

## Using VNREDSat-1 Images For Mangrove Forest Monitoring In Mekong River Delta In Vietnam.

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**Abstract:** As planned, the first Vietnam's Earth observation satellite – Vietnam Natural Resources, Environment and Disaster monitoring Satellite 1 (VNREDSat-1) was successfully launched into space on May 7<sup>th</sup> 2013. Its mission is to take image in panchromatic (2.5 meters) and four multispectral (10 meters) bands, with a revisit time of three days. This would create a space infrastructure enabling the country to better monitor and study the effects of climate change, predict and take measures to prevent natural disasters, and optimize the management of its natural resources. The first received images have been stimulating scientists and researchers to utilize VNREDSat-1 imagery as input data for their researches. In this study, VNREDSat-1 images was used to monitor the mangrove forest in Mekong river delta area, one of the most important natural ecosystems in this region. The object oriented classifier was used in combination with field survey data to evaluate the forest covers as well as the expansion of aquaculture, which is considered as the major driver of deforestation and forest degradation in this area. Results showed that VNREDSat-1 image is a good data source for forest monitoring as well as potential input data for natural resource surveillance in Vietnam.

Keywords: VNREDSat-1, remote sensing, mangrove forest, aquaculture, Mekong river delta.