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Water and Sustainable Development
From vision to action



Countries experiences in contributing to the implementation of the Sustainable Development Goals related to water

Session: Water Resources Management: Water scarcity on the rise

Session report, 16 January 2015

Introduction

Governments can play an important role in addressing water scarcity problems through the application of good water management strategies. This session presented and discussed on the challenges and tools applied by four countries to improve water security and efficiency through efficient water management.

The session started with an overview presentation by Tomas Sancho, president of the WCCE, who identified the main water scarcity driven problems (water deficit, famine, poverty, etc.), and the role of governments in addressing these problems through a range of possible actions (Institutional development, investment to value water, capacity building, effective regulatory frameworks in aspects like environmental flows, etc.). He introduced the four cases and raised the main discussion topics, mainly focused on the most important actions, barriers, lessons and keys for success and replication of the four experiences.

Tools for implementation

Several cases of tools for implementation were presented. They were introduced by a distinguished panel composed of Htun Lwin Oo, Ministry of Transport of Myanmar; Miguel Ángel Ródenas, President of the Segura Water Authority, Spain; Nelton Friedrich, Environment Coordination Director at Itaipu Binacional, Brazil; Jorge Hidalgo, Communications, participation and information coordinator at IMTA, Mexico.

Cases

The Republic of Myanmar, in spite of being water rich, faced numerous water risks (floods, rainfall variability) and didn't get an optimal advantage of their resources. The action taken was the creation of a **National Water Resources Committee (NWRC)** for coordination and cooperation among all different water institutions and relevant actors.

The Segura River Basin in Spain, a region suffering from extreme water scarcity and droughts, where the implementation of a **portfolio of management actions, from water transfers to technological efficiency measures** to reduce water loss and degradation and promote non alternative sources, are helping cope with water scarcity.

CONAGUA, Mexico, with severe water scarcity and financial problems, developed a **Financial Framework for Water (SFA)** through coordinated public action and public private partnerships to engage water users in the provision of the service.

Itaipu binational Brazil/Paraguay, where in some cases water may be undervalued and unevenly distributed, the government has initiated a sustainable water management policy with a mix of over 60 actions, empowering and engaging the participation of local stakeholders. It has also developed one of the biggest hydropower project applying a **sustainable management program: Cultivando Agua Boa.**



Presentation by Nelton Friedrich

Discussion on lessons learnt from implementation

The importance of coordination of ministries and building of internal consensus for participation and coordination

In Myanmar the new National Water Resource Committee works and is to be maintained. This committee is based on three pillars: an advisory group, a hydroinformatic centre and the secretariat. NWRC led water sector reform play an important role in present socio-economic and political reforms in Myanmar. Newly published National Water Policy is the foundation for democratization in the water sector. National Development policy, National Water Policy and socio-economic reform strongly focused on financing and capacity building factors. The experience obtained from the activities and efforts to achieve collaboration of ministries and building of internal consensus for participation and coordination was seen as process that requires patience.

Some key actions of the Committee so far were the creation of Myanmar National Water Policy, Myanmar National Water Framework Directive (abridge version) and standards on drinking water quality, allocation and pricing; and a strong capacity building program. Capacity Building programmes for 1. Youth, 2. Government professionals from various Ministries and 3. Interested NGO staff were organised through workshops, conferences, seminars, TOTs, further studies abroad. Grassroots and communities were capacitated by means of forums and public consultation meetings. School activities dominate in the WASH sector.

Two points were specially highlighted:

- The importance to create national and international technology centre networks to advance and share knowledge.
- Financing can work as a catalyser of sustainability, but it is important to set well the priorities, apply resources and revenue sharing, make guidelines to reduce risks for business and investors and be transparent.

A mix of Technology options creates resilience

The Segura Basin has to deal with a mix of severe water scarcity, a strong high-value agricultural sector and an ancient water culture, and its water management policy lies in three pillars: taking the basin as the management unit and applying a unique exploitation model that considers the whole resource regardless of the source (including desalination and reuse), long-term planning and an integrated approach. Technology has been used as a powerful tool to maximize efficiency and availability through actions like the Tajo-Segura transfer, multiple overlaying supply networks, water desalination and reuse networks, an Automatic Hydrologic Information System, etc. There were four points highlighted as lessons learnt:

- Advances are driven by a sharp water scarcity and a long tradition and experience.
- There is a key role on water infrastructures (water surgery) to reach a balance between supply and demand.
- Users are part of the system and need to be involved in the management and cost recovery of the systems to internalize awareness and responsibility.

Overcoming barriers for collective action requires 'social technology'

Within the case of Brazil it is important to consider the results, barriers, social perception and responses, and replicability of the project. The most positive results obtained from the project were the establishment of a new vision and culture of water with a territorial division into basins, interconnection of rural areas, remediation and monitoring of water quality and ecosystems using natural bioindicators, increased public awareness and engagement and better agriculture and food provision, especially to schools. The sharpest barriers were the inertia, passivity, poor intercommunication and pyramidal segmentation of public administration. Initial opposition from some landowners and the university was overcome after the first results proved the initiative win-win for all stakeholders.

The project is being replicated in other countries like Paraguay, Argentina and Dominican Republic through an open and disinterested cooperation.

A key lesson highlighted was that the most difficult and relevant achievement is the creation of collective action and values around water, through the use of social technologies to promote it. This needs to be facilitated and fostered by the government to make it happen.

Effective financing mechanisms require establishing appropriate regulations to avoid deviation of funds

In Mexico (CONAGUA) there has been different steps to develop a financial system to fund water infrastructures, by involving the users and stakeholders to cover the costs. The process started in the 60s with the creation of a payment for rights driven by situation of water scarcity. It later evolved into the creation of a Decree that established a fee for water right payments, with contributions from the local government and the private sector. This financial mechanism, together with the decentralization and distribution of the irrigation system ownership and costs, have supported all the investments required in water supply and irrigation infrastructure and promoted awareness and engagement of water users in the responsible use and maintenance of the system. The main constrain was the deviation of funds in some areas that prompted the government to create regulation entities and control systems. For the future the focus is on the creation of new social and environmental financial programs, increase security and risk management, enhance coordination and identify priorities.

Conclusions

Governments have a fundamental role to create resilience against water scarcity by applying the most appropriate mix of management actions. In order to do that, the first essential step is to acknowledge water as a priority, as well as the need to develop strategies, tools and capacities to achieve an efficient and fair water management.

The cases discussed in the session have highlighted four main aspects. First, water infrastructure and technologies can substantially help overcome the problems of water scarcity and uneven water distribution, but they need to be backed up by a strong financial system that engages all stakeholders. In line with this, the engagement of users in the management and provision of water services, as well as in the covering of the costs, is essential for the efficient use and sustainability of the system. In third place, the dissemination of a “culture of water” where people internalize the value and importance of water in their habits, economies and daily lives is the most difficult but valuable achievement. And finally, the creation of partnerships on water is a powerful tool to push all this forward.