

## 04. MANAGEMENT FOR SUSTAINABLE USE OF INTERNATIONAL SEMI ENCLOSED SEA, JAPAN SEA

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New project “Development of Coastal Management Method to Realize the Sustainable Coastal Sea” started in 2014. The objectives are to study the appropriate status of the coastal area and to provide scientific information to policy makers for better coastal management. One of the target areas in this project is Japan Sea. Japan Sea is a semi-closed sea which is surrounded by the Eurasian continent and Japanese islands. This area is one of the most populated regions in the world and experiences a rapid economic growth. In addition, it is reported that the sea surface temperature has increased rapidly compared to other areas. In our study, nutrient inputs and climate change are key drivers which influence the ecosystem of Japan Sea. Numerical models of the marine ecosystem were used for understanding and forecasting the impact and response mechanism of the ecosystem. Based on the study results, options for appropriate management will be proposed.

However, because of the long coastal zone along Japan, it is not appropriate to apply the same management options to all areas. Therefore, in this study, the coastal zone was divided into five sub-regions according to the characteristics of water mass. Surface water of Japan Sea is basically formed by Kuroshio water, Taiwan Current water, freshwater discharged in the East China Sea, freshwater discharged in Japan Sea and deep water of Japan Sea. Using physical numerical models, the mixing ratio of these five waters was calculated and options for regional management in each sub-region will be prepared.