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Coastal ocean assessment for sustainability and transformation (COAST Card)

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Abstract

The COAST Card project is developing a stakeholder-driven tool that monitors, forecasts, and reports the effectiveness of management decisions on coastal and ocean sustainability. Massive changes in climate, population, pollution and consumption patterns place coastal and ocean systems at increasing risk, so a new set of robust and transformative tools are needed to produce well-balanced policies that will lead to improving environmental resources at a global scale. COAST Cards will do this by merging three tools: 1) environmental status assessment through socio-environmental report cards, 2) societal guidance provided through social network analysis and 3) prioritized actions identified with system dynamics models. The synergistic impact of merging these three tools into the COAST Card will enable forecasting the effectiveness of future management regimes on coastal ecological, economic and social aspects. We have assembled researchers from the United States, Norway, Philippines, Japan and India into the following teams: leadership, stakeholder engagement, dissemination, evaluation and data management. We are developing the COAST Card tool in five iconic locations: Chesapeake Bay on the east coast of the United States, Manila Bay in the Philippines, Tokyo Bay in Japan, Ishigaki Island/Sekisei Lagoon in Japan and the Goa coast of India. Each study site is engaging a suite of stakeholders from governmental agencies, academic institutions, industry and businesses, non-governmental organizations, and interested members of the public. There are some values that are ubiquitous in all study sites like fishing, shipping/port operations, habitats, tourism/recreation and cultural values. Similarly, there are some threats that are ubiquitous like pollution, climate change, population pressure. This multi-year project is supported by the Belmont Forum, a consortium of scientific funding agencies focused on developing transdisciplinary and transnational collaborative research actions.

Keywords

COAST Card, Report cards, Social network analysis, System dynamics model