of stakeholders at the basin level. The water conference in Dublin in 1992 referred to the need to manage 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.

Note: This Charter is intended to guide NARBO in its start-up phase, during which membership by RBOs and partner organizations will be promoted and initial activities started to meet immediate needs of RBOs for training and exchange of information and experience. It is expected that the Charter will be

reviewed and revised by the NARBO General Meeting when membership has grown, a program of activities is agreed and under implementation, and membership fees can be introduced.

Section 1. Denomination and Working Language

- (1) This new initiative is entitled the Network of Asian River Basin Organizations (hereafter NARBO).
- (2) The language to be used is English.

Section 2. Goal and Objective

The goal of NARBO will be to help 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 on the establishment of RBOs in Asia.

Section 3. Activities

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:

- (a) Advocacy and raising awareness for IWRM among RBOs, water sector apex bodies, and leading water sector agencies in the region, mainly through regional workshops.

- (b) Sharing of information, good practices, and lessons learned for IWRM among the participating organizations, mainly by operating databases and a website for IWRM exchanging information, and by sending a newsletter by email 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.

- (a) Supporting NARBO members to improve water governance, including the enabling policy, institutional, and legal framework for IWRM, and the formulation of the action plans.
 - (b) Building capacity of RBOs in implementing IWRM, mainly through staff exchange and training among participating organizations.
 - (c) 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.
 - (d) 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.

Section 4. Organizations

Article 4.1. Membership

- (1) Membership will be open to the following types of organizations.
 - (a) RBOs, defined as organizations that have been officially recognized by the government of their country as having a mandate to promote and implement IWRM at the river basin level.
 - (b) National and federal/ provincial / local governmental organizations in charge of water administration in the countries which implement or are interested in promoting and implementing IWRM at the level of river basins. This includes water sector apex bodies and leading water agencies.
 - (c) Regional knowledge partner organizations with expertise in promoting and supporting IWRM, such as international RBOs and research and training organizations.
 - (d) Inter-regional knowledge partner organizations with expertise in promoting and supporting IWRM.
 - (e) Bilateral and multilateral development cooperation agencies promoting and supporting activities related to IWRM at the level of river basins.
- (2) Among these, the organizations under (1.a) are considered as RBO members and (1.b to 1.e) are considered as partner members. Partner members will participate in NARBO as promoters and supporters of IWRM and RBOs, and as knowledge partners to RBOs.
- (3) If other organizations wish to join NARBO, it needs to be recommended by an existing NARBO member or government agency concerned, notified to the Secretary General (see “Article 4.4.”) and approved in the NARBO General Meeting (see “Article 4.2.”).

Note: (1.c) and (1.d) include regional and inter-regional nongovernment organizations (NGOs) with expertise in promoting and supporting IWRM. For participation of national NGOs, (3) will apply. Participation as an observer in NARBO General Meetings is also possible (See “Article 4.2 (2)”).

(4) Application for membership in NARBO or withdrawal from NARBO

- (a) An application to join NARBO should be submitted to the Secretary General with a recommendation from a NARBO member or the government.
- (b) The Secretary General evaluates the application and confer with the Chairperson and the Vice-Chairperson with his/her comments.
- (c) The Chairperson makes the final decision.
- (d) The Secretary General notifies the result to the applicant organization.
- (e) When the applicant receives the approval, the applicant organization becomes the member.
- (f) The new member is introduced to the NARBO members.

(5) Withdrawal from NARBO

- (a) The following are grounds for a member to cease to be a NARBO member:
 - (i) The member applies for withdrawal from NARBO membership;
 - (ii) The member organization is abolished; and
 - (iii) The member organization undertakes activities contradictory to the principles of NARBO.
- (b) When a member matches to one of these grounds, the Secretary General evaluates the ground and confer with the Chairperson and the Vice-Chairperson with his/her comments.
- (c) The Chairperson makes the final decision.
- (d) The Secretary General notifies the result to that organization.

(6) Member's obligation

- (a) Members will participate in NARBO activities of their interest with commitment to use their own resources and to work effectively in partnership with other organizations that are collaborating in the

network. Members will support the objectives of NARBO and will comply with its rules and regulations.

- (b) RBO members are obliged to submit an annual report to the Secretary General once a year within 3(three) months after their yearly fiscal year, in which its plan, scope of action, major activities, and issues are summarized. The report will be submitted in English.
- (c) The NARBO members are required to pay an annual membership fee. The amount and schedule of payment will be approved by NARBO General Meeting.

Note: For the time being, no membership fees are being considered.

Article 4.2. NARBO General Meeting

(1) Venue and Date

- (a) The NARBO General Meeting is held, in principle, every two years.
- (b) In principle, the General Meeting is held in the Chairperson's country, except as otherwise determined by the Chairperson. The date is proposed jointly by the Chairperson and the Secretary General.
- (c) An extraordinary NARBO General Meeting can be convened at the request of the Chairperson, Vice-Chairperson, Secretary General or NARBO Secretariat before the next General Meeting, if there is a specific reason or if there are important issues to be solved urgently.
 - ii) The decision of the venue and date is the same as the decision for a General Meeting.
- (d) The venue, date and agenda of General Meeting shall be distributed with an appropriate advance notice.

(2) Participation

Members, technical advisory committee members, and observers may attend the NARBO General Meeting. Observers need

endorsement from the NARBO Secretariat and the local organizing committee hosting the NARBO General Meeting.

(3) Agenda of the NARBO General Meeting

- (a) Two year action report and future action program of NARBO
- (b) Reports by members on matters related to activities of NARBO
- (c) Selection and replacement of Chairperson, Vice-Chairperson, Secretary General and Vice-Secretary Generals
- (d) Approval and revision of the Charter
- (e) Approval of new members, or their withdrawal

(4) Approval

The approval of the NARBO General Meeting is based on consensus between the attending members.

Article 4.3. Chairperson and Vice-Chairperson

- (1) Nomination and Selection of the Chairperson and the Vice-Chairperson
 - (a) The Chairperson and the Vice-Chairperson are nominated by the Secretariat and selected by the NARBO General Meeting.
 - (b) In case the Chairperson is or becomes unable to perform his / her function as Chairperson, the Vice-Chairperson will exercise the function and responsibility of the Chairperson until a Chairperson is selected at the next NARBO General Meeting.
 - (c) The Chairperson will be deemed to be unable to perform his/her function as Chairperson if (i) The Chairperson declares that he/she is unable to perform his/her function as Chairperson; or (ii) The

Secretariat recognizes that the Chairperson is unable to perform his/her function as Chairperson.

(d) In case the Vice-Chairperson is or becomes unable to perform his/her function as Vice-Chairperson, an Acting Vice-Chairperson is nominated by the Secretariat and appointed by the Chairperson for a period extending until a Vice-Chairperson is selected at the next NARBO General Meeting.

(e) The Vice-Chairperson will be deemed to be unable to perform his/her function as Vice-Chairperson if (i) The Vice-Chairperson declares that he/she is unable to perform his/her function as Vice-Chairperson; or (ii) The Secretariat recognizes that the Vice-Chairperson is unable to perform his/her function as Vice-Chairperson.

(2) Responsibility of Chairperson

The Chairperson leads the NARBO General Meeting and guides NARBO activities until the next General Meeting.

(3) Responsibility of Vice-Chairperson

(a) Assist the Chairperson

(b) Substitutes for the Chairperson when he/she is not available

Article 4.4. Secretariat

(1) Responsibilities of the NARBO Secretariat

(a) Initiatives and Activities of NARBO

(i) Collection of relevant information and coordination with related organizations, including participation in relevant meetings

(ii) Preparation of the documents needed for and writing reports of the NARBO General Meeting

- (iii) Preparation of two-year action report and action program
- (iv) Operation and management of the NARBO web site and other communication facilities
- (v) Advice on the enabling policy, institutions and efficient operation to improve IWRM and on the establishment and capacity building of RBOs in implementing IWRM (subject to available resources of NARBO to provide advice through cost-effective means)
- (vi) Organization of other NARBO initiatives and activities

(b) Logistics Service for NARBO

- (i) Contacts and coordinates the members
- (ii) Handles the administration, including registration of members, accounting, document preparation etc.

(2) Composition and Location of the NARBO Secretariat

- (a) The NARBO Secretariat is composed of the Japan Water Agency (JWA), the Asian Development Bank Institute (ADBI), both in Japan, and the Asian Development Bank (ADB), in Philippines.
- (b) The Headquarters of the Secretariat is located in JWA and its branches are located in ADBI and ADB. Secretariat staff are nominated by the Secretary General in consultation with JWA, ADBI and ADB.
- (c) Any organization in the NARBO Secretariat may resign its function at any time without condition.

(3) Nomination and approval of the Secretary General and the Vice-Secretary Generals.

(a) The Secretary General and the Vice-Secretary Generals are nominated by the Secretariat and approved at the NARBO General Meeting.

(b) In case the Secretary General or any Vice-Secretary Generals is or becomes unable to perform his/her function, an Acting Secretary General or an Acting Vice-Secretary General, as the case may be, is nominated by the Secretariat and appointed by the Chairperson for a period extending until the Secretary General or the Vice-Secretary General is selected at the next NARBO General Meeting.

(c) The Secretary General or a Vice-Secretary General will be deemed to be unable to perform his/her function if (i) he/she declares that he/she is unable to perform his/her function as the Secretary General or the Vice-Secretary General; or (ii) The Secretariat recognizes that the Secretary General or such Vice-Secretary General is unable to perform his/her function as the Secretary General or the Vice-Secretary General.

(4) Responsibilities of the Secretary General

(a) Initiates and manages NARBO's initiatives and activities.

(b) Convenes the NARBO Meeting and sets its agenda in consultation with the Chairperson

(c) Supervises the Secretariat's work

(5) Responsibilities of the Vice-Secretary Generals

(a) Supports the Secretary General

(b) Substitutes for the Secretary General when necessary

Article 4.5. Technical Advisory Committee

(1) A Technical Advisory Committee may be convened by the Secretary General. The Committee will be composed of individuals and organizations who can advise and support NARBO in its activities. Its task is to extend the financial and the technical support for the implementation of regional activities of NARBO.

(2) The statute of the committee will be approved by the NARBO General Meeting.

Section 5. Resources

(1) Financial and human resources to support NARBO activities will be provided from the following sources:

(2) The Members of NARBO will voluntarily provide resources in cash and kind to support NARBO activities in which they are interested to participate.

(3) Costs (personnel and traveling expenses) of the NARBO Secretariat will be provided by JWA, ADB, ADBI who will mobilize financial resources for this purpose. Travel expenses for the Chairperson and Vice-Chairperson will be provided by JWA for travel approved by JWA.

(4) NARBO activities will be financed by JWA, ADBI, ADB, bilateral and multilateral agencies to be identified, and NARBO Members, on a parallel co-financing basis.

(5) ADB may be requested by the NARBO General Meeting to convene a NARBO Financial Support Group of interested bilateral and multilateral organizations to help support NARBO activities.

Appendix 2

Action Plan -2006 ~ 2007-

NETWORK OF ASIAN RIVER BASIN ORGANIZATIONS (NARBO)

ACTION PLAN 2006-2007

- A. Advocacy, Raising Awareness, and Exchange of Information and Good Practices on Integrated Water Resources Management (IWRM)
- B. Capacity Building in River Basin Organizations (RBOs)
- C. Network Support

(As of 16 Feb, 2006)

A. Advocacy, Raising Awareness, and Exchange of Information and Good Practices on Integrated Water Resources Management (IWRM)				
Activity	Remarks	Implementation Program (plan)	Leading Agency	Note (latest)
<p>Activities led by the NARBO Secretariat:</p> <p>1. NARBO Website (http://www.narbo.jp) The NARBO Web site will provide news and updates, information and reminders about NARBO's activities. The site linked to other related sites will release publications, case studies, electronic newsletters and online data bases</p>	<p>The website is managed by the Japan Water Agency (JWA) in collaboration with the Asian Development Bank (ADB) and the Asian Development Bank Institute(ADBI). It will be updated on regular basis.</p>	<ul style="list-style-type: none"> - Provide prompt and useful information. - Update Web site contents with frequency. - Manage database with various contents. - Implement on-line forum after feasibility study being conducted and its effectiveness being considered. 	<p style="text-align: center;">JWA</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin-bottom: 10px;">Priority</div> <p>- NARBO members' positive involvement regarding information gathering is essential.</p>

				- JWA NARBO Secretariat has been making continuous efforts to fulfil members' requests such as lightening the size of website for the quicker display.
2. NARBO Newsletter (E-news letter) The newsletter covers topics on good practices, lessons learned, activities etc.	JWA will issue newsletters. Basically, newsletters will be distributed by e-mail and via the website.	- Newsletters is being basically issued in every three month. - To ensure sending newsletters by email, organize email addresses informed and conduct survey of email accessibility of each recipient	JWA	<div>Priority</div> NARBO members' positive involvement regarding information gathering is essential.
3. Online data base Necessary materials developed on IWRM practices are compiled. Materials comprise lessons learned in river basins in Asia, standards and manuals, recommended formats for river basin organization (RBO) annual reports, reference materials on IWRM, and topics of interests, etc. Materials are shared through website and in CDs.	ADBI and JWA will lead this work in collaboration with ADB and other partners concerned. The reports and materials will be accumulated in the database continuously. Contents of Online data base are distributed in CDs.	Compile various information as much as possible from member organization.	ADBI, JWA	<div>Priority</div> NARBO members' positive involvement regarding materials gathering is indispensable.

<p>4. NARBO Annual Report Drawing on member organizations' inputs, the report will summarize NARBO's activities.</p>		<p>-JWA will issue the NARBO Annual Report 2005 by May in 2006. -JWA will issue the NARBO Annual Report 2006 by May in 2007. - NARBO Annual Reports will be distributed through website and CDs.</p>	JWA	RBO Members are requested to submit their reports by the end of March the following year
<p>5 Media Relations and NARBO Promotion and Dissemination NARBO will implement a media strategy to send key messages on IWRM and the work of RBOs, and promotes NARBO's objectives and activities at suitable events in the region.</p>	The Media Relations and NARBO Promotion will be conducted to attract great interest in NARBO's activities and to increase NARBO member	<p>- ADB will develop the concept media strategy by June 2006. - The development and implementation of a media strategy will be initiated and supported by ADB as part of ADB's Water Awareness Program</p> <p>- JWA will promote NARBO and its activities by taking advantage of every opportunity in order to draw the attention to NARBO and to increase the number of the members.</p>	ADB, JWA	Put much emphasis on increasing NARBO member

6. NARBO General Meeting The general meeting is held, in principle, every two years in accordance with NARBO Charter, and JWA will lead the Secretariat's work to organize the meeting in consultation with the NARBO Chairperson.		- The 2 nd General Meeting will be held in Indonesia, Feb 2006	Chair person and Vice-Chair person JWA ADB ADBI	The 3 rd General Meeting will be held in the first quarter of year 2008.
7. Remarkable events				
8. Others				

<p>Activities led by NARBO Member Organizations:</p> <p>1. NARBO members' websites</p> <p>NARBO member organizations develop and maintain their own websites and post relevant information on their activities in relation with IWRM and its implementation.</p>	<p>NARBO members should update them at least quarterly basis. JWA will encourage NARBO members to do so. NARBO secretariat will use the member websites to accumulate relevant information on activities for the NARBO website.</p>	<ul style="list-style-type: none"> - NARBO members are expected to develop their own web site by December, 2006. - NARBO members should strive to develop informative web site and to provide news and updates via online. - JWA will survey current situation of member's web site, 	<p>NARBO members</p>	<div data-bbox="1704 276 1895 349" data-label="Text"> <p>Priority</p> </div> <p>All members are encouraged to update the websites .</p>
<p>2. NARBO members' Annual Report</p> <p>NARBO RBO members are obliged to submit an annual report on their activities in accordance with guidelines prepared by the NARBO Secretariat.</p>	<p>The member's annual reports will be prepared by RBOs and submitted to NARBO Secretariat by March 2005. Other NARBO members are expected to prepare an annual report too.</p>	<ul style="list-style-type: none"> - The annual reports 2005 will be prepared RBOs and should be submitted to NARBO Secretariat by March 2006. - Only 8 member organizations contributed annual report 2004 	<p>RBOs</p>	<div data-bbox="1727 807 1917 880" data-label="Text"> <p>Priority</p> </div> <p>It is highly expected all RBO members submit an annual report 2005 by the end of March 2006</p>

B. Capacity Building in River Basin Organizations (RBOs)				
Activity	Remarks	Implementation Program	Leading Agency	Note (latest)
<p>Activities led by the NARBO Secretariat:</p> <p>1. IWRM Training Program</p> <p>IWRM Training program is promoted in order for member organizations to develop their capacities. With an advantage of NARBO network, it is expected to diversity in training resources among members and others. Member organizations are expected to propose to be a host organization of the training.</p>	<p>In principle Training courses will be held 2 times every year. Training courses will be designed by the host organization, contributing organizations and the leading agencies with guidelines for participants selection, contents, modalities, organizational structures and cost sharing.</p>	<ul style="list-style-type: none"> - The 4th training course will be held in Indonesia in June 2006. - Following Training courses will be held. <ul style="list-style-type: none"> - The 5th training course : Nov. 2006. - The 6th training course : Jun. 2007. - The 7th training course : Nov 2007. 	<p>JWA, ADB, ADBI, KOWACO</p>	<div>Priority</div> <p>NARBO Members are encouraged to be recipients organization</p>

2. Workshops Regional workshops will be held in conjunction with NARBO General Meeting. Thematic workshops in order to deepen discussion on specific themes concerning water resources management suggested by NARBO members.	Sub-regional workshops will be considered on demand. Deal with thematic workshop highly recommended by NARBO members. Organize workshops in series	- The Thematic Workshop on Water Allocation and Water Right will be held in NARBO member's country, May 2006, Oct 2006, and May 2007. - The Thematic workshop on Facilities Management will be held in 2006.	JWA, ADB, ADBI	<div>Priority</div> Small-scale workshops focusing on specific topics are preferable. NARBO Members are encouraged to be recipients organization
3. Performance Benchmarking Establishment of Performance Benchmarking system for RBOs is supported by peer reviews. Performance improvement of RBOs is stimulated and practical exchange of experience is allowed.	The program is designed by NARBO Benchmarking Group consisting of ADB and IWMI in consultation with NARBO members.	- The RBO Benchmarking Workshop will be held in NARBO member's country, Apr 2006, Sep 2006, Apr 2007 and Sep 2007.	ADB IWMI	<div>Priority</div>
4. Advisory visits to RBOs NARBO Secretariat staff visits RBOs to learn their work to implement IWRM and to provide advice and support for knowledge generation and sharing.	This activity can be collaborated with RBO exchange visit.	NARBO Secretariat will consider and determine implementation method by Aug. 2006.	JWA, ADB, ADBI	

5. Scholarship Programs NARBO Secretariat explores opportunities to promote participation of NARBO member organization staff in existing scholarship programs in the region and beyond.	NARBO Secretariat explores opportunities and welcome suggestions from NARBO members, knowledge partner organizations, academe and potential sponsors.	NARBO Secretariat will present an scholarship opportunity online	JWA, ADB, ADBI	Providing information on scholarship from NARBO members is anticipated.
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<p>Activities led by NARBO Member Organizations:</p> <p>1. RBO Centers of Excellence NARBO will recognize RBOs as centers of excellence in specific areas of IWRM expertise and stimulate opportunities for members to access and use the expertise within the network.</p>		<p>- JWA will conduct research on NARBO members intention until Aug., 2006 and consider the possibility of arranging program.</p>	<p>JWA, ADB, ADBI</p>	<p>RBOs will indicate areas of expertise.</p>
<p>2. Twinning Programs RBOs will 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.</p>	<p>To be initiated and arranged by RBO members. Information will be stored, classified and accessed by members on the website.</p> <p>Exchange visit between NARBO Members is a step before entering Twinning Programs between 2 (two) NARBO Members</p> <p>Intensive communication between NARBO Members are encouraged to establish closer relationship between NARBO Members.</p>	<p>- Existing Twinning Program will be continued. Another new agreements on Twining Program among NARBO members are highly expected.</p>	<p>NARBO members</p>	<div data-bbox="1753 715 1944 783" data-label="Text"> <p>Priority</p> </div>

<p>3. ISO certification RBOs will explore opportunities for ISO certification to stimulate achievement and maintenance of standards.</p>	<p>To be initiated and led by Jasa Tirta I and II.</p> <p>It is desirable to continue to have the opportunities to lecture on ISO certification.</p>	<p>RBO Members-who intersested in ISO Certification are kindly encourage to collaborate with Jasa Tirta I & II</p>	<p>Jasa Tirta I, Jasa Tirta II</p>	
<p>4. Transboundary Water Management RBOs will explore opportunities to foster regional cooperation for improving water resources management in transboundary river basins through sharing of information and exchange of experience.</p>		<p>- NARBO Secretariat will encourage considering the feasibility of transboundary water management</p>	<p>RBOs</p>	<p>Sharing information and experience accordingly. MRC will share their information and experiences.</p>

C. Network Support				
Activity	Remarks	Implementation Program	Leading Agency	Note (latest)
1. Technical Advisory Committee NARBO is considering the establishment of a technical advisory committee in accordance with the provision in the NARBO Charter, to support NARBO's work.		- NARBO Secretariat will consider and determine implementation method by Aug. 2006.		The details and the target time of the set up of the committee need to be discussed among JWA, ADB and ADBI. Any comments and suggestions are highly welcome
2. Financial Resources The NARBO Charter provides the possibility to convene a financial support group to extend financial support for NARBO activities from other multilateral and bilateral agencies.			ADB	

<p>3. Charting IWRM Program in Asia</p> <p>Charting IWRM Program in Asia will be undertaken a study of practical progress of implementating 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, identity further actions needed, and expand NARBO's activities.</p>			<p>ADB IUCN</p>	
<p>4. Facilitating IWRM Investment Project</p> <p>Facilitating IWRM Investment Project will be helped by NARBO members to promote investments and financing for IWRM in their river basins, by getting advice from other members and parners in identifying and preparing river basin projects.</p>			<p>ADB</p>	

Appendix 3

NARBO Members' List

List of NARBO Member and Interest to become member

As of 8th June, 2006

	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
Contacted Organization and Others		-	1

Classification		Country/Region		Organization	Representative/Signatory	Position
Member	RBO	Bangladesh	M	Bangladesh Water Development Board	Mr. Md. Azizul Haque	Director, Planning-I
		Indonesia	M	Jasa Tirta I Public Corporation	Mr. Socheh	President Director
		Indonesia	M	Jasa Tirta II Public Corporation	Mr. Djendam Gurusinga	President Director
		Indonesia	M	Jragung-Tuntang Basin Water Resources Management Unit (BWRMU) (Balai PSDA Jragung-Tuntang	Mr. Tri Widodo D.	Head of BWRMU
		Japan	P	Japan Water Agency (JWA)	Mr. Toshiki Aoyama	President
		Korea	M	Korean Water Resources Corporation (K water)	Dr. Ko Ich Hwan	Director, Hydrosystem Engineering Center
		Lao PDR	M	Nam Ngum River Basin Development Sector Project	Mr. Thatheva Saphangthong	Coordinator
		Malaysia	M	Selangor Water Management Authority	Mr. Rahmat Sharif	Director
		Philippines	M	Laguna Lake Development Authority (LLDA)	Ms. Dolora Nepomuceno	Assistant General Manager
		Sri Lanka	M	Mahaweli Authority of Sri Lanka	Mr. Piyadasa Koralevidana	Director General
		Vietnam	M	General Office for RBOs in Vietnam	Mr. Pham Quoc Hung	Specialist, General Office for RBOs
		Vietnam	M	Cuu Long & Dong Nai River Basin Organization	Mr. To Van Truong	Chief of Office of CLRBO & DNRBO
		Vietnam	M	Red River Basin Organization	Mr. To Trung Nghia	Chief of Office of RRBO
		Vietnam	M	Day River Basin Organization	Mr. Le Duc Nam	Deputy Director of DWR, MARD
		Vietnam	M	Vu Gia Thubon River Basin Organization	Mr. NGUYEN VAN SINH	Chief of GORBO's Secretariat Board
	Mekong region	M	Mekong River Commission Secretariat	Dr. Oliver Cogels	Chief Executive Officer	

Classification		Country/Region		Organization	Representative/Signatory	Position
Member	GOV	Bangladesh	M	Local Government Engineering Department, Ministry of Local Government, Rural Development and Cooperatives	Mr. Shahidul Hasan	Chief Engineer
		Cambodia	M	Ministry of Water Resources and Meteorology	Dr. Theng Tara	Director, Department of Water Resources Management and Conservation
		Cambodia	M	Department of Hydrology and River Works	Mr. Long Saravuth	Deputy Director of DHRW
		Indonesia	M	Directorate General of Water Resources	Mr. Imam Anshori	Director of Water Resources Management
		Indonesia	M	West Nusa Tenggara Regional Office of Settlement and Regional Infrastructure (Dinas Kinitraswi Provinsi NTB)	Mr. Djalal	Chief of Regional Office
		Indonesia	M	Bengawan Solo River Basin Development Project	Mr. Sudi Harsono	General Project Manager
		Indonesia	M	Jeneberang River Basin Project	Mr. Billy Parmono	Acting General Project Manager
		Indonesia	M	River Basin Water Resources Managenet Unit Pekalan Sampean(PSDA)	Mr. Wahjoe Pribowo, MT	Head of PSAWS
		Indonesia	M	Balai Pengelolaan Sumber Daya Air Ciujung-Ciliman Banten (BPSDA)	Ir.Winarjono, CES. MM	Head
		Indonesia	M	Sermo Water Resources Management Unit (BPSDA)	Ms. Rani Sjamsinarsi Fauzie	Head
		Indonesia	M	River Basin Water Resources Managenet Unit Citarum(PSDA)	Mr. Rustam Suharman	-
		Japan	M	Water Resources Department, Land and Water Bureau, Ministry of Land, Infrastructure & Transportaton	Mr. Koji Nukina	Deputy Director, Water Resources Department
		Lao PDR	M	Water Resources Coordination Committee Secretariat	Mr. Phonechaleun Nonthaxay	Head
		Malaysia	M	Department of Irrigation and Drainage	Datuk. Keizrul Abdullah	Director General
		Philippines	M	National Water Resources Board	Mr. Ramon Alikpala	Exective Director
		Philippines	M	Department of Environment and Natural Resources	Ms. Analiza R. Teh	Assistant secretary
		Sri Lanka	M	National Water Resources Authority	Mr. Ananda Jayaweera	Director
		Thailand	M	Department of Water Resources, Ministry of Natural Resources and Environment	Ms. Sukontha Aekaraj	Director, Foreign Relations Branch Department of Water Resources
		Vietnam	M	Department of Water Resources Management, MoNRE (General Office for RBO, WRD MARD))	Mr. Le Duc Nam	Deputy Director, DWR-MARD
		Vietnam	M	Sub Institute for Water Resources Planning	Mr. Nguyen Xuan Hien	Deputy Director
		Vietnam	M	Department of Natural Resources and Environment of Dong Nai Province	Mr. Phan Van Het	Vice Director

Classification		Country/Region		Organization	Representative/Signatory	Position
Member	RKP	Southeast Asia	M	Global Water Partnership (GWP) SEARWP (Malaysia)	Datuk. Keizrul Abdullah	Chairperson
		South Asia	M	Global Water Partnership (GWP) SAS RWP (Sri Lanka)	Mr. Nanda Abeywickrama	Chairperson
		South Asia	M	South Asia Network of River Basin Organization (SASNET-RBO)	Mr. Don Clement Sudharma Elakanda	Network Coordinator SASNET-RBO
		Bangladesh	M	Institute of Water Modeling (IWM)	Mr. Emaduddin Ahmed	Executive Director
		Thailand	M	Thailand Water Resources Association (TWRA)	Dr. Apichart Anukulamphai	President
		Indonesia	M	Indonesia Water Partnership	Mr. Achmadi Partowijoto Cae	Member of Trustee
		Indonesia	M	The Foundation on Water Affairs ADHI EKA	Ir. Kusdaryono Sutosuromo	Chairman of the Executive Board
		Indonesia	M	Faculty of Engineering, Brawijaya University	Mr. Agus Suharyanto, Ph.D	Vice Dear for Academic Affaires
		Indonesia	M	Research Institute for Water Resources	Mr. Eddy A. Djajadiredja	Head of Research Institute
		Indonesia	M	Center for Environment & Civil Engineering Research	Ms. Indreswari Guritno	Senior Member
		Indonesia	M	Post Graduate Study on Water Resources Management Faculty of Engineering Gadjah Muda University	Dr. Budi Wignyosukarto	Senior Lecture
		Indonesia	M	Sembrani Foundation	Mr. Mardjono Notodiharjono	Chairperson
		Australia	M	The World Wildlife Fund International (WWF International)	Dr. Isabella Louis	Director, Asia Pacific Region
		India	M	CapNET South Asia	Dr. Jasveen Jairath	Director
		Thailand	M	IUCN - The World Conservation Union	Dr. John Dore	Leader, Asia Water & wetlands Program
		Japan	M	JAWA-Japan Water Resources Association	Dr. Toru Kondo	President Director
	IRKP	Japan	P	Asian Development Bank Institute	Mr. Peter Mc. Cawley	Dean
		Sri Lanka	M	International Water Management Institute (IWMI)	Mr. Andrew Noble	Head IWMI-SEA
		Japan	M	Asia Pacific Association of Hydrology and Water Resources (APHW)	Dr. Katsumi MUSHIAKE	Secretary General
	DCA	Philippines	P	Asian Development Bank	Mr. Jan P. M. van Heeswijk	Director General

Classification		Country/Region		Organization	Representative/Signatory	Position
Interested	RBO	Pakistan	I	Water and Power Development Authority	Mr. M Mushtaq Chaudhry	General Manager (P&D)
		Thailand	I	Bang Pakong River Basin	Mr. Chamroon Suaydee	Chairman, Sub-committee
	GOV	Bangladesh	I	Joint River Commision	Mr. Mir Sajjad Hossain	Director
		P.R. China	I	Huai He River Water Resources Commission of Ministry of Water Resources	Mr. Liu Chang Zhong	Senior Engineer
		P.R. China	I	Taihu Basin Authority of Ministry of Water Resources	Mr. Gong Zheng	Engineer
		Indonesia	I	Brantas River Basin Development Project	Ir. Imam Agus Nugroho	General Project Manager
		Indonesia	I	Seputih-Sekampung River Basin Development Project	Mr. Mudjadi	General Project Manager
	RKP	Japan	I	Ritsumeikan Asia Pacific University (Japan)	Dr. Fransisco P. Fellizar, Jr	Associate Professor

Classification		Country/Region		Organization	Representative/Signatory	Position
Pre Member	GOV	Pakistan	R	Indus River System Authority (IRSA)	Mr.Fida Hussain	Senior Engineer
	GOV	Malaysia	R	National Hydraulic Research Institute of Malaysia (NAHRIM)	Dr. Salmah Zakaria	Director
	RKP	Japan	R	JAWA-Japan Water Resources Association	Dr. Toru Kondo	President Director

Note:

P = Promotor (Member)
M = Member
I = Interested to become a member
R = Pre-registered member

KP=Knowledge Partner
DCA=Development
Cooperation Agency

Appendix 4

Program of the Second General Meeting

Program of the Second General Meeting

DAY 0 13th February 2005 (Monday)

Time

Program

Arrival of participants, check-in and Registration

18.00 – 19.00	Secretariats' meeting	Secretariats, organizing committee, leading agency
19.00 – 19.30	Orientation meeting	
19.30 – 20.30	Reception dinner	

DAY 1 14th February 2005 (Tuesday)

Field Visit

Time

Program

07.00 - 17.00	Field visit, Good practice and issues on the site
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DAY 2 15th February 2005 (Wednesday)

Workshop

Time

Program

08.30 – 08.40	Opening address from PJTII	The president of PJTII
08.40 – 08.45	Briefing on the workshop program	JWA
08.45 – 10.15	Session 1 Water Quality Management	KOWACO
10.15 – 10.30	Break	
10.30 – 12.00	Session 2 Flood Management	JWA
12.00 – 13.15	Lunch	
13.15 – 14.45	Session 3 Water Financing	Indonesian NARBO Secretariat
14.45 – 15.00	Break	
15.00 – 16.30	Session 4 Performance Benchmarking	ADB, IWMI
16.30 – 17.30	Meaning and merits of Network activity - The questionnaire item 2	JWA, ADB, ADBI
	Closing remarks on NARBO workshop	
19.30 – 21.00	Side event: Indonesian NARBO Members Meeting	Indonesian NARBO Secretariat

DAY 3	16th February 2005 (Thursday)	<i>General Meeting</i>
Time	Program	
09.00 – 09.45	Opening Session	Organizing Committee
09.00 – 09.15	Welcome Remarks and Overview of the meeting	Organizing Committee
09.15 – 09.30	Opening remarks	Chairperson(Dr. Basuki)
09.30 – 09.45	Keynote Address and Official Opening	Minister of Public Works, GOI
09.45 – 10.00	Break	
10.00 – 12.00	Session “The report of NARBO activity 2004-2005”	Chaired by chairperson
10.00 – 10.15	Overall review of activities 2004 -2005	Secretary general & secretariat
10.15 – 10.30	Newsletter and web site	JWA
	Enhancement of Database for Information Sharing	
10.30 – 10.45	IWRM Training course	KOWACO
10.45 – 11.05	Twining program	Indonesian NARBO
11.05 - 11.25	Thematic Workshop	JWA/ADBI & RRBO
11.25 – 11.40	Others: Promotion and other events (Tokyo, SEAWF etc)	JWA
11.40 – 12.00	Discussion on implemented activities	JWA, ADB, ADBI
	The questionnaire. Item 1.	
12.00 – 13.15	Lunch	
13.15 –16.00	Session “NARBO Charter and Work plan 2006 – 2007”	Chairperson
13.15 – 13.25	Approval and withdrawal of NARBO member	JWA
13.25 – 13.40	Proposal and approval of the revised charter	JWA
13.40 – 13.45	Briefing of concept on Action plan 2006 – 2007	Secretary General
13.45 – 14.00	Briefing on action plan 2006 – 2007	JWA
14.00 – 14.30	Briefing on new program	ADB
	- Charting IWRM Progress in Asia	
	- Facilitating IWRM Investment Projects	
14.30 – 14.45	Q & A, Approval of Action plan 2006 –2007	JWA, ADB, ADBI
14.45 – 15.45	Commitment Speech	Member Organizations
	(The questionnaire. Item 3)	
15.45 – 16.00	Break	
16.00 – 16.15	Announcement	JWA, ADB, ADBI
	Guideline of financial support by the secretariat	
	Membership fee	
16.15 – 16.45	Selection “NARBO Constitutional Body”	JWA, ADB, ADBI
16.15 – 16.45	Nomination and approval	
	Short speech of Chair, Vice-Chair and Secretary General	
16.45 – 17.00	Closing Session	JWA, ADB, ADBI
16.45 – 17.00	Closing remarks on NARBO General meeting	DG of WR
19.00 – 21.00	Farewell Dinner	
DAY 4	17th February 2005	
	Participant are back to home countries	

Appendix 5

Electronic Newsletter

The NARBO Newsletter

(Network of Asian River Basin Organizations)

<http://www.narbo.jp/>

Report of the recent activity

The First Thematic Workshop

— Water Allocation and Water Right —

Michitaro Nakai *

The 1st thematic workshop on water allocation and water right was held from December 5 to 9 in Hanoi, Vietnam. This workshop was organized by Red-Thai Binh River Basin Organization (RRBO), ADB, ADBI and JWA. 24 participants from 6 countries (Vietnam, Indonesia, Philippines, Thailand, Lao PDR and Japan) participated in this workshop.

On 6th and 9th, special lecture and 3 sessions were held. Special lecturer was Mr. Ian Fox, Principal Project Specialist of Vietnam Resident Mission, ADB, and the theme of the lecture is "Understanding water right and water allocation". Also, the themes of 3 sessions are "Water allocation issues", "Water right system" and "Drought management". In each session, participants made presentations and discussions, and finalized the sheets for session outcomes. Through these process, we could share the information on current situation and issues on water allocation and water right, which is one of the objectives of this workshop, so I think these sessions were very beneficial.

On 7th and 8th, field trips were held. On 7th, we went to the Hoa Binh Hydropower plant in Hoa Binh Prov-

ince, which is one of the most important infrastructures in Vietnam. On 8th, we went to Tac Huong Irrigation scheme in Thai Nguyen Province. In both field visits, participants were enthusiastic to make questions or discussions.

In addition, the situation of this workshop was broadcasted by Hanoi Television on 9th.

As a whole, all the participants of

this workshop were very enthusiastic and RRBO's arrangement was excellent, therefore this workshop finished successfully.

Finally, I'd like to express my sincere thanks to all participants, RRBO and its staff member, and all concerned organizations for their hard works and efforts.

*) ADBI, NARBO secretariat



Courtesy Call for Vice Minister
(on 5th December)



Scenery of Meeting



Hoa Binh Dam (On 7th Dec)



Tac Huong Irrigation Scheme (On 8th Dec)

Topics of this issue

Report of the recent activity

- The First Thematic Workshop - Water Allocation and Water Right -

Information from members

- Royal Development Project regarding Upstream Area Rehabilitation and Maintenance
- Teesta Barrage Project in Bangladesh

From the secretariat

- The Second General Meeting coming up

Information from members

Royal Development Project regarding Upstream Area Rehabilitation and Maintenance

Kanokwan Yoowong *

His Majesty the King of Thailand has been dedicated to development work particularly in local population's livelihood who always facing on several problems caused by poverty, public health and environmental degradation. In fact, most of local population in Thailand makes their living by agriculture and livestock, therefore, the abundant natural resources are required especially in water resources. For this reason, His Majesty the King has emphasized on upstream area and forest area development and rehabilitation.

Thailand is geographically and hydrographically divided into 25 river basins. Ping River Basin is a major river basin in Thailand covering the area of 5 provinces namely Chiang mai, Lam Pang, Lam Poon, Kam Phaeng Phet and Nakorn Sawan. It is divided into 2 parts: Upper Ping and Lower Ping River Basin. Its geography and geological structure create valuable ecosystem including various types of forests such as dry dipterocarp, mix deciduous, pine and hill evergreen forest which are significant upstream forests of Thailand. At present, Ping River Basin is facing the natural resources problems such as forest encroachment particularly in watershed, deforestation, cultivation of local products, soil and water degradation as well as water shortage and flood problem.

The major causes of continuous and hasty deforestation in the upstream area are population growth together with economic growth in Thailand. The local people require further land for livelihood, food production and agricultural products to respond their basic minimum needs. Deforestation is the significant causes for flood, drought, water holding capacity, soil erosion, landslides and river shallowness. In addition, many declined forest area in Thailand necessitate the urgent reforestation for rehabilitation of upstream area and wild life's habitat.

His Majesty the King has acknowledged the mentioned problems on water and forest resources which relate directly to the needs of rehabilitating and maintaining the upstream area in Thailand. Many Royal Development Projects have been demonstrated by his initiatives. The target of these projects is to assist the villagers in managing natural resources for their better livelihood. Huai Hong Khrai Royal Development Study Centre is one of the projects, it was established on December 11, 1982 in the area of Pa Khun Mae Kuang National Reserved Forest, Huai Hong Khrai river basin that is one of the Ping River Sub-basin, at Doi Saket District, Chiang Mai Province.

The center's area covers approximately 1,360 hectares. Formerly, there had been severe deforestation which caused drought and forest fires. The center, therefore, focuses attention on conducting study and research on various development patterns such as forest development by cultivating three types of trees for four benefits, which are economic, fruit and firewood. Besides, there is also the fourth benefit, which is the conservation of soil and water to increase moisture. There is also the conservation of watershed areas by using water from the irrigation system, from rains and check dams to maintain moisture as well as by establishing wet fire breaks. The study also emphasizes the use of various development patterns to enable farmers to rely on themselves without having to destroy the environment. The center's operations are divided into 2 parts as follows.

1. Tasks on study, experiment and research namely the study and development on water sources, forest, land, intensive farming, milk cow and livestock and fishery, the study and experiment on crop cultivation, conservation and development frog farming
2. Tasks on extension of study Centre can be classified into
 - Forest Development by training on



deforestation impact and forest fires to the villagers surrounding the center

- Land Development by training on soil and water conservation
- Agricultural Promotion by encouragement on crop cultivation, farm products, dry crops, industrial crops and organic agriculture
- Occupational Promotion in family by training on clothes sewing, food preservation within agricultural housewife
- Livestock Promotion by training on milk and beef cows and birds
- Fishery Promotion by training and promotion on a variety of fish species

Implementation of development work at the centre up to the present day has achieved a certain level of success particularly in terms of infrastructure construction, study, experimentation, research and intersectional cooperation among the various government agencies and in providing certain services to the people in the target villages encompassing the Centre.

In conclusion, Huai Hong Khrai Royal Development Study Centre is an illustration project to develop, rehabilitate and maintain natural resources particularly in water resources, land and forest in Thailand that provide moisture in the soil, allow the forest to stay green throughout the year. Finally, local population will get the benefits from the integration of natural resources management.

*) Bureau of International Cooperation
Department of Water Resources Ministry of
Natural Resources and Environment, Thailand

Teesta Barrage Project in Bangladesh

Md. Azizul Haque *

1. Background

Bangladesh is a country of agro-based economy. It has more than 300 rivers, tributaries and distributaries. Still a vast area of North Bangladesh suffers from scarcity of water for irrigation its agricultural lands, not only in dry months but also during monsoon when a prolonged spell of scarcity/no rainfall affect crops. The idea of irrigation from the Teesta River was conceived since British time (1945). In Bangladesh territory, the preliminary feasibility report of the project was prepared in 1960 by M/S Haigh Zinn and Associates in collaboration with A.C.E. Ltd. and M/S Binnie and Partners Ltd. prepared the second one during 1968-70. M/S Haigh Zinn and Associates proposed a Barrage at Goddimare while M/S Binne and Partners Ltd. located it at Doani. After emergence of Bangladesh in 1971 the Government gave serious thought for undertaking the project. Under the changed circumstances engineers of Bangladesh Water Development Board (BWDB) and Bangladesh University of Engineering and Technology (BUET) reviewed the previous reports, conducted fresh survey, investigation, planning and detailed engineering. The site of the Barrage was selected at Doani where the present Teesta Barrage of Bangladesh proudly stands today.

2. Outline of the Teesta River Basin

The Teesta is one of the important rivers next to the three major rivers of Bangladesh. It is recognized as the most unstable, wandering and young river of the country. The river originates in the glaciers of the Himalayas in Sikkim at about 6400 metre above mean sea level (MSL). It flows for about 172 km in mountainous region before emerging at Sevak Railway Bridge into the alluvial plains of North Bengal in India. It crosses another 97 km of Indian plains before it enters into

Bangladesh about 19 km north of Dalia. It flows for about 130 km in Bangladesh territory before it joins the Brahmaputra river at Chilmari. The catchment area of the Teesta river upper basin is about 10550 sq. km (including upper and middle basin) of which 7200 sq. km. falls in Sikkim-Darjeeling Himalayan region. The lower basin covers 3290 sq. km. in the flood plains of Jalpaiguri district (India) and Bangladesh. The catchments area in Bangladesh is about 2071 sq. km. The average discharge during June to September, observed at Dalia, is about 1,800 cumec, while that of winter and dry months is only 200 cumec. Flow is lowest in the month of February and seldom exceeds 160 cumec.

3. Boundary and Area

The Project is bounded by the Teesta on the north, the Atrai on the west, Santaher-Bogra Railway line on the South and Bogra-Kaunia Railway line on the east. Command Area of the Project is 750,000 ha and the irrigable area is 540,000 ha.

4. Objective

The main objective of the project is to increase agricultural production through supplementary irrigation and thereby create employment opportunities.

5. Phasing and costing

Although the implementation of the project started in 1960, the actual construction of the barrage was taken up in 1979 and that of canal system in 1984-85. To derive early benefits, the project has been phased out viz. Phase-I and Phase-II. The phase-I (restructured) has a command area of 154,250 ha with a net irrigable area of 111,406 ha. It is spread over 12 upazillas. It comprises construction of a Barrage, Flood Embankment, Flood Bye pass, Silt Trap, Main Canal, and part of canal system with improvement of existing drainage canal. GOB's own resources were

financing the project since inception. In 1985 and 1994 GOB entered into three loan agreements with Saudi Fund for Development (SFD), Islamic Development Bank (IDB) and Abu Dhabi Fund for Development (AFD) for partial financing of the project. After phasing out of the project, the Phase-I was completed in June 1998 and the cost incurred is Tk. 9695 million.

6. Physical Infrastructure

For achievement of the project objective i.e., to provide supplementary irrigation to a net area of 111,406 ha in phase-1 under gravity irrigation system through the irrigation network various types of physical infrastructure were implemented including the main Barrage, Canal Head Regulator, Silt Trap, Irrigation and Drainage Canals etc. A short description of some of these infrastructures is provided below:

6-1 Teesta Barrage

The Teesta Barrage is constructed over the Teesta River to raise the water level and thus, to feed the main canal taking off from its upstream side. The Barrage itself is situated at Doani, Lalmonirhat completed in August 1990. The Barrage is 615 m long fitted with 44 opening (vent) with radial gates. Width of each vent is 12.19 m. The design discharge capacity of the Barrage is



Fig. 1 Teesta Barrage

12,752 cumec. The Barrage is divided into 2 portions by divide wall, named Weir proper and Under-sluices. There are 7 under sluiced bay. Normally the crest level of the under-sluices is kept equal to the deepest bed level of the river during

*) Planning Division I
Bangladesh Water Development Board, Bangladesh

non-monsoon seasons. As the crest of the under-sluice pocket is at a low level, a deep channel develops towards this pocket, which helps in bringing low dry weather discharge towards this pocket, thereby, ensuring easy diversion of water into the canal through the canal head regulator. Rest of the bays is normal bay (weir proper). There is a silt excluder in the under sluiced portion of the barrage. Tunnels of silt excluder are used to attract coarser particles. In Teesta Barrage, gates do most of the ponding. Gates of barrage can be operated by remote controlled power driven system, locally controlled power driven system or manually. This Barrage is fully operational now. This Barrage is serving as a bridge for vehicular and pedestrian traffic also.

6-2 Canal Head Regulator (CHR)

A Canal Head Regulator (CHR) is provided at the head of the off-taking main canal, and serves the following functions:

- i) It regulates the supply of water entering the main canal
- ii) It controls the entry of silt in the main canal



Fig. 2 Canal Head Regulator

- iii) It prevents river floods from entering the main canal.

The CHR is 110 m. long fitted with 8 no. of vent (radial gates). Width of each vent is 12.19 m. Discharge capacity of the CHR is 283 cumec. The CHR is fully operational at present.

6-3 Silt Trap

A Silt Trap covering an area of 45 ha adjacent to the CHR was constructed for arresting silt before supplying irrigation water to the Main Canal. Due to presence of Silt Trap, the resultant rate of siltation in the irrigation canals is very low. Here mecha-

nism is very easy, just discharging water into a larger area, resulting lower velocity and helping siltation in these areas called Silt Trap.

6-4 Irrigation Canal

Direct irrigation scheme using a barrage requires a network of irrigation canals. The main canal systems of the TBP consist of four main canals i) Teesta main canal, ii) Dinajpur secondary major canal, iii) Rangpur secondary major canal and iv) Bogra secondary major canal. Length of the Teesta main canal, total secondary major canal, secondary canal and tertiary canal are 33.67 km, 74.85 km, 224.91 km and 356.53 km respectively.

6-5 Hydraulic Structures

Mainly Regulators, Siphons, Escapes, Aqueduct and check/drops are the hydraulic structures constructed through out the project area. Total no. of hydraulic structures constructed are 856 (including X-drainage structures). Operation systems of the project structures are user friendly.

7. Command Area Development (CAD)

The Teesta Barrage Project (Phase-I) was completed in June, 1998. The irrigation network constructed need to be evaluated in an integrated way to identify the bottlenecks of the system to bring the potential area under irrigation. As such a Command Area Development (CAD) Project for Phase-I was introduced in 1998-99 for five years. The project cost is Taka 968 million. The objective of the CAD project is to accelerate agricultural production up to full potential by irrigation coverage and integrated water management as well as socio-economic enhancement by introducing multiple development programs viz. fisheries, duck culture, grass cultivation, afforestation etc. The following government organizations were involved to attain the objectives: Bangladesh Water Development Board (BWDB)

Directorate of Agricultural extension (DAE)

Directorate of Fishery

Directorate of Live stock

Directorate of Forestry.



Fig. 3 Beneficiary Training



Fig. 4
Afforestation
along Canals



Fig. 5
Duck culture
by beneficiary

7-1 Irrigation Systems and Irrigation facilities

The project will provide irrigation supplies with flood protection and drainage facilities to a gross area of about 750,000 ha of which net benefited areas are 540,000 ha. The irrigation system in the Phase-I area includes 154.57 km main and branch canals, 211.70 km secondary canals, 387.65 km tertiary canals and more than 3000 nos. of control structures different sizes.

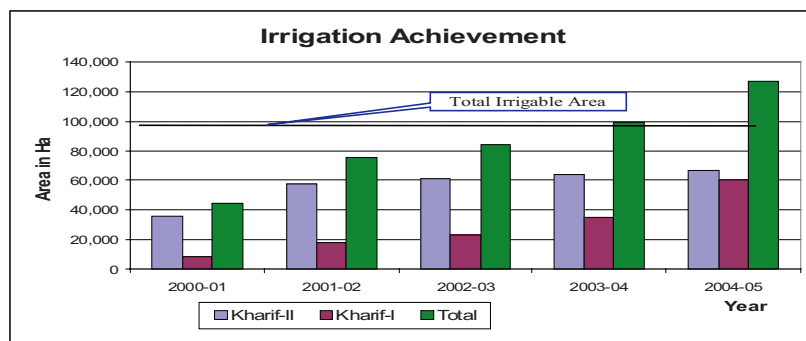
7-2 Irrigation Coverage

Irrigation coverage has remarkably been increased in the project area during the last years. It is observed that cropping pattern and cropping intensity have been changed remarkably in the irrigated area. Currently, HYV Aman and Boro have widely been practiced by the farmers and at least two crops are grown in a year. The irrigation achievement and irrigation coverage during last five years is shown in Fig.6. These show that the irrigation coverage increased with time.

7-3 Field Irrigation, Drainage and Water Management

To supply irrigation water to its command area from the available waters of the Teesta River in right time,

Fig.6
Irrigation
Achievement



water management is essential. For efficient water management in an economic way, people's participation in every step is necessary. People's participation is required for the maintenance of the tertiary canals and field channels as well as to collect the service charges as set by the rules. To achieve this goal the formation of Water Management Group (WMG), Water Management Association (WMA), and Water Management Federation (WMF) is going on. Service charge collection from the beneficiaries is already started. The target achieved so far for formation of the WMG, WMA, and WMF is shown in Table 1.

Sl. No	Name of the Organization	Target	Achievement	Remarks
1	Water Management Group (WMG)	2000	1880	
2	Water Management Association (WMA)	52	60	25 nos. have been registered
3	Water Management Federation (WMF)	1	-	

Table 1 Achievement of Water Management Organization

7-4 Drainage Facilities

TBP has been implemented to ensure Kharif-II rice in a flood free environment. Existing natural river systems serve the drainage function of the project. The river systems drain the runoff from both within and outside the project area.

8. Impacts of the Teesta Barrage Project

The actual performance due to intervention of the Teesta Barrage Project along with engineering, agriculture, fisheries, social, economic and environmental condition is provided below:

- The project is an example of self-reliance through domestic resource

mobilization although a part was financed by SFD, IDB and AFD. The main TBP Phase-I has been implemented with local expertise in the fields of planning, design and construction. Implementation of the project has helped adaptation of higher and modern technology.

- The Teesta Barrage Project (TBP), Phase-I made a revolution in agriculture through irrigation, flood protection and drainage improvement, by allowing intensive agricultural practices from shifting single to double or triple cropping, scientific cultivation of HYV and crop diversification instead of local varieties and

secured crop harvesting. Increased crop yield from about 218,288 M. Tons to about 710,036 M. Tons, higher income and employment generation and improved communication facility for crop marketing created a great impact on the socio-economic development of the people of project area. The shift in cropping pattern and cultural practices has been reflected in the form of increase in the cropping intensity to 218% (in 2005) in the project area with project against 180% (in 1994) in without project condition.

- Fish culture in the project area improved due to the availability of water which ultimately increased

fish production. Breeding and multiplication fish seeds increased in ponds, irrigation canal and drainage canal of the project area. Nearly 150 km main and secondary canals 600 km of major drainage channels and silt trap reservoir have created a watershed of about 50 sq. km which provide ample opportunities for fish and duck farmings.

- Groundwater recharge, reservoir, water flow through the irrigation canals networks, green crops and the trees along the dykes have positively impacted on local environment and weather. Due to SW irrigation, GW recharge has been increased significantly, creating more opportunity for conjunctive use of surface and groundwater

- Afforestation along the canal dyke, borrow pits, barrage site, roads along with various grasses of the area created a green belt in the region. Green crops have brought in green revolution.

- During execution of the TBP Phase-I 39.70 million man-days were created whereas during CAD components about 1.8 million man-days of skilled & unskilled labour were engaged as labor force, which produced a positive contribution to poverty alleviation of the project area.

- Socio-economic condition of the people of the project area improved due to project intervention assured a better living condition and literacy rate increased significantly. Education, health and sanitation, social infrastructure, employment generation, poverty reduction and social solidarity have improved to a great extent.

9. Concluding remarks on the Teesta Barrage Project

Teesta Barrage Project may be considered as one of the most successful water resources management project of Bangladesh Water Development Board.

Demand for food in Bangladesh is increasing. Implementation of the Phase-I of the TBP project has boost up the agricultural

production and thereby helping in satisfying the increasing food demand. So, implementation of Teesta Barrage Project Phase-II

has become a logical consequence of the achievement of TBP Phase-I.

From the secretariat

1. The Second General Meeting is coming up

The Second General Meeting is scheduled to be held from February 14 to 16 at Jatiluhur-Purwakarta, Indonesia and the preparatory work is now on the final stage.

The program was set, but some changes will be made, so, please check the latest information on NARBO website and contact us through e-mail if you have questions.

2. Secretariat meeting at JWA HQ

The JWA NARBO secretariat had the half-day meeting with Mr. Wouter and Mr. Dennis, who were on the way to Korea to attend the Third NARBO training course on November 10. At the meeting, they discussed how to organize the Second General Meeting, the First Thematic Workshop in Viet Nam and how to activate day-to-day NARBO activities etc.



Secretariat staff mumbling

Ten months has already pasted since I became one of the members in JWA secretariat. The secretariat is in the International Affairs Division and there are nine staff (one is working for Asian Development Bank Institute in Tokyo) are working now. Among them, two staff members are devoting to IT (website, newsletter etc.) and to translation and interpretation.

It seems that ten staff (including the Director) is quite enough to deal with NARBO activities. But they are working until late at night almost every day to deal with the preparation works of the Second General Meeting and international businesses in JWA and they look a little bit tired these days.

They look have another bane that they can't get enough information from members for the website and newsletter etc. NARBO is the network, so members' active involvement is quite important, I guess.

This winter, we have the record-high snowfall in northern part of Japan and the very cold days nationwide, but the secretariat is working very hard to promote NARBO activities. I'm looking forward to your active involvement and please well take care.

Program of the Second General Meeting

As of February 1

DAY 0	13th February 2005 (Monday)	
	Arrival of participants, check-in and Registration	
DAY 1	14th February 2005 (Tuesday)	<i>Field Visit</i>
DAY 2	15th February 2005 (Wednesday)	<i>Workshop</i>
08.45 – 10.15	Session 1 Water Quality Management	KOWACO
10.30 – 12.00	Session 2 Flood Management	JWA
13.15 – 14.45	Session 3 Water Financing	Indonesian NARBO Secretariat
15.00 – 16.30	Session 4 Performance Benchmarking	ADB, IWMI
19.30 – 21.00	Side event: Indonesian NARBO Members Meeting	Indonesian NARBO Secretariat
DAY 3	16th February 2005 (Thursday)	<i>General Meeting</i>
09.00 – 09.45	Opening Session	Organizing Committee
10.00 – 12.00	Session “The report of NARBO activity 2004-2005”	Chaired by chairperson
13.15 – 16.00	Session “NARBO Charter and Work plan 2006 – 2007”	Chairperson
16.15 – 16.45	Selection “NARBO Constitutional Body”	JWA, ADB, ADBI
16.45 – 17.00	Closing Session	JWA, ADB, ADBI
DAY 4	17th February 2005	
	Participant are back to home countries	

The NARBO Newsletter

(Network of Asian River Basin Organizations)

<http://www.narbo.jp/>

Report of the recent activity

NARBO Chairperson made presentations at the 4th World Water Forum

Katsunori Takagi *

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, Hassan 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 also in the afternoon on March 20. On top of the sessions, he attended the lunch seminar which was held on March 20 to answers 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’ questions, 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.

*) NARBO Secretariat staff, Japan Water Agency (JWA)



Dr. Basuki at presentation (March 20)



Dr. Basuki at lunch seminar (March 20)

Topics of this issue

Report of the recent activity

- NARBO Chairperson made presentations at the 4th World Water Forum
- Launching NARBO Forest with Next Generations at Jatiluhur, Indonesia!

Information from members

- Karnafuli River Basin Management

From the secretariat

- Introduction of the 2nd Thematic Workshop - Water allocation and Water rights -
- Higher priority activities

Launching NARBO Forest with Next Generations at Jatiluhur, Indonesia!

— Be Expansion of NARBO Forest from Jatiluhur to your places and heart! —



Be growing up with trees!

[Practitioners Way]

Like most tropical forests in Indonesia, NARBO Forest is expected to become the water capture and availability source not only for the neighboring environment but for the catchment area. Based on the functions of a forest, forest can be classified into three categories. Those are; Forest for conservation, Forest for protection and Forest for production. All these three functions would be discovered at NARBO Forest. Establishment of NARBO Forest was the part of the 2nd General Meeting and the ceremony was on 14 February 2006.



View from the NARBO forest site located near to the Jatiluhur Dam reservoir, Citarm River. This dam is the lifeline of Jakarta Metropolitan.

only by the government, also needs society participation. This activity is expected to earn mutual profit for each party, especially to Jasa Tirta II Public Corporation (PJTI) and existing society around it and as sample for future the Event of NARO in continuation of Water Resources.



Signing of "Agreement of NARBO Forest"



Inscription



Let's go !

As part of implementation of NARBO's goal, NARBO Pilot Forest was created in Jatiluhur, Indonesia in support of the on going GNKPA*. NARBO Forest would not only be executed by NARBO's members but also all components of stakeholders of water resources in the area. NARBO Pilot Forest is expected to become Spirit of RBO, Spirit of NARBO and Spirit of IWRM.

* "GNKPA" is The Target of National Partnership Movement for Safeguarding Water Resources in Indonesia. And is to return hydrology cycle balance at the basin so that reliability of water sources either its quality and quantity could be controlled, through partnership among actors in safeguarding water resources such as government, private sector and community.

[Partnership with Next Generation]

NARBO Forest located in Kembang Kuning Village and its area is about 20,000m². The area is generally flat and it is considered to be landslide-free.

In addition for conservation purpose, this pilot forest has also the aim that planted fruit trees would benefit to the communities around the area.

Through this cooperation, NARBO would give advocacy, increase the awareness, share information, good practices, lesson learned and technical advice the sustainability aspect of the watershed function.

Crop type trees for NARBO Forest are fruits trees (Rambutan, Avocado and Mango) and it is worthwhile also to protect the land from erosion and yet maintaining sustainability of water sources.

In the evening on 13 February 2006, the signing event was held in the venue of the 2nd General Meeting at Jatiluhur hotel and "Agreement of

*) NARBO Secretariat staff, Japan Water Agency (JWA)

NARBO Forest was signed between NARBO and Jasa Tirta II Public Corporation". Dr. Ir. Moch Basuki Hadimoeljono, Chairman of NARBO and Ir. Djendam Gurusinga, President Director of PJTII signed the agreement.

The participants of NARBO Second General meeting praised this activity and efforts made by PJT II.

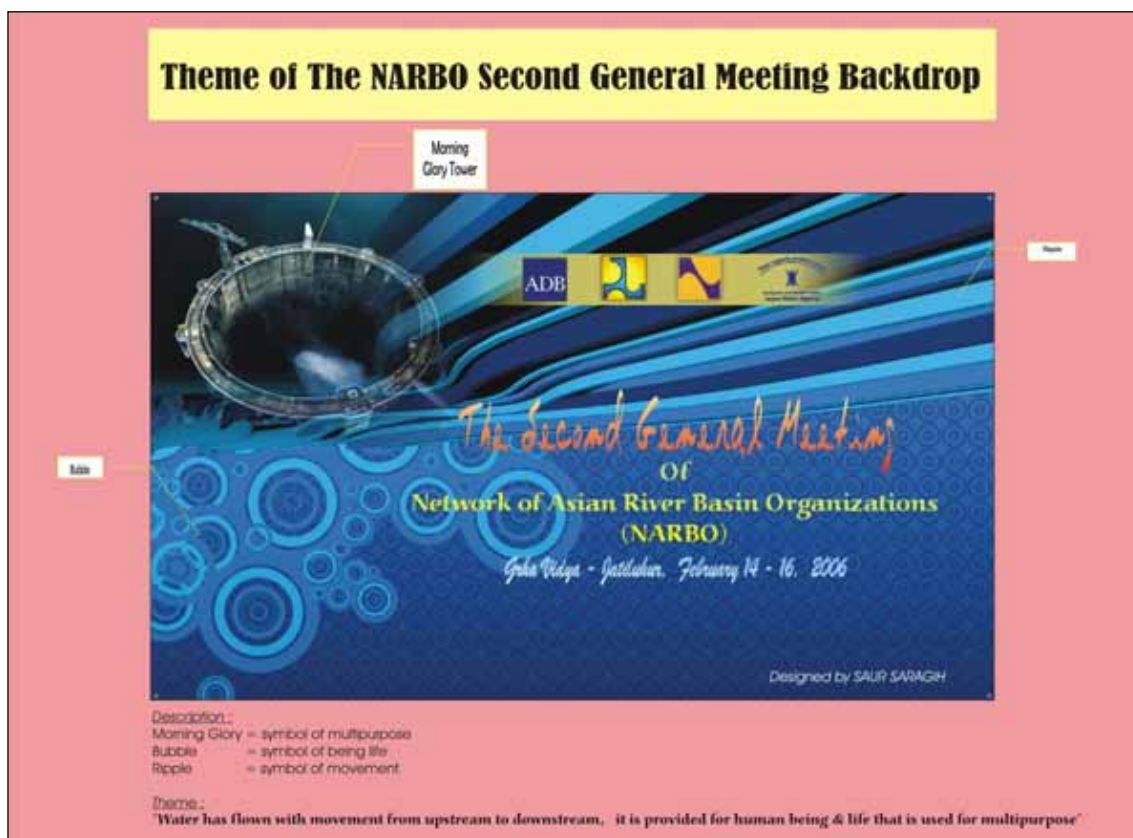
Especially, PJT II organized the

collaboration with local school students. It is believed that NARBO Forest was one of the best memories to students as well as participants of second general meeting. Participants from various countries might hope to visit again to Jatiluhur and they would pass a story down from generation to generation. The growth of students and planted trees in good health are expected.

In this time, Mr. Herman Idrus, Head of research and development bureau of PJT II and his colleagues formed core member of arrangement of NARBO Forest as well as the second general meeting. Their contribution was tremendous great and excellent. Thank to their efforts, Jatiluhur would be one of the best memorial place of participants.



Mr. Herman Idrus (Center), Head of Research and Development Bureau and colleagues of PJT II, Indonesian NARBO



The banner of the 2nd General Meeting designed by Mr.Saur, PJTII. The figure upper left corner is the morning glory type of the spillway at Jatiluhur Dam, which is the pride of PJTII

Information from members

Karnafuli River Basin Management

Emaduddin Ahmad, PEng. *

The Karnafuli is the principal river of Chittagong region. It originates in the Lushai Hills of Mizoram (India), flows through Rangamati and the port city of Chittagong and discharges into the Bay of Bengal. A number of streams flow upstream of Rangamati. The streams meet near Rangamati and their combined flow is known as Karnafuli. Karnafuly river basin faces upstream inundation flooding in the down stream, shortage of irrigation water, salinity intrusion, pollution at the source of water supply in the Chittagong city, siltation at Chittagong port. A suitable tool for optimization of Kaptai dam release can support a wiser decision among various options keeping the relevant parties informed to resolve conflict that arises from diversified interests.

The Kaptai Hydro Electric Power Plant is located at Kaptai around 50 km from the city of Chittagong. After the commissioning of the project in 1962, the hydro-power plant could feed the national grid with 80 MW of electricity from its 2 units. In later years, 3 more units were installed in two phases, which increased the power generation capacity of the plant to a total of 230 MW. It has been estimated that the capacity of the plant could be further increased to 330 MW by the installation of additional 2 units (6th & 7th units).

At present, the Karnafuli reservoir is operated on an ad-hoc basis. Decisions for operation of the reservoir and the power generation units are made by the Power Plant Authority based on experience and rule curves supported by rainfall and water level

data in the reservoir.

There are no tools to support the decision of the Power Plant authority for optimising reservoir operation based on real-time or predicted hydrological variables. In 2002, Bangladesh Power Development Board (BPDB) engaged Institute of Water Modelling (IWM) to develop a computer based Decision Support System (DSS) for the operation of the reservoir. IWM has successfully developed the DSS which integrates an inflow prediction model, reservoir operation model and Geographic Information System (GIS). The DSS has been installed at the Power Plant and is now being used to support decision making for operation of the reservoir in advance.

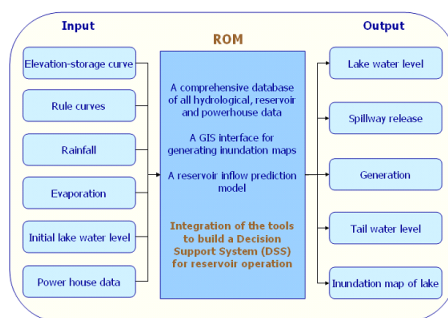
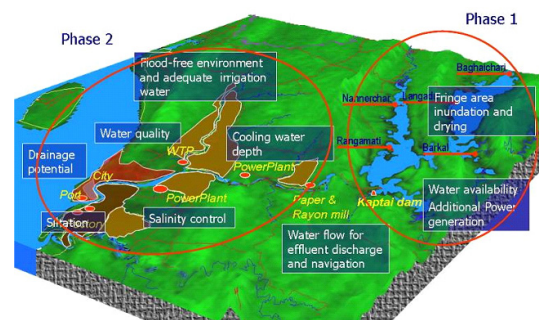


Figure: Karnafuli river basin model

Accordingly software based upon the historical database of Kaptai hydro power station operation, reservoir release, inflow forecast and inundation at various flow situations has been developed. The software so developed is known as decision support system (DSS) and enables the manager of Kaptai power station having knowledge of upstream inundation and the predicted flow for about three days to make release decision based on downstream flooding. The future development now being consid-

ered would attend to salinity intrusion or sedimentation on the port channel and fresh water availability for Chittagong. The present phase of development has been found to be useful in the flood forecasting of the Karnafuly basin supporting the Bangladesh Water Development Board. Once the manager has started discussing with the upstream people on the optimum level of the reservoir operation on the basis of a number of options, lot of tensions have been eased. Decision making in this process requires updated data of the basin rainfall, inundation extent and other water quality parameter. The process, being dynamic, would continuously provide improved decision using past experience. The system allows a new manager to get used to in a very short span of time.

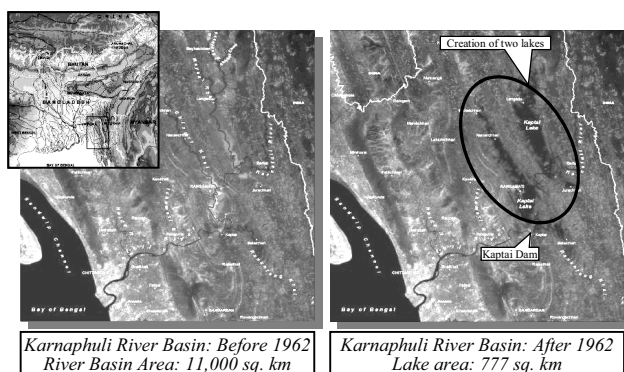


Karnafuli River Basin: Next Step

Data on the past inundation extent for each major storm has been generated. The reservoir capacity was surveyed. Primary data collection was extremely difficult due to inaccessibility and for want of adequate security. A set of scenario for future operation of reservoir were presented and the stakeholders were well participated to select one under win-win situation.

The present development is for upstream only. The downstream areas for flood management, salinity control, port siltation issues can be considered for a total basin management at a later date. This type of operation is first of its kind in Bangladesh; a unique example of basin level management of water resources for having a win-win situation.

*) Executive Director, Institute of Water Modelling, Dhaka, Bangladesh



From the secretariat

Introduction of the 2nd Thematic Workshop – Water allocation and Water rights –

“The second Thematic Workshop on Water Allocation and Water Rights” will be held on 5th -9th June 2006 in Manila, Philippines, following up with the 1st in Vietnam. The National Water Resources Board (NWRB) and the Laguna Lake Development Authority (LLDA) take the role of recipient organization in collaboration with NARBO secretariat.

The concepts of the thematic workshop is (1) emphasizing pragmatic and practical viewpoint, (2) intending deep and continuous discussions, (3) themes are focused, specific and important issues related to IWRM, and (4) Small scale and simple style. Also, we attach great importance to the self-reliant effort for problem solving by participating countries themselves.

“The Thematic Workshop on Water Allocation and Water Rights” is planned to be held a total of four times in two years, and the expected outcome of each workshop is as follows.

- 1st - To identify the issues in participating countries
- 2nd - To analyze the causes of the issues and suggest the approach to improvement
- 3rd - To review the 1st and 2nd workshop and suggest the approach to improvement
- 4th - To draft the report to make a suggestion

The participants are also basically stable through the 4 times. We call these stable participants as “the core members”.

In the second workshop, along with the aforementioned expected outcome, we will mainly discuss (1) the causes of the water-related issues in the participants' countries, and (2) the proposals of the approach to improve the water-related situations, which will be carried out on the basis of the session outcome of the first workshop. Through these discussions, I expect to approach the problem solving as much as possible.

Anyway, I'm looking forward to seeing the participants in Manila, and also I hope that we will make beneficial discussions and great achievement in the coming workshop.

(Michitaro Nakai)

Higher priority activities

“The Action Plan (2006-2007)” was approved at the 2nd General Meeting and 9 activities were classified as higher priority activities to strengthen the activities. Those higher priority activities are

- | | |
|-------------------------------------|--|
| 1. NARBO Website (JWA) | 2. NARBO newsletter (JWA) |
| 3. Online database (ADB, JWA) | 4. Members' website (Members) |
| 5. Members' Annual Report (Members) | 6. IWRM raining Program (JWA, ADB, ADBI, KOWACO) |
| 7. Workshops (JWA, ADB, ADBI) | 8. Performance Benchmarking (ADB, IWMI) |
| 9. Twinning Programs (Members) | |

For the details, please see “The Action Plan (2006-2007)” on the website.

* Inside the brackets are leading agencies

** Among others, members' positive involvement regarding information and material gathering for NARBO website and newsletter is indispensable.



Network of Asian River Basin Organizations

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The NARBO Newsletter

(Network of Asian River Basin Organizations)

<http://www.narbo.jp/>

Activities (Thematic Workshop)

PHILIPPINES hosted the 2nd Thematic Workshop

Evelyn Ayson *, Elenito Bagalihog *

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 the La Mesa Guest House, La Mesa Dam Eco-Park in Quezon City. The La Mesa Dam is an earth dam centrally located in Novaliches, Quezon City, Metro Manila. It was first erected in 1929 and then further raised in 1959 to a maximum water storage capacity of 505 million cubic meters (MCM). Its overflow level is an elevation of 80.15 meters. It is a vital link 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



Group photo in front of the La Mesa Guest House

(ADB) 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

causes 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 first part of the workshop.



Opening remarks by Mr. Alikpala



Session in the workshop

*) National Water Resources Board, Republic of Philippines

Topics of this issue

Activities (Thematic Workshop)

Information from members

From the secretariat

- PHILIPPINES hosted the 2nd Thematic Workshop
- About Thematic Workshop ~ New Attempt of NARBO
- Red -THAI BINH RIVER BASIN ORGANIZATION OF VIET NAM WITH NEW SUB-RBOs
- New Acting Secretary General – Mr. Yasutaka HAMADA –
- The 4th NARBO IWRM Training Program in Sri Lanka – Water for All –

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 aver-

age annual inflow of 1700 MCM. The mean annual rainfall in the area is about 4000 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 feed the Luzon grid; and to reduce flooding to downstream towns and villages.



Angat Dam and Reservoir



Lecture on the role of Angat Dam

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 wherein the Angat Dam/Reservoir was constructed at about 60 km 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.

About Thematic Workshop ~ New Attempt of NARBO

Michitaro Nakai *

1. Introduction

NARBO Secretariat has launched the thematic workshops from December 2005, which is a new attempt as well as one of the key activities of NARBO. The thematic workshop is aimed to provide more effective and beneficial activities for water resources management practitioners of NARBO member organizations. This article summarizes the thematic workshop to inform its outline and meanings of NARBO members broadly.

2. Objectives and Orientations

2.1 Objectives

The objectives of the thematic workshop are; (i) sharing information on

current status of participating countries, (ii) clarifying the problems in participating countries, and (iii) approaching the way for improvement in cooperation with participants. For that purposes, it is planned that participants are required preparing an action plan which summarizes their idea on improvement.

In addition, with regard to the thematic workshop, **we attach great importance to a self-reliant effort for problem solving made by participating countries themselves.** It is indispensable to consider problem solving with a self-reliant effort because NARBO basically adopts ownership principle. In addition, there is no common method of problem solving on water issues among each country because water issues usually reflect regional characteristics; therefore, it is appropriate that participants themselves, who must

know water issues of their own countries, consider the approach to improvement.

2.2 Orientations

The orientations of the thematic workshop are as follows;

- Pragmatic and practical viewpoints are emphasized. NARBO mainly consists of water related government agencies and river basin organizations, which are in charge of practical water resources management. Thus, it is desirable to hold the activities that can contribute to the practitioners of water-related organizations. Therefore, pragmatic and practical viewpoint is very important.
- Deep and continuous discussions are intended. Firstly, NARBO secretariat means to facilitate participants' deep discussions in the workshop, which can contribute to the participants' self-reliant consideration. Also, continuous



*) Asian Development Bank Institute

and consistent discussions should be held because water issues are often complex. For that purpose, workshops are held for total of three or four times against one issue, and main members should be stable.

- Focused, specific and important themes related to IWRM are taken up. In order to make discussions deeply, focused and specific themes are desirable, which also should be important ones in implementing IWRM.
- Small and simple style is preferable. The financial resources of NARBO secretariat are quite limited, but we intend to hold as many activities as possible. Due to that, the number of participants will be limited (two participants per one country), and we will not hold gaudy ceremonies or parties, which will contribute to saving costs. Also, limiting the number of participants will contribute to active discussion among participants.
- The host organization rotates among the participant's organizations. Participants' organization's taking on the host organization of the thematic workshop can have following merits; (i) Costs for the workshop can be saved, (ii) NARBO member can recognize the sense of ownership, and (iii) NARBO members can find their own water issues through participating in planning for the workshop.

by doubt about the general ways of trainings or workshops on water resources management. In other words, we recognize issues on the general trainings or workshops as follows.

- Academic organizations often play a leading role in organizing them; so scholarly aspects tend to be emphasized. As a result, their contents are often conceptual, which are not understandable from the viewpoint of practitioners.
- Scales of such trainings or workshops are often large; so, participants tend only to listen to lectures or speeches of resource speakers. As a result, it is difficult to keep two-way communications.
- Themes are too big and conceptual (i.e. IWRM implementation), so points of the argument often become unclear.
- Gaudy ceremonies or parties are often held, which causes considerable expenditure about such trainings or workshops.

Therefore, in some cases, we often cannot help doubt the usefulness of such trainings or workshops for considering the expensive organizing costs. From these perspectives, we give the above 5 orientations to



Field visit in 1st Thematic Workshop on Water Allocation & Water Rights

The above 5 orientations were led

the thematic workshops.

3. The Thematic Workshop on Water Allocation and Water Rights

Now, ongoing thematic workshop is "The Thematic Workshop on Water Allocation and Water Rights". We plan to hold the thematic workshops for 4 times in total during December 2005 to the beginning of 2007, and 2 workshops have finished already.

The theme, "Water Allocation and Water Rights", was selected on the basis of the research on the needs for NARBO activity, carried out in 2004. According to the research, NARBO secretariat recognized that there were quite a few member organizations which have interest in water allocation issues including water rights system. Therefore, we decided "Water Allocation and Water Rights" as the theme of the first series of the thematic workshop.

Government officials and practitioners on water resources management attended the thematic workshop on water allocation and water rights, from 6 countries (Vietnam, Philippines, Thailand, Indonesia, Lao PDR, and Sri Lanka). In first and second workshops, participants have shared the water-related situation each other through sessions and field trips, and discussed actively the ways for improvement to realize an appropriate water allocation. Workshop materials were posted on the NARBO website (<http://www.narbo.jp>).

The venue, date and expected outcome of each workshop are shown in the below table.

First	Hanoi (Vietnam)	5-9 December, 2005	To identify the issues in participating countries
First	Hanoi (Vietnam)	5-9 December, 2005	To identify the issues in participating countries
Second	Manila (Philippines)	5-9 June, 2006	To analyze the causes of the issues and suggest the approach to improvement
Third	Bangkok (Thailand)	27 November- 1 December, 2006	To review the 1st and 2nd workshop and suggest the approach to improvement
Forth	To be determined	January, 2007	To draft the report to make a suggestion

1st workshop in Vietnam



2nd workshop in Philippines



4. Next Steps

NARBO secretariat regards the thematic workshop as an effective and low-cost activity which can give direct and good impact on the practical business on water resources

management. Therefore, we mean to promote this thematic workshop as one of the main activities of NARBO. Then, we mean to launch a new activity, "The Thematic Workshop on Facility Management for

Water Resources Infrastructure" from the beginning of 2007. Your active participation would be appreciated.

Information from members

RED – THAI BINH RIVER BASIN ORGANIZATION OF VIET NAM WITH THE NEW SUB-RBOs

Truong Trong Luat *, Nguyen Thuy Hang *

The Red – Thai Binh River Basin of Viet Nam comprises of 26 provinces in the North of Viet Nam with about 25 million people (there are in total 64 provinces with about 83 million people in the whole country). (Please refer to the NARBO Newsletter Issue No.6 for general information).

The Red – Thai Binh River Basin Organization (the RRBO) is responsible to manage basin-level water resources development planning with following tasks (excluding those mentioned in the NARBO Newsletter Issue No.6):

1. To assess alternatives of water resources planning projects and water

resources basic investigation projects and then submit to the Ministry of Agriculture and Rural Development and state competent authorities for approval;

2. To assess and monitor implementation of integrated water resources planning projects, including irrigation, drainage, flood control alternatives and water resources conservation in the Red – Thai Binh River Basin;

3. To coordinate with related agencies of ministries, sectors, and localities in implementing water resources planning projects approved by the Ministry of Agriculture and Rural Development or the Government;

4. To coordinate with related agencies to establish management regulation of databases serving management, exploit, use and water resources conservancy in the Red – Thai Binh River Basin;

5. To propose capacity building and awareness programs in management, protection, exploitation, and use of water resources for organizations and individuals in the Red – Thai Binh River Basin;

6. To report to Minister of Agriculture and Rural Development and related ministries about water use, management, and protection in the Red – Thai Binh River Basin.



As illustrated in the map above, the Red – Thai Binh River Basin is formed hydrologically by five sub-basins which are characterized by different water-related issues. For instance, the Da, Thao and Lo-Gam rivers' basins are characterized by floods and flash floods, the Upper Thai Binh river basin (Cau river basin) by water

shortage, and the Red River Delta (half of it is the Day river basin) by water pollution and water logging. In order to well realize the assigned tasks and to deal with the specific problems in each sub-basin, two sub-RBOs for the two sub-basins with the most critical water-related-issues have been established under the

RRBO recently, they are Day sub-RBO and Cau sub-RBO. The two sub-RBOs are to help the RRBO's Chairman in implementing the above-mentioned tasks in the specific sub-basins. Main features of the two sub-RBOs are described in the following table.

*) Red - Thai Binh River Basin Organization Office

Main features of the Cau sub-RBO and Day sub-RBO

Features	Day Sub – RBO	Cau Sub -RBO
Location, area, population	a sub-basin of the Red River Delta, south of Hanoi capital city, 7665 km ² , 9 million persons	exactly the Upper Thai Binh River Basin, north of Hanoi capital city, 6030 km ² , 5.2 million persons
Date of establishment	December 1, 2005	May 11, 2006
Member provinces	6 including Hoa Binh, Ha Tay, Ha Nam, Nam Dinh, Ninh Binh provinces and Hanoi city	6 including Bac Kan, Thai Nguyen, Vinh Phuc, Bac Giang, Bac Ninh provinces and Hanoi city. (Hai Duong province also wants to join)
Office	Ha Nam Provincial Department of Agriculture and Rural Development	Thai Nguyen Provincial Department of Agriculture and Rural Development
Number of representative members	51	61
Functions	to help the RRBO's Chairman in implementing his tasks of river basin water resources planning management	to help the RRBO's Chairman in implementing his tasks of river basin water resources planning management
Main problems in the sub-basin	<ul style="list-style-type: none"> - river water pollution caused by industries, handicraft production, and agricultural activities, - ground and surface water contamination from agro-chemical residues, - frequent floods and inundation causing huge damages to socio-economic activities within the Red River flood diversion areas. 	<ul style="list-style-type: none"> - serious water shortage in the dry season - water pollution resulting in water quality deterioration due to population growth, agricultural development, industrialization and urbanization - destruction of watersheds, erosion, occupation of riverbanks, and water logging and flooding in the rainy season.
IWRM at basin level	Supported by the 2nd Red River Basin Sector Project funded by the Asian Development Bank (Component 1: IWRM in the Cau river basin). Activities focus on dealing with water shortage and issues like irrigation performance, overall water balance, crop diversification, potential shift to aquaculture, options for water shortage and water allocation.	Supported by the 2nd Red River Basin Sector Project funded by the Asian Development Bank (Component 3: IWRM in the Nhue-Day river basin). Activities include a water quality sector review, water quality monitoring and water quality management, as well as an assessment of ambient water quality conditions in the Industrial Corridor between Hanoi and Hai Phong.

Since their establishment, the two sub-RBOs have held their first meeting in May (for the Day sub-RBO) and in July (for the Cau sub-RBO) where they set out clear action programs to involve their member provinces, especially their representatives members to contribute to the course of IWRM in their respective basins and to deal

with their specific water-related issues. The role of the sub-RBOs is also stressed when every decision of the Ministry of Agriculture and Rural Development on water infrastructure investments in the two rivers' basins from now on will be based on the internal consensus of the sub-RBOs themselves. In-depth discussions and

a close collaboration are expected to be promoted among the members within their sub-RBOs and with the RRBO that help to further intensify activities by the sub-RBOs and by the RRBO for the ultimate purpose of sustainable development in the Red – Thai Binh River Basin.



Hoa Binh reservoir, one of the most important water infrastructures in the Red – Thai Binh river basin

From the secretariat

New Acting Secretary General – Mr. Yasutaka HAMADA –

Dr. Masafumi FUKUDA, the Secretary General of NARBO, left his post of the Executive Director at Japan Water Agency (JWA) 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 JWA, 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

My name is Yasutaka HAMADA, the successor of Dr. FUKUDA, the former Secretary General and I was appointed as the Acting Secretary General by the Chairperson, Dr. Basuki on October 1 according to the charter. First of all, I would like to express my thanks to Dr. FUKUDA, the former Secretary General, for his great contributions to NARBO activities during his 2 years and 7 months tenure.

I try to do my best to fulfill the duties for the further development of NARBO activities together with the secretariat under the guidance of the Chairperson and the Vice-Chairperson.

I worked in the water works administration in the Ministry of Health, Labor and Welfare (the former Ministry of Health and Welfare) to improve the water resources management for many years. I'm really happy to establish and promote IWRM in the river basins in Asia with my knowledge and experiences.

For NARBO activities, each member's active involvement especially in information exchange and sharing based on the ownership is indispensable. All of us have to remember this again and join forces with each other to promote NARBO activities much further.



The 4th NARBO IWRM Training Program in Sri Lanka – Water for All –

“The 4th IWRM Training Course in Sri Lanka” will be held on 6th – 10th November, 2006 in Sri Lanka. The Mahaweli Authority of Sri Lanka (MASL) takes a role of recipient organization in this training. MASL has a large stock of knowledge and experience on pragmatic water resources management through the implementation of the Mahaweli Ganga Development Program, which is the largest integrated rural development multipurpose program ever undertaken in Sri Lanka.

In this training course, the experiences of MASL and the lessons learnt from disaster in Sri Lanka will be introduced. Also the participants from other countries will report their countries' situations concerning this theme and have the discussion in the practical view among the participants. To enrich the training course, your active participation and preparation for the training are indispensable.

The 2nd announcement & the detailed program is available on the web-site.

Liaison

Mr. Sudharma Elakanda (Recipient Organization) e-mail: narbo@mahaweli.gov.lk

Mr. Masahiro Sugiura (NARBO Secretariat) e-mail: narbo@water.jp

Note: 1. The due date of the application is over now.

2. The registration fee (US\$ 200) is needed to participate in the training.



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Appendix 6

Program of the 2nd thematic workshop

Agenda of the 2nd thematic workshop on water allocation and water rights (2)

Schedule	Tuesday 6th Jun (Day1)				Schedule	Wednesday 7th Jun (Day2)			
	Session Title	Agenda/Activity	Presenter/Speaker	Facilitator		Session Title	Agenda/Activity	Presenter/Speaker	Facilitator
8:30–9:00 (30min)	Registration					Field Visit (1) – Ayala Land Filtration Plant, Putatan, Muntinlupa, National Power Corporation, Kalayaan, Laguna	7:00 Departure (Sulo Hotel)		
9:00–9:20 (20min)	Opening Session	Opening Remarks	Recipient Organization & NARBO secretariat	Secretariat	10:00				
9:20–9:40 (20min)		Introduction of the 2nd thematic workshop	Michitaro Nakai (ADB)						
9:40–10:20 (40min)		Introduction of recipient organizations	NWRB & LLDA (20min respectively)						
10:20–10:30	Break				11:00–12:00		Arrival at NPC, kalayaan Coffee Break Plant Tour		
10:30–11:10 (40min)	Special Lecture (including Q&A)	Japanese experience on water resources policy (Tentative)	Mr. Kouji Nukina, Deputy Director,Water Resources Planning Division, Water Resources Department, MLIT	Secretariat			Presentation and discussion		
11:10–12:00 (50min)	Session 1: Report on the situation of the dissemination and discussion in participants' countries	Short report on the discussion in participants' countries	Each participants (10minitues for each participant)	3 persons 1 from Secretariat 1 from Core Members 1 from Philippines					
12:00–13:00	Lunch at the workshop venue				12:00–13:30		Lunch		
13:00–14:30	Session2: Presentation and discussion (Grasp of issues and analysis of causes)			3 persons 1 from Secretariat 1 from Core Members 1 from Philippines	13:30–15:00		Departure for Ayala Land Filtration Plant, Mutinlupa		
14:30–14:40		Break			15:00–17:00				
14:40–16:10				3 persons 1 from Secretariat 1 from Core Members 1 from Philippines		Arrival at 15:00 Briefing/Discussion and Plant Tour			
16:10–16:20		Break				17:00–19:00	Arrival at Sulo Hotel at around 19:00		
16:20–17:00 (40min)	Presentation from JWA	Japanese experience on approaching water allocating issues	Michitaro Nakai (ADB)						
17:00–17:30	Message from Secretariat (Information on field trips etc..)		Secretariat						

Agenda of the 2nd thematic workshop on water allocation and water rights (2)

Schedule	8th Jun (Day3)				Schedule	9th Jun (Day4)			
	Session Title	Agenda/Activity	Presenter/Speaker	Facilitator		Session Title	Agenda/Activity	Presenter/Speaker	Facilitator
	Field Trip (2) – Angat Dam and Reservoir, Bulacan	8:00 Departure			9:00–9:50	Presentation from JWA	Methodology for this workshop	Michitaro Nakai (ADB)	
					9:50–10:00	Break			
10:00–12:00		Arrive at Angat Dam Coffee Break Tour Angat Dam and Facilities				Session 3: Presentation and discussion – First half (Proposals, Processes and Evaluations)			3 persons 1 from Secretariat 1 from Core Members 1 from Philippines
12:00–13:00		Lunch			12:00–13:00	Lunch at the workshop venue			
13:00–14:00		Presentation on Angat Dam and Reservoir			13:00–16:00				3 persons 1 from Secretariat 1 from Core Members 1 from Philippines
14:00–15:00		Open Forum				Session 3: Presentation and discussion – Latter half (Proposals, Processes and Evaluations)			3 persons 1 from Secretariat 1 from Core Members 1 from Philippines
15:00–15:30		Coffee Break & Others							
15:30–17:30		Departure							
					16:00–16:10	Break			
					16:10–17:00	Session3: Presentation and discussion – Latter half (Proposals, Processes and Evaluations)			3 persons 1 from Secretariat 1 from Core Members 1 from Philippines
		Arrival at Sulo Hotel at around 17:30			17:00–17:30	Closing Session	Toward the next workshop	Michitaro Nakai (ADB)	TBD
						Closing Remarks		TBD	TBD
						Farewell Party			

Appendix 7

Program of the 3rd thematic workshop

Agenda of the 3rd thematic workshop on water allocation and water rights

Tuesday 28th Nov (Day1)					Schedule	Wednesday 29th Nov (Day2)			
Schedule	Session Title	Agenda/Activity	Presenter/Speaker	Facilitator		Session Title	Agenda/Activity	Presenter/Speaker	Facilitator
8:30–9:00 (30min)	Registration				8:00	Field Visit	Departure 8:00 (Century Park Hotel) for Prachin Buri Province		
9:00–9:10 9:10–9:20 9:20–10:00 (40min)	Opening Session	Opening Remarks	Recipient Organization	NARBO Secretariat					
		Introduction	Michitaro Nakai (ADB)						
		Introduction of the recipient organization	From DWR						
10:00–10:50 (50min)	Special lecture	Groundwater management	Masayuki Sato, Deputy Director, Department of Water Resources, MLIT	NARBO Secretariat	10:00–10:45		Arrival in Prachin Buri Province Water Evaluation and Planning System (WEAP Model) and Water Allocation n Bang Pakong River Basin by Water Resources Regional Office 6 (about 45 minutes)		
Break					10:45–11:00		Break		
11:10–12:10 (60min)	Session 1: Report on the situation of dissemination and discussion in participants' countries	Short report on information dissemination and discussion in participants' countries	Each participant (10minitues for each participant)	NARBO Secretariat	11:00–12:00		Meeting with Bang Pakong River Basin Sub-Committee at Prachinburi City Hall		
12:00–13:00	Lunch				12:00–13:00		Lunch		
13:00–14:30	Session 2: Review of the former workshops (1) – First Half	Presentation from Thailand	Each participant (30minitues for each country)	3 persons 1 from Secretariat 1 from Core Members 1 from Thailand	13:00–13:45		Depart for the Khlong Tha Dan Dam Project in Nayok Province		
		Q&A							
		Presentation from Vietnam							
		Q&A			13:45–14:30				
		Presentation from Philippines							
14:30–14:40	Break				14:30–14:45	Break			
14:40–16:10	Session 2: Review of the former workshops (1) – Latter Half	Presentation from Indonesia	Each participant (30minutes for each participant)	3 persons 1 from Secretariat 1 from Core Members 1 from Thailand	14:45–16:30	Field visit the Khlong Tha Dan Dam Project			
		Q&A							
		Presentation from Sri Lanka							
		Q&A							
		Presentation from Lao PDR							
	Q&A								
16:10–16:20	Break								
16:20–17:00 (40min)	Presentation from Japan	Japanese River Law	Michitaro Nakai (ADB)	NARBO Secretariat	16:30–18:30	Departure for Century Park Hotel (Arrival at about 18:30)			
17:10–17:30	Message from Secretariat (Information on field trips etc..)		Thailand organizational committee						

Agenda of the 3rd thematic workshop on water allocation and water rights

Schedule	Thursday 30th Nov (Day3)				Schedule	Friday 1st Dec (Day4)			
	Session Title	Agenda/Activity	Presenter/Speaker	Facilitator		Session Title	Agenda/Activity	Presenter/Speaker	Facilitator
9:00–12:00	Session 3: Review of the former workshops (2) – First Half	Presentation from Thailand (9:00–9:30)	Each participant (30minutes for presentation, 30minute for discussion)	3 persons 1 from Secretariat 1 from Core Members 1 from Thailand	9:00–9:50	Presentation from Japan	Review of the session 2 & 3	Michitaro Nakai (ADB)	NARBO Secretariat
		Discussion for Thailand (9:30–10:00)			Break				
		Presentation from Vietnam (10:00–10:30)			Session 4: Internal discussion & revision of the discussion materials	Internal discussion toward the revision of the discussion materials	NARBO Secretariat		
		Discussion for Vietnam (10:30–11:00)							
		Presentation from Philippines (11:00–11:30)							
		Discussion for Philippines (11:30–12:00)							
12:00–13:00	Lunch				12:00–13:00	Lunch at the workshop venue			
13:00–16:00	Session 3: Review of the former workshops (2) – Latter Half	Presentation from Indonesia (13:00–13:30)	Each participant (30minutes for presentation, 30minute for discussion)	3 persons 1 from Secretariat 1 from Core Members 1 from Thailand	13:00–15:00	Session 5: Presentation on the revision of the discussion materials	Report on the outcome of the internal discussion in the Session 4	Each participant	NARBO Secretariat
		Discussion for Indonesia (13:30–14:00)			Break				
		Presentation from Sri Lanka (14:00–14:30)			Closing Session	Toward the next workshop	Michitaro Nakai (ADB)	NARBO Secretariat	
		Discussion for Sri Lanka (14:30–15:00)				Closing remarks and others	TBD	TBD	
		Presentation from Lao PDR (15:00–15:30)							
		Discussion for Lao PDR (15:30–16:00)							
						Farewell Party			

Appendix 8

Program of the 4th thematic workshop

Agenda of the 4th thematic workshop on water allocation and water rights

Schedule	Tuesday 23rd Jan (Day1)				Schedule	Wednesday 24th Jan (Day2)			
	Session Title	Agenda/Activity	Presenter/Speaker	Facilitator		Session Title	Agenda/Activity	Presenter/Speaker	Facilitator
9:00~9:30	Registration								
9:30~10:00	Opening Session	Introduction and explanation of field trip venues	Michitaro Nakai	NARBO Secretariat	9:30~10:30	Session 2: Presentation on action program	Presentation from Sri Lanka	Each participants (60min per 1 country including Q&A)	NARBO Secretariat
10:00~10:15		Opening Remarks	Toshiki Aoyama, President, JWA		Q&A, discussion				
10:15~10:45		Introduction of Japan Water Agency	Katsunori Takagi		Presentation from Indonesia				
10:45~11:00	Break				10:30~11:30		Q&A, discussion		
11:00~12:00	Session 1: Report on the situation of dissemination and discussion in participants' countries	Short report on information dissemination and discussion in participants' countries	Each participant (10minitues for each participant)	NARBO Secretariat					
12:00~13:00	Lunch				11:30~12:30	Lunch			
13:00~14:30	Move to Tokyo	Departure 13:00 for the Ministry of Land, Infrastructure and Transport, Tokyo		NARBO Secretariat	12:30~14:30	Move to Tone Canal Control Center	(1) Study Tour of Tone Canal Project		NARBO Secretariat
14:30~16:30	Special session in MLIT (Lecture and Others)	Speech from MLIT	Director General, Water Resources Department, MLIT	NARBO Secretariat	14:30~15:30	Tone Canal Control Center	Presentation on the Project		NARBO Secretariat
		Special Lecture: Case Study of improving water issue, taking the experience on Aichi Canal as an example	Prof, Tsuneaki Yoshida, University of Tokyo		15:30~16:00				
					16:00~16:30				
16:30	Going back to Saitama				16:30~17:30	Going back to Saitama			
					18:30~20:00	Dinner hosted by JWA at Kineya			

Agenda of the 4th thematic workshop on water allocation and water rights

Schedule	Thursday 25th Jan (Day3)				Schedule	Friday 26th Jan (Day4)			
	Session Title	Agenda/Activity	Presenter/Speaker	Facilitator		Session Title	Agenda/Activity	Presenter/Speaker	Facilitator
7:30-10:00	Move to Tonegawa Lower Reach Comprehensive Operation and Maintenance Office	(2) Study Tour of Lake Kasumigaura Development Project		NARBO Secretariat					
10:00-11:00	Tonegawa Lower Reach Comprehensive Operation and Maintenance Office	Presentation on the Project		NARBO Secretariat	9:30-10:30	Session 2: Presentation on action program	Presentation from Vietnam	Each participants (60min per 1 country including Q&A)	NARBO Secretariat
					Q&A, discussion				
				10:30-11:30	Presentation from Philippines				
					Q&A, discussion				
11:00-12:00	Boating on Lake Kasumigaura			NARBO Secretariat					
					11:30-12:30				
12:00-13:00	Lunch					Lunch			
					12:30-13:30	Session 2: Presentation on action program	Presentation from Lao PDR	Each participants (60min per 1 country including Q&A)	NARBO Secretariat
13:00-15:00	Move to Inbanuma Land Improvement District(LID) Office	(3) Study Tour of Chiba Canal Project		NARBO Secretariat			Q&A, discussion		
					13:30-14:30		Presentation from Thailand		
							Q&A, discussion		
15:00-16:00	Inbanuma Land Improvement District Office	Presentation on JWA & LID		NARBO Secretariat					
					14:30-14:45	Break			
16:00-17:50	Visiting Site	- Super Paddy Field - Usui 2nd Supply & Drainage Pumping Station - Ohwada Drainage Pumping Station		NARBO Secretariat		Session 3: Session for revision of drafted action program	Free discussion on revision of drafted action program (1hour)		
							Oral presentation on the outcome of the internal discussion (30 minutes)		
17:50-19:30	Chiba canal Comprehensive Operation & Maitenance Office	Welcome Reception by Chiba Canal Office		NARBO Secretariat	16:15-16:45	Summary of the thematic workshop	Presentation	Michitaro Nakai (ADBI)	NARBO Secretariat
					16:45-17:30	Closing Session	Closing remarks, Certification distribution	Yasutaka Hamada, Secretary General of NARBO	NARBO Secretariat
19:30-21:30	Going back to Saitama				18:00-19:30	Farewell Party at Nihonkai shouya			

Appendix 9

Program of the peer review under benchmarking initiative



NARBO PEER REVIEWER ORIENTATION AND CERTIFICATION & JASA TIRTA II PUBLIC CORPORATION PEER REVIEW

October 30 – November 2, 2006
Jatiluhur, Indonesia

October 29, DAY 0

08:00-17:00	Registration of Participants
19:00	Welcome Dinner at Venue – hosted by PJT2, IWMI, ADB

October 30, DAY 1: Peer Review Orientation

08:00 – 08:10	10	Welcome Remarks	D. Gurusinga (tbc) PJT2
08:10 – 08:20	10	Keynote Address	Dr. Moch. Basuki Hadi Moeliono, (tbc) NARBO Chair
08:20 – 08:35	15	Setting the Context	W. Lincklaen Arriens ADB
08:35 – 08:45	10	Self- Introduction	Participants
08:45 – 08:55	10	Introduction to the Program and Objectives of the (i) Peer Review Orientation; and (ii) PJT2 Peer Review	A. Inocencio IWMI
08:55 – 09:15	20	Performance Benchmarking and Peer Review Tool	I. Makin ADB
09:15 – 09:35	20	Web-Interface Orientation	I. Makin (ADB) / A. Inocencio (IWMI)
09:35 – 10:00	25	Discussion	Participants
10:00 – 10:20	20	Break	
10:20 – 10:35	15	Video Presentation: Peer Review of NWSABs	W. Lincklaen Arriens ADB
10:35 – 10:45	10	RBO Peer Review Process	J. Kiribandage IWMI
10:45 – 11:05	20	What are expected from RBO Peer Reviewers	A. Inocencio IWMI
11:05 – 11:35	30	Overview of PJT2 and Presentation of the PJT2 Self-Assessment Results	W. Hutagalung PJT2
11:35 – 12:00	25	Discussion	Participants
12:00 – 13:00	60	Lunch	

13:00 – 13:30	30	Analyzing the PJT2 Self-Assessment Process and Results	A. Inocencio IWMI
13:30 – 15:30	120	Exercise 1: Using the NARBO Performance Benchmarking Tool	Participants with facilitators: H. Manthrithilake A. Inocencio J. Kiribandage P. McCornick I. Makin W. Lincklaen Arriens
15:30 – 17:00	90	Plenary Presentations and Discussion of Exercise I Results	P. McCornick, IWMI

October 31, DAY 2: Peer Review Orientation

08:00 – 08:10	10	Recap of Day 1's Activities	A. Inocencio IWMI
08:10 – 08:20	10	Defining Peer Groups	J. Kiribandage IWMI
08:20 – 10:20	120	Exercise 2: How to Review Self-Assessment Reports of RBOs	Participants with facilitators: H. Manthrithilake A. Inocencio J. Kiribandage
10:20 – 12:00	100	Plenary Presentations and Discussion of Exercise II Results	P. McCornick IWMI
12:00 – 13:00	60	Lunch	
13:00 – 13:15	15	Expected outputs from the Peer Review Team	J. Kiribandage IWMI
13:15 – 14:45	90	Interviews with the PJT2 staff (without the management group)	PJT2 Peer Review Team All other Participants will be observers
14:45 – 16:15	90	Interviews with the PJT2 top management/selected heads of divisions/sections	PJT2 Peer Review Team All other Participants will be observers
16:15 – 17:00	25	Review of PJT2 support documents	PJT2 Peer Review Team All other Participants will be observers

November 1, DAY 3: The PJT2 Peer Review

08:00 – 09:30	90	Travel to Jakarta	All Participants
09:30 – 11:00	90	Consultation with BAPPENAS	PJT2 Peer Review Team All other Participants will be observers
11:00 – 12:00	60	Travel to Bandung	All Participants
12:00 – 13:00	60	Lunch	
13:00 – 14:30	90	Consultation with 2 NGOs/2 WUAs	PJT2 Peer Review Team All other Participants will be observers
14:30 –	90	Consultation with other stakeholders	PJT2 Peer Review Team

16:00		(e.g. West Java Provincial government)	All other Participants will be observers
16:00 – 17:00	60	Travel to Jatiluhur	All Participants

November 2, DAY 4: The PJT2 Peer Review

08:00 – 8:10	10	Recap of yesterday's consultations	PJT2 Peer Review Team Leader
08:10 – 9:10	60	Peer Review Team Dialogue with the PJT2 Self-Assessment Team	PJT2 Peer Review Team PJT2 Self-Assessment Team
09:10 – 1:10	120	Peer Review Team discussion of key observations/ findings and writing of synthesis following the 5 critical performance areas Meeting & preparation for presentation of results	PJT2 Peer Review Team
11:10 – 2:00	50	Peer Review Team's Presentation of its Review Results	PJT2 Peer Review Team
12:00 – 3:00	60	Lunch	
13:00 – 3:45	45	Presentation of Observations by Non-PJT2 Reviewer Groups	Non-PJT2 Reviewers
13:45 – 4:05	20	Initial Response of PJT2	D. Gurusinga PJT2
14:05 – 4:35	30	Key Lessons from the pilot Self-Assessment and Peer Review experiences for the succeeding assessments and reviews	H. Manthrilake / A. Inocencio (IWMI)
14:35 – 5:05	30	Awarding of Accredited Peer Reviewers' Certificate	Dr. Basuki I. Makin P. McCornick
15:05 – 5:15	10	Closing remarks / What next	W. Lincklaen Arriens ADB

November 3, DAY 5

Departure of Participants

Appendix 10

Program of the 4th training course

NARBO 4th Training Programme
"Water for all- Lessons Learnt and Meeting Future Challenge"

6th - 10th November 2006, Sri Lanka

Date	8.30 - 9.50		10:15-10:30	10:30-12:00	12:00-13:00	13:0-15:00	15:00-15:15	15:15-16:45	16:45-17:00	17:00-18:00
Monday, 6th November 2006 (Day 1)	8.30 a.m Registration of Participant		Tea Break	Hydraulic Civilization of Sri Lanka- Past-Present - Future	Lunch	Country Paper presentations each Country will be given 15 minutes presentation & 5 minutes for the Q & A	Tea Break	Water Management Practice on Sri Lanka (Resource persons to be confirmed)	Ice Break	Group Discussion among the participant to familiarize with the environment
	9.00 a.m. Lighting Traditional Oil Lamp									
	9.10 a.m. Welcome Speech									
	9.30 a.m. Introduction of Participant									
	9.50 a.m. Objective & Briefing of the Programme									
Tuesday, 7th November 2006 (Day 2)	Field Visits - Visits Mahaweli Dam Sites - Victoria, Randenigala & Rantembe Dam (about 200 k.m. has to be traveled from Colombo) - (Night at Randenigala Wild Life Department Hostels)									
Resource persons	Eng. S.R.K.Aruppola, EIC (Victoria) & Eng. Nimal Wickramarathna, Director (HAO&M)									
Wednesday, 8th November 2006 (Day 3)	Continue Field Visit - Dehiattakandiya, Maduruoya, Polonnaruwa & Back									
Resource persons	Meeting Water Uses gaining experience on IWRM Applications Tertiary Level / Visit Ancient Sluice Constructed in 6th Century at Maduruoya									
Thursday , 9th November 2006 (Day 4)	IWRM Applications in Mahaweli Projects	Model of Kala Oya Basin towards the IWRM	Tea Break	River Basin Applications in Sri Lanka	Lunch	Feed back from the Participants on Field Visits	Tea Break	Group Work / Brain Storming Session	Ice Break	Each Group Presentations on their findings
Resource persons	Eng. Mrs. Sepali Mathmaluwa	Eng. Mrs. Lalitha Seneviratna		Eng. Sudharma Elakanda		Participants		3-4 Working Groups will Discuss how the Workshop		
Friday , 10th November 2006 (Day 5)	Sri Lanka experience on recent Tsunami, precautions and strategies to minimize large scale disaster.		Tea Break	Lessons learnt from Tsunami and re-construction with a new vision (experience from lessons learnt from Tsunami disaster)	Lunch	How Hydropower Sector influence for IWRM	Tea Break	Effective and Sustainable Management on Existing Water Infrastructure	Ice Break	Certificate Awarding, Closing Ceremony & Reception Dinner
Resource persons	Mr. Lalith Chandrapala			Eng. Dharmasiri de Alwis		Mr. Shavindranath Fernando		Mr.Takuji Oikawa		
Saturday , 11th November 2006 (Day 6)	Departure of Participants									

AFTERWORD FROM THE SECRETARY GENERAL



More than three years has passed since NARBO was established in February 2004, and we, NARBO Secretariat, are very pleased to publish the 3rd NARBO Annual Report that summarizes activities conducted throughout 2006.

These activities were carried out in accordance with a new action plan 2006-2007, as accepted at the 2nd NARBO General Meeting in February 2006. Among them, thematic workshop had been successfully held in four sessions under the theme of “water allocation and water rights” from December 2005 to January 2007. Through tangible results over the period, we strongly believe that our activities will be further expanded in the future.

Following this workshop, a new thematic workshop is scheduled to be held under the theme of “Sustainable Management for Water Resources Infrastructures.” Like this, our efforts will continue to promote Integrated Water Resources Management (IWRM) in Asian monsoon region.

Activities in NARBO as a network organization are supported and promoted by ownership of NARBO members. In this regard, we highly expect members’ active participation to develop further our activities towards solving water problems and implementing preferable IWRM in monsoon Asia.

July, 2007

Secretary General of NARBO

浜田 康敬

Mr. Yasutaka HAMADA





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