Forest recreation planning in Langkawi Island, Malaysia, using Landsat TM

ABSTRACT

There is an increasing demand for development of new recreation areas and more intensive management of existing areas. With an eye to the design and implementation of comprehensive zoning plans, satellite remote sensing should provide an ideal tool for terrain analysis, vegetation, and cover type mapping, which are vital to intensive recreation planning. The study undertaken was aimed at examining the applicability of satellite remote sensing for providing necessary information to be used in forest recreation planning. A Landsat TM scene (path row 128/ 56) taken on 30 January 1992 was processed digitally on a Meridian PC image processing system by selecting a representative subsection of the scene that covered the study area. Existing land use, topographical maps, and other related ground information as well as contrast stretching and a maximum likelihood classifier (MLC) technique were used to assist in the classification. The selection of potential recreation sites was based from potential surface analysis (PSA). The results showed that most of the undeveloped forest area located in the north-eastern part of Langkawi Island, Malaysia, was the most potential sites for recreational development, while the moderate recreation potential zones lay on the western part of the island. The mean overall classification accuracy obtained was 82% Therefore the study implies that it is possible to select potential recreation sites ranging from most potential to least potential in Langkawi Island using Landsat TM.