

# Capacity building for sustainable management of water and energy resources in the wine sector

Triangular cooperation Argentina – Bolivia – Germany

## Context

The Province of Tarija in Bolivia is an area of high agricultural productivity and therefore of great importance for the economic development of the country due to its particular geographic and climatic conditions. In this context, the wine sector represents a vital economic activity in the region. At the same time, the Province of Tarija is known for its inefficient water management and it is one of the provinces most vulnerable to the effects of climate change in the country. According to climate projections, Tarija will experience considerable temperature fluctuations and desertification rates, which will impact negatively on its agriculture. These factors make efficient water management an essential objective for the Province in the coming years.

On the other hand, the Province of Mendoza in Argentina has a high expertise in irrigation and efficient use of water resources in agriculture and is also recognised internationally for its viticulture. In addition, in recent years the private wine sector of the geographical area, including parts of central Chile, has successfully implemented a sustainable wine production.

## Project

The objective of the triangular cooperation (TrC) between Argentina, Bolivia and Germany is to improve water and energy management in the wine sector of Tarija, as well as to optimise the

availability of these resources in the Province. Introducing new irrigation techniques will improve the wine production of small local winegrowers. This will increase their income and thereby contribute to enhance their quality of life.

The General Department of Irrigation (DGI) of Mendoza has more than 120 years of experience in water management in the wine industry. Within the framework of this TrC, the DGI advises the Provincial Government of Tarija in the elaboration of a technical strategy for efficient water management in the wine sector. In addition, the DGI offers trainings to small local winegrowers on efficient use of water and its distribution for agricultural use.

The private sector is also involved in this TrC: The winery Santa Rita Estates is one of the leading companies regarding efficient water resource management and sustainable wine production in the border region between Argentina and Chile. In order to expand the sustainable competences, Santa Rita Estates advises wineries of the National Wine Industry Association (ANIV) in the elaboration of technical guidances and provides trainings on efficient water use in wineries and vineyards to Bolivian winemakers.

On the German side, the Federal Ministry for Economic Cooperation and Development (BMZ) is supporting the TrC. Germany is internationally recognised for its efficient management of water and energy resources as well as for the development of related technologies. In this context, in 2016, representatives of the project's partner institutions visited German wineries and





exchanged experiences with developers of latest technologies with low environmental impacts, in order to optimise the use of water and energy resources in their own wineries.

## Results and Impacts

Up to this date, more than 100 winegrowers have been trained in the efficient use of water resources. Furthermore, technicians of the Provincial Government of Tarija participated in trainings on institutional water resource management. Likewise, 20 small and large winemakers were provided with technical know-how for an optimised water distribution and administration.

On an institutional development level, the TrC contributed to the establishment of the Office for Integral Water Management

(SEDEGIA) in Tarija, based on the Argentine example of the DGI. This office will be in charge of the Province's water resource administration. With the support of the DGI, a real time-telemetry application was set up to facilitate the measurement of water flows at the dam San Jacinto and to give users a better control. This application will also be managed by SEDEGIA.

Beyond that, based on the knowledge imparted by the Argentine partners, a viticulture strategy plan 2040 for an efficient water management will be elaborated for the stakeholders of the Bolivian wine sector (public and private institutions as well as the civil society). It is also expected that ANIV's wineries will have a sustainability protocol to incorporate social and environmental aspects in their institutional strategies before the triangular project concludes.

Programme	Regional Fund for Triangular Cooperation in Latin America and the Caribbean
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Partners	<p><b>ARGENTINA</b></p> <ul style="list-style-type: none"> <li>• General Irrigation Department of Mendoza (DGI)</li> <li>• Argentine Fund for South-South and Triangular Cooperation (FO.AR) of the Argentine Ministry of Foreign Affairs</li> <li>• Santa Rita Estates</li> </ul> <p><b>BOLIVIA</b></p> <ul style="list-style-type: none"> <li>• National Wine Industry Association (ANIV)</li> <li>• Provincial Government of Tarija (GAD-Tarija)</li> <li>• Bolivian Ministry of Environment and Water (MMAyA)</li> <li>• Vice Ministry of Public Investment and External Financing (VIPFE) of the Bolivian Ministry of Planning</li> </ul> <p><b>GERMANY</b></p> <ul style="list-style-type: none"> <li>• Federal Ministry for Economic Cooperation and Development (BMZ)</li> <li>• Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH</li> </ul>
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