

Comparison Of Chlorophyll Concentrations Using MODIS Data For The South West Indian Ocean

Vimal Ramchandur¹ and Hemanaden Runghen²

¹*Mauritius Oceanography Institute, Quatre Bornes, Mauritius, vramchandur@moi.intnet.mu*

²*Mauritius Oceanography Institute, Quatre Bornes, Mauritius, hrunghen@moi.intnet.mu*

Abstract: Oceanographic conditions significantly influence the migration and distribution of pelagic fisheries. The African Monitoring of the Environment for Sustainable Development (AMESD) aims at using satellite ocean observation data to support fisheries resources management in the South West Indian Ocean (SWIO) by producing potential fishing zones charts. In this paper, the inter-annual and monthly distribution of chlorophyll concentration has been calculated for the South West Indian Ocean region using data from MODIS for the periods June 2002 - December 2012. The amount of chlorophyll concentrations gives an idea of the distribution of phytoplankton across the ocean which accounts for half of all photosynthetic activity on Earth and have significant impact on the entire ecosystem. We investigate the chlorophyll variability patterns on a regional scale in seven boxes corresponding to the AMESD partners: Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles and Tanzania. The analysis of eleven years of monthly derived chlorophyll in the region showed considerable inter-annual and spatial variability as indicated by the chlorophyll concentrations anomaly. The result will be used within the AMESD framework to investigate the relationship between chlorophyll concentration and fish aggregation in the SWIO.

Keyword: Indian Ocean, MODIS, pelagic, chlorophyll, inter-annual.