

ÖkoFlussPlan – Preserving selected ecosystem services in the floodplains in Kyrgyzstan

Client II – International partnerships for sustainable innovation

The conservation of alluvial forests along the Naryn River in Kyrgyzstan is the main focus of the international and interdisciplinary “ÖkoFlussPlan” project. Partner institutions from Germany and Kyrgyzstan are involved in the three-year project, aiming to maintain the alluvial forests of the Naryn River and to provide and implement sustainable energy resources for the local population. In order to reduce the current demand, alternatives to harvesting wood from alluvial forests are being developed. In addition, the project also utilizes modern technologies for generating renewable energy and the efficient use of energy.

Ecosystems and energy production

The alluvial ecosystems along the Naryn River in Kyrgyzstan are still in a predominantly natural state. A natural discharge regime ensures strong dynamics with high biodiversity seen in the alluvial forests. For the local population, the ecosystems provide important services, such as the provision of firewood and grazing land, recreational areas, or protection against erosion. However, the use of forests as a source of timber and grazing practices threaten the forests’ survival. In addition, plans have been made to build a barrage dam for generating hydroelectric power on the upper reaches of the Naryn River. This will endanger the natural dynamics of the river system and its biodiversity. Therefore, there is a conflict of objectives between securing the energy supply of the local population, developing the country by increasing hydropower capacity and preserving natural ecosystems, their benefit to humans, and their biodiversity.



Wild landscape on the Naryn River, Kyrgyzstan.

The overall goal of “ÖkoFlussPlan” is to preserve the alluvial forests along the Naryn River and to find and implement sustainable solutions for the local population. For this purpose, the alluvial forests are to be gathered in a work package. Their condition will be analysed to identify areas particularly worth protecting and possible potential for development. In order to reduce demand, alternatives are also being systematically developed to harvesting wood

from alluvial forests. One approach is to establish short rotational plantations (planting of fast-growing trees), which can be a substitute for the wood from the forests. Another is to utilize modern technologies for generating renewable energy and the efficient use of energy.

Project implementation with strong partners

The project is sub-divided into six work packages:

- project management
- hydrology
- GIS and remote sensing
- ecology
- renewable energy
- environmental education, capacity building and stakeholder dialogue

Some partners are involved in several of these work packages, thereby helping to build a strong network between the various parts of the project. The hydrology, GIS and remote sensing, and ecology work packages will investigate the current state of the ecosystems, identify interfering factors, and devise development forecasts. These will be used to produce recommendations for sustainable land and water management. The renewable energy, environmental education, capacity building and stakeholder dialogue, and GIS and remote sensing work packages will implement short rotational plantations and beacon projects using innovative sustainable technologies. After identifying the potential benefits of replacing unsustainable fuels, recommendations can be made for generating efficient and climate-friendly energy. Workshops and a summer school will be held to facilitate stakeholder dialogue, thus guaranteeing close involvement of the local population from the very beginning and ensuring an exchange of knowledge between the German and Kyrgyz

partners. The results of the environmental research and the search for suitable alternatives will be summarized in a document entitled “Recommendations for the Sustainable Management of the Energy Supply and Environmental Resources”, which will be presented to relevant stakeholders at a closing event.



An updated forestry map generated with modern remote sensing methods will be handed over to the forestry authority.

Sustainable environmental management

After the end of the project, local forestry authorities will take over the continued operation of the existing plantations and establish new plantations.

In addition, “ÖkoFlussPlan” will evaluate the potential benefit of using technical facilities to generate and ensure the efficient use of renewable energy. The project will also identify market opportunities to develop these approaches and communicate these results to the relevant decision-makers. In the longer term, this can pave the way for establishing technical facilities in the project region and tapping into market potential. All results will help the authorities to align their activities towards sustainable development. The research on the floodplain ecosystems will collect core data, which will form the basis for further monitoring and scientific investigations. This data will also be an indispensable resource for environmental management concerning the planned barrage dam. In addition to providing training for scientists during the project period, a network will be established that can continue to thrive beyond the project’s lifetime. Alongside this, the authorities will be given recommendations for future sustainable drainage management of possible barrage dams in order to prepare them for future developments. All of the project’s scientific findings can contribute to an improved understanding of the natural dynamics of large rivers and thus to their protection and opportunities for renaturation, not only in Kyrgyzstan but also in Europe.

Funding initiative

Client II – International partnerships for sustainable innovations

Project title

ÖkoFlussPlan – Preserving selected ecosystem services in the floodplains in Kyrgyzstan through renewable energies and short rotational plantations, including a sustainable land and water management and capacity buildings

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