

New Network of IWRM for Asia

- Network of Asian River Basin Organizations -

Mr. Sukrasno Sastro Hardjono,
The Executive Director of Indonesian NARBO Secretariat
Director of Directorate Water Resources Management,
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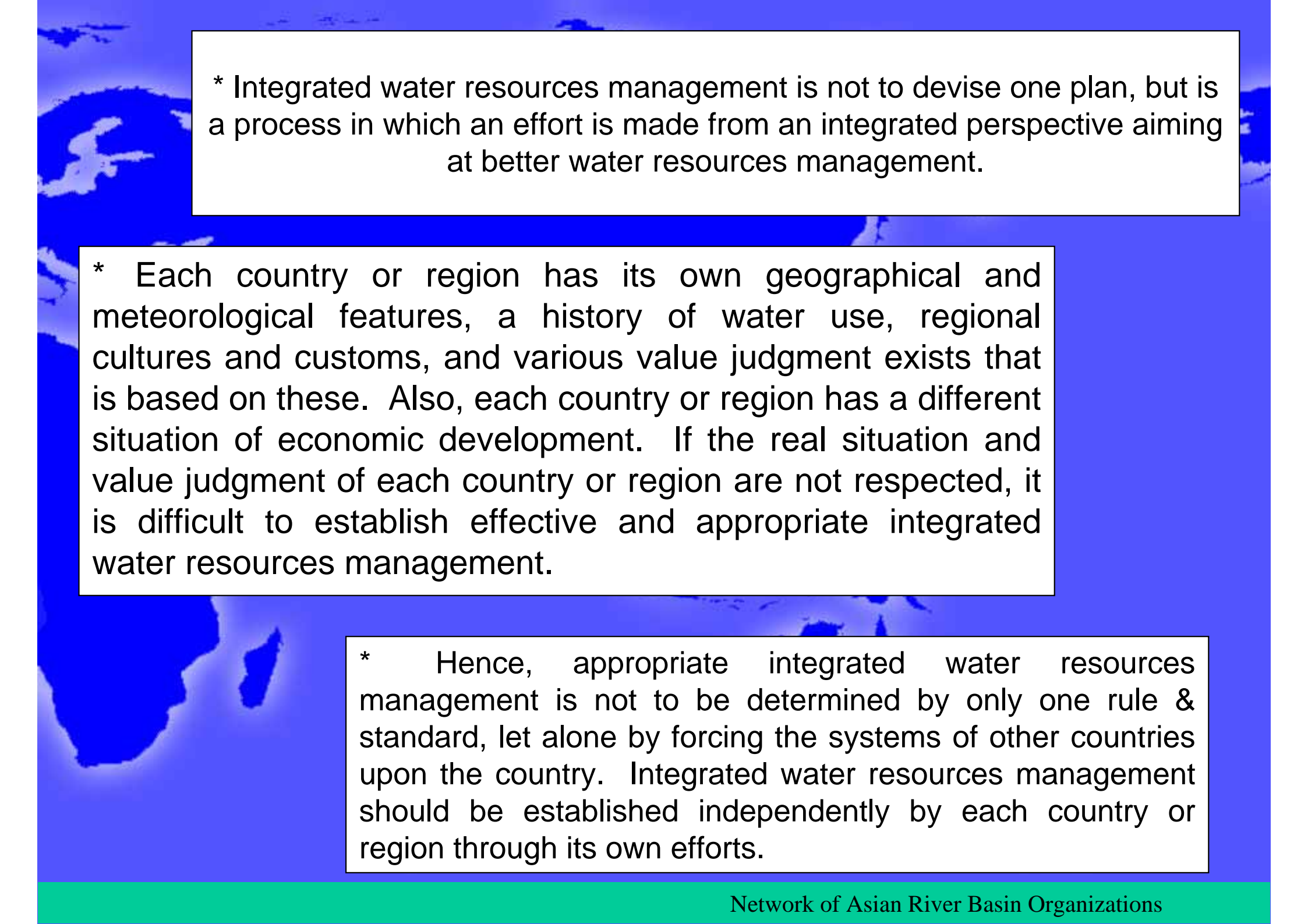
Mr. Tjoek Walujo Subijanto,
The Vice Executive of Indonesian NARBO Secretariat
Director of Jasa Tirta I Public Corporation, Republic of Indonesia



* Water plays various roles.

Water is an indispensable resource for people to live and develop, and at the same time it is an important element that constitutes the environment of the area.

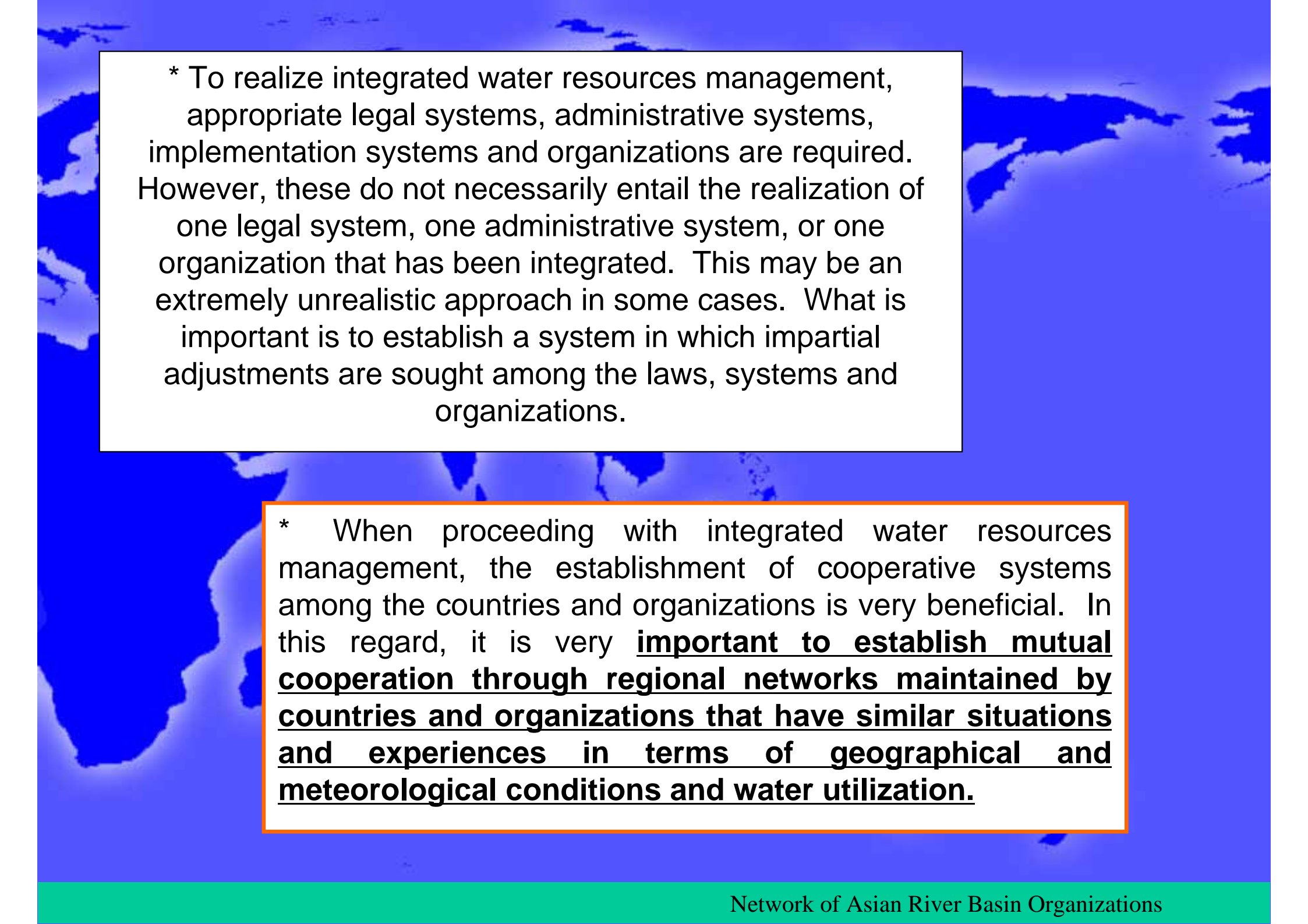
At present, serious and complex problems concerning water have occurred worldwide, and in order to solve them, it is required that integrated water resources management be established that considers all the factors on water resources at the integrated and comprehensive point of view.

A faint, light-colored map of the Asian continent is visible in the background of the slide, centered behind the text boxes.

* Integrated water resources management is not to devise one plan, but is a process in which an effort is made from an integrated perspective aiming at better water resources management.

* Each country or region has its own geographical and meteorological features, a history of water use, regional cultures and customs, and various value judgment exists that is based on these. Also, each country or region has a different situation of economic development. If the real situation and value judgment of each country or region are not respected, it is difficult to establish effective and appropriate integrated water resources management.

* Hence, appropriate integrated water resources management is not to be determined by only one rule & standard, let alone by forcing the systems of other countries upon the country. Integrated water resources management should be established independently by each country or region through its own efforts.



* To realize integrated water resources management, appropriate legal systems, administrative systems, implementation systems and organizations are required. However, these do not necessarily entail the realization of one legal system, one administrative system, or one organization that has been integrated. This may be an extremely unrealistic approach in some cases. What is important is to establish a system in which impartial adjustments are sought among the laws, systems and organizations.

* When proceeding with integrated water resources management, the establishment of cooperative systems among the countries and organizations is very beneficial. In this regard, it is very **important to establish mutual cooperation through regional networks maintained by countries and organizations that have similar situations and experiences in terms of geographical and meteorological conditions and water utilization.**

Asia Monsoon Region

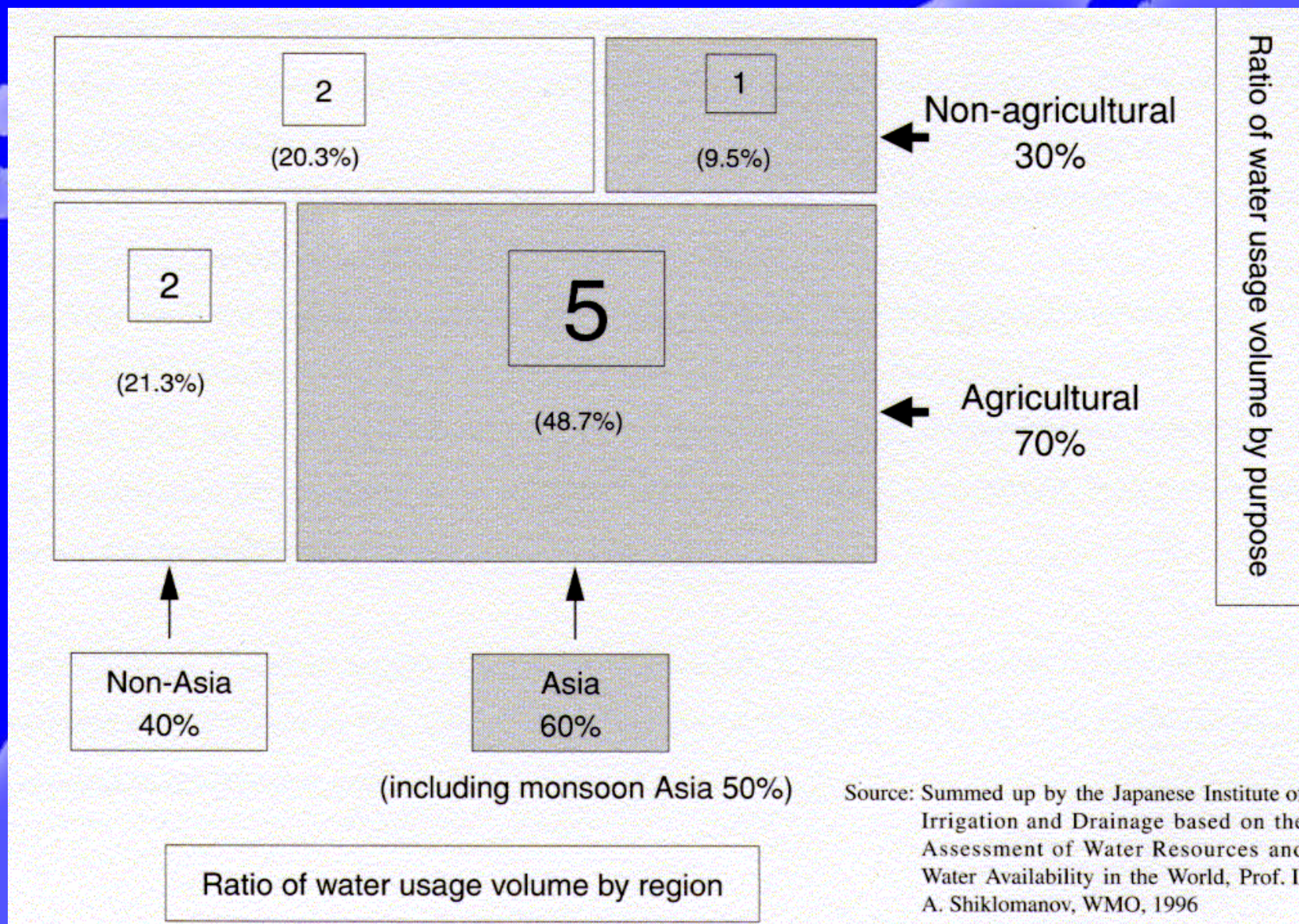
Global distribuion of annual precipitation



Source: Climate Data sets, GNV174-Annual precipitation CUN Environment Program)

Japan, the Korean peninsula, China(except the western interior, the Yellow river basin, and surrounding areas), all of Southeast Asia(the Indochina peninsula and the island nations), Nepal, Bhutan, Bangladesh, Sri Lanka, and areas east of the Deccan Plateau plus southwestern coastal regions of India

Water Usage Volume of Worldwide Water Sources - purpose and region -



General Features of Water Resources in the Asian Monsoon Region

☰ The Asian Monsoon Region is characterized by

- High precipitation compared with the global annual average of 1,000 mm, under the influence of seasonal winds
- Distinct wet and dry seasons in a year
- Day-by-day fluctuation of precipitation

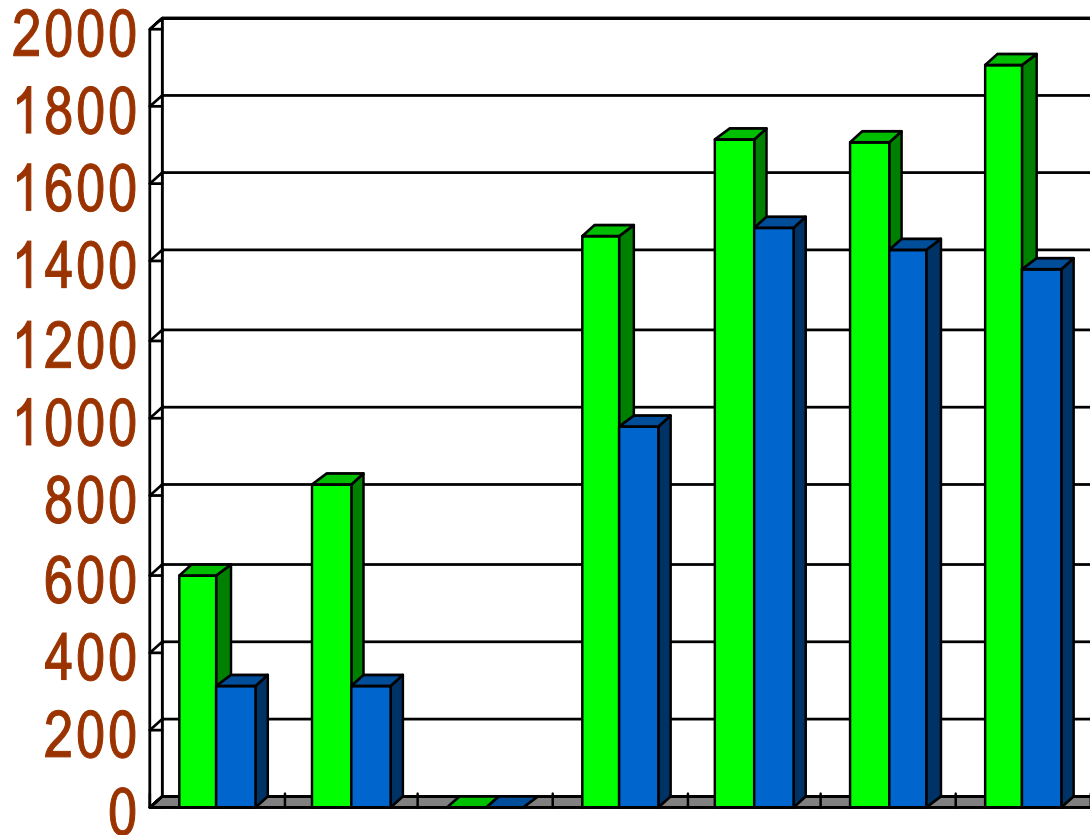
☰ Leads to

- Rice paddy farming
- High irrigation rate

Rainfall in the Asian Monsoon Region

Fluctuation of Water quantity of River etc.

(mm)

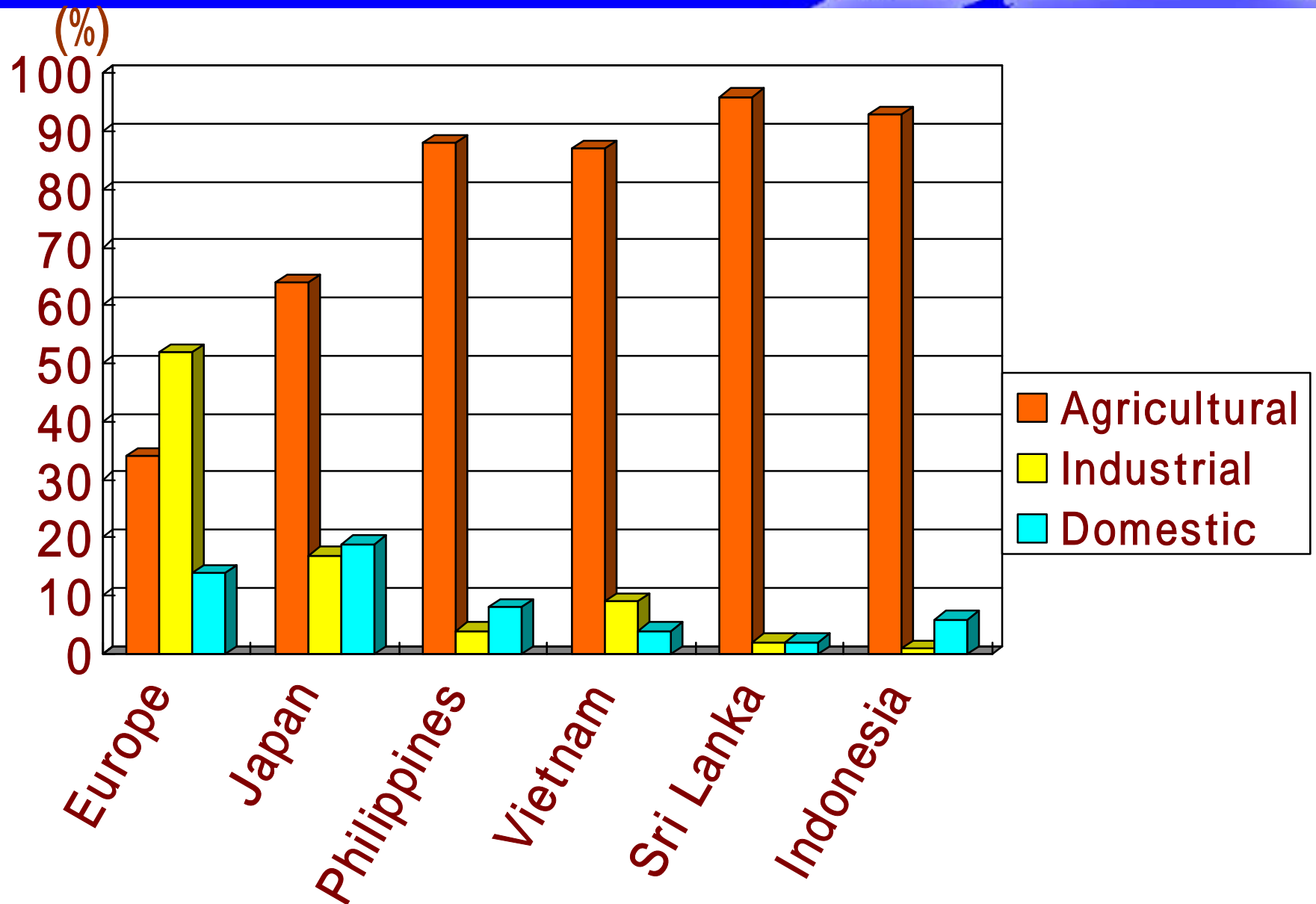


Paris
Rome
↔
Europe

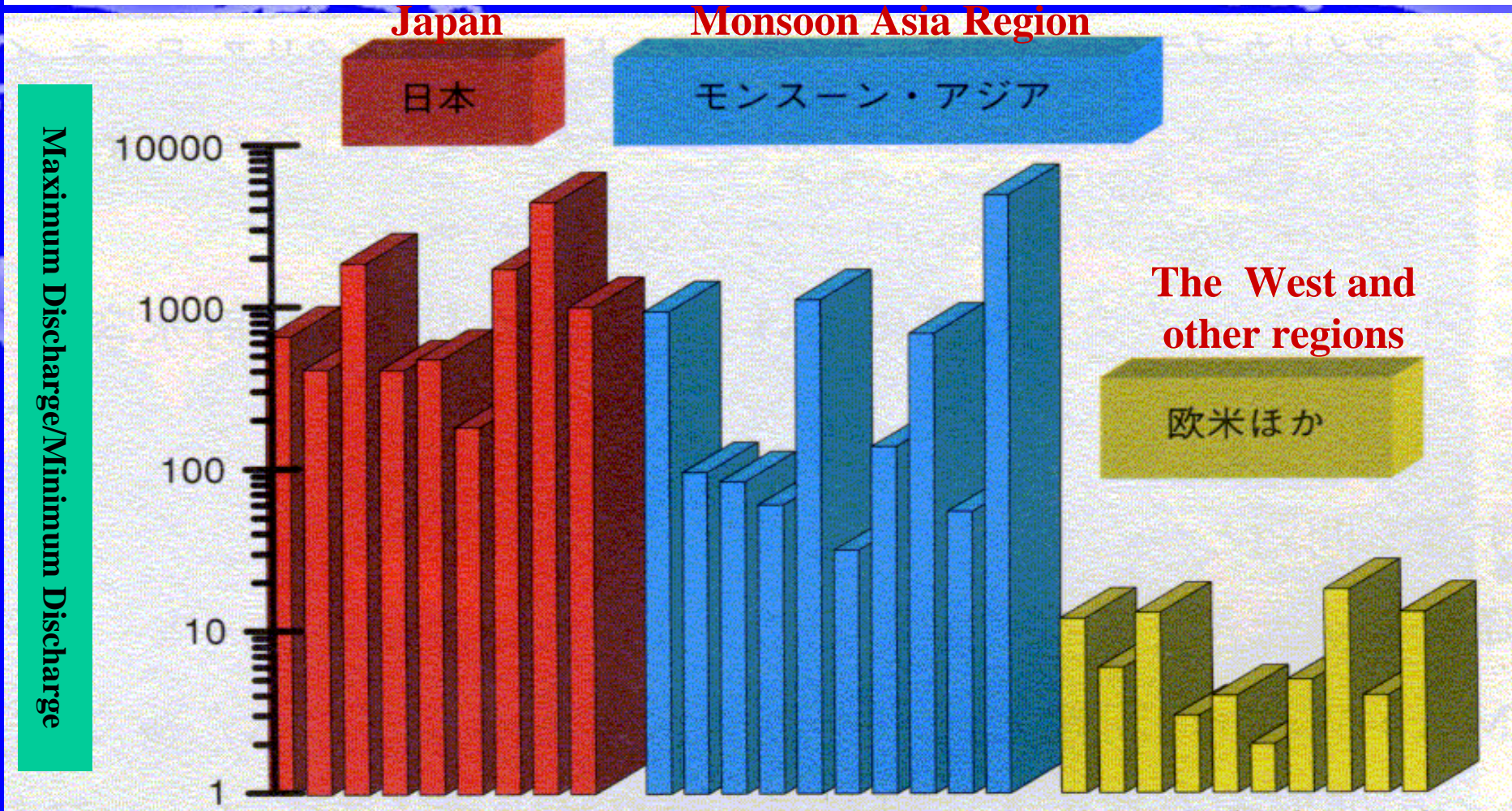
Tokyo
Manila
Hanoi
Jakarta

Difficulty of water management in Asia

Percentage of Sectorial Water Withdrawals



Comparison of coefficient of river regime



From
left to
right

Japan: Ishikari, Mogami, Tone, Shinano, Kiso, Yodo, Oota, Niyodo, Tikugo

Monsoon Asia: Songhua(China), Han(Korea), Naktong(Korea), Xun(China), Mun(Thailand), ChaoPhraya(Thailand), Nan(Thailand), Chindwinn(Myanmar), Ganges(Indea), Godavari(India)

The West and other regions: Donau(Slovakia), Rhein(Swiss), Rhone(France), Nile(Egypt), Congo(Congo), St. Lawrence(USA), Mississippi(USA),Hudson(USA), Amazon(Brazil), Parana(Argentine)

- Water related problems in Asia: Too much & too little water, high population density, shortage of infrastructure, etc.
- Population explosion: 60% of world population

Population density on habitable flat land and gentle terrains in each country (in order)

	Malaysia KL+Selangor	Indonesia Jawa Island	Japan	Britain	France	Holland
Flat land population density	700 over persons	2500 over persons	1040 persons	518 persons	159 persons	370 persons

Calculation formula: the population /(country x approximate ratio of flat land or gentle terrains)

- In terms of the population density, Practical IWRM approach for Asian countries is Needed.

Example from Indonesia

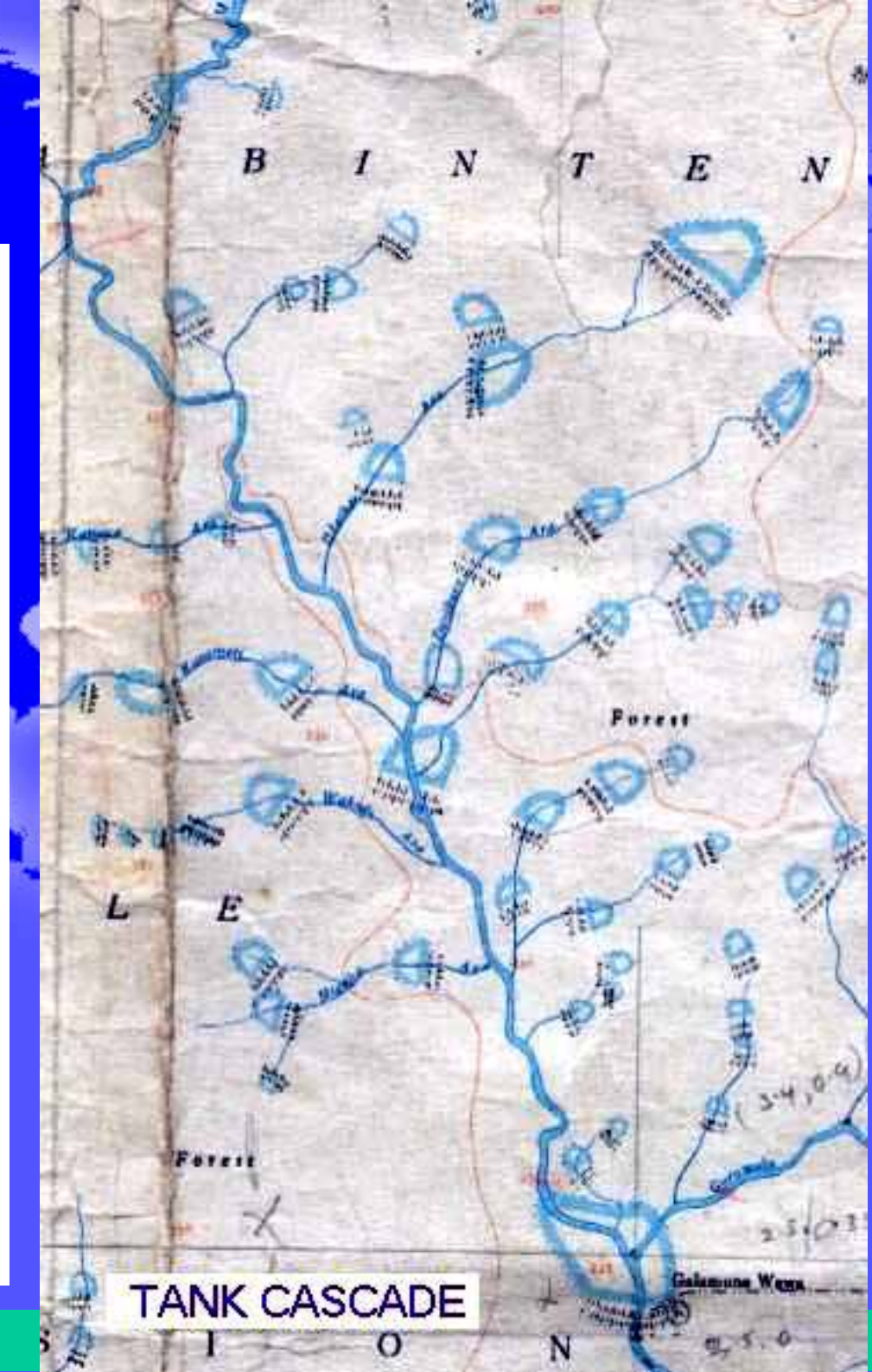
In Bali, there are about 1,700 irrigation collectives called "subak", organized for each water system. As well as water management on the principle of "fair water gathering and free crop selection", they make decisions on when to start planting, the dates of religious rituals, plans for repairs to facilities, and other matters at gatherings held every 35 days. They also pass down traditions such as festivals, folk dances and music, as a tourism resource.

Management of terraced rice paddy field by the Subak



Example from Sri Lanka

In Sri Lanka, linked network of reservoir irrigation, called the "cascade system", has existed for about two thousand years. Local farmers' organizations maintain and manage sustainable water management systems involving an advanced form of rainwater recycling, contributing to highly productive rice cultivation in paddy fields.



Fighting for water



●水あらしの図(図説「農民生活史事典」)

-Process to its establishment and scope-

1st General Meeting in Indonesia

Feb.24-26.2004

43 members & 8 interest parties

**Bangladesh, Cambodia, China, Indonesia, Japan, Korea, Lao PDR,
Malaysia, Pakistan, Philippine, Sri Lanka, Thailand, Vietnam**

(13 countries)

(1) RBO

**(2) Government organization in national, federal, provincial and
local level**

(3) Regional knowledge partner

(4) Inter-regional knowledge partner

(5) Development cooperation agency

NARBO Activities

NARBO Website

e-newsletter

Guidelines and Sourcebook

Collaboration with knowledge partner organizations

Workshop

Annual reports

Training course for IWRM

RBO staff exchanging program

Advisory visit to RBOs

RBO twining program

Technical advisory committee, and so on

Ownership is the basis of network activity


NARBO : Network of Asian River Basin Organizations - Microsoft Internet Explorer

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Network of Asian River Basin Organizations

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Link

[ADB](#)




[ADB](#)

[MLIT \(Japan\)](#)

[JWA \(Japan\)](#)

[JWF \(Japan\)](#)

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Event Report

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[The breif report on the first NARBO training course](#)
New !!

[The breif report of the Workshop on NARBO Web](#)
New !!

Attachment

[PDF NARBO Charter\(40KB\)](#)

What's New

[The 1st NARBO General Meeting 24-26 February, 2004 in Batu, Indonesia](#)

[NARBO Inception Meeting 20 November, 2003 in Chiang Mai, Thailand](#)

Press release

[JWA, ADB and ADBI hold the NARBO Inception Meeting\(PDF/13KB\)](#)

Newsletter

[NARBO Newsletter Second Issue \(PDF/520KB\) **New !!**](#)

[NARBO Newsletter First Issue](#)

[NARBO Newsletter Preparatory Issue \(PDF/143KB\)](#)

インターネット

スタート Hideshi Sasahara - 受信... Microsoft Word - ~90365... Microsoft PowerPoint - [...] NARBO : Network of... 15:08

Link

Event report

Newsletter

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

Network of Asian River Basin Organizations



The NARBO Newsletter

(Network of Asian River Basin Organizations)
NARBO Newsletter — First Issue

High Expectations of Asian Countries for

1. What is NARBO?

During the 1st World Water Forum held in Japan in March 2003, participants strongly recognized the importance of creating a partnership to promote Integrated Water Resources Management (IWRM) in river basins in Asian countries. Three organizations — Japan Water Agency (JWA), Asian Development Bank (ADB) and Asian Development Bank Institute (ADBI) — have signed a letter of intent for establishing the Network of Asian River Basin Organizations (NARBO).

An inception meeting was held in Chiang Mai, Thailand on November 20, 2003 to lay the groundwork for the establishment of NARBO, which will be officially announced at its first General Meeting scheduled on February 24-26, 2004 in Batu, Indonesia.



Signing Ceremony



Inception Meeting in Chiang Mai



The NARBO Newsletter

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

(Network of Asian River Basin Organizations)

THE FIRST GENERAL MEETING OF
NETWORK OF ASIAN RIVER BASIN ORGANIZATIONS
NARBO is officially established with 43 member org.

Enthusiasm

The 1st General Meeting of Network of Asian River Basin Organizations (NARBO) was held in Batu, East Java, Indonesia from February 24 to 26, 2004. It was presided by Japan Water Agency (JWA), Asian Development Bank (ADB) and Asian Development Bank Institute (ADBI), and supported by Director's General of Water Resources, Department of Infrastructure and Regional Development, Government of Indonesia, and Jawa Tirta 1 Public Corporation (PTT). Among about 100 participants from 16 countries, 43 organizations from 13 countries signed an Agreement to Membership in NARBO and 11 organizations signed an Expression of Interest for Membership, and NARBO was officially established. The NARBO Secretariat is composed of JWA, ADBI and ADBI, and its headquarters is to be located at JWA, Japan.

Background and

Over the past two decades, conferences and operations to resources manage Global Water for the planning, management of resources in a economic benefit manner without total environmental IWRM, it is important for river basin stakeholders, and Basin Organizational contribute to it. While an important recognized, a network of introduced



The NARBO Newsletter

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

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 - 5) JICA group training course



2. Announcement from NARBO Secretariat
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 - 2) Call for Information on RBO members
 - 3) Role sharing of NARBO activities
3. Serial Topics
 - 1) What is RBO? : Outline of Japan Water Agency (JWA)
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1. Latest Information
 - 1) The Report on APHW2004
NARBO Secretariat participated the APHW (Asia Pacific Association of Hydrology and Water Resources) Conference in Singapore, July 5 to 9. APHW was established with the aim to promote exchange of operational knowledge and experience in water resources management, and research activities as well as education. Of main interest are problems or cases (within the framework relevant to the geography and climate of the Asia Pacific region) and solutions or
 - 2) The report on the Third South Asia Water Forum
The Third South Asia Water Forum was held from July 13 to 15 for three days at Pan Pacific Sonargaon Hotel in Dhaka, Bangladesh with more than 250 participants. This Water Forum was sponsored by Global Water

approaches offered. Having cooperation with APHW, in which many researchers on water resources in Asia are involved, will be greatly beneficial to NARBO activities in the future. Over 150 experts from Asian countries gathered in the conference and had active discussion. NARBO Secretariat had a booth exhibit to introduce NARBO, and proposed to strengthen cooperation between NARBO and APHW at Closing Plenary. The representative of APHW made a comment that APHW would become a member of NARBO for future cooperation.

1st NARBO training course on IWRM in Thailand, 26 July - 6th August



Lecture in Class (Bangkok)



Lecture in field visit's site (Chiang Mai)



Frog breeding, a case of successful enterprise by water resources development and management (Chiang Mai)



Canal construction almost founded by farmers' irrigation association (Chiang Mai)

We, NARBO, hope to contribute toward the resolution of water issues in Asia for the stability and fruitful future of the World

*** The role of an RBO is to realize the stability and development of regions through appropriate management of water resources, and efforts are required that can acquire confidence of people and regional residents.**

The collaboration from all over the world will be anticipated & most welcome for Asia

Thank you

Jasa Tirta II Ir. H. Djuanda Dam