

NARBO ANNUAL REPORT

Network of Asian River Basin Organizations

2012 / 2013 / 2014 / 2015

Four Years' Numbers Bound Into One Volume



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Network of Asian River Basin Organizations

2012 / 2013 / 2014 / 2015

Table of contents

Abbreviations

Preface

1. General Information of NARBO

| | |
|---|----|
| (1) Introduction | 1 |
| (2) Purposes | 3 |
| (3) Charter | 4 |
| (4) Action Program | 4 |
| (5) Members | 5 |
| (6) Chairperson, Vice Chairperson and Secretariat | 10 |

2. Record of activities in 2012 - 2015

| | |
|--|----|
| Table of activities | 11 |
| A. Advocacy, Raising Awareness and Exchange of Information and Good Practices on IWRM | 16 |
| I. Website | 16 |
| II. Newsletter | 17 |
| III. NARBO Promotion | 18 |
| IV. Contribution to discussion on Post-MDGs and Post-HFA | 37 |
| V. NARBO General Meeting | 43 |
| B. Capacity Building in River Basin Organizations (RBOs) | 51 |
| I. IWRM Training | 51 |
| II. Leadership Program | 56 |
| III. Performance Benchmarking supported by peer reviews | 57 |
| IV. Twinning program | 60 |
| V. IWRM Proficiency | 61 |
| VI. Advisory visits to RBOs | 62 |
| C. Network Support | 66 |
| I. Technical Advisory Committee and Steering Committee | 66 |
| II. Knowledge Networking | 68 |
| III. Investments and Capacity development in Water Security in River Basins | 77 |
| IV. Collaboration with International Network | 80 |

[BASELINE]

BASELINE1 : NARBO Charter

BASELINE2 : Action Program - 2010 - 2012

Action Program - 2013 - 2015

[Programs]

Program1: 5th NARBO General Meeting

Program2: NARBO 10-Year Anniversary Meeting

Abbreviations

| | |
|-----------------|--|
| ADB | Asian Development Bank |
| ADBI | Asian Development Bank Institute |
| APWF | Asia-Pacific Water Forum |
| APWS | Asia-Pacific Water Summit |
| AWCI | Asian Water Cycle Initiative |
| CRBOM | Center for River Basin Organization and Management |
| GEO | Group on Earth Observation |
| GEOSS | Global Earth Observation System of Systems |
| GWOPA | Global Water Operator's Partnership Alliance |
| GWP | Global Water Partnership |
| HELP | High-level Expert and Leaders Panel on Water and Disasters |
| HLEP | High-Level Expert and Leader's Panel |
| IWC | International Water Centre |
| IWRM | Integrated Water Resources Management |
| IWRM Guidelines | IWRM Guidelines at River Basin Level |
| JWA | Japan Water Agency |
| MDGs | Millennium Development Goals |
| NARBO | Network of Asian River Basin Organizations |
| OECD | Organization for Economic Co-operation and Development |
| RBO | River Basin Organization |
| R-CDTA7547 | Regional Capacity Development Technical Assistance : Supporting Investment in Water Security in River Basins |
| SC | Steering Committee |
| SDGs | Sustainable Development Goals |
| UN | United Nations |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNESCO-IHE | United Nations Educational, Scientific and Cultural Organization Institute for Water Education |
| UNSGAB | United Nations Secretary General's Advisory Board on Water and Sanitation |
| WOP | Water Operator's Partnership |
| WWC | World Water Council |
| WWF | World Water Forum |

Preface

As the recognition of importance of Integrated Water Resources Management (IWRM) has been surging, the lack of the network to assist River Basin Organizations (RBOs) in Asia in their work of introducing and implementing IWRM approach came to light.

With this background, the 3rd World Water Forum (WWF) was held in Japan in March 2003. At the forum, Japan Water Agency (JWA), Asian Development Bank (ADB) and Asian Development Bank Institute (ADBI) signed a Letter of Intent to jointly launch Network of Asian River Basin Organizations (NARBO) in recognition of the need to cooperate and support RBOs in order to promote IWRM in Asia. Subsequently, the three organizations made inquiries to

governmental agencies, RBOs and other related organizations in Asia about their intention to participate in NARBO and solicited their cooperation. After the inaugural NARBO General Meeting was held after the Inception Meeting in Chiang Mai, Thailand in November 2003, NARBO was established in February 2004 with 43 member organizations.

Twelve years have been passed since the establishment of NARBO. The number of members becomes 86 organizations from 18 countries as of 31 March 2016.

Various NARBO activities had been conducted from April 2012 to March 2016 and those activities are summarized in this NARBO annual report 2012-2015.

1. General Information of NARBO

(1) Introduction

The world community has recognized the importance of managing water resources in a more integrated manner. Over the past decades, a series of regional and global water conferences, including the WWFs in every 3 years from 1997. These conferences have underlined the need to adopt and operationalize the approach of IWRM, which is defined by the Global Water Partnership (GWP) as “a process to improve the planning, conservation, development, and management of water,

forest, land, and aquatic resources in a river basin context, to maximize economic benefits and social welfare in an equitable manner without compromising the sustainability of vital environmental systems.”

By focusing on the management of water and related resources in a river basin context, it is implied that IWRM will be undertaken with the involvement of stakeholders at the basin level. The water conference in Dublin in 1992 referred to the

need for management of water resources at the lowest appropriate level. This has become one of the basic principles underpinning the IWRM approach, and it has led to increased recognition that 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 WWF 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 WWF highlighted the need to support these RBOs through knowledge sharing and capacity building, especially in developing countries.

The 3rd WWF also emphasized the contributions that IWRM can make to improve 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 (reconstituted as JWA in October 2003), ADB, and ADBI decided at the 3rd WWF in March 2003 in Kyoto, Japan, to collaborate in launching NARBO, and a letter of intent was signed at the Forum on 21 March 2003. After the forum, the three organizations made inquiries to governmental agencies,

RBOs and other related organizations in Asia about their intention to participate in NARBO and solicited their cooperation. The inaugural NARBO General Meeting was held after the Inception Meeting in Chiang Mai, Thailand in November 2003 and the Preparation Meeting for NARBO General Meeting in Tokyo, Japan in January 2004.

(2) Purposes

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

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

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

1) Activities for the whole of NARBO

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

- Advocacy and raising awareness for IWRM among RBOs, water sector apex bodies, and leading water sector agencies in the region, mainly through regional workshops.
- Sharing of information, good practices, and lessons learned for IWRM among the participating organizations, mainly by

operating databases and a website for IWRM exchanging information, and by sending a newsletter by email as well as posting on the website and holding (sub) regional workshops.

2) Activities for regional areas of NARBO

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

- Supporting NARBO members to improve water governance, including the enabling policy, institutional, and legal framework for IWRM, and the formulation of the action programs.
- Building capacity of RBOs in implementing IWRM, mainly through staff exchange and training among participating organizations.
- Supporting RBOs with technical advice in regard to the planning, conservation, development, and the proper and

efficient operation and maintenance of water resources facilities, to improve IWRM.

- Fostering regional cooperation for improved management of water resources in transboundary river basins.

3) The scope of IWRM activities to be supported by NARBO will be approved by the NARBO General Meeting.

4) NARBO's activities will mainly focus on the monsoonal areas of Asia.

(3) Charter

NARBO Charter serves as a constitution because it stipulates NARBO organizations and activities. The charter was presented and explained by NARBO Secretariat on 23 February 2004, the first day of the 1st General Meeting, and then it was duly approved without change. The charter consists of introduction and five sections. These five sections are as follows:

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

Resources".

The secretariat revised the charter partially in August 2005, February 2006 (At the 2nd General Meeting), February 2008 (At the 3rd General Meeting), November 2010 (At the 4th General Meeting) and May 2013 (At the 5th General Meeting) in an effort to make it to be completed.

About the whole NARBO Charter, please refer to BASELINE 1

(4) Action Program

The action program 2013-2015 was proposed by the secretariat at the 5th General Meeting on May 2013. The action program was divided into three categories:

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.

In both of first two categories, the activities are divided in two parts, namely led by the NARBO Secretariat and NARBO member organizations. Since NARBO is a network organization, members' contribution is highly required.

About the whole NARBO Action Plan, please refer to BASELINE 2

(5) Members

At the 1st General Meeting, 43 organizations from 11 countries signed the Agreement to Membership in NARBO and 8 organizations signed the Expression of Interest for Membership in NARBO.

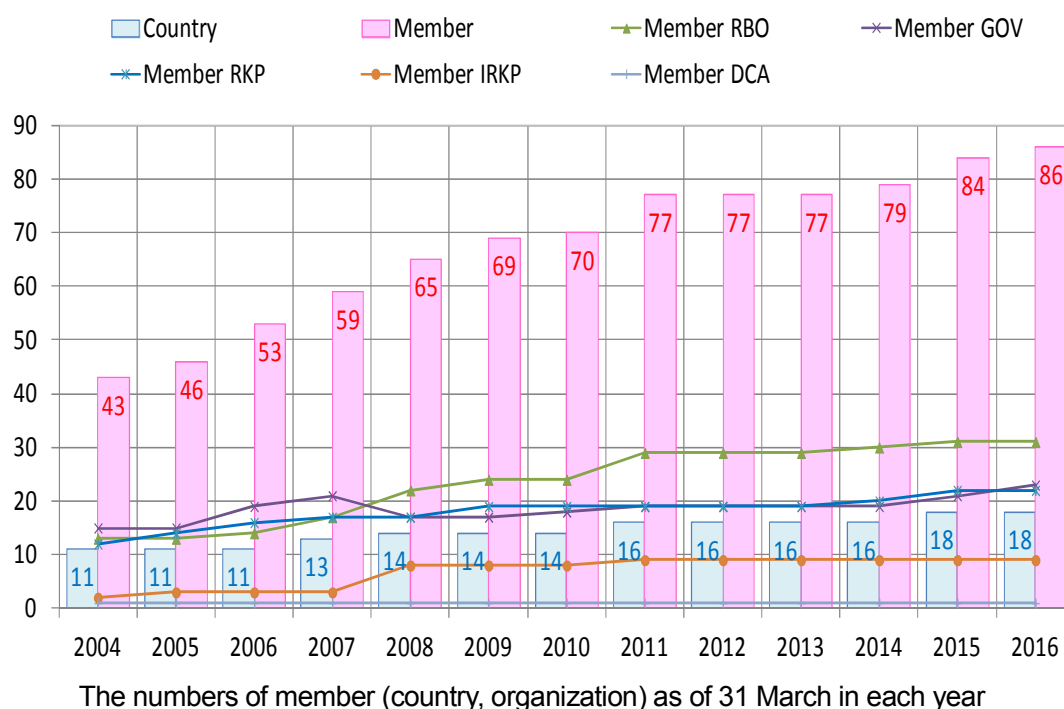
After the 1st General Meeting, 11 organizations newly joined NARBO and one organization withdrew (It was abolished in the organizational reform in its country) and another 3 organizations joined NARBO at the 2nd General Meeting (from 14 to 16 February 2006) in Indonesia. As a result, the number of members became 46 from 11 countries.

After the 2nd General Meeting, 19 organizations newly joined NARBO by the 3rd General Meeting (from 20 to 22 February 2008) in Indonesia.

Then, NARBO was joined by 9 organizations after the 4th General Meeting (from 8 to 12 November 2010) in Indonesia.

Finally, NARBO was joined by 13 organizations after the 5th General Meeting (from 14 to 20 May 2013) in Thailand. As of 31 March 2016, the number of members became 86 from 18 countries (Australia, Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Japan, Korea, Laos, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam).

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



[The list of NARBO members]

As of 31 March 2016

| Category | Member |
|---|-----------|
| River Basin Organization (RBO) | 31 |
| Government Organization (GOV) | 23 |
| Regional Knowledge Partner (RKP) | 22 |
| Inter-Regional Knowledge Partner (IRKP) | 9 |
| Development Cooperation Agency (DCA) | 1 |
| Associated Members | 0 |
| Total | 86 |



- ✓ **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.
- ✓ 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.
- ✓ **Regional knowledge partners** with expertise in promoting and supporting IWRM, such as international RBOs and research and training organizations.
- ✓ **Inter-regional knowledge partners** with expertise in promoting and supporting IWRM.
- ✓ Bilateral and multilateral **development cooperation agencies** promoting and supporting activities related to IWRM at the level of river basins.
- ✓ Water related organizations who support NARBO's Goal and Objective by offering their resources can be considered as **associate members**.

River Basin Organizations (RBOs)

| Classification | | Country/Region | | Organization |
|----------------|-----|----------------------------|---|--|
| Member | RBO | Indonesia | M | Jasa Tirta I Public Corporation (PJT I) |
| | | Indonesia | M | Jasa Tirta II Public Corporation (PJT II) |
| | | Indonesia | M | Jragung-Tuntang Basin Water Resources Management Unit (BWRMU) (Balai PSDA Jragung-Tuntang) |
| | | Indonesia | M | Bengawan Solo river Basin Organization |
| | | Indonesia | M | Pompengan Jeneberang Basin Water National Management Unit |
| | | Indonesia | M | Pekalan Sampean Basin Water National Management Unit |
| | | Indonesia | M | Ciujung-Ciliman Basin Water National Management Unit |
| | | Indonesia | M | Sermo Water Resources Management Unit (BPSDA) |
| | | Indonesia | M | Citarum Basin Water National Management Unit |
| | | Japan | S | Japan Water Agency (JWA) |
| | | Korea | M | Korean Water Resources Corporation (K water) |
| | | Laos | M | Nam Ngum River Basin Development Sector Project |
| | | Malaysia | M | Selangor Water Management Authority (SWMA) |
| | | Pakistan | M | Indus River System Authority (IRSA) |
| | | Philippines | M | Laguna Lake Development Authority (LLDA) |
| | | Sri Lanka | M | Mahaweli Authority of Sri Lanka (MASL) |
| | | Thailand | M | Bang Pakong River Basin Committee (BPRBC) |
| | | Viet Nam | M | Cuu Long & Dong Nai River Basin Organization |
| | | Viet Nam | M | Red River Basin Organization (RRBO) |
| | | Viet Nam | M | Day River Basin Organization |
| | | Viet Nam | M | Vu Gia Thubon River Basin Organization |
| | | Viet Nam | M | Ca River Basin Management Council |
| | | Viet Nam | M | Cau River Basin Planning Subcommittee |
| | | Southeast Asia | M | Mekong River Commission Secretariat (MRC) |
| | | Indonesia | M | Balai Bsear Wilayah Sungai Brantas |
| | | Philippines | M | HELP Davao Network |
| | | Lao PDR | M | Nam Ngum River Basin Committee Secretariat |
| | | Lao PDR | M | Nam Theun-Nam Kading River Basin Committee Secretariat (NT-NKD RBCs) |
| | | Myanmar | M | Ayeyarwaddy River Basin Research Organization (ARBRO) |
| | | People's Republic of China | M | Chao Lake Management Authority |
| | | Thailand | M | Mun River Basin Organization |

M: Member, S: Secretariat

Governmental Organizations (GOVs)

| Classification | | Country/Region | | Organization |
|----------------|-----|----------------|---|---|
| Member | GOV | Bangladesh | M | Bangladesh Water Development Board (BWDB) |
| | | Bangladesh | M | Local Government Engineering Department (LEGD) |
| | | Cambodia | M | Ministry of Water Resources and Meteorology (MOWRAM) |
| | | Cambodia | M | Department of Hydrology and River Works (DHRW) |
| | | Indonesia | M | Directorate General of Water Resources (DGWR) |
| | | Indonesia | M | Water Resources Development, West Nusa Tenggara Province |
| | | Japan | M | Water Resources Department, Land and Water Bureau, Ministry of Land, Infrastructure, Transport and Tourism |
| | | Laos | M | Water Resources Coordination Committee Secretariat |
| | | Malaysia | M | Department of Irrigation and Drainage (DID Malaysia) |
| | | Philippines | M | National Water Resources Board (NWRB) |
| | | Philippines | M | Department of Environment and Natural Resources (DENR) |
| | | Thailand | M | Department of Water Resources, Ministry of Natural Resources and Environment (DWR, MoNRE) |
| | | Viet Nam | M | Department of Water Resources Management, MoNRE (General Office for RBO, WRD, MARD) |
| | | Viet Nam | M | General Office for RBOs in Viet Nam (GO-RBO) |
| | | Viet Nam | M | Southern Institute for Water Resources Planning (SIWRP), Ministry of Agriculture & Rural Development (MARD) |
| | | Viet Nam | M | Department of Natural Resources and Environment of Dong Nai Province |
| | | Nepal | M | Water and Energy Commission Secretariat |
| | | India | M | Orissa Water Planning Organization |
| | | Bhutan | M | National Environment Commission (NEC) |
| | | Pakistan | M | Pakistan Meteorological Department |
| | | Thailand | M | Department of Groundwater |
| | | Philippines | M | Department of Public Works and Highways (DPWH) |
| | | Nepal | M | High Powered Committee for Integrated Development of Bagmati Civilization (HPCIDBC) |

M: Member, S: Secretariat

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

| Classification | | Country/Region | | Organization |
|----------------|------|----------------------------|---|---|
| Member | RKP | Southeast Asia | M | Global Water Partnership (GWP) SEA RWP |
| | | South Asia | M | Global Water Partnership-South Asia (GWP-SAS) |
| | | South Asia | M | South Asia Network of River Basin Organization (SASNET-RBO) |
| | | South Asia | M | The Capacity Building Network for Integrated Water Resources Management South Asia (CapNet SA) |
| | | Bangladesh | M | Institute of Water Modeling (IWM) |
| | | Indonesia | M | Indonesia Water Partnership (InaWP) |
| | | Indonesia | M | The Foundation on Water Affairs ADHI EKA |
| | | Indonesia | M | Faculty of Engineering, Brawijaya University |
| | | Indonesia | M | Research Centre for Water Resources (RCWR) |
| | | Indonesia | M | Center for Environment & Civil Engineering Research |
| | | Indonesia | M | Post Graduate Study on Water Resources Management Faculty of Engineering Gadjah Mada University |
| | | Indonesia | M | SEMBRANI foundation |
| | | Japan | M | Japan River Restoration Network (JRRN) |
| | | Japan | M | Graduate School of Management, Kyoto University |
| | | Japan | M | Civil Engineering Research Institute for Cold Region, PWRI |
| | | Malaysia | M | National Hydraulic Research Institute of Malaysia (NAHRIM) |
| | | Nepal | M | International Centre for Integrated Mountain Development (ICIMOD) |
| | | Thailand | M | Thailand Water Resources Association (TWRA) |
| | | People's Republic of China | M | Yellow River Conservancy Commission (YRCC) |
| | | India | M | Advanced Center for Integrated Water Resources Management (ACIWRM) |
| | | Pakistan | M | Pakistan Water Partnership (PWP) |
| | | Pakistan | M | Pakistan Water Operator Partnership (P-WOPs) |
| | IRKP | Inter-region | S | Asian Development Bank Institute (ADBI) |
| | | Inter-region | M | Asia Pacific Association of Hydrology and Water Resources (APHW) |
| | | Inter-region | M | International Centre for Water Hazard and Risk Management (ICHARM) |
| | | Inter-region | M | International Research and Training Center on Erosion and Sedimentation (IRTCES) |
| | | Inter-region | M | IUCN - The World Conservation Union |
| | | Inter-region | M | International Water Centre (IWC) |
| | | Inter-region | M | International Water Management Institute (IWMI) |
| | | Inter-region | M | The World Wildlife Fund International (WWF International) |
| | | Inter-region | S | Center for River Basin Organizations and Management (CRBOM) |
| | DCA | Inter-region | S | Asian Development Bank (ADB) |

M: Member, S: Secretariat

(6) Chairperson, Vice-Chairperson and Secretariat

1) Chairperson



Chairperson: Mr. Keizrul Bin Abdullah
(Adjunct Professor, Tenaga National
University, Malaysia)

2) Vice-Chairperson



Vice Chairperson: Mr. K. W. Ivan de Silva
(Secretary, Ministry of Irrigation and Water
Resources Management, Sri Lanka)



Vice Chairperson: Ms. Dolora Nepomuceno
(Philippines)



Vice Chairperson: Mr. Herman Idrus
(President Director, PJTII, Indonesia)

3) Secretariat

a) Secretary General



Secretary General: Mr. Kei Kudo
(Vice President, JWA)

b) Vice Secretary General

Ms. Yasmin Siddiqi
(Principal Water Resources Specialist,
ADB)

Mr. Kentaro Kido
(Director, International Affairs Division, JWA)

Mr. Bokhwan Yu
(Deputy Dean (CBT and Special), ADBI)

c) Secretariat

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



2. Record of activities in 2012-2015

Table of activities

| Year | Month | Name of Activity | Outline of Activity | Action Program |
|------|-------|--|---|-----------------|
| 2012 | Jan | GEO-UNESCO IWRM Joint Workshop in Kenya | - Held in Nairobi from 12 to 16 January - Attended by around 70 participants from RBOs, government organizations and so on | C.a.2 [P.68] |
| | Mar | 6th WWF | - Held in Marseille, France from 12 to 17 March - Attended by around 34,000 participants from 173 countries | A.a.5 [P.18] |
| | Apr | 5th GEOSS Asia-Pacific Symposium : AWCI parallel session | - Held in Tokyo, Japan from 2 to 4 April - Attended by around 280 participants from 21 countries & 4 international organizations | C.a.2 [P.68] |
| | May | NARBO Regional Technical Assistance IWRM Workshop in Nepal | - Held in Kathmandu, from 31 May to 1 June - Attended by around 15 participants | C.a.3 [P.77] |
| | Jun | International Seminar on River Basin Organization and the Bagmati River | - Held in Kathmandu, Nepal on 5 June | C.a.3 [P.79] |
| | Aug | NARBO Newsletter | 22nd Issue | A.a.2 [P.17] |
| | Sep | Twining Program between MARD of Vietnam and JWA | - Held in Japan from 14 to 21 September - Attended by 12 delegates from MARD & related organizations | B.a.5 [P.60] |
| | Oct | APWF Workshop on "Meta-Guidelines for Water and Climate Change Adaptation" | - Held in Japan from 1 to 2 October - Attended by around 80 participants | C.a.2 [P.69] |
| | | Saitama-City Waterworks International Seminar | - Held in Japan from 24 to 25 October | C.a.2 [P.70] |
| | Nov | 7th NARBO IWRM training in Sri Lanka | - Held in the Mahaweli River Basin, Sri Lanka from 2 to 9 November - Attended by 26 participants from 8 countries | B.a.1 [P.51] |
| | | 2nd NARBO Management Team Meeting | - Held in the Thulhriya, Sri Lanka on 8 November - Attended by around 10 participants | C.a.1 [P.66] |

| Year | Month | Name of Activity | Outline of Activity | Action Program |
|------|-------|--|--|-----------------|
| 2012 | Dec | IWC Leadership Programme | - Conducted for 9 months from December 2012 to August 2013 - Joined by around 10 trainees | B.a.3 [P.56] |
| | | RBO Visit to India | - Held in India from 8 to 15 December | B.a.7 [P.62] |
| 2013 | Jan | NARBO Newsletter | 23rd Issue | A.a.2 [P.17] |
| | Feb | WEPA Annual Meeting and Seminar in Cambodia | - Held in Siem Reap, Cambodia from 18 to 20 February - Attended by around 10 participants | C.a.5 [P.80] |
| | Mar | Side Event of UN Special Thematic Session on Water and Disasters | - Held in UN Headquarters, New York, USA on 5 March - Attended by around 100 participants | A.a.5 [P.19] |
| | | UN Special Thematic Session on Water and Disasters | - Held in UN Headquarters, New York, USA on 6 March - Attended by around 500 participants | A.a.5 [P.21] |
| | May | 5th NARBO General Meeting | - Held in Chiang Mai, Thailand from 15 to 18 May - Attended by around 80 participants | A.a.8 [P.43] |
| | Jun | 1st Meeting of HELP | - Held in Tokyo, Japan in from 3 to 4 June - Attended by 40 participants | A.a.6 [P.37] |
| | Jul | NARBO Newsletter | 24th Issue | A.a.2 [P.17] |
| | Aug | High-Level International Conference on Water Cooperation | - Held in Dushanbe, Tajikistan from 20 to 21 August - Attended by 900 participants | A.a.5 [P.22] |
| | | NARBO secretariat visited ARBRO in Myanmar | - Visited in Yangon, Myanmar from 31 August to 2 September | B.a.6 [P.63] |
| | Sep | Regional Workshop on "Training Needs and Gaps Assessment on Adaptation and Resilience to a Changing Climate in South Asia" | - Held in Kathmandu, Nepal from 4 to 5 September - Attended by around 30 participants | C.a.5 [P.81] |
| | | NARBO secretariat members visited Bhutan for the promotion of IWRM | - Visited in Thimphu, Bhutan from 7 to 14 September | B.a.7 [P.64] |

| Year | Month | Name of Activity | Outline of Activity | Action Program |
|------|-------|--|--|---------------------|
| 2013 | Oct | E-learning on Managing Water in Asia's River Basins-IWRM Based Online Training Courses 2013-2014 | - Offered between October 2013 and April 2014 - Completed by 116 trainees | B.a.1 [P.52] |
| | | Workshop on Water Resources Management Financing | - Held in Yangon, Myanmar on 3 October - Attended by around 50 participants | C.a.2 [P.71] |
| | | NARBO RBO Benchmarking Program : Self-Assessment and Reporting Training | - Held in Nam Theun Nam Kading River Basin Committee, Lao PDR from 15 to 16 October - Held in Selangor Water Management Authority, Malaysia from 24 to 25 October - Held in Help Davao Network , Philippines from 30 to 31 October | B.a.4 [P.57] |
| | Nov | NARBO RBO Benchmarking Program : Self-Assessment and Reporting Training | - Held in Mun River Basin Committee, Thailand from 6 to 7 November | B.a.4 [P.57] |
| | | 2nd Meeting of OECD Water Governance Initiative | - Held in Paris, France from 7 to 8 November - Attended by around 100 participants | A.a.5 [P.25] |
| | | 2nd Global WOP Congress and GWOPA General Assembly | - Held in Barcelona, Spain from 27 to 29 November - Attended by around 100 participants | C.a.5 [P.83] |
| | | 8th NARBO IWRM training in Sri Lanka | - Held in Thulhriya, Sri Lanka from 27 November to 4 December - Attended by 27 participants from 11 countries | B.a.1 [P.54] |
| | Dec | 2nd Meeting of HELP | - Held in Paris, France on 2 December - Attended by 40 participants | A.a.6 [P.39] |
| | | 1st Steering Committee | - Held in Thulhriya, Sri Lanka on 5 December - Attended by around 15 participants | C.a.1 [P.67] |
| | | NARBO RBO Benchmarking Program : Self-Assessment and Reporting Training | - Held in Mahaweli Authority of Sri Lanka, Sri Lanka from 6 to 7 December | B.a.4 [P.57] |

| Year | Month | Name of Activity | Outline of Activity | Action Program |
|------|-------|--|--|-----------------|
| 2013 | Dec | UNESCO mission in Pakistan | - Held in Faisalabad, Pakistan from 18 to 19 December - Attended by around 60 participants | C.a.2 [P.72] |
| 2014 | Feb | IWRM Workshop-How to Implement IWRM- | - Held in Yangon, Myanmar on 24 February - Attended by around 70 participants | C.a.2 [P.75] |
| | Mar | A SPECIAL EVENT ON "Taking Stock of the International Year of Water Cooperation and Advancing the Global Water Agenda after Post-2015" | - Held in UN Headquarters, New York on 11 March - Attended by around 70 participants | A.a.5 [P.26] |
| | Apr | 3rd Meeting of OECD Water Governance Initiative | - Held in Madrid, Spain from 28 to 29 April - Attended by more than 90 participants | A.a.5 [P.29] |
| | May | 9th NARBO IWRM training in Philippines | - Held in Tagaytay, Philippines from 12 to 19 May - Attended by 33 participants from 11 countries | B.a.1 [P.55] |
| | Jun | 3rd Meeting of HELP | - Held in Rotterdam, the Netherlands from 27 to 28 June - Attended by around 40 participants | A.a.6 [P.39] |
| | Oct | 4th Meeting of HELP | - Held in Washington, USA on 17 October - Attended by around 40 participants | A.a.6 [P.40] |
| | | NARBO Newsletter | 25th Issue | A.a.2 [P.17] |
| | Nov | NARBO 10-Year Anniversary Meeting | - Held in Manila, Philippines from 19 to 20 November - Attended by around 100 participants | A.a.9 [P.48] |
| | | 4th Meeting of OECD Water Governance Initiative | - Held in Paris, France from 24 to 25 November - Attended by around 115 participants | A.a.5 [P.30] |
| 2015 | Apr | 5th Meeting of HELP | - Held in Seoul, South Korea from 9 to 10 April - Attended by around 60 participants | A.a.6 [P.41] |

| Year | Month | Name of Activity | Outline of Activity | Action Program |
|------|-------|--|--|-----------------|
| 2015 | Apr | 7th WWF | - Held in Daegu and Gyeongju, South Korea from 12 to 17 April - Attended by around 41,000 participants from 168 countries | A.a.5 [P.30] |
| | May | 5th Meeting of OECD Water Governance Initiative | - Held in Edinburgh, Scotland from 26 to 27 May - Attended by around 85 participants | A.a.5 [P.34] |
| | Sep | Irrawaddy Capacity building and professional development for inclusive governance and management of water and ecosystem services in the Ayeyarwady River Basin | - Held in Yangon, Myanmar from 31 August to 6 September and Mandalay, Myanmar from 13 to 18 October - Attended by about 30 participants | B.a.6 [P.61] |
| | Oct | International Peer Reviewer Training and Certification | - Held in Solo, Indonesia from 27 to 29 October - Attended by around 30 participants | B.a.4 [P.58] |
| | Nov | 6th Meeting of HELP | - Held in UN Headquarters, New York, the USA on 17 November - Attended by around 30 participants | A.a.6 [P.43] |
| | | 2nd UN Special Thematic Session on Water and Disasters | - Held in UN Headquarters, New York, the USA on 18 November | A.a.5 [P.35] |
| | Dec | NARBO Newsletter | 26th Issue | A.a.2 [P.17] |

A. Advocacy, Raising Awareness, and Exchange of Information and Good Practices on IWRM

I. Website

1) NARBO Website

One of the main activities conducted as NARBO activities is to share the information on IWRM. As stated in the action program, NARBO provides news on NARBO activities, information on introducing IWRM in river basins in Asia, and publications related to IWRM through its website.

The website has been managed by JWA, the headquarters of the secretariat, since 2004, and improved for easy handling and visible.

2) Database

One of the main characteristics of NARBO Website is that it has a database. You can see annual reports submitted by the member organizations, sources used in IWRM trainings and workshops, and information on member organizations from the database.



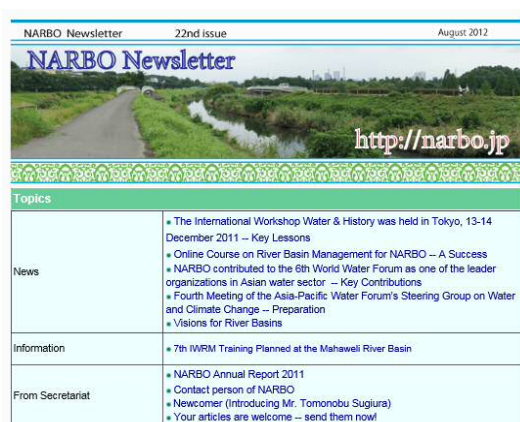
NARBO Website

II. Newsletter

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

- The 22nd in August 2012
- The 23rd in January 2013
- The 24th in July 2013
- The 25th in October 2014
- The 26th in December 2015

All newsletters were posted on NARBO website to make it possible for all members to see easily and sent to the contact person at each member organizations by e-mail.



The 22nd issue



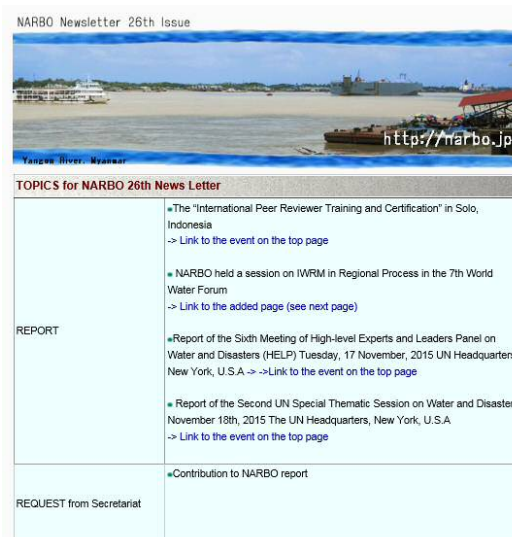
The 23rd issue



The 24th issue



The 25th issue



The 26th issue

III. NARBO Promotion

1) 6th WWF

6th WWF was held in Marseille, France from 12 to 17 March 2012. The Hosts were World Water Council (WWC) and French Government.

NARBO members actively participated in this forum. Dr. Keizrul Bin Abdullah, the Chairperson of NARBO served as chair for “Strengthen River Basin Organizations in the Asia-Pacific to Accelerate IWRM”, and Mr. Sudharma Elakanda from Mahaweli Authority of Sri Lanka also participated in this as a speaker in a session on 14 March.



The session, “Strengthen River Basin Organization in the Asia-Pacific to Accelerate IWRM”

With the word, “This session is intended to explore ‘How we can strengthen the governance of River Basin Organizations, and ‘How we can involve stakeholders’” spoken by the chair, the session started. Mr. Naoyoshi Sato, Vice-Minister for Engineering Affairs of Japan's Ministry of Land, Infrastructure, Transport and Tourism, made his opening remarks. He expressed his expectation that the result of this session would accelerate the initiative of IWRM in Asia-Pacific region which plays a central role with its growing population and economy.

Mr. Elakanda made a presentation titled “IWRM Solutions with Spiral Model

-Experience from NARBO & Mahaweli Authority of Sri Lanka”. At first, he introduced NARBO's outline. Following this, he made a summarized report of the situation in Sri Lanka. For instance, the annual rainfall ranging from 900 to over 5,500mm, the fact that the country has 103 river basins, and so on. He showed examples of the conflicts in Sri Lanka, and explained about how Mahaweli Authority has approached these conflicts. Using IWRM spiral model effectively, his explanation led participants to understand how Mahaweli Authority had gone up the spiral effectively.

The day before this session, “Launching of the Asia-Pacific Water Museum” was held at Japan Pavilion on 13 March. Dr. Pichai Sonchaeng, President of National Science Museum, Thailand made an introduction of the Museum. Dr. Abdullah gave a speech and he emphasized the importance of sharing information and experience through such a museum.



Japan Pavilion

Besides sessions, JWA set up a booth of NARBO at Japan Pavilion. As one of the secretariats of NARBO, JWA displayed presentation materials about NARBO on TV and distributed the latest leaflets.

2) Side Event of UN Special Thematic Session on Water and Disasters

a) Outline

Prior to the United Nations (UN) Special Thematic Session on Water and Disasters will be organized as Secretary-General's special event on 6 March 2013, technical discussion on key topics on water and disasters was conducted as Side Event of the Special Thematic Session on 5 March 2013.

The Side Event was expected to facilitate common understanding and shared vision on key topics on water and disasters, leading to enhanced awareness and deepened discussion in the Special Thematic Session. Chair of Side Event was expected to share output of the discussion in the Special Thematic Session next day.

As the organizer, Friends of Side Event of UN Special Thematic Session on Water and Disasters were High Level Expert and Leader's Panel (HLEP), United Nations Office for Disaster Risk Reduction, Water Meteorological Organization, United Nations Educational, Scientific and Cultural Organization (UNESCO), International Flood Initiative, International Centre for Water Hazard and Risk Management (ICHARM), US Army Corps of Engineers, JWA, NARBO, GWP, WWC, Global Facility for Disaster Reduction and Recovery and others.

Around 100 high level experts, national/international experts, civil society and private sector representatives from 30 countries joined and intensive discussions were made.

b) Brief Summary

Side events consisted of 3 sessions such as i) 'From relief to preparedness' –lessons

learnt of hurricane Sandy by US Army Corps of Engineers, ii) Addressing Water and Disasters in the context of Post- Millennium Development Goals (MDGs) and Post-Hyogo Process by ICHARM and iii) Integrated Water Resources and Flood Management in the context of International Water Resources Management and Water Cooperation by NARBO.

Through intensive discussions, we agreed following matters as common understanding to be addressed.

- Water-related disasters have strong linkage with economic growth and poverty issues.
- To achieve sustainable development goals (SDGs) under the increasing of serious hydrological events and population we need to prepare for water-related disasters immediately.
- Issues on water-related disasters need to be addressed at not only for national and local level but also internationally, because water-related disasters influence beyond the boarder in the current globally close economy and society.

Panelists stressed that the necessity of recognition of risks and enhancement of communication by capacity development and sharing information through education and training especially in local level. In addition, necessity of wholistic approach to cope with complicated issues on water and disaster. Wholistic approach should include and introduce with the recognition of preparedness to disaster and best mix of structural and non-structural measures and needs the combination of effective relief from disaster and strategic recovery plan.

As recommendations to the Special Thematic Session on Water and Disasters,

following points were summarized and reported to the Special Thematic Session.

- Regular dialogue process about water-related disaster should be established by the UN
- Visible and measurable target of disaster risk reduction with international consensus should be prepared the UN and other regional organizations have a highly important role on it.
- International and regional cooperation to enhance knowledge and experience of disaster risk management and offer the coordination mechanism of disaster relief operation need to be enhanced. The UN and other regional organizations have a highly important role on it.
- Continuous effort to implement the action program proposed by High-Level Expert Panel on Water and Disasters (HELP) is needed.

c) NARBO's Session

Dr. Keizrul Bin Abdullah, Chairperson of NARBO chaired the session, and 8 panelists introduced their views by focusing on IWRM and water-related disaster List of the panelist is as follows.

- Mr. Kuntoro Mangkusubroto, Head of Presidential Work Unit , Indonesia
- HE Mr. Sirodjidin Aslov, Ambassador, Permanent Representative of the Republic of Tajikistan to the UN
- Dr. Ania Grobicki, Executive Secretary of GWP
- Mr. Steven L. Stockton, Director of Civil Works, USACE
- Mr. Kenyu Komura, President of JWA
- Mr. Sami Areikat, Department of Economic and Social Affairs, UN
- Mr. Sering Jallow, Director, Water &

Sanitation Department and African Water Facility, African Development Bank

- Mr. Woochong Um, Deputy Director General, Regional and Sustainable Development Department, ADB

As a result of the discussion, Dr. Keizrul summarized the session as follows, and participants agreed on it.

- There are issues on too much water, too little water and too dirty water in the world.
- Coordination among different level of government organizations dealing water is necessary.
- Transition from top down approach to bottom up approach is needed to introduce participatory method about water governance.
- Cooperation and development tools are needed.
- Investment to water is necessary.
- Role of infrastructure to minimize the negative impact and affect of extreme event is needed. In addition, best mix of combination of structural and non-structural methods is also needed.



Side Event of the Special Thematic Session on Water and Disasters in the UN on 5 March 2013

Summary of the side event was distributed at the Special Thematic Session on 6 March, and speakers of the special session quoted the discussion at the side event. In this way, discussion of the side event contributed to

the discussion at the special session and achieved the expected results. Through the side event, NARBO introduced the issues on water as a representative of Asia and contributed to the discussion on issues on water and disasters. Furthermore, value of NARBO has been added by organizing the side event with other international organizations in the UN.

3) UN Special Thematic Session on Water and Disasters

a) Objective

Water is life. But water is also a threat to life. During the past decade, water-related disasters have not only struck more frequently but have also been more severe, hampering sustainable development by causing political, social, and economic shocks in many countries. Disaster risk levels are driven by factors such as climate variability, poverty, poor land-use planning and management, as well as ecosystem degradation, and are increasing as more people and assets locate in areas of high risk. For example, over the past 30 years, the proportion of people living in flood-prone river basins increased by 114 percent and on cyclone-exposed coastlines by 192 percent.

While the mortality risk associated with major weather-related hazards is now declining globally, the economic loss risk associated with floods and tropical cyclones is increasing in all regions. While disasters affect all, the poor suffer the most. Low income countries, including the Least Developed Countries and Small Island Developing States, have less capacity to absorb and recover from economic losses caused by disasters due to their social and

economic situations.

Global changes including climate change, increased population pressure, declining ecosystems, and unplanned urbanization are drastically increasing the risks of water-related disasters. Green growth will not materialize without adequately addressing water-related disasters. As highlighted during the current discourse in the Rio+20 process, integrated approaches to water resource management are critical for building the social, economic, and environmental pillars of sustainable development.

Having these in mind, the Special Session on Water and Disasters, an initiative of Secretary-General, will be held at the UN to raise awareness, share experiences and good practices, and discuss ways forward towards global actions on water and disasters.

b) Special Thematic Session and NARBO

The session was held in Economic and Social Council Chamber, UN, New York on 6 March 2013. The organizers were Secretary-General, Secretary-General's Advisory Board on Water and Sanitation (UNSGAB) and HELP. And the chair was H.E. Mr. BAN Ki-moon, Secretary-General, the co-chair was H.E. Dr. Han Seung-soo, Founding Chair of HLEP/UNSGAB. Around 500 delegates participated in the special session.

Dr. Keizrul Bin Abdullah, Chairperson of NARBO saw the Crown Prince of Japan at the reception on 5 March and exchanged the views on water and introduced NARBO. Dr. Keizrul also invited to the luncheon meeting organized by Mr. BAN Ki-moon, Secretary-General of the United States on 6 March and exchanged views with water

experts around the world. Dr. Keizrul highly contributed to add value of NARBO in the world.

Mr. Tadashige Kawasaki, NARBO Secretariat and JWA served as one of the temporary secretariat of the UNSGAB and engaged in the preparation work of the special session, especially side event and luncheon meetings. These experiences should be contributed to future NARBO activities.



The Crown Prince of Japan and Dr. Abdullah
at reception on 5 March 2013

4) High-Level International Conference on Water Cooperation

a) Outline of the Conference

The UN General Assembly recognized the necessity of solving the issues of effective freshwater and declared 2013 the International Year of Water Cooperation through the Resolution 65/154 accepted by a consensus on 20 December 2010. The Resolution also includes convening the High-level International Conference on Water Cooperation. The Government of the Republic of Tajikistan has coped with the issues on water cooperation.

Based on this background, the Government of the Republic of Tajikistan is pleased to host the High-level International

Conference on Water Cooperation from 20 to 21 August 2013 in Dushanbe, the capital city of the country.

The Conference was convened to discuss improvement of water cooperation, especially in a transboundary level, through advocating the successful policies and best practices, wider public participation, encouragement of policy makers to promote water cooperation at all levels for contribution to achieve the internationally agreed goals on water. In addition, it was an opportunity to discuss and develop new measures aimed to accelerate the efforts on achievement of MDGs and recommendations for further actions after 2015 including contribution to development of SDGs related with water. Approximately 900 delegates from over 70 countries have participated in the conference. H.E. Mr. Emomali Rakhmon offered opening remarks and welcomed the delegates and told that 'Tajikistan has always been in favor of mutually beneficial cooperation and good neighborly relations.



Photo of opening event on 20 August 2013 at
Dushanbe, Tajikistan

We understand clearly that only civilized cooperation and political will can ensure for all of us a progress in this direction. Tajikistan is completely ready for such cooperation'. Afterwards, the President of the 68th session of the UN General Assembly, H.E. Mr. John

Ashe recited the message by the UN Secretary-General, H.E. Mr. Ban Ki-moon. Moreover, the UN Under-Secretary General, H.E. Mr. Wu Hongbo, Prime Minister of Thailand, H.E. Ms. Yingluck Shinawatra, Prime Minister of Kyrgyzstan, H.E. Mr. Jantoro Satybaldyev, Prime Minister of Mozambique, H.E. Mr. Alberto Vaquina, UNESCO Director General, Ms. Irina Bokova, UN Under-Secretary-General, Mr. Rebeca Grynspan, Special Representative of the World Bank, Mr. Mahmud Muhidin, President of WWC, Mr. Benedito Braga, and the President of organization "Women for Water Partnership", Ms. Alice Bouman-Dentener have spoken at the plenary session of the Conference.

At the end of the conference, the Dushanbe Declaration was released as a result of the conference.

b) NARBO's Activities

i) Special Session on Water and Disaster

"Special Session on Water and Disasters" was organized by ICHARM, NARBO, Asia Pacific Water Forum (APWF), and HELP as one of the special focus events of the High-Level International Conference on Water Cooperation on 20 August 2013.

Following the opening remarks by Mr. Ravi Narayanan, Chair of the APWF Governing Council, and Dr. Keizrul Bin Abdullah, Chairperson of NARBO, the statement by H.E. Mr. John Ashe, President of the 68th Session of the UN General Assembly, was delivered by H.E. Dr. Paulette Bethel, Chef de Cabinet of the President Elect on his behalf.

At the latter half of the session, the High Panel Discussion with nine ambassadors was conducted and discussed on their

countries' experiences in addressing water and disasters, and what issues on water and disasters should be discussed in the future UN General Assembly.



Photo of the special session on water and disasters on 20 August 2013 at Dushanbe, Tajikistan

As a result of the discussion, the following points were agreed.

- Water related disasters to be addressed include not only floods and droughts but also degradation of water quality, including water pollution and acidification
- Water related disasters and their linkages with socioeconomic issues and development. Disasters are costly and often take away development gains.
- Water and disasters to be addressed in post 2015 development agenda and post Hyogo Framework. These processes need to be closely related.
- Infrastructure and adaptable technologies, including information sharing, prediction and forecasting
- Dealing with uncertainties and variability, climate change impacts and adaptation
- Reducing vulnerability through enhancement of governance systems, and capacity building for effective response, preparedness and mitigation mechanisms
- Financing water and disasters effectively through innovative mechanisms, including

effective utilization of Public Private Partnerships

- Focused discussion on vulnerable countries such as small island states
- Disaster prevention for conflict resolution

Result of the session is incorporated into the Dushanbe Declaration on 'We also underline the importance of dialogue on water and disasters at various levels' and contributed to the conference.

ii) High Level Panel on Water Cooperation and Sectoral Synergies

IWRM is recognized globally as an approach to managing water issues holistically. However, interest of each water sectors is different in general, and opportunities for synergistic investments and operations are limited in many river basins. IWRM offers a set of principles and processes to facilitate decision-making, planning and investment at all levels. New approaches to water, food and energy based on a better understanding and more systematic recognition has the potential to improve the production and sustainable management. Policy makers and water sector stakeholders need to enhance policy coherence, adjust existing legal and institutional arrangements and establish legal frameworks to maximize benefits and synergies across sectors.

Based on these backgrounds and the message from the Bonn 2011 Conference which discussed 'Water, Energy and Food Security Nexus – Solutions for the Green Economy, the post-2015 development agenda and the SDGs', the session discussed the consequences of competition for water among different sectors and the opportunities for water cooperation and

synergetic approaches for optimal benefits.



Photo of the HLP on Water Cooperation and Sectoral Synergies on 21 August 2013

The session was organized by ADB and United Nations Economic and Social Commission for Asia and the Pacific, and chaired by Mr. Ian Makin, ADB. Following the opening remarks, Dr. Ania Grobicki, Executive Secretary offered the presentation about activities of GWP. Intensive discussion on leadership, water & green economy, groundwater climate change based on the stakeholder participation in IWRM process were conducted among panelists and participants.

Dr. Keizrul bin Abdullah talked about how to increase the attention to water of political leaders based on his experiences. In addition, he insisted that we should invite political leaders to the field and come on board to water sector together and let them see what is happening in the fields. He also stressed the necessity of involvement of private sector in implementation of IWRM, especially in funding. Mr. Ravi Narayanan, Chairperson, Asia-Pacific Water Summit (APWS) told the importance of Political commitment and introduced the summary of the 2nd APWS and insisted to be more focused on groundwater on IWRM.

We recognized that water security faces

the challenges of disasters, declines of natural resources and so on, and challenges of Asia such as i) Water quality, ii) Implementation of act, iii) Clean freshwater resources, iv) Resilience to disaster and v) Transboundary.

At the end of the session, we summarized the session by introducing the message consists of i) Water is renewable, but many obstacles, ii) Necessity of sustainable management and iii) Water coverage for all.

c) Result & Way Forward

Through the conference, necessity of water cooperation, water security, human and economic development and addressing issues of water and disasters is well received, and much actions and projects will be seen as a result of the international conference. Furthermore, IWRM is expected to contribute to the 2015 Post MDGs agenda by identifying the clear target.

Thanks to the contribution of the Chairperson of NARBO, NARBO contributed the discussions and making the contents of the 'Dushanbe Declaration' and influenced to the discussions among the water society.

However, how to implement what we agreed is not clear. Therefore, as a network of the practitioner of IWRM, NARBO will improve IWRM by considering these messages and fill the gaps of viewpoints between politicians and researchers and practitioners for achieving water security by delivering the actual situation of practitioners at ground level.

5) 2nd Meeting of OECD Water Governance Initiative

a) What is OECD Water Governance Initiative ?

The OECD (Organization for Economic Co-operation and Development) Water Governance Initiative is an international multi-stakeholder network of members from the public, private and non-for-profit sectors gathering twice a year to share good practices in support of better governance in the water sector, and it was officially launched in March 2013. Objective of OECD Water Governance Initiative is to i) Provide a multi-stakeholder technical platform to share knowledge, experience and best practices on water governance across levels of government, ii) Advise governments in taking the needed steps for effective water reforms through peer-to-peer dialogue and stakeholder engagement across public, private and non-profit sectors, and iii) Provide a consultation mechanism to raise the profile of governance in the Global Water Agenda. The 1st phase activity focused on the launch of the document about water governance at the 7th WWF which will be held in Korea in April 2015. OECD has proposed to develop 'Water Governance Indicator' supported by case studies not only in OECD member countries but also non-OECD member countries.

NARBO received an invitation letter which asking for cooperation to OECD Water Governance Initiative in March 2013 and sent an endorsement letter to OECD in May 2013.

b) What was discussed at the 2nd meeting and ways forward.

Dr. Keizrul bin Abdullah, Chairperson of NARBO and Mr. Tadashige Kawasaki, secretariat of NARBO in JWA joined the 2nd meeting which was held at the Headquarters of OECD in Paris, France from 2 to 3

November 2013. Approximately over hundred participants, let's say stakeholders OECD Water Governance Initiative from government, international organization, river basin authority and NGO joined. OECD explained the background and roadmap of OECD Water Governance Initiative for 7th WWF. Each participant told about water governance by viewpoint of each position. NARBO introduced how we've contributed to improve IWRM at river basin level in Asia and useful tools to improve IWRM at field level such as RBO Performance Benchmarking.

OECD proposed to develop 'Water Governance Indicator' in 4 themes such as i) Stakeholder engagement, ii) Performance of water and sanitation, iii) Basin governance and iv) Integrity and transparency by dividing to 4 groups, and each group has a lead organization appointed by OECD. NARBO became a member of group 1 and 3 to contribute to the discussion and development of indicator by offering NARBO and Asian experience on IWRM.



Dr. keizrul who expressed his view

Meeting of OECD Water Governance Initiative will be held twice a year to develop water governance indicator which was held at the 7th WWF in April 2015. Teleconference and group meeting were held to boost the

development work by each group. NARBO was expected to contribute by sharing the viewpoint of practitioners at field to be more useful and add value to OECD. 14 indicators of RBO Performance Benchmarking will be introduced to OECD one of the practical indicators on IWRM and to be incorporated and referred to OECD Water Governance Initiative.

6) A SPECIAL EVENT ON “Taking Stock of the International Year of Water Cooperation and Advancing the Global Water Agenda after Post-2015”

a) Background of the event

The International Year of Water Cooperation 2013, declared by UN General Assembly resolution, was a landmark year for the water and sanitation for community. A series of High-Level Events were organized to raise awareness of the potential and challenges for water cooperation, facilitate dialogue among practitioners, and promote innovative solutions for nurturing water cooperation, among them the High-Level Interactive Dialogue of the 67th Session of UN General Assembly and the official World Water Day Event held in the Hague on 22 March 2013 and the High-Level International Conference held in Tajikistan in August 2013.

In addition, a number of open and inclusive consultations were also organized during that year, including the “Post-2015 Global Thematic Consultation on Water”. All the stakeholders from around the world were encouraged to take stock of the lessons learned from the implementation of the MDGs and to indicate the key global water-related challenges to inform the post-2015 development framework.

Participants suggested that the future water agenda should seek to achieve MDGs and other existing commitments but also to build on them and go beyond.

The UN Special Thematic Session on Water and Disasters which was held in March 2013 at the headquarters of the UN highlighted the importance of this emerging issue on water and disasters. Most recently, the UN Secretary General has appointed Mr. Han Seung-soo, Former Prime Minister of the Republic of Korea as Special Envoy for Disaster Risk Reduction and Water.

As the International Decade for Action “Water for Life”, 2005-2015, was coming to an end, A SPECIAL EVENT ON “Taking Stock of the International Year of Water Cooperation and Advancing the Global Water Agenda after Post-2015” was held on 11 March 2014 at Trusteeship Council Chamber, UN Headquarters, New York to take stock of the achievements and lessons learned from the International Year of Water Cooperation, 2013 and to discuss how to carry the global water agenda forward among the Permanent Missions of Finland, Hungary, Switzerland, Tajikistan and Thailand, the members of the Steering Committee of the Water Friends Group and the UN-Water which is the UN inter-agency coordination mechanism for all freshwater and sanitation related matters.

The Special event was attended by more than 70 representatives of the Permanent Missions to the UN, international organizations and national governments.

b) What was discussed at the events

During the opening session, H.E. Mr. Sirodjidin Aslov, Minister of Foreign Affairs of the Republic of Tajikistan welcomed the delegates and stated the rationale of the

events by introducing the result of the High-level International Conference on Water Cooperation which was held in August 2013 in Dushanbe, Tajikistan. H.E. Mr. Sirodjidin Aslov stressed that Water Resources Management should be streamlined, broad framework of water cooperation at all levels are needed and water policy should be decided based on the scientific data.

Following the speech by H.E. Mrs. Simona Miculescu, on behalf of H.E. Mr. John W. Ashe, President of the 68th session of the General Assembly, the statements about water were offered by H.E. Ms. Irina Bokova, Director-General of the UNESCO, H.E. Mr. Katsuhiko Takahashi, Minister, Permanent Mission of Japan to the United Nations and Mr. Nikhil Seth, Director for Sustainable Development, United Nations Department of Economic and Social Affairs.

Following the opening session, Roundtable 1 was conducted and moderated by Mr. Jerome Deli Priscoli, Senior Advisor of US Army Corps of Engineers’ Institute for Water Resources with the discussion on ‘the International Year of Water Cooperation and Beyond’ As a keynote presentation, Mr. Siegfried Demuth, UNESCO stressed the importance of water for progress across many sectors such as from education to health, from food security to risk reduction and talked about the result of the International Year of Water Cooperation by showing a single, focused goal, to advance water security for poverty eradication and sustainable development.

After the keynote speech, 3 panelists talked about lessons learnt from the experiences of these years and stressed the necessity of looking ahead to the Post 2015

agenda. Following the statement of the panelists, consideration of the issues of gender on water and necessity of enhancing the understanding of the issues of transboundary rivers and lakes were raised from the floor.

At the conclusion of the Roundtable 1, the moderator stressed the necessity of i) increasing capacity of negotiation, ii) financing, iii) political will and institutional change in implementation of IWRM and iv) role of women and youth in disaster risk reduction.

In the Roundtable 2 session, discussed were 'Sharing lessons and experiences on water and disasters' by answering to two questions such as i) 'What are your important lessons/experiences on water and disasters?' and ii) 'Do you wish the international organization (i.e. UN General Assembly) to continue discussions on water and disasters? If yes, what decisions/discussion on water and disasters do you expect at global (the UN) level?' by 6 panelists. At first, moderator explained the background of the discussion by introducing what were discussed at the UN Special Thematic Sessions on Water and Disasters held on 6 March 2013 at the Headquarter of the UN and special side event of water and disasters at the High Level International Conference on Water Cooperation which was held in August 2013 in Tajikistan. The panelists answered to the questions and stressed the following:

- Now, Abnormal is now becoming normal.
- Necessity of risk assessment, preparation for the worst case scenario and development of institutional arrangement
- Creation of the management framework to

support Disaster Risk Management

- Cooperate with all levels
- Outside of 'Water Box'

From the floor, the following comments were made: i) consideration to the water scarcity such as too little water and drought, ii) importance of the issues of pollution and iii) good infrastructure, good management and governance of water and relationship with human activities and risk.

Regarding the second question such as 'Do you wish the international organization (i.e. UN General Assembly) to continue discussions on water and disasters? If yes, what decisions/discussions on water and disasters do you expect at global (the UN) level?', all panelist answered 'Yes' and agreed to the continuous discussions at the UN, especially at the General Assembly. Panelist also agreed that we should need more water discussions to explore going 'outside of water box'.

At the end of the events, Mr. Sultom Rahimov, First Deputy Minister of Energy and Water Resources of Tajikistan concluded the special event and stressed the importance of water cooperation and disaster risk reduction, and necessity of more platforms for discussions to make decisions and actions, and the event was completed successfully.

c) NARBO's contribution

Dr. Keizrul Bin Abdullah, Chair, NARBO was invited to the event as one of the panelist of the Roundtable 2. Dr. Keizrul introduced lessons learnt in Asia and told i) Water disasters are the major concern in Asia, ii) Impact/Cost increases with the passage of time, iii) Impact beyond national borders, and iv) Preparedness can mitigate

impact by introducing what have happened in Asia such as Thai flood in 2011 and the big cyclones which hit India. Dr. Keizrul, stressed that 'Abnormal will be new normal' and warned of the current situation at the conclusion of his presentation and contributed to the panel discussion. In addition, Mr. Tadashige Kawasaki, NARBO Secretariat in JWA also contributed to the management of the Roundtable 2 as one of the temporary staff of secretariat for HELP which was established in June 2013 from the UNSGAB.

d) Way forward

NARBO organized the sessions to discuss IWRM and disasters at the Side Event of the UN Special Sessions on Water and Disasters in March 2013 at the Headquarters of the UN and contributed to raising awareness among international society and member countries of the UN. In addition, NARBO's 3 years Action Program which was approved in the 5th General Meeting of NARBO in 2013 indicated that NARBO cooperated to the actions for discussions on 'Water and Disasters'. Dr. Keizrul, Chairperson of NARBO was one of the members of HELP and contributed to the discussions at HELP. NARBO will continuously contribute to the discussions on water and disasters based on the action program from the practitioner's point of view at the field level and IWRM.



Photo of a Special event on 11 March 2014

7) 3rd Meeting of OECD Water Governance Initiative

The 3rd Meeting of the OECD Water Governance Initiative was held from 28 to 29 April 2014, at Casa de América, Madrid, Spain.

The meeting was held under the auspices of the Spanish authorities. The meeting gathered more than 90 members, and 80 web-based observers. Delegates peer-reviewed OECD water governance reports in Jordan and Tunisia, discussed post-2015 water related targets and the milestones to the 7th WWF, commented on draft principles and indicators on water governance, and exchanged lessons from water reforms in Spain, Peru, France, Ethiopia, Mozambique, and El Salvador.

Dr. Keizrul bin Abdullah, Chairperson of NARBO, participated and contributed as follows.

NARBO shared some concerns regarding the little attention water governance has received in the SDGs discussions thus far and advised that the Water Governance Initiative help advocate for a water goal as well as contribute to making it applicable outside the water sector.

NARBO shared some lessons from its RBO Performance Benchmarking and presented the 5 critical performance areas that were selected: mission, stakeholders, learning and growth, internal business processes and financing. A set of 14 indicators was developed and has helped building convergence, commitment and co-operation, and facilitating networking across RBOs.

JWA also advised to secure regular

evaluation such as yearly peer-reviews of IWRM river basins.

Regarding the development of the Indicators, NARBO committed to improve the accuracy of the suggested water governance indicators by pilot-testing them across Asian RBOs.

8) 4th Meeting of OECD Water Governance Initiative

The 4th Meeting of the OECD Water Governance Initiative was held from 24 to 25 November 2014, Paris, France.

The 4th meeting was opened by OECD Secretary General, Angel Gurría, and WWC President, Benedito Braga. It gathered around 115 delegates to discuss contributions to the Global Water Agenda and peer-reviewed analytical work on water governance. The meeting also discussed the first draft of OECD Principles on Water Governance and working group sessions allowed to brainstorm on water governance indicators. A tour de table provided experience-sharing on recent water governance reforms, initiatives and events.

Dr. Keizrul Bin Abdullah, Chairperson of NARBO, participated and contributed as follows.

NARBO presented the highlights of the Manila Declaration which was signed on 20 November 2014, for NARBO's 10th anniversary. For the occasion, an event was organized in Manila to introduce NARBO's former Chairperson, Dr. Basuki Hadimoeljono, Director-General for water resources at the Ministry of Public Works of Indonesia and to look back at NARBO's achievements since its inception (e.g. training programmes, benchmarking,

knowledge hubs, etc.). Looking at the future, NARBO will focus on strengthening water governance frameworks, in particular in far-East Asia; improving complementarities with other sectors; and sharing experiences between Asia and other regions. The event closed with the Manila Declaration that includes key elements on the contribution of NARBO to the global water community, in particular the Water Governance Initiative.



Dr. Keizrul who delivered a presentation regarding 'Manila Declaration'

9) 7th WWF

a) Outline of this forum

7th WWF was held in Daegu and Gyeongju, Republic of Korea from 12 to 17 April 2015. The Hosts were WWC and Government of Republic of Korea.

7th WWF is the world largest conference held once every 3 years among world water-related people to discuss the water-related issues on a global scale. This time Approximately 400 sessions were held under the four processes of "Thematic", "Political", "Regional", "and Science and Technology " matters. Around 40,000 people

from some 170 countries joined the meetings. Participants were International organizations, respective national governments, local governments, researchers, citizen groups, other entities.

NARBO organized 2 sessions in this forum.

b) NARBO's contribution

(i) Session on IWRM in Regional Process

It is widely known that with recent rapid increasing demand from agricultural, urban, and industrial sector, water distribution have been a crucial theme. In addition, water related disasters caused by typhoons and droughts have been occurring quite often. Moreover, fresh water supply, sanitation and environment of which waste water management and water quality management are typical examples, are also problems to be solved at river basin level in Asia and the Pacific. During this decade, each RBO has tackled with these issues.

To deal with the above issues, NARBO held the regional session named "SMART Implementation of IWRM / Future IWRM in Asia-Pacific What we have achieved and an outlook by focusing on the river basin level" in Hwabaek International Convention Center (HICO), Gyeongju, ROK on 13 April because NARBO was asked from APWF and Korea Water Forum to become one of the session organizers with UNESCO and Economic and Social Commission for Asia and the Pacific in 7th WWF in Republic of Korea. This session aimed at reviewing past achievement and discussing future directions on IWRM in the Asia-Pacific by sharing knowledge and experiences of participants achieved through their activities based on their footprints.

In the afternoon of 13 April in Gyeongju,

though it was a cold and rainy day, the meeting room in HICO where NARBO held a regional session was filled with passionate heat and excitement of about 70 participants. The session was started by emcee of this session, Dr. Kentaro Kido, the Vice Secretary General of NARBO and the Director of International Affairs Division, JWA.

Opening remarks was given by Mr. Choi Byoung Seub, the Vice President of K-water. Mr. Choi explained K-water had contributed to the establishment of IWRM in ROK with their technology and indicated that he hoped this session would be a good opportunity for all the participants to share various experiences and to be a milestone to resolve water issues.

H.E. Dr. Basuki Hadimoeljono, the Minister of Public Works and Housing, Republic of Indonesia and ex-Chairperson of NARBO, kindly delivered keynote address on IWRM in Indonesia. He introduced Water Resources Law in Indonesia which consisted of four dimensions: Conservation, Utilization, Potential Control and Information System. He also expressed his gratitude to NARBO for continuous networking activities and awarded his successor, Dr. Keizrul Bin Abdullah, incumbent Chairperson of NARBO, and Dr. Muhammad Amron, current Senior Advisor of NARBO. Dr. Basuki presented commemorative gift to them as a token of contribution. Following these speeches, various examples of implementation of IWRM in Asia were introduced. Mr. Jongjin Lee, the General Manager in Water operational Center of K-water gave presentation on i) Current situation, ii) History, and iii) Future of the of water resources management in Republic of Korea.

Dr. Kido introduced “NARBO IWRM Indicator” and explained some RBOs in Asia had tried their efforts for the progress of water resources management by using this. IWRM indicator was made by NARBO for the organizations which were facing difficulty in implementing IWRM and he emphasized this would be useful to measure how to proceed with IWRM spiral more concretely and easily. All the participants paid attention to his presentation and some took photos of this presentation.

| Score | Contents |
|-------|---|
| 0 | Not recognizing pressing issues or needs |
| 1 | Recognizing pressing issues or needs |
| 2 | Identifying pressing issues or needs |
| 3 | Conceptualizing the problem itself and formulating possible solutions |
| 4 | Coordinating among stakeholders in order to reach an agreement |
| 5 | Planning among stakeholders in order to reach an agreement |
| 6 | Reaching an agreement |
| 7 | Implementing the plan |
| 8 | Monitoring the plan and its outcome |
| 9 | Evaluating the plan and its outcome |

IWRM Indicator

After finishing these presentations, the panel discussion was held with Dr. Keizrul Bin Abdullah, the chairperson of NARBO as a moderator. The attending panelists were, as follows:

- Ms. Dolores Hipolito, Project Manager of Flood Control Office, Department of Public Works and Highways, the Philippines
- Dr. Arun Shrestha, Regional Program Manager of River Basin, International Centre for Integrated Mountain Development
- Mr. Vadim Sokolov, Deputy Director of Scientific Information Center/Regional Coordinator, GWP Central Asia and Caucasus
- Ms. Priyanka Dissanayake, Regional Coordinator, GWP-South Asia
- Prof. Guan Yiqing Hohai University / GWP, China

Abstract of key messages on Panel discussion is as follows:

- Ms. Hipolito reported current situation on IWRM implementation in the Philippines. She said that there were many challenges for the implementation of water management at ground level due to lack of standardized approach.
- Dr. Arun Shrestha expressed that water resources management in transboundary river basins was of highly importance, effective especially for coordination with different stakeholders. Adding to this, he also introduced its activities of technical cooperation on IWRM among Government, NGOs, and Private sector with touching upon the case study of International Centre for Integrated Mountain Development.
- Mr. Vadim Sokolov told as some people didn't recognize what IWRM was in this area, i) bottom-up as well as top-down approach is more effective, ii) linkage of stakeholders, making use of combination of bottom-up and top-down approach was necessary to implement IWRM. He also suggested the proper law to coordinate with stakeholders be put in place.
- Ms. Priyanka Dissayanake introduced a three-point lesson learnt from the case study of Mahaweli River Basin in Sri Lanka such as i) to improve water security through IWRM, ii) to reduce overuse and inequitable sharing of water, and iii) to introduce better water management practices, application of modern irrigation technologies. She also mentioned that establishing inter-agency cooperation is mandate to promote effective water resource management in the transboundary river basin.

- Prof. Guan Yiqing showed the case of Huai River Basin in People's Republic of China and expressed his opinion that it ought to be addressed i) Water Demand Management, ii) Waste Water Management, iii) Capacity building, iv) Stakeholder Participation, and v) Water Diversify. He also commented that Water Diversity would be the key resilience to cope with climate change and pressure for water use.

Some participants asked questions on various case studies and exchanged opinions on respective cases.

Lastly, Dr. Keizrul summarized these discussions and the participants agreed to send strong positive messages of this session as follows:

- i) Re-affirm that IWRM is an adaptive management process that adopts an inclusive approach bringing stakeholders together to increase water security and improve water governance,
- ii) Re-acknowledge that the Asia-Pacific region has ample experience and knowledge and innovative technology on IWRM to be shared,
- iii) Endeavor to make more opportunities of sharing experience and knowledge and enhance networking in the region to bridge the gaps in a smart way,
- iv) Contribute to achievement of international goals and target such as SDGs on water and IWRM and resolve to take follow-up actions, and
- v) Endeavor to improve our engagement with donors, UN-agencies, civil society, private sector, decision-makers and with actors outside the water sector to ensure that water is integrated into key socio-economic development decisions.

These messages were also reported in the synthesis session of regional process in Asia and the Pacific on 15 April. We, NARBO, will continue working to attain these messages as above.

(ii) A Decade of Achievements (2004-2014) debuted

"A Decade of Achievements (2004-2014)" was debuted at a session titled "Knowledgebase for IWRM" convened by NARBO on April 14 at 7th WWF in Daegu, South Korea. NARBO Secretariat has taken an initiative to prepare this booklet in collaboration with the Steering Committee (SC) and other NARBO members since April 2014 and completed it March 2015. It describes a summary of the 10-year achievements and the future direction of NARBO activities. We, the Secretariat, express sincere thanks for the SC and NARBO members' supports.

At the session, firstly Mr. Kamimura, NARBO Secretary General gave a keynote talk and secondly a video was aired following the footprints of 10-year NARBO activities.



Mr. Kamimura who gave a keynote talk

After these, Dr. Keizrul Bin Abdullah, NARBO Chairperson and Mr. Kamimura declared the debut of the booklet in a great way by clicking to the website of it. Following this event, Dr. Thomas Panella, Country

Director, Afghanistan Resident Mission, ADB delivered a presentation about an outline of the booklet and IWRM promotions implemented by ADB.

Finally, a panel discussion titled “Knowledgebase for IWRM” chaired by Dr. Keizrul was held. There were many participants in the session in spite of its late hour opening and a lively exchange of questions and answers between the floor and the panelists was made. As a conclusion, it was confirmed that the key point to develop the IWRM was to share the knowledge and the data among the stakeholders concerning water resources. This showed that people in the world were highly interested in the knowledge sharing in the course of dissemination of the IWRM and had lots of expectations toward the future NARBO activities in this respect. We highly appreciate the participants’ contributions to the successful session.



Dr. Keizrul who chaired a panel discussion

10) 5th Meeting of OECD Water Governance Initiative

NARBO has been contributing to OECD Water Governance Initiative for over two years by offering its experiences on IWRM in the field. OECD launched “Stakeholder Engagement for Inclusive Water

Governance” including the indicators on Water Governance by focusing on stakeholder engagement as one of the achievements of its activities at 7th WWF. NARBO also contributed to the success of OECD’s session at 7th WWF as one of the panelists at the session.

Based on these backgrounds, this meeting was held in Edinburgh, Scotland from 26 to 27 May 2015, and approximately 70 members of Water Governance Initiative joined. The meeting discussed the follow-up on the outcome of the OECD’s sessions at 7WWF and the scoping note on Water Governance Indicators.

The participants warmly welcomed the approval of OECD Principles on Water Governance by the Regional Development Policy Committee in OECD and the Ministers at the OECD Ministerial Council Meeting. The Principle provides ‘a framework to understand whether water governance systems are performing optimally and help to adjust them where necessary and has been developed and discussed through a bottom-up and multi-stakeholder process by members of Water Governance Initiative. Importance of the viewpoint of basin level and importance of coordination among all stakeholders which had been strongly recommended by NARBO have been mentioned on the Principles. In this point, NARBO highly contributed to develop the Principles by offering its experiences in the field. The participants agreed to support the implementation of WATER GOVERNANCE INITIATIVE as a next step.

NARBO made a presentation on how to use Water Governance Indicator by considering the result of the discussions at

the sessions of 7th WWF and showed a clear practical method.

NARBO presented its benchmarking system for river basin organizations. The exercise relies on 4 steps: i) assessing the situation using IWRM indicators; ii) evaluating the quality of IWRM frameworks looking at various aspects such as stakeholder engagement; iii) applying existing guidelines (e.g. International Network of Basin Organizations/GWP's handbooks, UNESCO's IWRM guideline, etc.) supporting improvement; and iv) developing a concrete tailored program fit to each basin to improve the institutional framework and financial arrangements. NARBO' Smart Implementation of IWRM concept was presented as part of the Asia-Pacific process of 7th WWF.

It was welcomed by the participants, and NARBO was recognized as a regional champion in the Asia-Pacific region to implement Water Governance Initiative, especially at field level.

NARBO stands ready to be a regional champion in the Asia-Pacific and make the Implementation Roadmap happen within its network of basin practitioners.



The photo of 5th meeting of

OECD Water Governance Initiative

NARBO will contribute to the discussions

continuously as one of the biggest contributors to Water Governance Initiative. Dissemination and application of Water Governance Initiative to the field by bridging the knowledge gaps will be held through NARBO activities in the future. More contributions of member organizations of NARBO are highly appreciated.

11) 2nd UN Special Thematic Session on Water and Disasters

The 1st Special Thematic Session on Water and Disasters was held in March 2013 and contributed to promote understanding the necessity of international discussion on water and disasters and to recognize water and disasters as one of the most important and pressing issues to be urgently addressed among the highest levels and the international community.

In September 2015, 17 goals with 169 targets were approved as SDGs, and we can see some targets on disasters in SDGs. International discussions to achieve the goals and targets have just started. It was high time to accelerate our efforts to share our experiences and lessons learned, strengthen regional coordination and collaboration and make progress towards creating a better-prepared and resilient society.

Based on these backgrounds, the 2nd UN Special Thematic Session on Water and Disasters was convened by the UN Secretary-General, and fruitful discussions were held by Ministers in charge of water-related disasters, specialists in international organizations and NGOs.

Followed by the opening remarks by the Secretary-General, His Imperial Highness

the Crown Prince of Japan made a speech on 'Quest for better relations between people and water' and emphasized that 'Learning from good practices can be a short cut to better water management' and the importance of making international opportunities to learn from each other to solve water problems.

The 2nd Special Session consisted of the High-level Panel Debate, Major Group Panel and Science Technology Panel. H.E. Dr. Basuki Hadimoeljono, Minister, Department of Public Works and Public Housing, Republic of Indonesia and Senior Advisor of NARBO offered presentation, and Dr. Keizrul Bin Abdullah joined the High-level panel discussion of the 1st session. Dr. Basuki introduced the strategy and policy on water resources management with water-related disasters in Indonesia and stressed the importance of working in a network, where each party is having their own rights and responsibilities. Dr. Keizrul explained the situation of Asia by focusing on water-related disasters and underlined the necessity of innovative solutions, adaptation/flexible solutions, adoption of River Basin approach and building resilience and reducing risk and making more opportunities of sharing knowledge and experiences.



Dr. keizrul who delivered a presentation

Regarding innovation, Dr. Toshio Koike, Prof. of the University of Tokyo and Director, ICHARM moderated the Science Technology Panel and summarized 'Key Directions and Actions' such as i) Improve data collection, sharing, integration and dissemination; ii) Advance inter-disciplinary and trans-disciplinary research on flood and drought risk reduction; and iii) Promote regional cooperation by mobilizing existing international initiatives for supporting local/national efforts.

The special session was completed successfully. Dr. Han, Seung-soo, Special Envoy of the UN Secretary-General for Disaster Risk Reduction and Water, Former Prime Minister of the Republic of Korea and Chair of HELP summarized that the session recognized that addressing the issue of "water and disasters" was critical element and the core of achieving sustainable development. The participants of the Special Session shared the important common understanding and recommendations including the necessity of continuous discussion on water and disasters and the expectations to the role of UN.

On 20 November 2015, the Closing Ceremony of UNSGAB was held at UN Headquarters. His Imperial Highness the Crown Prince of Japan, Honorable President of UNSGAB and His Royal Highness, the former Prince of Orange, Former Chair of UNSGAB offered impressive speeches at the opening session. As concrete achievements of UNSGAB, final report named "The UNSGAB Journey" was released at the ceremony.

NARBO has contributed to the activities of UNSGAB through such activity as UNSGAB

Strategic Dialogues. Chairperson of NARBO joined the closing ceremony and dialogue meeting and emphasized the importance of the view point of river basin and role of RBO on water resources management, and it was reflected at the panel discussions of the closing ceremony.

In this way, NARBO is contributing to the international discussions recently, and influence and value of NARBO has increased steadily among international organizations. As committed by 'Manila Declaration', NARBO has bridged the gaps between international discussions and the field of IWRM with support and contribution of member organizations.

IV. Contribution to discussion on Post-MDGs and Post-HFA

1) 1st Meeting of HELP

a) Outline of the 1st Meeting

1st HELP meeting was organized by HELP, Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan, Japan International Cooperation Agency (JICA) with other support organizations, and was chaired by Dr. Han Seung-soo, the Founding Chair of HELP and the Former Prime Minister of the Republic of Korea. At the meeting, HELP was officially established, and intensive discussion for concrete actions of HELP was made among representative of national governments, international organizations, civil society and private sector. Day 1 was the field visit to the Tohoku region where affected the Tsunami caused by Great East Japan Earthquake on 11 March 2011 and saw the situation of recovery work for enhancing the discussion of HELP activities. Day 2 was the meeting for discussion, and the meeting was

held at the Headquarters of MLIT on 4 June 2013. Around 40 representatives of governments and experts jointed the 1st meeting.

b) HELP and NARBO

NARBO contributed to the Special Session by organizing the Side Event of the Special Session on 5 March 2013. Discussions by the viewpoints of IWRM were made by experts, and we agreed the following points. Result of the discussion was reported to the Special Session on the following day.

6 Points were considered to address the issues on water and disasters by the viewpoint of IWRM.

- i) There are issues on too much water, too little water and too dirty water in the world.
- ii) Coordination among different level of government organizations dealing water is necessary.
- iii) Transition from top down approach to bottom up approach is needed to introduce participatory method about water governance.
- iv) Cooperation and development tools are needed.
- v) Investment to water is necessary.
- vi) Role of infrastructure to minimize the negative impact and affect of extreme event is needed. In addition, best mix of combination of structural and non-structural methods is also needed.

In addition to the discussion, NARBO joined HELP/UNSGAB meeting on 5 March 2013 and discussion for above mentioned discussion. As recognition of former useful and concrete activities on IWRM and contribution to the Special Session, Dr. Keizrul Bin Abdullah, Chairperson of NARBO was invited to the 1st HELP meeting as one

of the official members. Mr. Tadashige Kawasaki, NARBO secretariat in JWA was working for the 1st HELP meeting as one of the secretariat team and reported the discussions of the meeting.

c) Discussions at the 1st Meeting

The 1st meeting of HELP was held at the international conference room in the Headquarter of MLIT in Tokyo, and around 40 delegates of national government, international organization, private sector and experts on water and disasters joined. At first, Dr. Han Seung-soo, the Founding Chair of the HELP offered welcome remarks and told that the world need to respond to the issues on water and disasters immediately, and HELP needs to i) follow-up the Special Session for getting the resolution of the UN General Assembly to make the member states focused on this issue continuously, ii) create concrete target of disaster reduction at Post-MDGs and SDGs and iii) advance HELP action plan.

As a representative of MLIT, Mr. Shigeru Kikukawa, Vice Minister for Engineering Affairs of MLIT welcomed the participants and stressed the necessity of making target of disaster reduction in Post-MDGs and establishment of mechanism of discussion and sharing information on water and disasters with UN member states and international organizations. Mr. Kikukawa also stressed that Japan is ready to contribute to these international efforts.

Mr. Akihiko Tanaka, President of JICA also stated as a co-host organization of the meeting and stressed that investment for disaster risk reduction should be enhanced to establish sound development and paid off in the near future. Dr. Yordan Uzunov,

member of UNSGAB delivered the message of the acting chairperson of UNSGAB and stated that UNSGAB had unanimously agreed on the relationship between HELP and UNSGAB. H.E. Mr. Kittiratt Na Rang, Deputy Prime Minister and Minister of Finance, Kingdom of Thailand offered keynote lecture. He introduced the case study of Thailand flood in 1995 and 2011 as lessons learnt. According to his explanation, government of Thailand decided not to take any actions, although recommendations for investment to flood have been made by several institutions after the flood in 1995, and they had serious flood damage in 2011 more than what had been needed for investment. He stressed i) necessity of understanding the nature of water and disasters, ii) building capacity of community to support self-help measures, iii) ensuring non-structural measures as a part of no-regret measures, and so on. He also stated that the importance of balancing between excessive and deficient and confirmed that Thailand is ready to cooperate.

After the speeches, Mr. Kenzo Hiroki, Principal of ICHARM and Advisor of UNSGAB explained the history of UNSGAB and proposed strengthen of HELP into HELP and tentative actions of HELP. Following the discussion on it, Dr. Han Seung-soo confirmed the establishment of HELP, and HELP was officially established.

In the afternoon, intensive discussion about implementation of action by HELP was made. Members agreed actions should be implemented on i) promoting regular discussion on water and disasters in the UN, ii) Promoting Post-2015 Target on Disaster

Risk Reduction and iii) Advancing the agenda in HELP Action Plan. Dr. Keizrul Bin Abdullah, Chairperson of NARBO told that Action Plan of HELP should put more emphasis on capacity building and creating leadership at all levels, and NARBO commits to contribute to HELP by filling the gaps at local levels. In addition, Dr. Keizrul made a question to H.E. Mr. Kittiratt Na Rang about what is the best way to persuade politician about disaster risk reduction, and Mr. Na Rang answered that activities of APWS and HELP meeting would be useful to share the painful experiences and lessons learnt of flood in Thailand to other countries.

d) Way Forward

HELP meeting will be convened basically twice a year and operated by self financing. Secretariat of HELP will conduct surveillance to measure the progress of Hashimoto Action Plan II for making the concrete action plan of HELP.

e) Expectation to NARBO and NARBO's Strategy

NARBO Chairperson is an official member of HELP, and Chairperson committed that NARBO contribute to HELP by connecting the needs and gaps of local levels. According to the Action Program 2013-2015 which was approved at the 5th General Meeting, NARBO has already committed to contribute to HELP, and related activities will be conducted as part of NARBO in the near future. In this way, NARBO is playing an important role of the discussion in the international level, and contribution from member organization by offering useful case studies on water and disasters is highly expected, and NARBO secretariat assist it continuously. In addition, NARBO secretariat

shares the discussion at HELP and UN about water and disasters, Post-MDGs and Post-HFA with NARBO members.

2) 2nd Meeting of HELP

The Second Meeting of HELP was held on 2 December 2013 at the OECD Headquarters in Paris, France. The meeting was attended by more than 40 representatives of national governments, international organizations, civil society and private sector.



Dr. keizrul who introduced NARBO's actions

Dr. Keizrul bin Abdullah, Chairperson, NARBO, introduced NARBO's actions in the areas of water and disasters. He said that in terms of input into the HLEP Action Plan, NARBO has been undertaking actions under Action 11 and Action 14 of the Action Plan. He said that one of the problems is lack of ability at local levels to respond at times of disasters. In this respect, he said that it is important to build up capacity of NARBO's members that are RBOs.

3) 3rd Meeting of HELP

a) Outline of the 3rd HELP meeting

The 3rd Meeting of HELP was held on 27 May 2014 at the Stadhuis in Rotterdam, hosted by the Ministry of Infrastructure and the Environment of the Netherlands. More

than 40 participants from HELP member organizations representing national governments, international organizations, civil society and private sector joined the meeting. The meeting was chaired by HELP's Vice-Chair, H.E. Ms. Melanie Schultz van Haegen and discussed i) Membership of HELP, ii) HELP's Action Strategy and iii) Special Edition of Water Policy to be launched at 7th WWF. HELP members visited the Maeslant Storm Surge Barrier, one of the Delta Programs and the Noordwaard polder to see the situation of the river works of the Netherlands.



Photo of the 3rd HELP on 27 May 2014

b) NARBO's Contribution

Dr. Keizrul Bin Abdullah, Chairperson of NARBO is one of the members of the HELP. He attended the 3rd meeting and contributed to the discussion. Especially, at the session of the publication, NARBO made the presentation on its contribution to the publication and committed to offer case studies on water and disasters in Asia such as the Thailand flood in 2011, Super typhoon Haiyan 'Yolanda' and the SMART tunnel in Malaysia. Dr. Keizrul stressed that the publication should contain clear messages to decision makers, and indicators for measuring the progress of water-related disaster management. He also stressed that

after publication it was important to promote and support the implementation of the messages highlighted in the publication. NARBO's proposals and recommendations were welcomed and incorporated into the future activities of HELP.



Photo of the 3rd HELP on 28 May 2014 (Field Visit)

c) Result & Way Forward

The meeting was a very useful opportunity to discuss the draft policy and contents of the publications which would be launched at the 7th WWF in April 2015. NARBO committed to develop the publication by offering case studies of NARBO member countries as a representative of Asia. Therefore, NARBO secretariat will ask member organizations to offer notable case studies on water and disasters soon. Proactive contributions from member organization will be much appreciated.

4) 4th Meeting of HELP

The 4th meeting of HELP was held on 17 October 2014 at St. Regis Hotel in Washington D.C., hosted by the US Army Corps of Engineers. The meeting was attended by about 40 participants from HELP member organizations representing national governments, international organizations, civil society and private sector.

Dr. Keizrul Bin Abdullah, Chairperson of NARBO, introduced 'Water Related Challenges in Asia - A Tale Of Three Cities (Bangkok, Kuala Lumpur, Metro Manila)'. He

concluded the following points as Asian Voices.

- Policy response has been modified to learning to live under extreme hydrological events and to adjust by building resilience capabilities in the communities and flood infrastructure.
- However, continuing urbanization of the catchments in and around the city had resulted in flood runoffs increasing many-fold, bringing with it challenges for the flood planners to come up with more innovative solutions, from both the engineering as well as the financial perspectives.
- It would be prohibitively costly to invest in the necessary defensive infrastructure to protect city from disasters. Policy responses have been to focus on improving disaster preparedness and management.



Photo of the 4th HELP on 17 October 2014

5) 5th Meeting of HELP

a) Outline of this meeting

The 5th meeting of HELP was held in Seoul, Korea on 9-10 April 2015 hosted by Ministry of Land, Infrastructure and Transport (MoLIT), Republic of Korea. The meeting was chaired by Dr. Han, Seung-soo, Chairperson of HELP. Approximately 60

delegates from HELP member organizations, national governments, international organizations, civil societies and NGOs joined, and intensive discussions were held.

Field visit to the Hang River Flood Control Office near Seoul to see how MoLIT tackles the flood by making use of Information and Communication Technology effectively was held on 1st day.

2nd day was a day of discussion. H.E. Mr. Yoo, Il-ho, MoLIT, Republic of Korea, offered opening remarks and welcomed the delegates and the members of HELP.

Followed by the opening remarks, H.E. Ms. Melanie Schultz van Haegen, Vice-Chair of HELP, Minister of Infrastructure and the Environment, Kingdom of the Netherlands made an address and introduced 'Delta Coalition' which was proposed by the Netherlands during the UN World Conference on Disaster Risk Reduction in Sendai'.

According to the agenda of the day 2, Mr. Kim, Young-mok, President of Korea International Cooperation Agency and Dr. David Korenfeld, Director-General and National Water Commission of Mexico were welcomed as new members of HELP in accordance with HELP's Terms of Reference.

After the approval of new members, MoLIT introduced National Strategy for Climate Change Adaptation and Water Management, and Korea Agency for Infrastructure Technology Advancement presented application of Research and development Projects in Science and Technology for Water-related Disaster Risk Reduction as good case studies and innovative activities on water and disaster in Korea.

One of the main agenda of the 5th HELP was the discussion on HELP's contribution at the 7th WWF. Preparation for issuing special edition of "Water Policy" on Water and Disasters has been led by Dr. Jerry Delli Priscoli, US Army Corps of Engineers to launch at the 7th WWF. Advanced copy of the publication has been distributed to the participants, and the discussions have been held on ways of dissemination and possibility of the development of the 2nd edition.

NARBO contributed to the special edition by offering case studies on water-related disasters in Malaysia, Philippines and Thailand as "A tale of three cities: water disaster policy responses in Bangkok, Kuala Lumpur and Metro Manila" by Dr. Keizrul Bin Abdullah, Chairperson of NARBO, Dr. Apichart Anukularnphai, Senior Advisor of NARBO and Ms. Dolora Nepomuceno, Vice-Chairperson of NARBO.

In addition to the discussion on publication, discussions were held on HELP's additional flagship activities and HELP's actions for Post-2015 Development Goals (MDGs) and follow-up of the UN World Conference on Disaster Risk Reduction which was held in March, 2015 in Sendai, Japan.

The meeting was successfully concluded, and contributions at the special session on Water and Disasters on 14 April 2015 at the 7th WWF were requested to the participants.

b) High Level Panel on Water and Disasters at the 7th WWF

High Level Panel on Water and Disasters was held as one of the special sessions of the 7th WWF on 14 April 2015 in Daegu, Korea. After the opening remarks by Dr. Han, Seung-Soo, the Special Envoy of the Secretary-General on Disaster Risk

Reduction and Water, Former Prime Minister of the Republic of Korea, Chairperson of HELP, and Member of the UNSGAB was released, followed by the Keynote Video Message by His Imperial Highness (HIH) Crown Prince of Japan. HIH stressed that historical record itself had contributed to the development of science and technology as the best lessons to prepare for next disasters. HIH closed the message by emphasizing that the wisdom and the will of people would bring us to a better water situation.

Followed by the keynote video message, the special edition of "Water Policy Journal" was launched by Mr. Steven Stockton, Director of Civil Works, US Army Corps of Engineers and Dr. Han, Seung-Soo. You can download it at the following website.

(<http://www.iwaponline.com/wp/017S1/S1/default.htm>)

To boost the international discussions on water and disasters, High-level Panel Discussion on Water and Disasters was held after the launch of the special publication. Dr. Keizrul bin Abdullah, Chairperson of NARBO was invited to the discussion as one of the panelists and contributed to the discussion.



Photo of HELP Special Session on 14 April, 2015

c) Way forward

NARBO committed the contribution to the

achievements of the international goals on IWRM such as, the POST-2015 Agenda (SDGs). Issue of Water and Disasters is one of the important components of IWRM, and this issue and concrete target on Water and Disasters are incorporated into SDGs as 'by 2030 significantly reduce the number of deaths and the number of affected people and decrease by y% the economic losses relative to Gross Domestic Product caused by disasters, including water-related disasters, with the focus on protecting the poor and the people in vulnerable situations'.

NARBO will continuously contribute to the international discussions on water and disasters by telling the voice of Asia as the practitioners in the field and bridge the gap between international discussions and actual practice in the fields through capacity development activities.

6) 6th Meeting of HELP

HELP has contributed to promoting awareness of the urgency and importance of adaptation to the impacts on water-related disasters caused by climate change and other global changes through discussions, publications and dissemination of position papers. Chairperson of NARBO is one of the members of HELP and has contributed to the discussion based on the experience of Asia and NARBO. As one of the achievements, special edition of "Water Policy" was launched at the 7th WWF in April 2015 in Korea, and we can see NARBO's contribution as 'A tale of three cities: water disaster policy responses in Bangkok, Kuala Lumpur and Metro Manila'. (<http://wp.iwaponline.com/content/17/S1/89>)

The 6th meeting of HELP was held at the

UN Headquarters, New York on 17 November 2015 and the attendees discussed HELP future actions to be taken by members such as Water and disasters and cities, and drought issue. In addition, intensive discussions on establishing a global process for regularly discussed Water and Disasters at the UN and development of indicators for the targets relevant to reducing water-related disaster were held.

Result of the discussions was reflected on the discussions at the 2nd UN Special Session on Water and Disasters which was held on 18 November 2015 through the speakers and panelists of each session.



Photo of the 6th HELP on 18 November 2015

V. NARBO General Meeting

5th NARBO General Meeting

a) Brief introduction

NARBO organized the 5th General Meeting, and its Study Visit and Technical Workshops in line with the 2nd APWS in Chiang Mai from 15 to 18 May 2013. These events were hosted by Thailand Water Resources Association (TWRA) and Metropolitan Waterworks Authority. More than 100 participants attended the meeting and workshops, and shared useful knowledge and experiences. On 18 May, NARBO welcomed four organizations from Myanmar, Pakistan, PR China, and Thailand.

The new Action Program and NARBO Charter were approved, and a new vice chairperson was introduced. After the completion of the General Meeting, NARBO contributed 2nd APWS entity as one of the key networks of IWRM in Asia. Thanks to the TWRA, Metropolitan Waterworks Authority, and all NARBO members including speakers, it was completed successfully. Secretariat of NARBO was convinced that the meeting and workshops were fruitful for not only all participants from NARBO member to the meeting but also all water-related practitioners and policy makers who attended the summit.

b) 5th General Meeting, and its Study Visit and Technical Workshops

(i) Study Visit (15 May 2013)

Visiting places have outstanding achievements in the Ping river basin management, sub-basin Mea Sa in northern Thailand, 20km from Chiang Mai city center to the north. River basin management must closely reach to social and economic efficiency in the operating results from the specific, highly profitable, sustainable direction for the basin. Effectiveness should be gathered by each individual sub-basin to provide for efficient synthesis for the basin containing it.

(ii) Workshop

i) Leadership for the IWRM Process (16 May 2013)

As one of the main subjects in the 5th NARBO General Meeting, Leadership has been considered as playing an important role to address water issues. Leadership can "push" effective actions to solve the issues to achieve water security.

The session so-called "Leadership for the

IWRM Process" was the opening subject of the NARBO Thematic Workshop at the 2nd APWS Technical Session Chaing Mai, Thailand. NARBO secretariat showed the professional and good preparation for the successful meeting. All participants from NARBO members were very interesting in listening for presentations and freely stating their viewpoints. Activities in the first session are summarized in a process as follows:

- Dr. Keizrul Bin Abdullah, Chairperson, NARBO, started the meeting with opening remarks before welcome remarks were stated by Dr. Apichart Anukularmphai, President, TWRA.
- Mr. Wouter T. Lincklaen Arriens, Lead Water Resources Specialist, Regional and Sustainable Development Department, ADB present "What are the leadership attributes needed for improving IWRM?" in which reported the importance of leadership in IWRM and the role of RBO in each country. ADB has a long experience and always ready to help NARBO in any aspect.
- The panel discussion was carried out by presentations of panelists about the leadership in water issue aspect as well as in IWRM. The meeting was really attractive since we, participants could understand viewpoints and sharing of panelists and then expressed own our specific situations to discuss. All participants had opportunities to get the potential solutions or experience from the panelists as well as other colleagues in RBOs.
- Outstanding, the attendance of younger from South East Asia Youth Environment Network was appreciated since they could get quick understanding, lessons

abstracted from the panelists. They will be "leaders" in near future. This might give to all people a message: "A good leadership always needs young generations which are small green trees; they should be grown up now as building capacity to create better leaderships in future".

As a conclusion, the issue of integrated management of water resources is imperative and necessary; require flexible leadership, capacity building, and water security applications by nature, culture and society, etc in the basin. The basin should develop water resources management based on standard framework and principles to suit the changing in each circumstance.

ii) Water Security in the River Basins (16 May 2013)

Thematic Workshop on Water security in the River Basins was conducted on NARBO 5th General Meeting, technical workshop. Security of natural fresh water is groundwork for sustainable development. Water security is increasing concern for Asia Pacific countries because of gaps between water demand and supply, river deterioration, water related disasters and climate changes. Rapid population growth, transformation from rural societies to urban megacities, industrialization, over exploitation, pollution, poor river management, lack of coordination between neighboring countries and particularly climate change are the drivers in depletion of quality as well as quantity of water. Competitive industrialization, drawing down of ground water for household and commercial use has made the Asian country highly vulnerable to water stress. In some of the river basins of Asia, ground water is declining annually at a rate of two to four

meter which stresses water quality and results in salt intrusion into groundwater aquifers. Excessive use of ground water can enhance flood disaster thus needs of proper water allocation and alternative water resources. Scarcity of water in emerging economics, water pollution, floods and droughts are the major issues on water security thus to overcome this issue needs of urgent policy attention, cooperation between regional countries and integrated basin management into the impact of climate change on water resources. Despite of focusing on pure engineering only, engineer should consider surrounding scenario. Good management of water resources can manage water security. IWRM is a process that can help to achieve water security which provides a triple bottom line of economic, social and environmental benefits to secure water for everyone. Presentation on Water Security in Asia and Pacific, Water Security from the case of JAPAN, Water Security in Citarum River Basin, Water Security in International Rivers and Role of RBO in the promotion of water and Green Growth for better Water Security was conducted by experts. Summary of Presentation:

- Asian Water Development Outlook 2013, Measuring Water Security in Asia and the Pacific provides the first quantitative and comprehensive analysis of water security of the country by country basis in the region, examines five dimensions of water security from household, urban, environmental, economic to water related disasters, indicators and scaling system are used to rank the progress of each 49 Asia and the Pacific countries.
- Water security case of Japan shows that

the practice of industrial water recycling system may have short term impacts due to certain codes which may restrict water reuse but it will be key factor to deal with water scarcity in long run. Asian country should avoid negative IWRM spiral to develop water security.

- Experience of Citarum river basin Indonesia shows that water should be clean, healthy and sufficient to meet up the people's necessity. Updating of information & database and coordination between different agencies are essential for water security.
- Necessity of Transboundary Environmental Impact Assessment in river basins. Espoo Convention can be a good model to conduct transboundary Environmental Impact Assessment. Keys for success should be explored and adopt some good practices from the International rivers for security of water.
- "GREEN" economic growth could play vital role for continual development of river basin. Innovative RBOs are logical drivers for basin development and modernization. Nevertheless, consciousness and perceptions on water security is arising but further supports are required to perform actions. Political willingness, data and knowledge sharing, proper monitoring and evaluation, appropriate technology, Stakeholder ownership, and coordination between government agencies, private sector and local communities are some most important keys to carry successful IWRM to achieve water security.

iii) Capacity Building for the IWRM Process (17 May 2013)

The NARBO Thematic Workshop on

Capacity Building for IWRM Implementation was held on 17 May 2013 during the third day of the 2nd APWS at Chiang Mai, Thailand. It was presented by Tjoek Walujo Subijanto, NARBO Vice Chairperson and former President Director of Jasa Tirta I Public Corporation.

By way of an introduction, Mr. Tjoek underscores the importance of water and the challenges facing the water sector, such as the increasing demand for clean and potable water due to increase economic activity and population growth, the effects of extreme weather phenomenon causing water related disasters, ineffective water governance and the rise of conflicts relating to different water uses.

Considering that water issues are multi-sectoral, the involvement and cooperation of stakeholder is necessary to achieve water sustainability, which is one of the basic principles of the IWRM. It is said that the effective implementation of IWRM process will promote transparent and efficient water resources management, facilitate effective conflict resolution, encourage better water conservation and demand management, develop ownership; and help to maintain the sustainability of water resources to sustain the human being and ecosystems in future.

Mr. Tjoek described an effective participatory approach as one where the interests of the stakeholders are reflected in the decisions at all levels. Their participation must be real and not for mere compliance to legitimize the decisions already made. There must be a proper and credible forum for coordination and consultation where participation may be conducted. This will

promote transparency and trust between all parties. However, for effective participatory process, there must be a law institutionalizing the same which will pave way to political and financial support for its implementation.

Being the key institution in the implementation of IWRM, the RBO should be the focal point in the capacity development of its stakeholders to perform effective participation in all levels of the decision making process.

The success of a river basin is dependent on broad stakeholder involvement. To achieve this end, there must be both organizational and individual capacity building, which is not limited to education and trainings, but should be a continuous transformative process.

Stakeholders should have the proper motivation, with the help of strong leadership, for effective utilization of their competencies. An enabling environment is likewise necessary in successful capacity building program based on internal driven initiatives and long term goals.

(iii) 5th NARBO General Meeting (18 May 2013)

The 5th NARBO General Meeting was held in Chiang Mai, Thailand in line with the 2nd APWS. This was a first attempt for NARBO General Meeting in collaboration with APWS. By contributing to the summit entity, NARBO could present the importance of IWRM and its usefulness to not only the water sectors but also governmental high level in Asia Pacific.

The 5th General Meeting was hosted by TWRA and Metropolitan Waterworks Authority of Thailand. More than 140 water professionals from RBOs, government

agencies, academic, and knowledge partners participated in the Meeting.

The content of the 5th General Meeting was composed of usual sessions, such as looking back on the past activities, evaluation of the past activities, the new member welcome, proposal of new charter and action plan for next term, and introduction of new NARBO officials.

At the opening session, Dr. Keizrul, the Chairperson of NARBO and Dr. Apichart, the president the TWRA and serves as a Senior Advisor of NARBO, gave opening remarks respectively. Then, NARBO secretariat and active member summarized past activities and evaluated by rating along NARBO Action Program 2010-2012. At the next session, reports of technical workshops were introduced. After the lunch, new member of NARBO, Ayeyarwaddy River Basin Research Organization (ARBRO) of Myanmar, Chao Lake Management Authority of PRC, Department of Groundwater Resources, Ministry of Natural Resources and Environment, Thailand, and Pakistan Meteorological Department (PMD) of Pakistan, introduced their organizations in order. Then, NARBO secretariat reported the result of the survey, and other member showed future activities related IWRM. Then, new NARBO Action Program 2013-2015 was suggested, revision of NARBO charter was agreed, and new NARBO constitutional body was approved.



Participants to the 5th NARBO General Meeting

Lastly, thanks to the host organization,

Chairperson of NARBO appreciated their contribution to the 5th General Meeting and gave certificates to each representative from host organizations. The 5th General Meeting completed successfully and we believe it was fruitful for all participants.

VI. Ownership to NARBO

NARBO 10-Year Anniversary Meeting

a) What happened in Manila?

NARBO held the 10th Anniversary Event from 19 to 20 November 2014 at the Oakwood Hotel, in Manila, Philippines. Approximately 100 delegates including the respective resource speakers from 40 member organizations joined the Event, celebrated NARBO's 10th Anniversary by reviewing our achievements and discussed the future direction of NARBO.

(i) Day 1 (19 November 2014)

Day 1 was the day of celebration. At the opening, introductory remarks were offered by Dr. Naoyuki Yoshino, Dean of ADBI. Following the remarks, keynote speeches to celebrate NARBO were offered by Dr. Olivia La O'Castillo, Member of UNSGAB, Dr. Shahbaz Khan, Deputy Director and Senior Science Program Specialist, UNESCO and Dr. Kenzo Hiroki, Director of Water Resources Planning Division, MLIT, Government of Japan and Member of UNSGAB.

Dr. Gil-Hong Kim, Senior Director, Sustainable Infrastructure Division, Regional and Sustainable Development Department, ADB and Dr. Keizrul Bin Abdullah, Chairperson of NARBO offered the speech at the awarding ceremony for contributors to NARBO activities and awarded 18-selected NARBO members including the Secretariat,

ADB, ADBI and JWA with the plaques of appreciation. At this session, announcement of the appointment to new Vice-Secretary Generals of NARBO, Ms. Yasmin Sadia Siddiqi, Principal Water Resources Specialist, Sustainable Infrastructure Division, Regional and Sustainable Development Department, ADB and Dr. Kentaro Kido, Director, International Affairs Division, Water Resources Engineering Department, JWA were also released.

Before closing the program of Day 1, the video clip which introduced NARBO's achievements was aired and interaction session was held to note opinions from the participants. Many useful and helpful opinions and observations for the future activities of NARBO were presented.

(ii) Day 2 (20 November 2014)

Day 2 had a special lecture and two high-level panel sessions after the introductory remarks by Mr. Herman Idrus, Vice-Chairperson, NARBO/President Director, Perum Jasa Tirta II Public Corporation. In the special lecture, Mr. Fraser MacLeod, Head of Global Projects, GWP expressed that about 80 % of countries globally had embedded IWRM into their policies and plans. However, there were still some 80 countries that had not publicly stated. In order to overcome this situation, broad alliances and working together should be committed and the biggest challenge was explaining IWRM in a minute to a non-expert in a way that can s/he can pass it on.

Session 1 focused on 'What Has Been Achieved by NARBO' by four panelists who were Ms. Doan Thi Tuyet Nga, Deputy Director, Department of Technology and International Cooperation, Directorate of

Water Resources, Ministry of Agriculture and Rural development (MARD), Vietnam, Dr. Mochammad Amron, Senior Advisor, NARBO/Former Director General of Water Resources, Ministry of Public Works, Indonesia, Dr. Apichart Anukularmphai, Senior Advisor, NARBO/President, TWRA and Mr. Juichi Kamimura, Secretary General, NARBO, moderated by Mr. Wouter T. Lincklaen Arriens, Senior Advisor, NARBO. Major outcomes of Session 1 were as follows;

- NARBO has helped networking horizontally and vertically and sharing of many IWRM experiences through the network.
- NARBO promoted RBOs etc. to change their mindsets and perception of WRM with the enhanced WRM, i.e. IWRM, and helped incorporate it in their policies and master plans, and institutionalize IWRM process into governments and improve involvement and collaborative works at community level.
- Changes in IWRM perception came not only from not water sectors but also people outside the water sectors.
- NARBO developed new tools; Benchmarking Peer Review and IWRM Guidelines and utilized them for RBO capacity buildings. Other activities including Twinning Program and Thematic Workshop worked well.



Group Photo

Session 2 centered intensively on 'Future

NARBO' by seven panelists who were Prof. Mikiyasu Nakayama, Division of Environmental Studies, University of Tokyo, Dr. Gil-Hong Kim, Ms. Tshewang Lhamo, Environment Officer, National Environment Commission, Bhutan, Dr. Kentaro Kido, Dr. Shahbaz Khan, Mr. Takashi Matsuo, Director of Environment, Natural Resources and Agriculture Division, South, Asia Department, ADB and Mr. Akmal Siddiq, Director of Environment, Natural Resources and Agriculture Division, Central and West Asia Department, ADB, moderated by Dr. Keizrul Bin Abdullah. Major outcomes of Session 2 were as follows;

- There are countries which need NARBO's assistance in knowledge sharing and capacity building since IWRM is a new concept in these countries (i.e. Bhutan). NARBO should share more experiences and technologies on water, involve knowledge partners and knowledge hubs, work on different challenge areas, build on what we have done and shift to higher gear in the next decade.
- Water sharing principle including transboundary water allocation has not been common yet. NARBO should extend its network and collaboration to the area where the problems arose.
- New knowledge should be produced (ground water management, transboundary waters, urban water supply, water quantity and quality, climate change mitigation and adaptation, etc.).
- There is not much emphasis on gender equality in IWRM process. The gender issues/roles should be tackled in the future NARBO activities.
- Mentoring program to develop youth

leaders should be incorporated into the future NARBO activities.

- All RBO members should have a strong sense of ownership of their activities.

b) What are NARBO's achievements? / How should NARBO take actions for the future?

Based on the summary of what were discussed and recommended, 'Manila

Declaration' was released as one of the outcome documents of the Event. NARBO's achievements and its future directions will be summarized and launched at the 7th WWF in April 2015 as "A Decade of NARBO Achievements (2004-2014)" including the discussions and recommendations at the NARBO 10th Anniversary Event.

Manila Declaration

We, representing the members of the Network of Asian River Basin Organizations (NARBO), having met in Oakwood Premier Joy-Nostalg Center in Manila, Philippines, on 19-20 November, 2014 at the High-level Panel on 'Looking back a decade of NARBO Achievements and identifying the future direction of NARBO' convened to celebrate NARBO's 10-year anniversary, review NARBO's achievements and foresee NARBO's future, hereby:

- ▶ Recognize that IWRM is a useful concept to cope with the complex issues affecting water security such as, water-food-energy nexus and climate change;
- ▶ Re-affirm that IWRM is an adaptive management process that adopts an inclusive approach bringing stakeholders together to increase water security and improve water governance in river basins;
- ▶ Re-acknowledge significance of River Basin Organizations (RBOs) as champions that implement IWRM in their river basins, and believe that benchmarking contributes to improving their performance;
- ▶ Continue to use the UNESCO/NARBO 'IWRM Spiral' model and related training for improving IWRM capacity, and using locally adapted guidelines for implementing IWRM in our river basins;
- ▶ Endeavour to enhance our contributions to NARBO by active participation in regional activities for sustainability and to increase country-level NARBO activities for better networking in our countries;
- ▶ Believe that in the spirit of sustaining existing efforts and further achieving water for all, young leaders should be trained, supported and involved in IWRM;
- ▶ Continue to ensure gender balance in NARBO activities;
- ▶ Resolve to contribute to the achievements of the international goals on IWRM such as, the POST-2015 Agenda (Sustainable Development Goals) and OECD Water Governance Initiatives; and
- ▶ Endeavour to improve our engagement with donors, UN-agencies, civil society, private sector, decision-makers and with actors outside the water sector to ensure that water is integrated into key socio-economic development decisions.

We strive as a network to uphold these commitments to the best of our abilities.

Manila, Philippines
20 November 2014

Manila Declaration

B. Capacity Building in River Basin Organizations (RBOs)

I. IWRM Training Program

Background of the IWRM training

From 2004, NARBO holds its training on IWRM almost every year as a capacity building program for RBOs and government agencies. The objective of the IWRM training is to assist mid-level RBO managers and practitioners of water resources management to better apply IWRM approaches at basin-scale. Through a mix of disciplinary studies and case studies, the IWRM training helps participants develop their capacity to understand, introduce, implement and improve IWRM in their respective river basins.

The 7th IWRM training was held in the Mahaweli River basin in Sri Lanka. As Sri Lanka had experienced floods in 2011 and serious drought in 2012, participants was expected to learn water-related disaster risk management from Sri Lankan experiences.

The 8th IWRM training was held in the Mahaweli River basin, where is the biggest basin in Sri Lanka, to enhance water security through IWRM – Mahaweli experiences.

The 9th IWRM training was held near Laguna lake , where is the biggest lake in Philippines, to enhance water security through IWRM - Filipino experiences.

1) 7th NARBO IWRM training in Sri Lanka

a) Outline of the training

The 7th IWRM training was held from 2 to 9 November 2012 at MAS Fabric Park in Thulhiriya, which is located around 65km

northeast of Colombo in Sri Lanka. 26 participants, who work for RBOs or governments, came from 8 countries (India, Indonesia, Lao PDR, Myanmar, Nepal, Philippines, Sri Lanka, and Thailand), expecting to study and enhance their knowledge about IWRM through Mahaweli River basin experiences. Total 8 days' training including 2days' field visit (4th & 5th day) was carried out hosted by Mahaweli Authority of Sri Lanka (MASL).



Participants

Experts from MASL and other relevant institutes, and NARBO members gave lectures not only on IWRM-related matters using "IWRM Guidelines at River Basin Level" which published by UNESCO in cooperation with NARBO (IWRM Guidelines), but Mahaweli river basin's wide variety of subjects such as history of MASL, hydropower, irrigation, data collection, climate change adaptation, food security, domestic water issues, as case studies. During lectures, participants were very eager to learn and actively asked a lot of questions. They also actively expressed their views on these subjects so that they could enhance their comprehension.

Participants were also well prepared to have brought Posters, which they had been asked to make about their RBOs and

activities. They introduced their Posters one by one on the 2nd & 3rd day of the training.

What the hardest but the most important parts of the training might be some group works. The subject was about IWRM progress of their own countries or basins as a final session of the training on the 8th day. After presentations, participants including NARBO chairperson, vice-chairpersons, senior advisors and secretariat discussed how to embed IWRM on their countries or basins.

After the last lecture of each day, NARBO secretariat wrapped up the seminar by using clicker system to get frank but severe evaluation about all the lectures and the training including accommodations. Overall the course was assessed as satisfactory (96% rated the course as good or very good) and had met the participants' learning objectives satisfactorily (100%).

On the last day of the training, all the participants received a certification from NARBO chairperson "Dr. Keizrul Bin Abdullah" and vice-chairperson "Mr. K.W. Ivan de Silva".

b) Study Visit

On the first day, participants visited Anuradapura (World Heritage ancient city), Nachchaduwa and Kelawewa. At Nachchaduwa tank and the NAQDA center in Kelawewa, they met with stakeholders, who engage in farming, and exchanged their views each other. Hearing real voice from them must be helpful for participants to find a clue to solve the issues on water management.

On the second day, they visited Dambulla (famous city for rock temple), Victoria Dam, Polgolla, and Kandy. Participants observed

both inside and outside of Victoria Dam and felt its hugeness at first hand. According to the questionnaire, 40% of the participants selected Victoria Dam as the place by which they learned most.

c) Conclusion

As IWRM has been introduced well in the Asian region, now it is time to embed it in the river basin. But RBOs are facing challenges to start with IWRM and it is not yet working effectively. NARBO secretariat believes good examples or case studies in other basins help RBOs embed IWRM to their basins, and there are many good examples in this region. Moreover, it is necessary to help RBOs understand "terms and conditions" of good examples to customize them for their specific challenges. NARBO secretariat expects that the IWRM training is good opportunity to start with IWRM and participants of the training get the momentum to move IWRM process forward.

The next step, NARBO secretariat is going to seek for how NARBO can follow up the participants to improve the effect of the training and to maintain the strong network.

Thanks to everyone related to this training, the training was successfully finished without any problem. Especially, thanks to MASL and course directors, almost all the lectures went on punctually.

2) E-learning on Managing Water in Asia's River Basins-IWRM Based Online Training Courses 2013-2014

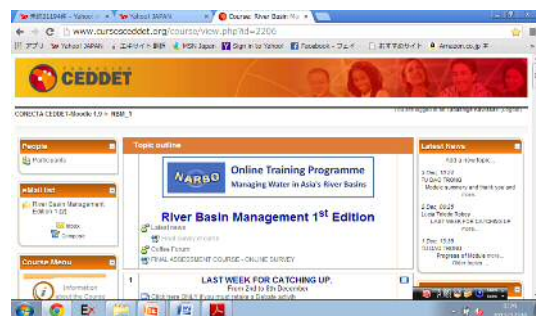
The 1st NARBO Technical Committee which was held in early April 2008 discussed strategic directions of capacity development activities of NARBO. Especially, the committee reviewed past IWRM training

courses and recommended some important matters to be considered when NARBO secretariats develop the program of IWRM training course. The committee recommended 4 level training courses such as Basic Entry, Middle management, Senior RBO management and Regional IWRM advisor. Introduction of e-learning for Basic Entry was recommended to enhance the basic understanding of IWRM to the young practitioners by the committee. Based on these recommendations, ADB decided to introduce e-learning by using the Technical Assistance 6470 : “Managing Water in Asia's River Basins: Charting Progress and Facilitating Investment” which aims to catalyze further basin water investments under the Water Financing Program and demonstrate good practices in introducing IWRM in river basins across the region. The Economic and Technological Development Distance Learning Centre (CEDDET) Foundation which aims to use Information and Communication Technology and enable countries to share experiences and knowledge, thereby contributing to the ongoing reform and modernization of public administration and established as a joint initiative between the Spanish Ministry of Economy and Finance, Government of Spain and the World Bank in 2001.

The CEDDET Foundation has designed and implemented a capacity building program in collaboration with NARBO as well as Asian and European RBO. The program consisted of two IWRM-based online training certificated courses on ‘River basin management’ and ‘Environmental management’ for a group of 140 persons. Each course was offered online two times

between October 2013 and April 2014. The course received over 260 applications from 88 organizations from 18 countries in Asia, and 140 trainees were selected after the evaluation.

Selected trainees was requested to read the text books which were developed by the lecturers nominated by NARBO thoughtfully and submit the reports which had answered the questions offered by the lectures and introduced their current issues on water. Then, trainees were requested to interact with other trainees through message board on the website. Lecturers also join the interaction and lead the discussion. After the interactions, trainees were requested to submit additional report which summarized the discussions through interaction. Lectures evaluate trainees by considering the attendance of the discussion, contents of the report and progress of the understanding and so on.



The top page of CEDDET Foundation

116 trainees out of 140 selected trainees have completed the training, and 94% of participants gave satisfactory ratings about the overall training course. Majorities of trainees were from NARBO member organizations, and the training had contributed to enhance the understanding of IWRM among young practitioners and network among them through the message board of the online training courses.

3) 8th NARBO IWRM training in Sri Lanka

a) Outline of the training

The 8th IWRM training was held from 27 November to 4 December 2013 at MAS Fabric Park in Thulhiriya, which is located around 65km northeast of Colombo in Sri Lanka. 27 participants, who work for RBOs or governments, came from 11 countries (Afghanistan, Bangladesh, India, Indonesia, Lao PDR, Malaysia, Nepal, Pakistan, Philippines, Sri Lanka, and Thailand), expecting to study and enhance their knowledge about IWRM through Mahaweli River basin experiences. Total 8 days' training including 2days' field visit (5th & 6th day) was carried out hosted by MASL. At 1st day opening ceremony was held and guests from ministry of Irrigation and water resources management, MASL and Japan embassy, some participants and secretariats lightened traditional oil lamp.



Participants of 8th IWRM Training

In this training many experts from MASL and other relevant institutes, and NARBO members gave lectures on not only IWRM using "IWRM Guidelines" but also Mahaweli river basin's wide variety of subjects such as irrigation, water allocation, drinking water, hydropower, ground water, environmental security, data collection as case studies.

During lectures, participants were very eager to learn, actively asked a lot of questions and expressed their views on these subjects.

Participants also introduced their posters about the IWRM spiral of their basin, prepared in advance of training one by one. And they developed and revised the IWRM spiral by knowledge and information learned during training. At the last day participants made their presentations about their renewed IWRM spirals for each river basin.

After the last lecture of each day, NARBO secretariat wrapped up the seminar by using clicker system to know what to get from lectures and get frank but severe evaluation about all the lectures and the training including accommodations. For example, the ratings of "what is most critical for IWRM to succeed in their river basin" were i)38% for political will for 38%, ii)27% for capacity development, iii)19% for financial matters and iv)15% for comprehensive monitoring and evaluation. The 89% participants achieved their learning objectives and overall satisfactory rating was 100%.

On the last day of the training, all the participants received a certification from NARBO.

b) Study Visit

On the first day, 30 November, participants visited Dambulu Oya, Kendalama and Maduru Oya. At Kandalama Reservoir and Maduru Oya Reservoir, they met with stakeholders such as farmer and fisher, and exchanged their views each other to find out "Key for success". The second day, 1 December they visited Nalanda reservoir (dam-reinforcing office), and Kandy city (Ancient capital city).

c) Conclusion

RBOs are facing challenges on introducing IWRM to their own basin and IWRM is not yet working effectively. NARBO secretariat believes good examples or case studies in other basins help RBOs embed IWRM to their basins, and there are many good examples in Asia and Pacific region. Moreover, it is necessary to help RBOs understand “terms and conditions” of good examples to customize them for their specific challenges. NARBO secretariat expects that the IWRM training is good opportunity to start with IWRM and participants of the training get the keys to move IWRM process forward. The 7th and 8th IWRM training were held in the Mahaweli River basin. Finally, we would like to express our thanks to everyone related to this training, especially MASL and course directors, on behalf of NARBO secretariat.

4) 9th NARBO IWRM training in Philippines

a) Outline

The 9th IWRM training was held from 12 to 19 May 2014 at One Tagaytay Place Hotel Suites in Tagaytay, which is located around 60km south of Manila in Philippines.

33 participants, who work for RBOs or governments, came from 11 countries (Afghanistan, Bangladesh, Bhutan, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Sri Lanka, Thailand and Vietnam), expecting to study and enhance their knowledge about IWRM through Laguna Lake basin experiences. Total 8 days' training including 2 days' field visit (4th & 5th day) was carried out hosted by Laguna Lake Development Authority (LLDA).

Experts from LLDA and other relevant

institutes, and NARBO members gave lectures not only on IWRM-related matters using “IWRM Guidelines”, but Laguna lake basin's wide variety of subjects such as irrigation, flood management, water security, domestic water, water allocation, decision support system, stakeholder's participation, as case studies. During lectures, participants were very eager to learn and actively asked a lot of questions and expressed their views on these subjects.

Participants also introduced their posters about the current issues of their basin, proposed solution, and key for success, prepared in advance of training one by one from the 1st to 3rd day of the training.

What the hardest but the most important parts of the training might have been some group works. The subject of a final session of the training on the 8th day was about IWRM spiral of their own countries or basins. After presentations in regards to the outcome of group works by participants, they talked together about how to embed IWRM on their countries or basins with NARBO vice secretary general and NARBO secretariat.

After the last lecture of each day, NARBO secretariat wrapped up the seminar by using clicker system to know what to get from lectures and get frank but severe evaluation about all the lectures and the training including accommodations.

For example, the ratings of “Which learning modality do you enjoy most in this training?” were i) 24% for Understanding, ii) 4% for Critical analysis, iii) 17% for Application, and iv) 54% for Active contribution to group work and v) 8% for Presentation. In addition, the 97% participants achieved their learning

objectives and overall satisfactory rating was almost 100%.

On the last day of the training, all the participants received a certification from NARBO vice secretary general “Dr. Kentaro Kido”.



Group photo

b) Study Visit

On the 4th day, 14 May, participants visited Lake Pandin, San Pablo, Laguna and Sta. Cruz, Laguna. At Lake Pandin they learned the role of youth and women in lake conservation. In addition, at Sta. Cruz, they learned keys for success as disaster risk reduction.

On the second day, they visited Maynilad Water Treatment Plant, Muntinlupa City, Metro Manila and Teresa, Rizal. At the plant, they learned the processes for domestic use of Laguna Lake's raw water at the plant and how to manage integrated solid waste for lake water quality protection at Teresa.



The photo of the study visit at Teresa

c) Conclusion

Though IWRM has been introduced well in the Asian region, however RBOs are facing challenges on introducing IWRM to their own basin and IWRM is not yet working fully and effectively. NARBO secretariat believes good examples or case studies in other basins help RBOs embed IWRM to their basins, and there are many good examples in Asia region. Moreover, it is necessary to help RBOs understand “terms and conditions” of good examples to customize them for their specific challenges. NARBO secretariat expects that the IWRM training is good opportunity to start with IWRM and participants of the training get the momentum and keys to move IWRM process forward. Thanks to everyone related to this 9th training, the training was successfully finished without any problem. Especially, many thanks to LLDA, and course directors, almost all the lectures went on punctually.

The next step, NARBO secretariat will seek for how NARBO can follow up the participants to keep and improve the effect of the training with the strong network.

II. Leadership Program

1) IWC Leadership Programme

The International Water Centre (IWC), Brisbane, Australia, Interregional Knowledge partner member of NARBO, is conducting the Water Leadership Program which helps emerging leaders to develop the abilities they need to exert influence, drive change and advance challenging integrated water management projects. The programme is designed for emerging water leaders at the project to middle management level and customized for the water sector through

sound research and collaboration with experienced industry practitioners. The program also incorporates a real work-based project, and its Key elements include mentoring activities involving experienced water industry executives, a sound research and theoretical basis, 360-degree feedback processes and one-to-one coaching and peer review of the program design of trainees.



The photo of the thematic workshop

The program for 2012-2013 was conducted for 9 months from December 2012 to August 2013. NARBO secretariat contributed to the programme as one of the strategic partners of IWC, and approximately 10 trainees nominated from NARBO member organizations joined. Achievements of the programme were reported at the thematic workshop on 'Leadership for the IWRM Process' which was held as one of the technical sessions of the 2nd APWS and the 5th NARBO General Meeting in May 2013 in Chiang Mai, Thailand. Leadership on IWRM Process became as one of the NARBO Action Program's priority actions at the 5th General Meeting. Consecutively to the programme in 2013, the programme for Water Leadership for RBOs in Asia was held in February 2014, and approximately 10 trainees nominated by NARBO member organizations joined the two weeks

programme.

The programme was an opportunity to link with Knowledge Partner and RBOs to enhance implementation of IWRM by making use of knowledge of Knowledge Partner. More opportunity to interact among member organizations is to be promoted.

III. Performance Benchmarking supported by peer reviews

1) NARBO RBO Benchmarking Program: Self-Assessment and Reporting Training

NARBO, in partnership with the Center for River Basin Organization and Management (CRBOM), resumed the RBO Benchmarking Program to improve implementation of IWRM in river basins. The RBO Benchmarking Program consists of 4 stages: i) self-assessment of RBO's present performance; ii) setting targets for future performance in each business area; iii) formulation of plans to reach the targets; and iv) peer review and assessment of plans for organizational improvement.

In regard to the first step of the NARBO Benchmarking Program, RBO organized the Self-Assessment and Reporting Training for the following 5 RBOs.

(i) Nam Theun Nam Kading River Basin Committee, Lao PDR; 15 and 16 October 2013



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- (ii) Selangor Water Management Authority, Malaysia; from 24 to 25 October 2013



- (iii) Help Davao Network, Philippines; from 30 to 31 October 2013



- (iv) Mun River Basin Committee, Thailand; from 6 to 7 November 2013



- (v) MASL, Sri Lanka; from 6 to 7 December 2013



The Self-Assessment and Reporting training aims to introduce the benchmarking tool (balance score card, performance indicators, scoring criteria, benchmarking process and methodology) and to explain the process of Self-Assessment and Reporting. In the Self-Assessment and Reporting training, NARBO certified peer reviewers and NARBO secretariats shared those contents with their experiences based on their RBO's situation. And also participants learned how to draw up the Self-Assessment Report through some exercises of applying performance indicators to their RBO.

After the Self-Assessment and Reporting training, the 5 RBOs will conduct an in-depth study on the organization's structures, programs, services and resources, which are closely related performance indicators and complete the Self-Assessment Report, including plans for their organizational improvement. And then, peer review will be conducted by NARBO certified peer reviewers to review the report thoroughly and assess their next steps to improve their RBO's situation.

2) International Peer Reviewer Training and Certification

ADB and CRBOM planned to co-hold the "International Peer Reviewer Training and Certification" by Performance Benchmarking Training with aiming at i) Sharing knowledge about implementing RBO Performance Benchmarking, ii) Improving awareness and benefits of RBO Performance Benchmarking in implementing IWRM and iii) Increasing the number of Peer Reviewer of RBO Performance Benchmarking with international standards.

16 participants from 7 countries (Cambodia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand and Viet Nam) and approximately 10 participants from Indonesia gathered. As this training was executed in the form of group work, participants are formulated into 3 groups each;

- Group1; Mission and Learning and Growth,
- Group2; Stakeholders,
- Group3; Internal Business Processes and Finance

Background of each participant was various: some participants have now been engaged in establishing RBO as ongoing project in their own country, but others haven't much experienced. Nevertheless, participants asked questions to lecturers and their colleagues each ardently in the lecture and desperately tackled with each work.

On 27 October 2015, Instructors explained basic knowledge of RBO Performance Benchmarking.

Before noon, Dr. Keizrul, Bin Abdullah, chairperson of NARBO kindly delivered the opening remarks on the topic of NARBO and Peer Reviewing. He explained the original meaning of "Peer Review" and the importance of this training course. Dr. Takeyoshi Sadahiro, senior IWRM specialist of JWA introduced the program and overviewed the feature of RBO Performance Benchmarking. Mr. Tadashige Kawasaki, IWRM specialist of JWA explained the Performance Benchmarking Indicator and reported on the conference of OECD Water Governance Initiative.

After the luncheon, explanations of the following topics were given. Self Assessment Process and Analysis of it were introduced in detail by Prof. Rohadi Masyhadi from

Indonesia. Following this lecture, method of interview to Self Assessment members was explained by Mr. Cesar Quintos, Performance Benchmarking specialist from the Philippines. He showed its procedure simply and specifically by touching upon his experience in his organization. Lastly, "expected outputs of Peer Review Report" was lectured by Mr. Tjoek Walujo Subijianto, senior advisor of NARBO. He pointed out importance of "recommendation" to its evaluation to make this process smoother.

All participants were organized into 3 groups as above and assigned tasks from the training committee.

On 28 October, participants were engaged in group study. Main topic of this day was analyzing Self Assessment Report of Bengawan Solo River Basin. Each group was assigned the area of the indicator to be evaluated and practiced the role of peer reviewing in the form of discussing and prepared ardently for next day's presentation. In their discussion, there were some differences between foreign interviewer and Indonesian interviewee over the rating of key performance area. This shows there is the recognition gap on how water should be treated by RBO not only between interviewer and interviewee but Indonesian and other participant.



Group photo

29 October is the final day of this training.

This day's presentations on reviewing the report by these groups were based on the lectures and discussion in each group. As all the participants are announced that preparation was important if the reviewer evaluate the items of self assessment team, each group carefully assessed it with their reasons. And further discussion was held to remove recognition gap between each groups. After completing the additional meeting, final evaluation was shown with some key fact and recommendation in plenary meeting through wrap up meeting.

A foreign participant who played as a chair in a group of peer reviewer was awarded because she gave an excellent presentation.

Most of participants are satisfied with this training in general, and this event was of valuable for them from the following viewpoint in addition to original objectives;

- (i) Promoting disseminating regional experiences among member organization.
- (ii) Raising awareness of necessity of continuous organizational improvement of RBO.
- (iii) Something clue on management or improvement of RBO performance for each participants.

Furthermore, it seemed to be more important from now that how each participant shared the knowledge what they acquired in the training with their colleagues and how they recognized peer review process made the situation surrounding RBO improve through deepening mutual cooperating between different sectors namely government and private.

IV. Twinning Programs

Twinning Program between MARD of

Vietnam and JWA

a) What is Twining Program?

Agreements on Twining Program were concluded between JWA and Indonesian NARBO, Viet Nam NARBO and Sri Lanka NARBO. The personnel exchange program under Twining Program is a part of NARBO activities to share knowledge and information among NARBO member organizations and enhance their capacity to implement IWRM.

Based on the agreement, first personnel exchange between JWA and Indonesia NARBO was implemented in 2005.

b) Brief Report of Activities in 2012

12 delegates from MARD and related organizations in Viet Nam visited JWA from 14 to 21 September 2012 to take part in Twining Program, which has been conducted between Viet Nam NARBO and JWA since April 2008 for the purpose of enhancing the capacity of water resources management.

They studied how JWA has implemented water management by visiting Tone-river basin, which is the largest river basin in Japan.



At Gumma Canal displaying a banner for 60th anniversary



Courtesy call to JWA headquarters



Operate monitoring and security cameras at Naramata dam

Observe state of the art technology, the shielding machine

At first, they saw downstream of Tone river, then went upstream, and finally visited midstream. They observed whole Tone river basin directly.

The schedule was quite busy. Despite a long trip, delegates took a serious look at Japanese water-related facilities, asked JWA staff sharp questions to grasp how Japan has developed and managed water resource facilities. Besides, they seemed to have enjoyed Japanese food and culture.

On the last day, they made a courtesy call to JWA headquarters. It was a good opportunity for both organizations to deepen the relationship and exchange knowledge and experience between Vietnam and Japan.

V. IWRM Proficiency

Irrawaddy Capacity building and professional development for inclusive governance and management of water and ecosystem services in the Ayeyarwady River Basin

The research Program on Water, Land and Ecosystems of The Consultative Group on International Agricultural Research is a research-for-development initiative that seeks to improve the governance and management of water resources by generating and sharing the knowledge and practices. The program is implemented in four river basins: the Salween, Irrawaddy, Mekong and Red in greater Mekong region. Through the programme, capacity to implement water-related projects will be developed in an appropriate manner (<https://wle-mekong.cgiar.org/about/our-focus/>).

Myanmar is now exploring the feasible

development methodology by considering the sustainability. Recently, Myanmar developed a Water Policy with concept of IWRM. The project under the programme of the Consultative Group on International Agricultural Research aims to contribute to enhancing capacities for inclusive governance and management of water and ecosystems services in the Ayeyarwady River Basin through capacity development of key Myanmar water related organizations such as national government and municipal government, and water professionals and individuals at university, civil society and NGOs. UNESCO Institute for Water Education (UNESCO-IHE) leads the projects with many partner organizations including Ministry of Transport, Government of Myanmar and NARBO.

1st batch of the capacity development activities named 'fellowship programme' was launched at September 2015 and ends in June 2016. Approximately 30 fellows from government, academia, private sector and NGOs joined and will graduate the program. Fellows were requested to make research papers related with the Ayeyarwady River Basin, and lecturers supported them to complete it through lectures at the trainings and consultation by e-mail. In 2016, 2nd phase of the fellowship programme has already been scheduled.

NARBO has contributed to the programme as one of the partner organizations and offered lectures on IWRM in Asia at the 1st training course in September 2015 and 2nd training courses in October 2015 as the 1st batch of the programme. The programme aims to develop 'IWRM Certification' which is expected to contribute to the capacity

development of water professionals in Myanmar, and NARBO is cooperating to it by offering the experience of NARBO. Development and management of IWRM Proficiency Certification is one of the activities of NARBO which was mentioned at 'NARBO Action Program 2013-2015' and to be implemented with UNESCO-IHE. Therefore, the programme is one of NARBO activities to be implemented as NARBO activities.



The photo of the UNESCO-IHE training

NARBO IWRM Certification is expected to be disseminated to member countries, and modified system to be developed and introduced. In this case, National Secretariat of NARBO which will be recommended to be established in member countries will play an important role for it, and NARBO secretariat with Steering Committee members will also support it.

VI. Advisory visits to RBOs

1) RBO Visit to India

NARBO secretariat in JWA visited India from 8 to 15 December 2012 in order to investigate circumstances surrounding water in India, and exchanged views on IWRM with central / state government, and an institute of India.

At first, we observed Up-flow Anaerobic

Sludge Blanket – Down-flow Hanging Sponge wastewater treatment facility which is being experimented by Tohoku University and installed in Karnal, north of Delhi.

In terms of energy consumption, this system can save electricity by using potential energy.

Wastewater treatment is crucial for sustainable water management. However, in general, developing countries have difficulties to cope with this issue because of financial problem and low environmental awareness. We saw how that system works, and to what extent the system purifies wastewater, and identified the issues which this system has.



The photo of the site visit

Next, we visited Central Water Commission of India where we provided a brief introduction of NARBO activities to the staff there. In India, there are no RBOs of which the government of India is considering the establishment.

We were informed from the staff of the Commission explained that 'National Water Policy' was amended, and is waiting for the approval. We also heard with pleasure that they promised to consider joining NARBO.

Following that, we went to the Technology and Resources Institute (TERI) where we introduced NARBO and exchanged opinions

about water-related issues.

Various topics were discussed between TERI researchers and secretariat members. TERI researchers mentioned that one of the most important challenges of IWRM in India is water pollution problems. We were also informed by them that water tariff is determined by the government, without considering running cost. We could have a fruitful discussion, which we could gain a wealth of information on water issues in India from TERI researchers who are familiar with water-related matters in many aspects.

Finally, we visited Odisha. Mr. Sahoo and Mr. Mohapatra, who participated in 7th IWRM training, kindly provided us a tour of the government office of Orissa. Mr. Rath, who also participated in NARBO RBO Seminar in 2011, welcomed us and held a meeting for an exchange of opinions. After the discussion, we made a courtesy visit to the Principal Secretary of Government. On the second day of the visit, we went on a field trip. Government of Odisha kindly arranged a meeting with farmer's association. It was meaningful for us that we could hear opinions from the organization. In addition, we observed IWRM spiral in Odisha.

In this visit, we realized that India is a great country as Indian people say with pride. At the same time, we keenly sensed that solving water issues is imperative in India. In this sense, we believe that NARBO activities must be useful for India, while the development of Indian IWRM can lead to the development of NARBO. We hope to keep in touch with friends in India and continue a cordial relationship.

2) NARBO secretariat visited ARBRO in

Myanmar

NARBO secretariat visited ARBRO in Myanmar from 31 August to 2 September 2013. ARBRO is the very new member and only one NARBO member from Myanmar so far, and was introduced in the 5th NARBO General Meeting in Chiang Mai, Thailand.

During the three days, NARBO secretariat had the opportunities to see Ayeyarwaddy River and exchange the ideas with stakeholders in Pyay and ARBRO members.

Observing Ayeyarwaddy River, NARBO secretariat headed for Pyay City which is famous for its history and ancient statue of Buddha. The city is located along the east side of Ayeyarwaddy River and 260km northwest of Yangon. Ayeyarwaddy River was very large and showed its magnificent view with the abundant water flow because of the rainy season. The secretariat members observed from the ship the views of Ayeyarwaddy River such as a big bridge over the Ayeyarwaddy River, Shwesandaw Pagoda, water intake pump stations for irrigation and sugar factory besides the river itself. After that, they were explained how the hydrological observation and transmission of the data were conducted at the hydrological observation station by the persons in charge. They fully understood the hydrological observation and hydrological transmission were being done in a very careful and reliable manner, although they found that the facilities and technology were rather old-fashioned. Moreover, they also found that the special technique was applied in transmitting data to prevent miscommunication.

On 1 September, meeting between NARBO secretariat and stakeholders in Pyay

took place. The engineers and staff members of Irrigation, Agriculture, Forestry, Fishery, Navigation and Hydrologic Observation kindly joined the meeting for several hours in spite of the early Sunday morning. Stakeholder meeting in regional base was said to be held often to exchange views. NARBO secretariat found a part of IWRM had already started.

On 2 September, the meeting between ARBRO and NARBO secretariat members was carried out in Yangon. Dr. Daw Swe Swe Aye, the chairperson of ARBRO and eight persons from ARBRO kindly attended the meeting. Following the introduction of NARBO and ARBRO and the report of the study visit to Pyay last two days and the transition of the Ayeyarwaddy River by using Geographic Information System, the views and ideas were exchanged among the participants. ARBRO and NARBO secretariat agreed that capacity development in IWRM was necessary and technology and facility including hydrological observation and transmission should be modernized to promote IWRM in Myanmar, where the new development stage had just started recently. Particularly, it was recognized that NARBO was expected to cooperate in capacity development for IWRM.



After the NARBO-ARBRO meeting

Being established in 2012, ARBRO is the organization established voluntarily with persons from administration, academy, consulting sectors and so on, to enhance the IWRM in Ayeyarwaddy River, the soul of Myanmar people. Since Myanmar is expected to make further development toward a new stage as a nation, the significant effort of ARBRO is very important in order to promote IWRM in Myanmar and the relationship between ARBRO and the government is expected to be tightened for capacity development in IWRM. NARBO secretariat hopes Myanmar could achieve sustainable development by adopting the IWRM.

At last but not the least, NARBO secretariat expresses sincere appreciation to ARBRO for their cooperation in accepting the visit and arranging various opportunities.

3) NARBO secretariat members visited Bhutan for the promotion of IWRM

NARBO secretariat visited Bhutan from 7 to 14 September 2013 for the purpose of supporting the promotion of IWRM by investigating the status of water resources management in the country and contributing a Workshop on IWRM.

Since the Water Act of Bhutan was enacted in 2011, organizations concerned were making great effort to establish the Water Regulation, we could observe steady promotion of IWRM in Bhutan. The Act clearly defines Water Resources Right. According to that, "Water resources are the property of the State" and "Every individual shall have access to safe, affordable and sufficient water for basic human needs." People can utilize water on the approval

basis in accordance with environment-friendliness. In addition to those, the water usage is prioritized depending on the purpose. Also the responsibilities and role of competent agencies are prescribed clearly.

In this regard, it can be said that the Act and the Regulation are the very advanced ones measuring up to the philosophy and concept of the IWRM. National Environment Commission held a workshop on IWRM with the presence of the secretary of National Environment Commission. Officers from Ministry of Agriculture, Ministry of Economic Affairs and so on took part in it, and NARBO secretariat made presentations on the topics of comparison between Bhutanese and Japanese water related regulations, and stakeholder-involvement in IWRM, which encouraged vigorous discussion.

In Punatsangchhu river basin, Punatsangchhu Phase I and II Projects are

being implemented which will generate 1,200Mw electricity respectively. Phase I Project consists of a gravity concrete dam of 136m height, a headrace tunnel of about 10km long, and a power station equipped with 6 turbines. The projects are jointly invested by Bhutanese and Indian governments. The electricity generated will not only be consumed in Bhutan but also be transmitted to India. Thanks to the good geological and hydro geological conditions, the construction is advancing without major trouble.



IWRM Workshop



Punatsangchhu Project Phase I dam site

C. Network Support

I. Technical Advisory Committee and Steering Committee

1) 2nd NARBO Management Team Meeting

a) Background

The 4th NARBO General Meeting has set several directions for expanding our NARBO work. We agreed to explore leadership roles for each member and realized the necessity of upgrading our activities, including the improvement of secretariat work and database of NARBO members. To address these matters, the Secretariat set up the 'Management Team' consists of Chairperson, Vice-Chairpersons, Senior Advisers, Secretary General and Vice-Secretary Generals in early 2011, and organized the 1st NARBO Management Team Meeting.

The purpose of this meeting is that NARBO Management Team discuss NARBO next action program by reviewing past activities. And, as the outcome, it is expected that NARBO management team advise strategic direction of future NARBO activities which should be reflected to NARBO next action program.

In the meeting, team discussed i) Exploring Strategic Direction, ii) Expanding Knowledge and Performance, iii) Developing Leadership in the IWRM Process, and iv) Improving Networking and Secretariat. Based on the result of the discussion and recommendations, NARBO achieved measurable progress. However, for enhancing the influence of NARBO in Asia and quality of NARBO activities, reviewing past activities and having strategic plan are needed. Toward the 5th NARBO General Meeting, Management Team Meeting was

convened to discuss above mentioned matters, especially focusing on making draft next action program of NARBO.

b) Brief Summary

(i) Reviewing past activities of NARBO (Session 1)

NARBO secretariat introduced the progress of NARBO after the 1st Management Team Meeting in January 2011. Compared with past Action Program, numbers of events have increased, and NARBO increased influence on IWRM in Asia. To expand, improve the quality of NARBO activities and add value to NARBO, we agreed to consider i) expanding category of member such as water sectors, ii) enhance ownership by members and encourage them to share their experiences and to make in-kind contributions to NARBO events and products (membership fee) and iii) action in the international field.

In addition, many useful recommendations to be noted to NARBO secretariat to offered by Management Team members.

(ii) Discussions for the strategy of NARBO and the next action program (Session 2)

In the session 2, Management Team discussed the directions of future activities of NARBO based on the discussion of the session 1 for considering the 5th General Meeting and the 2nd APWS which will be held in May 2013 in Thailand. We agreed to extend the terms of Action Program from 2 to 3 years to make good results and enhance i) benchmarking activities by using the result of past activities and ii) introducing 'Local Chapters' to share the experience of NARBO to staff level in each member organization to improve IWRM more local level.

NARBO secretariat started preparation for

the 5th General Meeting by considering the recommendations of Management Team members to add value and increase influence of NARBO.



The photo of the state of the meeting

2) 1st Steering Committee

a) Background / Rationale

NARBO conducted the 5th General Meeting in Chiang Mai, Thailand in May 2013, and NARBO's Charter was agreed by consensus of all member organizations. In the Section 4, Article 4.6 stipulates as follows.

Article 4.6 Steering Committee

- (1) The Steering Committee may be convened by the Secretary General after consultation to Chairperson. Its task is to advise the strategic direction of NARBO activities.
- (2) The Steering Committee shall consist of Chairperson, Vice-Chairpersons, Senior Advisors, Secretary General, Vice-Secretary Generals and experts invited by Secretary General.

10 years have passed since establishment of NARBO. Thanks to the effort and appropriate instructions of NARBO officials, NARBO has achieved very good results by conducting many activities to promote IWRM in Asia, and NARBO chairperson was invited to one of the member of the OECD Water Governance Initiative and HELP. Expectation to NARBO is getting higher than before, and NARBO needs to improve the quality of activities and to be more influential. At the

same time, budget and human resources of NARBO are limited, and NARBO also needs to consider the effective management. Seeing the future, we'll join some important events such as the 7th WWF. However, middle-term and long-term strategy of NARBO activities by considering the sustainability of our activities are necessary.

Having these situations in our mind, 1st SC meeting was convened by the Secretary General, and the meeting was held back-to-back with the 8th NABRO IWRM training on 5 December, 2013 in Thulhiriya, Sabaragamuwa Province, Sri Lanka

b) What we agreed

Around 15 participants attended the meeting.

SC meeting was convened by the secretary general based on NARBO charter, and majority of SC members joined. SC meeting consisted on sessions such as i) Long term and Middle term strategy of NARBO, ii) Financing matters of management of NARBO, iii) Action Program 2013-2015 and iv) Role of SC members and secretariat. Intensive and fruitful discussion was made among SC members and secretariats for NARBO future. Many useful and important recommendations were stated by SC members, and we agreed following points as summaries of the 1st SC meeting.

- (i) Focusing on RBO Leaders, RBO Deputy Leaders and also Young Leaders
- (ii) Enhance communication by making training alumni and social media / with internal affair of members
- (iii) Establishment of 'NARBO Foundation' (Legal Entity)
- (iv) Private sector involvement
- (v) New cost sharing scheme

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- (iv) SC to promote result of NARBO to ADB & other organization
 - (iiv) 'After 10 years' - Result of NARBO & President Meeting-
 - (iiiv) Role of SC members and secretariat

c) Way Forward

Based on the agreement, SC members and secretariat take actions to meet international standard quality of management. Especially, NARBO secretariat immediately considers conducting 'Presidential Meeting' with ADB, ADBI and JWA before the NARBO's 10th birthday.

II. Knowledge Networking

1) GEO-UNESCO IWRM Joint Workshop in Kenya

There are many difficulties in implementation of IWRM, and we have much issue to be overcome on engineering, information, institutional framework, budget, human resources and stakeholder participation. In Africa, ratio of the people who can access safe drinking water is still low. In addition, they have frequent extreme hydrological events such as serious flood and drought due to climate change. These events became additional threaten of water-food-energy security.

Based on these backgrounds, Group on Earth Observation (GEO) and UNESCO organized the workshop on IWRM in Africa to make use of the information of water resources management by satellite for enhancing regional cooperation and social benefit. The workshop was held at the UN Office at Nairobi from 12 to 16 January 2012. Around 70 participants from RBOs, government organizations, UN, space agencies and international donor

organizations in charge of water joined, and intensive discussions were made during the workshop.

The joint workshop was very much successful, and 'IWRM Spiral' was well understood among participants to improve IWRM in Africa. There are many differences on situation of water and water resources between Asia and Africa such as issues on transboundary aquifers and climate. However, we can see many similar issues on water resources management between regions. It is necessary for us to share each experience and challenge on IWRM to improve Water Resources Management and enhance interregional cooperation.



The photo of the state of the meeting

2) 5th GEOSS Asia-Pacific Symposium: AWCI parallel session

The 5th Global Earth Observation System of Systems (GEOSS) Asia-Pacific Symposium was successfully held from 2 to 4 April 2012 in Tokyo, Japan. Approximately 280 participants from 21 countries and 4 international organizations attended the symposium. The Symposium aimed further strengthening international networking within the region and shared the Asia-Pacific's experiences with the world. Each country reported on the progress it has made in

implementing GEOSS since the Asia-Pacific Symposium in Indonesia. To focus the discussions, we are organizing parallel sessions on the following topics;

- Asian Water Cycle Initiative (AWCI)
- Asia-Pacific Biodiversity Observation Network
- Forest Carbon Tracking
- Ocean Observation and Society; and
- Agriculture and Food Security.

The Symposium also demonstrated the benefits of Earth observation applications to end users in developing countries, particularly in the fields of Water, Biodiversity, Forests, Ocean and Agriculture in the Asia-Pacific region.

On the second day of the symposium at AWCI session, Mr. Tadashige Kawasaki introduced the activities of NARBO and exchanged opinions about IWRM with participants. In addition, discussion about possibility of collaboration with AWCI and NARBO was made after the discussion. As a summary of the session, we agreed that AWCI will conduct i) Framework for collaboration, ii) Project base collaboration and iii) Sub-Regional collaboration.

3) APWF Workshop on “Meta-Guidelines for Water and Climate Change Adaptation”

“Workshop on Meta-Guidelines for Water and Climate Change Adaptation” was held in the University of Tokyo from 1 to 2 October 2012. This workshop aimed to review key issues and determine the basic direction for the establishment of guidelines, which help the practitioners to utilize climate change projection methodologies, tools for vulnerability and impact assessment, and

project screening. The guidelines also provide instruction to them about adaptation strategies and activities.

As one of the key water-related organizations in the Asia-Pacific region, NARBO was invited to this workshop. The Vice-Chairperson, Mr. Tjoek Walujo Subijanto, the senior advisor, Dr. Apichart Anukularmphai, the Vice Secretary General, Mr. Kenji Someya, and one of the IWRM practitioners from Thailand, Ms. Janya Trairat from Department of Water Resources of Thailand participated in the workshop.

Mr. Someya gave his opening remarks. He introduced the contribution of NARBO, especially the publication of IWRM Guidelines in cooperation with UNESCO. He also explained about NARBO activities relating to the climate change. In conclusion, he said that NARBO would continue to promote its activities in cooperation with APWF, AWCI and other organizations.

At the Session, “How to Bridge the gap of usable knowledge” chaired by Mr. Wouter T. Lincklaen Arriens from ADB, who also serves as the Vice Secretary General of NARBO, Ms. Janya Trairat, Department of Water Resources, Thailand, one of the panelists, gave a presentation and provided details on the massive flood which hit Bangkok in 2011, as well as the situation of water resources in Thailand.

At the end of the session, active exchanges of views among all participants were promoted by Mr. Wouter.

At the session titled “How to synergize adaptation and IWRM”, Mr. Shinsuke Ota, a former vice president of JWA, Mr. Tjoek and Dr. Apichart made a contribution of the success of it. Mr. Tjoek exemplified

precipitation tendency of Brantas River Basin and also illustrated the relationship between IWRM and Climate Change Adaptation. Dr. Apichart showed the reason why IWRM and Climate Change Adaptation should be synergized each other and presented applicability, financial situation, and the promotion of IWRM.



The photo of the session

At the end of the session, Mr. Tjoek and Dr. Apichart joined as panelists the discussion where all participants could conduct lively exchange of information and opinions. It was a great opportunity for all participants to realize the importance of synergy between IWRM and Climate Change Adaptation and IWRM is a very important tool for climate change adaptation.

4) Saitama-City Waterworks International Seminar

Saitama-city convened the International Seminar on Water Works on 24 October 2012 in Saitama, Japan. The seminar was held based on the agreement of the enhancement of collaboration on waterworks with Saitama-city and Vientiane-city, and the Vice Mayor of Vientiane-city and Director General of waterworks authority of Vientiane were invited to the seminar.

In the seminar, 12 presentations on water resources management, waterworks administration, experience of waterworks and public sewerage system in Japan and Lao PDR were made from representative of each

field in both countries. JWA introduced NARBO activities on behalf of NARBO secretariat and insisted the necessity of IWRM in river basin level. To contribute to the discussion at the seminar and enhance IWRM in Lao PDR, JWA invited representative of the Nam Ngum River Basin Committee and Ministry of Natural Resources and Environment as members of NARBO to the seminar and requested to make presentation on IWRM in Lao PDR. Mr. Phonechaleun Nonthaxay introduced current situation of IWRM in Lao PER, especially Nam Ngum river basin and shared the lessons learnt. He emphasized that the necessity of the strong political support from high level officials and awareness among key stakeholders to improve IWRM, especially capacity development for them to achieve it. In addition to the seminar, poster session was held and 25 organizations including private sectors exhibited and introduced their latest engineering materials on water.



Waterworks International Seminar

On 25 October, guest of the seminar visited the Takizawa Dam managed and operated by JWA, and JWA introduced the engineering and operation of the dam for them. It was a very good opportunity to exchange views on water issues in upper reach of the river.

The seminar was successful and contributed to enhance collaboration with Lao PDR and NARBO.



Field Visit to the Takizawa Dam (JWA)

5) Workshop on Water Resources Management Financing

a) Outline

Asian countries have already introduced the concept of IWRM in water policy and water law. However, institutional capacity to implement it, especially financing is not enough. Focusing on this fact, Workshop on Water Resources Management Financing was conducted by GWP South East Asia (GWP-SEA) with support of Myanmar Water Partnership was held in Yangon, Myanmar on 3 October 2013. Approximately 30 delegates from 8 countries and 20 staff from Myanmar joined the meeting.

At first, opening remarks was offered by Mr. Hla Baw, GWP-SEA chairperson and told the expectation to the result of the discussion and welcomed the participants. Mr. Baw stressed the importance of Public Private Partnership and Capacity development for IWRM.

Following the opening welcome remark, presentations from member country on IWRM financing were conducted. Commonly, we agreed that we need more budgets for water resources management to develop structural and non-structural measures and

capacity building especially in local level, and the issue is how to secure the budget and implement IWRM.



Group photo

In addition to the country report, International Union for Conservation of Nature and Natural Resources and NARBO introduced each activity. Mr. Tadashige Kawasaki, NARBO secretariat introduced NARBO activities and told that NARBO aims to be an interpreter to fill the gaps between the international discussion and local level activities by enhancing our activities with GWP-SEA. Regarding financing of river basin management, Mr. Kawasaki introduced case study of Japan and told that combination of 3 pillars such as i) Law & Framework, ii) Financing mechanism, and iii) Institutional capacity.



The photo of the workshop

After the country report and report of international organizations, discussion session was moderated by Mr. Baw, GWP-SEA chair and following views and comments were shared among participants.

- Economic aspects is one of the key to

implement IWRM

- Sharing some part of the cost of water resources management is needed to be shared by water users for socio economic development in the river basin.
- The issue is how to set the system for financing and how to link water resources management with financing aspects.
- GWP-SEA needs cooperation with other organization in promoting IWRM
- Influence to the politician or policy make is needed, and we need a champion.

He concluded the workshop and told that there are issues of water on 'Too much water', 'Too little water' and 'Too dirty water' in Asia and we need further collaboration for developing socioeconomic of countries and sustainable growth.

b) Way Forward

GWP-SEA is one of the important members of NARBO. We've established good relationship with GWP, especially in 2013. NARBO is a network of RBOs, and promotion of IWRM at ground level is our task. Concrete actions to improve IWRM in Asia by getting each synergy and making the strong showing in IWRM are expected.

6) UNESCO mission in Pakistan

a) Background and Outline of the Mission

Pakistan has been facing havoc and suffering from heavy losses due to the damages caused by cyclic floods occurring in the Indus Basin due to heavy monsoon rainfalls. In addition, negative impact of the climate change effects on glacier melting from the northern Himalayas have also increased the risk of flood damage. To cope with the issues, the UNESCO has developed Guidelines for integrated flood management

based on flood forecasting and as an early warning system. To maximize the benefit from these guidelines, the Workshop on IWRM Guidelines for Integrated Flood Management, was held at the University of Agriculture, Faisalabad, on 17 December 2013 and was co-organized by the University of Agriculture, Faisalabad, in collaboration with UNESCO for flood management in the Indus basin using integrated approach based on modern technologies. The workshop focused on Strategic Strengthening of Flood Warning and Management Capacity in Pakistan and developing framework for managing floods in the Indus Basin. Moreover, the workshop provided an exciting opportunity to all the stakeholders to exchange their views on how efficiently the "IWRM Guidelines", developed by UNESCO in collaboration with NARBO, is being used in the management of flood worldwide. The workshop also facilitated the Engineers/Scientists in dissemination of these Guidelines among the academic institutions and professionals engaged in water management activities in Pakistan.

Two Days International Seminar on "Reliable Flood Forecasting" A Challenge for Data, Models or Forecaster skills organized by UNESCO in close cooperation with the PMD has launched two days International seminar on Reliable Flood Forecasting at the Avari hotel in Lahore from 18 to 19 December 2013. The seminar aimed at bringing together the scientists, hydrological modelers, meteorologists, planners and decision makers to develop mechanism to meet the challenges for data, model and forecasting skills for improvement of flood forecasting and early warning system in

Pakistan in order to save the population affected by flood. Representatives and officials from UNESCO, PMD, Government of Japan and JICA, Japan Aerospace Exploration Agency, ICHARM, Pakistan Council for Water Resources Research, Indonesian Meteorological and Geophysics Agency, UNSGAB, National Disaster Management Authority, Pakistan Space and Upper Atmosphere Research Commission, Federal Flood Commission and Irrigation Departments have participated in the seminar.

Mr. Tadashige Kawasaki, as a representative of NARBO, was expected to share expertise on IWRM by focusing on flood management and IWRM, introducing “IWRM Guidelines” by focusing on stakeholders in the basin and flood management and explaining how the “IWRM Guidelines” contributes to develop flood management in the basin by using the “IWRM Guidelines”.

b) What has happened in Pakistan?

(i) The Workshop on IWRM Guidelines for Integrated Flood Management

The workshop was held at the University of Agriculture, Faisalabad, on 17 December 2013, and approximately 120 experts and doctoral students joined the workshop. At first, Prof. Dr. Allah Bakhsh, Chairman of Irrigation and Drainage Department of the University of Agriculture in Faisalabad (UAF) offered welcome address and told the expectations. After that, Dr. Prof. Shahbaz Khan, Deputy Director, Asia and the Pacific Regional Science Bureau on UNESCO in Indonesia offered the key note address and talked the necessity of the integrated flood management in the basin and capacity

development to implement it. At the end of the morning session, Prof. Dr. Iqrar Ahmad Khan, Vice Chancellor of UAF, offered the conclusion remarks.

In the afternoon session, Mr. Kazuaki Yoshida, Coordinator of Pakistan Flood Project, UNESCO talked about the overview of “IWRM Guidelines” by introducing the case studies in the “IWRM Guidelines”. Consecutively, Mr. Kawasaki talked about the application of IWRM in River Basin in NARBO and stressed the necessity of stakeholder involvement on IWRM process and how “IWRM Guidelines” contribute to practical work. Mr. Kawasaki made questions about IWRM to the participants for enhancing the understanding of IWRM and told the commitment of NARBO’s contribution to UNESCO’s Pakistan activities. Dr. Tariq Rama, Australian Department of Environment introduced the case study of the Murray Darling Basin. Before closing the workshop, Dr. Prof. Shahbaz Khan summarized the workshop and committed UNESCO’s continuous contribution to flood management project in Pakistan and establishment of doctor’s course on IWRM in UAF.

(ii) International Seminar on “Reliable Flood Forecasting” A Challenge for Data, Models or Forecaster skills

The International Seminar was jointly organized by PMD, JICA and UNESCO from 18 to 19 December 2013 at the Avari hotel in Lahore. Approximately 60 delegates of government officials and researchers joined the international seminar. Mr. Muhammad Saeed Aleem, Chairman, National Disaster Management Authority told the project had started giving results, and the new model of

forecasting adopted by the Met Department greatly helped in monitoring floods and reducing losses to human life and property in monsoon this year. However, there was a need to develop a system to forecast hill torrents and urban flooding so as to minimize damage to human life or property and avoid inconvenience to urban population. There should be small radars for all cities for accurate weather forecasting for them. Mr. Arif Mahmood, Director General, PMD said the seminar related \$3.2 million project was made by UNESCO to develop a latest forecasting model, to establish media centers in Islamabad and Lahore to timely convey extreme weather reports to people and to develop human resource of his department. He also said the project was being funded by JICA and the new forecasting model greatly helped the PMD accurately forecast monsoon rains and monitor the river flood flows this year.

Dr. Shahbaz Khan and representatives of research and international organizations introduced the various aspects of flood management by using analysis model of run-off in the basin and exchanged opinions to explore the appropriate model for Pakistan. Mr. Kawasaki talked about NARBO activities and “IWRM Guidelines” by focusing on flood management of NARBO member organizations and ‘IWRM Spiral’ which was introduced at the “IWRM Guidelines” as useful tool to enhancing understanding and implementation of IWRM in the basin.

c) What has achieved through the mission?

Workshop and seminar initiated by UNESCO were completed successfully, and it highly contributes to boost the UNESCO’s

flood management project in Pakistan. In addition to the runoff analysis system, the “IWRM Guidelines” is expected to contribute to improve flood management on the IWRM process in Pakistan by using its useful case studies and ‘Key for Success’.

d) Way forward

UNESCO and NARBO jointly organized the international seminar on capacity development at the 2nd APWS in Chiang Mai, in May 2013, and NARBO dispatched important member to the focus area session which discussed IWRM organized by UNESCO as one of the partner organizations. Furthermore, UNESCO kindly contributed to NARBO’s 7th and 8th IWRM Training course in Sri Lanka and offered useful lectures on outline of IWRM.

NARBO is using and disseminating “IWRM Guidelines” at international conferences, NARBO and JICA’s training courses and so on. As a result, ‘IWRM Spiral’ is well recognized especially among NARBO member organizations. NARBO joined the IWRM Workshop organized by UNESCO and GEO in 2012 in Nairobi, Kenya and showed how to implement IWRM. As representative of NARBO, JWA has tried to summarize the result of NABRO’s IWRM training courses and making text book for future UNESCO’s business on IWRM on commission of UNESCO.

In this way, UNESCO and NARBO have strong relationship through “IWRM Guidelines”. NARBO will continuously use “IWRM Guidelines” in our activities and show how to implement IWRM by using “IWRM Guidelines” to the practitioners of IWRM at field level. In addition, NARBO is happy to contribute to UNESCO’s activities by using

NARBO's experiences. As one of the options of future collaboration, collaboration to the doctor's course on IWRM in UAF seems to be possible as NARBO. Continuous discussion for collaboration is desired to make synergy with UNESCO and NARBO.

7) IWRM Workshop -How to implement IWRM-

a) Background of the Workshop

Myanmar has a very long history of water management, especially in agriculture, navigation and development of those technologies. In recent years, large scale development projects to enhance economic growth have been planned, and the demand for water resources is expected to increase in the near future. In addition, unexpected hydrological disasters may be caused by climate change, and the need for consideration to bio-diversity is increasing. Based on these backgrounds, ARBRO joined NARBO in May 2012 to get regional experience on IWRM and develop IWRM in Myanmar. Since then, it has contributed to the discussion on IWRM with other members through their active role.

On 25 July 2013, to maximize the benefit of water resources in terms of equity, integrity, sustainability and inclusiveness, government of Myanmar has established the National Water Resources Committee (NWRC) chaired by the Vice President U U Nyan Tun, decreed by the President of Myanmar. The focal Ministry of NWRC is the Ministry of Transport (MOT), and it undertakes the duty of the Vice Chairperson. Secretary of NWRC is the Director General of the Directorate of Water Resources and Improvement of River Systems, Ministry of Transport. The NWRC

is responsible for establishing the IWRM system in Myanmar. ARBRO is a people-centered and action-oriented river basin organization established with Myanmar Water Professionals who later became members of the Expert Group of NWRC. The role of ARBRO is very important for enhancing the actions to improve IWRM and help enabling environment to create RBOs for other major river basins in Myanmar. Thus immediate actions are needed in Myanmar now to improve IWRM.

Based on these backgrounds, ARBRO and NARBO started the discussions on collaboration for IWRM in Myanmar and agreed to organize the joint workshop on IWRM focusing on the role of RBO and how to implement an IWRM on 24 February 2014 in Yangon. JWA and Directorate of Water Resources and Improvement of River Systems (DWIR) on behalf of the MOT and NWRC supported the lead organizers, ARBRO and NARBO.

b) What we discussed and agreed in Yangon

One day workshop was held on 24th February, 2014 by DWIR of MOT, ARBRO, JWA and NARBO. Participants for the workshop were approximately 70 expert members of NWRC, delegates of government officials in charge of water resources management, ARBRO members, water and environment NGOs, academia and researchers in Myanmar. They joined the workshop to interact through discussions with various participants and exchange experiences on IWRM in Myanmar and Asia.

During the opening session, H.E. Mr. Han Sein, Deputy Minister of MOT offered welcome remarks and introduced Myanmar's

policy such as Green Economy and Green Growth. H.E. Mr. Han Sein also stressed the necessity to enable the government to create the environment for river basin organization in Myanmar by IWRM and stressed the expectations to the workshop.

Following the welcome speech by the Deputy Minister of MOT, Dr. Swe Swe Aye, Chairperson of ARBRO welcomed the participants and introduced the activities of ARBRO. Dr. Swe Swe Aye stressed the necessity of the concrete collaboration between related agencies for the future.

Mr. Shigeharu Jikan, Director General, JWA also welcomed the participants on behalf of NARBO Secretary General and introduced the activities of NARBO and JWA. Mr. Jikan stressed that IWRM was improving step-by-step and made a commitment to keep supporting Myanmar through NARBO.

Following the opening session, Mr. Aye Myint, Member of the Expert Group of NWRC and former Director, Irrigation Department, Ministry of Agriculture and Irrigation and Mr. Satoshi Ojima, Deputy Director, JWA and NARBO introduced experience of IWRM in Myanmar and Japan as keynote lecturers. Mr. Aye Myint stressed the necessity of monitoring process, capacity building for monitoring indicator and comprehensive approach on IWRM. Mr. Aye Myint also mentioned that water allocation indicator should be implemented in IWRM in Myanmar. Mr. Ojima talked about IWRM from the viewpoint of people's happiness and explained how JWA experienced IWRM and developed engineering on IWRM in Japan. Mr. Ojima stressed the importance of ownership of the project and the necessity of identification of 'What you want to do with

support'. Mr. Ojima concluded his presentation with the keywords such as 'Think globally, act locally'.



Group Photo

Before lunch break. Mr. Ojima and Mr. Tadashige Kawasaki, NARBO Secretariat explained how to implement IWRM by introducing NARBO activities and "Regional Capacity Development Technical Assistance : Supporting Investment in Water Security in River Basins" (R-CDTA7547) by JWA and ADB. Mr. Ojima explained case studies of Indonesia and Nepal by focusing on the role of RBO and importance of the capacity development of RBOs. Mr. Kawasaki explained NARBO's tools to implement IWRM such as 'RBO Performance Benchmarking' and "IWRM Guidelines" and emphasized how these tools contributed to improve IWRM in Asia.



Keynote Lecture

In the afternoon session, 7 delegates from

organizations in Myanmar and Japan were invited to the panel discussion. Mr. Kawasaki led the panel discussion as a moderator and made 3 questions to the panelists such as i) What is necessary to implement IWRM in Myanmar, ii) What is the expectation to RBO in implementation of IWRM in Myanmar, and iii) What is the expectation to international organizations to implement IWRM in Myanmar. Mr. Sein Tun, Director, DWIR, MOT stressed the necessity of collection of current situation on IWRM and grasping existing baseline on IWRM implementation in Myanmar. In addition, Dr. Khin Ni Ni Thein, ARBRO Founder and Special Advisor, Secretary of the Expert Group of NWRC emphasized that there were many excellent human resources in Myanmar, however, they needed holistic policy to implement IWRM and lobbying support in addition to financial and technical support from international society. From the floor, there were comments for the necessity to implement IWRM and the establishment of RBO as well as the establishment and implementation of holistic policy by securing transparency, and intensive discussions were conducted.

As result of discussions, we agreed that we need i) Clear target and process to implement IWRM, ii) establishment of active RBO and iii) Continuous support not only in financial area, but also in experience & engineering with ownership.

At the end of the workshop, Mr. Sein Tun, Director, DWIR, MOT offered closing remarks as representative of the Ministry and talked about the expectation and the result of the workshop by introducing the NWRC and declared the success of the workshop.

Mass media, including Newspaper

companies, reported the workshop through TV program and newspapers, and contributed to disseminate the concept of IWRM and raise awareness of the necessity of IWRM to the people in Myanmar.

c) Way forward

The workshop identified some issues to implement IWRM related to the situation of water in Myanmar. Delegates from Myanmar touched on NARBO and JWA's experiences on IWRM, especially how to implement IWRM and the role of RBO. We convinced the participants of Myanmar that the workshop was a very good opportunity to raise awareness of the importance of implementation of IWRM in Myanmar and show the effective and practical tools to implement it.

To maximize the achievement of this workshop, concreted actions to implement IWRM in Myanmar should be explored through continuous discussions and the establishment of concrete collaboration activities.

III. Investments and Capacity development in Water Security in River Basins

1) NARBO Regional Technical Assistance IWRM workshop in Nepal

a) Background and Target of the Training

R-CDTA7547 primarily aims at supporting RBOs in the Asian river basins which are implementing IWRM. The R-CDTA7547 is conducted by JWA and ADB targeting three river basins: i) Solo River, Indonesia, ii) Bagmati River, Nepal and iii) Syrdarya River, Uzbekistan. NARBO is partially collaborating with this R-CDTA7547 in the capacity development portion.

As a part of many activities of R-CDTA7547, one training course for concerned staff of Nepal was organized to promote IWRM in the Bagmati River basin and to share the experiences with NARBO members, using the "IWRM Guidelines" published by UNESCO in 2009.

There are too many issues in the Bagmati River basin such as lack of domestic water, deteriorated water quality, uncontrolled land use, haphazard and rapid urbanization, overextraction of groundwater causing land subsidence, lack of electricity, fragmented responsibilities regarding water management, and so on. Participants of the training were expected to consider sustainable Bagmati river environment as well as water resources development focusing on effective participatory approach and good water governance. Developing 'IWRM Spiral' in Bagmati River basin and finding out 'Keys for Success' to solve the above mentioned issues were programmed.

b) What happened at Nagarkot?

The training was held at the Club Himalaya Resort in Nagarkot, which is located around 20km from Kathmandu, from 31 May to 1 June 2012. Experts from JWA and Perum Jasa Tirta II (PJT II), Indonesia and participants from Nepal exchanged each other's experiences on IWRM. Intensive discussions on how to improve current situation of the Bagmati River were made among experts and participants. PJT II was established in line with Gov. Reg. No 94/1999 and manages the Citarum river in West Java near Jakarta. PJT II provides public services and simultaneously gains profit based on the company management principles.

On the 1st day of the training, Mr. Herman Idrus, Director, PJT II shared his experiences on IWRM in the Citarum River by focusing on the improvement of river basin environment. He explained water quality management in the Citarum River and introduced the following 'Keys for Success: Appropriate human resources are important to carry out proper operational works and also to have a vision on managing water quality management system as a whole. Comprehensive and customized database and information system are supporting tools for good decision making. Collaboration and mutual coordination with other agencies are a must to make an integrated plan, to put the plan into action, and to utilize monitoring result for law enforcement. At the end of his presentation, he stressed that rivers with complex problems should be managed by multi-sectoral approach.

Mr. Tadashige Kawasaki, Deputy Director, JWA also explained concept of 'IWRM Spiral' and 'Keys for Success' in implementation of IWRM by introducing some case studies. At the end of his presentation, he stated that the importance of i) thinking about the differences of characteristic of basins, ii) perspective of IWRM, iii) each sector's perspective, and iv) added value. After his presentation, 'Keys for Success' in the Bagmati River was explored and discussed among all participants and experts. We identified potential 'Key for Successes' on each phase of 'IWRM Spiral' on the Bagmati River.

At the end of the training, Mr. Shishir Koirala, Water and Energy Commission Secretariat (WECS), Nepal summarized the training as follows, and concluded his

remarks by praising successful conclusion of the training.

- (i) We learnt new insights on IWRM through the training, and concept of IWRM is new to Nepal.
- (ii) However, how to apply IWRM process into the Bagmati River in the future is the issue.
- iii) By using the knowledge, better and happy river for the people will be realized in the future.

c) Outcome of Training

Participants of the training had already recognized the existence of many stakeholders in the basin and necessity of functioning institutional framework. After the conclusion of the training, importance of each sector's perspective was well understood. 'IWRM Spiral' and 'Keys for Success' of the Bagmati River contributed to the preparation of roadmap of investment plan for the Bagmati River. Recommendations for going up 'IWRM Spiral' and discussed 'Keys for Success' of the Bagmati River will contribute to the improvement of IWRM in their river basin. Result of the training is expected to contribute to the management of the future IWRM related projects.



Photo of the participant

d) Way Forward

The training provided by experts from JWA and PJTII for participants from Nepal and

had great success with capacity building. Experiences of the Bagmati River will be shared among NARBO for improving IWRM. In addition, NARBO has many good case studies of IWRM and various types of RBOs. More case studies should be shared with colleagues in Nepal for assisting them to establish appropriate types of RBOs.

2) International Seminar on River Basin Organization and the Bagmati River

a) Backgrounds

Nepal has been introducing IWRM process, with recognition that integrated planning, development, and management of water, land, and related natural resources is critical in maximizing the development potential and reducing water-induced disasters, while sustaining water quality and ecosystems and their cultural values. As a major step to provide sound policy and institutional bases for introducing IWRM, the Water Resources Strategy was adopted in 2002, which set out the sector goals, short- to long-term (up to 25 years) objectives, principles, and institutional framework for IWRM on the basis of river basins. On the basis of Water Resources Strategy, the National Water Plan was adopted in 2005, as a means to put Water Resources Strategy into operation, with specific action plans for 10 subsectors or agendas categorized into water security, water use, and institutional mechanisms. With a reasonable framework to operationalize IWRM provided by Water Resources Strategy and National Water Plan, the Government of Nepal is piloting IWRM process at the first phase, led by the WECS, the Government of Nepal. ADB and JWA have been supporting the Bagmati River

basin through R-CDTA7547, with partnership to improve water security through NARBO.

b) Objective

To provide an opportunity for water related government officers and civil societies in Nepal to think about practical IWRM approach by introducing a couple of actual RBO types which is an outcome from the NARBO RBO Seminar, and by learning experiences in other countries.

c) Brief report of the seminar

The seminar was held in Everest Hotel, Kathmandu, NEPAL on 5 June 2012. Representatives from Government, NGOs, International Water Management Institute, NARBO and civil group were took part in the seminar.

The session was Chaired by Mr.B.P.Pandit, Secretary, WECS, and welcome remark was offered by Mr. Lacoul, Joint Secretary of WECS. Mr. Hisashi Mitsuhashi, ADB offered opening remarks by introducing ADB's Water Policy (Water for All & Water Operational Plan 2011–2020) and ADB's support to NARBO.

Dr. Keizrul Bin Abdullah made keynote speech and talked about managing river basin through RBO and how NARBO helps RBOs. Then, Prof. Slamet Budi Prayitno, Diponegoro University, Indonesia talked about stakeholder's participation approach on IWRM by introducing i) Case Study of Solo River, ii) Background of the establishment of Basin Council, iii) Structure of Basin Council and basin stakeholders and iv) Coordination scheme and Public Participation approach.

After the speeches, panel discussion Dr. Keizrul chaired the session, and panelist talked following points.

(i) Mr. Lacoul, WECS

- Issues and Countermeasure Strategy in the Bagmati River

(ii) Mr. Hisashi Mitsuhashi, ADB

- RBO project in ADB by the viewpoint from Sustainable Infrastructure Division, ADB

iii) Dr. Slamet Budi Prayitno, Diponegoro University

- Participatory approach of water resources management in Solo River

iv) Dr. Takeyoshi Sadahiro, JWA

- R-CDTA7547 Project in 3 countries. Importance of legal frame and RBO. Introduction of Indonesia's case

Result of the seminar contributed to improve IWRM in the Bagmati river and R-CDTA7547 supported by NARBO.

V. Collaboration with International Network

1) WEPA Annual Meeting and Seminar in Cambodia

Water Environmental Partnership (WEPA) in Asia, aims to promote good governance in water environment management by providing necessary information and knowledge of water environment management in the region through databases. NARBO, as a Network of RBO, considers water environment management is one of the important areas under the IWRM umbrella. Therefore NARBO keeps connection with WEPA.

This time, WEPA 4th International workshop was held in Siem Reap, Cambodia, from 22 to 23 February 2013. It focused on "on-site water treatment". WEPA partners introduced their country's situation. According to the presentation from WEPA, the settlement of water treatment facilities

remains relatively low in many countries in Asia, such as Cambodia, Vietnam, Sri Lanka, Indonesia, and so on. Therefore, the importance of on-site treatment system was stressed. One of speakers from Japan introduced Japanese on-site domestic wastewater treatment system, “Johkasou”. He emphasized the effective of Johkasou system, and also mentioned the importance of governmental support as well as periodical monitoring. By using this opportunity, NARBO secretariat introduced NARBO activities as well as an experiment of wastewater treatment executed in Nepal.



The photo of the meeting

WEPA annual meeting was followed the workshop. Speakers from Cambodia said that IWRM approach is considered to cope with water pollutant. In this meeting, secretariat of WEPA introduced the industrial wastewater management as a next topic of WEPA activities. Lastly, road map of the 3rd phase was shown to WEPA members. Secretariat of WEPA asked members to be more active on WEPA activities.

At the last day of this workshop and meeting, Study visit was held. Many members observed wastewater treatment system in Siem Reap.

Wastewater treatment is also one of the big challenges for IWRM practitioner. Sharing and exchanging experience and knowledge

is crucial for achieving good water environment and society. As one of IWRM practitioner Network, NARBO will keep relationship with WEPA, and hopefully hold joint-event with WEPA in near future.

2) Regional Workshop on “Training Needs and Gaps Assessment on Adaptation and Resilience to a Changing Climate in South Asia”

a) Background of the workshop

Number of water-related disasters all over the world, and poorly equipped climate resilient society weakens the capacity to address the actual situation to mitigate the damage of water-related disasters. It is clear that in the emerging global and regional scenario, climate change adaptation and coping with disaster is interwoven and crucial to the success of initiatives in the water sector, impacting all countries.

By examining the literature and assessing case studies of adaptation in the region, it becomes apparent that there are a number of gaps in knowledge, capacity, and experience. These include a lack of information on climate impacts in some of the region’s most vulnerable areas, which are hotspots of climate change; and a lack of research and knowledge across a range of interconnected issues. Adaptation to climate change converges on the goal of water security for all in addition to harnessing the social and productive potential of water and limiting its destructive force. IWRM will be the key for water security and coherent policies or strategies and institutional framework will play a significant role in climate resiliency and adaptation in the water sector.

The South Asian region requires cohesive,

robust generation of data and knowledge on the process of adapting to climate change. Bangladesh, Bhutan, India, Nepal and Pakistan share 20 major rivers. Therefore, there is a need for formalized channels of information sharing, centered specifically around climate change adaptation, will be critical in building climate change resiliency in South Asia.

Based on these backgrounds, the Asia Pacific Adaptation Network and GWP-South Asia conducted a 2-day workshop on “Training needs and gaps assessment on adaptation and resilience to a changing climate in South Asia” from 4 to 5 September 2013 in Kathmandu, Nepal, focused on assessing the gaps and needs in climate change resilience in South Asia in water. The workshop also aimed to contribute explore the need for formalized channels of information sharing centered specifically on climate change adaptation, which will be critical in building climate change resiliency in South Asia.

Around 30 delegates, researchers and practitioners from 8 countries joined the workshop, and intensive discussion was made.

At first, Dr. Somlal Subedi, Secretary, Ministry of Science, Technology and Environment, Nepal offered opening remarks and told the expectation to the discussions and results of the workshop. Following the opening remarks, 7 sessions on i) Water Sector Adaptation and Resilience to a Changing Climate in South Asia, ii) Water Security Progress and Success Stories, iii) How Indigenous Knowledge and Modern Technology Work Towards Resilience in the Water Sector - Focus Agriculture, iv)

Adaptation Technologies and Adaptation Capacities, v) Water Cooperation for Climate Resiliency (Hydrological Data Sharing and Early Warning) , vi) IWRM for Water Security, and vii) Gaps and Challenges were conducted.

Intensive discussions were made among participants, and the workshop showcased good practices from the region on water security progress, indigenous knowledge and modern technology working towards resilience in water sector, underlined the need of water cooperation for climate resiliency and laid emphasis on the framing of coherent policies and strategies in relation to IWRM in the region. In addition to the activities of member organization, regional organizations such as the South Asia Association of Regional Cooperation, The South Asia Cooperative Environment Programme and NARBO added an additional dimension to the overall workshop and stressed the necessity of integrating Disaster Risk Management, Climate Change Adaptation, IWRM and SDGs.

The workshop highlighted the issues that IWRM, water governance issues, water cooperation needs, community-based adaptation, sharing of data information within the context of target audience and the methodologies and tools behind its usage. Consideration to the equity and inclusive approach of the different levels of stakeholders in the decision-making process was also agreed. The workshop also recognized that the post disaster cooperation is visible between the countries of the world, but the gaps should be filled in this direction during the pre-disaster phase in integrated manner.

b) NARBO's Contribution

Mr. Tadashige Kawasaki, Deputy Director, JWA served as a session chair of 'Water Security Progress and Success Stories' and 'IWRM for Water Security'. Session on 'Water Security Progress and Success Stories' had 7 presentations from South Asia countries which introduced water security in each country by considering the 5 categories of water security which was introduced at Asia Water Development Outlook 2013 and success stories, and discussed what kinds of gaps are there.

Session on 'IWRM for Water Security' recognized the questions how to implement IWRM especially at ground level, necessity of commitment and capacity building for all levels including stakeholders of IWRM and institutional capacity. And we also learnt that necessity of institutional tools for IWRM implementation, and result of studies conducted by each organization should be disseminated by translated to local language and adaptive manner, and applicable perspective should be incorporated into each project and implemented it at each level.

In addition, we agreed that these activities should be encouraged to fill the gap, and result of the activities such as demand for government is the gap to be filled in.



Dr. Sadahiro who explained IWRM Spiral

Dr. Takeyoshi Sadahiro, Senior Counselor, JWA introduced the result of ADB's Technical Assistance in Nepal in addition to introducing NARBO, and it was well received as practical activities at ground level and real story which introduces how to implement IWRM.

c) Result & Way Forward

As a summary of the workshop, we agreed that necessity of concrete actions to fill the gaps between researchers and practitioners and collaboration with other organizations such as collaboration with the Asia Pacific Adaptation Network and NARBO is highly recommended. NARBO is a network of RBO and practitioner of IWRM supported by Knowledge Hub organizations and associated members. NARBO is expected to take a role of filling in the gaps between politicians, researchers and practitioners to boost the implementation of IWRM as like an interpreter. NARBO will enhance collaboration with other networks through IWRM and assist member organization in implementation of IWRM.

3) 2nd Global WOP Congress and GWOPA General Assembly

a) What is GWOPA and WOPs?

Global Water Operator's Partnership Alliance (GWOPA) is an alliance of partners working towards the common goal of making Water Operators' Partnerships (WOPs) and is led by UN Human Settlements Programme. UN Human Settlements Programme founded GWOPA in 2009 to scale up quality WOPs worldwide, and its Secretariat is hosted in Barcelona.

WOPs is a peer-support exchange between two or more water or sanitation operators, carried out on a not-for-profit basis

with the objective of strengthening capacity, enhancing performance and enabling the water operator to provide a better service to more people, especially the poor. WOPs are promoted by 'Hashimoto Action Plan' of the UNSGAB for a global scale-up of the approach. WOPs have contributed to enhance capacity development of water operators and improve the achievement of MDGs.

The GWOPA Secretariat, hosted by UN Human Settlements Programme, is driven by an international Steering Committee and supported by a global network of partners and members. Goal of GWOPA is to promote and enable impactful WOPs by creating awareness about WOPs, producing and sharing knowledge and tools, and rallying the funds and political backing to enable effective WOPs practice. In addition GWOPA is ultimately contributing to MDGs of halving the proportion of the world's population that remains unserved by adequate water and sanitation services.

b) Why NARBO?

Every two years, GWOPA organized a global forum on WOPs, and the 2nd Global WOPs Congress and GWOPA General Assembly were held from 27 to 29 November 2013 in Barcelona, Spain. Representative of water and wastewater utilities, national and local government officials, donors, civil society, labour unions and knowledge and academic institutions and international networks. The congress is a celebration of UN International Year for Water Cooperation, and main theme was "Fostering Cooperation between Water Operators". Many sessions to discuss important topics related with WOPs and its regions have been conducted.

GWOPA Secretariat requested JWA to make a presentation at the sessions on 'Reducing Risks : Water and Sanitation Operators Helping Each Other 'as a representative of NARBO which focused on how to reduce risks in urban water management by Water Operators, and what are the important actions Water Operators should take when a disaster strikes.

c) What we discussed at the session

6 presenters, 6 panelists and 40 participants including Water Operator, specialists and so on with moderator joined the session. The session consisted of presentations of 6 presenters and panel discussions by 6 panelists. Informative and concrete activities were introduced at the presentation sessions. As key words of the presentations, we agreed the importance and necessity of i) information and analysis, ii) involvement of related organizations and iii) Capacity building & Awareness rising at all level.

In panel discussion, panelist stated many useful points to be considered, and by answering to 2 questions such as lessons learnt and what are the most important actions Water Operators should take when a disaster strikes. We agreed the necessity of i) Preparedness, ii) Political will, iii) Multi crisis approach, and iv) Integrated Urban Water management. As notable comments, 'Events caused by climate change are 'new normal'. Therefore, we have to change our culture' and 'For preparedness, we need to exchange the experiences, and impact of Water Operator could be large' were stated by the panelists.

As summary of the discussions, following recommendations were summarized by the

moderator.

- Information is critical. ; To take decisions and actions, accurate information is indispensable.
- Teamwork for preparedness ; Preparedness for disaster is not achieved alone.
- Networking & Interactions with Partners ; Necessity of networking and partnership including stakeholder involvement is necessary for reducing risks.

WOPs are expected to help opportunities of change and can grow more in risk / crisis management.

d) NARBO's Contribution at GWOPs Session

Mr. Tadashige Kawasaki, NARBO Secretariat in JWA joined the session and introduced JWA's risk management by introducing experience of the Great East Japan Earthquake and water quality accident in the basin and importance of the preparedness by regular drill, establishment of network among stakeholders and viewpoint of river basin. In addition, some experiences of NARBO were also shared by the participants. Mr. Kawasaki reported the summary of the session as one of the rapporteurs at the closing session and contributed to summarize the discussions of the congress.



Photo of the closing session

e) Way Forward

NARBO created the member category of 'Associate member' which target is water operators at the 5th NARBO General Meeting in May 2013. GWOP congress was a very good opportunity to collect current information of water operators and understand water operator's view point. In addition, presence of NARBO among WOPs member in the world was increased.

Water operators are one of the important stakeholders in the basin, and RBOs need to consider their viewpoints as a coordinator to improve IWRM in the basin. NARBO secretariat promotes the information about the group of stakeholders continuously. In addition, presence of NARBO among WOPs member in the world was increased, and we'd like to consider how to make synergies with other networks including GWOPA to improve water security.

Baselines

BASELINE1 : NARBO Charter

**BASELINE2 : Action Program - 2010 - 2012
Action Program - 2013 - 2015**

Network of Asian River Basin Organizations (NARBO)

CHARTER

February 2004
(Revised February 2006)
(Revised February 2008)
(Revised November 2010)
(Revised May 2013)

Contents

| | |
|--|----|
| Introduction | 1 |
| Section 1. Denomination and Working Language | 3 |
| Section 2. Goal and Objective | 3 |
| Section 3. Activities | 3 |
| Section 4. Organizations | |
| 4.1. Membership | 4 |
| 4.2. NARBO General Meeting | 8 |
| 4.3. Chairperson and Vice-Chairperson | 9 |
| 4.4. Secretariat | 10 |
| 4.5. NARBO Patron | 13 |
| 4.6. <u>Steering Committee</u> | 13 |
| Section 5. Resources | 13 |

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 improve 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 water sector agencies and knowledge partner organizations in Asia and to advise on the establishment of RBOs in Asia.

Section 3. Activities

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

- (1) Activities for the whole of NARBO

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

- (a) Advocacy and raising awareness for IWRM among RBOs, water sector apex bodies, and leading water sector agencies in the region, mainly through regional workshops.
- (b) Sharing of information, good practices, and lessons learned for IWRM among the participating organizations, mainly by operating

databases and a website for IWRM exchanging information, and by sending a newsletter by email as well as posting on the web site and holding (sub) regional workshops.

(2) Activities for regional areas of NARBO

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

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

Section 4. Organizations

Article 4.1. Membership

- (1) Membership will be open to the following types of organizations.

- (a) RBOs, defined as organizations that have been officially recognized by the government of their country as having a mandate to promote and implement IWRM at the river basin level.
- (b) National and federal/ provincial / local governmental organizations in charge of water administration in the countries which implement or are interested in promoting and implementing IWRM at the level of river basins. This includes water sector apex bodies and leading water agencies.
- (c) Regional knowledge partner organizations with expertise in promoting and supporting IWRM, such as international RBOs and research and training organizations.
- (d) Inter-regional knowledge partner organizations with expertise in promoting and supporting IWRM.
- (e) Bilateral and multilateral development cooperation agencies promoting and supporting activities related to IWRM at the level of river basins.
- (f) Water related organizations who support NARBO's Goal and Objective by offering their resources can be considered as associate members.

- (2) Among these, the organizations under (1.a) are considered as RBO members, (1.b to 1.e) are considered as partner members and (1.f) are considered as associate member. 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

- (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 confers with the Chairperson and the Vice-Chairpersons 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 confers with the Chairperson and the Vice-Chairpersons 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 their plan, scope of action, major activities, and issues are summarized. The report will be submitted in English.
- (c) Associate members are obliged to submit a report which summarized their activities and contribution to NARBO in the duration of the General Meeting to the Secretary General to facilitate favorable screening by NARBO secretariat for renewal of their membership. Associate members have no voting rights.
- (d) The NARBO members are required to pay an annual membership fee. The amount and schedule of payment will be approved by NARBO General Meeting.

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

Article 4.2. NARBO General Meeting

(1) Venue and Date

- (a) The NARBO General Meeting is held, in principle, every three years.
- (b) In principle, the General Meeting is held in the Chairperson's country, except as otherwise determined by the Chairperson. The dates 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.
- (c) 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) Three 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-Chairpersons, Secretary General and Vice-Secretary Generals
- (d) Approval and revision of the Charter

(4) Approval

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

Article 4.3. Chairperson and Vice-Chairpersons

(1) Nomination and Selection of the Chairperson and the Vice-Chairpersons

(a) The Chairperson and the Vice-Chairpersons 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 appointed by the Secretariat 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 a 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) A Vice-Chairperson will be deemed to be unable to perform his/her function as Vice-Chairperson if (i) A 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

(4) NARBO Senior Adviser

(a) Secretary General may invite the Chairperson to become NARBO Senior Adviser at the completion of Chairpersons term. A senior expert who had made a significant contribution to NARBO works and demonstrated leadership may also be invited to become NARBO Senior Adviser. NARBO Senior Adviser is expected to advise the Chairperson and Secretariat in promoting and enhancing NARBO activities.

(b) A NARBO Senior Advisor is expected to serve for a period of 3 years, with possible extension.

Article 4.4. Secretariat

(1) Responsibilities of the NARBO Secretariat

(a) Initiatives and Activities of NARBO

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

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

- (iii) Preparation of three-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, the Asian Development Bank (ADB), in Philippines and Center for River Basin Organizations and Management (CRBOM) in Indonesia.
 - (b) The Headquarters of the Secretariat is located in JWA and its branches are located in ADBI, ADB and CRBOM. Secretariat staffs are nominated by the Secretary General in consultation with JWA, ADBI, ADB and CRBOM.
 - (c) Any organization in the NARBO Secretariat may resign its function at any time without condition.

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

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

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

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

(4) Responsibilities of the Secretary General

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

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

(c) Supervises the Secretariat's work

(5) Responsibilities of the Vice-Secretary Generals

(a) Supports the Secretary General

(b) Substitutes for the Secretary General when necessary

Article 4.5. NARBO Patron

The Chairperson may invite a person of high public stature and influence to take on the role of NARBO Patron. A NARBO Patron is expected to represent and promote NARBO and its objectives and activities in the region and world, specifically to leaders, policy makers, media, and the general public. The patron may also be requested to advise NARBO on its work.

Article 4.6. Steering Committee

- (1) The Steering Committee may be convened by the Secretary General after consultation to Chairperson. Its task is to advise the strategic direction of NARBO activities.
- (2) The Steering Committee shall consist of Chairperson, Vice-Chairpersons, Senior Advisors, Secretary General, Vice-Secretary Generals and experts invited by Secretary General.

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 and CRBOM who will mobilize financial resources for this purpose. Expenses for the Chairperson, Vice-Chairpersons and Senior Advisors will be provided by NARBO Secretariat and other sources for approved travels.
- (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.

Network of Asian River Basin Organizations (NARBO)

ACTION PROGRAM 2010-2012

Key Result Areas:

- 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

| A. Advocacy, Raising Awareness, and Exchange of Information and Good Practices on IWRM | | | |
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| Activities | Implementation Plan | Lead Agency | Notes |
| Activities led by the NARBO Secretariat: <ul style="list-style-type: none"> 1. NARBO Website (http://www.narbo.jp) <ul style="list-style-type: none"> • Provides information, news and reminders on NARBO activities; and information on introducing IWRM in river basins in Asia, including publications, case studies, articles on important IWRM topics • Provides links to NARBO member websites, e-newsletters, online databases, and other related sites | <ul style="list-style-type: none"> • Continue regular updates • Introduce on-line forum to enhance information and knowledge sharing | JWA | <ul style="list-style-type: none"> • Members to provide stories, cases, articles, and links |

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| 2. NARBO e-Newsletter <ul style="list-style-type: none"> • Publishes good practices, lessons learned, IWRM-related activities, etc. | <ul style="list-style-type: none"> • Draft and prepare stories and materials on priority topics of interest to NARBO members • Prepare and distribute quarterly through e-mail and the website | JWA | <ul style="list-style-type: none"> • Members to send contributions |
| 3. Guidelines and Online data base <ul style="list-style-type: none"> • Provides guidelines and other useful reference materials on IWRM practices, cases, lessons learned, champions, standards and manuals, annual reports, topics of interest through website and CDs | <ul style="list-style-type: none"> • Formulate guidelines and continue collecting and updating information from members and partners • Provide useful reference material • Provide references of Japanese water resources development and management | ADBI, JWA, ADB, CRBOM, Knowledge Hubs | <ul style="list-style-type: none"> • Members to provide reference materials |
| 4. NARBO Annual Report <ul style="list-style-type: none"> • Publishes NARBO activities and events; and members' updated profile | <ul style="list-style-type: none"> • Distribute annual report in May of following year through hardcopies, the website and CDs | JWA | <ul style="list-style-type: none"> • RBO Members to submit their annual reports no later than end March |
| 5. NARBO Promotion <ul style="list-style-type: none"> • Increases governments, public, and media interest in NARBO activities and increase NARBO membership • Disseminates key messages on introducing IWRM in river basins and RBO work • Promotes NARBO's objectives and activities | <ul style="list-style-type: none"> • Promote NARBO work through media, country visits, regional events, and knowledge networks • Invite RBOs in development projects to join NARBO • Invite knowledge partner organizations to join NARBO • Encourage national NARBO networks in countries with many RBOs | NARBO Secretariat, Chair, Indonesia NARBO | <ul style="list-style-type: none"> • Members to contribute to the promotion and dissemination work, and to increase NARBO membership • NARBO Indonesia and CRBOM to pilot in-country RBO network |

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| 6. NARBO General Meeting <ul style="list-style-type: none"> Includes study visit in host river basin, IWRM workshops, and general meeting | <ul style="list-style-type: none"> Organize the 4th NARBO General Meeting in the last quarter of 2010 and the 5th NARBO General Meeting in early 2013 | Chair, Vice-Chair, NARBO Secretariat | <ul style="list-style-type: none"> Members to participate and share their knowledge |
| Activities led by NARBO Member Organizations: | | | |
| 1. NARBO members' websites <ul style="list-style-type: none"> Provides useful information and knowledge products on introducing IWRM in their respective river basins | <ul style="list-style-type: none"> Develop, maintain, and update the website on a regular basis | Members | <ul style="list-style-type: none"> Members to develop and maintain modern websites |
| 2. NARBO members' Annual Report <ul style="list-style-type: none"> Compiles overview of RBO's objectives, targets, activities, lessons learned, and performance improvements in introducing IWRM in their respective river basins | <ul style="list-style-type: none"> Prepare annual report and send to NARBO Secretariat at JWA no later than March of the following year | RBO Members | <ul style="list-style-type: none"> RBO members to invest in useful annual reports |

| B. Capacity Building in River Basin Organizations (RBOs) | | | |
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| Activity | Implementation Plan | Lead Agency | Note |
| Activities led by the NARBO Secretariat: 1. IWRM Training Program <ul style="list-style-type: none"> Develops the capacity of NARBO member staff in understanding and implementing IWRM in their respective river basins | <ul style="list-style-type: none"> NARBO Technical Advisory Committee to guide an overhaul of the program design 7th IWRM training will be held for senior level staff in 1st quarter of 2011 Next series of IWRM Training should | JWA, ADB, ADBI, CRBOM, Technical Advisory Committee, Knowledge Hubs | <ul style="list-style-type: none"> Members to facilitate their staff to apply and contribute registration fee A program comprises 2 training courses for middle level and 1 course for senior level IWRM GUIDELINES at River Basin Level is used as main reference material |

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| | be discussed at the TAC meeting and conducted from 2011 <ul style="list-style-type: none"> Conduct once or twice a year | | |
| 2. Workshops <ul style="list-style-type: none"> Covers IWRM topics of interest and is held during the NARBO general meeting Separate thematic workshop series held outside the general meeting deepen further understanding on selected priority IWRM topics | <ul style="list-style-type: none"> Conduct workshop on IWRM case study by NARBO secretariat and Department of Water Resources, Ministry of Natural Resources and Environment, Thailand Conduct workshops on Climate Change Adaptation, Disaster Management, Water Quality Improvement, Leadership and Water and History Conduct sessions in the ADB conference, October 2010 – Water: Crisis and Choices and prepare a technical background paper in collaboration with members | JWA, ADB, ADBI, CRBOM, Indonesia NARBO, Knowledge Hubs | <ul style="list-style-type: none"> Members to attend and contribute knowledge on issues and solution strategies Lessons learned from thematic workshops on water rights, facility management disaster management and climate change will be used in designing the subsequent workshop series |
| 3. Performance Benchmarking supported by peer reviews <ul style="list-style-type: none"> Provide a demand-based benchmarking service for RBOs to assess and continuously improve their performance | <ul style="list-style-type: none"> Manage the implementation of the NARBO RBO performance benchmarking service Form and maintain a group of trained and certified peer reviewers Maintain tools and documentation capturing experience gained and lessons learned, Report progress and benefits | CRBOM, with support from ADB and other partners | <ul style="list-style-type: none"> CRBOM to manage training and certification service for peer reviewers, facilitation of peer reviews, and support for pilot-testing of basin benchmarking methodology, in collaboration with the Knowledge Hubs |
| 4. Advisory visits to RBOs <ul style="list-style-type: none"> Includes study visits by RBOs to learn from their experience in implementing | <ul style="list-style-type: none"> Encourage members to promote such visit through newsletter and | JWA, ADB, ADBI, CRBOM, Knowledge | <ul style="list-style-type: none"> Knowledge Hubs to join visits for piloting Roadmap Advisory Service for RBOs |

| IWRM, and to promote knowledge generation and sharing | website | Hubs | <ul style="list-style-type: none"> Where possible linked to RBO exchange visits initiated by members |
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| 5. Scholarship Programs <ul style="list-style-type: none"> Introduces information about higher education institutions, research and training organizations or any scholarships which relate to IWRM | <ul style="list-style-type: none"> Share information on IWRM courses and existing scholarship programs, through NARBO website | JWA, ADB, ADBI, CRBOM, Knowledge Partner members | <ul style="list-style-type: none"> May include online distance learning programs |
| Activities led by NARBO Member Organizations: | | | |
| 1. Twinning Programs <ul style="list-style-type: none"> Mutually beneficial programs for knowledge sharing and capacity development, involving exchange visits, staff exchange, and joint projects | <ul style="list-style-type: none"> Explore further substantial outputs in using current scheme for mutual benefits | Members | <ul style="list-style-type: none"> Initiated, arranged and financed by RBO members themselves NARBO Secretariat can facilitate initial contacts |
| 2. ISO certification <ul style="list-style-type: none"> Explores opportunities to gain ISO certification for good performance in achieving standards of excellence | <ul style="list-style-type: none"> ISO certified member RBOs in Indonesia (PJT 1 and 2) can provide information to other members NARBO Secretariat can post information on the website | Members, PJT 1, 2 | <ul style="list-style-type: none"> Members to exchange information and experience |
| 3. Transboundary Water Management <ul style="list-style-type: none"> Explores opportunities to foster transboundary water resources management (within and between countries) through information sharing and exchange of experience | <ul style="list-style-type: none"> Contribute good practice cases as inputs for regional study on charting progress in IWRM in river basins in the region | Members, Knowledge Hubs | <ul style="list-style-type: none"> The Mekong River Committee is expected to contribute as a knowledge hub for this topic |

| C. Network Support | | | |
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| Activity | Implementation Plan | Lead Agency | Note |
| 1. Technical Advisory Committee <ul style="list-style-type: none"> Provides guidance to ensure quality of NARBO's IWRM Training Program, and on strategic direction of NARBO's activities | <ul style="list-style-type: none"> TAC meetings shall be convened before holding IWRM Training to discuss the strategy and the contents of IWRM training | ADB, ADBI, JWA, CRBOM, Chair, Vice-Chair | <ul style="list-style-type: none"> TAC meetings shall be convened at least once a year based on the statute Heads of regional water knowledge hubs to be involved |
| 2. Knowledge Networking <ul style="list-style-type: none"> Facilitates and supports regional water knowledge hubs under the Asia-Pacific Water Forum Provides demand-based knowledge and capacity development services that meet NARBO member clients needs | <ul style="list-style-type: none"> Improve collaboration with APWF regional water knowledge hubs and other partners to help RBOs and projects for IWRM in river basins Member RBOs to explore partner relationships with relevant knowledge hubs for specific services they need Collaborate with other RBOs (such as Spanish RBOs and others) in improving water security in their basins for the future Collaborate with other organizations in exchanging data or others for climate change adaptation in IWRM. Conduct on-demand trainings or workshops on Leadership. | CRBOM, other Knowledge Hubs, and partners | <ul style="list-style-type: none"> ADB and JICA TA projects to support CRBOM are on progress. Other donors to be encouraged to provide complementary assistance. Involve ICHARM, K-Water, YRCC, NAHRIM, IRTCES, IGES, JSC and other hubs in collaboration. Knowledge Hubs to develop a network of clients and partners on their topic (knowledge domain) Use development project budgets to pay for services provided by the hubs |

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| <p>3. Charting Progress and Facilitating Investment for IWRM</p> <ul style="list-style-type: none"> • Catalyze further investments in IWRM and demonstrate good practices in introducing IWRM in river basins across the region | <ul style="list-style-type: none"> • Implement TA project through CRBOM • Enhance dissemination of IWRM experience in basins within Indonesia through new dissemination unit (by JICA) • Pilot a Roadmap Advisory Service to help RBOs prepare long-term IWRM investment programs • Chart and analyze regional progress of introducing IWRM in river basins • Publish a book on Managing Water in Asia's River Basins by a team of IUCN and ADB in collaboration with NARBO and CRBOM | <p>ADB, IUCN, Knowledge Hubs</p> | <ul style="list-style-type: none"> • Regional TA project formulated by ADB to help member RBOs • Update to be provided to 4th NARBO General Meeting |
| <p>4. Investments in Water Security in River Basins</p> <ul style="list-style-type: none"> • Accelerates economic growth and to improve the living standards in river basins through efficient, effective, and sustainable water resources management, environmental conservation, and water-related disaster risk mitigation. | <ul style="list-style-type: none"> • Implement TA project by JWA • Enhance RBOs to improve water security in each basin based on the Lol between ADB and JWA • Help identify investment needs in preparation for future feasibility studies for projects to increase water security in three pilot river basins in the region • Strengthen the capacity of government agencies and other stakeholders concerned for the implementation of the future investment programs | <p>ADB, JWA</p> | <ul style="list-style-type: none"> • Regional TA project formulated by ADB to help member RBOs • Update to be provided to 4th NARBO General Meeting |

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| <p>5. Sharing knowledge on River Basin Management in Asia Pacific.</p> <ul style="list-style-type: none"> • Make use of the 2nd Asia-Pacific Water Summit • Disseminate information, observations and experience made, as well as news, opinions, ideas, or open questions for discussion • Emphasize innovative approaches, successful achievements, benefits, and valuable lessons learnt • Support personal networking among RBO leaders and practitioners • Consider and activate contributions by APWF water knowledge hubs and other actors, including universities and business schools | <ul style="list-style-type: none"> • Organizing regional meeting during the 2nd Asia-Pacific Water Summit • Guide NARBO members in networking and communication, • Recommend on good networking and knowledge-sharing practices. • Prepare inventory of IWRM-related knowledge, projects and partners • Support pilot implementation and disseminate good practice • Expand knowledge products and services to clients in the region the CRBOM Small Publications Series as long as a need is seen • Perform other services consistent with the 10 key operating principles of APWF regional knowledge hubs | <p>CRBOM, Knowledge Hubs, Thailand Water Resource Association, and other partners</p> | <ul style="list-style-type: none"> • To be elaborated. |
| <p>6. Collaboration with International Networks</p> <ul style="list-style-type: none"> • GWP, INBO, CapNet, If-net and others as needed. | <ul style="list-style-type: none"> • Coordinate activities as needed | <p>JWA, ADBI, ADB, CRBOM</p> | <ul style="list-style-type: none"> • Share IWRM experience to benefit NARBO members |

Network of Asian River Basin Organizations (NARBO)

ACTION PROGRAM 2013-2015

Key Result Areas:

- 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

| A. Advocacy, Raising Awareness, and Exchange of Information and Good Practices on IWRM | | | |
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| Activities | Implementation Plan | Lead Agency | Notes |
| <p>Activities led by the NARBO Secretariat:</p> <p>1. NARBO Website (http://www.narbo.jp)</p> <ul style="list-style-type: none"> Provides information, news and reminders on NARBO activities; and information on introducing IWRM in river basins in Asia, including publications, articles on important IWRM topics Provides links to NARBO member websites, e-newsletters, online databases, and other related sites | <ul style="list-style-type: none"> Continue regular updates Introduce on-line forum by using Facebook or other innovative methods to enhance information and knowledge sharing | <p>JWA, CRBOM</p> | <ul style="list-style-type: none"> Members to provide stories, cases, articles, and links |

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| 2. NARBO e-Newsletter <ul style="list-style-type: none"> • Publishes good practices, lessons learned, IWRM–related activities, etc. | <ul style="list-style-type: none"> • Draft and prepare stories and materials on priority topics of interest to NARBO members • Prepare and distribute quarterly through e-mail and the website | <p>JWA, CRBOM</p> | <ul style="list-style-type: none"> • Members to send contributions |
| 3. Guidelines and Online data base <ul style="list-style-type: none"> • Provides guidelines and other useful reference materials on IWRM practices, success stories, cases, lessons learned, champions, standards and manuals, annual reports, topics of interest through website | <ul style="list-style-type: none"> • Make use of UNESCO's "IWRM Guidelines at River Basin Level" and "IWRM Experience of Japan" and contribute to make additional edition • Formulate guidelines and continue collecting and updating information from members and partners • Provide useful reference material | <p>ADBI, JWA, ADB, CRBOM, Knowledge Hubs</p> | <ul style="list-style-type: none"> • Members to provide reference materials |
| 4. NARBO Annual Report <ul style="list-style-type: none"> • Publishes NARBO activities and events; and members' updated profile | <ul style="list-style-type: none"> • Distribute annual report in May of following year | <p>JWA, CRBOM</p> | <ul style="list-style-type: none"> • RBO Members to submit their annual reports no later than end March |
| 5. NARBO Promotion <ul style="list-style-type: none"> • Increases international organizations, governments, public, media, and private sectors interest in NARBO activities and increase NARBO membership • Disseminates key messages on introducing IWRM in river basins and RBO work • Promotes NARBO's objectives and activities • Programs for building awareness for stakeholders (young generation, gender) | <ul style="list-style-type: none"> • Promote NARBO work continuously through media, country visits, regional events, and knowledge networks • Promote NARBO at the 2nd Asia-Pacific Water Summit and the 7th World Water Forum and major international conferences • Invite RBOs in development projects to join NARBO • Invite knowledge partner organizations and stakeholders of | <p>Chair, Vice Chairs, Senior Advisors, NARBO Secretariat, Indonesia NARBO</p> | <ul style="list-style-type: none"> • Members to contribute to the promotion and dissemination work, and to increase NARBO membership • NARBO Indonesia and CRBOM to pilot in-country RBO network |

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| | <p>IWRM to join NARBO</p> <ul style="list-style-type: none"> Encourage national NARBO networks in countries with many RBOs Contribute international activities such as UN and OECD Water Governance Initiative should be enhanced. | | |
| <p>6. Contribution to discussion on Post-MDGs and Post-HFA</p> <ul style="list-style-type: none"> Contribute to discussion on Post-Millennium Development Goals (MGDs) and Post Hyogo Framework for Action (HFA) by view point of IWRM | <ul style="list-style-type: none"> Contribute to discussions by offering NARBO's experience and view at HELP (High-level Expert Leaders Panel) meetings and other related international initiatives | <p>Chair, Vice-Chairs, Senior Advisors, NARBO Secretariat</p> | <ul style="list-style-type: none"> Members to contribute by offering case study and good example and supporting NARBO's view in county. |
| <p>7. Interaction with other region</p> <ul style="list-style-type: none"> Enhancing interaction on IWRM with other region such as Europe and Africa | <ul style="list-style-type: none"> Summarize Asian Experience and disseminate by active participation to international conferences | <p>NARBO Secretariat</p> | <ul style="list-style-type: none"> Members to contribute by offering case study and good example NARBO secretariat introduces case studies and advanced technologies by enhancing collaboration with academia and other international networks |
| <p>8. NARBO General Meeting</p> <ul style="list-style-type: none"> Includes study visit in host river basin, IWRM workshops, and general meeting | <ul style="list-style-type: none"> Organize the 6th NARBO General Meeting in the 2nd quarter of 2015 | <p>Chair, Vice-Chairs, Senior Advisors, NARBO Secretariat</p> | <ul style="list-style-type: none"> Members to participate and share their knowledge Schedule of the 7th World Water Forum should be considered |
| <p>9. Ownership to NARBO</p> <ul style="list-style-type: none"> Promote ownership of NARBO for securing sustainable activities | <ul style="list-style-type: none"> Organize activities based on demand and meet expectation of members Actions to enhance ownership of member organizations to be conducted | <p>Chair, Vice-Chairs, Senior Advisors, NARBO Secretariat</p> | <ul style="list-style-type: none"> Members to offer active opinions |

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| Activities led by NARBO Member Organizations: | | | | |
| 1. NARBO members' websites | <ul style="list-style-type: none"> Provides useful information and knowledge products on introducing IWRM in their respective river basins | <ul style="list-style-type: none"> Develop, maintain, and update the website on a regular basis | Members | <ul style="list-style-type: none"> Members to develop and maintain modern websites |
| 2. NARBO members' Annual Report | <ul style="list-style-type: none"> Compiles overview of RBO's objectives, targets, activities, lessons learned, and performance improvements in introducing IWRM in their respective river basins | <ul style="list-style-type: none"> Prepare annual report and send to NARBO Secretariat at JWA no later than March of the following year | RBO Members | <ul style="list-style-type: none"> RBO members to invest in useful annual reports |
| 3. Localization of IWRM Guidelines | <ul style="list-style-type: none"> Enhance customizing "IWRM Guidelines at River Basin Level" supported by NARBO to enhance implementation of IWRM on the grounds by providing contextualized descriptions of how the IWRM Process can progress within the existing structures and constraints of their own river basin. | <ul style="list-style-type: none"> Start making customized "IWRM Guidelines " by using concept of 'IWRM Spiral' and use it for capacity development activities in organization. | Members | <ul style="list-style-type: none"> NARBO secretariat supports making customized guideline. |
| 4. National Chapter | <ul style="list-style-type: none"> Enhancing establishment National Chapter Share what they have learned at NARBO's events with staff in their organization to enhance implementation of IWRM on the grounds | <ul style="list-style-type: none"> Promote to establish Local NARBO in their countries by organizing the network of RBOs and related organizations in their countries | Gov Members | <ul style="list-style-type: none"> NARBO secretariat supports to establish National Chapter. |
| 5. Ownership to NARBO | <ul style="list-style-type: none"> Contribute to NARBO more by active participation with their own resources Making use of what they have learnt at NARBO's event on the grounds | <ul style="list-style-type: none"> Result of NARBO activities should be summarized, and shared in member organization by organizing local workshop | Members | <ul style="list-style-type: none"> NARBO secretariat supports any activities to enhance ownership. |

| B. Capacity Building in River Basin Organizations (RBOs) | | | |
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| Activity | Implementation Plan | Lead Agency | Note |
| 1. IWRM Training Program <ul style="list-style-type: none"> Develops the capacity of NARBO member staff in understanding and implementing IWRM in their respective river basins | <ul style="list-style-type: none"> 8th IWRM training will be held for middle level staff in 3rd quarter of 2013 in Sri Lanka Conduct at least once a year Next series of IWRM Training including the introduction of e-learning should be conducted from 2014 | JWA, ADB, ADBI, CRBOM, Knowledge Hubs | <ul style="list-style-type: none"> Members to facilitate their staff to apply and contribute registration fee A program links to proficiency activities. IWRM GUIDELINES at River Basin Level and "Experience of IWRM in Japan" are used as main materials |
| 2. Workshops and conferences <ul style="list-style-type: none"> Covers IWRM topics of interest and is held during the NARBO general meeting Separate thematic workshop series held outside the general meeting deepen further understanding on selected priority IWRM topics Result of the events should be contributed to the discussion on Water Security, Post-MDGs and Post HFA | <ul style="list-style-type: none"> Conduct workshop on IWRM case study by NARBO secretariat and NARBO member organization with support of partner organizations based on the result of demand from member organizations such as climate change adaptation, water quality management, and water-related disasters. Organize series of NARBO IWRM Executive Retreat and International Seminar on Corporate RBOs in Asia | JWA, ADB, ADBI, CRBOM, Indonesia NARBO, Knowledge Hubs | <ul style="list-style-type: none"> Members to attend and contribute knowledge on issues and solution strategies Result of thematic workshops and conferences should be summarized, and shared in member organization by organizing local workshop and reported at international conferences to promote NARBO NARBO secretariat introduces case studies and advanced technologies by enhancing collaboration with academia and other international networks. |
| 3. Leadership Program <ul style="list-style-type: none"> Conduct NARBO-IWC (International WaterCenter) joint program | <ul style="list-style-type: none"> Conduct joint leadership program with IWC in 2013 and following year | NARBO secretariat, IWC | <ul style="list-style-type: none"> Members to dispatch staff to leadership program and promote active participation |

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| 4. Performance Benchmarking supported by peer reviews <ul style="list-style-type: none"> • Provide a demand-based benchmarking service for RBOs to assess and continuously improve their performance | <ul style="list-style-type: none"> • Manage and develop the implementation of the NARBO RBO performance benchmarking service • Form and maintain a group of trained and certified peer reviewers • Maintain tools and documentation capturing experience gained and lessons learned, • Report progress and benefits | <p>CRBOM with support from ADB and other partners</p> | <ul style="list-style-type: none"> • CRBOM to manage training and certification service for peer reviewers, facilitation of peer reviews, and support for pilot-testing of basin benchmarking methodology, in collaboration with the Knowledge Hubs |
| 5. Twinning Programs <ul style="list-style-type: none"> • Mutually beneficial programs for knowledge sharing and capacity development, involving exchange visits, staff exchange, and joint projects | <ul style="list-style-type: none"> • Enhance making LOI for implementing the program • Explore further substantial outputs in using current scheme for mutual benefits | <p>Members</p> | <ul style="list-style-type: none"> • Initiated, arranged and financed by RBO members themselves • NARBO Secretariat can facilitate initial contacts |
| 6. IWRM Proficiency <ul style="list-style-type: none"> • Develop a framework for IWRM Proficiency | <ul style="list-style-type: none"> • Pilot project of IWRM Proficiency for individual and accreditation for organization and scale up | <p>NARBO Secretariat, Members</p> | <ul style="list-style-type: none"> • Support of UNESCO-IHE • Members to cooperate to pilot project |
| 7. Advisory visits to RBOs <ul style="list-style-type: none"> • Includes study visits by RBOs to learn from their experience in implementing IWRM, and to promote knowledge generation and sharing | <ul style="list-style-type: none"> • Encourage members to promote such visit through newsletter and website | <p>JWA, ADB, ADBI, CRBOM, Knowledge Hubs</p> | <ul style="list-style-type: none"> • Knowledge Hubs to join visits for piloting Roadmap Advisory Service for RBOs • Where possible linked to RBO exchange visits initiated by members |
| 8. Scholarship Programs <ul style="list-style-type: none"> • Introduces information about higher education institutions, research and training organizations or any scholarships which relate to IWRM | <ul style="list-style-type: none"> • Share information on IWRM courses and existing scholarship programs, through NARBO website | <p>JWA, ADB, ADBI, CRBOM, Knowledge Partner members</p> | <ul style="list-style-type: none"> • May include online distance learning programs |

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| <p>9. Transboundary Water Management</p> <ul style="list-style-type: none"> • Explores opportunities to foster transboundary water resources management (within and between countries) through information sharing and exchange of experience | <ul style="list-style-type: none"> • Contribute good practice cases as inputs for regional study on charting progress in IWRM in river basins in the region • Case study of other region and advanced technology which support achieving transboundary water resources management • Collaboration with Academic Society on this field | <p>Members, Knowledge Hubs</p> | <ul style="list-style-type: none"> • NARBO secretariat introduces case studies and advanced technologies by enhancing collaboration with academia and other international networks. |
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| C. Network Support | | | | |
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| Activity | Implementation Plan | Lead Agency | Note | |
| 1. Steering Committee <ul style="list-style-type: none"> Provides guidance on strategic direction of NARBO's activities | <ul style="list-style-type: none"> SC meetings shall be convened by Secretary General if necessary | Chair, Vice-Chairs Senior Advisors, NARBO Secretariat, | <ul style="list-style-type: none"> Heads of regional water knowledge hubs and experts from NARBO members to be involved | |
| 2. Knowledge Networking <ul style="list-style-type: none"> Facilitates and supports regional water knowledge hubs under the Asia-Pacific Water Forum Provides demand-based knowledge and capacity development services that meet NARBO member clients needs | <ul style="list-style-type: none"> Improve collaboration with APWF regional water knowledge hubs and other partners such as WEPA (Water Environment Partnership in Asia) and AWCII (Asia Water Cycle Initiative) to help RBOs and projects for IWRM in river basins Member RBOs to explore partner relationships with relevant knowledge hubs for specific services they need Collaborate with RBOs in other regions in improving water security in their basins for the future Collaborate with other organizations such as Asia Water Information System, GEO (Group on Earth Observations), AWCII and Academic Community in exchanging data or others for climate change adaptation in IWRM. Conduct on-demand trainings or workshops on Leadership. | CRBOM, other Knowledge Hubs, Partners | <ul style="list-style-type: none"> Knowledge Hubs to develop a network of clients and partners on their topic (knowledge domain) Use development project budgets to pay for services provided by the hubs | |

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| <p>3. Investments and Capacity development in Water Security in River Basins</p> <ul style="list-style-type: none"> Accelerates economic growth and to improve the living standards in river basins through efficient, effective, and sustainable water resources management, environmental conservation, and water-related disaster risk mitigation. | <ul style="list-style-type: none"> Enhance RBOs to improve water security in each basin based on the LoI between ADB and JWA Implement TA project by JWA in other basins to improve water security through ADB TA scheme Result of TA7547 to be shared with NARBO Help identify investment needs in preparation for future feasibility studies for projects to increase water security in three pilot river basins in the region Strengthen the capacity of government agencies and other stakeholders concerned for the implementation of the future investment programs | <p>ADB, JWA</p> | <ul style="list-style-type: none"> Regional TA project formulated by ADB to help member RBOs Update to be provided to the 6th NARBO General Meeting |
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| <p>4. Sharing knowledge on River Basin Management in Asia Pacific.</p> <ul style="list-style-type: none"> • Make use of the 2nd Asia-Pacific Water Summit, the 7th World Water Forum and other international conferences on IWRM • Disseminate information, observations and experience made, as well as news, opinions, ideas, or open questions for discussion • Emphasize innovative approaches, successful achievements, benefits, and valuable lessons learnt • Support personal networking among RBO leaders and practitioners • Consider and activate contributions by APWF water knowledge hubs and other actors, including universities and business schools | <ul style="list-style-type: none"> • Guide NARBO members in networking and communication, • Recommend on good networking and knowledge-sharing practices • Prepare inventory of IWRM-related knowledge, projects and partners • Support pilot implementation and disseminate good practice • Expand knowledge products and services to clients in the region • Perform other services consistent with the 10 key operating principles of APWF regional knowledge hubs | <p>CRBOM, Knowledge Hubs, Other partners</p> | <ul style="list-style-type: none"> • To be elaborated. |
| <p>5. Collaboration with International Networks</p> <ul style="list-style-type: none"> • GWP, INBO, CapNet, If-net, AWCI, WEPA and others as needed. | <ul style="list-style-type: none"> • Coordinate activities as needed | <p>JWA, ADBI, ADB, CRBOM</p> | <ul style="list-style-type: none"> • Share IWRM experience to benefit NARBO members |

Programs

Program1: 5th NARBO General Meeting

Program2: NARBO 10-Year Anniversary Meeting

THE FIFTH GENERAL MEETING (DRAFT PROGRAM)

Network of Asian River Basin Organizations (NARBO)

Venue ; D7 Auang-luang, The International Convention and Exhibition Centre
Commemorating His Majesty's 7th Cycle Birthday Anniversary, Chiang Mai, Thailand.

| Day 5 5 th NARBO General Meeting | | | |
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| 18 May, 2013 Sat | | | |
| 08:00 – 08:30 | Registration | | |
| 08:30 – 09:20 | Opening Program | MC; Ms. Apinya Anukularmhai, Thailand Water Resources Association | |
| 08:30-08:35 | Opening address by NARBO Chairperson | Dr. Keizrul Bin Abdullah, Chairperson | |
| 08:35-08:40 | Opening address by Host Organization | Dr. Apichart Anukularmhai, President TWRA | |
| 08:40-08:45 | Welcome Address | Mr. Nitat Poovatanakul, Director General Department of Water Resources, Ministry of Natural Resources and Environment, Kingdom of Thailand | Confirmed |
| 08:45-09:00 | Keynote Lecture | Mr. Tsuyoshi Koike, Director General, Ministry of Land Infrastructure Transport and Tourism, Japan | |
| 09:00-09:30 | Keynote (TBC) | ** , Metropolitan Waterworks Authority | Request of Khun Apinya |
| 09:20-09:40 | Photo Session and Coffee Break and networking | | |
| 10:00 – 11:15 | What NARBO did next ? - Report on NARBO Activity 2010-2012 – | Chaired by Mr. Kenji Someya, Vice Secretary General of NARBO, Director of International Affairs Division of JWA | |
| | Overview on NARBO Programs 2010-2012 | Mr. Tomonobu Sugiura, ADB | |
| | Reports on E-learning, RBO corporatization, and Waterwealth publication | Mr. Dennis Von Custodio | Requested |
| | Asian Development Bank Institute | Mr. Yuqing Xing, ADB Institute | Consulting |
| | IWRM Training Programs (7 th IWRM Training) | Mr. Sudharma Elakanda, MASL | Requested |
| | LLDA activities | Mr. Nereus Acosta, Secretary, LLDA | Dolly-san |
| | Twinning Program - MARD & JWA - | Representative of MARD, Viet Nam | Need to consult |
| | 1 st NARBO Executive Retreat & International Seminar on Corporate Type RBO / NARBO performance benchmark peer review | PJT1 | Pak Tjoek |
| | NARBO Promotion Activities | Mr. Tadashige Kawasaki, JWA | Requested |
| | Interactions | Member Organization | |

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| 11:15 – 12:00 | Postcard from Chiang Mai – Report of technical Sessions - | Chaired by Mr. Kenji Someya, Vice Secretary General of NARBO, Director of International Affairs Division of JWA | |
| 11:15 – 11:20 | Leadership Session | Dr. Keizrul Bin Abdullah | |
| 11:20 – 11:25 | Water Security Session | Dr. Slamet Budi Prayitno | |
| 11:25 – 11:30 | Capacity Building Session | Ms. Dolora Nepomuceno & Mr. Shabazh Khan | |
| 11:30 – 12:00 | Water Security Session (TA Session) | Dr. Keizrul Bin Abdullah & Mr. Takeyoshi Sadahiro, JWA | |
| 12:00 – 12:30 | Launch session of “IWRM Experience in Japan” - Introduction - Remarks (2 speakers) | Japan Water Agency | |
| 13:30 – 13:30 | Lunch Break and Networking | | |
| 13:30 – 15:00 | NARBO Family News | Chaired by Mr. Yuqing Xing, Vice Secretary General of NARBO, CBT Director of ADBI | |
| 13:30-14:05 | Welcoming New NARBO Members | NARBO Secretariat | |
| 13:35-14:45 | Ayeyarwaddy River Basin Research Organization (ARBRO), Myanmar | Prof. Khin Ni Ni Thein | Need to request |
| 13:45-13:55 | Chao lake Management Authority, PRC | TBC | Need to request |
| 13:55-14:00 | Department of Groundwater Resources, MONRE, Thailand | TBC | Need to request |
| 14:00-14:05 | Pakistan Meteorological Department (PMD), Pakistan | TBC | Need to request |
| 14:05-15:00 | News from NARBO Members & Friends | NARBO Secretariat | |
| 14:05-14:15 | Report on result of survey to NARBO members | Mr. Yuki Hachijo, JWA | |
| 14:15-14:20 | PJT2 activities and contribution to NARBO | Mr. Herman Idrus, PJT2 | Need to request |
| 14:20-14:25 | Indonesian Association of Hydraulic Engineers (HATHI) Meeting | Dr. Mochammad Amron | Need to request |
| 14:25-14:30 | The HELP Davao International Symposium on Water Resource Management and Hydro Hazards | HELP Davao | Need to request |
| 14:30-14:35 | TBC | TBC | Consulting |
| 14:35-15:00 | Other Organizations | Dr. Wasn / GWP/WEPA/ AWCI etc... | |
| 15:00 – 16:00 | NARBO Leading Water Forward | Chaired by Dr. Keizrul Bin Abdullah | |
| 15:00 – 15:20 | Outlook on NARBO's Program 2013-2015 | Mr. Hisao Inoue, Secretary General & Mr. Kenji Someya | |
| 15:00-15:10 | Briefing on Action Program 2013-2015 | Mr. Tomonobu Sugiura & Mr. Tomotaka Higuchi | |
| 15:10-15:20 | Activities in NARBO by Knowledge Partners | Ms. Fiona Chandler, IWC | Now confirming |
| 15:20 – 15:30 | Proposal of revision of NARBO Charter | Mr. Kenji Someya | |
| 15:30 – 16:00 | Wrap up session, plenary discussion with comments and commitments by NARBO members | Dr. Keizrul Bin Abdullah | |
| 16:00-16:20 | Coffee Break and networking | | |

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|----------------------|--|---|--|
| 16:20 – 17:00 | Charter Revision, New Constitutional Body & Closing Session | Chaired by Mr. Kenji Someya, JWA | |
| 16:20-16:22 | Introduction of Secretary General | Dr. Keizrul Bin Abdullah | |
| 16:22-16:25 | Introduction of Vice Secretary Generals | Dr. Keizrul Bin Abdullah | |
| 16:25-16:30 | Approval of NARBO Charter Revision & Action Program 2013-2015 | Mr. Kenji Someya | |
| 16:30-16:40 | NARBO Constitutional Body Nomination and Approval | Secretary General | |
| 16:30-16:32 | Introduction of Chairperson and Approval | Secretary General | |
| 16:32-16:35 | Introduction of Vice Chairpersons and Approval | Secretary General | |
| 16:35-16:38 | Introduction of Senior Advisors and Approval | Secretary General | |
| 16:38-16:45 | Acceptance remarks by Chairperson | Chairperson | |
| 16:45-16:50 | Acceptance remarks by Vice-Chairperson | Vice-Chairperson (TBC) | |
| 16:50-16:55 | Remarks from retired executive | TBC | |
| 16:55-17:00 | Looking Forward by new NARBO constitutional body | Representative of Senior Advisor (TBC) | |
| 17:00 – 17:05 | Closing | Vice-Chairperson (TBC) | |
| 18:00 – 20:00 | Farewell Dinner organized by APWS | | |



The NARBO 10-year Anniversary Event
'Looking back a decade of NARBO Achievements and identifying the future Direction of NARBO'

Date: November 19-20, 2014

Venue: Oakwood Premier Joy~Nostalg Center, Manila, Philippines

DAY 1; November 19, 2014 Celebrating NARBO's 10-year Anniversary

MC; Mr. Michio Ota, JWA

- 15:00 – 15:10 Introductory Remarks by **Dr. Naoyuki Yoshino**,
Dean of Asian Development Bank Institute (ADBI)
- 15:30 – 15:40 Keynote Speech 1 by **Dr. Olivia La O'Castillo**,
Member of the United Nations Secretary General's Advisory Board on Water and Sanitation (UNSGAB)
- 15:40 – 15:50 Keynote Speech 2 by **Dr. Shahbaz Khan**
Deputy Director and Senior Science Program Specialist, United Nations Educational, Scientific and Cultural Organization (UNESCO)
- 15:50 – 16:00 Keynote Speech 3 by **Dr. Kenzo Hiroki**
Director of Water Resources Planning Division, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Member of UNSGAB, Japan
- 16:00 – 16:20 ----- Networking Session -----
- 16:20 – 16:45 Awarding Ceremony - Plaque of Recognition to NARBO
- 16:20 – 16:30 Speech by **Dr. Gil-Hong Kim**
Senior Director, Sustainable Infrastructure Division (RSID), Regional and Sustainable Development Department (RSDD), Asian Development Bank (ADB)
- 16:30 – 16:45 Commendation from **Dr. Keizrul Bin Abdullah**
Chairperson of NARBO awards the Plaques of Appreciation to selected NARBO member organizations
- 16:45 – 16:55 Announcement of New Vice-Secretary Generals
-**Ms. Yasmin Sadia Siddiqi**
Principal Water Resources Specialist, Sustainable Infrastructure Division (RSID), RSDD, ADB
- **Dr. Kentaro Kido**
Director, Japan Water Agency (JWA)
- 16:55 – 17:05 Video Clip
- 17:05 – 17:45 Voice from Members –Plenary discussion-
- 17:45 – 17:50 Closing Remarks by **Mr. Juichi Kamimura**
Secretary General, NARBO/Vice President, JWA

- 18:30 Welcome Reception at ADB Courtyard -

DAY2 ; 20 November, 2014 High-Level Panel Workshop 'Charting the Future of NARBO'

MC; Mr. Michio Ota, JWA

- 08:45 – 09:00 Introductory Remarks by **Mr. Herman Idrus**
Vice-Chairperson, NARBO/President Director, Perum Jasa Tirta II Public Corporation
- 09:00 – 09:35 Special lecture 'Water security and IWRM' by **Mr. Fraser MacLeod**

Head of Global Projects, Global Water Partnership

09:35 –10:50 Session 1

09:35 –09:40 Introduction of Panelists

09:40 –10:50 Panel Discussion 1 ; ‘What Has Been Achieved by NARBO’

Moderator; **Mr. Wouter T. Lincklaen Arriëns**, Senior Advisor, NARBO

[Panelist]

- **Ms. Doan Thi Tuyet Nga**

Deputy Director, Department of Technology and International Cooperation, Directorate of Water Resources, Ministry of Agriculture and Rural development (MARD), Vietnam

- **Dr. Mochammad Amron**

Senior Advisor, NARBO/Former Director General of Water Resources, Ministry of Public Works, Indonesia

- **Dr. Apichart Anukularmphai**

Senior Advisor, NARBO/President, Thailand Water Resources Association

- **Mr. Juichi Kamimura**, Secretary General, NARBO

[Rapporteur]

- **Ms. Marisha Wojciechowska-Shibuya**

Water resources writer (consultant) for ADB for the NARBO's 10th Anniversary Report.

10:50 – 11:00 ----- Networking Session -----

11:00 – 11:10 Presentation “Recent Activities of NARBO -Report and Request for cooperation-” by **Dr. KeizruBin Abdullah**, Chairperson of NARBO

11:10 – 12:30 Session 2

11:10 –11:15 Introduction of Panelists

11:15 –12:30 Panel Discussion 2 ; ‘Future NARBO’

Moderator ; **Dr. Keizrul Bin Abdullah**, Chairperson, NARBO

[Panelist]

- **Prof. Mikiyasu Nakayama**, Division of Environmental Studies, University of Tokyo

- **Dr. Gil-Hong Kim**, Senior Director, RSID, RSDD, ADB

- **Ms. Tshewang Lhamo**, Environment Officer, National Environment Commission, Bhutan

- **Dr. Kentaro Kido**, Vice-Secretary General, NARBO

- **Dr. Shahbaz Khan**, Deputy Director and Senior Science Program Specialist, UNESCO

- **Mr. Takashi Matsuo**, Director of Environment, Natural Resources and Agriculture Division, South Asia Department, ADB

- **Mr. Akmal Siddiq**, Director of Environment, Natural Resources and Agriculture Division, Central and West Asia Department, ADB

[Rapporteur]

- **Ms. Marisha Wojciechowska-Shibuya**

Water resources writer (consultant) for ADB for the NARBO's 10th Anniversary Report.

12:30 –12:40 Summary-Manila Declaration by Youth

12:40 –12:45 Closing Remarks by **Ms. Dolora N. Nepomuceno**

Vice-Chairperson, NARBO/Former Deputy General Manager, Laguna Lake Development Authority, Philippines

13:00 Lunch at Joy-Nostalg Lounge in the 3/f -

14:00 –16:00 Meeting on CRBOM

18:00 – Farewell at Columbus Ballroom in 42/f, Discovery Suites



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