

*Workshop on
Integrated Water Resources Management (IWRM) in Libya
Tripoli 11-12 April 2007*

**Water Governance in the Arab Region: Networking
and Priorities for Action**

Jean Khouri

DEFINITION OF GOVERNANCE

Governance is the framework of social and economic systems and legal and political structures through which humanity manages itself *WHAT 2000*

Water governance is the range of social, economic, political and administrative systems that regulate the development and management of water resources and provision of water services

WATER GOVERNANCE: BASIC ELEMENTS AND PRINCIPLES

- **Policy integration**
- **Legal framework for the implementation of policy**
- **Water institutions: forms and functions for organizational framework**
- **Stakeholder participation: involvement in planning and management**
- **Capacity building**

GOVERNANCE HAS TO ADDRESS KEY ISSUES IN THE ARAB REGION

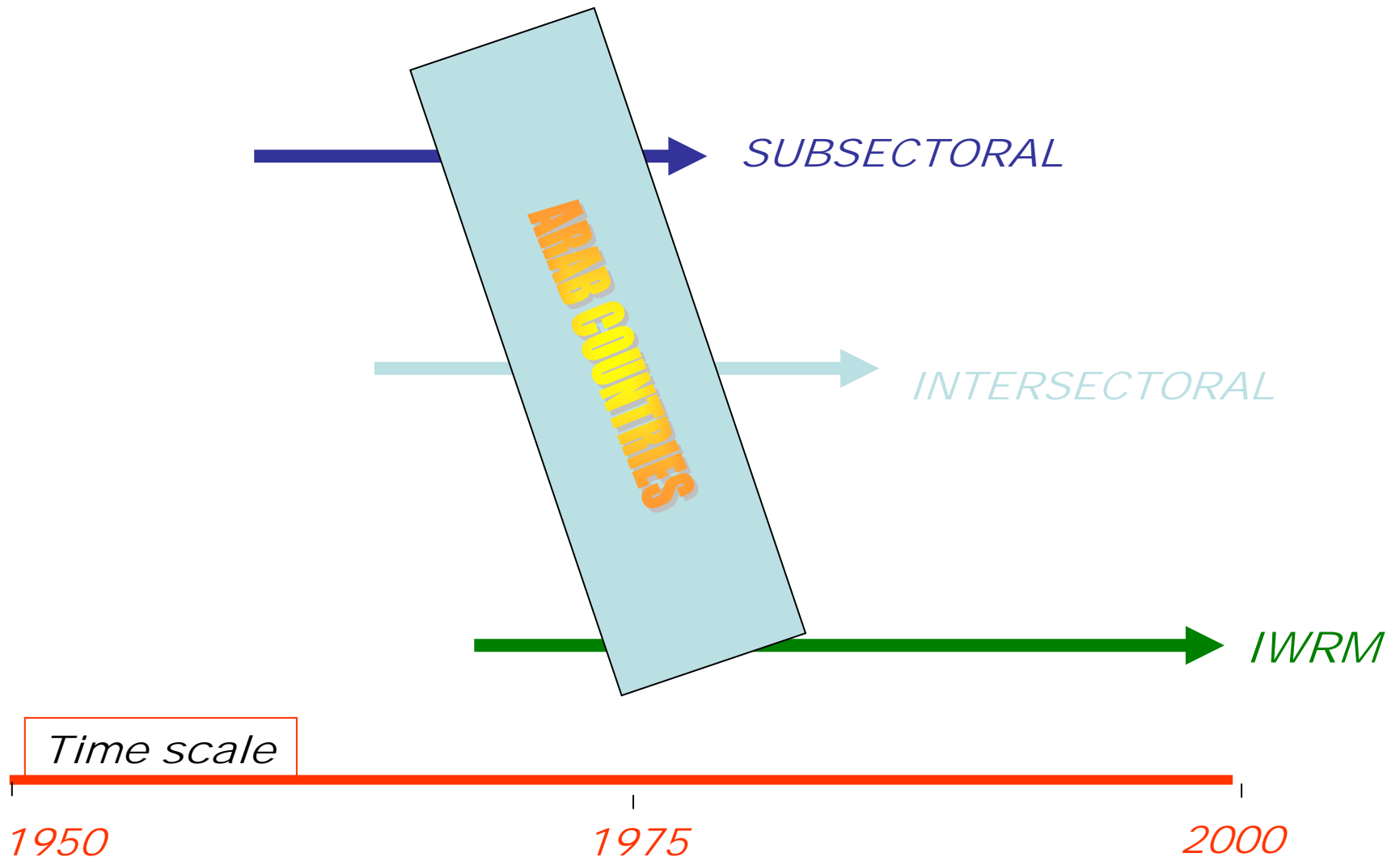
1.Natural and water use issues

- **Drought and desertification**
- **Water scarcity**
- **Ephemeral streamflow: wadi systems**
- **Aquifer depletion**
- **Non-renewable groundwater resources**
- **Dryland salinity**
- **Irrigation salinity**
- **Water quality degradation**

2. Technical and socio-economic issues

- Technical issues: *information, data management*
- Managerial issues: *comprehensive legislation, enforcement, participation, awareness, economic instruments*
- Water policy issues: *water and food security, sustainability level and spatial scale*
- Social and ethical issues: *intergenerational equity, social justice, international equity.*

GRADUAL SHIFT IN WATER GOVERNANCE IN THE ARAB REGION



WATER GOVERNANCE SHIFT

EARLIER DECADES	Conjunctive use, focus on supply management	Subsectoral approach
LATER DECADES	Comprehensive planning, Master Plans	Inersectoral approach
RECENT DECADES	Agenda 21, focus on Demand management	IWRM
MODERN TIMES	Shift from crisis (reactive) to risk (proactive)	IWRM

Why: integrated approach ?

- ❖ Increasing scarcity, widespread deterioration and depletion of the water resource base
- ❖ Water use and management is constrained by existing fragmented approaches
- ❖ Supply-demand imbalance is growing fast
- ❖ Demand management is a priority option for future action
- ❖ Risk and high vulnerability of water systems
- ❖ Sustainability: The development of a new paradigm that incorporates increasing emphasis on sustainability

Definition of integrated water resources management(IWRM)

- ***“ Managing the whole range of development activities within a framework limited by the finite nature of the resource, and the finance available, and optimizing the development strategy in terms of supply management, demand management, social equity, economic and environmental sustainability and national capacities”***

UNDP,World Bank, 1992

- ***“ A process, which promotes the coordinated development 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”***

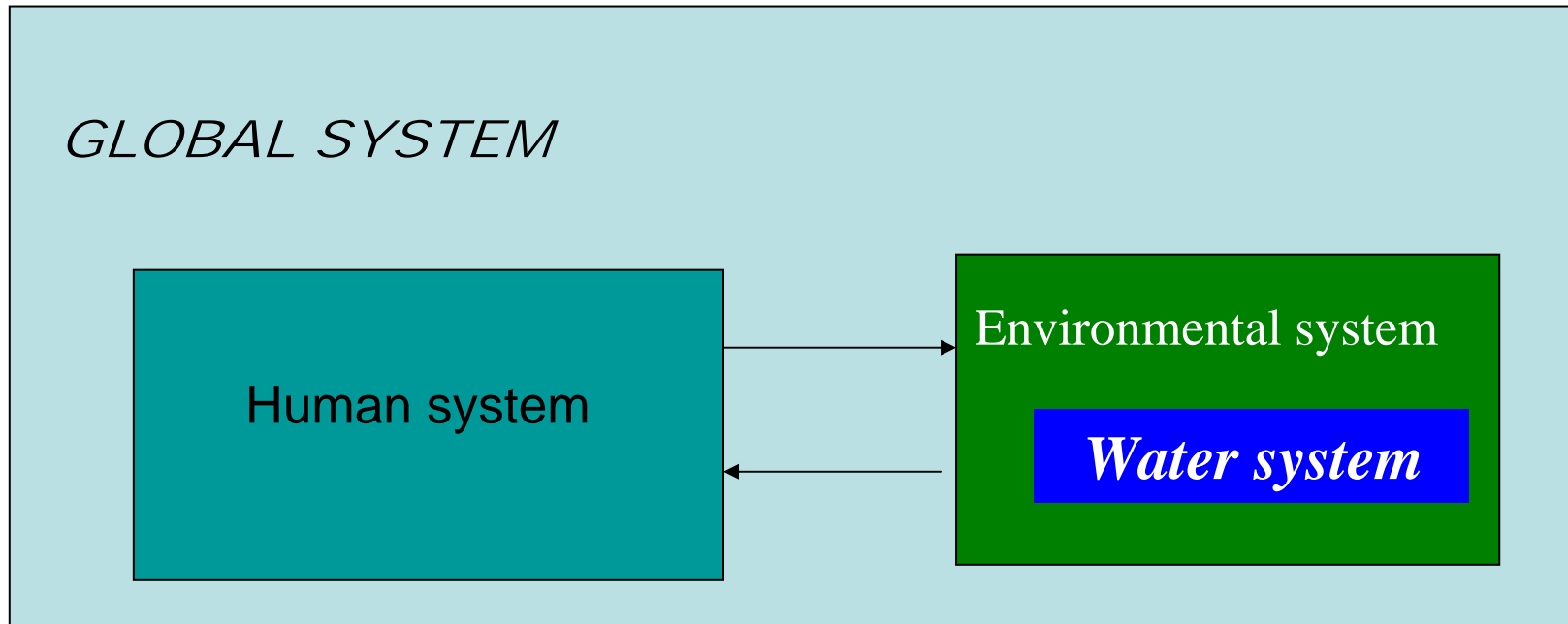
Global Water Partnership, 2000

WHY : INTEGRATED WATER MANAGEMENT APPROACH

IWRM ADDRESSES AND ALLOWS FOR:

- Best use and, greatest social value and diversified social needs
- Water policy options and adaptive management through reallocation and new technologies
- Efficient management and transparency of planning through public accountability
- Assessment of performance and progress through national and regional evaluation

Context of the water system (*Hoekstra 1995*)



INTEGRATION OF THE WATER SYSTEM

- ✚ **The water system is an integral part of the environmental system and interlinked with the human system**
- ✚ **Integration in the water system involves integration of multiple uses of water, and environmental aspects, coordination of upstream and downstream aspects, as well as managing the water system as conjunctive resource of surface and groundwater**

INTEGRATION OF THE ENVIRONMENTAL AND HUMAN SYSTEMS

- ✚ Integration in the environmental system involves integration of land and water , reflecting the relationship between water and: land use, land cover and related ecosystems
- ✚ Integration in the human system involves a broader perspective involving holistic management of the natural-environmental system in coordination with human activities, creating *GOVERNANCE SYSTEM* capable of integrating economic, social and political systems

Development of a general framework for IWRM

➤ **Enabling environment:**

- *Setting policy goals, reform of legislation, financing*

➤ **Institutional roles:**

- *Creating organizational framework, capacity building*

➤ **Management instruments:**

- *WRA, EIA, SIA, Demand management, pricing, awareness, conflict resolution, information management, risk management*

WATER GOVERNANCE: NETWORKING

- ❑ **The development of better systems of resource management depends not only on institutional development but also on *networks* of voluntary private and other civic organizations**
- ❑ **The strengthening of networks at the national and regional level can foster commitment to, and democratisation of new governance systems**
- ❑ **Networks which connect governmental organizations to civil society organizations and link citizens in different countries are vital to consensus building which can underpin better systems of water governance**

NETWORKS IN THE ARAB REGION

- 1. Arab Network on Wadi Hydrology**
- 2. Arab Network on Groundwater Protection**
- 3. Arab Network on Water Ethics**

Objectives of the networks include *inter alia*:

- Develop the concept of integrated and sustainable development and management**
- Strengthen human resources and institutions in the region**
- Promote new ethics of water management**
- Promote networking with relevant programs, projects and networks**

PRIORITIES FOR ACTION WITHIN A NEW FRAMEWORK OF GOVERNANCE

- **Improving the national level of governance to ensure sustainable management of water resources**
- **Reinforcement of existing institutional structures to ensure integrated water resources management**
- **Building new forms of resource valuation into the policies and water-related institutions**
- **Bringing key stakeholders into dialogue which can lead to urgent action through governance, institutions and conferences**
- **Strengthening and activation of networks**

PRIORITIES FOR ACTION WITHIN A NEW FRAMEWORK OF GOVERNANCE *CONT*

- **valuation of water-related resources**
- **Development of “consensual” philosophy of resource conservation; bridging nations and cultures**
- **Linking ethical concerns pertaining to intergenerational equity and social justice to practical systems of governance**
- **Developing a mechanism for engaging water policy and decision-making structures with bottom-up initiatives for water management and conservation**
- **In managing water resources , institutions must take into account the impacts of their activities on ecosystems and the precautionary principle**

DSS

- ❖ **IWRM is a field where complex decisions are frequent, because conflicting interests are involved**
- ❖ **DSS can enhance the quality of decision and speed up the decision process**
- ❖ **The main objective of DSS is the support of the decision – making process by providing flexible models which can be interactively adapted to a specific problem and by providing a reliable data base which should be user – friendly combined with the models. *Such models have been developed by national and regional institutions in Syria and many Arab countries***
- ❖ **The application of DSS for modeling and analysis of regional aquifer systems in the Arab Region, is a useful tool for describing the regional flow pattern, and if interactively used can assist in decision -making**

Indicators of IWRM

IWRM indicators are an important tool to:

- **Describe the status of water resources**
- **Monitor the success and report progress towards sustainable water resources development**
- **Measure the performance and effectiveness of IWRM policies**
- **Help in development planning and decision-making**
- **Communicate information to decision makers and the public**
- **Monitor the effects of policy responses**

GROUNDWATER INDICATORS IN THE ARAB REGION

- **Priority groundwater issues in the Arab Region have been identified, and indicators were selected to address these issues. (Khouri, 2004)**
- **They comprise groundwater quantity indicators, groundwater quality indicators, isotopic indicators and composite indicators or indices.**
- **The chosen indicators monitor and communicate information on critical emerging issues, such as groundwater depletion, aquifer susceptibility, contamination hazard, salinization, over-exploitation.**
- **They encompass the social, economic, institutional and environmental dimensions of sustainable development.**

Thank you

The text 'Thank you' is rendered in a bold, sans-serif font. Each letter is filled with a different color from a rainbow spectrum: 'T' is magenta, 'h' is red, 'a' is orange, 'n' is yellow, 'k' is green, 'y' is blue, and 'o' is purple. The text is positioned on a white surface, and a soft, grey shadow is cast beneath it, giving it a three-dimensional appearance.