

## The Change of Urban Land Use/Cover Using Object Based Approach for Southern Bali

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**Abstract :** Change on land use/cover (LULC) dominantly affects spatial structure and function. It can have such impacts by disrupting social culture practice and disturbing physical elements. Thus, it has become essential to understand of the dynamics in time and space of LULC as it can be used as a critical input for developing sustainable LULC. This study was an attempt to map and monitor the LULC change in Bali Indonesia from 2003 to 2013. Using object based classification to improve the accuracy, and change detection, multi temporal land use/cover data were extracted from a set of ASTER satellite image. The overall accuracies of the classification maps of 2003 and 2013 were 86.99% and 80.36%, respectively. Built up area and paddy field were the dominant type of land use/cover in both years. Patch increase dominantly in 2003 illustrated the rapid paddy field fragmentation and the huge occurring transformation. This approach is new for the case of diverse urban features of Bali that has been growing fast and increased the classification accuracy than the manual pixel based classification.

**Keywords :** land use/cover, urban, Bali, ASTER

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