

Coastal Governance for Resource Based Development

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Oceans are the world's single largest ecosystem, covering nearly three-fourths of the earth's surface, thereby providing a massive arena for the emerging complex and interconnected development and environmental issues such as climate change, livelihoods, commerce, and security. According to estimates by the Global Ocean Commission, ocean resources contribute five percent of the world's GDP, secure the jobs of three billion people, and sustain the livelihoods of 350 million.

Emerging Blue Economy

'Blue Economy' is basically a Resource Based Development (RBD) concept. It conceives the oceans as "shared development spaces". World Bank defines it as the "sustainable use of ocean resources for economic growth, improved livelihood and jobs, and ocean ecosystem health." In different contexts it is referred to as "ocean economy", "coastal economy", or "marine economy." The concept is at a nascent stage, but emerging.

While the basic tenets and goals of these paradigms may be similar, there are differences in approaches and treatment with reference to resource management, growth objectives, sustainability, and social equality. "**Ocean economy**" deals with efficiency and optimisation of natural marine resources within ecological limits." "**Coastal economy**" is larger than "ocean economy" and includes, concentration of activities on or around the coastal areas and sum of all activities relating to output, livelihood, employment and wages in the coastal region. '**Marine economy**' is a sub-set of the coastal economy, that includes commercial seafood, marine transportation, coastal tourism and recreation, marine science and technology, marine-related construction and infrastructure.

Blue Economy Sectors and Activities

Sector	Activity
Fishing	Capture fishery, Aquaculture, seafood processing
Marine Biotechnology	Pharmaceuticals, chemicals, seaweed harvesting, seaweed products, marine derived bio-products
Minerals	Oil and gas, deep-sea mining (exploration of rare earth metals, hydrocarbon)
Marine Renewable Energy	Offshore wind energy production, wave energy production, tidal energy production
Marine manufacturing	Boat manufacturing, sail making, net manufacturing, boat and ship repair, marine instrumentation, aquaculture technology, water construction, marine industrial engineering
Shipping, Port & Maritime Logistics	Ship building and repairing, ship owners and operators, shipping agents and brokers, ship management, liner and port agents, port companies, ship suppliers, container shipping services, stevedores, roll-on roll-off operators, custom clearance, freight forwarders, safety and training
Marine Tourism & Leisure	Sea angling from boats, sea angling from the shore, sailing at sea, boating at sea, water skiing, jet skiing, surfing, sail boarding, sea

	kayaking, scuba diving, swimming in the sea, bird watching in coastal areas, whale/dolphin watching, visiting coastal natural reserves, trips to the beach, seaside and islands
Marine Construction	Marine construction and engineering
Marine Commerce	Marine financial services, marine legal services, marine insurance, ship finance & related services, charterers, media & publishing
Marine ICT	Marine engineering consultancy, meteorological consultancy, environmental consultancy, hydro-survey consultancy, project management consultancy, ICT solutions, geo-informatics services, yacht design, submarine telecom
Education	Education and training, R&D

Coastal Governance-Imperatives

In the early days, the high seas were understood as being common property, open to all. However, there existed two competing concepts about who had sovereignty over the oceans: *mare clausum* versus *mare liberum* (17th Century). *Mare clausum* was the Portuguese notion of giving the rights over the ocean to the coastal states. In contrast, the Dutch notion of *mare liberum* defended the understanding of the freedom of the ocean.

Both ideas were fuelled by economic considerations. After decades of negotiating, the UNCLOS (United Nations Convention on the Law of the Sea), brought both ideas together and codified these arrangements in 1982 resulting in the categorisation of Ocean waters into Territorial (12 NM); EEZ (12 to 200 NM) and International.

Coastal governance is the integrated conduct of the policy, actions and affairs to protect the livelihood of coastal communities, coastal environment, sustainable use of coastal and marine resources as well as to conserve its biodiversity. It has three elements: (1) Legal (2) Institutional Framework (3) Mechanism of Implementation. The process of coastal governance should be integrated horizontally because it requires the participation of governmental institutions, the private sector, NGOs, academics, scientists, etc., as well as vertically across all of levels of governance within an integrated system with reciprocal collaboration and coordination.

The Indian Coast

India has a land frontier of 15,200 km (9,445 mi) and a coastline of 7,516.6 km (4,671 mi). Mainland: 5422.6 km. Island Territories: 2094 km. India's total Land Area is 3,287,263 km² continental shelf 372,424 km². Continental shelf comprises the submerged prolongation of the land territory of the coastal State. It does not include the deep ocean floor. Territorial sea (up to 12 nautical miles)-193,834 km². Exclusive Economic Zone 2,305,143 km².

66 coastal districts in mainland India; 3 in Andaman & Nicobar and 1 in Lakshadweep. Population of Coastal States and Union Territories 560 million. Population of Island Territories 0.44 million. Total Population of coastal districts, 171 million. Percentage of population in coastal districts of India 14.2 %. Number of Marine Fishing Villages 3288. Fishermen Population about 5 million comprising in 864,550 families.

Coastal Ecosystems: Coastal wetlands 43230 km² Major estuaries 97; Major Lagoons 34; Mangrove Areas 31; Area under mangroves 6740 km². Coral Reef Areas 5. Marine Protected Areas 31; Area Covered by MPA 6271.2 km². Very high Coastal Biodiversity

Only coastal regulation-no governance

For such a vast and varied coast there is no governance frame work, only regulatory system managed through CRZ. To understand coastal governance, the Economist Intelligence Unit measured the extent of governmental regulation and management across 20 key ocean economies. The survey (2015) identifies best practices and areas for improvement in two fundamental categories (policy and institutional capacity; the business environment for coastal activities) and four “asset” categories (water quality; minerals and energy; land; and living resources). India finds its place at 17, below Indonesia and Vietnam.

The governing law in India is Environmental Protection Act, 1986 (EPA) and CRZ and CZMA are its by-products. EPA is basically a policing and regulatory law and is not conducive to coastal development, management and governance. Supreme Court has laid down guiding principles only for coastal regulation. These are: First, protection and conservation of our environment is the paramount objective of Indian laws. Second, environmental decision-making must benefit from expert knowledge and inputs. Third, the government cannot arrogate to itself unbridled discretionary powers to dilute environmental norms. Neither EPA nor SC guidelines has anything for coastal/ocean governance.

Coastal cum Ocean Grabbing

The result is Coastal cum Ocean Grabbing that negatively affect the people and communities whose way of life, cultural identity and livelihoods depend on their involvement in small-scale fishing and closely related activities. These grabbing occurs mainly through policies, laws, and practices that are (re)defining and (re)allocating access, use and control of fisheries resources away from small-scale fishers and their communities, and often with little concern for the adverse economic and environmental consequences. Coastal/Ocean grabbing thus means the capturing of control by powerful economic actors of crucial decision-making around fisheries, including the power to decide how and for what purposes marine resources are used, conserved and managed now and in the future. These powerful actors, whose main concern is making profit, are gaining control of both the fisheries’ resources and the benefits of their use. “Sagar Mala” project is the typical example.

Conclusion

The remedy is to go in for holistic governance frame work through appropriate laws, institutional framework and mechanism of implementation. That is the way to go forward for a Coastal RBD Model that can bring prosperity to the coastal states and communities while preventing coastal/ocean grabbing and protecting and preserving the coastal ecosystem. This is the task cut out for the Tamil Nadu Science Forum and All India People’s Science Network.