Green Economy and Sustainable Private Sector Development in the Kyrgyz Republic

The challenge

Rural areas of Kyrgyzstan face challenges like limited employment and income opportunities, and loss of soil productivity caused by poor management of natural resources that leads to soil degradation and additional CO_{2eq} emissions. Coal remains a major source of energy, and its increasing consumption and inefficient use contribute significantly to the carbon footprint. At the same time, value chains with strong income and market potential exist that, if developed, can reduce measurable negative environmental impact at practically no additional cost.

Our approach

With funding of the European Union, the Swiss Agency for Development and Cooperation (SDC), and the German Federal Ministry of Economic Cooperation and Development (BMZ), we support Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Ministry of Economy and Commerce of Kyrgyzstan in advancing the transition towards a Green Economy by promoting sustainable value chain development, implemented in close collaboration with capable local partners to ensure long-term impact and scalability. The main focus has been on value chains with strong market potential, high return on investments for farmers, and opportunities to increase water and soil productivity (i.e. efficient use of natural resources). We have used a simplified 'value for money' approach to select project intervention areas.

The goal

Originally limited to the promotion of agricultural export of Kyrgyzstan, the scope of the project and its objectives have significantly expanded since 2020, focusing more extensively on establishing successful examples for the development towards a Green Economy within selected value chains.

Project name	Value chain and market system development in fruits and vegetables sector
Project region	Kyrgyz Republic
Financed by	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
Implemented by	GOPA AFC
Duration	Phase I: 02/2016 - 03/2021 Phase II: 04/2021 - 04/2023 Phase III: 05/2023 - 08/2025

Key highlights

- ✓ Continuous upgrade of the **early vegetables** value chain by improving product quality and meeting market demands, enabling farmers to boost sweet pepper exports from 0 to 1,000 tonnes annually, earn an additional €500,000 per year, and reduce carbon footprint of the product by 60%.
- ✓ Advancing **conservation agriculture** by adapting production technology on drought-prone, rain-fed lands to climate change, transitioning over 3,000 hectares of such lands to regenerative practices that have reduced yield losses by 100% and increased soil organic matter. The complex approach included simultaneous development of improved quality of mechanization services, access to drought-tolerant local seeds and balanced plant nutrition, and improved crop management.
- ✓ Continuous support to the **dried plums** value chain by facilitating organic certification of primary producers and processers, certifying processing according to ISO 22000, opening new markets in Europe, and achieving regular exports of 50-100 tonnes of dried plums annually.
- ✓ Continuous promotion of commercial, impact-driven, and **sustainable agricultural advisory systems** for selected value chains (including early vegetables, cereals, rice, fruits and berries), development of **revolving funds** that strengthen non-commercial actors through result-oriented financing aimed at increasing income of clients and reducing CO_{2eq} emissions (green finance) - objectives beyond full repayment rates and financial sustainability.
- ✓ Fostering development of the **heat pump** value chain with technology and impact assessment on the grid and emissions, development of finance and business models, and facilitation of access to funding for producers and consumers.
- ✓ Continuous promotion of **food safety and quality standards** in project-supported value chains, including a widescale introduction of international certification standards, e.g. HACCP, ISO 22000, Global GAP.

- ✓ Based on the project experience and in collaboration with a group of local scientists, a **Green Economy Curricula** for higher education institutions developed and later adapted by 15 key state universities of Kyrgyzstan, with estimated exposure to students of over 1,000 people annually.

Voices from the field

"GOPA AFC experts have been reliable partners over the past 9 years. They have demonstrated excellent diligence and dedication, and always supported us on any unexpected issues occurring."

Saidrakhim Kyrgyzbaev, Deputy Director, "Burgondu" Commercial Agricultural Cooperative

"GOPA AFC's expert support has laid the right foundation for the sustainable development of our organization. They have taught us how to develop and offer farmers the most viable solutions, and how to adapt to changing situations through constant self-learning. It is because of this support that TES-Centre is rightly regarded as one of the foremost organizations in its field."

Baktygul Satykulova, Director, "TES-Centre" Agricultural Advisory and Training Extension Service

Examples of our success

In the past 5 years of the project:

- ✓ **2,500** project-supported farmers have increased their annual income by **30%** by applying verified or certified green practices;
- ✓ **3,000** new permanent and seasonal jobs created in selected value chains;
- ✓ over **400** MSMEs gained access to new international, regional or local markets;
- ✓ **3,000 tonnes** of CO_{2eq} annual sequestration on rain-fed lands achieved, and **1,000 tonnes** of annual CO_{2eq} emissions avoided through efficiency increase of greenhouses for seedlings production;
- ✓ **1,200** vulnerable households adapted project-developed business models and strategies to increase income and decrease climate-related agricultural risks;
- ✓ intensive cooperation and training on organizational development and Green Economy for **three** main agricultural advisory services in the country provided, enabling them to promote local producers and their apex organizations efficiently;
- ✓ over **€500,000** in green investments mobilized by project target groups;
- ✓ over **250** lecturers of public colleges and universities of Kyrgyzstan trained on the basics of Green Economy, carbon footprint, energy and resource efficiency, and green agriculture, that has enabled them to teach courses on respective topics for thousands of Bachelor-level students.

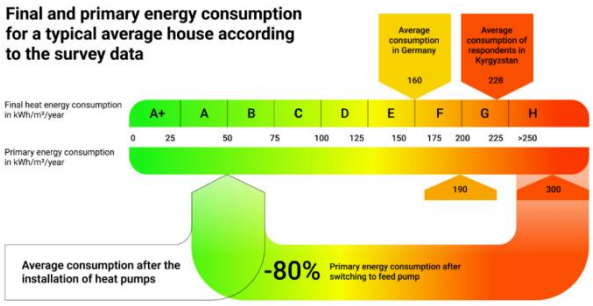
Impact story

Case study: Empowering Local Innovation for Green Transition.

Bishkek, 2023

Farkhad Iarullin, 36, a local innovator from Bishkek, who established a small-scale production of the first locally-produced geothermal heat pumps (HPs) in Kyrgyzstan, lacked the capital and investment needed to optimize production processes and expand operations, while low awareness among the general public about the advantages of his technology hindered the marketing.

The project intervened at the critical stage, provided evidence to show the high environmental relevance and energy efficiency of the product. To demonstrate market viability, the project facilitated demonstrations and contributed to essential seed capital for R&D and established links to impact investors.



Further analysis implemented together with partner university students demonstrated that even a large-scale conversation to HPs does not increase electricity consumption in Kyrgyzstan, hence poses no risks for the grid. With over 90% of the country's electricity generated from renewable hydropower, the environmental impact of HPs is expected to be very high. The heat production changes from coal combustion with high carbon emissions and huge impact on smog to HPs powered by renewable energy can lead to a system that causes almost no emissions any longer.

The project supported strategic planning and the development of a green financing mechanism that includes the generation of carbon credits. That system ensures competitiveness of HPs with coal hence an inclusive access to the technology and a high potential for market penetration due to affordable prices for all client groups.