

Multi-criteria decision making (MCDM) in marine protected area resource management: a review of methods

ABSTRACT

Multi-criteria decision making (MCDM) is a general approach that has been applied to a wide range of natural resource management situations. Firstly, this paper aims to provide a critical review of MCDM methods applied to Marine Protected Area (MPA) and other natural resource management. The review seeks to layout the nature of the models, their inherent strengths and limitations. The second purpose is to describe new MCDM paradigms aimed at addressing the inherent complexity of managing coastal ecosystems, particularly with respect to multiple criteria, multi-stakeholders, and lack of information. Comments about, and critical analysis of, the limitations of traditional models are made to point out the need for, and propose a call to, a new way of thinking about MCDM as they are applied to MPA and natural resource management planning.

Keyword: Multi-criteria; Marine; Decision making; MPA; MCDM