Geophysical Research Abstracts
Vol. 19, EGU2017-12794-1, 2017
EGU General Assembly 2017

Science of Integrated Approaches to Natural Resources Management

Anna Tengberg and Sandra Valencia
Lund University Centre for Sustainability Studies (LUCSUS), Box 170, SE-22100, Lund, Sweden

To meet multiple environmental objectives, integrated programming is becoming increasingly important for the Global Environmental Facility (GEF), the financial mechanism of the multilateral environmental agreements, including the United Nations Convention to Combat Desertification (UNCCD). Integration of multiple environmental, social and economic objectives also contributes to the achievement of the Sustainable Development Goals (SDGs) in a timely and cost-effective way. However, integration is often not well defined. This paper therefore focuses on identifying key aspects of integration and assessing their implementation in natural resources management (NRM) projects. To that end, we draw on systems thinking literature, and carry out an analysis of a random sample of GEF integrated projects and in-depth case studies demonstrating lessons learned and good practices in addressing land degradation and other NRM challenges. We identify numerous challenges and opportunities of integrated approaches that need to be addressed in order to maximise the catalytic impact of the GEF during problem diagnosis, project design, implementation and governance. We highlight the need for projects to identify clearer system boundaries and main feedback mechanisms within those boundaries, in order to effectively address drivers of environmental change. We propose a theory of change for Integrated Natural Resources Management (INRM) projects, where short-term environmental and socio-economic benefits will first accrue at the local level. Implementation of improved INRM technologies and practices at the local level can be extended through spatial planning, strengthening of innovation systems, and financing and incentive mechanisms at the watershed and/or landscape/seascape level to sustain and enhance ecosystem services at larger scales and longer time spans. We conclude that the evolving scientific understanding of factors influencing social, technical and institutional innovations and transitions towards sustainable management of natural resources should be harnessed and integrated into GEF's influencing models and theory of change, and be coupled with updated approaches for learning, adaptive management and scaling up.