Sida

Water and Sanitation

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Water vital for food and energy production

Today agriculture accounts for about 70% of the world's freshwater withdrawals and food demand is expected to more than double by 2050. But water is also needed to meet rising energy demands. Sida promotes integrated and rights based approaches for efficient food and energy systems and sustainable use of water across sectors.

While there is sufficient water and land to feed all, a billion people go hungry, and more than two billion people lack access to modern energy sources. In the years ahead the pressure on food and energy systems will grow due to population increase, improved living standards, changes in diets, and climate change. The implications on the water resources are large. Consequently, ensuring water, food and energy security will be a demanding challenge.

Sida promotes integrated water, food, and energy resource management with particular attention to gender aspects and people in poverty. This brief provides a general overview of Sida's engagement in the area of water management linked to energy and food security, and highlights selected examples relevant to the theme.

THE INTERCONNECTEDNESS

The interconnectedness between the water, food and energy systems has become more obvious in the light of rising energy and food prices and evidence of climate change.

Without a strategic approach, there is a significant risk that gains in one or two areas will result in unintended negative effects in another. For example, improving water storage capacity may enhance local food production by smoothing seasonal variations in water availability and allow for hydropower generation. However, negative impacts such as decrease in downstream fisheries or displacement of people may violate rights and outweigh the benefits experienced by vulnerable groups. Therefore, strategic thinking and cross-sectorial collaboration is a priority for Swedish support to agriculture, rural development, water and energy.

More effective farming in Kenya. Photo: Simon Maina/Sida

MORE OUTPUT PER DROP

Water and energy-saving agricultural practices and effective and equitable water management methods are needed throughout both rain fed and irrigated food production systems. A combination of approaches can be applied to increase the crop yields per unit of water. These include improved land management, such as no tillage, use of compost to increase water absorption, choice of seed materials, and application of nutrients and water control measures that minimise evaporation.

Water is an important input in many energy systems such as the cultivation of bio-fuels, hydropower production or cooling of coal plants. Already today, water scarcity is an obstacle to energy security in many water scarce regions.

Water and energy efficiency alone is not sufficient. Powerful interests may capture a disproportional share of the resources. Through increased participation, transparency, accountability and non-discrimination Sida promotes efficient and equitable use of resources.

Examples of Swedish support related to water and food security

MULTIPURPOSE RESERVOIRS INCREASE FOOD SECURITY IN BURKINA FASO

Food insecurity is a large problem in rural Burkina Faso where agriculture is the main livelihood. The region is dependent on rain fed agriculture and droughts are common. Small reservoirs reduce vulnerability by increasing the supply of water for domestic use, small scale irrigation, livestock and fisheries. Women, young men and girls are large beneficiaries of the programme as they constitute the bulk of the seasonal workers around the dams. In response to the government's National adaptation plan and the National integrated water resource management action plan, Sida supports the construction, maintenance and rehabilitation of small water reservoirs in some of the poorest regions in the country.

Reservoirs in Burkina Faso increase farmers' incomes. Photo: P. Casier/CGIAR.

RESEARCH FOR SUSTAINABLE AND PRO-POOR FOOD PRODUCTION

Joint research is needed to help increase agricultural productivity without degrading the supporting ecosystems. The Consultative Group on International Agricultural Research (CGIAR), conducts research to foster sustainable agricultural growth that benefits the poor. Sida provides core support to CGIAR research centres including the research program on Water, Land and Ecosystems managed by the International Water Management Institute (IWMI). The program focuses on learning how to intensify farming activities, expand agricultural areas and restore degraded land while using natural resources wisely and minimising harmful impacts on ecosystems. IWMI takes a river-basin and land-scape approach to provide solutions to widespread declines in soil fertility, land degradation including erosion and salinization, and the critical phenomenon of water scarcity.

STRONGER INSTITUTIONAL CAPACITY TO SUPPORT RURAL FARMERS IN BOLIVIA

Bolivian farmers in arid and semi-arid rural areas have been able to improve their food security through the introduction of water harvesting installations and small scale irrigation systems as part of a large program for agricultural development. The agricultural program PROAGRO II is a partnership between Sida, the German development cooperation and the Bolivian Government. The program addresses institutional capacity constraints at municipal level in assisting farmers with services. The program also involves outreach to individual farmers to increase their productivity and resilience to climate change. PROAGRO II is harmonised with the National plan for watershed management. The program has contributed to better coordination between public institutions.

ENERGY AND FOOD IN THE MEKONG

The hydropower potential of the Mekong River is huge and would enable improved access to low-carbon electricity for the whole region. However, the increased electricity supply could come at a great cost, if not food-, energy-, and water-security issues are dealt with in an integrated way. Recent research shows that if all the planned dams are constructed, a considerable share of the fish supply will be lost, with large impacts on protein intake in the region. Sweden provides support to the countries to offset negative impacts and manage trade-offs between different uses of the river, e.g. through support to the Mekong River Commission (MRC). The MRC seeks to improve the knowledge base to enable more well-informed decisions. MRC furthermore promotes transboundary cooperation to sustainably manage existing hydropower stations in the lower Mekong Basin.

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.

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