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“Competition for Resources in a Changing World:
New Drive for Rural Development”

Assessing Multifunctional Land Use and Sustainable Development in Rural Regions of Developing Countries

HANNES KÖNIG¹, LIN ZHEN², SEEMA PURUSHOTHAMAN³, SAULO RODRIGUES FILHO⁴, KAREN
TSCHERNING¹, KATHARINA HELMING¹, STEFAN SIEBER¹

¹*Leibniz-Centre for Agricultural Landscape Research (ZALF e.V.), Germany*

²*Chinese Academy of Sciences, Institute of Geographical Sciences and Natural Resources Research (IGSNRR), China*

³*Ashoka Trust for Research in Ecology and Environment (ATREE), India*

⁴*University of Brasília (UnB), Center for Sustainable Development, Brazil*

Abstract

Sustainable land use is a key issue to improve food security, control land degradation and reduce poverty, especially in developing and transition countries. Global changes and growing demands on resources have resulted in dynamic changes of land. Hence policy- and decision makers have increasing demand for ex ante assessment tools to support decision making processes in a sustainable way. The EU-funded projects LUPIS (www.lupis.eu) and SENSOR TTC (www.sensor-ip.org) develop methods and tools for assessing policy impacts on land use and sustainable development in a selected number of case study regions in Africa, Asia and Latin America. The concept of Land use functions (LUF) is developed for sustainability impact assessment (SIA) to assess in an integrative way the economic, environmental and social impacts that land use changes have on sustainable development. Based on the Driver-Pressure-State-Impact-Response (DPSIR) framework the analytical chain is developed to structure case study regions and to identify cause-effect relations between policies, land use changes and regional sustainability issues. Sustainable development is then interpreted implying the LUFs framework to allow policy makers, scientists and stakeholders identifying at a glance those functions of the land which are fostered or hindered under various scenarios of land use changes, and makes it possible to explore the trade-offs between them. Initially this concept has been developed for European regions and is now being tested in a selected number of case studies in Asia and Latin America to identify strengths and weaknesses of this approach, and also to provide a primer for sustainability impact assessment in developing countries. Therefore a heterogeneous set of land use related problems is assessed to test the transferability of the LUF approach: land degradation in China, side effects of infrastructure projects and land conversion in Brazil and agrarian crisis leading to farmer suicide in India. Participatory approaches are used to define relevant key land use functions and to identify regional sustainability issues in the respective regions. The LUF framework as presented here comprises guidelines on how to implement LUFs and perform a sustainability assessment in developing countries.

Keywords: Decision support tools, integrated assessment, land use change, land use functions, land use policies, multifunctionality, sustainable development