Comments on Sea Level Rise and Its Impact

(China)

In the face of the serious impact of the accelerated rise of sea level on the coastal areas under the background of global warming, China and other coastal countries in the world should strengthen the top-level overall planning and strategic layout of the sustainable utilization of natural resources, improve relevant policies, regulations and management mechanisms, take scientific and technological innovation as the support, strengthen the sea level monitoring, investigation and evaluation. We will improve coastal protection on the basis of an ecological philosophy, and actively carry out international cooperation and publicity, so as to comprehensively improve our ability to adapt to sea level rise and ecological environmental changes.

1. Establishing a Comprehensive Management System to Cope with Sea Level Rise

To compile an active, effective, sustainable and resilient work plan for responding to sea-level change at the national level, explore the establishment of a comprehensive management system for responding to sea-level rise. To strengthen cooperation and coordination among government departments across jurisdictions, departments, policy areas and planning levels, and gradually establish and improve a multi-sector joint response mechanism. To strengthen the professional personnel and equipment allocation of administrative departments at all levels to realize reasonable and efficient division of labor and cooperation among countries, provinces, cities and counties in adapting to the rising sea level.

2. Strengthening Sea Level Monitoring, Investigation and Impact Assessment

To optimize the existing ocean observation network and improve the technology level of sea level change attribution and prediction. To conduct

in-depth investigation on the impact of sea-level change, establish an assessment system for the impact of sea-level rise, develop assessment models and application software, build an assessment system for the impact of sea-level rise in coastal areas, improve the comprehensive risk assessment level of the coastal zone, assess the impact of sea-level rise on land, economy, society, ecology and disasters, and improve the assessment capacity for the impact of sea-level rise.

3. Improve Coastal Protection Capacity in Coastal Areas

The possible range of global and local sea-level rise should be fully considered in the coastal zone response planning, and the coastal infrastructure should be optimized to cope with sea-level rise. According to the trend of sea-level rise, the protection standard of coastal engineering should be rechecked, and the existing coastal protection engineering should be strengthened to resist the invasion of extreme sea-level events and prevent and slow down the impact of coastal erosion. Upgrade and transform the drainage system, roads and other infrastructure in coastal cities, appropriately improve the building base level, and prevent flood disaster caused by high sea level jacking. To promote the construction of ecological seawall, and reconstruct the existing coastal engineering protection system based on the concept of ecological protection, so as to effectively reduce the risk of sea level rise.

4. Optimizing the Ecological Spatial Pattern of Coastal Zone

Marine disaster prevention and mitigation and ecological protection needs should be fully considered to carry out appropriate coastal ecological protection planning according to the characteristics of local sea-level rise, extreme marine weather events, natural geography and social economy. In areas with small impact of sea-level rise, low disaster risk and intact ecosystem, ecosystem stability shall be maintained and natural protection shall be realized by making full use of the disaster reduction function of ecosystem; in areas with relatively large impact of sea-level rise and high disaster risk, coastal protection shall be carried out based on the ecological concept, and the retreat space of coastal ecosystem shall be reserved as

much as possible. It could also combine biodiversity conservation, blue-carbon storage and improved water quality to improve the comprehensive response capacity to sea level rise in coastal areas.

5. Deepen International Cooperation and Exchange

To promote international exchanges and cooperation, strengthen regional cooperation, and establish a cross regional cooperation governance network to integrate different stakeholders, clarify responsibilities and obligations. Actively carry out multidisciplinary cooperation research on natural environment and socio-economic impacts, and jointly respond to the impact of sea-level rise. Actively participate in the marine governance of small island countries, jointly carry out the observation and prediction of sea-level rise, risk assessment and scientific response, build a community of marine development interests around the sustainable development of island economy, island ecological environment protection, response to climate change, disaster prevention and mitigation, and improve the level of marine technology development, and comprehensively build a community of shared future for global marine governance.

6. Strengthen Publicity and Encourage Social Participation

In coastal areas, elementary education and concept demonstration of adaptation measures in the field of sea-level rise should be widely carried out. Moreover, science popularization in the field of climate change and sea-level rise should be carried out in various ways, and knowledge about the main impact of sea-level rise on economic and social development should be publicized to all sectors of society, so as to increase people's awareness of prevention of sea-level rise, storm surge, salt tide and other marine disasters. We should guide the whole society to live a low-carbon lifestyle, reduce emissions of greenhouse gases and pollutants, reduce the risk of sea-level rise, and promote the sustainable development of social economy in coastal areas.