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Legal Framework for Conservation of Coastal and Marine Environment of India: A Review

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Legal Framework for Conservation of Coastal and Marine Environment of India: A Review

Lawyers Initiative for Forests and Environment
(Independent Consultant)

November 2013

CMPA Technical Report Series

02

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List of Acronyms

BMC	Biodiversity Management Committee
CBD	Convention on Biological Diversity
CCRF	Code of Conduct for Responsible Fisheries
COP	Conference of Parties
CRZ	Coastal Regulation Zone
CRZ	Coastal Regulation Zone (CRZ) Notification, 2011
CVCA	Critical Vulnerable Coastal Area
CZMP	Coastal Zone Management Plan
DTEPA	Dahanu Taluka Environment Protection Authority
EC	Environment clearance
EEZ	Exclusive Economic Zone
EIA	Environment impact assessment
ESA	Ecologically Sensitive Areas
HTL	High tide line
IUCN	International Union for Conservation of Nature
LTL	Low tide line
MCPA	Marine and coastal protected area
MFRA	Marine Fishing Regulation Act
MoEFCC	Ministry of Environment, Forests and Climate Change
MPA	Marine protected area
NCZMA	National Coastal Zone Management Authority
PA	Protected area
UT	Union territory
WGEEP	Western Ghats Ecology Expert Panel
WPA	Wildlife Protection Act

Executive Summary

India has an extensive coastline that is characterized by various complex ecosystems. At the same time, there are dependent populations and concerns of urbanization, industrialization and commercial activities that directly affect the coastal ecosystem and the marine environment. At the Eleventh Conference of Parties to the Convention on Biological Diversity (CBD-COP 11), the Government of India expressed its interest in coastal and marine conservation. This study lists the legal framework for 'protected areas' in coastal and marine areas in India and outlines the procedures and the implications of the creation of such protected areas. Currently, the legal framework relating to coastal areas in India is highly fragmented, with a multiplicity of authorities and departments. From time to time, judicial interpretations, delegated legislations and elaboration of national policies have contributed to this situation. To assess the overall effectiveness of the protection afforded to fragile coastal and marine ecosystems, the demarcation of protected areas has to be further viewed in the broader context of other relevant laws. This also has to be viewed in the context of the international legal framework, in terms of obligations as well as normative standards. At the same time, it has to be taken into account that any regulation of a coastal area will affect the legal rights and obligations of the affected populations. Stakeholders also play an important role in the effectiveness and implementation of these regulations. On the basis of this review, this study suggests a participative, equitable and effective model of protection of the coastal and marine environment.

Chapter 1

Introduction

About the Study

India has an extensive coastline that is characterized by various complex ecosystems. At the same time, there are dependent populations and concerns of urbanization, industrialization and commercial activities that directly affect the coastal ecosystem and the marine environment.

The aim of the project is to identify the legal framework for 'protected areas' in coastal and marine areas in India, and to outline the procedures and the implications of the creation of such protected areas. To assess the overall effectiveness the protection afforded to fragile coastal and marine ecosystems, the demarcation of protected areas has to be further viewed in the broader context of other laws aimed at their protection in India.

The legal framework relating to coastal areas in India is highly fragmented, with a multiplicity of authorities and departments. From time to time, judicial interpretations, delegated legislations and elaboration of national policies

have contributed to this situation. This project seeks to outline the legal mandate, functions and responsibilities of these organizations and identify their strengths and weaknesses. This has to be viewed in the context of the international legal framework, in terms of obligations as well as normative standards.

At the same time, it has to be taken into account that any regulation of a coastal area will affect the legal rights and obligations of the affected populations. Stakeholders also play an important role in the effectiveness and implementation of these regulations. In the course of this review, we seek to identify the range of stakeholders. Thereafter, we aim to chart out the interests of these stakeholders that stand to be affected by marine and coastal regulations, and whether they have any role in the governance of coastal areas.

Finally, on the basis of our review, we aim to suggest a participative, equitable and effective model of protection of the coastal and marine environment.

Sources Examined

- Applicable laws, rules, regulations, standing orders and office memorandums thereunder at the national and state levels
- International instruments to which India is a signatory
- Reports or guidance manuals on aspects of coastal and marine protection produced by international organizations
- Reports or guidance manuals on aspects of coastal and marine protection produced by national or state-level authorities
- Judgements of judicial bodies

- Secondary sources such as books, articles, and reports

Methodology

- Map the applicable laws at the national and international levels.
- Identify the authorities at the national level and at the state level who are responsible for the different aspects related to the protection of marine and coastal areas.
- Chart out their functions and responsibilities, and identify the strengths and weaknesses of these bodies.

Chapter 2

Marine Protected Areas in International Legal Framework

The Earth's biological resources should be viewed not only in terms of their value to human economic and social development, but also in terms of their own intrinsic value. In light of the increasing pressure on natural resources caused by human activities, it has been recognized by the international community that concerted efforts need to be undertaken for the protection of fragile ecosystems.

Convention on Biological Diversity

Substantiating the principles of sustainable development and the precautionary principle articulated in the Rio declaration, the Convention on Biological Diversity (CBD) is the main international legal instrument for conservation of biological diversity. India has ratified the Convention on Biological Diversity. The CBD recognizes protected areas as a fundamental tool for safeguarding biodiversity.

The term 'protected area' is defined in Article 2 of the CBD as "a geographically defined area, which is designated or regulated and managed to achieve specific conservation objectives." Article

8 contains specific references to protected areas by encouraging Parties to:

- Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity.
- Develop, wherever necessary, guidelines for the selection, establishment and management of protected areas or the areas where special measures need to be taken to conserve biological diversity.
- Regulate or manage biological resources important for conservation of biological diversity within or outside protected areas, with a view to ensuring their conservation and sustainable use;
- Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering the protection of these areas.
- Cooperate in providing financial and other support for in-situ conservation, particularly to developing countries.

While the definition of 'protected areas' is applicable to both terrestrial and marine areas, the legal tools and techniques available for marine biodiversity conservation are much less advanced than those available for terrestrial environments. This despite the fact that the oceans make up about 70 per cent of our world in terms of surface area and constitute more than 90 per cent of the planet's biologically useful habitat. In addition, oceans perform vital ecosystem functions.¹ Further, these ecosystems are under an ever-increasing threat from activities within and outside these ecosystems. The Millennium Ecosystem Assessment, which is the first global assessment of the health of the planet's ecosystems, found that marine and coastal systems are among the most threatened on the planet.²

The concept of 'protected areas' has been traditionally developed and applied in the context of terrestrial areas. The scientific understanding of the operation of marine ecosystems is in its infancy, and the legal framework for marine protected areas (MPAs) in many countries continues to be dispersed and fragmented. The need for marine and coastal protected areas, developed in the context of specific scientific and management challenges, has been recognized by the international community.³

The decision adopted by the Conference of Parties (COP) to the Convention on Biological Diversity, at its seventh meeting, in 2004, on marine and coastal biological diversity,⁴ specifically noted the following.

11. *Notes* that marine and coastal biodiversity is under rapidly increasing and locally acute human pressure, such that globally, regionally and nationally marine and coastal biodiversity is declining or being lost. One of the reasons for this level of threat is the very low level of development of marine and coastal protected areas;

12. *Notes* that marine and coastal protected areas have been proven to contribute to:

- a. Protecting biodiversity;
- b. Sustainable use of components of biodiversity; and
- c. Managing conflict, enhancing economic well-being and improving the quality of life;

14. *Notes* also that according to available data, marine and coastal ecosystems are severely underrepresented as protected areas, and these protected areas probably protect a very small proportion of marine and coastal environments globally and consequently make a relatively small contribution to sustainable management of marine and coastal biodiversity;

Goals of Marine and Coastal Protected Areas

16. *Agrees* that marine and coastal protected areas are one of the essential tools and approaches in the conservation and sustainable use of marine and coastal biodiversity;

17. *Notes* that there is an international body of evidence demonstrating that those marine and coastal protected areas where extractive uses are excluded have benefits for fisheries in surrounding areas, and in many cases for communities, and for sustainable tourism and other economic activities within and outside the marine and coastal protected area;

18. *Agrees* that the goal for work under the Convention relating to marine and coastal protected areas should be:

The establishment and maintenance of marine and coastal protected areas that are effectively managed, ecologically based and contribute to a global network of marine and coastal protected areas, building upon national and regional systems, including a range of levels of protection, where human activities are managed, particularly through national legislation, regional programmes and policies, traditional and cultural practices and international agreements, to maintain the structure and functioning of the full range of marine and coastal ecosystems, in order to provide benefits to both present and future generations.

21. *Agrees* that an effective marine and coastal biodiversity management framework as set out in Appendix 3 to Annex I to the present decision would comprise sustainable management practices and actions to protect biodiversity over the wider marine and coastal environment, including integrated networks of marine and coastal protected areas consisting of:

- a. Marine and coastal protected areas, where threats are managed for the purpose of biodiversity conservation and/or sustainable use and where extractive uses may be allowed; and
- b. Representative marine and coastal protected areas where extractive uses are excluded, and other significant human pressures are removed or minimized, to enable the integrity, structure and functioning of ecosystems to be maintained or recovered;

The declaration of the COP to the Convention on Biological Diversity at its 10th Meeting⁵ on Protected Areas also made the following observations:

Invites Parties to

- a. Promote the application of the ecosystem approach that integrates protected areas into broader land and/or seascapes for effective conservation of biological diversity and facilitate, in accordance with their management objectives, sustainable use within protected areas;
- e. Expedite establishment where appropriate of multi-sectoral advisory committees for strengthening inter-sectoral coordination and communication to facilitate the integration of protected areas in national and economic development plans, where they exist;

Marine Protected Areas

21. *Encourages* Parties, other Governments and competent international organizations to cooperate, as appropriate, collectively or on a regional or sub regional basis, to identify

and adopt, according to their competence, appropriate measures for conservation and sustainable use in relation to ecologically or biologically significant areas, and in accordance with international law, including the United Nations Convention on the Law of the Sea, including by establishing representative networks of marine protected areas in accordance with international law and based on best scientific information available, and to inform the relevant processes within the United Nations General Assembly;

23. *Encourages* Parties to establish and/or strengthen a range of measures for long-term appropriate management of marine protected areas under national jurisdiction or in areas subject to international regimes competent for the adoption of such measures and to incorporate good governance principles;

24. *Also encourages* Parties to establish marine protected areas for conservation and management of biodiversity as the main objective and, when in accordance with the management objectives for protected areas, as fisheries management tools;

Aichi Targets

Aichi Target 11 specifically relates to coastal and marine protected areas.

Target 11: *By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape.*⁶

Other International Instruments

India has also ratified the United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea dated 10 December 1982,

Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UN Fish Stocks Agreement). Under this Agreement, coastal States and States whose people are fishing on the high seas shall have a duty to, *inter alia*, protect biodiversity in the marine environment, and to take measures to prevent or eliminate overfishing and excess fishing capacity and to ensure that levels of fishing efforts do not exceed those that commensurate with the sustainable use of fishery resources.⁷ The General Principles articulated in Article 5 of the Agreement states that Coastal State shall:

- a. Adopt measures to ensure long-term sustainability of straddling fish stocks and highly migratory fish stocks and promote the objective of their optimum utilization;
- b. Assess the impacts of fishing, other human activities and environmental factors on target stocks and species belonging to the same ecosystem or associated with or dependent upon the target stocks;
- c. Adopt, where necessary, conservation and management measures for species belonging to the same ecosystem or associated with or dependent upon the target stocks, with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened;
- d. Minimize pollution, waste, discards, catch by lost or abandoned gear, catch of non-target species, both fish and non-fish species, (hereinafter referred to as non-target species) and impacts on associated or dependent species, in particular endangered species, through measures including, to the extent practicable, the development and use of selective, environmentally safe and cost-effective fishing gear and techniques;
- e. Protect biodiversity in the marine environment;
- f. Take measures to prevent or eliminate overfishing and excess fishing capacity and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of fishery resources;
- g. Take into account the interests of artisanal and subsistence fishers;
- h. Implement and enforce conservation and management measures through effective monitoring, control and surveillance.

Notes

1. Barbara Lausche, "Guidelines for Protected Areas Legislation", IUCN Environmental Policy and Law Paper No. 81, available at http://www.mote.org/clientuploads/MPI/P3_Ch2.pdf
2. Paul Dayton *et. al.*, "Coastal Systems", Ecosystems and Human Well-being: Current State and Trends, Volume 1 (2005), Report of the Millennium Ecosystem Assessment, available at <http://www.unep.org/maweb/documents/document.288.aspx.pdf>
3. Barbara Lausche, "Guidelines for Protected Areas Legislation", IUCN Environmental Policy and Law Paper No. 81, available at http://www.mote.org/clientuploads/MPI/P3_Ch2.pdf
4. Decision of the Conference of Parties dated 13 April, 2004 (UNEP/CBD/COP/DEC/VII/5), available at <http://www.cbd.int/doc/decisions/cop-07/cop-07-dec-05-en.pdf>
5. Decision of the Conference of Parties dated 29 October, 2010 (UNEP/CBD/COP/DEC/X/31) available at www.cbd.int/doc/decisions/cop-10/cop-10-dec-31-en.pdf
6. Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets, available at <http://www.cbd.int/decision/cop/?id=12268>
7. Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, available at http://www.un.org/depts/los/convention_agreements/texts/fish_stocks_agreement/CONF164_37.htm

Chapter 3

Marine Protected Areas in India

Keeping with the international commitments and in greater National interest, the Government of India and the Governments of the coastal States are under a legal obligation to control marine pollution and protect the coastal-environments.

S. Jagannath versus Union of India
Supreme Court judgment(dated 11 October 1996)

Environmental Conservation in Indian Constitution

Under Article 253 of the Constitution of India, the Indian Parliament has the power to make any law for the whole or any part of the territory of India for implementing any treaty, agreement or convention with any other country or countries or any decision made at any international conference, association or other body. This has two implications: first, this imports the standards, duties and obligations of the international instruments, and the decisions taken under such instruments, to which India is a party. Second, this places the legislative responsibility on the Centre to implement the instruments to which India has acceded. This is important in the quasi-federal structure of India, where the legislative powers

are distributed between the Centre and the states. Consequent to this provision, the Central Government can take measures to implement international treaties, even if the subject matter falls within the legislative competence of the states.

In terms of executive power, Article 73 of the Constitution states that the executive power of the Union shall extend to matters with respect to which the Parliament has power to make laws; and these rights, authorities and jurisdictions are exercisable by the Government of India by virtue of any treaty or agreement.

The Supreme Court, in the landmark judgment of *Vishakha v. State of Rajasthan*, specifically spells

out that international laws and conventions have a binding effect insofar as domestic law and policy is concerned. The operative portion of the judgment is excerpted in the following:

“Any International Convention not inconsistent with the fundamental rights and in harmony with its spirit must be read into these provisions to enlarge the meaning and content thereof, to promote the object of the constitutional guarantee. This is implicit from Article 51(c) and enabling power of the Parliament to enact laws for implementing the International Conventions and norms by virtue of Article 253 read with Entry 14 of the Union List in Seventh Schedule of the Constitution. Article 73 also is relevant. It provides that the executive power of the Union shall extend to the matters with respect to which Parliament has power to make laws. The executive power of the Union is, therefore, available till the Parliament enacts to expressly provide measures needed to curb the evil.”

In the specific context of the Convention of Biodiversity, and its implications on the domestic laws of India, the Supreme Court, in *K.M. Chinnappa and T.N. Godavarman Thirumalpad v. Union of India*,¹ took note of certain decisions of the Convention on Biological Diversity, and made the following observation:

Duty is cast upon the Government under Article 21 of the Constitution of India to protect the environment and the two salutary principles which govern the law of environment are: (i) the principles of sustainable development and (ii) the precautionary principle. It needs to be highlighted that the Convention on Biological Diversity has been acceded to by our country and, therefore, it has to implement the same. As was observed by this Court in Vishaka and Ors. v. State of Rajasthan and Ors. (1997 (6) SCC 241), in the absence of any inconsistency between the domestic law and the international conventions, the rule of judicial construction is that regard must be had to international convention and norms even in construing the domestic law. It

is, therefore, necessary for the Government to keep in view the international obligations while exercising discretionary powers under the Conservation Act unless there are compelling reasons to depart therefrom.

It is interesting to note that the Cabinet Secretariat of the Government of India, through its Office Memorandum (OM) dated 23 August, 2011,² stated the following: “it was resolved that where domestic laws are required to be amended or new laws are required to be amended to meet the obligations associated with such Conventions/Treaties, such Conventions/Treaties will be acceded to, or ratified, only after amending the relevant domestic laws, or enacting appropriate legislations.” This OM is interesting for the following points:

- It only talks about prospective action of ratification or accession to treaties and instruments. The impact of this notification in respect of obligations already undertaken through various international legal instruments is unclear.
- It indicates a level of sanctity associated with the accession/ratification of a legal instrument. The implication of this could be that if there is an accession or ratification to an international instrument, there is an assumption that the entire instrument, subject to any reservation specifically spelt out, would be applicable in its entirety as domestic law.
- ‘Strict compliance’ to this direction, as required by the OM, would also make accession/ratification of instruments onerous on the part of the Government. This can be even more difficult in the federal context of India in terms of the uniform application of the obligations entered into through international instruments. While this would lead to adoption of stricter standards and higher accountability, this should not lead to a reluctance on the part of India to participate in international instruments.

MPAs in India

India has a coastline of more than 7500 km,³ with an exclusive economic zone (EEZ) of 2.02 million km² and a continental shelf area of 468,000 km², spread across 10 coastal states and seven union territories, including the islands of Andaman and Nicobar, and Lakshadweep. The extreme diversity of the Indian marine ecosystem is attributed to the geomorphological and climatic variations along the coast. The coastal and marine habitat includes nearshore, gulf waters, creeks, tidal flats, mudflats, coastal dunes, mangroves, marshes, wetlands, seaweed and seagrass beds, deltaic plains, estuaries, lagoons and coral reefs.⁴ There are no legally defined categories of MPAs in Indian law. Currently, existing MPAs are either declared as sanctuaries or national parks. Significantly, in India, MPAs are designated for conservation and preservation of the ecosystem, and not for fisheries management.

Currently, there are 31 MPAs along India's coastline (including the islands) that have been officially declared for conserving and protecting coastal and marine biodiversity (SCBD 2006). There are another 100 protected areas that have terrestrial or freshwater components, which partly contain the marine environment. Most

of the MPAs were designated during the 1980s and early 1990s. They were notified as either 'national parks' or 'wildlife sanctuaries', under the Wildlife (Protection) Act, 1972, where, in most cases, no extractive activity is allowed (Rajagopalan, 2008). These MPAs are sites of rich biodiversity. Over 700 species of seagrass and 25 species of marine mammals (Cetaceans and Sirenians) are found in Indian waters. Sea cows, for example, are found in the Gulf of Mannar, the Gulf of Kutch and the waters off the Andaman and Nicobar Islands.

The islands of Andaman and Nicobar and Lakshadweep, along with the Sundarbans, are considered biodiversity hotspots, where large numbers of endemic plants and animals exist.⁵ In fact, recently, with an aim of scaling up marine protection, necessary for sustainable development of the ocean, a global initiative of the Sylvia Earle Alliance 'Mission Blue' and the International Union for Conservation of Nature (IUCN), has listed the Andamans and the Lakshadweep group of islands among the 50 'Hope Spots, worldwide.⁶ The following sections look at the legal framework of 'protected areas' in India, and at other laws aimed at protecting the coastal and marine environment of India.

Notes

1. *K.M. Chinnappa and T.N. Godavarman Thirumalpad v. Union of India*, (2002) 10 SCC 606
2. Accession/Ratification of International Conventions/Treaties Office Memorandum No. 1/13/2/2010- Cab, Available at http://cabsec.nic.in/showpdf.php?type=circulars_23august_2011&special
3. The official estimate of the coastline of India varies greatly. As per the Report of the Swaminathan Committee, "India has a coastline of about 7,500 kms of which the mainland accounts for 5,400 kms, Lakshadweep coasts extend to 132 kms and Andaman & Nicobar islands have a coastline of about 1,900 kms", http://www.iczmpwb.org/main/pdf/ebooks/swaminathan_Report.pdf. In another estimate, the coastline of India is 8129 kms. (Manual on Fishery Statistics, Central Statistics Office, Ministry of Statistics and Programme Implementation (2011), http://mospi.nic.in/mospi_new/upload/manual_fishery_statistics_2dec11.pdf)
4. Ramya Rajgopalan, Marine Protected Area in India, Samudra Monograph (Published by ICSF, 2008), available at aquaticcommons.org/1562/1/Samudra_mon5.pdf
5. Ramya Rajgopalan, Marine Protected Area in India, Samudra Monograph (Published by International Collective in Support of Fisheries, 2008), available at aquaticcommons.org
6. A Hope Spot is an area of ocean that merits special protection because of its wildlife and significant underwater habitats. Information available at <http://mission-blue.org/hope-spots-new/>

Chapter 4

Coastal and Marine Conservation in Indian Legal Instruments

10

Wildlife (Protection) Act, 1972 and Marine Protected Areas

The Wildlife (Protection) Act, 1972 (Wildlife Protection Act), lays down the overall regime of identifying and notifying areas as 'protected areas'. The need to protect the marine flora and fauna was specifically recognized and reflected in the statement of objects and reasons of the Wildlife (Protection) Amendment Act, 1991.¹

The amendment of the Wildlife Protection Act in 2002 introduced the definition of 'protected area' through the inclusion of Section 2(24). Under the definition, a protected area means "a National Park, a Sanctuary, a conservation reserve or a community reserve area as notified under sections 18, 35, 36A and 36C of the Act." It may be noted that the definition under the act is not an inclusive one rather, it specifies only four categories of protected area.

The procedural requirements for declaration, governance structures, and entailing rights, restrictions and obligations for each category is outlined in the Wildlife (Protection) Act, 1972. In

this section, each category of 'protected areas', and the respective implications and applicability are examined in the context of marine areas.

Sanctuaries²

Areas of "adequate ecological, faunal, floral, geomorphological, natural or zoological significance" can be declared as sanctuaries for the purpose of protecting, propagating or developing wildlife or its environment.

Sanctuaries can be declared by a state government or by the Central Government in respect of any land transferred to it by a state government. The procedure for declaration as well as the implications of such declaration is the same.³

Under Chapter IV of the Wildlife Protection Act, there is a set of procedures for areas falling within any reserve forest⁴ or territorial waters,⁵ and there is a separate procedure for all other areas. In terms of procedural requirements for the declaration of sanctuaries, they have been broadly classified and discussed as in the following.

Areas not Comprising Territorial Waters (and Reserve Forests)

Section 18(1) of the Wildlife Protection Act states, “The State Government may, by notification, declare its intention to constitute any area other than an area comprised within any reserve forest or the territorial waters as a sanctuary”. (emphasis added)

It is therefore clear that the procedure detailed in Sections 18 to 26 relates only to sanctuaries that do not fall in the category of reserve forests or territorial waters. For such areas, the state government has to first declare its intention to notify an area as a sanctuary. Thereafter, the Collector is responsible for determining the existence, nature and extent of rights claimed by any person in or over the notified area. The act also includes provisions for providing adequate notice in regional languages, so that the affected people can meaningfully assert their claims. The act clearly requires that the Collector has to pass an order in respect of every claim raised— whether it admits or rejects the claim. In case a claim in respect to a notified land is admitted, the Collector can adopt any of these three possible actions: (1) exclude such land from the limits of the sanctuary, (2) proceed to acquire such land in lieu of compensation as provided under the Land Acquisition Act or (3) In consultation with the Chief Wildlife Warden, allow continuance of any rights over the land within the limits of the sanctuary. In any case, if a claim is admitted, the claimant will not be left without any relief. Sub-section (a) of section 26A, which deals with such sanctuaries, clearly states that only after the settlement of all claims can an area be declared a sanctuary. Further, the state government also has the responsibility of making alternate arrangements for fuel, fodder and other forest produce in the interim period till the final settlement of claims.

It is interesting to note that these safeguards were implemented only through the amendment of the Wildlife (Protection) Act in 1991. As observed by the Supreme Court in *Pradip Kishen*

v. Union of India,⁶ “In substance, the thrust of the Section is the same except that earlier the State Government could straightaway declare any area to be a Sanctuary by issuing a notification but under the amended Section, it has to declare its intention to constitute any area other than an area comprised within any reserved forest or territorial waters as a Sanctuary”.

However, though these safeguards have been implemented in these areas, they are not applicable to areas that fall within reserve forests or territorial waters.

Areas comprising Territorial Waters

Protected areas in territorial waters (and reserve forests), face a peculiar blind spot. For a sanctuary comprising these areas, only a summary procedure under sub-section (b) of Section 26A is provided. For such areas, the state government can merely issue a notification specifying the limits of the area and declare it to be a sanctuary from a specified date.

For territorial waters, the state government is required to obtain the prior concurrence of the Central Government, and the limits of the area of territorial waters to be included in the sanctuary are to be determined in consultation with the Chief Naval Hydrographer of the Central Government.

Only a cursory regard is paid to the interests of the affected population in the second proviso to sub-section (b) of Section 26, which states that “the limits of the territorial waters to be included in the sanctuary shall be determined ... *after taking adequate measures to protect the occupational interests of the local fishermen*”. This provision pays mere lip service to the concerns of the affected communities and does not provide any assurance, or even avenues, to raise legitimate claims. There is no requirement of publication of any declaration of the intention to notify a marine area as a sanctuary. Nor is there any procedure for raising any claims. In fact, nowhere does it even mention consultation

with local communities before declaring an area as a Sanctuary. The entire process rests purely on the subjective opinion of the state government wherein “adequate measures” are to be taken to protect the occupational interests of the local fishermen.

The implication of demarcating an area as a sanctuary is that it imposes restrictions on entry, access and activities inside such areas. Only government officials and persons permitted by the Chief Wildlife Warden or other authorized officers are allowed to enter or reside in a sanctuary. Permits for the same may be issued only for restricted purposes such as scientific research, study of wildlife, photography or even tourism. For any activity that destroys, exploits or removes wildlife, or damages the habitat of wild animals, a permit is required from the Chief Wildlife Warden, provided that the state government is satisfied that “such removal of wildlife from the sanctuary...is necessary for the improvement and better management of wildlife therein”.⁷ There is, therefore, a legislative restriction on the types of activity that can be permitted within sanctuaries.

National Parks⁸

Areas of ecological, faunal, floral, geomorphological or zoological association or importance may be declared national parks for protecting, propagating or developing wildlife or its environment.

A national park can be declared by the state government, or by the Central Government in respect of any land transferred to it by the state government. The procedure for declaring an area a national park by a state government is provided under Section 35. Section 38(2), applicable for a national park declared by the Central Government, refers to the same provisions. The procedure for the declaration of a national park is substantially similar to the procedure relating to sanctuaries, and follows a similar differentiation between areas comprising reserve forests and territorial waters and all other areas.

The provision to sub-section (1) of Section 35 states that where any part of the territorial waters is proposed to be included in a national park, only the provisions of Section 26A will apply. For other areas, sub-section (1) of Section 35 outlines the ordinary procedure for declaring the intention of the state government to demarcate an area as a national park, and sub-section (3) states that the procedure for determination and settlement of existing rights applicable to sanctuaries under Sections 19 to 26A would apply to national parks as well.

Therefore, the same issues identified in the process of declaring territorial waters as sanctuaries are applicable for national parks as well. This is further clarified in sub-section (3) of Section 35, which mentions that when an area is intended to be declared a national park, the provisions of the procedure for determination and settlement of existing rights are applicable only “in relation to any land in such area”.

The primary difference between sanctuaries and national parks is that in the case of the latter, all rights in respect to lands that are proposed to be included in the national park have to be vested with the state government. For a sanctuary, on the other hand, a Collector may allow, in consultation with the Chief Wildlife Warden, the continuance of any right of any person in or over any land within the limits of the sanctuary.⁹ The activities in and relating to national parks are more restricted. Sub-section (8) of Section 35 imports the application of some other provisions relating to sanctuaries in the context of national parks. However, it does not include subsection (d) of Section 33 to national park. The implication of this is that certain activities that are allowed in sanctuaries – that is, regulated grazing or movement of livestock, – are not permissible in national parks.

The oversight of the rights of communities dependent on fishing for livelihoods was sought to be resolved to some extent by the Supreme Court in the case of *Animal and Environmental Legal Defence Fund v. Union of India*,¹⁰ where,

in the context of the ecological impact of fishing permits within a national park, it observed that “while every attempt must be made to preserve the fragile ecology of the forest area, and protect the Tiger Reserve, the right of the tribals formerly living in the area to keep body and soul together must also receive proper consideration. Undoubtedly, every effort should be made to ensure that the tribals, when resettled, are in a position to earn their livelihood.”

In terms of activities that destroy, exploit or remove wildlife, or damage the habitat of wild animals, the restriction for national parks, mentioned in Sub-section (8) of Section 35, is similar to that for Sanctuaries under Section 29. The only difference is that for sanctuaries, the permit is issued by the Chief Wildlife Warden, and for national parks, the responsible authority is the National Board for Wildlife. The legislative restriction on the type of permissible activities is similar to that in the context of sanctuaries, that is, the state government has to be satisfied that “such removal of wildlife from the sanctuary... is necessary for the improvement and better management of wild life therein”.

Conservation Reserves

The concept of conservation reserves and community reserves was introduced through the amendment of the Wildlife Protection Act in 2003. Both aim at the twin objectives of improving the socio-economic conditions of the people and conservation of wildlife.

Conservation reserves are areas which are owned by the state government and are adjacent to, or link to protected areas.

Since the criteria indicate that a conservation reserve can be “any area”, and that the purpose is to protect “landscapes, seascapes, flora, fauna and their habitat” (emphasis added), a conservation reserve could technically include a marine area.

Sub-section (1) of section 36A provides for consultation with local communities for such a declaration. Further, the implications of declaration of an area as a conservation reserve are far less stringent than for a Sanctuary or a national park in terms of restrictions on permissible activities. It mostly relates to responsible and ecologically benign behaviour

Table 1
Matrix of Marine Activities that may be Appropriate for MPAs under WPA

	National Park	Sanctuary	Community Reserve	Conservation Reserve
	Y (With permission)	Y	Y	Y
Non-extractive traditional use	N	N	Y	
Non-extractive recreation – e.g, tourism	Y (With restrictions)			
Shipping (except as may be unavoidable under international maritime law)	N	N	NA	NA
Traditional fishing/collection in accordance with cultural tradition and use	N	Y		
Untreated waste discharge N	N	N	N	N
Fishing/collection: long- term and sustainable local fishing				
Harbours, ports, dredging	N	N		
Mining (seafloor as well as sub-seafloor)	N	N		
Renewable energy generation, e.g, wind-mills	N	N	NA	NA

Table 2
Governance Framework under the Wildlife (Protection) Act, 1972

S. No	Authorities	Functions	Comments
1.	National Board for Wildlife (NBWL)	The main function of the Board in the context of MPAs is making recommendations regarding setting up of management or national parks, sanctuaries and other protected areas, and regarding matters relating to restrictions of activities in these areas. Preparing and publishing a status report. The board has the discretionary power to constitute a standing committee for the purpose of performing such duties that are delegated to it by the board.	The NBWL as a full body rarely meets. The functions are carried out by the standing committee headed by the Forest and Environment Minister. Proactive conservation initiatives are rarely taken, and it serves essentially as a 'clearing house' for infrastructure and development projects located in protected areas and within a radius of 10 km.
2.	State Board for Wildlife (SBWL)	With respect to the MPAs, it is the duty of the board to advise the state government in the selection and management of the areas to be declared as protected areas. Any matter connected with the protection of wildlife that may be referred to it by the state government.	Not much information is available regarding whether any of the state boards have played a proactive role with respect to its statutory functions. The SBWL rarely meets. This is perhaps due to the fact that it is headed by the Chief Minister.
3.	Chief Wildlife Warden	The Chief Wildlife Warden is the authority that shall control, manage and maintain all sanctuaries. The Chief Wildlife Warden is empowered to pursue the construction of roads, bridges, buildings, fences or barriers that are necessary for the purpose of the sanctuary. S/he may take steps for the preservation of the sanctuary, security of wildlife and improvement of habitats and may prohibit grazing activities keeping in mind the interest of the wildlife. State government shall constitute an advisory committee, consisting of the Chief Wildlife Warden or his/her nominee (not below the rank of Conservator of Forests) who shall render advice regarding measures to be taken for better conservation and management of a sanctuary, including the participation of the people living in and around the sanctuary.	The statutory powers of the CWLW are significant. However, the powers with respect to allowing destruction of wildlife and its habitat have been curtailed in view of the Supreme Court order in <i>T.N Godavarma v. Union of India</i> (order dated 14 February 2000 and order dated 25 November 2005 in W.P (C) No. 202 of 1995). Though a lot of powers are vested with the CWLW statutorily, the actual power to declare a protected area as well as settle rights vests with the state government, the District Collector/ Magistrate being a focal point.

within the area, rather than a restriction of rights.

For the purpose of administration of such areas, the act provides that the state government is to constitute a Conservation Reserve Management Committee, which includes representation of the village panchayats of the affected areas and non-governmental organizations.

Community Reserves

Community reserve, a recently introduced concept, pertains only to land. The state government may notify any private or community

land as a community reserve where individuals or any community volunteers to protect the flora and fauna, traditions, cultures and practices related to the area. The act provides for the constitution of Community Reserve Management Committee for the administration of such areas. However, the concept of community reserves is related only to land, and marine areas are not to be included within its scope.

The Environment (Protection) Act, 1986 and MPAs

The Environment (Protection) Act, 1986, is the

umbrella legislation for the protection of the environment, and allows the Central Government wide-ranging powers to address its different aspects. Some of the relevant provisions are excerpted here:

Section 3

1. Subject to the provisions of this Act, the Central Government shall have the power to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution.

It specifically mentions that the Central Government has the power to impose “restriction on areas in which any industries, operations, or processes or class of industries, operations or processes”

The Environment (Protection) Rules (EPR), 1986 further elaborate the power of the Central Government to impose prohibitions and restrictions.

5. Prohibitions and restrictions on the location of industries and the carrying on of processes and operations in different areas

1. The Central government may take into consideration the following factors while prohibiting or restricting the location of industries and carrying on of processes and operations in different areas:

- v. The biological diversity of the area which, in the opinion of the Central Government needs to be preserved.
- vii. Net adverse environmental impact likely to be caused by an industry, process or operation proposed to be prohibited or restricted.
- viii. Proximity to a protected area under the Ancient Monuments and Archaeological Sites and Remains Act, 1958 or a Sanctuary, National Park, game reserve or closed area notified as such under the Wildlife (Protection) Act, 1972 or places protected under any treaty, agreement or convention

with any other country or countries or in pursuance of any decision made in any international conference association or other body.

- x. Any other factor as may be considered by the Central Government to be relevant to the protection of the environment in an area.

From time to time, the Central Government, through the Ministry of Environment, Forests and Climate Change, has notified ‘Eco-Sensitive Zones’ under Section 3(1) and Section 3(2)(v) and (xiv) of the Environment (Protection) Act, 1986, read with Rule 5(3) of the Environment (Protection) Rules, 1986. In declaring an area as an Ecologically Sensitive Area (ESA), a draft notification is published inviting objections and suggestions from all persons likely to be affected by the notification.

The Supreme Court of India has been hearing a petition filed by Goa Foundation with respect to notifying ESA around national parks and sanctuaries in the country. The Supreme Court on 4 December 2006 directed as an interim measure that all projects within 10 km of the boundary of the national parks and sanctuaries should be referred to the Standing Committee of the National Board for Wildlife under Sections 5(b) and (c) (ii) of Wildlife (Protection) Act, 1972.

The Government of India has specific criteria for declaration of ESAs as identified in the Pronab Sen Committee Report. The Pronab Sen Committee has defined ecological sensitivity or fragility as follows:

Ecological sensitivity is defined as the imminent possibility of:

- a. permanent and irreparable loss of extant life forms from the world; or
- b. significant damage to the natural processes of evolution and speciation.

The committee has identified 13 principal parameters of ecological sensitivity falling into three broad categories of ecological significance.

Box 1
Primary Criteria for Identifying Ecologically Sensitive Areas

Primary Criteria

Species based

1. Endemism
2. Rarity
3. Endangered species
4. Centres of evolution of domesticated species

Ecosystem based

5. Wildlife corridors
6. Specialized ecosystems
7. Special breeding site/area
8. Areas with intrinsically low resilience
9. Sacred groves
10. Frontier forests

Geomorphological features based

11. Uninhabited islands in the sea
12. Steep slopes
13. Origins of rivers

The first of these categories is related to species and defines the characteristics of species that are or may become threatened with extinction. The second category relates to ecosystems. Some of these derive their importance from being essential to the survival of the first category, while the rest are critical for maintaining the range and pace of evolution and speciation. The third category includes geo-morphological conditions that are known to have a substantial effect on ecosystems at large. It should be noted that these parameters relate only to ecological sensitivity and not to environmental sensitivity, for which a broader set of criteria may need to be developed. The list of these primary parameters or criteria is provided in Box 1.

In the opinion of the committee, areas that meet even one of these primary criteria deserve to be protected without any additional factor or consideration being brought in. Despite specific recommendations, as well as fixing selection criteria, the Pronab Sen Committee report seems to have been forgotten.

The MoEFCC has declared ESAs under the Environment (Protection) Act 1986. One of the first instances of the use of these legal provisions by the Central Government was Murud-Janjira, a coastal village in Raigad District of Maharashtra, in January 1989. The notification currently prohibits the location of industries in the region (except industries linked with tourism, for which environmental impacts are to be assessed) to preserve the mangrove ecosystem of Murud. However, the specific term 'ESA' was not used in that notification. The second ESA in Maharashtra is Dahanu. In 1988, the Bombay Suburban Electric Supply Limited proposed to set up a 500 MW thermal power plant in Dahanu Taluka of Maharashtra. Alarmed by its environmental consequences, the residents of Dahanu filed a writ petition in the Mumbai High Court. The Mumbai High Court, and later the Supreme Court, permitted the setting up of the thermal power plant in their respective orders. However, local groups such as the Dahanu Taluka Environment Protection Group, with assistance from groups like the Bombay Environmental

Action Group (BEAG), lobbied for declaration of the area as an ESA. The notification was issued in 1991, but only after the thermal power plant was permitted. Also it was the first time that the term ‘Ecologically Fragile Area’ was used in such a notification. However, it took a Supreme Court order in 1996 to finally constitute the Dahanu Taluka Environment Protection Authority (DTEPA) to monitor the compliance with the Dahanu ESA Notification. The DTEPA has actively examined the environmental impact of proposed development projects in the region. It flue gas desulphurization plant was installed in the thermal power plant and prevented the establishment of a port in Dahanu. The DTEPA’s role may have been facilitated by the fact that it has executive powers to safeguard Dahanu – it is not under governmental control and is answerable only to the Supreme Court.¹³

The notification of ESAs is an important conservation tool. However, ESAs cannot be termed protected areas in view of the fact that only a limited number of activities are prohibited in such areas. Nevertheless, the option of ESAs is worth exploring for the following reasons:

1. The process of declaration is much simpler and quicker compared with declaration of national parks and wildlife sanctuaries.
2. The specific threats in a particular area can be identified and only appropriate restrictions imposed rather than prohibiting all kinds of activity.
3. They have a limited adverse impact on livelihoods in view of the fact that virtually no restrictions are imposed on the non-industrial or construction activities.
4. The areas adjoining national parks and sanctuaries can be declared ESAs. This in turn will help create a buffer zone around the protected areas, thus providing an additional layer of protection.
5. The existing rights of local residents are largely untouched.

The following however are the likely obstacles

that could be faced when declaring an area an ESA:

1. The negative impact and restrictions as a result of declaration of ESA adversely affects industrial development. Given the relative economic and strategic power as well as industry’s access to those in political and administrative control, any plans for declaration are likely to lead to resistance.
2. Coastal areas are the new centres of investments, including thermal power plants, petrochemical and industrial complexes, ports, nuclear power plants, desalination plants and storage tanks for chemicals and construction material. Given the large corporate interests, any move to declare a coastal area an ESA will be met with resistance from both the state and the industrial sector.
3. There is a general misconception among the public about the adverse effect on the ‘right to development’ of such declaration.
4. Although the law entitles the Central Government to declare ESAs, it is ultimately the state government that has the actual control. Given the general reluctance of states to impose any kind of restriction on industrial development, it seems unlikely that there will be any strong impetus from any state for declaration of ESAs.
5. Given the federal set-up with politically strong state governments, it is also unlikely that the Central Government will ‘force’ ESAs on state governments. The recent experience with the recommendation of the Western Ghats Ecology Expert Group (WGEEP) is a case in point. Despite a comprehensive report based on wide-ranging consultations, the MoEFCC rejected the same and went ahead with implementing a much watered down report of the High Level Expert Group.
6. The penal provisions applicable to ESAs

are the same as those contained in the Environment (Protection) Act, 1986. The said penal provisions hardly serve as a deterrent since the maximum punishment is a fine of INR 1 lakh after conviction by a Court of law. The penal provisions are out of tune with present-day realities and contrary to the precautionary principle.

Despite, the above-mentioned difficulties and hurdles, ESA declaration is the very least India can do to protect its marine biodiversity. It is now an accepted fact that India has very few undisturbed coastal stretches, and each day, more and more projects are being approved in these sensitive zones. The CRZ Notification, 2011 is insufficient on its own to deal with the multiple threats. Further, given the impracticality of declaration of national parks and sanctuaries under the Wildlife (Protection) Act, 1972 in view of its social implications and severe restrictions, it is essential that the relatively softer option of ESAs be seriously explored.

Biological Diversity Act, 2002 and MPAs

The Parliament of India enacted the Biological Diversity Act, 2002 to meet its obligations under the Convention on Biological Diversity. The act contains provisions aimed at preserving biological diversity in India and establishing a mechanism for equitable sharing of benefits arising out of the use of traditional biological resources and knowledge.

‘Biological diversity’ has been defined as “the variability among living organisms from all sources and the ecological complexes of which they are part, and includes diversity within species or between species and of ecosystems” (Section 2(b)). In terms of delineating protected areas, the act provides for setting up Biodiversity Heritage Sites.

Section 37: Biodiversity Heritage Sites

1. Without prejudice to any other law for the time being in force, the State Government may, from time to time in consultation with the local bodies, notify in the Official Gazette, areas of biodiversity importance as

biodiversity heritage sites under this Act.

2. The State Government, in consultation with the Central Government, may frame rules for the management and conservation of all the heritage sites.
3. The State Government shall frame schemes for compensating or rehabilitating any person or section of people economically affected by such notification.

According to the fact sheet on the status of implementation of the Biological Diversity Act, as on December 2011, four Biodiversity Heritage Sites have been notified.¹⁴

The Biodiversity Act also provides for the constitution of local-level Biodiversity Management Committees (BMCs) for, inter alia, promoting conservation and sustainable use of biological diversity.¹⁵ Currently, India has 32,796 BMCs.¹⁶

Biosphere Reserves

In addition to the types of protected areas under the legal provisions, India has also announced establishment of ‘biosphere reserves’. The concept of biosphere reserves was initiated by UNESCO under its Man and Biosphere (MAB) Programme. Biosphere reserves are representative parts of natural and cultural landscapes extending over large areas of terrestrial or coastal/marine ecosystems or a combination of these. Biosphere reserves do not have a separate legal status and are viewed within the broader approach of resource management and development planning from the perspective of conservation of biodiversity. India recognizes coasts as one of its 10 bio-geographic zones.¹⁷

There are instances where a national park or a sanctuary is part of a larger biosphere reserve as in the case of the Gulf of Mannar National Park. In 1986 the Gulf of Mannar region was declared a marine national park by a Government of Tamil Nadu notification under the Wildlife Protection Act. The area of the GOMNP is 560 km² which includes 21 islands, bordering the districts of Tuticorin and Ramanathapuram. The example

of this national park highlights issues of rights and access of fishermen to their traditional fishing grounds, and the problems that arise in the declaration of an area as a marine national park. The park and its 10 km buffer zone were declared a biosphere reserve in 1989.

Although the national park was declared 20 years ago, there was no restriction on fishing until recently. It is only in the last 14 years, starting 2002, that restrictions on accessing fishing grounds have been put in place, and enforced by the forest department (Rajagopalan 2008). Demarcation buoys were deployed in 2006 around the islands, and fishermen were not allowed to fish inside the waters demarcated by them. For the fishing community here, this meant denial of access to their primary fishing grounds. This led to regular confrontations and conflicts between the fishing community and the forest guards. Sometimes the fishing gear and the catch are confiscated by forest department personnel, and a fine of INR 500–1,000 (approximately USD 12–25) has to be paid to get the fishing gear back. Although the livelihoods of around 100,000 people from the fishing community have been affected as a result of the declaration of the GOMNP, consultation with fishing communities regarding fishing practices consistent with sustainable-use principles that can be allowed within the GOMNP and GOMBR, as well as alternative livelihood options of their choice, has been limited.

Interestingly, the fishing community around the national park has from time to time implemented self-regulation such as a ban on collection of turtle eggs and a restriction on the number of days when seaweeds can be collected, demonstrating that there is knowledge about the declining health of the marine ecosystem. These regulations are enforced by a guard from within the community, appointed by the villagers. The regulations are strictly observed, especially as there are penalties for violation, including handing over of violators to the forest guards. Although the villagers have taken these steps, they are not recognized by the forest department, and villagers still have

to regularly pay huge amounts of bribes to local forest guards and rangers to collect the seaweed. A good management practice could have been to take into account these community initiatives of self-regulation and give them an official status.

While fishing is considered one of the major threats to the marine resources of the GOM, there are other developmental activities that pose threats to the biodiversity of the area, such as the upcoming Sethusamudram Canal Project, and other industrial projects on the Tuticorin coast. Additionally, the southern tips of the GOMNP and GOMBR are very close to the town of Tuticorin, where the major industries include a thermal power plant, chemical factories, and the Sterlite copper plant, besides a major port. These development structures may be outside the protected area but pose a threat to the coral reefs and seagrass ecosystem of the park.

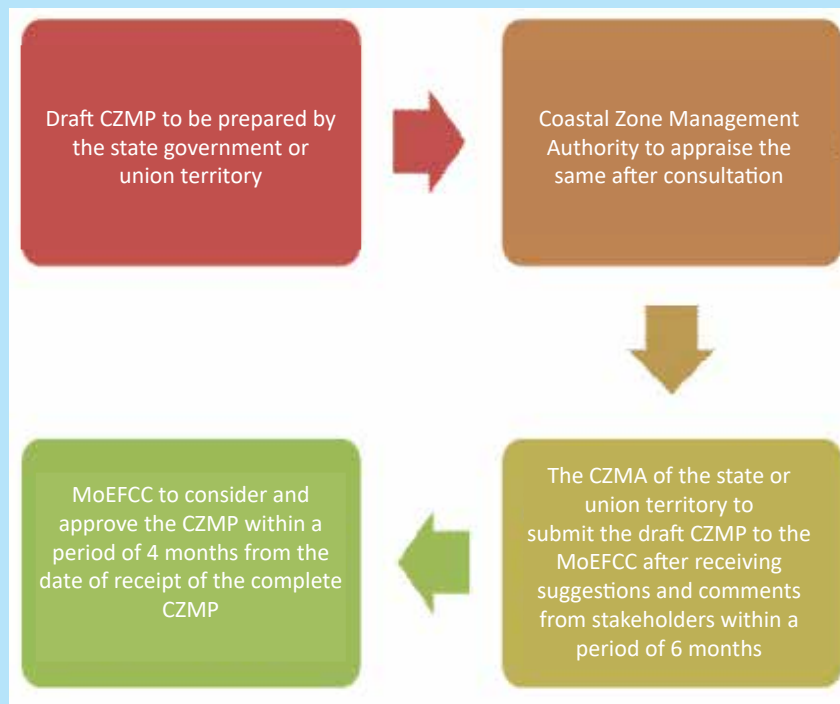
Biosphere reserves serve as a limited conservation tool in view of the fact that they are weak policy instruments with no legal backing. In addition, unlike tiger reserves and other protected areas, financial support from the Central Government is also very limited, as in the case of the Gulf of Mannar Biosphere Reserve, where the total expense incurred in the year 2010–2011 was INR 59.86 lakhs for an area of 10,500 km².

Coastal Regulation Zone Notification, 2011

Protected areas are only one aspect of protection of the coastal and marine ecosystem. Viewed in the 'ecosystem approach', activities along the coastline, especially in contiguous areas, need to be taken into account. Supplementing the provisions for demarcating specific areas as protected areas or zones, other activities along coastal areas also need to be regulated.

The main instrument regarding this in the Indian context is the Coastal Regulation Zone Notification under the Environment Protection Act. The other significant aspect is the restrictions on fishing along coastal areas. These two aspects are discussed in this section.

Figure 1
Procedure for Preparation of Coastal Zone Management Plan (CZMP) under CRZ Notification, 2011



The Coastal Regulation Zone (CRZ) Notification, 2011 came into effect from 6 January 2011. This notification, issued under the provisions of the Environment (Protection) Act, 1986, supersedes the CRZ notification of 1991. The CRZ Notification, 2011, was an outcome of detailed deliberation and consultation and has specific provisions with respect to protection of marine areas. The CRZ notification is based on the classification of coastal areas into different categories as per their geographical locations and not on hierarchy. One of the stated objectives of the CRZ notification is to “conserve and protect coastal stretches, its unique environment and its marine areas”. Further, it is stated that the purpose is to ensure livelihood security to the fisher communities and other local communities in coastal areas.

The CRZ notification imposes a range of restrictions and regulations in relation to various activities in the different categories. It can be viewed as a significant legal instrument that provides for restrictions on the setting and expansion of industries and on operations and processes in coastal stretches including creeks

and the landward sides of the creeks.

The CRZ notification requires that the High Tide Line (HTL) be demarcated throughout the country by an authority appointed by the Ministry of Environment, Forests and Climate Change.

The CRZ notification essentially regulates construction activities in the CRZ areas.

General Prohibitions under CRZ. The general prohibitions and regulations are mentioned in Para 3 of the notification. It specifically prohibits the setting up of new industries and expansion of existing industries. However, the prohibition is not absolute, and certain industries and activities are allowed in the CRZ. These include projects of the Department of Atomic Energy, power generation by non-conventional energy sources and setting up of desalination plants in areas other than CRZ -1. In addition, reconstruction and repair of dwelling units of local communities, including fisher communities, fish drying and setting up of hatcheries are allowed. However, setting up and expansion of fish-processing units, including

warehousing, is specifically prohibited. Further, there is a restriction on reclamation, bunding or disturbing the natural course of seawater. However, there are exceptions to this rule, and the construction and modernization of ports, harbours, jetties, sea links, etc, are permissible. Similarly, measures for control of erosion and clearing of waterways based on EIA studies are allowed. Mining of sand, rock and substrate material is prohibited. However, extraction of rare minerals not available outside CRZ areas, as well as oil and natural gas, is allowed.

General Regulations under CRZ. The CRZ notification stipulates that clearance 'shall' be given for any activity within the CRZ only if it requires waterfront and foreshore facilities.

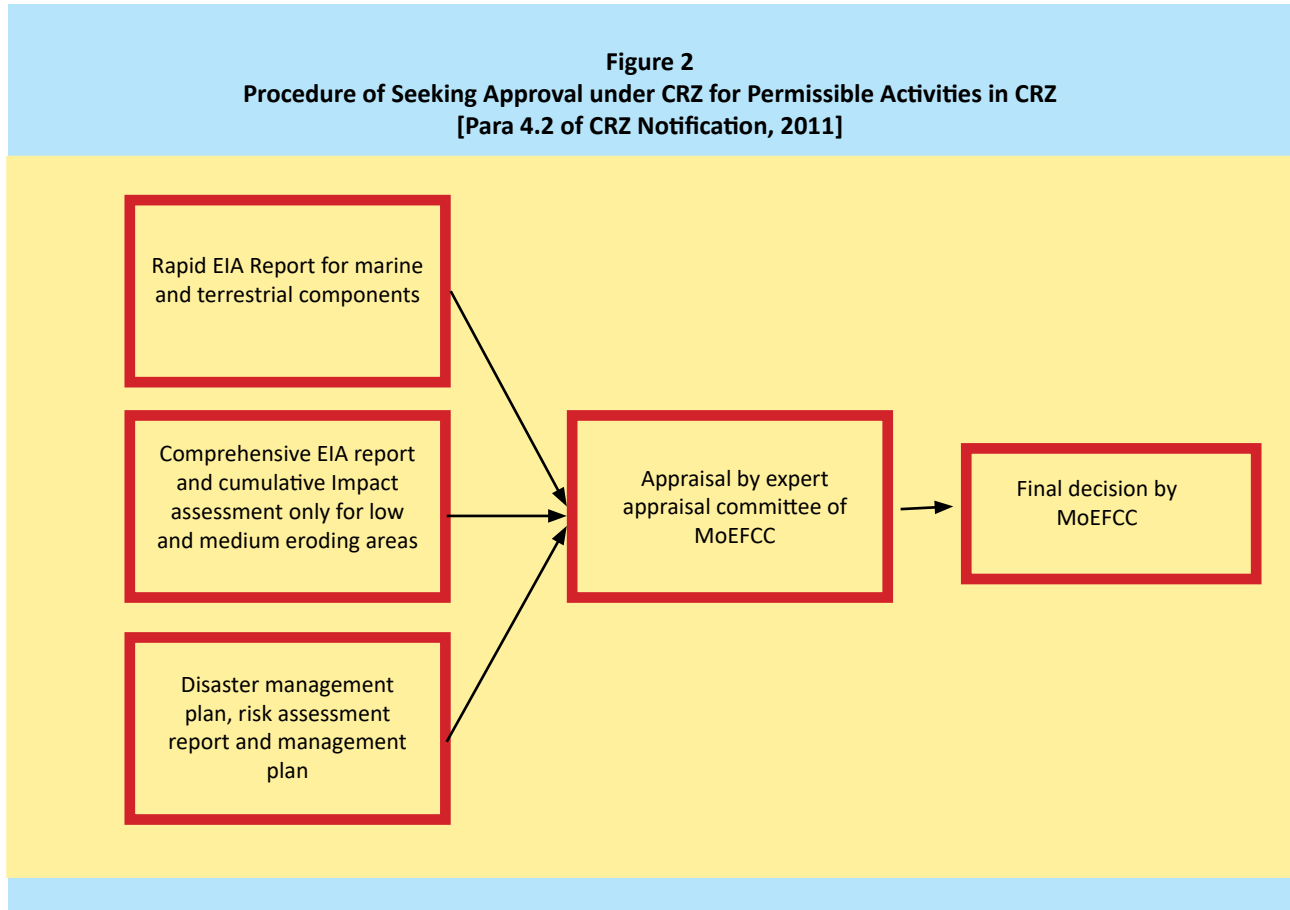
Coastal Zone Management Plan. The CRZ notification provides for the preparation of a Coastal Zone Management Plan (CZMP). It is specifically provided that all coastal states and union territories shall by 6 January, 2013 prepare a CZMP identifying and classifying CRZ areas in

their respective territories . All developmental activities mentioned in the CRZ notification shall be regulated by the state government, union territory administration, local authority or the concerned Coastal Zone Management Authority within the framework of the approved CZMPs.

Implementation of CRZ Notification. Violations of the CRZ notification and compliance-related issues will attract the provisions of the Environment (Protection) Act, 1986

The enforcement of the notification shall be the primary responsibility of the state government or the union territory Coastal Zone Management Authority. A tabulated representation of the authorities under the CRZ notification, their powers and their functions have been included in Annexure 1.

Categorization of CRZ and its implication for Marine Protected Areas. With respect to marine protected areas, the CRZ categories that are relevant are CRZ-1 and CRZ IV. In addition, new



categories such as 'Critical Vulnerable Coastal Area (CVCA)' are also relevant.

CRZ -1

The CRZ-I category comprises areas that are ecologically sensitive and have geomorphological features that play a role in maintaining the integrity of the coast, including the area between the Low Tide Line (LTL) and the High Tide Line (HTL). This includes mangroves, corals and coral reefs, sand dunes, national parks and wildlife habitats. Significantly, it includes 'marine parks' within the category of CRZ-1. However, neither the CRZ Notification, 2011 nor the Wildlife Protection Act defines or mentions marine parks.

Para 8 (i) prohibits new construction in the CRZ-1 category except six broad activities that are permitted with the prior approval of the Ministry of Environment, Forests and Climate Change. These include projects of the Department of Atomic Energy, pipelines, trans-harbour links, desalination plants, exploration and extraction of natural gas, storage of non-hazardous cargo, and others.

It is clear from a perusal of the list of activities permissible in CRZ-I that the list is quite extensive and, despite the fact that new constructions are prohibited, the category is flexible enough to allow a range of activities. The process of seeking approval from the MoEFCC is depicted in Figure 2. For projects listed in the Environment Impact Assessment Notification (EIA), 2006, the process of approval will follow the procedure as stipulated in the EIA notification. For other projects, the procedure is stipulated in CRZ Notification, 2011. A comparison between the two notifications reveals the following critical differences:

1. No provision for prescribing terms of reference for EIA study
2. No mandatory provision for public consultation.
3. Requirement only of a rapid environment impact assessment (EIA) report, i.e., one based on a single season's data, as opposed to a comprehensive EIA report and a

cumulative study, which is required only for low and medium erosion areas of the coast

4. No requirement of sharing the EIA report in the public domain

CRZ- IV

CRZ-IV is important for the purpose of protection of marine and coastal areas. This category includes the water area from the LTL to 12 nautical miles on the seaward side and also includes the water area of the tidal-influenced waterbody.

It is specifically provided that no untreated sewage, effluent, ballast water, ship waste, fly ash or solid waste from any activity, including aquaculture operations, shall be let off or dumped. All activities impinging on the sea and tidal-influenced waterbodies will be regulated. However, traditional fishing and related activities of local communities will be exempted from such regulation.

Critical Vulnerable Coastal Areas

As per the CRZ notification, the Critical Vulnerable Coastal Areas, which include the Sundarbans and other identified sensitive areas, shall be managed with the involvement of the local coastal communities, including the fisherfolks.

Whether CRZ-I or CRZ-IV Category can be Considered an MPA?

The CRZ notification provides for a certain degree of protection for coastal stretches both towards the landward side as well as towards the seaward side. However, the regulation and restriction is mainly directed towards construction and related activities. In both the categories, i.e., CRZ-I and CRZ-II, a range of construction and related activities are permissible after the due procedure is followed. The procedures required to be followed for seeking prior permission for permissible activities are comparatively less complex and stringent compared with the procedures to be followed with respect to an area classified as a national park or sanctuary under the Wildlife (Protection) Act, 1980 or even a forest under the Forest (Conservation) Act, 1980. Even in comparison with the provisions of the Environment Impact Assessment Notification,

Box 2 Threats to Coastal Areas of India

A detailed report on the activities along the Indian coastline was prepared by leading NGOs in India and released on the occasion of the 11th Conference of Parties to the Convention of Biological Diversity in October, 2012.¹⁹ The report contains a detailed map of all the existing and proposed activities along the coastal area. The map clearly indicates that the entire coastline is crowded with existing and proposed projects, which will have significant impacts on the coastal ecosystem. The report also outlines some of the specific concerns in some of the coastal states.

Maharashtra

In Maharashtra, sensitive coastal lands are still owned by absentee landlords (*Khots*), who sell off land and thereby dispossess the actual cultivators. In Ratnagiri District, the Maharashtra Industrial Development Corporation (MIDC) reportedly has acquired large areas with high horticultural activity as well as marine biodiversity. The other is *Khar* land, the tidal land described variously as askhar, khajan, kharepat and gazni made cultivable or otherwise beneficial by protecting it from the sea or tidal river by means of an embankment. The master plan prepared in 1979 was to reclaim 67,422 ha. As per the notification published on 25 December 2003, there were 575 *khar* land development schemes in four districts of Konkan to reclaim 49,120 ha. The current state of the reclamation is not available, but clearly this would result in extensive loss of coastal biodiversity.

The Konkan coast is under grave threat of overdevelopment, with at least 15 proposed coal-fired power projects equalling 25 GW of power and one nuclear power plant of 10,000 MW set to be built on a narrow strip of coastal land 50 to 90 km wide and 200 km long. This represents a 200 per cent increase in coal-fired power for the entire state of Maharashtra, the state that already has the largest total installed capacity, equal to 11 GW or 13 per cent of the national capacity. Such development will also promote the development of ancillaries apart from human settlements due to in-migration. This would completely transform the coast and result in a tremendous loss of biodiversity. In addition, there are aquaculture farms, mining and tourism activities. All these are likely to have a cumulative impact on the biodiversity. While the report of Untawale *et al.* (2000) gives some idea of the biodiversity of the region, the BNHS is working on the preparation of a systematic report on the biodiversity of the coastal areas as well as an examination of the local factors that are affecting its biodiversity.

Karnataka

The level of pollution off the Dakshina Kannada coast is high. Various types of small, medium and large industries located near Mangalore discharge their effluents directly into the coastal water off Kulai. The available information indicates that Mangalore Refineries and Petrochemical Ltd discharges 7200 m³/day; BASF India Ltd discharges 3600 m³/day north of the harbour; and Mangalore Chemicals & Fertilizers discharges 13,000 m³/day south of the harbour. However, more than pollution, it is erosion that is of greater concern on Karnataka's coast. Studies on erosion/accretion over long-term periods (30 years) have indicated that it is not continuous but occurs in isolated stretches. Comparatively high levels of erosion have been observed at river mouths.

A study on the Karnataka Coast carried out 12 years ago showed that the Dakshina Kannada coast was undergoing extensive industrialization, which began with the establishment of the Mangalore Port in the 1970s; petrochemical industries and power plants soon followed. Uttara Kannada at that time was comparatively free of heavy industries, but tourism and industrial aquaculture were on the rise. Land acquisition completely changed the livelihoods of the locals, who were earlier solely dependent on agriculture and fisheries. Privatization of coastal land for resorts was another issue that was highlighted in the report.

Current reports indicate investments of more than INR 17,000 crore in the biotechnology, agriculture, petroleum and petrochemicals, tourism and service sectors in Karnataka. The coastal region is seen as the next growth engine of the state, with the government planning steps to improve the infrastructure facilities in the region, including road and rail connectivity. The plans include the Ankola-Hubli and Talaguppa-Honnar railway lines, widening of the Shirdi-Agumbe, Charmady and Sampaje roads, installation of power lines, and development of an IT hub on the coast.

Kerala

A major problem faced in Kerala is sand mining of riverbeds as well as mining of beach sand for minerals. This is said to be a major cause of erosion along the coast, where huge sections of the beach are pockmarked with pits. This is also said to be the cause of coastal flooding and unprecedented erosion along the shore, resulting in houses being inundated or even washed away. Tourism pressure and a high demand for development projects such as ports have further exacerbated problems along the coast. Kerala's traditional fishing community is still very active and has protested extensively about the various issues that affect both the coast and coastal livelihoods.

Box 2 Threats to Coastal Areas of India *continued*

Goa

The main problems faced by Goa's coastal areas are sand mining, erosion, construction activities and pollution. Sand dunes, characteristic of Goa's beaches, are being razed, leveled or flattened to make place for hotels, resorts and other structures, resulting in irreversible damage to the dunes. In addition, a negative sand budget has been created that has resulted in erosion, as clearly observed in Palolem. Dune removal has also resulted in the entry of saline water into paddy fields, apart from storm surges and instances of inundation. Fifty-nine species of dune plant have been reported from Goa. Native plant species are prevented from colonizing because of a preference for the lawn grass variety and exotic shrubs for landscaping, but it is the native dune vegetation that can stabilize the dunes as it acts as a binder. It has also been found that buildings too change the location of accretion and scour on beaches and dunes. At Candolim beach, in North Goa, erosion had been caused by a 240 foot long ship running aground. This had resulted in a change in the direction of the waves approaching the shore. A geotube was installed in 2009, but soon sank in the sand. Erosion continued. A second line was fixed seaward around October 2009 but during the 2010 monsoon, the waves overshot the tubes. In 2008-09, the NIO had estimated that Sinquerim had lost around 80,000 m of its beach. In June 2012, the grounded ship was removed, and the beach is reportedly building up again.

Tamil Nadu

Concern about the deteriorating state of the coast has been high since the 2004 Indian Ocean tsunami, that affected all 13 coastal districts to varying degrees. That ports have an impact on the coastline has been long known, thanks to the development of the Marina beach in Chennai. The best studied among ports is Chennai Port, for its impact on the shoreline. The vast Marina beach of Chennai was formed because of the breakwaters of Chennai Port blocking the littoral drift. This resulted in the formation of the Royapuram Bay due to erosion in the north. This has been used to extend the Chennai Port and to develop the fisheries harbour with minimal capital dredging. However, severe erosion has affected the beaches north of Royapuram, resulting in the placement of a groyne field to arrest the problem. In recent times, the problem appears to have worsened, with houses along the shore falling into the sea and more frequent reports of flooding of coastal hamlets in that area. In May 2012, reports of sudden erosion near the fishing hamlet of Nettukuppam resulted in the loss of 30 m of beach overnight. The sudden erosion of the coast in Nettukuppam is not an isolated incident. Fishermen from Kadalur Periyakuppam, in Kancheepuram District also reported that 30 m of beach vanished overnight, a day before the full moon and about the same time as the Nettukuppam erosion. Houses built after the tsunami were found with their foundations exposed due to the intense wave action and erosion of the shore barely a couple of weeks later. So far some 350 ha of land have been lost along the Chennai coast in the past four decades. In addition to all this, the salinity of the groundwater has increased, which forces residents to buy packaged water.

2006, the provisions of CRZ Notification, 2011 are less complex. In fact, the process as provided in the CRZ notification for allowing permissible activities can hardly be said to comply with the basic principles of environmental laws and international conventions to which India is a party. The legitimization of the rapid EIA report, when the EIA Notification, 2006 makes no mention of the name, and restricting 'comprehensive EIAs' to only low and medium eroded areas, clearly violates the precautionary principle. Further, the fact that no public consultation is required for activities permissible under CRZ renders the whole process non-participatory.

The CRZ-1 category can be superimposed on MPAs in the form of national parks and sanctuaries. In such circumstances, since the provisions of the Wildlife (Protection) Act, 1972

are more stringent, its provisions will override the provisions contained in the CRZ Notification, 2011.

The CRZ notification allows for traditional fishing in the 'regulated zone'. However, no definition is given in the CRZ notification as to the meaning of the term. Given the fact that the concept of protected area involves some degree of restriction, such blanket exemption clearly implies that CRZ categories cannot be termed MPAs.

In conclusion, it can be stated that the CRZ notification is not an instrument for the creation of MPAs. Though there are many provisions in the notification that can serve as tools for restricting destructive activities, there are far too many exceptions to the general restriction.

Fisheries Regulation in India

Fisheries management in India can be categorized into management of fisheries in the Exclusive Economic Zone (EEZ) and in territorial waters. According to the Constitution of India, the Central Government has jurisdiction over the fisheries in the EEZ, while the state governments have jurisdiction over the fisheries in the territorial waters.

With an approximate coastline of 7,500 km, an EEZ of over 2 million km² and with extensive freshwater resources, the fisheries play a vital role in ensuring food and livelihood security to millions of Indians, especially the poorer coastal communities. The marine fisheries, supporting 1.5 million fisher people directly and many more indirectly is an important sector in India.

Union-Level Fisheries Management

The following are some of the important central legal and policy frameworks for fisheries management:

Comprehensive Marine Fishing Policy, 2004

The Comprehensive Marine Fishing Policy, 2004, seeks to bring the traditional and the coastal fishermen in focus together with stakeholders in the deep-sea sector so as to achieve harmonized development of the marine fisheries in both the territorial and extraterritorial waters of our country.

The policy objectives are (1) to augment marine fish production of the country up to a sustainable level in a responsible manner so as to boost exports of seafood from the country and to increase the per capita fish protein intake of the masses, (2) to ensure the socio-economic security of the artisanal fishermen whose livelihood solely depends on this vocation and (3) to ensure sustainable development of the marine fisheries with due concern for ecological integrity and biodiversity.

The policy calls for adopting fisheries management regimes such as registration of fishing vessels, observation of closed fishing

seasons, proscription of destructive fishing methods, implementation of mesh size regulations, reduction of bycatch and discards and establishing an effective monitoring, control and surveillance mechanism. The guideline specifically calls for compliance with the Code of Conduct for Responsible Fisheries (CCRF) and other international rules and regulations in the management of fish stocks. Besides these, a uniform fishing holiday is declared every year in the EEZ along the east and west coasts. A national committee has also been constituted to effectively implement the provisions of the 1995 CCRF.

Fisheries development and planning is undertaken through the Five-Year Plans formulated by the government since 1951. The initial Five-Year Plans focused more on the 'development' of the sector, and on increasing production, while it was only in the Ninth and Tenth Five-Year Plan periods that the need for conservation and management was explicitly recognized.

Guidelines for Fishing Operations in Indian EEZ

The Department of Animal Husbandry, Dairying and Fisheries, under the Ministry of Agriculture, vide Public Notice dated 14 December 2006, decided to allow the operation of deep-sea fishing (20 m OAL and above) vessels in the Indian EEZ under joint venture. Proposals are subjected to certain guidelines and considered according to their merit by the Inter-ministerial Empowered Committee on Marine Fisheries.

The following Indian legal instruments at the central level that also relevant and important for the fisheries and fisheries management:

- Indian Fisheries Act, 1897
- Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act, 1981 and the Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Rules, 1982
- Coastal Aquaculture Authority Act, 2005
- Marine Products Export Development Authority Act, 1972
- Merchant Shipping Act 1958

State-Level Fisheries Management

- Fisheries management is undertaken mainly through licensing, prohibitions on certain fishing gear, regulations on mesh size and establishment of closed seasons and areas under the Marine Fishing Regulation Act (MFRA).
- Zones are demarcated by each state on the basis of the distance from the shoreline (from 5 km to 10 km) or depth. These inshore zones, where trawling and other forms of mechanized fishing are not permitted, are perhaps the most important space-based fisheries management measures in place.
- Fisheries within the 12-mile territorial limits are managed under the MFRA of the maritime states of India. Some of the important management measures adopted under the MFRA are prohibition certain fishing gear, regulations regarding mesh size, establishment of closed seasons and areas, demarcation of zones for no-trawling, other measures such as the use of turtle excluder devices (TEDs) and designation of no-fishing areas.
- The closed season or 'monsoon fishing ban' is another important 'temporo-spatial' management measure implemented along both the east and west coasts of India for a period of 47 days and 65 days, respectively, during what is considered to be the spawning and breeding season. However, the closed season differs in each state.²¹

Table 3
State-wise Monsoon Fishing Bans

State/Union Territory	Year of Introduction	Closed Season	Days	Type of Fishing Banned	Type of Fishing permitted
Gujarat	1998–99	10 June to 15 August	67	All craft	
Maharashtra	1990	10 June to 15 August	67	All Craft	
Daman and Diu		10 June to 15 August	75	Trawlers, <i>dol</i> netters, gill netters	Motorized and traditional craft
Goa	1999	15 June to 31 July	67	All craft	Nil
Karnataka	1989	10 June to 15 August (Dakshin Karnataka),	67	All except motorized OBM/IBM vessels with engines up to 25 hp	Motorized craft with engines up to 25 hp
		15 June to 29 July (North Karnataka)	57		
Kerala	1988	15 June to 29 July	47	Mechanized vessels/ motorized craft with engines up to 10 hp	All except motorized OBM/IBM vessels up to 10hp engine
Tamil Nadu and Pondicherry	2001	15 April to 29 May (east coast), 15 June to 29 July (west coast)	47	Mechanized fishing and trawlers	All craft with engines less than 25 hp
Andhra Pradesh	2000	15 April to 31 May	47	Trawlers and motorized craft with engines up to 25 hp	Traditional and motorized craft with engines less than 25 hp
Orissa	2000	15 April to 31 May	47	Trawlers and motorized craft with engines up to 25 hp	Traditional and motorized craft with engines less than 25 hp
West Bengal	1995	15 April to 31 May	47	Trawlers, gill netters, <i>bir</i> nets and <i>behundi</i> nets	

Table 4
State-wise Marine Fishing Regulation Legislation²⁰

State	Year adopted	Area reserved for traditional craft	Area reserved for mechanized craft (up to 12 nautical miles)
Gujarat	2003	5 nautical miles (nm)	Beyond 5 nm (9km)
Maharashtra	1981	5 fathoms (Mumbai, Raigad, Thane) 10 fathoms (Ratnagiri, Sindhudurg)	Beyond 2.6 nm (5 km)
Goa, Daman and Diu	1980	2.6 nm (5 km)	Vessels up to 50 feet beyond 3.23 nm (6 km) Vessels above 50 feet beyond 10.79 nm (20 km)
Karnataka	1986	3.23 nm (6 km)	Vessels up to 50 feet beyond 3.23 nm (6 km) Vessels above 50 feet beyond 10.79 nm (20 km)
Kerala Southern sector (1): Kollengode to Paravoor Pozhikkara Southern sector (2): Pozhikkara to Kovilthottam Northern sector: Kovilthottam to Manjeswaram	1980	Southern sector (1): up to 25 fathoms Southern sector (2): up to 18 fathoms Northern sector: up to 12 fathoms	Motorized fishing zone Southern sector: area up to 20 fathoms Northern sector: area up to 10 fathoms Mechanized fishing vessels less than 25 GRT Southern sector: up to 35 fathom line Northern sector: up to 20 fathom line
Tamil Nadu	1983	3 nm	Beyond 3 nm
West Bengal	1993	Non-mechanized, up to 9 m: till 4.3 nm (8 km) None-mechanized, above 9 m: up to 10.7 nm (20 km) but not below 8 km	Mechanized up to 15 m – up to 50 km but not 10.7 nm (20 km) Mechanized above 15 m – beyond 26.99 nm (50 km)
Andaman and Nicobar Islands	2004	Fishing Zone A: up to 6 nm Vessels fitted with 30 HP engines including traditional and non-mechanized boats. (Gear to be used , (i) Gill net not below 25 mm mesh (knot to knot diagonally) (ii) Hook and line. (iii) Shore seine/drag net of mesh size not below 25 mm (iv) Fish traps)	Fishing Zone B (Territorial waters beyond 6 nm from appropriate base line) Vessels fitted with engines of more than 30 hp. Gill net not below 25 mm mesh (ii) Trawl net of standard mesh size fitted with TED suitable for the trawl net (iii) Longline, purse seine, squid jigger (iv) Hook and line

Notes

1. Surender Mehra, *Study and Practice of Wildlife (Protection) Act, 1972 Laws in India – Concepts, Acts, Rules and Notifications* (2012), at 18.
2. A sanctuary is defined under Section 2(26) as “an area declared as a sanctuary by notification under the provisions under Chapter IV of this Act and shall also include a deemed sanctuary under sub-section (4) of section 66”.
3. Section 38(1) of the Wildlife (Protection) Act, 1972.
4. “Reserve Forest” as declared by State Governments under the Indian Forest Act, 1927.
5. “Territorial Waters” as defined under Section 3 of the Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976
6. *Pradip Kishen v. Union of India*, (1996) 8 SCC 599.
7. Section 29, Wildlife (Protection) Act, 1972.
8. A “National Park” is defined under Section 2(21) of the Wildlife Protection Act as “an area declared, whether under section 35 or section 38, or deemed, under sub-section (3) of section 66, to be declared a National Park”.
9. This is permissible under Section 24(2)(c) of the Wildlife Protection Act, which has been specifically excluded in Section 35 in respect of national parks
10. *Animal and Environmental Legal Defence Fund v. Union of India*, AIR 1997 SC 1071.
11. *Goa Foundation v. Union of India*, W.P (C) No. 460 of 2004.
12. Report of the Committee on Identifying Parameters for Designating Ecologically Sensitive Areas in India, Ministry of Environment, Forests and Climate Change, Government of India (2000).
13. Meenakshi Kapoor *et al.*, ‘India’s Notifies Ecologically Sensitive Areas (ESAs) – The Story so Far’ , report prepared by Kalpavrissh and WWF-India, available at http://assets.wwfindia.org/downloads/indias_notified_ecologicallysensitive_areas.pdf (2009)
14. Biodiversity – Future Secured, Report of the National Biodiversity Authority available at <http://nbaindia.org/uploaded/pdf/Fact%20Sheets.pdf>.
15. Section 41, Biodiversity Act.
16. Biodiversity – Future Secured, report of the National Biodiversity Authority, available at <http://nbaindia.org/uploaded/pdf/Fact%20Sheets.pdf> (2012).
17. Protection, Development, Maintenance and Research In Biosphere Reserves in India, guidelines issued by the Ministry of Environment, Forests and Climate Change (2007), available at [atenvfor.nic.in/divisions/csurv/BR_Guidelines.pdf](http://envfor.nic.in/divisions/csurv/BR_Guidelines.pdf).
18. Para 5 (vi) of the EIA Notification, 2011.
19. Ahana Lakshmi *et al.*, *The Challenged Coast of India*, a report by PondyCAN in collaboration with BNHS and TISS (2012). available at http://deepakapte.com/attachments/article/20/Challenged%20Coast%20of%20India_Lowres.pdf.
20. Composed by <http://indianfisheries.icsf.net/en/page/827-Indian%20Legal%20Instruments.html>
21. Data available at www.icsf.net.

Chapter 5

Conclusion

The legal instruments and tools available for creation and protection of marine areas are diverse. The wildlife, coastal, environmental, forest and fisheries laws afford different levels of protection to marine areas. However, no single instrument on its own can ensure effective protection. A lot depends on the local situation, i.e, the nature of threats and the perception of the communities living in and around the existing and proposed marine areas. Any tendency to create an MPA without an effective ground-level assessment will prove counter-productive.

The fact is that coastal areas are under an increasing threat on account of massive industrialization, many of which may not be necessarily dependent on the waterfront. Coastal communities are already struggling to ensure protection and access to traditional fishing grounds. Port projects, petrochemical complexes, power projects, tourism projects and a range of other commercial activities have created an environment of conflict between those who depend on marine areas for their

livelihoods and those who control the new commercial developments. Any policy to create and strengthen new MPAs must be alive to the above-mentioned reality of the coastal areas, since creating MPAs strictly as nature reserves is bound to lead to further marginalization of coastal communities.

It is challenging to apply conventional conservation laws and policies to marine areas due to the fact that wildlife conservation laws have been framed keeping in view terrestrial issues and concerns, as is evident in the case of the Wildlife (Protection) Act, 1972. The act and its various provisions are geared towards the creation of protected areas within the terrestrial landscape. Through subsequent amendments, mainly to meet its international obligations, certain provisions have been incorporated to include marine areas within its scope. However, as the legal analysis shows, treating territorial areas as equivalent to reserve forests is problematic, from the perspective of community rights as well as long-term conservation goals.

The Coastal Regulation Zone Notification offers some degree of protection to marine areas and specifically to coasts. The restrictions with reference to marine areas covered under Category IV, which include territorial waters, do regulate some activities but are not sufficient to deal with the prevailing multiple threats.

The provisions of the Environment (Protection) Act, 1986 and, specifically, the power to declare Ecologically Sensitive Areas (ESAs), offer scope since their adverse impact on the livelihoods needs of traditional communities is minimal whereas they achieve broad environmental conservation goals. However, as stated in the reports, there are pros and cons with respect to ESAs that needs to be considered.

In addition to the creation of MPAs and declaration of ESAs, an effective focus is required on empowering citizens to enforce laws and policies related to marine conservation. The National Green Tribunal (NGT) was set up through an Act of

Parliament with the mandate for efficacious and effective adjudication of issues concerning the protection of environment. It has a mandate for adjudicating on all 'substantial questions related to the environment' that affect the community at large. Significantly, the NGT has powers to issue directions for restoration of ecology as well as compensation for victims of environmental degradation in accordance with the polluter pays, principle. Various environmental statutes including the Environment (Protection) Act, 1986 come within the jurisdiction of the NGT. Recent decisions of the NGT with respect to prohibition of sand mining on beaches are a case in point.

At the end of the day, unless local and other concerned citizens and groups play an active and vigilant role in defending and preserving marine biodiversity, new legal and policy measures are unlikely to bear any positive results. There is thus a need for empowering communities about existing laws and seeking their active support with implementing the laws.

Resources

International instruments

Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks

Convention on Biological Diversity

Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets

Indian Laws and Policy Documents

Constitution of India

Biological Diversity Act, 2002

Environment (Protection) Act, 1986

Forest (Conservation) Act, 1980

Wildlife (Protection) Act, 1972

Environment Impact Assessment Notification, 2006

Environment (Protection) Rules, 1986

National Biodiversity Action Plan, 2008

Comprehensive Marine Fishing Policy, 2004

“Protection, Development, Maintenance and Research in Biosphere Reserves in India” guidelines issued by the Ministry of Environment and Forests (2007)

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Animal and Environmental Legal Defence Fund v. Union of India, AIR 1997 SC 1071

Goa Foundation v. Union of India, W.P. (C) No. 460 of 2004

K.M. Chinnappa and T.N. Godavarman Thirumalpad v. Union of India, (2002) 10 SCC 606

Pradip Kishen v. Union of India, (1996) 8 SCC 599

Books

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Ahana Lakshmi *et al.*, *The Challenged Coast of India*, report prepared by PondyCAN in collaboration with BNHS and TISS (2012)

Barbara Lausche, *Guidelines for Protected Areas Legislation*, IUCN Environmental Policy and Law Paper No. 81

Manual on Fishery Statistics, published by the Central Statistics Office, Ministry of Statistics and Programme Implementation (2011)

Meenakshi Kapoor *et al.*, *India’s Notifies Ecologically Sensitive Areas (ESAs) – The Story so Far*, report prepared by Kalpavrissh and WWF-India (2009)

Paul Dayton *et. al.*, *Coastal Systems, Ecosystems and Human Well-being: Current State and Trends*, Volume 1 (2005) Report of the Millennium Ecosystem Assessment

Ramya Rajgopalan, *Marine Protected Area in India*, Samudra Monograph, published by International Collective in Support of Fisheries, 2008

Report of the Committee Headed by Prof. M.S. Swaminathan to Review the Coastal Regulation Zone Notification, 1991 (2005)

Report of the Committee on Identifying Parameters for Designating Ecologically Sensitive Areas in India, Ministry of Environment, Forests and Climate Change, Government of India (2000)

Annexure 1
Agencies for Implementation of CRZ at National Level

The ultimate goal of the National Coastal Zone Management Authority is to prepare Integrated Coastal Zone Management Plans for all coastal states, balancing the ecological needs of natural ecosystems and socio-economic demands

S. No.	Name of the Agency	Responsibilities	Critical Analysis
1.	National Coastal Zone Management Authority (NCZMA).	<ol style="list-style-type: none"> 1. The NCZMA is empowered to take measures for preventing, abating and controlling environmental pollution in coastal areas. 2. It is to provide technical assistance and guidance to the concerned state coastal zone management authorities, union territory coastal zone management authorities and other institutions or organizations related to protection of the environment in coastal areas. 3. It shall : <ol style="list-style-type: none"> a. advise the Central Government on policy planning, research, development and setting up of centres for excellence and funding in coastal zone management matters. b. deal with all environmental issues relating to coastal zones that may be referred to it by the Central Government. 4. The NCZMA shall within 6 months furnish reports of its activities to state and union coastal authorities and to the Central Government, and place the information with regard to agenda and minutes in the public domain. <p>The authority is required to inquire into and review cases of violation of rules, to file complaints and to take corrective action.</p>	<p>The NCZMA has a balanced approach as far as representation/composition is concerned. It has representatives from all the concerned departments and ministries including the South Indian Federation of Fishermen Societies. With regard to its powers and functions, the authority is under the supervision of the Central Government.</p> <p>The CRZ Notification 2011 is a major step-up from the 1991 Notification and the MoEFCC has made special efforts to include specific provisions to benefit the fishers community in all the coastal areas, and address the shortcomings of the 1991 Notification, such as time-bound clearances, enforcement measures and special provisions for specific coastal stretches. There is a significant change in the new notification, but there is need for further improvement.</p> <p>Keeping in view the current development trends along the coastline of India, sectoral practices, artisan policies, unbalanced tourism an absence of strict implementation have led to CRZs being breached.</p> <p>The national authority should interact authoritatively with multiple agencies as this appears to be the only way to attenuate impacts and restore the resilience of the coastal ecosystem.</p>

Annexure 2 Agencies for Implementation of CRZ at State Level

For every state/union territory along the 75,000 km coastal stretch of India, a coastal management authority has been constituted by the Central Government. A study of these authorities shows that the composition and the functions entrusted to each of them are broadly the same. A tabular representation below outlines the functions these state authorities.

S. No.	State/UT Coastal Zone Management Authorities	Functions/Powers/ Responsibilities	Critical Analysis
1.	Kerala Coastal Zone Management Authority Tamil Nadu Coastal Zone Management Authority Maharashtra Coastal Zone Management Authority Goa Coastal Zone Management Authority Odisha Coastal Zone Management Authority	<ol style="list-style-type: none"> 1. The authority is required to inquire into cases of violation and provisions of the act, to review cases of violation of rules, to file complaints and to take corrective action. 2. It shall deal with environmental issues relating to the Coastal Regulation Zone referred by the respective state government and NCZMA. 3. It shall identify coastal areas vulnerable to erosion and ESAs and arrange funds for the same. 4. It shall identify economically sensitive areas and prepare coastal zone management plans. 5. Projects subjected to coastal zone clearances shall be processed by the state authority as per the procedure laid in the coastal regulation zone clearance. 6. It shall direct all District Collectors, planning authorities and field agencies to comply with the CRZ Notification. 7. It shall submit coastal zone maps of the coastal areas in the state as per the procedure laid in CRZ 2011 to the NCZMA. 8. Furnish report of its activities once in six months to NCZMA. 9. It shall review the functioning of District Coastal Zone Management Committees. 10. The powers and functions of the authorities are subjected to the Central Government. 	<p>The coastal management authorities in each state has a balanced approach vis-a-vis composition and representation.</p> <p>So far as the powers and functions are concerned, it is entrusted with adequate powers, but on observation of the activities and current development trends along the coastline, a conclusion can be reached that there has been a poor implementation of these powers and functions.</p> <p>Sand mining on the beaches of Kerala, ship breaking on the coastline of Gujarat, construction activities in CRZ areas, coral reef mining, setting up of thermal power plants that are beyond the CRZ areas and whose activities involve pumping of groundwater and unplanned development, contribute a lot to coastal erosion and result in the CRZ Notification being breached. The state authorities, despite the powers and various responsibilities they have been entrusted with, have failed to implement the same.</p> <p>There is a need for state authorities to authoritatively and pragmatically discharge their duties and interact with the district agencies /institutions/ organizations as this appears to be the only way to attenuate negative impacts and restore the resilience of coastal ecosystems in the states.</p>

Annexure 3
Agencies for Implementation of CRZ at District Level

In every district of the states along the coastal stretch, there is a district-level committee whose main function is to assist the state coastal zone management authority with implementing the Coastal Regulation Zone Notification. However, the composition of district committee slightly differs from one state to the other. The following authorities are operating at the district level in each state. The authorities, their composition and the functions in each state are presented in the table below:

S. No.	State	Institution	Constituents	Functions
1	Kerala	District-level committee	The Chairman (District Magistrate) and at least three representatives from local coastal communities	To assist the state coastal zone regulatory authority with implementing the CRZ Notification.
		Local panchayats and the District Collectors		Implementation of the same for taking necessary action such as demolition with regard to the identified violators
		Corporation		Granting permissions for buildings; they are supposed to grant permissions only after the necessary clearance has been granted by the state coastal zone authority.
2	Gujarat	District-level committee	District Collector	To assist the state coastal zone regulatory authority with implementing the CRZ Notification, 2011
3	West Bengal	District-level committee	District Collector	To assist the state coastal zone regulatory authority with implementing the CRZ Notification, 2011
4	Odisha	District-level committee	District Collector	To assist the state coastal zone regulatory authority with implementing the CRZ Notification, 2011
5	Maharashtra	District-level committee	District Collector	To assist the state coastal zone regulatory authority with implementing the CRZ Notification, 2011
6	Tamil Nadu	District-level committee	Chairman- District Magistrate, at least 3 representatives from local coastal communities	To assist the state coastal zone regulatory authority with implementing the CRZ notification

About the Study

The study titled *Legal Framework for Conservation of Coastal and Marine Environment of India: A Review* enlists the categories of 'protected' areas that could be established in the coastal and marine areas of India and the legal framework that supports the same. It also details the procedures to be followed and the implications of the creation of each type of protected area on the basis of the instrument discussed.

The CMPA Project

The project 'Conservation and Sustainable Management of Coastal and Marine Protected Areas' (CMPA) is a project of the Indo-German technical cooperation. It is funded by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and implemented by the Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India, and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of BMUB.

Established to support the achievement of the Aichi targets of the Convention on Biological Diversity, the Project's overall goal is to contribute to conservation and sustainable use of biodiversity in selected areas along the coast of India. Taking into consideration the economic importance of the coastal zone for large segments of the population, the Project's approach is people-centered, thus ensuring the support for conservation by those depending on coastal ecosystems.

CMPA Technical Report Series

02

Legal Framework For
Conservation of Coastal and
Marine Environment of India:
A Desk Review

November 2013

Implemented by

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