

## Part 7

# LEGAL INSTRUMENTS FOR THE CONSERVATION OF MARINE TURTLES

HATCHLINGS ATTRACTED TO TORCH LIGHT (PHOTO: BIVASH PANDAY)





## Laws and Marine Turtle Conservation in India

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New challenges and threats have emerged as interest in marine resources increases on Indian coasts. Numerous threats have been listed with relation to conservation of marine turtle. Over fishing, trawling, disregard for turtle excluder devices, lack of regulation and enforcement in fishing gear specifications, oil spills and pollution along the coast, discharge of untreated/unsatisfactorily treated municipal waste and industrial waste, warm water discharge from thermal power plants, beach sand mining, large-scale construction activity along the coast, port construction activity in and around turtle nesting sites, urbanisation along the coast creating human impacts such as bright lights incompatible with turtle habitats, are some of the problems that marine turtle conservationists face in India (Choudhury et al 2002, Upadhyay and Upadhyay 2002).

What is more alarming is a clearly visible trend where economic gains from the exploitation of marine resources takes precedence over conservation concerns, thereby aggravating the already sensitive marine habitats of India. Whether it is recovering rare earth metals from seawater,<sup>1</sup> the hazards of nuclear pollution through mineral exploration, effects of acoustic pollution in the sea,<sup>2</sup> or more specifically in the Indian context, the absence of clear cut policies on marine products (Anon. 1995) or the setting up of proposed Special Economic Zones (SEZs),<sup>3</sup> the threats from economic activities

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<sup>1</sup> See, for example, 'Recovering rare earth metals from sea water,' (1999). *Down To Earth* 7: 24, 15 May 1999 (52).

<sup>2</sup> See, for example, 'Acoustic pollution in the oceans: The search for legal standards,' (2000). *Ocean Development and International Law* 31: 151–182.

<sup>3</sup> See, for example, the Maharashtra state government's policy regarding setting up of Special Economic Zones: GOVERNMENT OF MAHARASHTRA Resolution No. SEZ 2001/(152)/IND-2 Industries, Energy & Labour Department Mantralaya, Mumbai 400 032. Dt. 12.10.2001.



pose the greatest challenge to turtle conservation. Whether the present legal regime addresses these new threats or even has the potential to cover the risks associated with marine turtle conservation is the inquiry of this chapter. Any analysis of the legal framework and its inadequacies or strengths has to be evaluated in the context of what exists at present. Hence it is imperative to understand the legal framework within which the marine environment in India is placed.

The existing legal regime on India's marine environment may be broadly seen under two categories of laws—one relating to laws that conserve marine areas, and secondly those that relate to the use of marine areas. The use-oriented regime has to be juxtaposed with the conservation-directed legal regime to evaluate the efficacy of the legal mandate for marine turtle conservation.

### **Laws Relating to the Conservation of Marine Areas**

The laws relating to conservation of marine areas include both laws that protect marine habitats and laws that protect species (marine turtles in this case). These two categories are not mutually exclusive and a comprehensive understanding of the entire gamut of laws that protect the coastal environment is required.

The Constitution of India recognises the need to protect marine habitats—the land, minerals and other things of value ‘under-lying’ the ocean, within various zones such as territorial waters or continental shelf or the Exclusive Economic Zone, ‘vests’ with the Union of India.<sup>4</sup> This simply means that the proprietary rights over natural resources that are beneath the ocean lie with the central government. In fact, there has been progressive thinking on the limit of these territorial zones resulting in a comprehensive legislation in 1976.<sup>5</sup> In addition to this, the provision under Article 48 A which mandates the state to protect and safeguard and improve the environment, with the corresponding fundamental duty under Article 51 A(g) to the citizens to protect and improve the natural environment, clearly arms the state to take all the necessary legal steps to not only protect but also to improve the marine environment.

Following the UN Conference on the Law of the Sea, the Department of Ocean Development issued an OCEAN POLICY STATEMENT in 1982, ‘establishing a new international order for the oceans’. The Statement’s primary focus pertains to the harnessing of resources in the Indian marine space. It states that the ‘main thrust should be on the optimal utilisation of living resources, exploiting of non-living resources and harnessing of renewable resources of ocean energy’. The Statement recognises the economic jurisdiction of the coastal state as well as the complexity and uncertainty of the ocean environment. It further recognises that a coordinated centralised response needs to be based on adequate knowledge of marine spaces, including seabed, water and air columns, in order to control, manage and utilise the rich and varied natural resources available in the sea. The Statement further points towards the use of technology for the ‘utilisation and preservation of the marine environment’. While the thrust of the

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<sup>4</sup> Article 297 of the Constitution of India.

<sup>5</sup> Territorial Waters, Continental Shelf, Exclusive Economic Zone and other Maritime Zones Act, 1976.

Statement is on 'marine development' linked with scientific and technological inputs, it also mandates the surveillance and conservation of the marine environment and its resources through an integrated legal framework and its concomitant enforcement. However, such an integrated legal framework has to find its way in enabling legislations, something that is yet to emerge in marine-related laws.

The TERRITORIAL WATERS, CONTINENTAL SHELF, EXCLUSIVE ECONOMIC ZONE AND OTHER MARITIME ZONES ACT, 1976 (MZA) is notably the most important legislation that governs various maritime zones such as the territorial waters, continental shelf and Exclusive Economic Zone (EEZ) in India.<sup>6</sup> Apart from the physical jurisdiction of the above-mentioned maritime zones it is important to note that the Union of India has exclusive jurisdiction to preserve and protect the marine environment as well as to prevent and control marine pollution. Further it has control over the territorial waters of India and over the, 'seabed and subsoil underlying and the air space over such waters'. The Indian Union also has full and exclusive sovereign rights for 'exploration, exploitation, conservation and management of all resources' within the continental shelf. The central government, which is the main authority controlling all activities in the continental shelf, has the authority to grant licenses for any exploration and exploitation within the continental shelf. Interestingly, any area of the continental shelf may be declared a 'designated area', where the central government has the power to make any provisions it thinks necessary with an aim of 'the protection of marine environment of such designated areas'. In the EEZ, barring fishing by any Indian citizen, no person can, without an agreement/licence, explore or exploit any resources. It is safe to assume that the MZA has enough provisions to protect marine environments in the EEZ, provisions that may be creatively used for the protection of marine habitats. However, it is for the central government to take necessary action and frame rules to this effect. Earlier laws classified marine areas into various zones taking into account the priorities of the state at that point in time. There is now an urgent need to rethink these priorities and reclassify these areas as per new and emerging needs. These should offer economic opportunities, but at the same time be conscious and mindful of environmental imperatives.

One of the most important environmental legislations in India is the ENVIRONMENT PROTECTION ACT, 1986 (EPA). An umbrella legislation, the EPA empowers the central government to take all necessary measures for 'protection and improving the quality of the environment and to prevent and control pollution'.<sup>7</sup> The EPA gives a very broad definition to 'Environment', including not only the physical environment of water, air and land but also the 'inter-relationship' of these resources with 'other living creatures, plants, micro-organisms and property'. Section 25 of the EPA also empowers the central government to make rules regarding the conservation and improvement of the natural environment. The most significant of these rules relating to the coastal environment is the COASTAL REGULATION ZONE NOTIFICATION, 1991 (CRZ). This notification prohibits

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<sup>6</sup> Although, the MZA's primary objective was to establish India's sovereign jurisdiction over the Territorial Waters, Continental Shelf and EEZ, there are numerous provisions which have the potential, but which may not have been realised, in protecting India's marine environment.

<sup>7</sup> Section 3 of the EPA



as well as regulates the setting up/or expansion of industries in ecologically sensitive areas. The CRZ Notification divides coastal areas into four Coastal Regulation Zones, namely CRZ I,<sup>8</sup> II,<sup>9</sup> III<sup>10</sup> and IV.<sup>11</sup> CRZ I areas are the most stringently regulated with a complete ban on construction activities within these areas. One of the main ambiguities surrounding this notification is the distinction between CRZ I and II areas. The CRZ does not specify clearly the criteria for the classification of areas into these two zones and is thus open to varying interpretations. The notification also provides for the formulation of specific COASTAL ZONE MANAGEMENT PLANS (CZMP) by individual states (with the approval of the central government); identification of the regulation zone areas within the states' respective territories are to be made in accordance with the guidelines contained in the main notification. The notification thus arms the central government with adequate powers to regulate construction activities in and around coastal areas and to protect ecologically sensitive areas, including nesting grounds of marine turtles. Further, in 1998, a National Coastal Zone Management Authority was constituted to take measures 'for protecting and improving the quality of the coastal environment and preventing, abating and controlling environmental pollution in coastal areas'. One of the most important functions of this authority is to examine and accord its approval to area-specific CZMPs formulated by State Coastal Zone Management Authorities and Union Territory Coastal Zone Management Authorities.<sup>12</sup>

Apart from the classification of marine zones, the highest protection to both marine turtles and their habitats is provided by the INDIAN WILDLIFE (PROTECTION) ACT, 1972 (WLPA). All the species of the marine turtles found in India including green turtles, hawksbill, leatherback, loggerhead and olive ridley turtles have been included in Schedule I of the Act, which means that they are accorded the highest degree of protection. Hunting<sup>13</sup> which includes damaging or destroying the eggs/nests of the reptiles is strictly prohibited and entails maximum penalties.<sup>14</sup> The state government also has power to

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<sup>8</sup> CRZ I areas are those areas that are ecologically sensitive, such as reserve forests, protected forests, sanctuaries, national parks, estuaries, inter-tidal areas, mangroves, coral reefs, etc.

<sup>9</sup> CRZ II areas are 'those which have already been developed upto or close to the shoreline'.

<sup>10</sup> CRZ III are those areas that are relatively undisturbed.

<sup>11</sup> CRZ IV areas are the coastal stretches in the Andaman and Nicobar Islands, Lakshadweep Islands, and other small islands.

<sup>12</sup> It is still not clear whether the CZMPs of the states incorporate all the conditions laid down in the MoEF's letter dt. 27.9.1996 in the revised plans, and whether these revised plans have been approved by the MoEF.

<sup>13</sup> As per Section 9, read with Section 2(16)(c) of the WLPA.

<sup>14</sup> Proviso to Section 51 of the WLPA lists the penalties under the Act; the proviso provides that where the offence committed is in relation to any animal specified in Schedule I or Part II of Schedule II, or the meat of any such animal, or article, trophy or uncured trophy derived from such an animal, or where the offence relates to hunting in a sanctuary or a national park or altering the boundaries of a sanctuary or a national park, such offence shall be punishable with imprisonment for a term which shall not be less than 3 years but may extend to 7 years and with a fine which shall not be less than Rs 10,000. Further, Section 51 A provides that any person who contravenes any provisions of Chapter VA, shall be punishable with imprisonment for a term which shall not be less than 3 years but which may extend to 7 years, and with a fine which shall not be less than Rs 10,000.

declare as a 'sanctuary'<sup>15</sup> those areas (comprised within any part of its territorial waters) which it thinks to be of 'zoological significance' for 'protecting/propagating/developing wildlife/environment'. However, this provision lays down that the limits of the area of territorial waters to be included in the sanctuary 'after taking adequate measures to protect the occupational interests of the local fishermen'. Similarly, the state government has the power to declare an area as a 'National Park' (whether in a sanctuary or not) and provisions of Section 26A will apply, where 'any part of the territorial waters is proposed to be included in such National Park'.<sup>16</sup> The various species of turtles, including the olive ridley, are further protected from trade under the WLPA, which prohibits trade in any such animals and prescribes penal consequences for any violation of the Act (Upadhyay and Upadhyay 2002). The WLPA is the most important legislation that protects species that are threatened.

Another significant act that may have far reaching consequences for marine biodiversity conservation is the BIODIVERSITY ACT, 2000. The Act seeks to 'provide for conservation of biological diversity, sustainable use of its components and equitable sharing of the benefits' arising therefrom. It is pertinent to mention that biological diversity includes within its definition marine biodiversity. The authority to be created under the Act has a representative member from the Department of Ocean Development.<sup>17</sup> The authority may advise the state government to specify areas of importance as 'heritage sites' and also provide measures for the management of such heritage sites.<sup>18</sup> Significantly, this provision empowers the Authority to specify critical habitats such as nesting sites of marine turtles as heritage sites. The nodal agency, which looks after the enforcement of several of the above legislative measures is the Indian coast guard, constituted under the COASTGUARD ACT, 1978. This Act defines 'maritime zones of India' as per the MZA, where it provides that it is the duty of the coast guard to protect, 'maritime and other national interests of India in the maritime zones of India', for which it may employ any measures as it thinks fit. This includes measures necessary for preserving and protecting 'marine environment' and prevention of marine pollution. Thus, the coast guard is vested with adequate powers to ensure the safety of marine habitats, including the nesting grounds of marine turtles that may be affected due to the movement of vessels and ships along their trade routes. Specifically, the functions of the coast guard include, amongst other things, to ensure the safety and protection of artificial islands, offshore terminals and other installations in maritime zones, to preserve and protect the marine environment, and to prevent and control maritime pollution.<sup>19</sup>

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<sup>15</sup> See Section 18 and Section 26 A (b) of WLPA

<sup>16</sup> See Section-35 of WLPA

<sup>17</sup> Section 8 (4) (c) (iii) of the Act

<sup>18</sup> Section 18(3) (b) of the Act

<sup>19</sup> Although it is not one of its principal tasks, the coast guard has been assisting the forest and fisheries departments, to implement closed area regulations for the protection of marine turtles. Recently, at the GOI-UNDP Workshop on Sea Turtle Conservation and Management, the spokesperson of the coast guard complained of lack of coordination with the forest department. The coast guard, for example, has been appointed as wildlife warden of Gahirmatha MNP, with power to stop and seize fishing vessels, especially trawlers, and to hand them over to the forest department for further action.



## Laws Relating to the Use of Marine Areas

Laws relating to the conservation of marine habitats and marine species have to be seen in conjunction with laws that specifically regulate the use of marine areas. This is imperative, as both use and conservation need to be balanced for any sustainable management of marine species. Historically, laws relating to the use of marine areas have had precedence over laws that protect marine habitats; the latter is a more recent phenomenon. The regulations on the use of marine areas include regulations in the trade in marine products (including export), laws that facilitate such trade, and laws which involve movement of marine vessels. The former has a direct bearing on marine resource conservation while the latter has implications on the habitat through potential pollution by discharge or accidental release of oil and other pollutants.

One of the central laws that facilitate trade in marine products is the MARINE PRODUCTS EXPORT DEVELOPMENT AUTHORITY ACT, 1972 (MPEDA). The MPEDA aims to streamline the marine products industry through the establishment of a central agency for regulating, organising and developing the industry along economic lines. Under this Act, the Authority is vested with adequate powers to undertake measures to develop marine products industry—such as promoting exports, registering fishing vessels, processing plants, etc. Since the main thrust of this Act is economic gain from export of marine products, the concerns of conservation are not given adequate importance. This is apparent from the composition of the Authority established under the Act; while the Authority has representatives from ship-owners, processing plants, dealers, and persons engaged in research connected with the industry, there is no representation of persons concerned with the conservation of marine resources. However, the Act does provide space for representation by persons concerned with the environment, by vesting discretion with the government to additionally engage such other persons, who, in the opinion of the government, ought to be represented. Though the MPEDA seeks to promote marine industry, its provisions do not adversely affect turtle conservation in as much as the EXPORT IMPORT POLICY (EXIM) prohibits export of all forms of marine turtles, including their parts and products.<sup>20</sup> However, deep-sea fishing and environmental concerns are not adequately addressed under this law.

Perhaps the most important legislation concerning the use of marine resources is the INDIAN FISHERIES ACT, 1987, which empowers local governments to take management of some selected streams or headwaters in order to protect fish. 'Water' includes the sea within a distance of one marine league of the coast (i.e. 3 nautical miles), and therefore the nesting grounds of turtles may come within the ambit of this act. Although the Act does talk about precautionary measures relating to fishing, its mandate is to promote fisheries in a sustainable manner. The Act empowers state governments to make rules for the protection of fish in selected waters<sup>21</sup> and to punish breach of such rules with

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<sup>20</sup> Recently, the MPEDA that has been at the forefront in the implementation of the turtle excluder device in India. They are currently providing free TEDs through state agencies on the east coast of India.

<sup>21</sup> Such as prohibition/regulation of engines, construction of wiers, specification of the nets and modes of their use etc

finest and forfeiture of engines, nets, fish, etc. This has implications for marine turtle conservation as violations of this Act have direct bearing on the mortality of turtles.

Some of the other laws that facilitate trade and may be relevant to the conservation of marine turtle habitats include the INDIAN PORTS ACT, 1908, where port includes any part of a river or channel. Under this Act, the government may enact rules to regulate the manner in which oil or water mixed with oil shall be discharged in any such port and for the disposal of the same; for regulating the use of piers, jetties, landing places etc; to regulate vessels whilst taking in or discharging ballast or cargo, and to regulate the use of fires and lights within any such port among other things. The Act specifically prohibits the improper discharge of ballast/rubbish into the sea; if such ballast/rubbish is likely to form a shoal, it is punishable under the Act. The main authority under the Act is the Conservator of Ports who is empowered to impose fines and take other measures to ensure compliance with provisions under the Act. Since lighting is a major threat to marine turtles, this Act may be utilised to develop a legislation similar to the Model Lighting Ordinance for Marine Turtle Protection (of the USA), which requires the department to designate coastal areas utilised or likely to be utilised for nesting by marine turtles, and to establish guidelines for local government regulations that control beachfront lighting. This rule is intended to guide local governments in developing ordinances which will protect hatchlings from the adverse effects of artificial lighting, provide overall improvement in nesting habitats degraded by light pollution, and increase successful nesting activity. From the above, it is clear that there are ample provisions under this Act to ensure protection of marine turtles while meeting the requirements of trade through the movement of vessels.

The INDIAN MERCHANT SHIPPING ACT, 1958, essentially a trade law, is another important legislation that can protect marine habitats. Among other things, the Act requires ships, both cargo and otherwise, to conform to the Safety Convention and secure 'Safety Convention Certificates'. Under the rule-making powers of the above Act, the central government may specify areas which shall be deemed to be 'prohibited zones' for the purposes of this Part (i.e. Part XI of the Act viz. Prevention of Pollution of the Sea by Oil). Further, the Act also prohibits discharge of oil in the 'prohibited zone'. Recently, this Act has been amended in the light of India's obligations under the International Convention on Limitation of Liability for Maritime Claims (LLMC), 1976. Significantly, the amendment provides for liability of ship-owners in case of damage, and formation of an international oil pollution compensation fund under the International Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage, 1992.

Further, due to the increase in poaching by foreign fishing vessels in the Exclusive Economic Zone, a need was felt to prevent such illegal activities and to protect the right of local fishermen. Although the Act has provisions that empower the government to take steps in the 'national interest', it has not been used to protect marine habitats, despite having the potential to do so. Specifically, the concept of 'prohibited zone' as well its linkage to the designated area under the MZA needs to be further explored for the protection of marine turtle habitats.



The MARITIME ZONES OF INDIA (REGULATION OF FISHING BY FOREIGN VESSELS) ACT, 1981 regulates fishing activities of foreign fishing vessels in the territorial waters of India and its EEZ. Interestingly, 'fish' as defined under the Act includes 'turtle (chelonia)'. The Act provides for the introduction of a system of licensing and permits to be issued by the central government. These permits can specify, amongst other things, the areas, period, the method and even the purpose of fishing. To this end, the central government is also empowered to make rules and to check violations through search, seizure and arrest, and also impose stringent fines for contravention of the license/permit. As this Act has been enacted to enhance and supplement other laws which are presently in force, its provisions can be used to support other laws such as Environment Protection Act, 1986 and Indian Wildlife (Protection) Act, 1972. The potential of the Act needs to be realised to address the issue of foreign vessels engaged in illegal activities in the marine waters of India.

Recently, the OFFSHORE AREAS MINERAL (DEVELOPMENT AND REGULATION) ACT, 2003 was enacted by Parliament<sup>22</sup> to regulate mineral development in offshore areas. The Act seeks to provide for the development and regulation of mineral resources in the territorial waters, continental shelf, EEZ and other maritime zones of India. It provides for stringent punishment of five years, with or without a fine of Rs 50,000, for unauthorised reconnaissance operations, exploration operations or production in offshore areas.

### **The International Legal Regime on Marine Areas**

National legislations enumerated above must be seen in the light of the international covenants that India has signed or ratified. It reflects the intent of any nation towards the use and conservation of its natural resources. However, international law is effective only when there is national legislation that reflects the spirit of the international instruments, thus providing a platform for the implementation of multi-lateral measures. It is in this light that any international legal regime has to be assessed for its effectiveness in conservation, in this case marine turtle conservation.<sup>23</sup> International law, more often than not, has been considered as soft law<sup>24</sup> that lacks teeth, especially at the national level.

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<sup>22</sup> Notified in the Gazette of India as Act No. 17 of 2003.

<sup>23</sup> The 1996 Inter-American Convention for the Protection and Conservation of Sea Turtles is one of the important international treaties dedicated exclusively to marine turtles, setting standards for the conservation of these 'endangered' animals and their habitats. The Convention came into force on 2 May 2001. It prohibits domestic trade and includes both terrestrial and marine habitats of turtles. The Convention also mandates use of TEDs in shrimp trawl. This is a regional convention and till date has already received the required number of eight ratifications. This treaty is a promising first attempt to address threats to marine turtles in a detailed manner.

<sup>24</sup> Though international law is admittedly soft law, it assumes the character of hard law at times. This is true in cases of International Conventions which become a part of the law of the land by virtue of being signed and ratified by the State. However, despite becoming part of national legal regime, implementation of international conventions depends largely on the will of the signatory state. This acts as the biggest constraint in enforcing compliance.

India is a party to a number of international covenants that provide a strong legal framework for marine turtle conservation in India. This has assumed more significance with the judiciary playing a more liberal role by incorporating the mandate of international instruments in national decisions, thus providing more legitimacy both to its own decisions as well as to the international instruments to which India is a party.

The process of development of international law on marine conservation evolved with *ad hoc* attempts to regulate specific problems arising out of various maritime operations. The international legal regime on marine areas began to develop with agreements dealing solely with pollution by oil. The INTERNATIONAL CONVENTION FOR THE POLLUTION OF THE SEA BY OIL (OILPOL),<sup>25</sup> concluded at London in 1954 was one of the first comprehensive international regulations for preventing oil pollution from tankers operating at sea. Despite its potential, OILPOL was never adequately implemented in India to have had any clear relevance to marine turtle habitats.

This was followed by agreements on the prohibition and regulation of dumping practices of ships at sea. The INTERNATIONAL CONVENTION FOR PREVENTION OF POLLUTION FROM SHIPS (MARPOL),<sup>26</sup> first adopted in 1973 regulated other types of ship-based pollution, including noxious liquids, garbage and so on. It was only with the growing realisation that prevention of marine pollution should be a matter of comprehensive legal obligation, that general principles and guidelines for the preservation of marine environment began to emerge. The basis for regulation and enforcement was the sovereign right of the States over the natural resources in their territorial seas. In the case of India, MARPOL has been viewed as one of the most important conventions to which ships, especially commercial ones, should be subject. However, some officials, have (anonymously) admitted that the nodal agency—the coast guard—has not been able to implement this Convention. This is especially because defence gets higher priority than conservation of marine ecosystems, and constant monitoring in the absence of requisite infrastructure, especially for a developing country like India, is very expensive. Moreover, commercial vessels, which are primarily profit-driven, often show laxity in conforming to international obligations wherever they can. Further, there is inadequate training of the members of enforcement agencies on the implications of pollution on marine biodiversity. Although officers of the coast guard are generally informed about these aspects during their training, the knowledge base is far from satisfactory.<sup>27</sup>

The United Nations CONVENTION ON THE LAW OF SEA (UNCLOS-III),<sup>28</sup> concluded in December 1982, provides comprehensive legal provisions for protection and preservation of the marine environment. While laying down general obligations of all the States to protect and preserve the marine environment, the Convention elaborates on the measures to prevent, reduce and control pollution of marine environments. Detailed provisions

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<sup>25</sup> Ratified by India without qualification on 4 March 1974.

<sup>26</sup> Ratified by India on 24 September 1986.

<sup>27</sup> This is as per the personal interviews conducted with some captains of commercial ships based in Hong Kong, on conditions of anonymity.

<sup>28</sup> Ratified by India on 10 December 1982.

for preventing pollution by dumping, pollution from vessels and pollution from seabed activities, subject to national jurisdiction, apart from pollution from land-based sources have also been provided. The UNCLOS-III also formulated for the first time the concept of the Exclusive Economic Zone.

In the context of marine casualties, the provisions of the BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL,<sup>29</sup> concluded in 1989, is also of immediate significance. Each Party is mandated to take appropriate legal, administrative and other measures to implement and enforce the provisions of this Convention, including measures to prevent and punish conduct in contravention of the convention.

Another relevant international documents dealing with the harmful effect of discharge of ballast water are the guidelines for the control and management of ship's ballast water to minimise transfer of harmful aquatic organisms and pathogens issued by the International Maritime Organisation (IMO). These guidelines aim to assist governments in minimising the risk of introduction of aquatic organisms and pathogens from the ship's ballast water and associated sediments while protecting the ship's safety. To this end, the guidelines lays down broad procedures and precautionary practices that port states and ships should follow.

#### INTERNATIONAL LAWS ON THE PROTECTION OF SPECIES

The various international conventions relating to protection of species have adopted a typical methodology while aiming at conservation of species; these conventions have generally listed the species in terms of degree of threat or the degree of protection required. This is accompanied by a system of permits with each party State required to enact the necessary legislation to support the system. The most important of all these is the CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA (CITES).<sup>30</sup> The Convention explicitly recognises that 'international cooperation is essential for the protection of certain species of wild fauna and flora against over-exploitation through international trade' and then categorises these species in terms of the extent of the threats they face and consequently the varying degrees of regulation they require. The Convention further deals with the modalities of regulation of trade in specimens of species included in three appendices. The contracting parties are also required to take appropriate measures, including provisions for penalty and confiscation, to prohibit trade in specimens of listed species and to enforce the provisions of the Convention.

The Indian Wildlife (Protection) Act, 1972 (WLPA) is a good example of national legislation that has adopted stricter measures than CITES, and even prohibited certain 'scheduled species' from being traded or hunted, although CITES measures are weaker.<sup>31</sup>

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<sup>29</sup> Ratified by India on 15 March 1990.

<sup>30</sup> Ratified by India on 20 July 1976.

<sup>31</sup> See Section 9 and Chapter VA of the WLPA. Here it may be noted that WLPA is a domestic regulatory instrument and does not yet specifically legislate on CITES as an international convention dealing with regulating international trade.

While hunting and other related offences entail up to 6 years of imprisonment along with a fine, any trade in 'scheduled species' (species included in Schedule I and in Part II of Schedule II), entail a stricter punishment of 7 years of imprisonment as well as a fine. All five species of marine turtles documented from India are listed in Schedule I of the WLPAs as well as in Appendix I of CITES. It is also important to note that the offences in 'scheduled species' are categorised as 'non-bailable offences', which means that the grant of bail to an accused is not a matter of right but is left to the discretion of the judge whereby she/he could impose conditions or restrictions for granting bail to the accused. In short, trade in wild species such as marine turtles entails serious consequences; this amendment to the WLPAs, including a stricter legal provision, was made in 1986 after India's ratification of CITES. Further, the Foreign Trade Act, 1973 mandates a five-year period of the Export Import Policy (EXIM); the EXIM Policy of 1997–2002 prohibits all wildlife and wildlife products from being exported. All species of marine turtles fall within the ambit of this Policy under the Foreign Trade Act, which further strengthens India's legal regime to protect marine turtles.

The IUCN RED DATA LIST also lists six species of marine turtles in Appendix I. Similarly, The CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS 1979, focussing solely on the conservation of migratory species is also relevant. The Convention requires parties to conserve migratory species, the conservation status of which is 'unfavourable'. Appendix I to the convention in pursuance of its Article III, contains a list of Endangered Migratory Species, which include all the five species of marine turtles listed in Schedule I of the WLPAs. Besides, migratory species with an 'Unfavourable Conservation Status' are listed in Appendix II under Article IV to the convention along with the corresponding States' obligations. Article V, which lists the modalities of international agreements, seeks to restore the migratory species concerned to a 'Favourable Conservation Status' and provides that each agreement should cover the whole geographic range of the migratory species concerned and should be open to accession by all range states of that species, *whether or not they are parties to this convention*.<sup>32</sup> Further, the Convention calls upon the states to establish a 'Scientific Council' to provide advice on scientific matters. Significantly, the provisions of this treaty culminated in a Memorandum of Understanding (MoU), complemented by a Conservation and Management Plan in July 2000 to conserve marine turtles in the waters and coastal states of the Indian Ocean and Southeast Asia and adjacent waters. India has played an active role in the finalisation of the MoU on the CONSERVATION AND MANAGEMENT OF MARINE TURTLES AND THEIR HABITATS OF THE INDIAN OCEAN AND SOUTH EAST ASIA (IOSEA), under the Convention on the Conservation of Migratory Species of 1979.

In India, there are no specific laws on migratory species. At best, the commonly identified migratory species are listed in the Schedules appended to the WLPAs. The biggest challenge to migratory species is providing adequate protection over the migratory route. While the legal status of the destinations might be enhanced in certain cases, such as Keoladeo Ghana National Park in Rajasthan and Chilika Lake in Orissa, there is a lack of adequate planning and management of conservation activities for the routes that

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<sup>32</sup> Author's emphasis

such migratory species follow. Clearly, much needs to be done in terms of scientific inputs to understand the migratory routes of these endangered species in order to take appropriate management measures.

#### INTERNATIONAL LAWS ON THE PROTECTION OF MARINE HABITATS

Apart from the various conventions with a focus on protection of species, there have been attempts to emphasise the protection of habitats within which various endangered species exist. This assumes significance as the destruction of habitats has been identified as the single most important reason for extinction of species. In this context some of the major international conventions include the CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE, ESPECIALLY AS WATERFOWL HABITAT, in 1971 in Ramsar, which seeks to preserve the fundamental ecological functions of wetlands as regulators of water regimes and as habitats supporting a characteristic flora and fauna.

Each contracting party is required to designate suitable wetlands within its territory for inclusion in a list of wetlands of international importance (the list to be maintained by the bureau). Further, the parties are also required to formulate and implement domestic law to promote conservation of wetlands in consonance with obligation under this convention. Although there is policy emphasis (for example, the designation of Ramsar Sites in India under the WLPA as Protected Areas)<sup>33</sup> and protection of specific wetlands, there is no exclusive legislation in India for wetland protection. Laws in India generally have addressed different resources which occur in wetlands, such as water, fish, birds and the land itself, and generally have not addressed wetlands as a habitat. Needless to add, there is an urgent need to enact a separate legislation for wetland management in India including marine habitats. The CONVENTION FOR PROTECTION OF WORLD CULTURAL AND NATURAL HERITAGE, 1972 concluded at general conference of the UNESCO in 1972<sup>34</sup> was made in recognition of the fact that 'natural heritage is increasingly threatened with destruction not only by the traditional causes of decay, but also by changing social and economic conditions which aggravate the situation with even more formidable phenomena of damage or destruction'. Besides, States were also mandated to take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of such heritage.<sup>35</sup> India has established such World Heritage Sites, all of which are based on cultural values. The mass-nesting sites of olive ridley turtles in Orissa are clearly of global importance, and they could be declared as natural heritage sites under this Convention. Another significant convention, The CONVENTION ON BIOLOGICAL DIVERSITY (CBD), concluded in 1992<sup>36</sup> has been instrumental in putting the concerns for

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<sup>33</sup> Till date, 19 areas have been designated as Ramsar sites in India, including the Bhitarkanika mangrove forests in Orissa.

<sup>34</sup> The Convention came into force in India on 14.2.1978.

<sup>35</sup> See Article 5 for some other measures that States are required to develop for the purposes of this Convention.

<sup>36</sup> The Convention signed by India on 5.6.1993. It has been signed so far by over 180 countries.

conversation of biodiversity on the international agenda. Significantly, the Convention stipulates that contracting parties shall implement the convention with respect to marine environments consistently with the rights and obligations of states under the Law Of the Sea.<sup>37</sup> Other obligations under the convention deal with international cooperation, identification, monitoring of species, public education, awareness, research and training of personnel, minimising adverse impacts, access and judicious use of genetic resources.

Other than these conventions, conservation of marine turtles has also been an issue of dispute before the WTO (Bache 2001). The shrimp–turtle case is a leading example in this context, where the initial WTO ruling upheld the free trade agreement over the concerns of marine turtle conservation. The case arose with the US banning import of shrimp and shrimp products harvested with ‘commercial fishing technology which may affect adversely species of marine turtles’ unless such harvesting was done using turtle excluder devices (TEDs). Following this ban, India, Pakistan, Thailand and Malaysia filed claims against the USA under the WTO disputes procedure. The WTO panel decided against the USA, and held that the US law banning import of shrimp harvested without use of TEDs was ‘arbitrary’ because it ‘undermined the multi-lateral trading system’.<sup>38</sup> Recently, however, the WTO has upheld the US position on this issue.<sup>39</sup>

## Conclusion

The above overview suggests that the legal regime on marine areas is comprehensive in its nature and scope, but in reality is inadequate in managing marine ecosystems. This is due to several reasons ranging from the involvement of multiple agencies, lack of coordination between stakeholders, inadequate scientific research, and lack of integration of policy and science of marine conservation to the pressing needs of a developing economy. This paper gives only a broad overview of national and international legislation that has larger implications; what is most important is to study in detail the state and local laws of the coastal states especially where marine turtles migrate or nest so that a more region specific plan for marine turtle conservation may emerge.<sup>40</sup> Some of the broad conclusions that emerged out of the present study are listed below:

- \* Although there are numerous agencies that have been entrusted with protection of marine ecosystems in India, coordination between them is a major legal concern. The coast guard, the chief wildlife warden’s office (entrusted with protection and management of endangered species) under the Ministry of Environment and Forests, the Ministry of Transport, the Department of Ocean Development, MPEDA under the Ministry of Commerce, and the Ministries of Petroleum and Natural Gas, Tourism, and Shipping have little coordination in ocean management.

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<sup>37</sup> See Article 22 (2) of the Convention.

<sup>38</sup> The case underlines the fact that the search for a level playing field for trade issues needs to reconcile, and not be independent of, the concerns of conservation

<sup>39</sup> See Chapter 25 for a more detailed report on this case.

<sup>40</sup> This is significant as each state has its own Coastal Zone Management Plan and Coastal Zone Management Authority.

Perhaps, a multi-disciplinary Ocean Management Cell could be formed for better coordination.

- \* More technological and scientific inputs are required to understand the biology of marine turtles.
- \* The occupational and *bonafide* interests of local people have to be taken into account.
- \* Regulation of trade and enforcement of maritime laws are essential prerequisites for marine conservation. Again, better coordination between the coast guard, wildlife authorities and Ministries of Commerce and Defence is required in this regard.
- \* Streamlining of international law into national law is essential. Although India has enacted most of its international obligations into national laws, there is greater need of integrating the use-oriented laws with conservation oriented legislation for the sustainable management of marine eco-systems.
- \* There is an urgent need to study in detail the local and state laws of coastal states especially where marine turtles migrate or nest.

It is important to keep the words of Henri Reichart (1999) in mind while undertaking any legal review of provisions: 'national legislation should be clear in its intent, equitable in its objectives, uncompromising with regard to the basic biology of marine turtles (for example, recognising slow growth, delayed maturity, unique importance of gravid females), adequate in their areas of enforcement and penalty, holistic (for example, include habitat protection), and harmonised with relevant international obligations'. Lastly, there is a need to re-emphasise the historical and mythological significance of turtles in India. The *kurma avatar*<sup>41</sup> the *kachhapa asana*<sup>42</sup> and other historical linkages to turtles in India and the reverence for these animals, based on ancient traditions, are perhaps the most important reasons for their survival in such large numbers on the Indian coast until today. However, this aspect does not easily fall within the aegis of law.

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<sup>41</sup> Reincarnation of Vishnu, an important Hindu deity.

<sup>42</sup> A particular pose in yoga.

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## Appendix

Major laws on marine areas: Powers, responsibilities and penalties.

Name of the Act	Nodal Authorities	Powers and Responsibilities	Penalties
CRZ NOTIFICATION 1991 (under EPA, 1986)	Central Government	The central government is empowered to issue notification imposing prohibition or restriction on location of industries and the carrying on of any process or operation in an area [Rule 5 (3)(d) of the EPA], on consideration of factors such as topography and climatic features of an area, environmentally compatible land use, net adverse environmental impact, etc.	The Act provides for imprisonment upto 5 years and/or fine upto Rs 100,000, and additional fine upto Rs 5,000 a day for continuance of offence.
Marine Products Export Development Authority Act, 1972 (MPEDA)	Marine Products Export Development Authority	The Authority has powers to undertake measures for the development of the marine products industry such as promoting exports, registering fishing vessels, processing plants, etc. (Section 9)	The Act penalises non supply and false returns with a fine of upto Rs 5000. It also penalises obstruction of authority in duty or failure to produce books and records or any other offence with imprisonment upto 6 months and/ or fine upto Rs 1000.
Indian Fisheries Act, 1897	State Government	The state government is empowered to make rules prohibiting/regulating fishing in any water, erection and use of fixed engines, construction of wiers, specification of net and modes of their use. (Section 6)	The state government can impose a fine of Rs 100 initially, and Rs 10 per day additionally, for continuing breach, seizure, forfeiture and removal of engines, nets and fish.

Name of the Act	Nodal Authorities	Powers and Responsibilities	Penalties
Indian Wildlife (Protection) Act, 1972 (WLPA)	National Board for Wildlife; Chief Wildlife Warden	National Board to promote the conservation and development of wildlife and forests by such measures as framing policies, advising government, etc (Section 5C). Chief wildlife warden empowered to control hunting of wild animals. Protect specified plants, prevention and detection of offences etc (Chapter III, IIIA, VI).	Offences in relation to any animal specified in Schedule I or Part II of Schedule II are punishable with imprisonment for 3 to 7 years and also with fine not less than Rs 10,000. For subsequent offences, penalty is imprisonment of 3 to 7 years and fine not be less than Rs 25,000. Contravention of provisions of Chapter VA, punishable with imprisonment for 3 to 7 years and fine not be less than Rs 10,000.
Biodiversity Act, 2000	National Biodiversity Authority	The Authority regulates biodiversity-related activities (Section 3), research on biological resources (Section 4), intellectual property rights relating to biodiversity (Section 6), to advise the state government, to specify areas of biodiversity importance as 'heritage sites' and also measures for the management of such heritage sites and to specify critical habitats such as nesting sites of turtles as heritage sites (Section 18).	Penalties under the Act include imprisonment upto 5 years and/or fine upto Rs. 1 million for violation of Sections 3, 4 and 6. Also fine of upto Rs 100,000 can be imposed for any other offence with additional fine of Rs 200,000 for subsequent offence.





Name of the Act	Nodal Authorities	Powers and Responsibilities	Penalties
Coastguard Act, 1978	Coast Guard	Power to take measures to ensure the safety and protection of artificial islands, offshore terminals and other installations in maritime zones, to preserve and protect the marine environment and to prevent and control maritime pollution; powers similar to those exercisable by government officers and state police officers vested with coast guard; power to arrest. There is also a provision for setting up of Coast Guard Courts.	Punishments awardable by coast guard vary between death, prison terms upto life imprisonment; detention, fine, etc depending upon the nature of offence
Indian Merchant Shipping Act	Director-General Shipping	Extensive powers relating to general administration of ships, registration of ships, collision, accidents at sea, navigation, control of Indian Ships and ships engaged in coastal trade, etc have been vested	The Act specifies specific punishments to various offences under the Act. For offences other than those for which specific penalty is provided, the punishment is penalty upto Rs 200.
Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act 1981	Central Government, officers of the Coast Guard and any authorised officer of the government.	Competence to stop or board a foreign fishing vehicle in any maritime zone and search such vessel for ensuring compliance with the Act; power to seize and detain such vessel and to require vessel owner to bring vessel to any specified port; power to arrest violator. The Central Government to regulate	The Act provides for imprisonment upto three years and fine upto Rs 1.5 million for unlawful fishing in territorial waters, Rs 1 million for unlawful fishing in EEZ and/or contravention of license; fine ranging

Name of the Act	Nodal Authorities	Powers and Responsibilities	Penalties
Indian Ports Act, 1908	Government/ Conservator of Ports	fishing activity of fishing vessels in the territorial waters and EEZ to curb poaching activities by foreign vessels through licensing.  Power to enact rules to regulate the manner in which oil or water mixed with oil shall be discharged in any such port and for the disposal of the same; for regulating the use of piers, jetties, landing places etc; to regulate vessels whilst taking in or discharging ballast or cargo and to regulate the use of fires and lights within any such port among other things. (Section 6)	between Rs 50,000 to Rs 500,000 for contravention of a permit; confiscation of vessel for any of the above offences; fine of upto Rs 500,000 for entering Indian Maritime Zone without permit; imprisonment for one year and fine not exceeding Rs 50,000 for obstruction of authorised officers.  Fine upto Rs 500 and reasonable expenses for discharge of ballast water or rubbish or any mix of oil and water and imprisonment upto two months

