



BOLIVIA

IRRIGATION PROGRAMME SIRIC



Client	Ministerio de Asuntos Campesinos y Agropecuarios
Financing	Kreditanstalt für Wiederaufbau (KfW)
Duration of Services	2004 - 2012
Cost of Implementation	12.5 Mio. Euro

Scope of Services

- Set-up and introduction of design procedures and criteria for local consultants
- Elaboration of pre-inversion and identification studies
- Revision of engineering studies for final design
- Design and supervision of geotechnical investigations
- Preparation of hydrological study as model for local consultants
- Development of ToR for consulting services
- Training of local consultants

Brief Project Description

In numerous rural areas of Bolivia only the agricultural sector offers potentials for considerable economic development. For the majority of population agriculture means the most important source of income. However, depending on agriculture often implies low incomes which in addition high fluctuation, which means uncertainty. In the Andine and Chacco regions scarceness of water are the limiting factors for agricultural production. In these areas the wet season lasts only 4 to 5 months with significant variation of annual rainfalls. During the rest of the year most rivers show only little base flow or even fall dry.

Under these natural conditions the rural population developed irrigation systems with their own means and sources over centuries. Most of these systems are designed to directly divert the water from the rivers to the fields and not to store it during the rainy months for the following dry period. With the uncontrolled extension of these simple systems dry season yields of many rivers dramatically shrunk, in particular on their lower reaches.

In Bolivia the irrigation sector is characterised by the discrepancy in capacity of state and private actors. On the institutional level insufficient legal regulations/laws and lack of competence of the Agricultural Ministry or of the regional Governments often hamper the successful implementation of irrigation projects which largely depend on foreign money. On the other hand farmers have extensive traditional knowledge about irrigation and they have their respective community based, irrigation focused self-governance bodies. Further on national consulting firms and NGOs could also extend their sector relevant know-how.

The present KfW-financed Inter-Communal Irrigation Programme (SIRIC) forms part of the Bolivian national irrigation programme. It follows an innovative implementation concept for the irrigation sector for average sized perimeters. The programme's overall objective is to enable the state and private irrigation sector to execute irrigation projects under their own responsibility to finally allow for increased income from agricultural activities.

The SIRIC target groups are state and private actors, at the level of individual projects the programme focuses on the rural population and marginal peasants who live on the edge poverty.

Self-organisation of farmers and of civil society are strengthened by the participatory approach to the individual projects and by the support of the respective water user associations.

The environmental impacts of the projects are expected to be minor. In general existing schemes will be improved by intensifying the land use moderately rather than striving towards drastic changes of the traditional set-up.

SIRIC is intended as open programme that starts with the Regions / Prefectures of Chuquisaca, Cochabamba and Santa Cruz. The execution of the Programme shall respect a clear separation of tasks among Ministry of Agriculture, Regional States and Municipalities to strengthen the principle of subsidiarity, for operational tasks the private sector and NGOs shall be contracted to ensure a strict distinction of control and supervision on the one hand and execution or construction on the other.

During a first Phase of SIRIC this Concept has been developed in 2001, the present second Phase runs from 2004 to 2009, it is set up to implement the technical, socio-economic and training measures that are required for new and/or extended irrigation schemes. According to the innovative concept the bulk of expertise is to be contributed by national consulting companies, this holds true for the final design as well as for the following supervision of construction and implementation.

The main tasks of the international consultant is to develop terms of reference for national consultants, and to steer, control and supervise their work so that sound and comprehensive project planning and implementation can be ensured. The tasks of CES include the control and supervision of engineering designs for hydraulic infrastructure, incl. dams, appurtenant structures and irrigations canals, hydrologic and water resources expertise as well as the supervision of geotechnical works.

The Mairana irrigation scheme with its La Tuna Dam and its downstream water distribution system is one of three projects for which a final design has been completed in the past or is presently under way. The second one is Villa Serano which is in the design phase and the 3rd project will be the San Pedro irrigation scheme, its design phase starts early in 2006.