

How to Enhance Technology Transfer for Decentralized and Augmentation-Oriented Applications

- ADB & ADBI's Activities -

20 April, 2010

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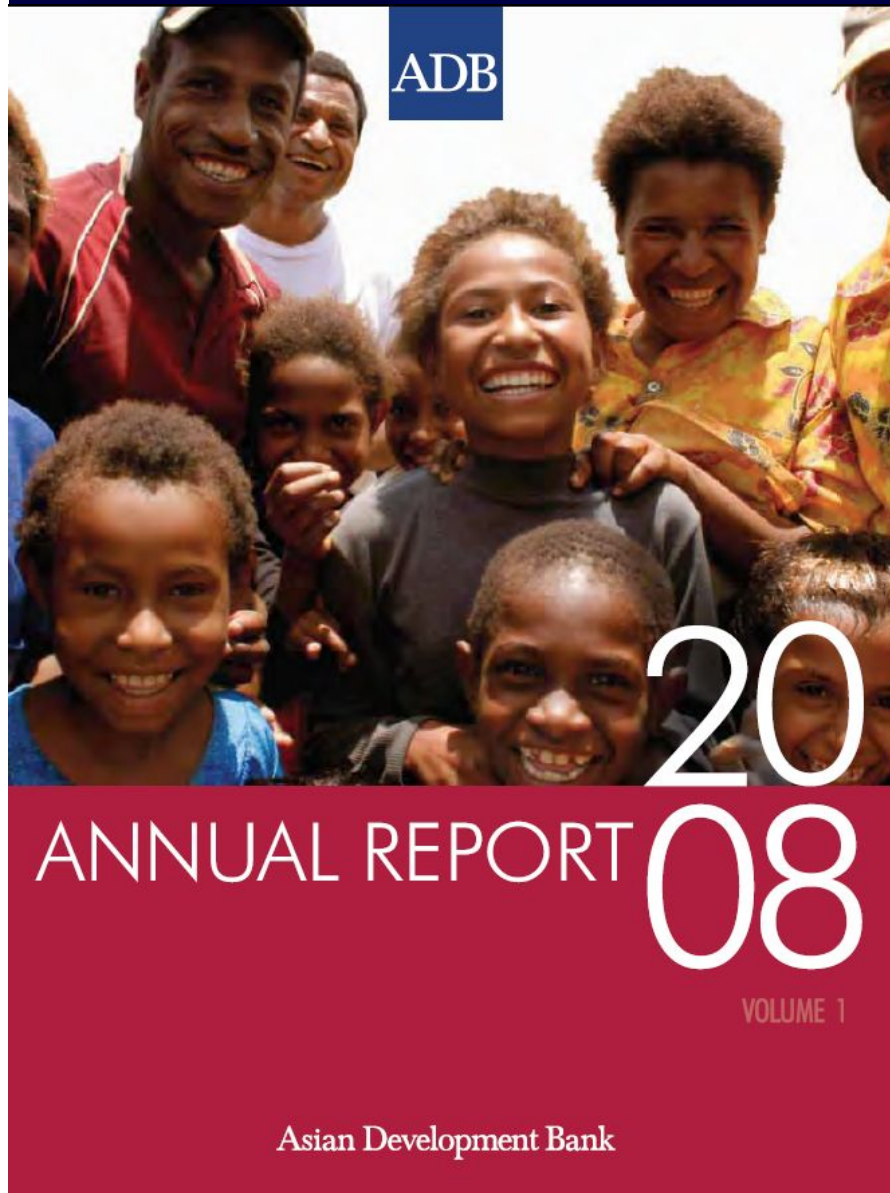
Outline

1. Introduction of ADB and ADBI

2. Examples

3. Conclusion

What's the Asian Development Bank (ADB)?



Outline of ADB

- **President:** Haruhiko Kuroda
- **Headquarters:** Manila, Philippines
- **Founded:** 1966
- **Members:** 67
- **Total employees:** 2,500+
- **Nationalities employed:** 50+
- **Total loans in 2008:** US\$10.5 billion

ADB's Mission

- **Reduce poverty**
- **Improvement the quality of life**

<http://www.adb.org/About/>



ADB and Water **'Water for All'**

[Vision for integrated water management]

- *Water is a socially vital economic good*
- *Water needs careful management*
- *A participatory approach will help conserve and protect water resources*

[Principal of Water Policy]

- *Promote a national focus on water sector reform*
- *Foster the integrated management of water resources*
- *Improve and expand the delivery of water services*
- *Foster the conservation of water and increase system efficiencies*
- *Promote regional cooperation and increase the mutually beneficial use of shared water resources within and between countries*
- *Facilitate the exchange of water sector information and experience • Improve governance and capacity building*



ADB and Water

'Water Financing Program'

- ✓ *To **double investments** in the sector between 2006 and 2010.*
- ✓ *Setting a precedent among multilateral development banks, the WFP committed to devoting **25%** of ADB's investment portfolio to water projects.*
- *200 million people with sustainable access to safe drinking water and improved sanitation*
- *100 million people with reduced risks to flood*
- *40 million people with more productive and efficient irrigation and drainage services*
- *25 river basins introduced to integrated water resources management (IWRM)*
- *Improved water governance through national water reforms and capacity development*

ADB and Water

'Water Financing Program (WFP)'

WFP will ensure the delivery of a substantial investment, reform, and capacity development programs in three key areas.



Rural Water



Urban Water



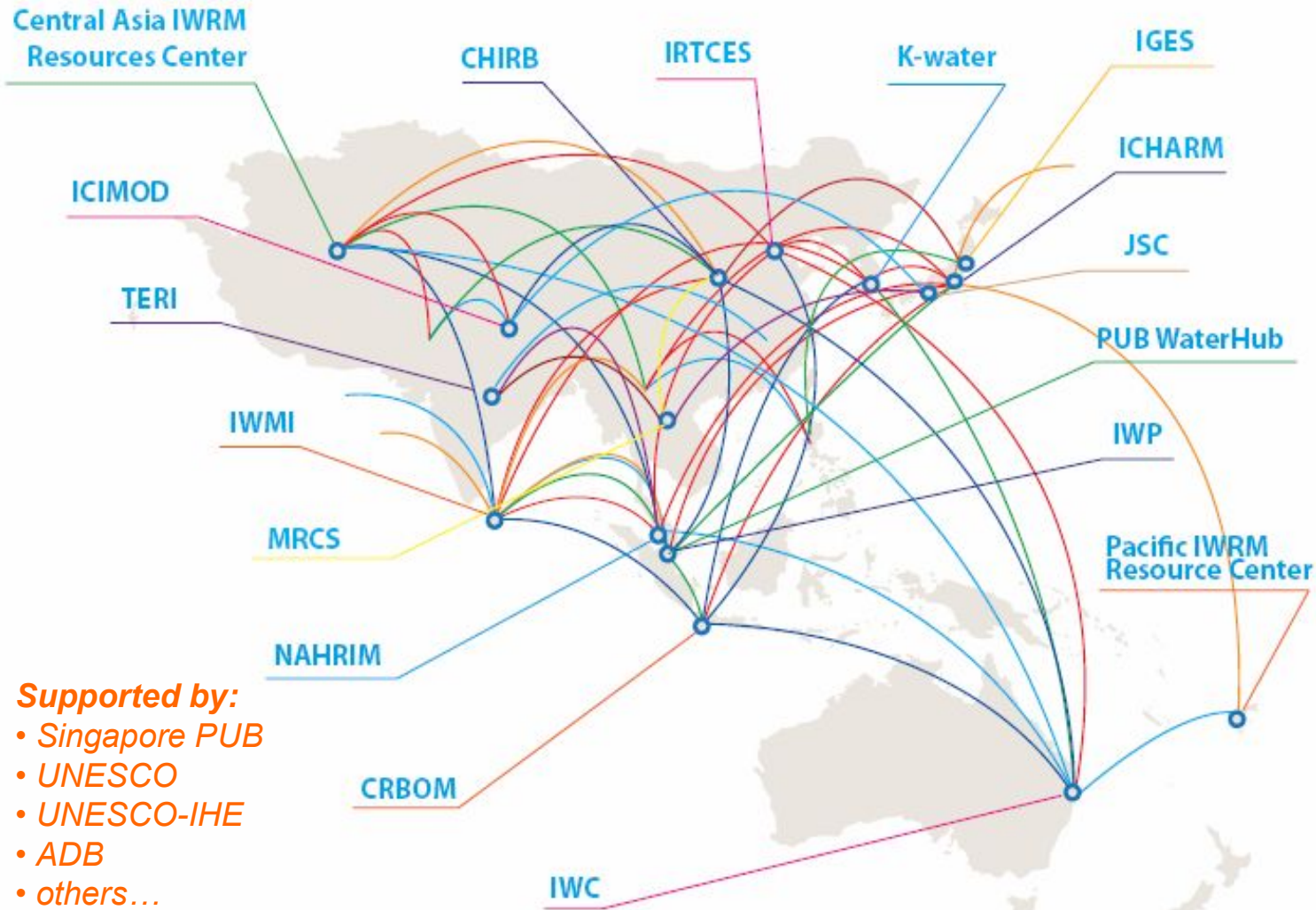
Basin Water

Asia Pacific Water Forum - *KnowledgeHubs*



Asia-Pacific
Water Forum

Overview of Regional Water Knowledge Hubs as of July 2009



Supported by:

- Singapore PUB
- UNESCO
- UNESCO-IHE
- ADB
- others...

<http://www.apwf.org/link/index.html>

<http://www.apwf-knowledgehubs.net/>

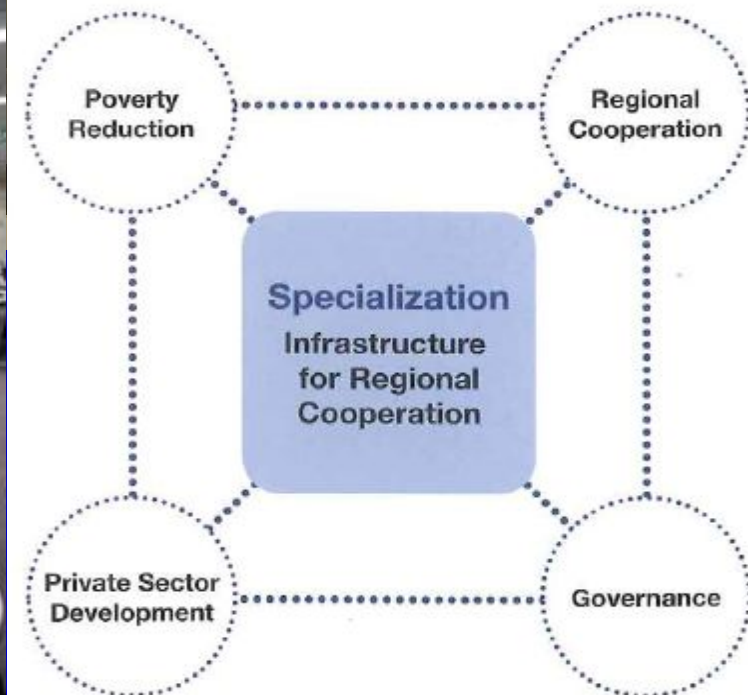
What's the **Asian Development Bank Institute** ?

[Outline]

- Established in December 1997
- A subsidiary of the Asian Development Bank (ADB)
- 55 staffs from 16 countries

[Purpose]

- Identification of effective development strategies
- Improvement of capacity for sound development management



<http://www.adbi.org>

Relationship ADBI and Water



- **Network of Asian River Basin Organization** was initiated by Asian Development Bank (ADB), ADB Institute (ADBI) and Japan Water Agency (JWA).
- Formally announced by signing the LOI on March 21, 2003, during the 3rd World Water Forum at Kyoto-Shiga, Japan.
- Established on February 24-26, 2004 in Malang, Indonesia



Letter of Intent for NARBO



1st NARBO General Meeting in 2004

Ownership is the basis of network activity

Goal and Objective of NARBO



Goal

To help to achieve

Integrated Water Resources Management (IWRM) in river basins throughout Asia.

Objective

*To strengthen the **capacity and effectiveness of RBOs** in promoting **IWRM** and improving **water governance**, through **training & exchange of information and experiences** among RBOs and their water sector agencies & knowledge partner organizations.*



IWRM Guidelines Launched

at the 5th World Water Forum, Istanbul



Part 1 Principles

Part 2-1 The Guidelines for IWRM Coordination

Part 2-2 The Guidelines for Flood Management

Part 2-3 Invitation to IWRM for Irrigation Practitioners

2. Examples

Example 1 *Sulabh, India*



- A cheap and effective sanitary toilet with a two-pit, pour-flash, water-seal system
- Public & Household toilet

Introduced and Disseminated by

Sulabh International, NGO

- Changed life cycle and behavior
- Created new business model

Example 2 *Yellow River, PRC*



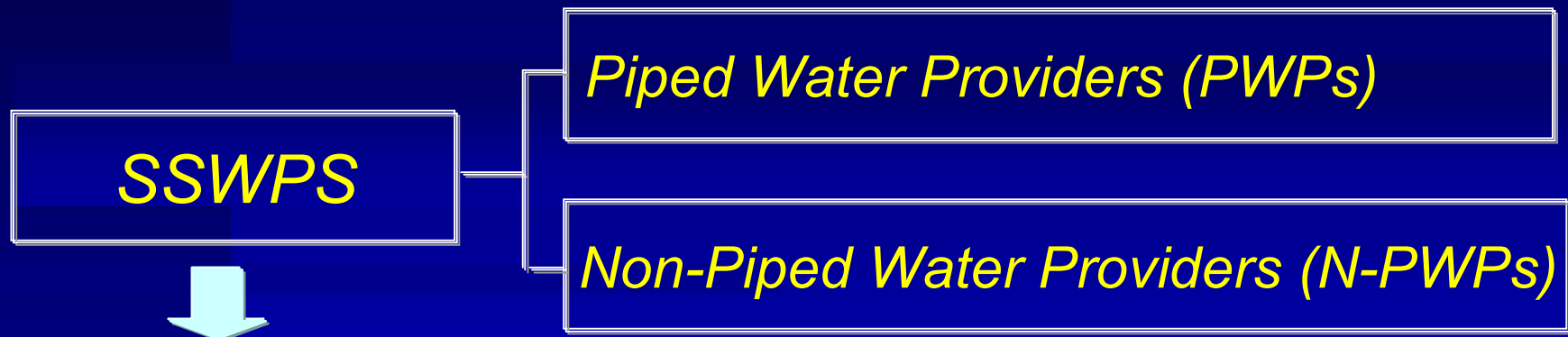
The Yellow River Conservancy Commission (YRCC) has recently implemented the *Digital Yellow River Project*, an integrated water resource management system comprising hydro informatics tools such as a geographic information system (GIS) database; a global positioning system (GPS); remote sensing technology; and the best hydrodynamic, sediment transportation, and water quality models available.

Through this project, YRCC has developed a range of policies, techniques, and tools for modern river basin management that address the growing and complex nature of today's needs.

Example 3 *Small Piped Water Networks*

50% of urban poor in Manila get their water from variety of small-scale water providers (SSWPs).

ADB's study in 2002



Alternative & Unreliable water resource

They need

- *Framework to govern their operations*
- *Technology & Standard*

Pilot Project by ADB

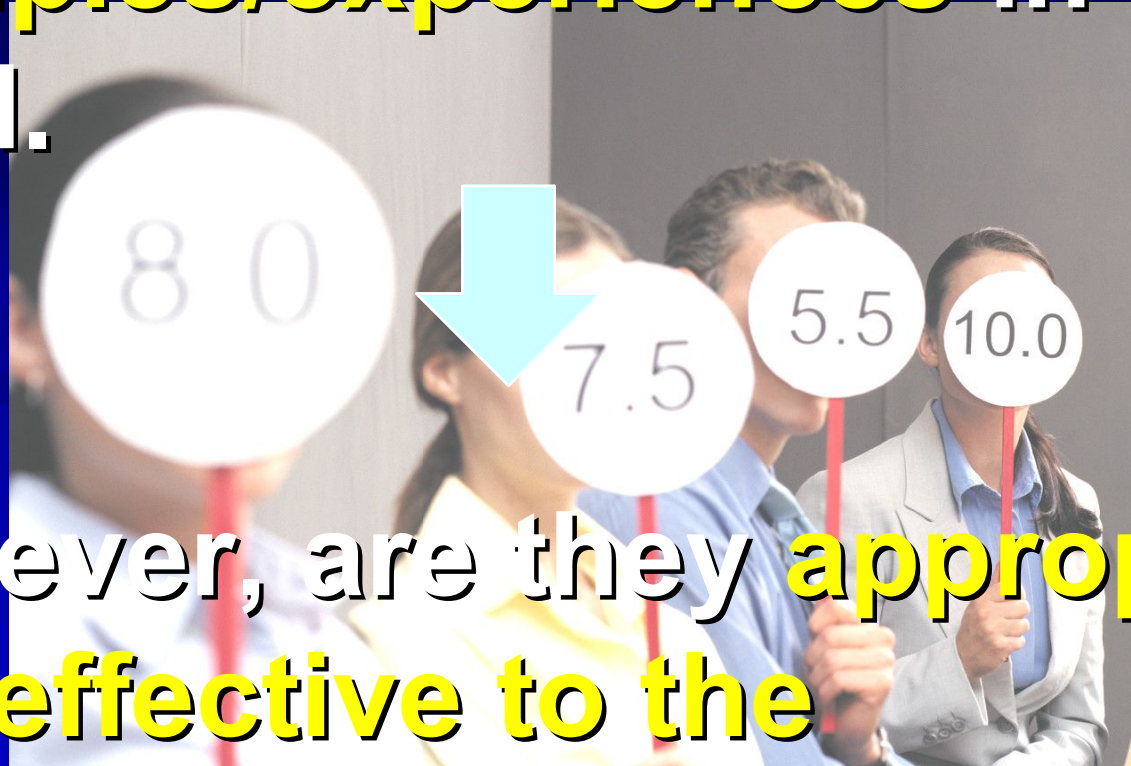


Example 4 *IWRM Experience of Japan*



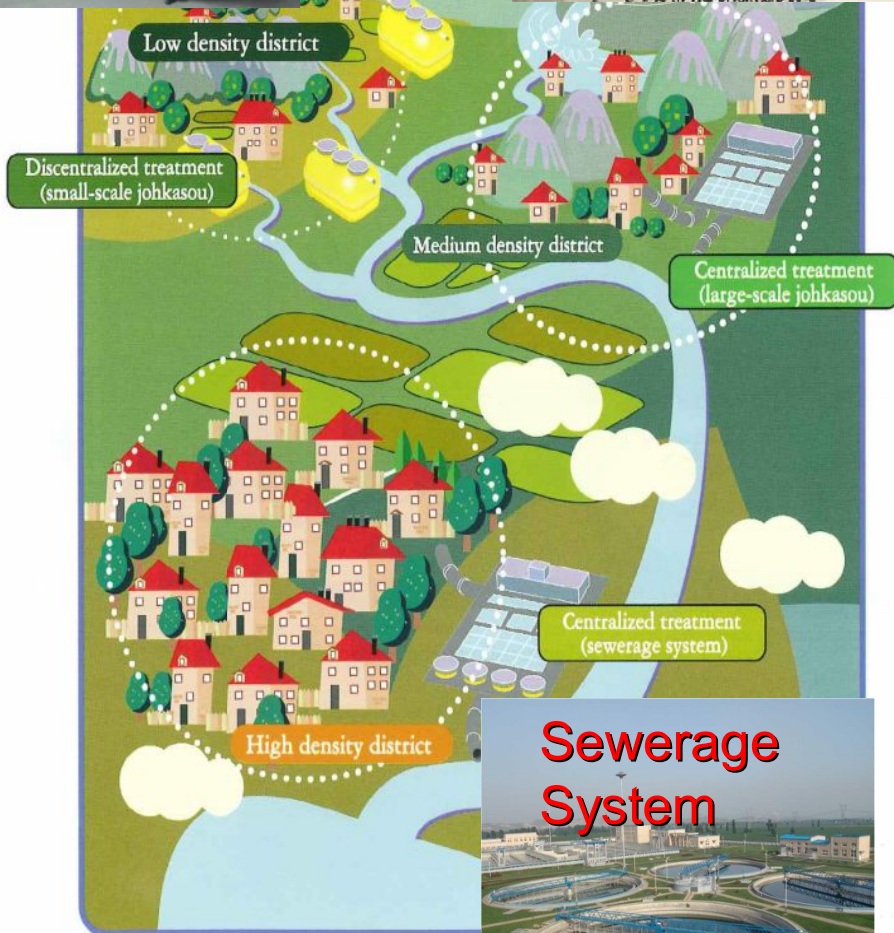
- *Lessons learned from the IWRM experience of Japan will be useful and applicable to Asian developing countries.*
- *JWA summarized the IWRM experience of Japan with support of MLIT and professionals.*

There are many **examples/experiences** in the world.

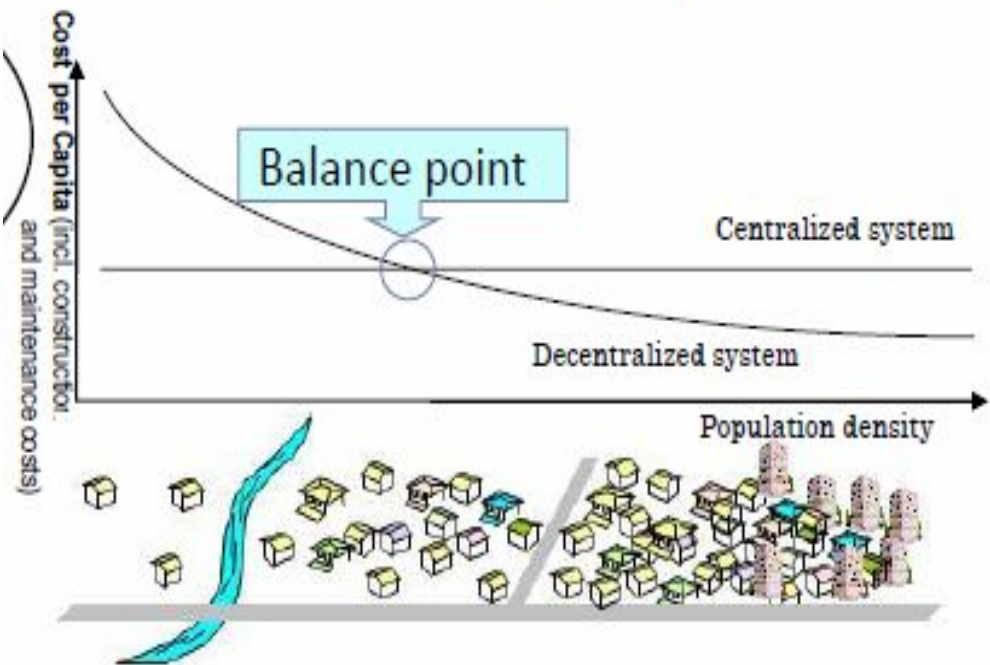


However, are they **appropriate and effective** to the **region/city/community?**

Centralized systems or Decentralized systems?



Cost comparison between centralized systems and decentralized systems



Decentralized systems for dispersed areas

Centralized systems for densely populated areas

Source: JSC & JECES

State-of-art technology or Low-tech?

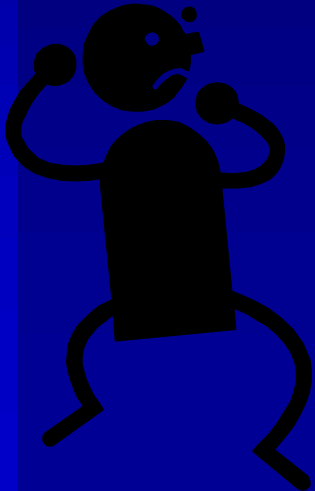
Large scale or Small scale?



Who decide which application is suitable for them?



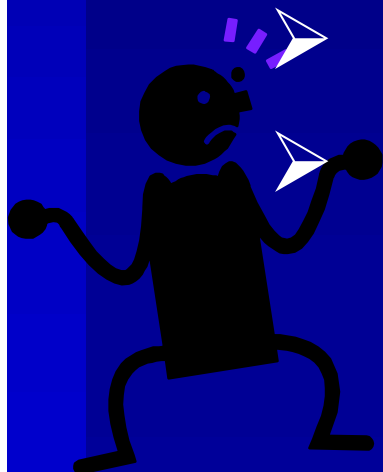
Mayer/Policy Maker/Residents/Donor?



3. *Conclusion*

Lack of many things

- Knowledge & Experience
- Innovative & Affordable technology
- Human resources
- Institutional framework
- Political will
- Public-Private-Partnership
- Awareness
- Financing....



Need



Capacity Development





Learning and Capacity Development

- Technical assistance is important to help access financing and develop bankable projects
- Learning and knowledge sharing across countries: planning; institutional reforms, innovative technological and financing approaches
- Demonstrate innovative projects (e.g., biogas, waste-to-energy, treated wastewater reuse, decentralized wastewater treatment systems)

***We're offering the opportunities by
conducting many events to share***

1) information,

2) Experiences, and

3) Good examples and practices

for improving current situations.

Water Operator's Partnership (WOPs)

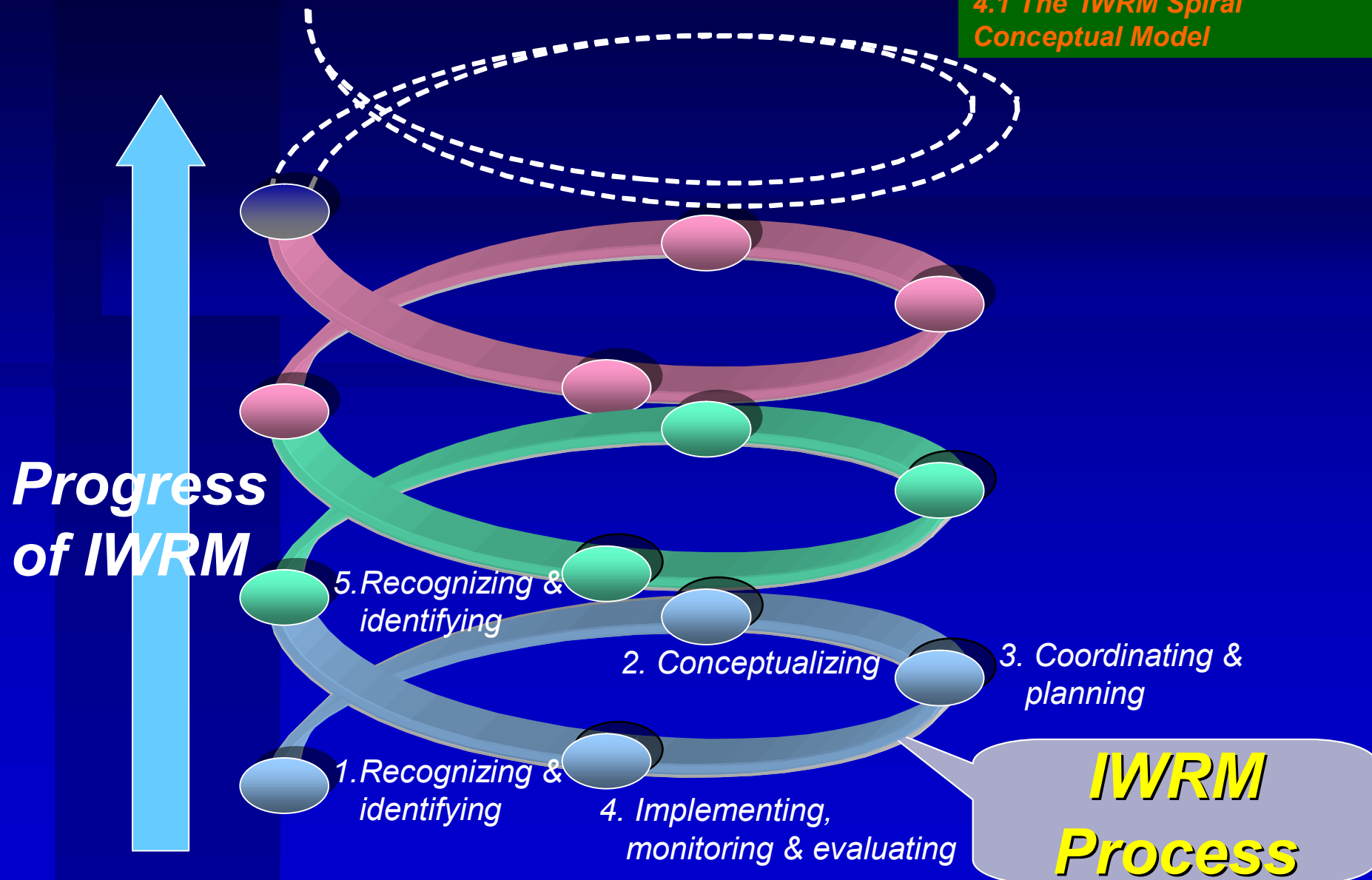
To enable water utilities including sanitation to improve service coverage and delivery, financial sustainability and other aspects of water operator's performance.

Strategies

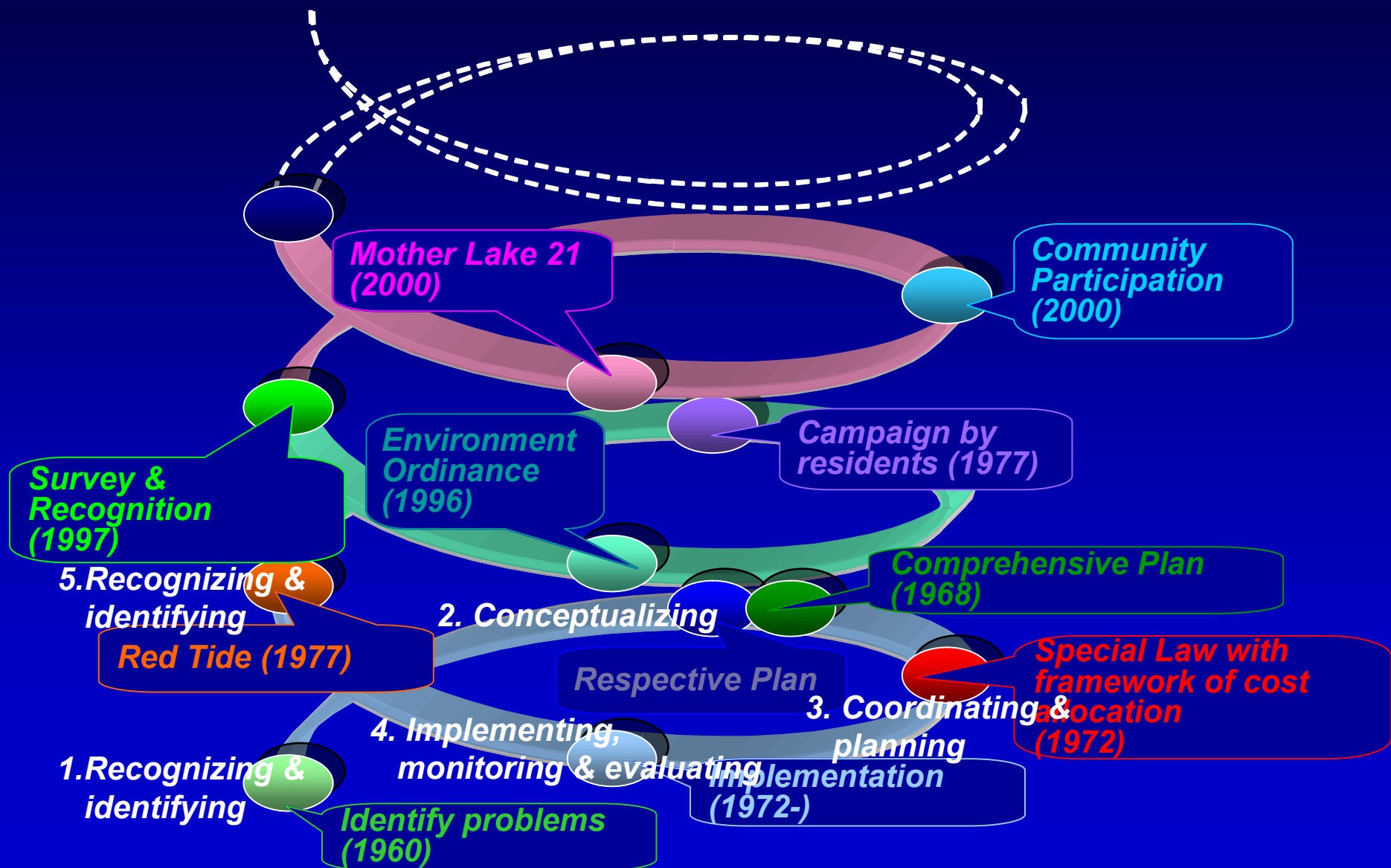
- Formation of Water Utilities Networks
- Continuous Improvement and Benchmarking
- Twining of Water Utilities
- Training Workshops

IWRM Spiral *IWRM Guidelines*

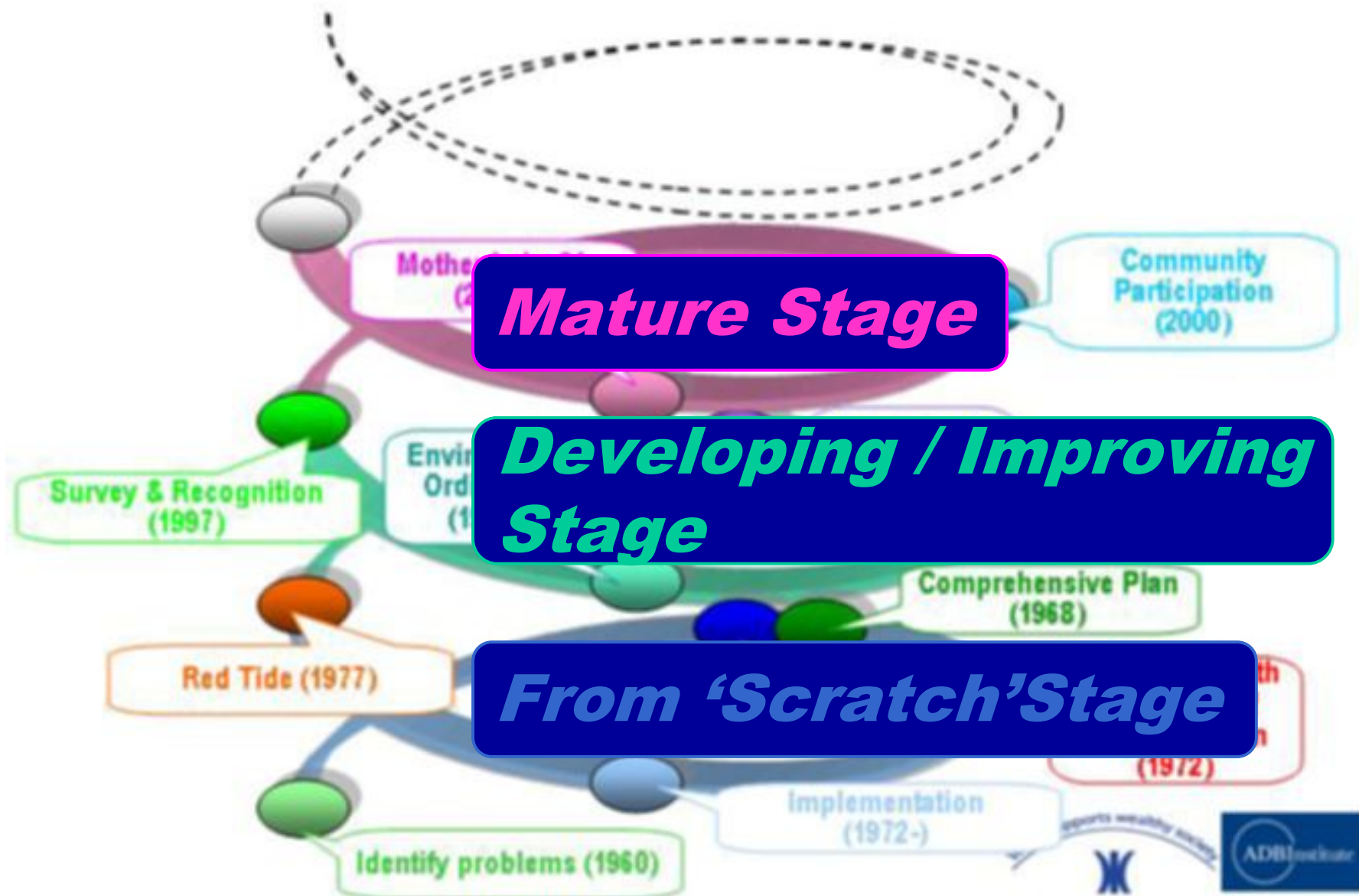
Guidelines Part2-1 pp.51-52
4.1 The 'IWRM Spiral'
Conceptual Model



IWRM evolves as Spiral



Staged Approach by IWRM Spiral



Extracted Key for Success from Lake Biwa

Guidelines Part2-1 pp.99-100
5.4.2(2) Extracted KfS from Lake
Biwa (Japan)

[Title]

Formulation of comprehensive conservation plan with the participation of all stakeholders

[Situation]

Water quality in Lake Biwa had been deteriorating

[Problem]

Deterioration of water quality in Lake Biwa was caused by all the activities in the basin

[How the problem was overcome]

Bottom-up approach led to the establishment of a participatory and comprehensive conservation plan.

[The Key]

Residents in the basin recognized the problem of water quality in Lake Biwa as their own problem, and they started citizens' campaigns. This movement not only had an effect on prefectural government and the establishment of ordinances but it forced the prefecture to approach national government for further action. Mother Lake 21, which was established as a consequence of such activities, encouraged the participation of all stakeholders in the basin, and stipulated that it should be reviewed and modified periodically.

>>> [1.1.2] Consider a significant change in the basin as a chance to move IWRM forward, and recognize and understand such changes as early as possible.

>>> [3.1.1] Prepare a framework for stakeholder participation to build consensus among stakeholders.

>>> [4.2.2] Continuously monitor and evaluate the effectiveness of the IWRM activities (plans, projects, infrastructure, legal framework, organizations, etc) in the basin.

>>> [5.1.1] Advocate the importance of water resource management at the basin level and promote coordination among all sectors to be addressed in policies and national strategies.



*Thank you very much for
your kind attention.*

More Information

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<http://www.adbi.org> / <http://www.water.go.jp> /
<http://www.narbo.jp>

