United Nations
Educational, Scientific and
Cultural Organization

International
Hydrological
Programme

The 5th GEOSS Asia-Pacific Symposium
UNESCO Water Activities in Asia
- Bridging Between Scientists and Practitioners -

National Museum of Emerging Science and Innovation, Japan

3 April 2012

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United Nations
Educational, Scientific and
Cultural Organization

International
Hydrological
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UNESCO's International Hydrological Programme 2008-2013

Water dependencies:

Systems under stress and Societal responses

Theme 1	Global Change, Watersheds and Aquifers
Theme 2	Governance and Socio-economics
Theme 3	Ecohydrology and Environmental Sustainability
Theme 4	Water Quality, Human Health and Food Security
THEME 5	**Water Education for Sustainable Development**

United Nations Educational, Scientific and Cultural Organization · International Hydrological Programme

IHP-VII (2008-2013)

Water Dependencies: Systems under Stress and Societal Responses

Cross - cutting Programmes
HELP / FRIEND

IHP VI Initiatives
PC - CP
ISI
IFI
ICHARM
G - WADI
IAHS - PUB

IHP - VII
New Initiatives:
UWMP
Others

Hydrological Research

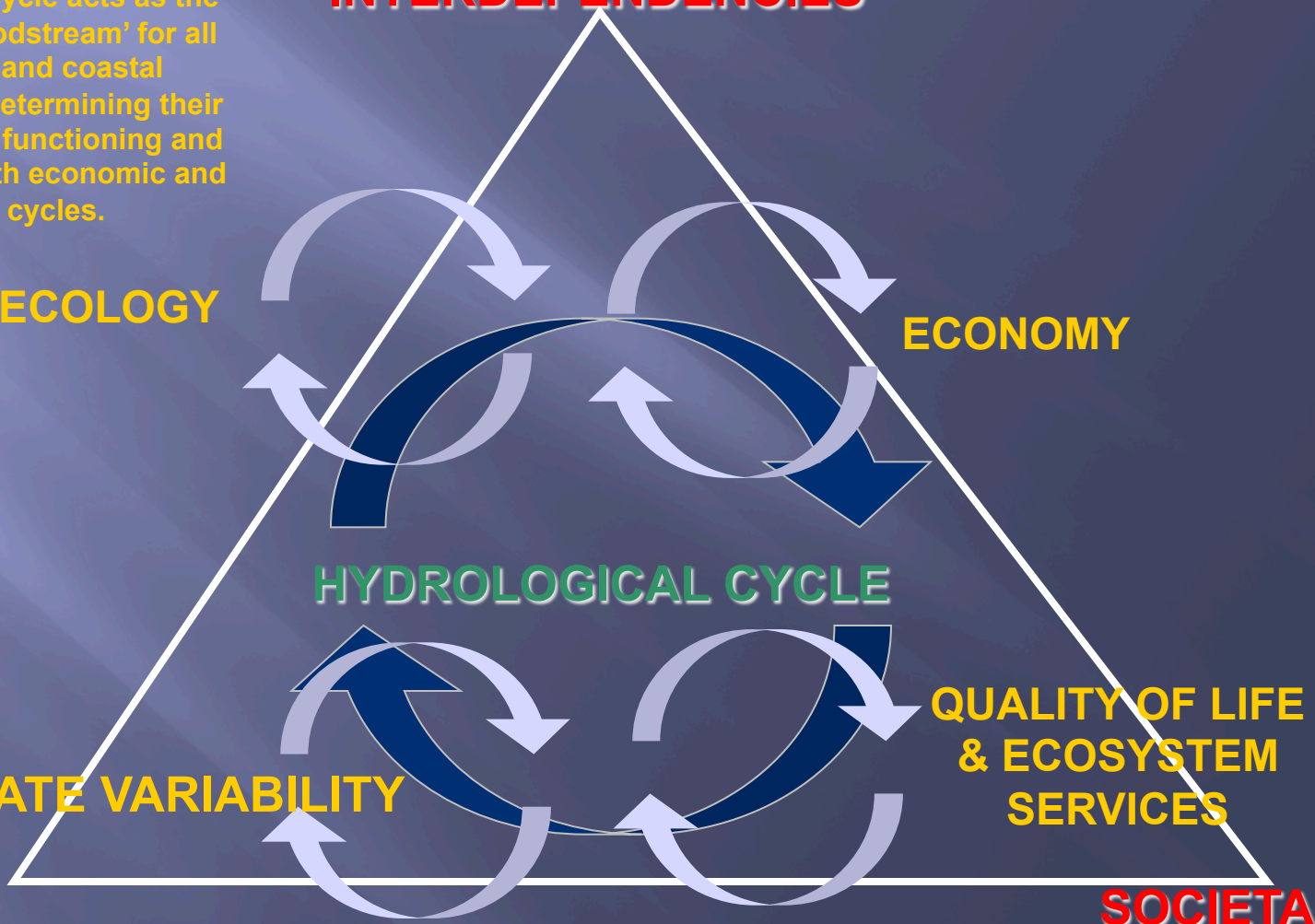
Water Resources Management

Education,
Transfer of knowledge, Capacity building

United Nations Educational, Scientific and Cultural Organization

International Hydrological Programme

Planetary systems are strongly *interdependent*. Water in the hydrological cycle acts as the essential 'bloodstream' for all terrestrial and coastal ecosystems, determining their dynamics and functioning and interrelates with economic and social cycles.



IHP Activities in Asia

- Hydrology for the Environment, Life and Policy (HELP)
- International Sediment Initiative (ISI)
- International Flood Initiative (IFI)
- Assessment of Flood Forecasting and Warning System for Humid Tropic Regions
- Flood Forecasting and Warning System Assessment (SEAP)
- Flow Regimes from International Experimental and Network Data (FRIEND)
- Global Network on Water and Development Information in Arid Lands (G-WADI)
- International Centre for Water Hazard and Risk Management (ICHARM)
- Asia-Pacific Center for Echohydrology (APCE)

Background

Integrated Water Resource Management

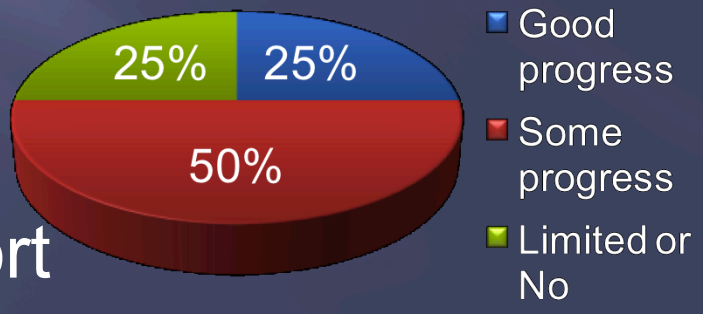
IWRM is defines by the Global Water Partnership (GWP) as ‘a process which promotes the coordinated development and the management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems’

Background

Planning and Implementation of IWRM

Basic concept in Dublin 1992
The target to 'develop integrated water resources management (IWRM) and water efficiency plans by 2005, through actions at all levels' was agreed through the Johannesburg Plan of Implementation (JPOI) with support to developing countries.

Progress in2008 toward 'IWRM Target' (IWRM planning)



*UN-Water and GWP Roadmapping for Advancing IWRM Process 2008 ,
UN-Water Status Report on Integrated Water Resources Management and Water Efficiency Plans, 2008

IWRM implementation in Basin, Sub-basins and Aquifers

State of the art review IHP-Ⅵ

1. **Guidelines for development of institutions for IWRM implementation at BSA level should be developed.**

   Institutional arrangement to facilitate IWRM approach at BSA level are missing.

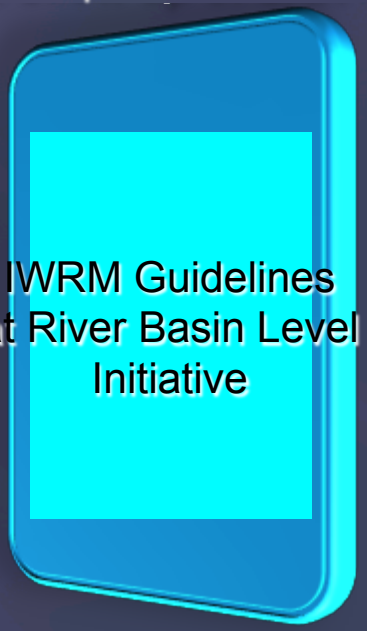
2. **Tools for IWRM should be documented with respect to the existing and emerging capacity for BSA, in particular for carrying out multi-disciplinary process in IWRM**

3. **Broader recognition that the 'Integrated' approach is feasible and beneficial should be strengthened.**

   Preparing **guidelines for operational implementation of IWRM**, and **a series of examples to illustrate the implementation of IWRM at basin level** are recommended.

4. **Case histories should be adequately documented, collected and disseminated.**

Follow up of the review



Target of the Initiative

Global Awareness

- The Guidelines (Part 1: Principles)
- Stockholm World Water Week
- World Water Forum

Tools for Implementation of IWRM

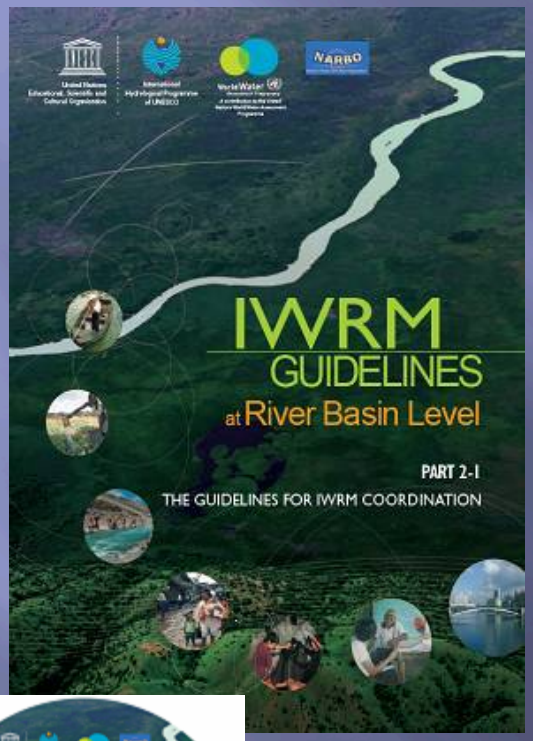
- The Guidelines (Part 2: Implementation)
- Capacity Development activities of IWRM at River Basin Level

Steering Committee Member

Name	Organization
Eugene Z. Stakhiv (Co-chair)	International Center for Integrated Water Resources Management (ICIWaRM), USA
Yasuro Nakajo (Co-chair)	**Japan Water Agency**
Wouter Lincklaen Arriens	**Asian Development Bank**
Olsanju A. Bamgboye	**National Water Resources Institute, Nigeria**
Keizrul Bin Abdullah	**NARBO**
Johannes Cullmann	IHP/HWRP Secretariat, Germany
Shahbaz Khan	UNESCO-IHP
Shelley McMillan	World Bank, Water Specialist for Africa
Eiji Otsuki	**MLIT, Japan**
Simla Yasemin Özkaya	**Ministry of Foreign Affaires, Turkey**
Victor Pochat	IHP for Latin America and the Caribbean UNESCO Montevideo
Kuniyoshi Takeuchi	**ICHARM**

* alphabetical listing

Production of the Guidelines



Modality

Inclusive Partnership
Practitioners, Int. Org, Governments, Donors etc.

Knowledge integration
Collected and disseminated comprehensive sources

Interaction with users
Early interaction with guidelines users for practical value

Structure of the IWRM Guidelines

Part 1 Principles

Target Group

- Decision Maker
- Policy Planner
- Government Official
- River Basin Organization

Launched at 5th World Water Forum

Part1 Principles

Part 2 Implementation

Target Group

- Government Official
- NGO
- River Basin Organization
- Other Stakeholder

Part2-1 IWRM Coordination

Part2-2 Flood Management

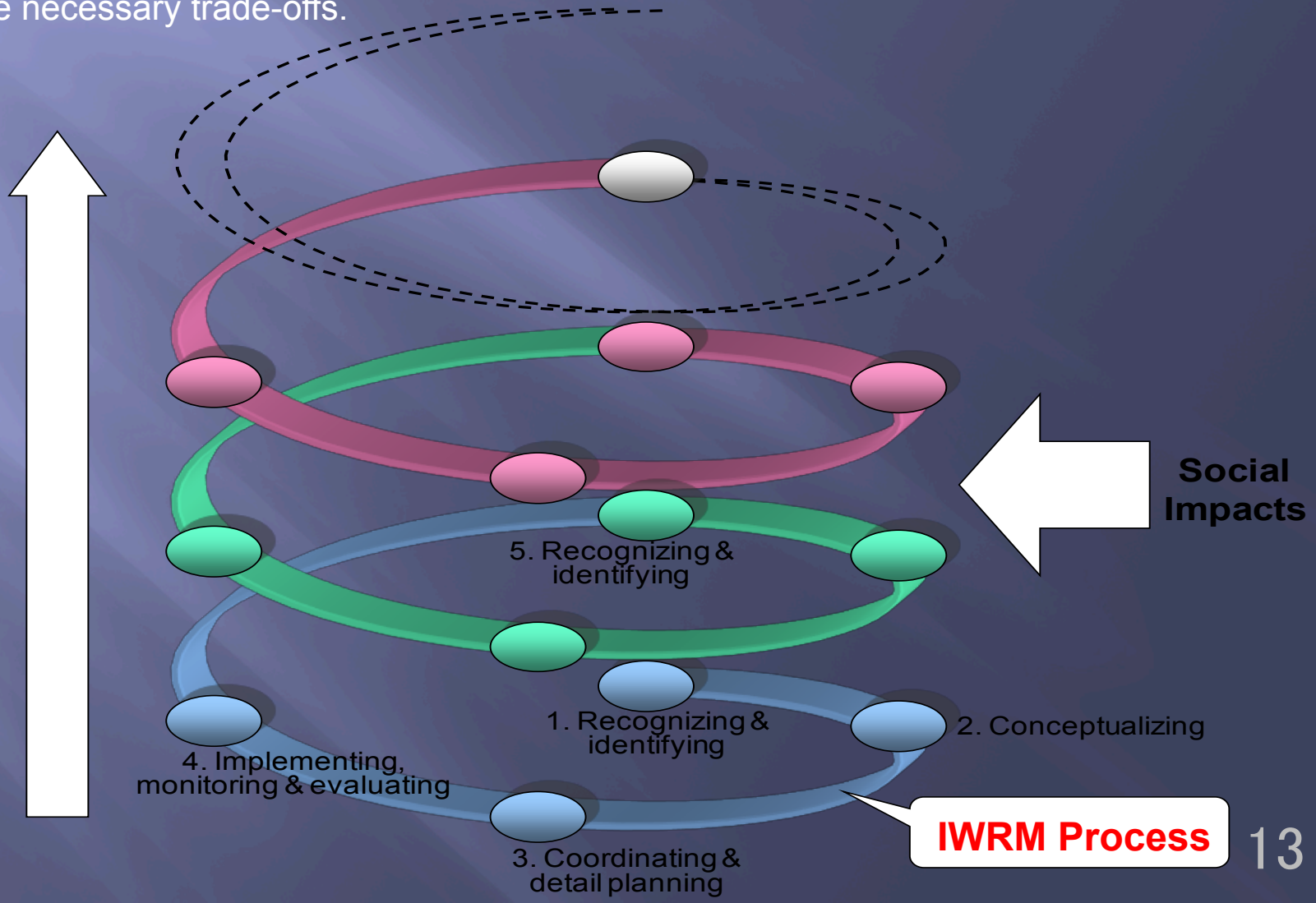
Part2-3 Invitation for Irrigation practitioners

Part2-4 Managing Environmental Sustainability

Message on Adaptation to Climate Change

"Spiral" Model of IWRM

The IWRM process at the river basin level is illustrated by a "**spiral**". New solutions are added at each stage, responding to evolving needs and social, economic and environmental circumstances, through facilitating agreements among basin stakeholders on the necessary trade-offs.



Key for Success

- can be used in practice to help IWRM succeed at basin level -

Sample 'Key for Success'

Key

It is advisable to start considering mechanisms and courses of action for stakeholder participation during the conceptualization phase.

Why

・The mechanisms and courses of action for progressively involving various stakeholders in the basin need to be thoroughly considered, otherwise the later process of consensus building could involve many revisions making it time-consuming. Moreover, the agreement reached may become ineffective or in the worst case may be overturned.

How

- **Mechanisms for participation may include setting up a committee, public hearings, and workshops. Appropriate forms of participation should be chosen based on local conditions and the relationships among the stakeholders.**

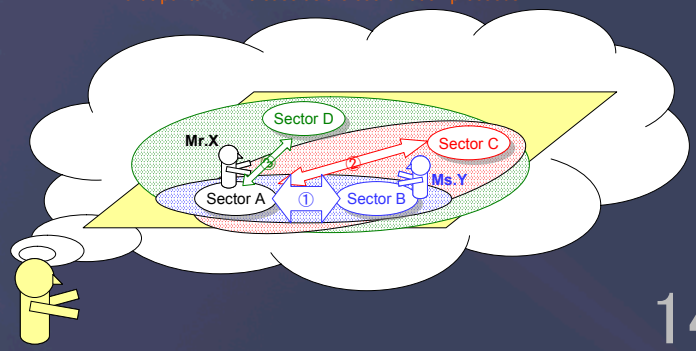
- Planning here does not only mean preparing plans for water-related projects, but also includes planning for the establishment of a coordinating organization like a river basin organization, ・・

>> **Good Examples**: Davao River, Tama River

>> **Useful tools**: Grasping the Positioning of Stakeholders and their Mutual Relationships

Example of an useful materials ― Chart of stakeholders

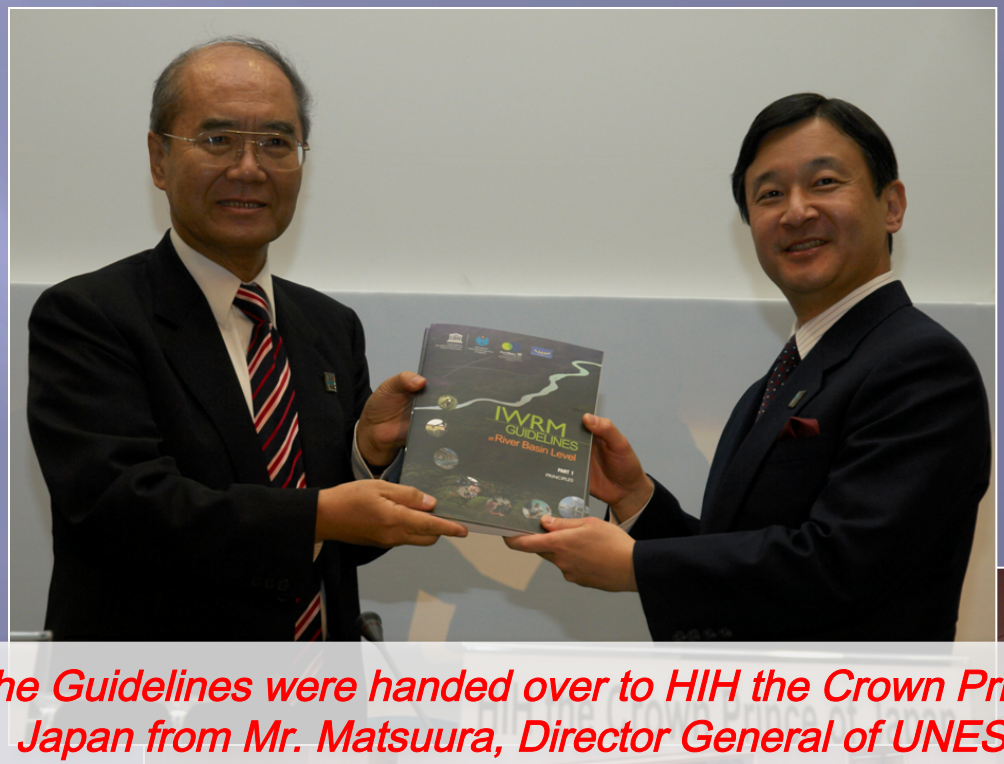
✓To grasp position of each stakeholder and mutual relations
✓To find who is the key person in the stakeholder.
✓Participants will increase as the coordination proceeds.



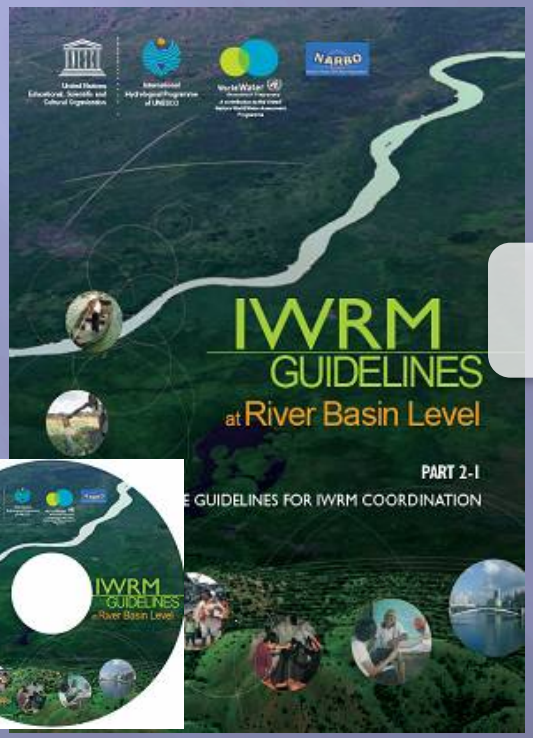
Launching of IWRM Guidelines at River Basin Level

5th World Water Forum on March 16th , 2009 in Istanbul

Mr. Eugene Z. Stakhiv, Technical Director of ICIWaRM



The Guidelines were handed over to HIH the Crown Prince of Japan from Mr. Matsuura, Director General of UNESCO



Activities in Asia

Workshops Total 200 peoples

- ✓ Water Allocation and Water Rights ; 5 times
- ✓ Sustainable Management for Water Resources Infrastructures; 4 times
- ✓ Water-Related Disaster and Its Management ; 2 times

IWRM Trainings ; Six times Around 100 peoples

Seminars Around 100 peoples

Korean version of the Guidelines was produced by Korean partner

Activities in Latin America

Launching of Spanish version

- Spanish version of IWRM Guidelines at River Basin Level are produced in cooperation with Inter-American Development Bank , ICIWaRM and UNESCO Montevideo Office.

Regional Workshop in 2012-2013

- Regional Workshop on IWRM Implementation is expected to be organized in 2012 or 2013

GEO-UNESCO Joint Workshop on Earth Observations and Capacity Development for Integrated Water Resources Management at River Basins in Africa

- UNESCO and the Group on Earth Observations (GEO) co-organized “The Workshop on Earth Observations and Capacity Development for Integrated Water Resources Management (IWRM) at River Basins in Africa” from 12 to 16 January 2012 at the UN Office facilities at Nairobi, Kenya.

GEO-UNESCO Joint Workshop on Earth Observations and Capacity Development for Integrated Water Resources Management at River Basins in Africa

- Based on the recognition that data availability and capacity development are two essential wheels of IWRM implementation in Africa, the workshop has provided precious occasion of exchange of knowledge, experience as well as training of experts.
- All major River Basin Organizations (RBO) in Africa were invited and more than seventy experts from RBO, space agencies, governments, donors, UN entities and other stakeholders actively participated.

GEO-UNESCO Joint Workshop on Earth Observations and Capacity Development for Integrated Water Resources Management at River Basins in Africa

- Participants shared the various water resource management needs and capacities among several river basin authorities and initiatives, space agencies, and overseas development agencies (ODAs), and how GEOSS can serve as a framework for delivering observations, services, data integration and capacity building in support of informed decision-making to respond to these needs.
- The contribution of GEO to the Green Economy, which is a main theme of the United Nations Conference on Sustainable Development (Rio+20) in June 2012 was also highlighted.

GEO-UNESCO Joint Workshop on Earth Observations and Capacity Development for Integrated Water Resources Management at River Basins in Africa

- Capacity Development session allowed participants to share their experiences or good example of IWRM and discuss the keys for success in implementing IWRM. Interregional cooperation between Africa and Asia was enhanced through the contribution of NARBO.

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Thank you for your attention

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