

Water resource efficiency

Water scarcity is a reality for hundreds of millions of people and competition for water is rising, highlighting the need for improved water efficiency. Present inefficiencies are explained by inadequate or deteriorating infrastructure in water supply systems and/or lack of incentives to use water efficiently. Sida supports capacity development, data collection, policy changes and investments to contribute to more efficient and equitable allocation of water.

Policy makers need to balance increasing water demands from households, farmers, industry, and hydropower while protecting the integrity of ecosystems. Good information on current and future water availability and demand under different scenarios helps policymakers to develop frameworks and investments for efficient use. Sweden acknowledges the central role of water governance and a rights-based approach when improving both water demand management and supply side measures. As water resources often are transboundary, international cooperation on data collection, policy responses and monitoring of implementation is often important. This brief provides a general overview of Sida's approach to water resource efficiency and highlights selected examples of relevance at both global and bilateral level on the next page.

WATER DEMAND MANAGEMENT

Water demand management, a set of tools to *meet* and *control* water demand, is often applied to increase water resource efficiency. Sida supports water demand management activities through capacity building and promotion of various policy instruments, such as economic signals, regulations/quotas or information campaigns. Water metering and appropriate tariff systems help create an enabling framework for efficient water provision and use. Institutional capacity is needed to

design and implement policy responses that promote efficient and socially acceptable use of water.



Learning to use drip irrigation. Photo: ICRISAT

In the agricultural sector responses to policy instruments can range from application of more efficient irrigation technologies, such as drip irrigation, to improve maintenance of irrigation systems and reduce losses, as well as switching into less water-demanding crops.

Many transition countries with a history of subsidised water have reformed the tariff systems to allow cost recovery for service providers. A substantial reduction in demand has typically followed. Sweden has in several cases combined support to reform processes with loans or guarantees to improve water and energy efficiency and stimulate investments in water provision infrastructure or waste water treatment.

REDUCING WATER LOSSES

In many countries a large share of the water provided is lost either due to leakages, illegal connections or unpaid bills. This undermines the financial viability of service providers and creates disincentives to provide the services as planned. Investments and capacity to manage both water infrastructure and collection of bills are needed.

Examples of Swedish support related to water resource efficiency

TARIFF REFORMS AND INVESTMENTS

Large investments are needed in municipal water and wastewater treatment services in Eastern Europe, Central Asia and Caucasus. Opportunities to modernise energy and resource efficiency are generally substantial. Operation and maintenance typically require improvements in the tariff system to allow for cost recovery. Sweden continues to build on its long experience of combining support to institutional changes with investments in water infrastructure in countries like Georgia, Ukraine and Russia. In Bosnia Herzegovina, Sida co-finances a wastewater treatment plant to improve water quality. Investments are also made to reduce leakage in existing infrastructure. Most of Sida's water infrastructure support in Europe is undertaken in collaboration with the European Bank for Reconstruction and Development.



Agriculture in the Nile, Sudan. Photo: Petter Meirik/Sida

COOPERATION TOWARDS OPTIMAL USE

In the face of increasing competition for water from multiple users and climate variability and change, the 11 riparian countries of the Nile seek to accompany water development with a concerted and systematic approach to water resource management. Sweden provides various types of support to the basin countries, for instance through the Nile Basin Trust Fund, managed by the World Bank. Ensuring efficient and optimal use of the resource is one of the main objectives of the NBTF.

NBTF's introduction of IWRM is replacing the previously fragmented water management with a more integrated and regional approach based on cooperation. The regional approach is both financially and environmentally more efficient than unilateral projects. NBTF has e.g. supported plans for regional hydropower generation and trade, and the Rusumo Falls hydroelectric project: a multilateral

project resting on a foundation of cooperation, aiming at efficiency and socio-economic development. Another result of the NBTF is the development of a world class Decision Support System, helping stakeholders to analyse the potential impacts of investment alternatives and choosing the best win-win solutions.

COLLECTION AND ANALYSIS OF DATA ON KENYA'S WATER RESOURCES

Efficient management calls for good information of water resources and their uses. Kenya is reporting declining levels of water per capita and declining per capita storage. However, data on rainfall, evaporation, climate, groundwater and water quality is lacking in many parts of Kenya, which constrains proper planning of resource use. As part of a large sector wide support to the Kenyan water sector Sida supports the Water Resources Management Authority to develop a monitoring system to improve planning and facilitate follow up.

PROMOTING INTEGRATED MANAGEMENT OF THE WORLD'S WATER RESOURCES

Sida is co-funding the Global Water Partnership (GWP) and provides core support to its 2009-2013 strategy period. GWP's mission is to support the sustainable development and management of water resources at all levels. Promoting water as a key part of sustainable national development is one of GWP's strategic goals. This involves helping to ensure that IWRM and Water efficiency plans are not isolated processes but incorporated in national development processes and investment plans. GWP also facilitates multi-stakeholder negotiations and promotes knowledge tools for integrated and more efficient management of water. For instance, in eight developing countries where GWP is active the development and promotion of IWRM plans led to the inclusion of water financing strategies and institutional reforms.

Policy direction – water and sanitation

Sweden promotes efficient, fair and sustainable management of water and sanitation. Sida's interventions are guided by the Swedish Policy for environment and climate issues in Swedish development cooperation, 2010-2014, as well as by results strategies at country, regional and global levels.