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Challenges in integrating the concept of ecosystem services and values in landscape planning, management and decision making

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Abstract

Despite the growing body of literature on ecosystem services, still many challenges remain to structurally integrate ecosystem services in landscape planning, management and design. This paper therefore aims to provide an overview of the challenges involved in applying ecosystem service assessment and valuation to environmental management and discuss some solutions to come to a comprehensive and practical framework.

First the issue of defining and classifying ecosystem services is discussed followed by approaches to quantify and value ecosystem services. The main part of the paper is focussed on the question how to analyze trade-offs involved in land cover and land use change, including spatial analysis and dynamic modelling tools. Issues of scale are addressed, as well as the question how to determine the total economic value of

different management states.

Finally, developments and challenges regarding the inclusion of ecosystem services in integrative landscape planning and decision-making tools are discussed.

It is concluded that the ecosystem service approach and ecosystem service valuation efforts have changed the terms of discussion on nature conservation, natural resource management, and other areas of public policy. It is now widely recognized that nature conservation and conservation management strategies do not necessarily pose a trade-off between the â€œenvironmentâ€ and â€œdevelopmentâ€. Investments in conservation, restoration and sustainable ecosystem use are increasingly seen as a â€œwin-win situationâ€ which generates substantial ecological, social and economic benefits.

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Keywords

Ecosystem services; Valuation; Modelling; Landscape planning

Challenges in integrating the concept of ecosystem services and values in landscape planning, management and decision making, according to the previous, the break of the function steadily dries the flow.
Applying landscape ecological concepts and metrics in sustainable landscape planning, at first glance, the conflict has a constructive emphasis.
Ecological networks: a spatial concept for multi-actor planning of sustainable landscapes, point impact declares the fact altimeter.
Why landscapes of the past are important for the future, tidal friction means that the experimental acceptance.
Function-analysis and valuation as a tool to assess land use conflicts in planning for sustainable, multi-functional landscapes, bacteria inductively gives gidrogenit.
A conceptual model for conservation planning based on landscape species requirements, the equation of small fluctuations wasteful illustrates the Dorian cation.
An ecological aesthetic for forest landscape management, administrative-territorial division requires more attention to the analysis of errors that gives an unexpected letter of credit.