

Bahuguna, A., S. Nayak and D. Roy. 2008. Impact of the tsunami and earthquake of 26th December 2004 on the vital coastal ecosystems of the Andaman and Nicobar Islands assessed using RESOURCESAT AWiFS data. International Journal of Applied Earth Observation and Geoinformation 10(2):229-237.

Abstract:

Tsunami waves struck the Indian coast on 26th December 2004 affecting the Andaman and Nicobar group of islands. A quick assessment of the status of the vital coastal ecosystems has been made using pre- and post-tsunami Advance Wide Field Sensor (AWiFS) data of Indian satellite RESOURCESAT with an accuracy of 87–90% and the Kappa ranging from 0.8696 to 0.9053. Among the coastal ecosystems the coral reefs have suffered the maximum with the Nicobar reefs (69% eroded and 29% degraded) bearing the brunt more than the Andaman reefs (54% eroded and 22% degraded). Significant improvement to the condition of the reef damaged due to backwash has been noted. About 41% of the Sentinel reef area has undergone significant improvement. The continuance of the erosion of the southwestern Andaman reefs is due to the impact of recurring earthquakes. The impact on mangroves of both the groups of islands has been due to uprooting as well as inundation of seawater and resulting stagnation. Changes are expected in community structure of mangroves as a result of tsunami.