



**Sustainable Water
Integrated Management (SWIM) -
Support Mechanism**



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Water is too precious to waste

**Cost Assessment of Water Resources Degradation (CAWRD)
Conclusions and Recommendations**

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General Conclusions of the CAWRD Studies

- **The environment neglect of the Basins studied is becoming a burden on the countries' economy**
- **The environmental health bill due to the burden of waterborne diseases is also high.** Major sources of waterborne diseases are due to: untreated wastewater; poor quality of potable water from private wells; and poor hygiene practices that still need to be assessed, especially among the poor
- **Water resources allocation does not reflect the reality of the socioeconomic conditions in the Basins.** There is no approved water resources master plan (with the exception of Oum Er Rbia) which should take into account the supply and demand management based on economic principles, the future long term needs of this basin taking into consideration population growth, climate change impacts as well as the necessary environmental flow for protecting the biodiversity resources in the basin
- **The fragmented responsibilities between different ministries and institutions and at the local level are contributing to poor water performance** in terms of monitoring and enforcement and have prevented the efficient development and management of the water and wastewater services.

General Conclusions of the CAWRD Studies

- The lack of access to safe drinking water and sanitation in peri-urban and rural areas is the most significant in terms of degradation.**
- Untreated municipal waste is the second source of degradation of water resources of the basin. Open dumps and insufficient collection and disposal in suburban and rural areas are a major cause of degradation of the basin**
- Loss of irrigated agricultural productivity due to salinity contribute to soil degradation Despite the use of fertilizers, soil salinity is particularly linked to the quality of irrigation water**
- Data and reports on the quality and quantity of water resources as well as qualitative assessments of impacts on natural resources are generally understood from a technical point of view, however, economic evaluations of these impacts are almost nonexistent**

Political ownership : Towards a System of Sustainable and Integrated Water Resources Management

- The following recommendations are proposed to evolve towards a sustainable integrated water resources management using watersheds as a pilot
- This system should be based on the following three blocks:
 - the participation of the water stakeholders
 - setting elements of effective and efficient system and continuous management of the water resources ; and
 - Strengthening the aspects of water management, from the institutional, legal, financial and environmental and social point of view.
- At this stage, it is important to note that these three blocks can not be implemented in parallel on a short and medium term of 2-5 years, however, it should begin by the following recommendations corresponding to the socio -economic conditions of each country

Six Domains of Interventions

- **Focusing primarily on efficient investments for controlling water pollution in rural and peri-urban that have been neglected in the past. Priority would be that**
 - **The Government initially invest in the extension of drinking water and waste water networks in rural areas of the basin where poverty is predominant, using appropriate technologies and based on monitoring indicators such as lowering the cost of water resources degradation**
 - **Develop a strategy for monitoring followed by investment municipal waste management in peri-urban and rural areas and the closure of uncontrolled dumps**

Six Domains of Interventions

- **Consideration of opportunities to increase agricultural productivity by reducing the impact of salinity.** The following opportunities can be explored to improve the efficiency of irrigation systems, the use of drip irrigation, and consideration of other agricultural products that are tolerant to salinity (wheat, sugar beet and citrus) instead of vegetable farming and in the soils where salinity levels are very high.
- **The gradual shift in policy intensification of exploitation of natural resources, particularly in the context of resource mobilization of surface water and groundwater.** This shift could be based on criteria that explicitly include economic performance and degradation and scarcity of resources in the basin. This will allow one hand, a better use of water resources and secondly to integrate conservation concerns of "soil and water" heritage, and improving productivity.

Six Domains of Interventions

- **Planning upstream interventions to reduce siltation of dams** in order to derive the causes of siltation and assess the exact impact of erosion control regarding the control and mobilization of surface water; and adapt erosion control technologies for their actual use by the operators.
- **Establish a decentralized information network** for monitoring and enforcement of the environment and natural resources of the basin. The network will aim to:
 - define and validate continuous exchange of protocols and cooperation with other information sources and databases.
 - undertake measures of the state of soil and water to assist in the understanding and assessment of the environment and its impact on health and the degradation of natural capital and to contribute to decision-making based on accurate data and information and;
 - provide all users, all information and data on the nature and quality of water and soil as well as the constraints and the incentives required .

Six Domains of Interventions

- **Consider a horizontal dimension for the application of a comprehensive and integrated water management in watersheds. This requires**

The establishment of a study group consisting of representatives of ministries (Water and Environment, Interior, Agriculture and Health), their as well as representatives of users, whose mandate will be to:

- **Develop the expertise in the assessment of benefits and damages , in water economy and the integration of these aspects into programs and sectoral development strategies; and**
- **establish a system of monitoring and evaluation for investments and for the activities in the Basin**

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Thank you
for your attention

Merci pour
votre attention



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