GISIDEAS -

**Using multi-temporal remote sensing data for change detection of coral and seagrass in Nha Trang Bay**

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**Abstract:**

Currently, underwater marine ecosystem focused coral reefs and sea grasses in Nha Trang Bay is under heavy pressure from human activities, especially the island tourism. This paper presents the results of research and application of remote sensing techniques to determine the status of coral and seagrass distribution, as a basis for assessing their changes over time and space. Research used reflectance spectral characteristics, based on indicators invariant with depth, is a function of the logarithmic relationship between surface reflectance spectra of channels 2, 3 and 4 of the Landsat follow spots of the substrate. Subsequently, research conducted supervised classification to identify object classes of coral and seagrass. The results show that there is a clear variation in the number and area of their distribution over time. Using satellite data sources historical, multi-temporal to evaluate the variability of the ecosystem as well, in order to come up with solutions to respond and appropriately conserve and protect natural resources to coastal island.

**Keywords:** coral, seagrass, Depth Invariance Index, island tourism, change detection