

A fuzzy analytic hierarchy approach for ranking and prioritizing sustainability criteria and indicators of ecotourism management

ABSTRACT

Ecotourism is an approach that should be environmentally, socially and economically sustainable. For this reason, monitoring and evaluating the ecotourism destination is very important. A good practice is using an indicator system for planning and applying ecotourism models that emphasis on the sustainability approach. Ranking and prioritising of sustainability criteria and indicators facilitates evaluating the situation of the destination by managers. The purpose of this study was to prioritizing and ranking the sustainability criteria and indicators for monitoring and assessment of ecotourism management in Penang National Park, Malaysia. A Fuzzy Analytic hierarchical process (FAHP) was used for prioritizing 9 criteria and 21 indicators from four dimensions of 'ecological', 'social', 'economic' and 'institutional' which obtained from a modified Delphi survey.

Keyword: Criteria and indicators; Fuzzy analytic hierarchical process; Sustainability; Ecotourism