

TITLE:

Evaluation of ecosystem integrity and services on regional level with the use of participatory approaches

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ABSTRACT:

The presented work proposes and applies a set of methods designed to describe ecosystem integrity, services and landscape values, including their interaction, on the example of several studied regions. The included publications describes 4 types of methods for evaluating these phenomena: remote sensing of the Earth, regional statistics, expert matrices, and qualitative interviews and mapping. Applied methods can be divided into natural sciences and social sciences, and part of the work is to evaluate the benefits and compare the compatibility between these very different methods in evaluating selected elements of landscapes. The methods are applied in a variety of ranges, ranging from urban areas (10 km²) to the federal states. Natural ecosystems and forests have been assessed best in terms of ecosystem integrity, with the relationship between ecosystem integrity and crop production being negative. Qualitative mapping of landscape values revealed that pristine and inaccessible areas, as well as single-purpose sites, had low societal value in terms of intensity and / or diversity of values. Places with high ecosystem integrity were valuable when infrastructure was available at the same time (eg roads, information boards, accommodation). The publications included in this work aim to contribute to the knowledge of sustainability science and the study of Socio-Ecological Systems (SES), seeking to provide a holistic description of the landscape, expressed as interactions between stakeholders, landscape values, ecosystem services and ecosystem integrity.

KEYWORDS:

Ecosystem integrity, Remote sensing, Ecosystem services, Landscape values, Participatory mapping