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Contribution of Walnut-fruit Forest Products to Food Security and Socio-economic Development: Experience from Countries of the Silk Road Region

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Abstract

World forests directly or indirectly supply the food to an estimated 200–300 million people annually. Natural walnut (Juglans regia L.) forests are rich of wild-growing fruits, berries, nuts, mushrooms and medicinal plants, which are valuable alimentary source of vitamins, carbohydrates, proteins, organic acids, aromatic, mineral and other components necessary for human nutrition and well-being.

The distribution of the major genetic pools of Juglans regia forest stretches along the Silk Road from Turkey to north-eastern China. The walnut-fruit forest in Kyrgyzstan is the world's largest area of naturally occurring walnut and a unique biodiversity hotspot. However, current forest use and management are unsustainable and contribute to forest degradation. Moreover, the potential of these forests, in particular some of its currently underutilised species, to augment food security, income diversification of smallholders and sustainable development are not yet fully exploited.

A systematic literature review has been conducted to comparatively assess the patterns of utilisation, socio-economic importance, value chains and prevailing resource governance mechanisms of plant species occurring in the walnut forests in various production systems, including natural forests and cultivated plantations, in 17 countries along the Silk Road.

175 sources, including scientific publications, grey literature and websites published in English, Russian and German languages have been assessed in detail. Preliminary results show that, although these forests species make considerable contributions to subsistence, livelihoods, employment and human nutrition of local populations, the extent and concrete practices of their utilisation differ remarkably between countries. Regions more advanced in sustainably managing and adding value to these resources will serve to derive recommendations for better utilisation of these plant species.

The paper also presents preliminary results of a model that estimates the potential contribution the walnut forests and plantations can make to socio-economic development in the Silk Road region.

The study was conducted within the SUSWALFOOD project (funding code 01DK17016), that aims at contributing to the development of nutritious food from underutilised plant species of the walnut-fruit forests in Kyrgyzstan.

Keywords: Central Asia , neglected and underutilised species (NUS), non-timber forest products (NTFP), rural development

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