



Food security despite climate change: farming families in the Atitlán highlands produce sustainably and protect their forests

Project background

The majority of the indigenous rural population in the department of Sololá depend on subsistence farming. 70% of these farming families are poor. The soils of their small fields produce little yield, because they overuse their natural resources. The erosion washes valuable topsoil from the steep slopes into the streams and further into Lake Atitlán, the largest freshwater reserve in Central America.

The mountain cloud forests in the department of Sololá are not only important for the livelihood of the population and for the regional water balance, they are also of national ecological importance for numerous species. However, many farmers are burning woodland to gain new farmland.

Our solution approach

With our project, we are helping 2,500 small farming families to make their land use more resource-efficient while still improving their crop yields. They learn agroecological farming methods as well as beekeeping and mushroom cultivation that helps them to generate income. They also learn how to use and maintain the forests sustainably. We raise awareness among various groups of the population about resource conservation and support the authorities in implementing organised land-use planning.

Project goals

2,500 farming families have become more resilient and are empowered to manage their natural resources sustainably.

- The population's ability to protect water resources and the environment has been further strengthened.
- The village communities use their forests more sustainably.
- Farming families use agroecological practices and disseminate them.
- Farming families generate additional income through improvements in beekeeping and mushroom cultivation.

Project activities

Environmental education

In the previous project (2021-2023), we collected basic information on geology, soils, forests and water, installed rain gauges and trained farmers as local weather observers. In this project, the project team is making this information available to farmers in quarterly climate bulletins together with seasonal forecasts from the national weather service. In addition, the project team is working with the farmers to document long-term changes in the vegetation behaviour of coffee and maize and in the biodiversity of the forest vegetation.

Furthermore local communities are supported in the organization of committees and provided

Project location

Water shed of the Rio Quiscab and the Zunil-Atitlán-Balam-Juyú volcanic chain. These cover almost the entire department of Sololá in the Atitlán highlands of Guatemala.

Topics

Sustainable water and agriculture, protection of natural resources, empowerment

Vivamos Mejor Programme

"Food & Water"

Duration

2024–2027

Project costs

CHF 1,061,170

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Regional approach

The project is part of our Central America regional program, in which we implement projects in the same thematic area in a context-appropriate manner, together with partners in Honduras, Guatemala and Nicaragua. We bring together local experiences and share them with our partners and applied research institutes in regional meetings. Through the shared experiences, we learn from each other to continuously improve our projects at a local level. In addition, we are working with all partners and with the technical support of the CATIE research institute* to establish a climate monitoring system that also documents the local impacts of climate change on agriculture, ecosystems and biodiversity in the different project regions.

* Renowned research institute Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), Costa Rica

Our mission

With our “Food and Water” programme, we provide the rural population with the necessary expertise and empowerment for the future. Thanks to modern, sustainable agriculture and water resource management, they can grow their products in harmony with their natural resources and are able to feed themselves as well as their environment.

Our vision

Our vision is for rural areas to provide future generations with a sustainable environment thanks to future-proof development.

We base our actions on the 2030 Agenda. With this project we are making an active contribution to the following SDGs:



Ending hunger, achieving food security and improved nutrition, as well as promoting sustainable agriculture



Taking immediate action to combat climate change and its impacts



Protecting, restoring and promoting sustainable use of land ecosystems, managing forests sustainably, combating desertification, halting and reversing soil degradation and putting an end to biodiversity loss

with educational courses and workshops about nature protection. A special focus of the project lies also on environmental education in primary and preschools as well as through radio and TV programmes for the broader population.

Protection of the forests and reforestation

Together with the municipalities and representatives of the nature conservation authorities, the project team draws up an implementable conservation and management plan for the four communally protected mountain cloud forests covering an area of 1,500 hectares. It also trains 100 people who are part of the municipal forest protection brigades in fighting and preventing forest fires. The project also equips one fire brigade with required material and supports in creating or maintaining fire protection channels. Farmers are provided with further training in reforestation and forest management in order for them to reforest a total of 250 deforested areas with seedlings of native tree species. 100 families are given material and instructions how to build wood-saving stoves, which reduce their firewood consumption by 50% and improve their health as the smoke is let to the outside.

Agroecological practices and new income

Local field advisors support farming families with expert advice in managing their fields more sustainably, preventing soil fatigue and producing greater and more diverse crops. In addition to the practical training, the farming families also learn important facts about agroecology, nutrition, food security and climate change. The project team organises the agricultural advice for 600 farming families according to the “from farmer to farmer” method directly in the fields. Furthermore families are trained in beekeeping and mushroom cultivation in order to offer them additional income prospects.

Impressions from previous project



A local weather observer reads the rain gauge.



Fruit trees and diversification on maize fields are important elements of agroecological production.

Target group

Directly: 22,300 people: 2,500 farming families à 5 people; in addition 1,800 children, estimated 8,000 radio listeners/TV viewers; indirectly: 25,000 additional residents of the project area

Costs

The total costs amount to CHF 1,061,170. We are counting on various donors such as companies, cantons, foundations, municipalities and parishes for funding. The project is co-financed by the Swiss Agency for Development and Cooperation SDC, Federal Department of Foreign Affairs FDFA, as part of the programme contribution.

Local contributions

The total costs do not include own contributions and local contributions totalling CHF 167,930, which means that the beneficiaries are contributing local material and labour for the construction of the efficient stoves and reforestation. The authorities pay the wages of their employees. The project is supported by the GNF - Global Nature Fund (D) with the equivalent of CHF 444,200 in co-financing. This amount is not included in the total project costs indicated.

Local partner

Our project partner is the legally independent, grassroots Guatemalan NGO “Asociación Vivamos Mejor Guatemala” (AVMG). AVMG has 30 years of experience and proven expertise in strengthening grassroots organisations with a special focus on promoting women, education projects, water management, land use and food security. AVMG has an excellent network in the department of Sololá and participates in thematic expert groups, works constructively with various government agencies and is involved in the local and departmental development councils.



Forest “Ranger” in the village community of Pacoxom



Beekeeping generates income and promotes biodiversity.