ABSTRACT

Land cover is a biophysical appearance of the earth's surface that can be observed. Land cover can describe the relationship between natural processes and social processes. Land cover is divided into two categories, namely vegetated areas and non-vegetated areas. Vegetated area categories are derived from a consistent physiognomy structure concept approach from plant shape, form of cover, plant height, and spatial distribution. Whereas the category of non-vegetated areas refers to the aspect of surface cover, distribution or density, and height or depth of objects.

By using digital image processing based on images obtained from Google Earth to detect and classify land cover areas so that it can help and facilitate the identification of land use in an area. In the previous research, the identification of land cover in Tembalang sub-district using the Object Base Image Analysis (OBIA) method. OBIA consists of two stages, namely segmentation with Multiresolution algorithm and classification with K-Nearest Neighbor method. The software used is Developer eCognition 8.9.

In this final project the author detects and classifies land cover in the coastal area in Pelabuhan Ratu, Sukabumi City, West Java. Using the Singular Value Decomposition (SVD) method with the K-Nearest Network (K-NN) classification can detect land cover with 7 types of classes, namely forests, grasslands, ports, plantations, settlements, rice fields and rivers through image processing using Google Earth. Matlab application. The best accuracy results in system detection using images when the S, distance type parameter is Correlation with a value of k = 1 when the pixel size is 256x256 which is 87.14%.

Keywords: Land Cover, Google Earth, Singular Value Decomposition, Image, Matlab, K-Nearest Neighbor