Pan-European Forest/Non-Forest Mapping Based on Landsat Data

Abstract:
The paper presents a harmonized pan-European forest/non-forest map based on Landsat imagery. This high resolution forest map is aimed to be consistent over Europe, independent of national borders, and is based on the forest definition of CORINE Land Cover 2000 nomenclature (CLC2000) in order to enable cross border investigation and comparisons at European level. The applied fully automatic forest mapping methodology employs publicly available Landsat satellite data and CLC2000 data. The classification process has been carried out on a scene-by-scene basis for the year 2000. It consists of several steps such as image segmentation, spectral categories mapping, clustering, adaptive spectral representative analysis, and supervised classification. The methodology shows to be applicable to different bio-geographical regions and ecological conditions. Preliminary validation results state that the classification accuracy is at the level of 90% in central European conditions.

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Publication Year:
2007

Type:
Contributions to Conferences

Publisher:
Association Geographic Information Laboratories Europe (AGILE)

Citation:
The 10th AGILE International Conference on Geographic Information Science - Proceedings

Source URL:

Links