

Environmentally Sustainable Management of the Tungurahua Watersheds in Ecuador

Promoting a sustainable and productive agriculture

At a Glance

Project name	Environmentally sustainable management of the Tungurahua watersheds (Programa Sustentable de las Aguas y Cuencas de Tungurahua – PACT II)
Commissioned by	German Federal Ministry for Economic Cooperation and Development (BMZ)
Implemented by	KfW Development Bank
Country/Region	Tungurahua Province
Lead executing agency	Honorable Gobierno Provincial de Tungurahua (HGPT)
Implementation period	2020–2026
Funding	EUR 19 million (loan)

In addition to the oil industry, export-oriented agriculture is the second central pillar of the Ecuadorian economy. Around one-third of Ecuador's land area is used for agriculture, much of it with irrigation. Approximately one-quarter of Ecuadorians depend on agriculture. However, agricultural production remains low and growing water scarcity, exacerbated by climate change, pose major challenges to the development of the local population.

Traditionally, many farmers in Ecuador use irrigation. They have been managing this vital resource for centuries in well-established irrigation organizations. By upgrading the systems to modern irrigation technologies, agricultural production can be increased considerably. As a result, the profitability of the farms and the incomes of farming families rise and the resistance to the impacts of climate change too.

Programme Objective and Beneficiaries

The main objective of this programme is to improve the living conditions of the rural population in the province of Tungurahua / Ecuador and to conserve the watersheds. The beneficiaries are the communities of four irrigation systems in the province of Tungurahua.

Main Component

Component 1: Technological modernization and upgrading of collective and parcel irrigation systems on a minimum area of 2,300ha. The upgrade activities aim to introduce innovations – between others – trip irrigation. The activities involve the entire process from training, final design, commissioning, implementation (infrastructure work) and training.

Component 2: Measures that contribute to the sustainable management of watersheds.



Main storage basin. Source: KfW / Michael Heiland

After a very successful implementation of the first phase, phase II of PACT focusses on the modernization of 2,300 hectares; a project that will benefit more than 2,000 farms in the province and improve the living conditions of more than 4,257 families. This will be achieved by increasing water use efficiency (less water per hectare), higher crop yields, optimization of production and productivity, improved pasture quality, and thus greater resistance to the impacts of climate change.



Irrigated area. Source: KfW / Michael Heiland

Measures that contribute to sustainable watershed management focus on developing work that guarantees water quality and

quantity in a changing future within the area of influence of the PACT Programme. These are the catchment areas of the channels or systems: Ambato-Huachi-Pelileo, Mocha-Huachi, Leito, and Mocha-Quero-Pelileo.



Irrigation of strawberries in Esperanza Montalvo. Source: KfW / Michael Heiland

In addition, the aim is to implement 15 agrometeorological stations with computerized data processing to better control the effects of frost and to diagnose, based on appropriate algorithms, the presence or influence of possible pests and diseases.

Publisher

KfW Group

KfW Development Bank

Biodiversity and Natural Resources Latin America
and the Caribbean

Palmengartenstrasse 5–9

60325 Frankfurt / Main, Germany

Andreas.weitzel@kfw.de

www.kfw-entwicklungsbank.de