ABSTRACT

Overfishing has threatened the sustainable use of fisheries resources over the world, particularly in Thailand. The spatial information indicating the area of fish larvae will be essential for resource conservation with effective enforcement. This prototype project are conducted to achieve the purposes which are a) to develop an appropriate spatial model representing the distribution of fish larvae in the Gulf of Thailand and the Andaman Sea using MODIS and research vessel data during 2004 -2010 and b) to propose and apply the results into fisheries conservation planning process at the Department of Fisheries (DOF), Thailand. The image analysis and spatial analysis are applied to MODIS data (Sea Surface Temperature, Chlorophyll and Diffuse Attenuation Coefficient) and vessel data (Sea Surface Temperature, Chlorophyll, Nitrate and Fish Larvae Amount) under the appropriately spatial and temporal data scheme. The preliminary results have shown that there are some relationships between MODIS data and vessel ground data to the amount of fish larvae in Thai waters. The further analysis will find the best fit model to the existing dataset. This prototype project will enable the operational use of satellite data for mapping and monitoring the distribution of fish larvae in the Thai waters with the DOF conservation units for better planning of conservation zone (i.e. fishing area closures) and timely monitoring, control and surveillance of fishing activities. This is believed that the space applications for environment (SAFE) initiated by Japan Aerospace Exploration Agency (JAXA) and collaboration with DOF will continuously develop the important fisheries application for the resources use sustainability not only for Thailand but also for the South East Asia region as a whole.