

Promoting the reuse of recycled wastewater for agricultural irrigation in Bolivia

Triangular Cooperation Mexico – Bolivia – Germany

Context

The Andean region is particularly affected by the consequences of climate change. One consequence is a growing water shortage, which is expected to have serious repercussions on soil fertility and the quality of life of the people living in the region. The water shortage is already leading to the use of insufficiently treated or even untreated wastewater in agriculture, promoting the spread of diseases, particularly diarrhoea, cholera and parasite infestations.

In 2004, Mexico began to reform its domestic water sector. Germany and Bolivia followed Mexico's progress in modernising its water sector with interest. Against this backdrop, Bolivia asked Mexico and Germany for technical assistance in improving its management and recycling of wastewater. A triangular cooperation initiative between the three countries was set up in 2011.

Project

The triangular cooperation between Mexico, Bolivia and Germany promotes the exchange and transfer of knowledge between the experts of the participating countries, focusing on issues such as integrated water resource management, levying mechanisms, monitoring of water quality, tariffs in the water sector and mechanisation of irrigation systems.

The project has several objectives. On the one hand, it seeks to develop and implement a sustainable, cross-sectoral strategy for modernising the water sector. For this reason, the project

supports the Bolivian Government in drafting laws and implementing regulations, and develops the institutional capacities of the regulatory authorities in the water sector. On the other hand, the project aims to help improve Bolivian wastewater treatment plants.

Owing to the great success of the measures implemented from 2011 to 2013 within the Fund, the partners designed a follow-on project that focuses on the following components:

- Further development of a normative set of regulations for the planning and the implementation of projects for the reuse of recycled wastewater for agricultural irrigation.
- Extension of training and qualification courses for staff of national and municipal sectoral agencies, the technical staff of wastewater treatment plants and organisations of users of agricultural irrigation. Development of qualification and training modules (diplomado) in cooperation with Mexican and Bolivian higher education institutions and institutes of technology.
- Development of two pilot projects for the construction of wastewater treatment plants with subsequent reuse of the recycled water.

Impact

The partners of the triangular cooperation project are currently developing and implementing sustainable cross-sectoral and participatory strategies to improve wastewater treatment in Bolivia. This will help to improve food security and contain the





spread of diseases caused by water contamination. More than 220 experts and staff of agencies have been trained in workshops for sustainable water management.

Intensive cooperation and regular sharing of experience have created a dynamic knowledge platform that is benefiting all sides. Six municipalities in Bolivia have been supported by CONAGUA in improving their local wastewater structures. In Comarapa municipality, the Mexican partners helped to repair and improve the local

wastewater treatment plant. In Sacaba municipality, the complex decision-making process for the construction of a sewage plant was successfully supported by the partners.

The envisaged pilot projects will connect approximately 75,000 inhabitants of the affected municipalities to wastewater treatment facilities for the first time in their lives. The reusable water of adequate quality will be provided to a great number of farmers for the irrigation of their farmlands.

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