

On Sustainability Initiative in the Marginal Seas of South and East Asia

*Toshio Yamagata¹, Lourdes J. Cruz², Nordin Hasan³, Annadel Cabanban⁴, Marie Antonette Menez⁵, Fadzilah Binti Abdul Majid⁶

1. Japan Agency for Marine-Earth Science and Technology, 2. Department of Science & Technology National Research Council of the Philippines, 3. Institute for Environment and Development (LESTARI) Universiti Kebangsaan Malaysia, 4. Sustainability Initiative in the Marginal Seas of South and East Asia (SIMSEA) The Marine Science Institute, University of the Philippines, 5. The Marine Science Institute University of the Philippines, 6. Faculty of Arts, Humanities and Heritage Universiti Malaysia Sabah

The South and East Asian marginal seas are vulnerable to rapid coastal population growth, overharvesting of marine biological resources, and pollution. The region's marine ecosystems have more than 30% of the world's coral reefs and produce about 40 million tons of fish and more than 80% of the world's aquaculture products. The high extraction volume of marine bioresources, rapid population growth, and far-reaching economic development increasingly test the limits of these seas to provide the ecosystem services that drive economic growth and development in the region. The conservation and management of marine resources and ecosystems, while coping with the pressures of climate change/variability and other global changes either brought about or augmented by human activities, are immense challenges that require cohesive transnational endeavours in the region and the rest of the world. The Sustainability Initiative in the Marginal Seas of South and East Asia (SIMSEA) is an international alliance of physical, ecological, and social scientists working together to meet the regional challenges of biodiversity conservation, sustainability of marine ecosystem services, and protection of human well-being in light of population pressure, environmental degradation, extreme weather events, and climate change/variability. The objectives are to: co-design an integrative program that would establish the sustainability of the marginal seas of South and East Asia; and play a catalytic role in projects and programs to facilitate scientific cooperation for the benefit of societies. The overall goal is to generate knowledge that can bring about transformative change toward sustainability in the marginal seas of South and East Asia, and contribute toward sustainability at the global level.

Keywords: Climate Change/Variability, Marginal Seas of South and East Asia, Ocean Health, SIMSEA