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Manila Bay : a challenge to coastal transformation and sustainable development

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Abstract

Manila Bay is strategically located in the Philippines and has a long history of use for shipping, navigation, and port services. With its natural features (topography, bathymetry, circulation) and multiple functions from stakeholders' conflicting needs, the Bay can be considered a complex ecosystem. The major environmental problems include deteriorating water quality, declining fisheries, coastal subsidence, and saltwater intrusion. The expansion of aquaculture, human settlements, commercial establishments after land conversion of mangroves and tidal flats, and other reclamation projects have prevailed in recent decades. To address the continued pollution in the Bay, the Supreme Court issued a writ of "continuing mandamus" in 2008, compelling 13 government agencies headed by the Department of Environment and Natural Resources to "clean up, rehabilitate, and preserve Manila Bay" and bring back its waters to a state fit for swimming, skin diving, and other forms of contact recreation. The Manila Bay Coordinating Office has been facilitating environmental management and coastal rehabilitation efforts with help from stakeholders and the general public. A Manila Bay Development and Sustainability Plan (MBDSP), completed in July 2020 and to be implemented up to 2040, focused on inclusive growth, ecosystem protection, Disaster Risk Reduction and Climate Change Action, water quality improvement, and housing for informal settlers. However, with pressures from influential sectors, meeting the goals of the MBDSP will be a big challenge.

Manila Bay is one of the study areas of the Belmont Forum COAST Card project, which is a transformative, transdisciplinary, and transnational approach to coastal and marine research and management. The project aims to add value to present initiatives in the Bay by using various tools and measures, i.e., Stakeholders Network Analysis (SNA) and Systems Dynamics Modeling. These consider both social and physical factors as inputs to the COAST Card, a participative and holistic tool for coastal ecosystem management.

Keywords

Manila Bay, COAST Card, Stakeholders Networks Analysis, Systems Dynamics Analysis