Effective Policies and Management of Water Supplies Utilizing Integrated Water Resources Management Frameworks in Saudi Arabia

Prepared By

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Background Information:

- Contrary to popular belief, **water crises in many countries are more of a governance failure**, than one that relates to water shortages or technical shortcomings.

- Most water challenges are political, economic, and social. If we can improve water governance using the integrated approach, we will get closer to a water-secure world.

- The purpose of the IWRM tools is to provide assistance in overcoming the largest obstacles to good water governance.

Adoption of IWRM at International Level

- In an effort to encourage a move towards more sustainable approaches to water development and management, **the World Summit on Sustainable Development (WSSD)** in 2002 called for all countries to craft the Integrated Water Resources Management **(IWRM)** and water efficiency strategies **by the end of 2005.**

- This was emphasized again **by the UN-world summit in 2015.**

Adoption of IWRM at International Level

Adoption of IWRM is intended to support countries in their efforts to:

- Meet development goals (MDGs 2005-2015, and SDGs 2016-2030), such as reducing poverty, increasing food security, fostering economic growth, protecting ecosystems.

- Tackle specific water challenges, such as controlling flooding, mitigating the effects of drought, expanding access to water and sanitation, and addressing increasing competition for water and water scarcity.

Definition, Objectives and Tools of IWRM

- **Definition of IWRM**

- IWRM is a process which promotes the co-ordinated development and 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." (GWP 2008:22)

- IWRM is based on the understanding that all the different uses of finite water resources are interdependent.

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Objectives of the IWRM Frameworks

- **Economic efficiency in water use:** water must be used with maximum possible efficiency.

- **Equity:** The basic right for all people to have access to water of adequate quantity and quality for the sustenance of human well-being must be universally recognized.

- **Environmental and ecological sustainability:** "The present use of water resource should be managed in a way that does not undermine the life-support system thereby compromising use by future generations of the same resource. (GWP 2008)

IWRM Tools

IWRM Tools

- **Tools A, enabling environment,** identify what are some of the founding policy, legal, and financial structures that are promoted by IWRM. These first steps are about providing an Enabling Environment, which clarifies the rights and assets of all stakeholders, while ensuring for environmental quality.

- **Tools B, institutional arrangements,** are concerned with identifying some key social, economic, and political systems that are conducive to strong Institutional Arrangements. These entities act as incubators and channels for good and effective water governance to materialize.

- **Tools C, management Instruments,** lay out elements and methods that enable and help decision makers to make rational and informed choices between alternative actions, in accordance to IWRM principles.

IWRM and National Water Strategy 2017-2030

- The Kingdom has surpassed **MDGs era (post 2015),** and the MEWA recognized the need to introduce an **updated National Water Strategy 2017-2030** **t**o ensure that **national goals and priorities** are realigned to the country's changing needs according to **2030 National Vision and UN-SDGs (2016-2030)**.

- **The updated strategy has adopted the IWRM frameworks**.
- The MEWA is on the verge of **implementing the NWS .**

Required Stages for Implementation of IWRM Frameworks in KSA

Required stages for IWRM Implementation:

- Build Commitment to Actions

- Implement IWRM Planned Frameworks

- Monitor and Evaluate Progress.

- Necessary Modifications in the courses of actions.

Build Commitment to Actions

A) Political Commitment to actions from high level Decision Makers.

- This is clear by the adoption of 2030 National Vision including water and wastewater sectors by high level decision makers.

Build Commitment to Actions: Stakeholder acceptance

B) Stakeholder acceptance: This can achieved by:

- **Communications** with all types of stakeholders.

- **Proper Communication Channels to be utilized.**

- **Consensus Building** .

- **Conflict Management**.

Build Commitment to Actions: Stakeholder acceptance

C) Promotion of Social Changes: It requires changes of deeply held attitudes in society to accept new changes.

- **Youth Education.**

- **Raising Public Awareness**.

- **Water Footprint.**

- **Virtual Water.**

Build Commitment to Actions: Identify Financing

- **<u>D) Identify Financing</u>**: creating and funding the resources to meet water infrastructure needs.

- **Investment Frameworks**

- **Strategic Financial Planning**

- **Generating Basic Revenues for Water.**

- **Repayable sources of finance for water: Loans, Bonds, Equity, Public-private partnerships (PPPs)** and **Risk-sharing, guarantees & credit enhancement**

Second: Implementing Frameworks

A)   Frameworks for Water and wastewater Infrastructure Developments:

- Public Sector Water Utilities.
- Private Sector Water Service Providers.
- Community-Based Water Supply and Management Organizations.

B) Capacity Building:

- Information Gathering and Sharing Networks
- Training Water Professionals
- Partnerships
- Bodies for Water Integrity and Anti-corruption

Third: Monitoring and Evaluation Systems

- **Water resource monitoring** is about assessing physical quantity and quality of water in any of its phases.

- **Evaluation of policy performances**: indicators need to be developed. These indicators are often specific and measurable and part of a larger evaluation system, in which they relate to each other and to established strategic goals.

Third: Monitoring and Evaluation Systems

- **Social Assessment:** SA will consider population impacts, institutional arrangements, communities in transition, individual and family level impacts, and community infrastructure needs.

- **Ecosystem Assessment:** EA is a tool for analyses of the effects of changes in policies and management on ecosystems.

Fourth: Possible Modifications on Policies and Related Course of Actions

On the basis of the results and findings from assessment, monitoring and evaluation processes, it will be possible to develop the required modifications on the course of actions to ensure that the adopted IWRM tools have lead, and will continue to lead to achieve sustainable water and wastewater services.

Conclusions

- **During the past two years, the MEWA has taken major steps forward towards achieving sustainable water and wastewater services in the Kingdom in accordance of National 2030 Vision.**

- **The implementation of the developed National water strategy 2017-2030, utilizing IWRM tools requires the execution of sound steps utilizing IWRM tools to achieve its planed goals.**

THANK YOU