

Water is everybody's concern

Water is an essential resource for economic and social development, but it is becoming more and more scarce as a result of population growth, overexploitation of groundwater and surface water, pollution from human activities, climate change...

However, water is a vital natural resource characterised by a strong interaction with all other natural resources and human activities. Therefore, it is crucial to take into consideration water in all connected aspects inside an interdisciplinary approach.

This is why Integrated Water Resources Management (IWRM) is a well-established approach to sustainably meet users' water needs and protect the precious and scarce water resource. This paper exemplifies Enabel's IWRM experience in Morocco, Senegal and Vietnam.

A complex issue

IWRM is an approach that has to take into account numerous themes: environment protection, human rights, elimination of poverty, food security, sustainable agriculture, drinking water, sanitation, energy, tourism, industry, human settlements, health, employment...

The scope of action is very large, making water management a complex issue. Solutions that are fit for a certain context, may not be suitable for another.

Extensive knowledge of available water resources (quantity and quality) and current water use is an essential prerequisite for efficient IWRM and accurate decision process.

How to get started

When implementing an IWRM project, Enabel always considers the following aspects:

- **The legal framework** for water management is absolutely mandatory. It has to be up to date, sustainable and adapted to the local context.
- **Regulation and Law enforcement** shall be ensured by an efficient and capacitated authority. Often, the regulations exist on paper, but in practice there are no incentives and lack of staff to enforce them.
- **Decentralisation** processes are key. Dedicated water agencies (e.g. per river basin) have an essential role to play as regards to quantitative and qualitative monitoring of the resources and to have water users participate in the decision-making process.
- **Water 'observatories'** are essential for accurate water data collection, for supporting decision-making and knowledge-sharing.
- **Planning** is crucial for taking into account the numerous challenges in a long-term perspective. But it is necessary to limit the number of objectives and prioritize them (and be realistic).
- **Participatory approach** is another essential component. Make sure to include all water users to make them aware of the scarcity of water resources and how important it is to share them with present and future users.

Crucial role for the public sector

In a context of climate change, all the organizations involved in water management need to coordinate their actions. Enabel aims at improving management, the collaboration and interaction between the different partners, including the local level, the regional and the national level (bottom-up approach).

The public sector has a crucial role to play in IWRM. Carrying out water surveys is often not profitable for private companies. Water authorities need the financial autonomy and the authority to manage water resources at the local level (decentralization). It is hard to find sustainable funding for such public duties, be it at national or at regional level.

Among other supports, Enabel facilitates the appropriation of digitalized tools by its partners for data's management, coupled with specific and continuous training that improves water resources management (including measurement, monitoring, upgrading early warning systems, management information system).



More information?

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Enabel always starts from the solutions used by the partner, adapting and improving them if necessary with standard solutions available on the market. If needed, the agency facilitates the development of specific solutions. The Belgian Agency also initiates appropriate spaces and tools of dialogue and exchange of information between the various users.

Making people pay for water requires efforts in terms of information, awareness-raising, commitment and empowerment. Strengthening communities to settle water conflicts in a peaceful manner and to use water in efficient ways is delivering promising results and pave the way for adaptation to climate change consequences.



Measurement station



Climate impact



Making people more resilient to the adverse effects of climate change

Morocco

Institutional and operational support to three river basin agencies (A3ABH)

- **Duration:** 2013-2018
- **Budget:** 8.2 million euro
Belgium: 5.5 M€ - Morocco: 2.7 M€

Enabel accompanied three Moroccan river basin agencies to manage water resources more efficiently as a prerequisite for the development of IWRM at decentralised level.

Some of the major outcomes of the project included improving the agencies' functioning, tools and governance; and specifying the tasks and responsibilities of the public actors involved with regard to the private sector (agriculture, industry), and organising tax collection.

Result: competent and well-equipped authorities on data's collection and analysis and on communication with mastering and sharing information through digitalised tools, the reinforcement of communication as a mean to fight Climate Change and the authorities' ownership as referenced actor for local and regional development. All have permitted to deliver better services to water users and citizens and empowered the agencies in self-sustaining management and growing.

Senegal

Improving drinking water and sanitation services in rural areas (PASEPAR)

- **Duration:** 2015-2019
- **Budget:** 8.85 million euro
Belgium: 6.5 M€ - Luxemburg: 2 M€ - Senegal: 0.350 M€

The project aimed to improve the services of water delivery and sanitation provided to the rural population of the regions of Diourbel, Fatick, Kafrine, Kaolack, Thiès and Louga.

The activities supporting the Senegalese water authorities included the provision of equipment and training; legal, organizational and political reforms (such as taxes on water extraction) in order to create a favourable environment for IWRM; raising awareness on the rational use of water.

Result: better structuration and competency reinforcement at the IWRM Directorate level, in particular with the strengthening/creation of digital tools for water resources monitoring at the national level, improving communication on the legal framework for water users, setting up pilot IWRM model at local level and improving the functionality of water policing (e.g. creation of water consumption records by volume).

Vietnam

Integrated water management and urban development

- **Duration:** 2013-2019
- **Budget:** 29.8 million euro
Belgium: 26 M€ - Vietnam: 3.8 M€

This project's objective was to make people in the provinces of Ninh Thuan, Binh Thuan and Ha Tinh more resilient to the adverse effects of climate change.

Provincial staff was trained on IWRM and urban development as possible answers to the effects of climate change, introducing hydrological models for river basin management and flood risk maps. Lessons from the project's achievements were used to promote scaling-up at the national level.

Result: a revised city master plan with a large set of pilot projects limiting flooding risks, such as digital early warning systems, retention lakes within urban parks, coordinated mechanisms to limit the effects of sea level rise...