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NAVIGATING INDIA'S BLUE ECONOMY: EMERGING LEGAL CHALLENGES AND GOVERNANCE FRAMEWORKS

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I. Introduction

Oceans covering more than seventy percent of the earth's surface have moved from being a peripheral policy concern to a central axis of economic strategy, environmental governance, and geopolitical competition. The rise of the "Blue Economy" paradigm reflects a recognition that maritime resources, fisheries, energy, minerals, tourism, and shipping lanes, can no longer be exploited without regard to ecological limits or overlapping sovereign claims. For India, a nation with a coastline of nearly 7,500 kilometres, nine coastal states, 1,382 islands, and an Exclusive Economic Zone exceeding two million square kilometres[1], the Blue Economy is simultaneously an economic opportunity and a governance challenge. The Government of India has embedded ocean-based growth within flagship instruments such as the Draft Blue Economy Policy and the Maritime India Vision 2030[2], projecting substantial increases in port capacity, shipbuilding, and coastal tourism. Yet ambition alone does not create governance capacity. This article asks whether India's existing legal and institutional architecture, assembled piecemeal across environmental, maritime, and fisheries statutes, is equipped to reconcile economic development with marine conservation, climate resilience, sustainable resource use, and maritime security. The central argument advanced here is that the Blue Economy is not reducible to an environmental policy label; it constitutes an emerging and distinct field of law that cuts across constitutional, environmental, admiralty, and international law, and that India's fragmented governance model is increasingly unable to manage the tensions inherent in this convergence.

[1]Ministry of Earth Sciences, Draft Blue Economy Policy for India (2021); Press Release, Press Info. Bureau, Ministry of Earth Sciences Invites Suggestions on Draft Blue Economy Policy for India (Feb. 17, 2021).
[2]Ministry of Ports, Shipping and Waterways, Maritime India Vision 2030 (2021).

II. Understanding the Blue Economy

The term "Blue Economy" gained currency through the sustainable-development discourse preceding the Rio+20 Conference and was subsequently absorbed into the vocabulary of multilateral institutions. The World Bank has described the concept as the sustainable use of ocean resources for economic growth, improved livelihoods, and employment, while preserving the health of the marine ecosystem[3]. The United Nations, through Sustainable Development Goal 14, frames the ocean agenda around the conservation and sustainable use of oceans, seas, and marine resources[4]. The Government of India, through the Ministry of Earth Sciences, has adopted a similarly integrative formulation, treating the Blue Economy as a subset of the national economy comprising the entire system of ocean resources and human-made economic infrastructure within the country's maritime jurisdiction[5].

What distinguishes the Blue Economy from the traditional "ocean economy" is not the sectors involved so much as the normative frame applied to them. The traditional ocean economy is essentially extractive and sectoral, treating fisheries, shipping, and offshore drilling as discrete industries subject to industry-specific regulation. The Blue Economy paradigm, by contrast, insists on an ecosystem-based and cross-sectoral approach in which economic exploitation is bounded by carrying capacity, cumulative environmental impact, and intergenerational equity. This reframing carries legal consequences: it requires instruments capable of managing cumulative effects across sectors rather than isolated licensing regimes, and it invites courts and tribunals to read environmental and constitutional guarantees into decisions that would otherwise be treated as purely commercial or infrastructural.

For India, this shift is captured in the seven thematic pillars of the Draft Blue Economy Policy, ranging from national accounting and ocean governance to coastal spatial planning, fisheries, offshore energy, deep-sea mining, and maritime security[6]. The breadth of these pillars illustrates why the Blue Economy cannot be governed through any single statute; it necessarily implicates constitutional federalism, environmental regulation, mining law, fisheries law, shipping law, and international maritime law simultaneously.

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[3]World Bank, Towards a Blue Economy: A Promise for Sustainable Growth in the Caribbean (2017), as reflected in the definitional framing adopted in the Draft Blue Economy Policy for India, supra note 1.
[4]G.A. Res. 70/1, Transforming Our World: The 2030 Agenda for Sustainable Development, Goal 14 (Sept. 25, 2015).
[5]Ministry of Earth Sciences, supra note 1.
[6]Id.

III. India's Legal and Institutional Framework

India's constitutional structure allocates authority over marine resources unevenly between the Union and the States. Fisheries within territorial waters extending to twelve nautical miles fall under Entry 21 of the State List in the Seventh Schedule, while offshore areas beyond territorial waters are governed by Union legislation[7]. This division means that a single fishing vessel moving from state territorial waters into the Exclusive Economic Zone may pass through at least two distinct regulatory regimes, an arrangement that produces uneven enforcement of conservation measures.

At the environmental end of the framework, the Environment (Protection) Act, 1986 remains the parent statute under which the Coastal Regulation Zone Notifications are issued[8]. The current CRZ Notification of 2019 divides the coastline into four zones, CRZ-I (ecologically sensitive intertidal areas), CRZ-II (developed urban coasts), CRZ-III (rural coasts, further divided by population density), and CRZ-IV (marine waters up to twelve nautical miles and tidal water bodies), and delegates clearance powers between the Ministry of Environment, Forest and Climate Change and State Coastal Zone Management Authorities[9]. The 2019 Notification, prepared on the recommendations of the Shailesh Nayak Committee, relaxed the No Development Zone in densely populated rural stretches and streamlined tourism-related clearances, illustrating the recurring tension between developmental flexibility and ecological caution that runs through successive CRZ revisions[10].

Biodiversity conservation in marine and coastal areas draws on the Biological Diversity Act, 2003, which establishes the National Biodiversity Authority and requires access and benefit-sharing arrangements for the use of biological resources, though its application to deep-sea and offshore genetic resources remains underdeveloped[11]. Maritime jurisdiction itself is defined by the Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976, which operationalises India's sovereign rights under the United Nations Convention on the Law of the Sea[12]. Port governance sits with the Indian Ports Act, 1908, alongside sector-

[7]India Const. sched. 7, list II, entry 21 (allocating fisheries within territorial waters to the State List).
[8]Environment (Protection) Act, No. 29 of 1986, India Code.
[9]Coastal Regulation Zone Notification, G.S.R. 37(E) (Jan. 18, 2019) (India).
[10]Id.; Report of the Committee under the Chairmanship of Dr. Shailesh Nayak, Ministry of Environment, Forest and Climate Change (2014).
[11]Biological Diversity Act, No. 18 of 2003, India Code.
[12]Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, No. 80 of 1976, India Code; United Nations Convention on the Law of the Sea art. 56, Dec. 10, 1982, 1833 U.N.T.S. 3.

specific instruments such as the Inland Vessels Act, 2021, which consolidated inland waterway safety and registration rules previously scattered across colonial-era enactments[13].

On the resource-extraction side, the Offshore Areas Mineral (Development and Regulation) Act, 2002 regulates reconnaissance, exploration, and production of offshore minerals, but had not resulted in a single mining lease being operationalised in two decades, prompting the 2023 Amendment Act to introduce auction-based allocation, a non-lapsable Offshore Areas Mineral Trust, and enhanced penalties[14]. Fisheries governance operates through the National Policy on Marine Fisheries, 2017, which seeks to align stock sustainability, co-management with fishing communities, and India's international obligations concerning illegal, unreported, and unregulated fishing[15].

Institutionally, this legal architecture is administered by an equally dispersed set of bodies: the Ministry of Ports, Shipping and Waterways, which now anchors the Maritime India Vision 2030[16]; the Ministry of Earth Sciences, custodian of the Draft Blue Economy Policy and the O-SMART scheme[17]; the National Centre for Sustainable Coastal Management, which prepares Coastal Zone Management Plans and demarcates the High Tide Line[18]; and the National Green Tribunal, which has emerged as the principal adjudicatory forum for CRZ violations since its establishment in 2010[19].

IV. Emerging Legal Challenges

The most persistent structural difficulty is fragmented governance. Ocean-related competence is spread across at least half a dozen central ministries, mining, shipping, fisheries, environment, earth sciences, and defence, besides coastal state governments, with no statutory apex body possessing binding coordinating authority. The proposed Blue Economy Advisory Council in the draft policy remains just that: a proposal, not yet placed on a statutory footing[20]. Overlapping jurisdiction over the same physical space, a port project may simultaneously

[13]Indian Ports Act, No. 15 of 1908, India Code; Inland Vessels Act, No. 33 of 2021, India Code.
[14]Offshore Areas Mineral (Development and Regulation) Act, No. 17 of 2003, India Code; Offshore Areas Mineral (Development and Regulation) Amendment Act, No. 27 of 2023, India Code.
[15]Ministry of Agriculture and Farmers Welfare, National Policy on Marine Fisheries (2017).
[16]Ministry of Ports, Shipping and Waterways, supra note 2.
[17]Ministry of Earth Sciences, O-SMART (Ocean Services, Modelling, Application, Resources and Technology) Scheme, Gov't of India.
[18]National Centre for Sustainable Coastal Management, Coastal Zone Management Plan Guidelines, Ministry of Environment, Forest and Climate Change.
[19]National Green Tribunal Act, No. 19 of 2010, India Code.
[20]Ministry of Earth Sciences, supra note 1 (proposing establishment of a National Blue Economy Advisory Council).

require CRZ clearance, environmental clearance under the EIA Notification 2006, forest clearance, and wildlife clearance, generates delay and, more troublingly, inconsistent outcomes, as different authorities apply different standards of scientific scrutiny to the same ecological data.

Marine pollution regulation remains reactive rather than preventive. The National Green Tribunal's handling of the sinking of the MV Rak off the Mumbai coast illustrates this: liability and compensation were determined only after ecological damage had occurred, applying the polluter-pays principle as a remedial rather than a preventive standard[21]. There is no dedicated marine pollution prevention statute analogous to the oil-pollution liability regimes found in other maritime jurisdictions.

Offshore renewable energy and deep-sea mining expose a regulatory vacuum at the frontier of the Blue Economy. The 2023 Amendment to the Offshore Areas Mineral Act addresses licensing and revenue-sharing but contains comparatively little on the ecological thresholds for seabed disturbance, an omission that becomes more consequential as India pursues polymetallic nodule exploration in the Central Indian Ocean Basin under its International Seabed Authority contract[22]. Offshore wind and floating solar installations, similarly, lack a dedicated permitting statute and are currently accommodated through ad hoc notifications rather than a coherent offshore energy law.

Coastal community rights present a recurring point of friction. National Green Tribunal decisions such as Kashiram Jairam Setye v. Anil Hoble and Marie Christine Perdriau v. Goa Coastal Zone Management Authority reveal a pattern in which commercial encroachment into the No Development Zone is frequently disguised as renovation or livelihood activity, placing the burden of vigilance on under-resourced State Coastal Zone Management Authorities[23]. The Tribunal's approach in Alexio Arnolfo Pereira v. State of Goa, striking down a state tourism policy that authorised beach shacks in contravention of the CRZ regime, underscores how state economic policy can drift out of alignment with central environmental notifications, precisely the coordination failure that integrated ocean governance is meant to prevent[24]. More recently, the Tribunal's treatment of the Great Nicobar infrastructure project, in which environmental

[21] Samir Mehta v. Union of India, Original Application No. 26 of 2015 (Nat'l Green Trib. Aug. 23, 2016) (India).
[22] International Seabed Authority, Exploration Contract for Polymetallic Nodules with the Government of India (2002, renewed).
[23] Kashiram Jairam Setye v. Anil Hoble, 2015 SCC OnLine NGT 117; Marie Christine Perdriau v. Goa Coastal Zone Mgmt. Auth., 2015 SCC OnLine NGT 23.
[24] Alexio Arnolfo Pereira v. State of Goa, 2014 SCC OnLine NGT 6655.

clearance was substantially upheld despite concerns over incomplete seasonal impact studies and the displacement of indigenous Shompen and Nicobarese communities, illustrates the difficulty of using project-by-project environmental clearance as a substitute for strategic, ecosystem-scale planning[25].

Illegal, unreported, and unregulated fishing by foreign vessels, including reported incidents involving vessels operating within the Indian Exclusive Economic Zone, exposes gaps in maritime domain awareness and inter-agency enforcement between the Indian Coast Guard, the Navy, and State fisheries departments[26]. Climate change compounds each of these pressures: sea-level rise and cyclone intensification threaten the same mangrove and reef ecosystems that the CRZ regime is meant to protect, yet climate adaptation planning remains largely absent from coastal zone management plans. Finally, unresolved maritime boundary questions with neighbouring states continue to complicate joint resource development, particularly in hydrocarbon-rich sedimentary basins.

V. Comparative Perspective

Other maritime jurisdictions offer instructive, if imperfect, models. The European Union's Marine Strategy Framework Directive imposes a binding obligation on member states to achieve good environmental status of marine waters, operationalising an ecosystem-based approach as a matter of law rather than policy aspiration, while the Maritime Spatial Planning Directive requires cross-sectoral spatial plans for all EU maritime waters[27]. The Commission's proposed European Ocean Pact envisages a single Ocean Act consolidating these strands by 2027, a level of legislative consolidation India has not yet attempted[28]. Australia's Oceans Policy and its network of statutory Marine Parks operate through a dedicated oceans authority with cross-sectoral planning powers, reducing the clearance-stacking problem visible in Indian port and mining projects. Norway's integrated management plans for its sea areas combine scientific ecosystem assessment with binding sectoral coordination between petroleum, fisheries, and shipping regulators, an approach frequently cited in bilateral India-Norway

[25]In re Great Nicobar Island Project, Nat'l Green Trib. (2022-2024) (India).
[26]See generally Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976, supra note 12; Indian Coast Guard, Extraordinary Gazette Notification on Enforcement against Illegal, Unreported and Unregulated Fishing.
[27]Council Directive 2008/56/EC, Establishing a Framework for Community Action in the Field of Marine Environmental Policy, 2008 O.J. (L 164); Directive 2014/89/EU, Establishing a Framework for Maritime Spatial Planning, 2014 O.J. (L 257).
[28]European Commission, The European Ocean Pact (2025).

maritime cooperation dialogues on green shipping[29]. Indonesia, despite weaker enforcement capacity, has experimented with a dedicated Coordinating Ministry for Maritime Affairs empowered to direct sectoral ministries, offering a federal-style coordination model relevant to India's own centre-state divide over fisheries and coastal management. The common thread across these jurisdictions is the existence of either a binding cross-sectoral planning instrument or a single authority empowered to enforce coordination, features that remain absent, or merely aspirational, in the Indian framework.

VI. The Way Forward

Three categories of reform merit consideration. First, integrated ocean governance legislation, an umbrella statute analogous to the EU's proposed Ocean Act, could consolidate coastal zone management, offshore mining, marine spatial planning, and fisheries conservation under common environmental thresholds, replacing the current practice of parallel clearances issued under separate notifications. Such a statute could place the proposed Blue Economy Advisory Council on a statutory footing, transforming it from a coordinating committee into a body with binding directive authority over sectoral ministries, comparable to Indonesia's coordinating ministry model.

Second, marine spatial planning should be made a mandatory, judicially enforceable precondition for offshore projects, drawing on the European Union's Maritime Spatial Planning Directive. This would require project-specific clearances to be assessed against a pre-existing cumulative-impact map rather than in isolation, addressing the fragmented, project-by-project approach criticised in the Great Nicobar proceedings.

Third, environmental impact assessment for offshore mining and energy projects requires strengthening. The Offshore Areas Mineral Act's 2023 amendments, though improving revenue transparency, should be paired with statutory seabed-disturbance thresholds and mandatory multi-season baseline studies, addressing precisely the gap the National Green Tribunal identified in the Great Nicobar matter[30]. Ecosystem-based management principles, already embedded in the Central Marine Fisheries Research Institute's Ashtamudi Lake fisheries

[29]Norway-India Joint Working Group on Maritime Cooperation, Outcomes of the Eighth Meeting (Nov. 17, 2022).
[30]In re Great Nicobar Island Project, supra note 25.

experiment, could be scaled into a national fisheries co-management framework, giving statutory recognition to Regional Fisheries Management Councils[31].

Finally, enhanced participation of coastal communities is both a normative and a practical necessity. National Green Tribunal litigation repeatedly shows that non-enforcement, rather than an absence of law, is the proximate cause of coastal degradation, and community-based monitoring, formalised through statutory co-management councils, is likely to close this enforcement gap more effectively than additional central-level notifications.

VII. Conclusion

India's Blue Economy ambitions rest on formidable natural endowments, a coastline of nearly 7,500 kilometres, a vast Exclusive Economic Zone, and one of the world's largest fishing populations, but these endowments are currently managed through a legal architecture built for an earlier, more sectoral conception of ocean use. The Draft Blue Economy Policy and Maritime India Vision 2030 articulate an integrated economic ambition that the underlying legal framework does not yet match: overlapping jurisdiction, reactive rather than preventive environmental regulation, and an absence of binding cross-sectoral planning instruments continue to generate the very governance failures that recur in National Green Tribunal litigation. Sustainable governance of India's oceans will require treating the Blue Economy not as an environmental appendage to economic policy but as a distinct field of law demanding its own consolidated statutory architecture, spatial planning obligations, and coordinating institutions. If India is to fulfil its stated ambition of becoming a leading maritime nation, the next phase of reform must match the scale of its economic vision with a corresponding investment in integrated ocean governance law.

[31] International Collective in Support of Fishworkers, National Workshop on the 2017 National Policy on Marine Fisheries, India (2018) (describing the ICAR-CMFRI Ashtamudi Lake clam-fishery co-management experiment).