

Comparison in Changed Detection Techniques for Monitoring Mangrove Forest

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Most of Land-cover and land-use change data caused of human activities and nature disasters. The efficient techniques to detect mangrove change, several methods for land use/land cover change detection using time series Landsat imagery data were employed and discussed. Landsat 5 TM color composites of 2005 and 2007 were employed for locating training samples for supervised classification in the coastal areas of Samut Prakarn, Samut Songkram, Samut Sakorn and Bangkok. Three change detection techniques were evaluated: normalized difference vegetation index (*NDVI*) image differencing, principal component analysis, the *RGB-NDVI* change detection, the *RGB-IVDVI* technique and the *NDVI* differencing technique. This study illustrated not only awfully coastal line changed with decreasing of the land but also an increasing trend of shrimp farms, forest/mangrove and urban areas with a decreasing trend of agricultural and wasteland areas. Land use changes from one category to others have been clearly represented by the *NDVI* composite images, which were found suitable for delineating the development of shrimp farms and land use changes in coastal area in the central region of Thailand.

Keyword : Land use/land cover changed, *NDVI*, *RGB-NDVI*, *RGB_IVDVI*, *NDVI* differencing