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Titolo Land Use and Land Cover Mapping in Europe [[electronic resource]]:

Practices & Trends / / edited by Ioannis Manakos, Matthias Braun

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Soggetti Earth sciences

Environment Remote sensing

Statistics Geography

Earth Sciences, general Environment, general

Remote Sensing/Photogrammetry

Statistics, general Geography, general

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Note generali Description based upon print version of record.

Nota di bibliografia Includes bibliographical references and index.

Nota di contenuto Remote Sensing in support of the geo-information in Europe -- Global

land cover mapping: Current status and future trends -- The users' role in the current European land monitoring context -- Towards an European land cover monitoring service and high-resolution layers -- CORINE Land Cover and land cover change products -- European Area Frame Sampling based on Very High Resolution image -- European forest monitoring approaches -- The European Urban Atlas -- A review of modern approaches to classification of remote sensing data -- Recent advances in remote sensing change detection – a review -- Synergies from SAR-optical data fusion for LULC mapping -- Application of object-oriented method for classification of VHR satellite images using rule-based approach and texture measures -- Remote

sensing of vegetation for nature conservation -- Modeling urban sprawl

-- Land Information System Austria (LISA) -- Digital Land Cover Model for Germany DLM DE – The "German Way" -- Land Use & land cover mapping in Europe: Examples from the UK -- Operational land cover and land use mapping in the Netherlands -- The use of the Land-Cover Classification System in Eastern European countries: experiences, lessons learnt and the way forward -- Differentiation of Crop Types and Grassland by Multi-Scale Analysis of Seasonal Satellite Data -- Enhancing remotely sensed low resolution vegetation data for assessing Mediterranean areas prone to land degradation -- Beyond NDVI: Extraction of biophysical variables from remote sensing imagery -- Land transformation processes in NE China: Tracking trade-offs in ecosystem services across several decades with Landsat-TM/ETM+ time series -- Carbon stock estimation of tropical forests on Borneo, Indonesia, for REDD+.

## Sommario/riassunto

Land use and land cover (LULC) as well as its changes (LUCC) are an interplay between bio-geophysical characteristics of the landscape and climate as well as the complex human interaction including its different patterns of utilization superimposed on the natural vegetation. LULC is a core information layer for a variety of scientific and administrative tasks (e.g. hydrological modelling, climate models, land use planning). In particular in the context of climate change with its impacts on socioeconomic, socio-ecologic systems as well as ecosystem services precise information on LULC and LUCC are mandatory baseline datasets required over large areas. Remote sensing can provide such information on different levels of detail and in a homogeneous and reliable way. Hence, LULC mapping can be regarded as a prototype for integrated approaches based on spaceborne and airborne remote sensing techniques combined with field observations. The book provides for the first time a comprehensive view of various LULC activities focusing on European initiatives, such as the LUCAS surveys. the CORINE land covers, the ESA/EU GMES program and its resulting Fast-Track- and Downstream Services, the EU JRC Global Land Cover, the ESA GlobCover project as well as the ESA initiative on Essential Climate Variables. All have and are producing highly appreciated land cover products. The book will cover the operational approaches, but also review current state-of-the-art scientific methodologies and recommendations for this field. It opens the view with best-practice examples that lead to a view that exceeds pure mapping, but to investigate into drivers and causes as well as future projections.