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

Article4.1. 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 with in 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.

Article4.2. 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 are 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.

Article4.3. 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

Article4.4. 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

Article4.5. 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)
Activities led by the NARBO Secretariat:				Priority
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	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.	- 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.	JWA	- NARBO members' positive involvement regarding information gathering is essential.

				- 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	Priority 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	Priority NARBO members' positive involvement regarding materials gathering is indispensable.

4. NARBO Annual Report Drawing on member organizations' inputs, the report will summarize NARBO's activities.		-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.	JWA	RBO Members are requested to submit their reports by the end of March the following year
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.	The Media Relations and NARBO Promotion will be conducted to attract great interest in NARBO's activities and to increase NARBO member	- 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 - 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.	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 2nd General Meeting will be held in Indonesia, Feb 2006	Chair person and Vice-Chair person JWA ADB ADBI	The 3rd General Meeting will be held in the first quarter of year 2008.
7. Remarkable events				
8. Others				

Activities led by NARBO Member Organizations: **1. NARBO members' websites** NARBO member organizations develop and maintain their own websites and post relevant information on their activities in relation with IWRM and its implementation.	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 accumlate relevant information on activities for the NARBO website.	- 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,	NARBO members	Priority All members are encouraged to update the websites .
2. NARBO members' Annual Report NARBO RBO members are obliged to submit an annual report on their activities in accordance with guidelines prepared by the NARBO Secretariat.	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.	- 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	RBOs	Priority It is highly expected all RBO members submit an annual report 2005 by the end of March 2006

B. Capacity Building in River Basin Organizations (RBOs)				
Activity	**Remarks**	**Implementation Program**	**Leading Agency**	**Note (latest)**
Activities led by the NARBO Secretariat: **1. IWRM Training Program** 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.	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.	- The 4th training course will be held in Indonesia in June 2006. - Following Training courses will be held. - The 5th training course : Nov. 2006. - The 6th training course : Jun. 2007. - The 7th training course : Nov 2007.	JWA, ADB, ADBI, KOWACO	Priority NARBO Members are encouraged to be recipients organization

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	Priority 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	Priority
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.

Activities led by NARBO Member Organizations: **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.		- JWA will conduct research on NARBO members intention until Aug., 2006 and consider the possibility of arranging program.	JWA, ADB, ADBI	RBOs will indicate areas of expertise.
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.	To be initiated and arranged by RBO members. Information will be stored, classified and accessed by members on the website. Exchange visit between NARBO Members is a step before entering Twinning Programs between 2 (two) NARBO Members Intensive communication between NARBO Members are encouraged to establish closer relationship between NARBO Members.	- Existing Twining Program will be continued. Another new agreements on Twining Program among NARBO members are highly expected.	NARBO members	Priority

3. ISO certification RBOs will explore opportunities for ISO certification to stimulate achievement and maintenance of standards.	To be initiated and led by Jasa Tirta I and II. It is desirable to continue to have the opportunities to lecture on ISO certifiction.	RBO Members-who intersested in ISO Certification are kindly encourage to collaborate with Jasa Tirta I & II	Jasa Tirta I, Jasa Tirta II	
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.		- NARBO Secretariat will encourage considering the feasibility of transboundary water management	RBOs	Sharing information and experience accordingly. MRC will share their information and experiences.

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	

3. Charting IWRM Program in Asia 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.			ADB IUCN	
4. Facilitating IWRM Investment Project 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.			ADB	

Appendix 3

NARBO Members' List

List of NARBO Member and Interest to become member

As of 21st April 2006

	Member	Interest
River Basin Organization (RBO)	**16**	**2**
Government Organization (GOV)	**21**	**4**
Regional Knowledge Partner (RKP)	**15**	**1**
Inter Regional Knowledge Partner (IRKP)	**3**	**0**
Development Cooperation Agency (DCA)	**1**	**0**
Total	**56**	**7**
Contacted Organization and Others		**1**

Classification		Country		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 (KOWACO)	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		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		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 (Bangladesh)	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	Exective Director
		Thailand	M	Thailand Water Resources Assiciation (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 Emvironment & 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 Widlife 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
	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		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. Mudjiadi	General Project Manager
	RKP	Japan	I	Ritsumeikan Asia Pacific University (Japan)	Dr. Fransisco P. Fellizar, Jr	Associate Professor

Note:

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

KP=Knowledge Partner
DCA=Development Cooperation Agency

After the 2nd General meeting, the Signatory should be change to "representative"
Record of Update As of 20th Dec. 2005

KOWACO: changed contact person with position to Dr. Ko Ich Hwan
Japan government member (MLIT): Mr Nukina <- Mr Tokunaga
Format: split between RBO and Gov. (revised by Indonesian OC of 2nd general meeting)
IUCN joined member

Prospective members in 1st General meeting (Feb. 2004) : Another file

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

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 Closing remarks on NARBO workshop	JWA, ADB, ADBI
19.30 – 21.00	Side event: Indonesian NARBO Members Meeting	Indonesian NARBO Secretariat

DAY 3	**16th February 2005 (Thursday)**	*General Meeting*
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
http://www.narbo.jp/
(Network of Asian River Basin Organizations)

From Secretariat

1. Report of the event

The 2nd NARBO training course

The training course on "River Basin Management and Organizations" was held from April 25 to 29 at Beach Hotel on Negombo in Sri Lanka. Twenty-seven participants from Afghanistan, Bangladesh, India, Nepal Pakistan and Sri Lanka took part in the training. From NARBO Secretariat, Dr. Tennakoon, who is acting vice-chairperson, Mr. Dennis, Mr. Imam, Mr. Ishimura and Mr. Takagi also attended and made presentations.

The training course was organized under the auspices of six organizations. Six organizations were IWMI, ADB, ADBI, JWA, GWP-South Asia and Lanka Jalani respectively. The core training team from IWMI HQ guided the course and they emphasized on the first day that it was very important for participants to learn each other by exchanging their experiences and knowledge, discussing problems they had.

The program was consisted of four modules titled "General overview of reasons for River Basin Management (RBM)", "New insights from recent studies", "Problems and constraints, at local and national levels" and "Designing an appropriate institutional system". On module 3, participants were divided into three groups and visited the upper reach, middle reach and lower reach of Maha Oya River Basin. After coming back from the field trip, they were working until late at night to meet the deadline of group assignments on what they learnt from the field trip. Also on module 4, each group tackled with the assignment given by the core training team and presented the assignment on the final day.

At closing ceremony, every participant was given the citation and the training course ended very successful and fruitful.

It was quite impressive for me to see all participants make friends, chat and take photos here and there at the closing ceremony.

Finally, I'd like to offer my sincere thanks to all participants, the core training team, staff members of secretariat and all concerned organizations for their hard works and efforts.

Prepared by Katsunori TAKAGI, JWA NARBO Secretariat

Photo1 : Presentation

Photo 2 : Group work

Photo 3 : At the field trip

Photo 4 : At the closing ceremony

2. General information

(1) The 3rd preparatory meeting for Southeast Asia Water Forum

Toward the 2nd Southeast Asia Water Forum in Bali from August 29 to September 2, the 3rd preparatory meeting is going to be held on May 17 in Indonesia.

(2) JICA training course on IWRM

The 2nd training course is going to be held from October 11 to November 8. Ten participants will be nominated from Indonesia, Lao PDR, China, India, Philippines, Vietnam, Bangladesh and Pakistan. If interested, please inquire to JICA Office in your country to get GI (General Information).

The NARBO Newsletter
http://www.narbo.jp/
(Network of Asian River Basin Organizations)

Members' contribution

SAVE BURIGANGA MOVEMENT

Mir Sajjad Hossain*

Dhaka is the capital of Bangladesh with an Metropolitan area of about 380 Km^2. It stands beside the Buriganga Turag river system. The length of the Buriganga river is about 17km. Owing to its historical perspective and cultural heritage, the Buriganga is termed as the "lifeline" of Dhaka city. This capital city was first established during the Mughal period about 400 years back. The river Buriganga gave the old metropolis its water connection and was easily navigable so that the great Mughal fleet could often anchor near the town. Once the water of this river was largely used as dirking water by the city dwellers. In 1874 a water treatment plant was set up by the then government at a place named Chadnighat in the city for supplying pure water to the city dwellers. In fact the total ecosystem of Dhaka evolved based on the river Buriganga. Presently Dhaka city has a population of about 11 million and would be about 16 million by 2025.

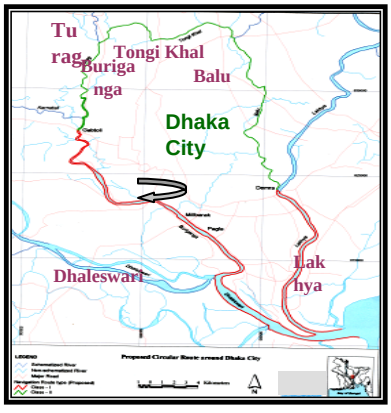

Figure: 1 Dhaka City and adjoining river system

The Turag, upper reach of the Buriganga, originates from the Bangshi at Kaliakoir that receives significant runoff contributions from the inland Gar areas. The river is connected to the Balu river through the Tongi Khal before joining the Buriganga at Mirpur. The river Balu originates from the Gar areas and joins the Lakhya near Demra. Usually, Tongi khal flows from Turag towards Balu during monsoon when there is practically no tidal effect. But during the dry season, the flows of the Tongi khal changes direction from Balu towards Turag due to lower water level in the Turag and higher water level in the Balu caused by higher tidal influence in the Balu. The main source of water of the Buriganga had been the spills of the Brahmaputra river.

Problem

The river Buriganga is getting polluted over the years causing serious environmental degradation in the capital. The pollution problems are the outcome of both natural as well as human activities and interventions and also due to lack of adequate pollution control measures.

Photo 1 Contaminated water of the Buriganga

Photo 2 Encroachment near the Buriganga

The natural reasons behind the problems include hydraulic and morphological changes in the rivers around Dhaka. Due to gradual sedimentation in the Buriganga-Turag-Balu-Lakhya river systems, the conveyance capacities of the channels have decreased, causing no flow condition during the dry season and consequently the navigation drafts have been reduced. Moreover, the Feeder Rivers from the source of the Brahmaputra do not receive flows due to drying up of the off takes during the dry

* *Mir Sajjad Hossain, Director, Joint Rivers Commission, House-13, Road-4, Dhanmondi R. A. Dhaka-1205, Bangladesh.*

The NARBO Newsletter
http://www.narbo.jp/
(Network of Asian River Basin Organizations)

season. Heavy sedimentation at the off take and river reaches is the major problem impeding sustainable development.

Human activities and interventions include encroachment on the river bed, floodplains and low lying areas, sewage and solid waste disposal, insufficient water supply and sanitation, industrial waste disposal and high rate of migration of the poor people in the slum areas of Dhaka.

The dumping of untreated liquid tannery wastes from tannery industries at Hazaribag, Dhaka is the major source of pollution of Buriganga. The chromium released from the Hazaribag tannery industries has been contaminating the water of the river Buriganga for the last forty-five years. This highly polluted water is spreading various diseases including cancer. A statistics available from the Department of Environment reveal that 95 per cent of the tannery industries have been built in unplanned way at the congested places of Hazaribag during the last fifty years. At present during the pick monsoon about 21 thousand and 600 cubic meters of liquid toxic wastes are dumped daily into the river Buriganga from the 185 tannery industries of Hazaribag. There is no alternative way to dump this liquid toxic waste at the time of continuous production of tannery industries. Besides contaminated water dumped everyday from the 500 kilometre long sewerage line of Dhaka city Buriganga is another important reason for water pollution in the river. An estimated 35,000 cubic meter of untreated highly toxic industrial wastes are also dumped into the river every day. Other reasons responsible for water pollution in the river Buriganga include dumping of oil from vessels playing in the river, human wastes thrown from the unsanitary latrine set up on or near the river. Illegal settlements on both sides of the river are also responsible for both water pollution and obstacles to the course of the river. An estimated 25 lakh cubic meter of toxic liquid wastes have been dumped into the river Buriganga in 2003 causing severe pollution of its water. Besides, about 12 thousand cubic meters of untreated wastes are dumped from the Tejgaon industrial area at Dhaka. About 40% of total sewerage wastes of the total one crore people of Dhaka city are dumped in the river in untreated condition.

The contamination of water of the river Buriganga is creating adverse effect on our environment. The Department of Environment (DOE) in a survey in 1997 found that oxygen in the river is close to zero level for which its marine life is depleted. In the meantime the river has reached in a stagnant position with black, slimy, stinking water due to continuous dumping of untreated industrial wastes. The flow of current is now almost non existent in the river. The condition of water of the river has now reached in such a situation that at Sadarghat, when big passenger launches start their engines and whirl the water with propellers, the foul odor become so unbearable that every one around have to press handkerchiefs on their noses. The tidal range from the sea is badly obstructed by the encroachments, massive sedimentation and dumping of all sort of wastes. As a result the rivers and channels around the city are extremely contaminated due to the dead slow tides. Thousands of people traveling everyday and residents of its banks are exposed to serious health hazards. Many residents complained of irritation in eyes and skins.

Values of some water quality parameters of the Buriganga river are as follows:

PH	EC	Chloride	Ts	DO	BOD
6.7-8.0	141-859	1.5-26.0	45-525	2-8.5	0.7-240

Initiatives to overcome the problem

Initiatives have been taken at both governmental and non-government level to save Buriganga from continuing environmental degradation.

- The department of Environment, Govt. of Bangladesh formed a committee in 1997 to implement the “Save Buriganga” Program.
- ‘Bangladesh Paribesh Andolon’ in active participation of its members and other Voluntary organizations formed the “Buriganga Bachao Andolon” in other words “Save Buriganga Movement” in order to protect it from encroachment and pollution. This committee first organized a meeting with the representatives of civil society in July 2000. It also organized a boat race in August 2000. The activities of the committee were publicized in TV and news media which helped building public opinion.

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http://www.narbo.jp/
(Network of Asian River Basin Organizations)

In August 2000 a sit in program was staged by the committee against the encroachment by the "Sena Kallayan Sangstha". The committee later on met the Ministers, Ministry of Water Resources and Ministry of Environment. This committee had been carrying out regular programs to "Save the Buriganga".

The Government in October, 2002 formed a 11 member Task Force comprising four Ministers, Environmentalists, Elites, Journalists with Minister of Shipping as the Chairman of the Taskforce. The Taskforce formulated its recommendations which were subsequently approved at the cabinet meeting. The recommendations fall in the following categories:

- Steps be taken to stop encroachment on the river and gradients
- Demolish illegal structures on the river bank

Maintenance of water quality

- Carryout dredging to increase the river
- navigability and establishing a circular waterway around Dhaka city.

An implementation committee under the chairmanship of Minister of Shipping was formed at the cabinet meeting to implement the recommendations of the Taskforce. In October, 2003, at a meeting chaired by the Shipping Minister, the Buriganga protection Taskforce decided to undertake an integrated action plan to demarcate the river bank. They decided to initiate an integrated project to protect the riverbanks coordination with nongovernmental organizations. The government has entrusted its two organizations BWDB and BIWTA to restore normal flow of the river and maintaining the required navigation draft respectively. BIWTA has identified 648 illegal structures along the Buriganga of which it has already demolished 576 since March, 2004. BWDB has constructed flood control embankment and revetment works alongside the riverbank. It has also conducted a study for augmenting the flow of the Buriganga with a view to maintain water quality, and navigation draft. The government has also undertaken steps to relocate the tannery industry outside the city with all precautionary measures to abate further pollution. Other activities are also being taken up by the government to mitigate further degradation of environment and ecosystem of Dhaka city and its water courses around it.

Photo 4 :

Photo 5 :

Photo 6 :

Ongoing Protection work

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Members' contribution

Mekong River Commission celebrates 10 years of cooperation

On 5 April 2005 The Mekong River Commission celebrated the 10th Anniversary of the Signing of the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin.

This historic agreement was made between the four countries that share the Lower Mekong Basin: Cambodia, Lao PDR, Thailand and Viet Nam in Chiang Rai. Thailand on April 5 1995.

The countries agreed to co-ordinate and promote co-operation in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong Basin. At the same time they agreed to work together on formulating several procedures that would allow the water resources of the basin to be shared on an equitable basis.

These procedures cover such important areas as notification of proposed use of water in any of the member countries, prior consultation on developments, the basin development plan, protection of the environment and freedom of navigation.

But the story did not begin there. Cooperation regarding the Mekong begins in the middle of the 20th century with the formal signing of the Geneva Accords, when the newly independent nations of Cambodia, Laos and Viet Nam took their places on the world stage.

Studies of the Mekong by the United Nations' Economic Commission for Asia and the Far East (ECAFE) and the US Bureau for Reclamation sparked interest in the Lower Mekong countries and at the newly established ECAFE for a grand scheme to develop what was thought of as one of the world's great "untamed rivers".

No international river body had ever attempted to take on such encompassing responsibilities for financing, construction, management and maintenance of projects on an international river.

The "Mekong Project' was the largest single development project the fledgling United Nations organization had ever undertaken.

Photo 1 : The MRC symbol in balloons

When the new Mekong Committee began its work, there were no models to follow. In its early days, the Committee was guided and supported by ECAFE and the United Nations Development Agency.

Lack of stability in the region resulted in the interruption of Mekong Committee sessions in the late 1970s. In response to Cambodia's absence, in 1977 Lao PDR, Thailand and Viet Nam adopted a new statute forming the basis of the Interim Mekong Committee.

When Cambodia finally requested readmission in 1991, lengthy discussions began which led to the eventual transformation of the Mekong Committee through the 1995 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin.

The 1995 Agreement was a coming-of-age for the Mekong Committee, which now became the Mekong River Commission. Its Articles give full management responsibility of the Commission to a Council of Ministers of member countries.

Following the '95 Agreement the MRC shifted its focus from the development of large-scale projects to sustainable development and management of natural resources.

It consolidated all the knowledge gleaned from 30 years of surveys and studies into a "knowledge base".

The MRC member countries agreed to work together in all fields of sustainable development, utilization, management and conservation of the

The NARBO Newsletter
http://www.narbo.jp/
(Network of Asian River Basin Organizations)

water and related resources of the Mekong River Basin, such as navigation, flood control, fisheries, agriculture, hydropower and environmental protection.

Over the past 10 years the organization has achieved significant progress toward its stated goals through a variety of agreements on water use, quality and quantity. Member countries have concurred on the need for data and information sharing and exchange, a flood management and mitigation strategy, a hydropower strategy and have made a formal agreement with China on the exchange of hydrological and other data.

In the future the MRC is keen to encourage investment in water resources in the basin in all areas in order to reduce poverty and improve the livelihoods of the basin's residents. The people of the basin are predominately rural and are some of the poorest in the world.

The MRC's new Regional Cooperation Program for Integrated Water Resources Management and Development of the Mekong River Basin is intended to help member countries make the best use of their water resources. Through this strategy, the MRC plans to act as a promoter and facilitator of the development and investment process in the water sector, encouraging and coordinating sustainable use and management of water and related resources for navigation, food production, energy production and domestic use.

It will support the countries at the level of strategic planning and program implementation. It is now working to identify, plan and prioritize a broader range of development projects in cooperation with the donor community and at the same time finding the right mechanism to deliver the right strategy and priorities for funding.

The MRC works closely with many organizations either directly as partners or indirectly through information exchange, including UN agencies such as UNDP and UNESCAP, the World Wildlife Fund, the World Conservation Union (IUCN) and many government aid agencies.

The World Bank is a partner in programs such as the Basin Development Plan and the Water Utilization Program and the ADB is funding a component of the new Flood Management and Mitigation Program. The MRC is keen to play a role within the ADB financed Greater Mekong Sub-Region initiative. We have many other organizations with whom

Today the member countries gain from the close cooperation with their neighbors in many ways. There is a regular exchange of information about new developments, support with technical expertise and knowledge to be gained in such areas as environmental testing of water quality, fishery management and sound hydropower development. There are many trans-boundary issues such as the provision of safe navigation, protection of the watersheds and flood management and

mitigation, which MRC programs are working to institute in all the countries. It would not be possible to deal with some of these big issues alone.

The MRC is currently seeking funding for a tourism program.The Mekong River is almost totally undeveloped as a tourist attraction, in nearly all the countries of the basin. There is huge untapped potential for making this river an exciting and economically advantageous addition to the tourism industry. However, in order not to damage the river, tourism needs to be developed in an ecologically and culturally sensitive way so local communities can benefit directly and tourists (both foreign and domestic) can enjoy the natural beauty of the countryside.

The MRC is looking forward to another decade of challenges and successful cooperation. The Mekong River Basin is facing a time of huge growth, both in population and the economy, and it is vital to take a united approach to its development needs if the valuable natural water resources are to be protected for the benefit of future generations.

http://www.mrcmekong.or

Editor's postscript

On this issue, we could introduce only two events as general information. Not to mention the forthcoming events, to enrich the contents of NARBO newsletter, your contributions are very important. Please contact us if you have news, comments, opinions whatever. (Katsunori TAKAGI)

The NARBO Newsletter
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http://www.narbo.jp/

The 1st Twinning Program - Report from Japanese exchange staff -

1. The 1st Twinning Program was launched !

— Staff exchange between JWA and Jasa Tirta I, II —

Yasuhiro Ochii *

Between Indonesian NARBO and Japan Water Agency (JWA), MOU and agreement were concluded as a first case of Twinning Program on 29th November 2004. Then, exchange of personnel on Twinning Program among JWA, Jasa Tirta I (PJT I) and Jasa Tirta II (PJT II) was also agreed and signed.

The Program aims at sharing information to solve problems as well as to contribute toward an improvement of Asian IWRM. Developing good relationship between JWA and Indonesian NARBO is also important target, too.

Mr. Sugiura and Mr. Ochii from JWA were dispatched to Indonesia from 10th April 2004 to 9th July 2004. We had worked at Head Quarter of PJT I in Malan, East Java State mainly, but we also had worked at Head Quarter of PJT II in Jatilhur, East Java for about two weeks. Further, we visited two River Basin Organizations that belonged to Indonesian NARBO, and other related offices, too.

We had visited many O&M offices of water resources infrastructures in the Brantas River Basin and Bengawan Solo River Basin guided by PJT I and Citarum River Basin guided by PJT II.

Hearing from staff of maintenance office

It seemed that PJT I and PJT II had been doing their Operation and Maintenance works for their facilities well in spite of their severe budget condition and facing some difficult problems. For example, We were impressed with seeing an old weir of more than 80 years old was still working very well because of proper maintenance by PJT II. PJT I and PJT II prepared maintenance rules and standard on how and when they should check the facilities, and they fully observed the rules. Documentation was well managed based on the ISO9001 system. Staff seemed to have good skill to maintain and repair their facilities and they know facilities condition well.

Hydraulic pump
(Water is pumped up by hydraulic power.)

We thought that PJT I and PJT II would be able to take an active role

*) Toyogawa Canal Management & Construction Dpt, JWA

Water grasses are really problem!

Steam engine which move gate up and down for more than 80 years

Final presentation to report our activities

Topics of this issue

in the NARBO through dissemination of their O&M skill to other organizations in Indonesia and other NARBO members.

At the end of Twinning Program, we reported our activities to both PJT I and PJT II and also gave presentations on “Risk and Crisis Management” and “Irrigation Project And Farmers’ Cost Bearing” based on the Japanese experience.

Hoping to continue this Program, we returned to Japan with fruitful experience and good friendship with Indonesian NARBO. We think that we launched the first Twinning Program very well.

Finally, We would like to express our sincere thanks to PJT I, PJT II, Indonesian NARBO Secretary and all organizations.

The 1st Twinning Program - Report from Indonesian exchange staff -

1. ”Jaga Tirta” is farmer leadership style

Saur Saragih *

In reaching a purpose, usually a group will agree to make some ordinances. Even if the simple ordinance, but it contains the procedure, mechanism and guidance in which they must do, so that their purpose can be executed better. Even in determining a figure as their leader, they will use a way to assign their leader by voting. That way the things of farmer groups in Indonesia had a good custom in determining their leader. This custom has the long history and is kept by farmers to date. This farmer group has expanded continually as a strong social institution. Farmer society in Indonesia has developed their institution since ninth century. There are a number of traditional irrigation institutions which have been expanded.

Role of water

A leader can manage water resource to various importances as according to its role. For example, long time ago in Bali area that ordinary water was managed traditionally based on concept of water management through power orientation according to each its benefit. King as highest power made the treatment ordinance of water so that the water have strong role. Power of the past Kings supported by Seven of Water (Sapta Tirta) so that role of water as follows : Irrigation water, Holy water Healthy water, Drinking water, Enjoyment water, Art Water Recreation Water,

Jaga Tirta

Of course water as according to its role will be managed by a man which assigned to the better function. However this article will explain “Jaga Tirta” as a leadership type in Indonesia farmer group. Understanding of the role of water is relatively same in other area in Indonesia, but more stress to first understanding, irrigation water. " Jaga Tirta" has conditions as follows : he has to own the farmlands, be experienced man, be trusted to arrange all farmers in concerning irrigation management (for i.e repairing the canal), be wise to distribute water and to handle the conflict among farmers, and he is very influential because other farmers follow his words and actions.

Farmers usually arrange the way and assign person in charge of water at each gate for their rice field. The election of “Jaga Tirta” is held with all farmers gathering in Village hall. At the election, there are one or two important person in that area, such as the chief of the village and the security guard. Of course the election of " Jaga Tirta" is usually held in friendly atmosphere and “Jaga Tirta” is chosen by voting among candidates. Leadership in traditional irrigation has the important relationship to other institutions in the village. In general traditional irrigation with small scale covering one village only, relationship of conformity each other, so that very easy to mobilize mutual assistance (is called gotong royong). A lot of same term as “Jaga Tirta” in other areas in Indonesia, such as in West Java it called "Ulu-ulu", in North Sumatra "Raja Bondar", in Aceh "Keujuren Blang", in West Sumatra " Tuo Banda", etc .

*) Jasa Tirta II, Indonesia

2. Impressive experience during stay in Japan

— Spirit, dedication and responsibilities —

Titik Indahyani *

During my twinning program in Japan Water Agency, there are various impressive experiences I gained, especially about Japanese and its technology. The Japanese culture is worth appraising, mainly on their work dedication and time management.

I myself witnessed those two outstanding things on my way to work and in my working place. I found difficulties to adjust with Japanese footstep. It seems they accustomed to walk fast. Based on my observation, there aren't Japanese who walk briskly and jokingly. The same thing happened in JWA's office. Most of the workers work seriously and meticulously. It is little different with the working atmosphere in my office in Indonesia. Most of the workers in my office work seriously and meticulously also but sometimes there are joking and snacks between their working hours. Eventhough the working hours ends at 17.30, but many JWA's workers gladly work until late at night because they are completely responsible with their work. The dedication and appraisal toward the work are another thing we must learn from Japanese. There is no single work which is done relaxly as most of the works are done seriously.

Another interesting experience happened when the strong earthquake came. I also almost happened to experience the typhoon. Yet it was just its impact-rain and strong wind-but it made the visit to Gunma Prefecture was canceled. Because of the typhoon, when I joined JWA operation work session (special work in emergency), I also can witness the hard work of operation room staff who were all in alert condition. I suddenly remembered when I had my alert turn to keep my eyes on the flood flow. I had to work until late at night at the office when the flood happened in Kali Brantas. One of the differences in the operation room between JWA and PJT are the screen for visual monitoring. In JWA there are several monitoring screen in which we can directly and continously observe the condition (eventhough it is available only in certain reservoir/dam/canal) but it helped us to monitor it visually. All the observation datas had been integrated and connected with the outsider datas (ex. meteorology data). I think we can analize and evaluate the data more accurately. As a result the decision to overcome the disaster problem can be taken accurately.

Another simple example of time management can be seen when we travel by train. Most Japanese have their own different way to use their time-reading and sleeping. I rarely saw the train passengers use their time talking or joking in the train. The comfortable train condition makes it stands as the main transportation option in Japan, including me, besides walking ofcourse. I hope I can gain various breath-taking experiences and useful knowledge based on the purpose of this program.

*) Jasa Tirta I, Indonesia

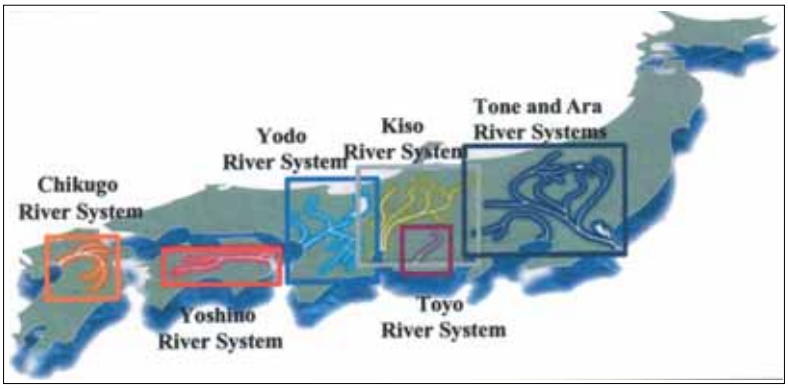
3. Learn about Integrated Water Resources Management on Japan

— How to create innovation from getting the problem —

Alfan Rianto *

According to the Memorandum of Understanding on Twinning Program between Japan Water Agency and Indonesian Network of Asian River Basin, scope of the twinning program focuses on fields related to promoting Integrated Water Resources. And based on the discussions at a series of regional and global water conferences, including the World Water Forums in 1997, 2000, and 2003, they have underlined the need to adopt and operationally 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.*" Why the water is one of the most important aspect for human life in the world, because Water is a prime natural resources, a basic human need and precious national asset. Growing population urbanization and economic development are exerting pressure on the available fresh water resources.

Basically from above matter we get surprise from my company to joint with twinning program on the Sakura Country under organizing of Japan Water Agency (JWA) as an Independent Administrative corporation with the goal of contributing the growth of national economy and improvement in the life of citizens through implementation water resources development and use project based on the water resources Development Basic plan formulated for each of the water



Locations of Water Resource Development River Systems

resources development river system (seven river system) designated for the purpose of supplying water to areas for which wide area water measures are required to be taken urgently. Japan one of the country in the world which implemented of integrated water management with long-term experience, content of water resources development basic plan such as 1) Water demand forecast and supply target according to purpose use, 2) Basic items relating to construction of facilities required in order to achieve the supply target and 3) Other important item related to the comprehensive development of water resources and rationalization of water utilization. The 1997 amendment to the River Law 1997 based from the process started from 1896 with purpose of flood control and on 1964 establishment of systematic framework for flood control and water use and in this time Japan introduced of integrated river management system, on 1997 established of comprehensive river administration system for flood control, water use and environmental conservation.

We would like to thank the all of JWA staff according to the lecturing, information and transfer knowledge to us for all matters such us management system, financial and budgeting system, technical matter and scheduling to site visit and etc. Particularly on the technical matters many kind of information and new knowledge given to us, this is very important to us because we get experience about how to create innovation after to get the problem. For example problem about sedimentation and eutropication, we get comparing technical issues between Indonesian problem and Japanese problem and how to solve with the counter measures. Once more …, how Japanese create the problem to reduce inundated area due to flood occurred, what is being done and what can be done, some of a good idea to create of solving the problem flooding by remarkable countermeasures and various facilities and system have been established to provide protection from damage. Watarase Retarding Basin is one of the countermeasures with the main function to keep amount of water flood approximately 200 million m3, but in the next session inundated water can use of some purpose like water supply for domestic water, industrial user, irrigation and etc, the operational system of Watarase retarding basin is very smart. And also the creation of reducing inundated area surrounding the metropolitan district by construction of underground subway (extension : 6.3km; depth : 50 m; inside diameter : 10,6 m) and draining it finally into the Edogawa River, and effect of flood control is reduced flooded area from 264 km^2 to 90 km^2, in this project high level construction was achieved. This structure is remarkable structure and very expensive but very important to solve problem of flood on the future because in the next major cities, it is becoming more difficult to construct new surface floodways. Underground floodways and underground regulating reservoirs are underground rivers and ponds designed to protect the overlying cities from floods.

In conclusion, We would like to underline that The Japan Water Agency have a good vision and why all Japanese component support it. We believe that JWA can contribute to a better future for Water Management in Asia region. Networking among the members of NARBO can help a NEW GENERATION of Water management make Integrated Water Resources Management a reality in river basin. Water management start with changing people mind effect.The main purpose Development for poverty reduction and sustainable economic development. This is not daydream and not nightmare but is really dream and dream come true if the people mind in the world changing to support of basic vision on Integrated Water Resources Management. The Future depend on what we can do on the current condition and we must prepare with the vision and a good planning.

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*) Jasa Tirta I, Indonesia


Watarase Retarding Basin


Underground Flood Way Construction, Metropolitan District

Information from members

1. Introduction of Jeneberang River Basin Development

— Bili-Bili Dam, South Sulawesi,Indonesia —

Bambang Hargono *

Jeneberang River Basin Development

Jeneberang River Basin is under tropical monsoon climate. The weather is warm, humid, with constant temperature throughout the year, but significant variation of rainfall intensity occurs between rainy and dry season. The basin may receive 80 to 90% of annual rainfall in rainy season. Rainfall at the mountains may reach 4000 mm, while in the lower plains it is around or less than 2500 mm. The average annual rainfall intensity is around 2800 mm. The whole extent of the Jeneberang River basin is 762 km^2, while the channel length of the mainstream is 85,5 km. Bawakaraeng Peak, 2830 m above mean sea level is the headwater. The River runs westward through Gowa District before eventually pours to the estuary, in the Strait of Makassar at the perimeter of the City of Makassar. Makassar is the capital of the Province; a big city with around 1.2 million populations.

Bili-Bili Dam

The Jeneberang River has been fully developed. A large dam, Bili-Bili Dam, has been built about 30 km from Makassar City. The reservoir catchment area for the dam itself is 385 km^2. This dam, 73 m high and around 1800 m crest length, is a rockfill dam with earth central core. The impounding commenced in 1997 creaf around 37 million m^3. The intake for irrigation, power generation, and water supply is set at a level created a dead storage of 29 million m^3.

Bili-Bili Dam, the blue color of the water now turns brown due to sedimentfrom Bawakaraeng Caldera wall collapse 45 km upstream.

Flood Protection

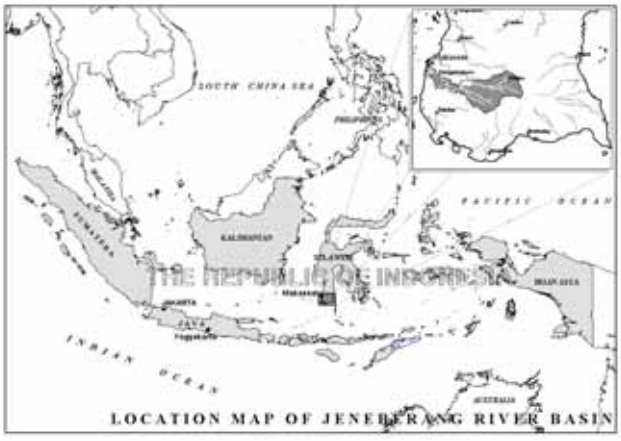
The idea for developing Jeneberang rose after the big flood of 1976 inundated 2/3 of Makassar City around 37 km^2. The development started with construction of dyke along Jeneberang River. The dyke is 11 km long, protects Makassar City for flood of 25 years return period. The development continued with a plan for Bili-Bili Dam development. Construction of the dam started in 1992 and completely finished in 1998. The dam then increased the flood protection intensity to a return period of 50 years, protecting around 58.5 km^2 area of the Makassar City.

Water Supply Facilities

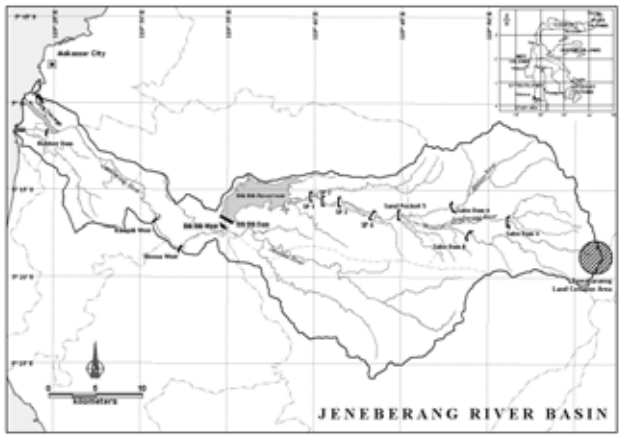
A large supply concrete conduit 1.5 m diameter runs down 16 km from Bili-Bili Dam to Sombaopu Water Treatment Plant (WTP). The conduit, usually termed as Raw Water Transmission Main (RWTM), supplied raw water for domestic water supply and industry to Makassar City. Although the reservoir is able to supply raw water as much as 3.3 m^3/second, the current capacity of the Sombaopu WTP is only 1.1 m^3/second. This WTP serves around 1/3 of Makassar population, while there are still some WTPs for the rest ofhe city. The development for enlarging the capacity of the WTP is planned pursuant to the developmetof the city; which is increase of population and industry.

There are still five other raw water supply intake facilities along Jeneberang River downstream of Bili-Bili Dam; at Sungguminasa, Ratulangi, Pandang-Pandang, Malengkeri, and Maccini Sombala. The last one, Maccini Sombala intake is at the long storage, where the Jeneberang River split into two, around 4 km before reaching the estuary.

Due to important utilization of Jeneberang water for domestic water supply, a rubber dam is built at a site just after Jeneberang River split into two mentioned above. This rubber dam protects the water at the river from being brackish, beside to maintain the water level along the



Location Map, Jeneberang River Basin, South Sulawesi, Indonesia.



Jeneberang River Basin, Bawakaraeng Caldera at utmost left, and water resources infrastructures along the River

river to keep the head in the water supply intakes.

The operation of the rubber dam is also for water diversion to the long storage where the intake gate is located 300 m upstream of the rubber dam. At the end of the long storage a tidal gate is installed, to maintain the fresh water at the long storage. The distance from the intake to the tidal gate is around 4.7 km. The capacity of the long storage is 3.8 million m^3. As mentioned before, water is extracted from the long storage into the Maccini Sombala WTP. Currently, the Maccini Sombala WTP supplies around 200 l/sec for possible improvement in the future to 700 l/sec. The long storage also provides regular city flushing to maintain sanitary in the Makassar City.

Irrigation development

Irrigation development has its long history in South Sulawesi. In Jeneberang River itself, there had been many irrigation intakes since the old days. The recent development intended to increase a cropping intensity from 160% to 240% with the provision of water from the Bili-Bili Reservoir. Change of water level after the dam development and excessive sand mining resulted in deterioration of the free intakes; besides water could not reach the operation level.

Three (3) weirs replacing the free intakes have been developed for 23,690 ha irrigation area at Kabupaten Gowa, and Takalar. The weirs are Bili-Bili (2,360 ha), Bissua (10,785 ha), and Kampili (10,545 ha). The irrigation system as well as the headworks have just completed in 2004.

Power Generation

The potential head of Bili-Bili reservoir will also be utilized for generating power. Two vertical shaft Kaplan Turbines are being erected; 14.1 MW and 6 MW, total 20.1 MW installed capacity. The operation of the power plant is scheduled to commence in 2006.

Bawakaraeng Collapse

A huge mass movement had occurred in 26 March 2004, in the afternoon at around 1.30 PM. The caldera wall of Bawakaraeng, as high as 1500 m collapse. All of a sudden, 200 to 300 million m^3 of sediment material covered the Jeneberang River Valley from the headwater to around 8 km downstream. The sediment material piled to 150 m thick from the bottom of the V-shape river valley. On the surface this material spread to 400 m (Figure 1).

Figure 1. Bawakaraeng Caldera two days after the collapse.

The river ran dry for some time after the collapse.

The collapse occurred several times, but there were two main collapses, as sensed by a seismometer installed in a station located around 60 km from the collapse site. The first collapsed material filled the river valley. Based on the remnant found on the wall of the caldera, it seemed the second one run on the surface of the first. This second collapse destroyed Lengkese village that is located on a hill at 150 m above the bottom of the Jeneberang River valley; 32 persons were reported missing, 10 among those were found dead. This collapse also destroyed 1 (one) elementary school and 10 houses, buried 1500 paddy field and coffee plantations, beside 635 cows were reported missing. People at the valley felt a very strong wind following the terrible sound of explosion from the caldera. The wind, filled up with dust drove people working in the paddy field and plantation away. This gave short but significant opportunity for the people to escape, before the debris came and buried the valley.

Local inhabitant reported that debris flow in Jeneberang River had ever occurred in 1958. Cracks in the Bawakaraeng had been reported in 1993. However, it is difficult to assess whether the crack will be followed by collapse of such magnitude. Bawakaraeng collapse started with cracks at the top of the caldera that get wider and wider from time to time. Rain water seeped through these cracks and made the rock saturated. Eventually the rock mass lost its stability and resulted a huge collapse. This is pure geological movement that has nothing to do with absence of vegetation on the caldera. (Dr. Sarono, Directorat Vulcanology and Geological Disaster Mitigation, personal interview). There are still some cracks found in Mount Bawakaraeng nowadays. We still have to work hard to anticipate such large scale slope failures.

Land conservation

Jeneberang River Basin is classified as one of 59 critical watersheds in Indonesia. This is reported in 1999, and quoted in the opening ceremony of National Movement for Rehabilitation of Forest and Land in Malino, 2003. The result of soil erosion assessment as reported for the design of Bili-Bili Dam is that the annual erosion rate in the Bili-Bili Watershed is 600,000 m^3. Many studies had been conducted to control sediment in the watershed, for the purpose of keeping sustainability of Bili-Bili Reservoir for 50 years the Government decided to build five sand pockets and three sabo dams, all the sand pockets and one out of the three sabo dams are in the mainstream of Jeneberang River. The rest are in its tributaries. However, after Bawakaraeng collapse, these sediment control structures along the mainstream have been buried by the collapsed material. Due to this disaster, the dead storage of the Bili-Bili reservoir may be full in 5 years.

*) Manager of Jeneberang River Basin Development Project, Indonesia

2. Introduction of the Red River Basin Organization in Vietnam

Nguyen Thuy Hang *

Red River system is the second biggest river of Vietnam. Red River is an international river which originates in China and runs through Lao and Vietnam before merges the East sea. Total area of the entire basin is 169,020 km^2 including 81,240 km^2 (or 48%) in China's territory, 1,100km^2 (0.65%) in Laos' territory and 86,660km^2 (51.35%) in Vietnam's territory.

Administratively, the Red River basin covers 26 provinces with a population of 28 million people (in 2002). The basin is consisted of 5 sub-basins as showed in the following picture.

The Red River Basin Organization is a non-productive body under Ministry of Agriculture and Rural Development of Viet Nam. The RRBO was established on April 9, 2001 according to a Decision by Minister of Agriculture and Rural Development of Vietnam. Dr. Pham Hong Giang, Vice Minister of Agriculture and Rural Development is Chairman of the RRBO.

The RRBO has its office (Secretariat) based at Institute of Water Resources Planning (IWARP).

Address: Red River Basin Organization
162A Tran Quang Khai street,
Hoan Kiem district – Hanoi
Tel: (84-4) 8267020
Fax: (84-4) 8267020
E-mail: iwrp.hanoi@hn.vnn.vn
Website: www.rrbo.org.vn

Dr. To Trung Nghia, Director of IWARP is also Chief of the Secretariat of the RRBO.

The RRBO has tasks to:

- Prepare, submit for approval the Red – Thai Binh River Basin Plan and monitor implementation in ensuring consistent management of the river basin plan with the administrative boundary;
- Coordinate with relevant Ministerial, sectoral and local agencies in baseline water resources investigation, inventory and assessment for the Red – Thai Binh and in preparing, submitting for approval and monitor implementation of river basins' plans for tributaries of the Red – Thai Binh system;
- Propose resolution for water resources disputes in the Red – Thai Binh River Basin.

The Directory Board of the RRBO comprises of 4 persons with following details.

Dr. Pham Hong Giang
Vice Minister of Agriculture and Rural Development
Chairman

Dr. Pham Xuan Su
Director of Water Resources Department Ministry of Agriculture and Rural Development (MARD)
Vice chairman

Dr. Nguyen Thai Lai
Director of Water Resources Department (Ministry of Natural Resources and Environment -MONRE)
Vice chairman

Dr. To Trung Nghia
Director of Institute of Water Resources Planning (IWARP) Ministry of Agriculture and Rural Development (MARD)
Chief of the Secretariat

There are in total 46 members of the RRBO excluding those of the Directory Board. Members are directors of relevant Departments under MARD, directors of provincial Departments of Agriculture and Rural Development (DARDs) 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.

Funds for operation of RRBO are provided from the State budget upon approval by Ministry of Agriculture and Rural Development (MARD).

*) Institute of Water Resources Planning, Vietnam

From secretariat

1. The revision of NARBO Charter

NARBO Charter was revised a little bit to clear some of its stipulations. The outline of the revision is as follows:

1. Provision of selection of the Chairperson and venue for the General Meeting (changed)
   (a) In principle, the General Meeting is held in the Chairperson's country.
   (b) The date of the General Meeting is proposed jointly by the Chairperson and the Secretary General

2. Provision of the procedure for the change of officers in the middle of their tenure (added)
   (a) When the Chairperson becomes unable to perform his/her function, Vice-Chairperson substitutes for the Chairperson until the next General Meeting.
   (b) When the Vice-Chairperson becomes unable to perform his/her function, Acting Vice-Chairperson serves as the Vice-Chairperson until the next General meeting.
   (c) When the Secretary General or any of the Vice-Secretary Generals become unable to perform his/her function, Acting Secretary General or Acting Vice-Secretary General serves as the Secretary General or Vice-Secretary General.

The processes regarding selection of Acting Vice-Chairperson, Acting Secretary General and Acting Vice-Secretary General need
   (1) Nomination by the Secretariat
   (2) Appointment by the Chairperson

If you want to know the detail, please see our web-site.

2. The announcement of the 2nd General Meeting

The three-day-long 2nd General Meeting will be held at Bandung, Indonesia next February. The last day will be the site visit.

3. Three Indonesian exchange staff in JWA HQ

Under the twinning program, signed between Indonesian NARBO and JWA, three Indonesian exchange staff, Ms. Titik Indahyani and Mr. Alfan Rianto from Jasa Tirta I and Mr. Saur Saragih from Jasa Tirta II, have been assimilating information that JWA and Japanese society have experienced and accumilated.

[Photo] At Naramata Dam, JWA (Ms. Titik, Mr Alfan, Mr. Yoshioka and Mr. Saur:from left)

According to the two-month-long program, they came to Japan July 12 and go back to Indonesia September 10. They're staying at the weekly condominium near JWA HQ and walk to work every day. They seem to work very hard to fulfill their own purpose. The first month was constituted of lectures, but they have had some opportunities to go out for visiting JWA facilities and other organizations.

They seem to enjoy their stay in Japan as the communication between JWA staff and three exchange staff has been getting well and getting used to the ways in Japan.

We hope that they will continue to work hard, have good time with JWA staff without any problems and this program will end very successfully.

Network of Asian River Basin Organizations
Secretariat: International Affairs Division Japan Water Agency (JWA)
Land Axis Tower, 11-2 Shintoshin, Chuo-ku, Saitama City, 330-6008, Japan TEL：+81-48-600-6553 / FAX：+81-48-600-6550 E-mail：narbo@water.jp

Appendix 6

Session program

(The 2nd Southeast Asia Water Forum)

Second Southeast Asia Water Forum

Theme	:	Managing Water Resources in River Basins
Session	:	**Developing Capacity in River Basin Organizations (RBO)**
Date	:	Day 3, August 31st, 2005
Convening Organization	:	Network of Asian River Basin Organizations (NARBO), Japan Bank for International Cooperation (JBIC), Indonesian NARBO Secretariat (Session Coordinator), World Bank (WB)
Chairperson	:	Mr. Sukrasno Sastro Hardjono (Executive Director of Indonesian NARBO Secretariat)
Facilitator/Rapporteur	:	Mr Bambang Hargono

08.00 – 08.30	Registration
Preliminary Opening	Plenary
08.30 – 09.00	Keynote Speech (Chairperson: Dr. Basuki Hadi Moeljono)
09.00 – 09.20	Question and Answer
09.20 – 09.30	Move to concurrent session room
[09.30 - 12.30] Developing Capacity in RBOs session	
09.30 – 09.35	Moderator : Sri Hernowo Mashudi
Presentations: Sharing of information and experiences on RBOs - its status and activies	
09.35 – 09.50	1st presentation: (RBO) Mr. Socheh, (Jasa Tirta I - Indonesia) and Mr. Djendam Gurusinga (Jasa Tirta II – Indonesia)
09.50 – 10.10	2nd presentation : (RBO) Mr. Vu Hong Chau (Red River – Vietnam)
10.10 – 10.30	3rd presentation: (Government organization) Ms. Sukotha Aekaraj (DWR - Thailand)
10.30 – 10.50	4th presentation: (Donor) Mr. B. Haisman (World Bank)
10.50 – 11.10	Question and Answer (Q & A)

Panel Discussion: What are the essential points for capacity development of RBOs?	
11.10 – 11.15	Moderator : (to be determined) Panelists are invited to the stage and introduced the name, organization and country. The program of panel discussion is introduced.
Short speech (5 panelist)	
11.15 – 11.20	Dr. Kaneko Atsushi, JBIC Lesson learn on the public participation project in Sri Lanka
11.20 – 11.25	Ms. Dolora Nepomuceno (to be determined)
11.25 – 11.30	Mr. Sura Adnyana, Local Government (Subak Bali) Traditional water management in Bali
11.30 – 11.35	Dr. Oomachi Toshikatsu, APHW Relationship between APHW and NARBO
11.35 – 11.40	Dr. M.U.A. Tenakoon, NARBO, Vice Chairman, Mahaweli Authority of Sri Lanka Lessons learn: the experience of Mahaweli Authority, and its expansion to Mahaweli special district.
11.40 – 12.00	Discussion by panelist Theme: What are the essential points for Capacity development of RBOs? The Rappouter mentions the paper on the “Needs”. (No need to read all, just read about the brief of result of questionnaire) Comments from panelists
12.00 – 12.15	Opinions from participants
12.15 –12.25	Introduction of outcome
12.25 – 12.30	Conclusion and Closing remarks : Facilitator/Reporteur Mr. Bambang Hargono

Appendix 7

Session outcome

(The 2nd Southeast Asia Water Forum)

Outcome of the Session
"Developing Capacity of River Basin Organizations" for the better water management in Asia

In 2nd Southeast Asia Water Forum, 31st August 2005, Bali, Indonesia

Network of Asian River Basin Organizations (NARBO) aims to facilitate the better water management based on the understanding of characteristics of Asian monsoon region. For this purpose, a session on "Developing Capacity of River Basin Organizations" was held in Bali, Indonesia on August 31st 2005 by Indonesian NARBO.

Through this session, we confirm that following viewpoint, function and capacity are needed for River Basin Organizations (RBOs);

1. Water resources management should be undertaken at a basin level with understandings of the geography, meteorology, history of water use, regional cultures and customs and various value judgments of the basin. Accordingly, its approach should differ from basin to basin. This means that there is no sole guideline that everyone has to follow. RBOs have to develop the original and pragmatic approach through their effort to establish the original water resources management that best fits to the basin.
2. River Basin Organizations (RBOs), who should play the important role as advocators in the basin, are the practitioners of water resources management that are well versed in the situation in the basin. RBOs have to continue effort to get the confidence from residents in the basin with much close relationship between governments, stakeholders and residents.
3. Therefore, RBOs are requested to make their effort for development of capacity and to be the professional on water resources management with high level of capability in technical, social and spiritual.
4. In order to achieve above matters, various experiences, profound knowledge, information and training for capacity development, are absolutely necessary to be strengthened among Asia. Accordingly, it is desirable to expedite information exchange, sharing knowledge and experiences, conducting training for RBOs.
5. It should be enhanced that the network activities at the ownership point of view the quite effective vehicle to attain capacity development. In this sense, the network consists of RBOs in monsoon Asia is quite significant because it is true that monsoon Asia region has a lot in common in water usage, water resources management and water issues. For this reason, NARBO which is the networking for Asian River Basin Organizations is established and shall be reinforced.
6. It is, however, rather difficult to do capacity development of RBOs without supports from the governments for its institution, system and financial aspect. Of course, supports from various kinds of bodies like from academic fields and development cooperation agencies collaboration / cooperation among countries are equally important.

We, RBOs gathered here at "Session on Developing Capacity in River Basin Organization", and confirm to try to do our best for capacity development for people and country. Also we insist that the strong/possible assistance from the government and related organizations are essential.

Appendix 8

Program of the 2nd training course

NARBO 2nd Training Workshop - River Basin Management and Organizations -- April 2005

Date	Sessions 08:30-10:00	10:00-10:30	10:30-12:00	12:00-13:30	13:30-15:00	15:00-15:30	15:30-17:00	17:00-18:30	18:30-20:00
Saturday 23rd	**Participants arrival**								
Sunday 24th	**Participants arrival**						Introductions of participants, outline of objectives and programme, administrative matters:		Official Opening and Welcome Reception: Presentations by MASL, NARBO Secretariat, GWP SASNET, JWA, ADB, IWMI
Resource Persons							Charles Abernethy, Prachanda Pradhan		Dr Tennakoon; Mr. Nanda Abeyawickrema; Mr. Wouter Lincklaen Arriens; Mr Katsunori Takagi; Mr. Gerard O'Donoghue
	Module 1 : General overview of reasons for RBM								
Monday 25th	**Module 1 :** General overview of the River Basin Management and Organizations	**Tea/Coffeee**	**Group Work 1 :** Identification of objectives, emerging issues, and constraints in the six participating countries.	**Lunch**	Group Work 1 Reports and facilitated discussions.	**Tea/Coffeee**	River basin management and organizations in Japan and Indonesia Two presentations		Historical perspectives on water resources management in Sri Lanka,
Resource Persons	Presenter - CL Abernethy		Core Training Team as observers		Core Training Team		Mr Shinobu Ishimura (JWA) & Mr. Imam Anshori (Directorat of Water Resources, Indonesia)		Dr Tennakoon, DG MASL & Acting Vice Chair NARBO
	Module 2 : New insights from recent studies								
Tuesday 26th	**Module 2:** New insights obtained in a 5-country study of Effective River Basin Organizations;	**Tea/Coffeee**	**Group Work 2**: This task will be determined by the Core Training Team after review of Work group 1 outputs and the participants backgrounds.	**Lunch**	**Group Work 2 :** reports and discussions	**Tea/Coffeee**	Short presentation on how to gather **institutional information in the field**; Descriptions of field study basin (Maha Oya), maps, and its institutional set-up ; Division into sub-groups, preparation by each sub-group for their information-gathering strategy.		River basin Management in Sri Lanka and Japan-
Resource Persons	Presenter: Madar Samad		Core Training Team as observers		Core Training Team.		Ranjith Ratnayake (Lanka Jalani) & K Jinapla (IWMI)		Organized by JWA and MASL/ Lanka Jalani

NARBO 2nd Training Workshop - River Basin Management and Organizations -- April 2005

Date	Sessions 08:30-10:00	10:00-10:30	10:30-12:00	12:00-13:30	13:30-15:00	15:00-15:30	15:30-17:00	17:00-18:30	18:30-20:00
	Module 3 : Problems and constraints, at local and national levels								
Wednesday 27th **Resource Persons**	Field Visit - 3 Itineraries with specified objectives and contact points; Informants will be identified who can explain about this basin, from different perspectives: local government, private business sector, environmental, urban water supply, as well as agricultural water. Guides and resource persons from Field Visit Organization Team, Core training team and local institutions and communities								Informal reviews and discussions of field trip and findings
	Module 3 continued: Problems and constraints, at local and national levels								
Thursday 28th **Resource Persons**	Presentation of observations from the field visit. Participants with comments by CTT and field trip guides etc. Ranjith Ratnayake (Lanka Jalani) & K Jinapala, P G Somaratne, B R Ariyartne (IWMI)	**Tea/Coffeee**	**Module 3 :** Local / national experiences identifying **problems and constraints**, existing and anticipated - 2 presentations about local-level management issues and 2 presentations about national-level issues; Resource persons TBD Local perspectives: Mr Chandra Ranatunga, Chair of the Friends of Maha Oya; Professor Malik Ranasinghe, Moratuwa University; National perspectives: Mr Shantha Fernando, Additional General Manager, National Water Supply and Drainage Board;Mr R. de S. Ariyabandu, until recently Director of Policy Planning, National Water Resouces Authority	**Lunch**	**Group Work 3 :** To evaluate yesterday's Field visit, in the light of the previous session on policies and constraints Core Training Team	**Tea/Coffeee**	**Group Work 3 :** Reports and discussions; **Module 4 :** Introduction of Group Work 4 task Core Training Team		Private study and review of Work Group 4 material, Completion of individual assignments
	Module 4 : Designing an appropriate institutional system								
Friday 29th **Resource Persons**	**Group Work 4:** To propose an appropriate institutional system for managing the water resources of a specific river basin Core Training Team as observers	**Tea/Coffeee**	**Group Work 4 Continues :** To propose an appropriate institutional system for managing the water resources of a specific river basin Core Training Team as observers	**Lunch**	**Group Work 4 :** Reports and discussions Core Training Team	**Tea/Coffeee**	NARBO Secretariat Presentation (15 mins) Review of modules and participants findings NARBO Secretariat & Core Training Team		Closing Ceremony, presentation of Certificates, Cultural Show and Training Workshop dinner IWMI Conference Coordinator
Saturday 30th	**Participants Departure**								

Appendix 9

Program of the 3rd training course

NARBO 3rd Training Workshop
Detailed Program

Date	Sessions 08:30-10:00	10:00-10:15	10:15-12:00	12:00-13:00	13:00-14:30	14:30-14:45	14:45-16:00	16:00-16:30	16:30-18:00
Sunday 13th	**Participants arrival**						Introductions of participants		
Resource Persons							Dr. Ick Hwan Ko		
Monday 14th	**Module 1:** Official Opening & Introduction of the IWRM in Korea from KOWACO's experiences	**Tea/Coffeee**	River basin management and organizations in Korea	**Lunch**	Report session: Each participant give the presentation on proposed theme in advance (e.g. Theme is needed to link with the theme of training)	**Tea/Coffeee**	Report session: Each participant give the presentation on proposed theme inadvance (Until around 18:00pm?)	**Tea/Coffeee**	**18:30 - 20:00** Welcome Reception: Presentations by KOWACO, ADB, ADBI, JWA
Resource Persons	Dr. Ick Hwan Ko (KOWACO), Mr. Wouter Lincklaen Arriens (ADB), Mr.Shindou(not fixed yet) (JWA)		**Dr. Ick Hwan Ko (KOWACO)**		Participants		Participants.		**TBD**
Tuesday 15th	**Group Work 1: Identification of problems in developing and applying integrated water resources management tools in each participating organization.**	**Tea/Coffeee**	**TBD**	**Lunch**	Introduction of IWRM Tools developed by KOWACO (Run-off, Water Quality, and Dam Operation)	**Tea/Coffeee**	Orientation on field trip on Wednesday including Descriptions of field study basin (Geum River), maps, and its institutional set-up ; Division into sub-groups, preparation by each sub-group for their information-gathering strategy.	**Tea/Coffeee**	Special Session on Progress of Twinning Programs (1) between JWA and Indonesian NARBO; (2) between KOWACO and Indonesian NARBO
Resource Persons	Participants.				KOWACO's Core Training Team.		Dr. Jeongkon Kim		Organized by KOWACO, JWA and Indonesian NARBO
Wednesday 16th	Field Visit - Geum River Basin including KOWACO main office, Daecheong Multipurpose Dam, Cheongju Water Treatment Plant								Informal reviews and discussions of field trip and findings
Resource Persons	Guides and resource persons from Field Visit Organization Team, Core training team and local institutions and communities								
Thursday 17th	Presentation of observations from the field visit. Participants with comments by CTT and field trip guides etc.	**Tea/Coffeee**	**Module 3:** Hands-on Training of the IWRM tools (Run-off)	**Lunch**	Hands-on Training of the IWRM tools (Reservoir Operation)	**Tea/Coffeee**	Hands-on Training of the IWRM tools (Water Quality)	**Tea/Coffeee**	**18:30 - 20:00** Closing Ceremony, presentation of Certificates, Cultural Show and Training Workshop dinner
Resource Persons	**TBD**		KOWACO's Core Training Team.		KOWACO's Core Training Team.		KOWACO's Core Training Team.		KOWACO Conference Coordinator
Friday 18th	To propose an appropriate Tools for managing the water resources of a specific river basin	**Tea/Coffeee**	NARBO Secretariat Presentation (15 min) Review of modules and participants findings	**Lunch**	**Participants Departure**		**Participants Departure**		
Resource Persons	Core Training Team as observers		NARBO Secretariat & Core Training Team						
Saturday 19th	**Participants Departure**								

Appendix 10

Program of the 1st thematic workshop

NARBO 1st Thematic Workshop on Water Allocation Water Right (5th-9th Dec, 2005)

Schedule	Tuesday 6th - Room 101 - B6 at MARD Office (No.2 Ngoc Ha street)				Schedule	Wednesday 7th			
	Session Title	Agenda/Activity	Presenter/Speaker	Facilitator/Reporter		Session Title	Agenda/Activity	Presenter/Speaker	Facilitator/Reporter
8:00-9:00	Opening Session	Opening Remarks	JWA	Dr. To Trung Nghia	7:30	Pick up at Sunny Hotel			
		Introduction of Thematic Workshop	Michitaro Nakai (ADBI)		7:30-9:30	Field Trip to Hoa Binh	Travel to Hoa Binh by car		
9:00-9:45		Introduction of RRBO & Explanation about venue of field visit	Dr. To Trung Nghia						
9:45-10:00		Break			9:30-9:45	Tea break	at Hoa Binh plant		
10:00-10:45		Presentation of ADB	Ian Fox (ADB)		9:45 - 10.30	Discussion		Mr. Nguyen Van Thanh, Director General of Hoa Binh Hydropower Plant	
10:45-12:10	Session 1: Issues on Water	Presentation (First Half)	Each Participant (Vietnam: Dr. Pham Xuan Su)	ADB - Tentative	10:30-12:00	Visit to the hydropower plant	visit and discussion		Mr. Mai Van Bieu, Director of the Hydraulic Workshop
12:10-13:00	Lunch at the workshop venue				12:00−13:00	Lunch at the canteen			
13:00-14:20		Presentation (Latter Half)	Each Participant	Mr. Pham Xuan Su Mr. Nguyen Van Sinh	13:15-14:45	Reservoir visit	visit and discussion		
14:20-14:40		Tea Break			15:00-15.15	Tea break	on boat		
14:40-16:00		Discussion	Each Participant						
16:00-16:40		Explanation of Field Visit	Secretariat		15:30	Return to Hanoi			

NARBO 1st Thematic Workshop on Water Allocation Water Right (5th-9th Dec, 2005)

Schedule	Thursday 8th			
	Session Title	Agenda/Activity	Presenter/Speaker	Facilitator/Reporter
8:00	Pick up at Sunny Hotel			
8:00-9:30	Field trip to Thac Huong dam	Travel to Thac Huong dam		
9:30-10:30	visit to the dam	Thac Huong, Da Gan dam, 10 gate -sluice, Van Gia spillway (visit and discussion)		Mr. Vu Van Bao, Director of Thac Huong Irrigation Management Company (IMC)
10:30-11:30	back to the Company			
11:30-	Lunch	near the company		
13:30-15:00	Discussion		Vu Van Bao, Director of Thac Huong IMC	
15:00-15:15	Tea break			
15:30	Return to Hanoi			

	Friday 9th - Room 101 - B6 at MARD Office (No.2 Ngoc Ha street)			
	Session Title	Agenda/Activity	Presenter/Speaker	Facilitator
7:40-9:10	Session 2: Water Right System	Presentation (First Half)	Each Participant (VN: Mr.Nguyen Van Sinh)	Dr. Kobkiat Pongput (Thailand) - Tentative Mr. Pham Hong Giang, Mr. Ngo Trong Thuan
9:10-9:20		Break		
9:20-10:50		Presentation (Latter Half) and Discussion	Each Participant	
10:50-11:00	Break			
11:00-12:00	Session 3: Drought Management			
12:00-13:00		Lunch at the workshop venue		
13:00-15:00		Presentation (First Half)	Each Participant (VN: Mr.Nguyen Xuan Phong)	Mr. Pham Hong Giang, Mr. Nguyen Anh Minh
15:00-15:20	Break			
15:20-16:30	Closing Session	Toward Next Workshop	Michitaro Nakai (ADBI)	To be determined
		Closing Remarks	Vice Minister Pham Hong Giang	
	Farewell Party (17:00-18:00)			