Classifying and Evaluating Land Cover in California

Topic: Environmental management

Problem Statement: Residential development and wildland fuel reduction are among the most significant dynamics affecting land cover around Redding and the adjacent Whiskeytown National Recreation Area in California's northern interior. Whiskeytown land cover is also affected by past logging and mining practices and by current habitat restoration activities. Effective environmental planning and management in the region requires accurate maps of land cover.

Level: Intermediate

Software: ArcGIS, ENVI, PowerPoint

Description: The goal of this Learning Unit is to develop a land cover map of the transition area between Redding and Whiskeytown. Students are guided through standard procedures for image processing and classification before deciding upon the methods that best fit the desired outcome. An optional field validation procedure is provided.

Key words: Land cover, land use, image processing, image enhancement, vegetation indices, unsupervised classification, supervised classification, GPS field validation, GIS integration

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