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Adequate Perspectives of Unique Natural Walnut-fruit Forests in South Kyrgyzstan through Sustainable Management

MAIK REHNUS, JEAN-PIERRE SORG

ETH Zurich, Department of Environmental Sciences, Switzerland

Abstract

Walnut (*Juglans regia*) forests including other fruit-bearing trees like apple (*Malus* sp.) and pear (*Pyrus* sp.) species grow in the subtropical influenced climate in the southern part of Kyrgyzstan. The so-called “walnut-fruit forests”, which are unique worldwide, are considered a biodiversity hotspot. Moreover, they are of huge ecological and economical importance for the local rural population. Due to the pressure of the local population, the sustainable management of this forest type is currently not ensured. The main aim of our applied research project ORECH-LES is to develop silvicultural management schemes through research and to encourage and ensure their implementation by means of informing and training the local population and the forest officers. The overall research question is how to shape, optimise and practically manage the forests and the agroforestry systems. Special attention is paid to the influence of forest management both on the livelihood of the local population and on the biodiversity. Since 2001 a lot of scientific and socio-economic data has been collected within a field network of 34 trial plots. The step by step analysis of the data has indicated a high potential for the sustainable management of walnut-fruit forest. Since the beginning of the project, the stakeholders’ participation has been of great importance. The scientific results of various research disciplines such as silviculture and forest production, agroforestry, geobotany, fruit-growing, pathology and biodiversity, have been regularly disseminated in seminars and publications. In the medium and long-term, the productivity of many forest stands could be raised. Besides, the dissemination of the results has to be focused at a local, regional, national but also at an international level.

Keywords: Biodiversity, *Juglans regia*, Kyrgyzstan, silviculture, walnut