

Irrigation – Driving Agricultural Growth

Challenges

Irrigated agriculture plays a vital role in global food supply and economics. However, after almost a century of growth through large investments, mainly in infrastructure, irrigation faces a variety of problems. Low water use efficiency, declining public funding for investment and operation as well as maintenance are the most critical issues. At the same time, irrigation infrastructure is deteriorating continuously.



However, enhancing irrigation efficiency and stimulating irrigation productivity is a key element in spurring economic development, alleviating poverty, and enhancing food security.

GFA Intervention Options

Climate change has led to rising uncertainties and increased risks in rain-fed agriculture. Hence, access to water and irrigation becomes an ever more important determinant of land productivity, the stability of yields and the adaptation to the effects of climate change. GFA's approach to irrigation reflects the principles of integrated water resource management as well as participatory irrigation management (PIM).

A participatory approach in irrigation projects is the only guarantee of real and effective ownership of irrigation infrastructure by the beneficiaries. Farmers, different from public agents, realize the advantage of direct and manifold incentives when managing irrigation water in a productive and sustainable manner.

They offer a kind of on-site presence that even the most dedicated off-site agency cannot match. Farmers also know about their fellow irrigators' attitudes and practices. To GFA, the logic of the PIM approach is that both, governments and farmers, have separate comparative advantages to gain from, and distinct roles to play in sustainable irrigation development.

GFA's experience demonstrates that today's irrigation improvement is much determined by the right mix of scaling-up new irrigation technologies and applying integrated water resources management. Also, our experts emphasize promoting water user organizations and balancing a sustainable environment to agriculture in general and irrigation in particular.

Setting the right water tariffs is another crucial issue in Developing sustainable irrigation. GFA has carried out a wide range of water tariff studies in major and in minor irrigation schemes. We are convinced that water tariffs have to cover all incurring costs: from resource mobilization via scheme operation to infrastructure maintenance. This is a key element to maintain in a sustainable manner the economic potential that irrigation is expected to provide.



GFA at Work

Tunesia, Irrigation Modernization KfW, 2008 – 2009

The Tunisian Mornag area is well known for its intensive irrigation. However, groundwater resources are heavily over exploited. GFA was contracted to develop a mitigation



strategy in order to protect and maintain both the groundwater resources and the productivity of irrigated agriculture. We developed a model of integrated water resources management which uses surface water, groundwater and – as a new component – treated waste water to replenish the aquifer through controlled infiltration.

Contract Value: € 400,000

Bolivia, Irrigation Sector Planning KfW, 2004 – 2010

The SIRIC program supported the planning of the irrigation sector at the national and the municipal level. The GFA team developed and adopted guidelines, criteria and procedures for the elaboration, selection and implementation of medium-sized irrigation projects. The experts also assisted in formulating and implementing a policy for the irrigation sector which fosters the creation of sustainable and self-administered irrigation systems. Three medium-sized irrigation projects and five feasibility studies were prepared and implemented in close collaboration with prospective beneficiaries.

Contract Value: € 2,323,000

Kosovo, River Basin Management European Union, 2008 – 2010

The institutional support to the Ministry of Environment and Spatial Planning and River Basin Authorities in Kosovo comprised, inter alia, water monitoring programs and integrated databases for managing and controlling water resources in the Drini River Basin. Ultimately, public health and economic development of Kosovo should meet European Union standards. GFA experts used appropriate modeling and network programming, a flood management plan, training as well as participatory approaches to assist this process.

Contract Value: € 1,900,500

Morocco, Minor Irrigation KfW, 2009 – 2013

The focus of this program is rehabilitating and modernizing small and medium irrigation schemes in the region of Souss-Massa which covers a total area of approximately 7.200 ha. GFA experts carry out rehabilitation and modernization activities which target the enhancement of water use efficiency and an increase of agricultural productivity. The program also aims at handing over operation and maintenance to water user groups. GFA and its consortium partners accompany the public irrigation agency all along the planning, implementation and monitoring process.

Contract Value: € 2,180,000



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