Classification of ecosystem services: Problems and solutions

Ken J. Wallace

Natural Resources Branch, Department of Environment and Conservation, Locked Bag 104, Bentley Delivery Centre, Western Australia 6983, Australia

http://dx.doi.org/10.1016/j.biocon.2007.07.015, How to Cite or Link Using DOI

Abstract

Ecosystem values are not well accounted for in decisions concerning natural resources. In this context, the concept of ecosystem services offers an important opportunity to develop a framework to underpin the wise use of biodiversity and other natural resources.

Although the merit of using ecosystem services to frame biodiversity evaluations has been documented, the classification systems employed mix processes (means) for achieving services and the services themselves (ends) within the same classification category. This limits their contribution to decisions concerning biodiversity. Ambiguity in the definitions of key terms – such as ecosystem processes, functions and services – exacerbates this situation.

After clarifying definitions and discussing the basic components of an effective typology, this paper develops a classification of ecosystem services that provides a framework for decisions in natural resource management. However, further work is still required to resolve particular issues, such as the classification of socio-cultural services.

Although science can contribute to effective decisions by clearly classifying services and describing their links to processes, final decisions concerning biodiversity and other natural resources are inevitably socio-political, and embedded within a particular cultural context.

Keywords

Biodiversity planning; Ecosystem services; Natural resource management; Decision-making; Values