Development of a Regional Coastal Ocean Ecosystem Model for SEA-WP Regions

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We are developing a regional coastal ocean ecosystem model for SEA-WP (South East Asia and West Pacific) regions, which encompass the exceptionally dense and rich marine biodiversity area in the world. The ecosystem model is coupled with a high resolution regional ocean model, which can resolve complicated eddying motion of currents in SEA-WP regions. The model has been largely extended from a simple NPZD (Nutrient-Phytoplankton-Zooplankton-Detritus) ocean ecosystem model so that it can be applied to SEA-WP regions. One of our research concerns is to highlight some relevant aspects of coastal phenomena in the SEA-WP regions into the regional ecosystem model and thereby to demonstrate the complexity of coastal processes in the regions. Our preliminary results show that the surface chlorophyll-a values simulated by the model reproduced well to those de-tected by the ocean color satellite imagery showing high concentrations of surface chlorophyll in the coastal regions in SEA-WP, especially in Indonesian archipelago, and low concentrations in the subtropical ocean regions.

: coastal ocean ecosystem model, regional ocean model, SEA-WP regions
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