Implementation and development of agroforestry in Kyrgyzstan

Efficient Land Use through Agroforestry: Sustainable Solutions for Farmers in the Face of Climate Change

March 1, 2025

KYRGYZ REPUBLIC

Kyrgyzstan (Kyrgyz Republic) is located in the northeast of Central Asia and is landlocked.

Kyrgyzstan is a mountainous country, about 94 percent of Kyrgyzstan is mountains, about half of the area is above 1500 m above sea level.

More than 60% of the population lives in rural areas.

The main activity of the rural population is agriculture and animal husbandry.

CHALLENGES

SOLUTION TO THE CHALLENGE:
KAFLU encourages its members and other stakeholders to implement agroforestry practices.

- Most of the agricultural land is subject to degradation.
- As the population grows every year, the consumer attitude towards land, pastures, forests and other natural resources also grows.
- The Kyrgyz Republic is a low-forest area (5.6% of the total area of the country), but more than one million people live on or near the territory of the Forest Fund and use forest resources.
- Non-normalized load on pastures is the main reason for the
- resources.
- Climate change.

Basic methods of agroforestry:

AGROFORESTRY

Alley method

Silvopastures
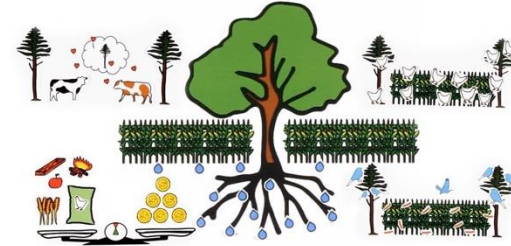
Afforestation for non-timber forest products

Coastal (buffer) strips

Windbreak strips

| Agroforestry | what is this? |

<u>Agroforestry</u> is a system of farming in a given area that combines the cultivation of crops and/or livestock with the growing of trees and shrubs.

To implement and develop agroforestry in the Kyrgyz Republic, a study was conducted using SWOT analysis

Strengthens
Economic: diversification and increase in farmers' incomes, increase in farmland due to the development of unproductive land, increase in productivity;
Environmental: mitigating climate change, reducing air pollution, preserving biodiversity, preventing land erosion, reducing natural disaster risks, strengthening river banks.
Social: creating additional jobs, reducing poverty, and others.

Weaknesses
Gaps in legislation, weak implementation of state policies;
Lack of cross-sectoral cooperation and coordination, including weak links with science;
Lack of information and knowledge, weakness of consulting services;
Shallow contour of land, lack of irrigation networks, lack of high-quality planting material;

Opportunities
Economic: Availability of land and farmers ' interest, attraction of investments, development of nursery and seed farms;
Awareness-raising: availability of promising research for the development of agroforestry, exchange of experience, development of consulting services;

Threats
Land degradation (ongoing processes);
Increase in natural disasters;
Biodiversity loss;
Lack of financial resources for the state and farmers;

The main areas of work of KAFLU on the implementation and development of agroforestry

- **Promotes awareness** – informs farmers and stakeholders about the benefits of agroforestry through trainings, seminars, publications and videos;
- **Organizes training and consultations** – conducts educational programs, master classes and demonstration projects;
- **Provides technical support** – helps in the selection of trees, crop integration and resource management, and provides vulnerable farmers with fruit tree seedlings, agricultural seeds and drip irrigation materials, etc. within the framework of grant programs;
- **Cooperates with the state** – participates in the development of strategies and policies to support agroforestry;
- **Develops partnerships** – cooperates with local communities, NGOs, scientific organizations and international organizations to scale up agroforestry initiatives.

The KAFLU's experience in implementation

Round tables were held with the participation of all stakeholders

__As a result :__

1. *Recommendations for the introduction and development of agroforestry in the Kyrgyz Republic were developed;*

2. *Recommendations were sent to the relevant government agencies,*

3. *A letter of cooperation has been received from Ministry of Agriculture and Forestry on the implementation and development of agroforestry in the Kyrgyz Republic*

4. *The Project CONCEPT for the development of agroforestry in the Kyrgyz Republic: the path to food security and carbon neutrality has been developed (2025 – 2050)*

The KAFLU's experience in implementation

With the support of the UNECE, the Association carried out work on the restoration of floodplain forests in pilot sites along the Chu River

Combining fast-growing Paulownia trees with grain crops in Arashan village

The KAFLU's experience in implementation

More than 500 farmers trained in the implementation of agroforestry for efficient land use and diversification of income sources

Farmers use agroforestry practices for three reasons:
1. They want to increase the variety of products they grow;
2. They want to increase their economic stability;
3. To optimize the management of the rangelands under their care.

The KAFLU's experience in implementation

Assistance was provided in the form of seedlings of fruit trees and seeds of agricultural crops, materials for the installation of a drip irrigation system and fencing for the creation of an agroforestry system (150 poor households)

Results: In 2023–2024, 150 low-income households received assistance in the form of seedlings (apricot, apple, almond, pear, walnut), berry crops (strawberries, raspberries) and agricultural seeds (potatoes, carrots). According to the survey results, they have already harvested strawberries, raspberries, potatoes and carrots, which allowed them to provide themselves with a year's supply of these products, and the seedlings will begin to bear fruit in 3–5 years.

Processing and marketing of agroforestry products

The Ishker KG cooperative unites 18 members who lease state forest lands and use agroforestry method of afforestation for non-timber forest products. Within the framework of the AFA project, a business plan for processing and marketing forest products (pistachio, walnut, rose hips, almonds) collected by the cooperative team has been developed.

The cooperative was also provided with material and financial assistance for processing and marketing forest products according to the business plan. Thanks to this, they increased their income by 30-40%, processing and exporting 3,780 kg of walnuts to the USA, as well as selling other products on the local market (10%).

Lessons learned in the implementation and development of agroforestry in Kyrgyzstan

1. **Need for an integrated approach** – successful implementation of agroforestry requires a combination of technical, educational and financial support, as well as the active involvement of local communities.

2. **Education and awareness raising** – an important step is to conduct training programs for farmers, which promotes the correct application of agroforestry methods and increases their effectiveness.

3. **Government support and policy** – large-scale implementation of agroforestry requires support at the government policy level, including the creation of favorable conditions for financing and strategy development.

4. **The role of grants and funding** – attracting grants and financial resources to provide necessary materials and technologies, such as seedlings, seeds and irrigation systems, is a key element of successful implementation.

5. **Networking** – developing partnerships between local communities, NGOs, government agencies and businesses contributes to the effective scaling up and dissemination of successful agroforestry practices.

6. **Long-term sustainability** – agroforestry requires long-term planning and continuous monitoring to ensure its sustainability and effectiveness in the face of climate change.

7. **Need for research** – conducting scientific and social research to assess the effectiveness of methods and identify optimal practices for different regions of Kyrgyzstan.

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