

**PRESERVING OUR OCEANS: ANALYSIS OF
ENVIRONMENTAL TREATS, INTERNATIONAL
OBLIGATIONS, AND PARTICIPATORY
APPROACH TOWARDS CONSERVATION OF
MARINE ECOSYSTEM**

*Mishita Jethi**

I. HISTORY OF THE ‘FREEDOM OF HIGH SEAS’

The earliest Roman Empire recognised the utility of freedom of the seas, and the sea was “common to all men”.¹ However, at the height of the Roman Empire, the entire Mediterranean Sea was regarded as a Roman lake. Thus, one may argue that the concept of such waters being ‘common to all men’ was simply a way of stating the right of the *Roman citizens* over the seas. There was no international flavour in this recognition, because the waters dealt were all *mare clausum*, i.e. closed seas, totally under the dominion of the Roman empire.²

With the breakdown of social order after the Roman authority, various governmental entities arose and developed into modern-states, appropriating adjacent areas of sea for their exclusive use, with Spain and Portugal emerging as forerunners in maritime navigation and exploration.³ In the later centuries, the concept of freedom of seas arose once again, with the other nations in Europe challenging Spain and Portugal’s right to exclusive trade with the ‘New World’. In his

*Mishita Jethi is a fifth-year student at National Law Institute University, Bhopal. The author may be reached at mishita.jethi@yahoo.com.

¹PERCY THOMAS FENN, *Justinian and the Freedom of the Sea*, 19 AJIL 716-727 (1925).

²PITMAN POTTER, *THE FREEDOM OF THE SEA IN HISTORY, LAW AND POLITICS* (Longmans, Green and Co. New York 1924).

³THOMAS WEMYSS FULTON, *THE SOVEREIGNTY OF THE SEA* 3-6 (EdinburgWm. Blackwood and Sons, 1911).

treatise, Dutch jurist Grotius argued, that every nation was free to travel to every other nation and to trade with it, utilizing the high seas for that purpose.⁴ According to his classification, the sea fell in a category of things which could not be placed under ‘ownership’ because it could not be reduced to possession, and one vessel’s navigation was not an impediment to others. In modern law, this concept ripened into the doctrine of ‘Freedom of High Seas’, with there being an unbroken line of judicial authority from the 18th century onwards affirming that the high seas are free and open for the use of all and may not be appropriated to any nation.⁵

II. MODERN CONCEPT OF ‘LIMITED SOVEREIGNTY’

A. *State Practice and the International Court of Justice*

It has been stated in the previous section that from the very beginning, the high seas were considered to be open for all, and not to be made territory of any State. To understand what ‘*territory*’, and thus ‘*sovereignty*’, of a State means, we must realize that it is a well-recognized principle of international law that no State can be deemed subordinate to external authority, including the rule of a body of international law. In the case of *The Schooner Exchange v. McFaddon*⁶ it was held that “*The jurisdiction of the nation within its own territory is necessary and exclusive and absolute. It is susceptible of no limitation not imposed by itself. Any restriction upon it, deriving validity from an external source, would imply a diminution of its own sovereignty to the extent of the restriction.*” The

⁴HUGO GROTIUS, MARE LIBERUM CHAPTER 5 (Oxford, England: Clarendon Press, Magoffin translation 1916).

⁵LE LOUIS, 2 *Dodson* 210, 165 English Reports 1464 (1817); *The Marianna Flora*, 11 Wheat (24 US) 1 (1826); *The SS Lotus Case* (France v. Turkey) PCIJ Series A, No: 10 (1927).

⁶11US (7 Cranch) 116, at 156, (1892).

*Right of Passage case*⁷ is an example that a State's conduct within its own territory is unrestricted by international legal rules. The specific right of States to render independent decisions with respect to their natural resources and their right to freely use and exploit their natural wealth and resources has been identified in a series of statement from the UN General Assembly.⁸ Thus the 'territory' of a State is understood to be that geographical extent over which and for which a State can make independent legislations, without requiring to consult any external authority or entity.

However, it is equally true that it is international law that defines the points of intersection, and therefore the limits of States' sovereignty. The consent of State is not required to subordinate a State rule which has risen to the dignity of international law.⁹ No State maybe vested with exclusive competence or unfettered liberty even as to its own resources when the interests of other states are implicated. In 1951, the International Court of Justice ("ICJ") held that "[t]he delimitation of the sea areas has always had an international aspect, it cannot be dependent merely on the will of the coastal States as expressed in its municipal law".¹⁰ In the *Icelandic Fisheries case*¹¹, it was indicated that the states not only have a duty in customary International law to allocate common resources equitably but also to conserve them for future benefits in the interest of sustainable utilization. This case does support the existence of a customary obligation on the part of the nations to co-operate in conservation and sustainable use of common property resources of High seas.

⁷The Right of Passage over Indian Territory case, (Portugal v. India), (1960) I.C.J. 6.

⁸G.A. Res 626 (VII), U.N. Doc. A/RES/626 (1952); G.A. Res 1803 (XVII), U.N. Doc. A/RES/1803(XVII) (1962).

⁹BRIAN D. SMITH, STATE RESPONSIBILITY AND THE MARINE ENVIRONMENT: THE RULES OF DECISION, (Oxford: Clarendon Press 1988).

¹⁰The Anglo-Norwegian Fisheries case (1951) ICJ Reports 3, 132.

¹¹1974 ICJ Reports, 3.

***B. The UN Conventions and Codification of ‘Territorial Sea’
and ‘Reasonable Use’***

This brings us to the special status accorded to the high seas and coastal zones in international law. In this spirit, the concept of ‘*territorial sea*’ maybe studied. This concept became a rule of customary international law together with the freedom of the high seas. The principle was ultimately codified in *the Convention on the Territorial Sea and the Contiguous Zone*¹², which provides that

‘The sovereignty of a State extends beyond its land territory and its internal waters, to a belt of sea adjacent to its coast, described as the territorial sea...The sovereignty of a coastal State extends to the air space over the territorial sea as well as to its bed and subsoil.’¹³

The First UN Conference on the Law of the Sea was held in Geneva in 1958 and The Convention on the High Seas¹⁴ was adopted. Under this Convention however, this freedom was to be exercised by all States “*with reasonable regard to the interests of other States*”.¹⁵ Even the US Courts as early as 1826 said that one must exercise ocean rights so as not to impinge on the rights of others or cause damage to the property of others.¹⁶ This notion of something other than ‘absolute’ right of freedom on the high seas was the beginning of a new stage in the law of the sea development that would have important ramifications for the emergence of international rules concerning high seas trade in the latter half of the twentieth century

The various treaties of the United Nations have stated that common places and the high seas are open to *legitimate and sustainable use* by

¹²Convention on the Territorial Sea and the Contiguous Zone, 15 UST 1606 (1964), 516 U.N.T.S. 205 (1964).

¹³Convention on the Territorial Sea and the Contiguous Zone, Article 1(1) and 2.

¹⁴Convention on the High Seas, April 29, 1958, 13 UST 2312 (1962), 450 U.N.T.S. 82 (1962).

¹⁵Convention on the High Seas, Article 2.

¹⁶The *Marianna Flora*, 11 Wheat (24 US) 1 (1826).

all the states warding off absolute sovereignty of a particular state.¹⁷ The 1982 United Nations Convention on the Law of the Seas¹⁸ (“UNCLOS”) was intended to be a comprehensive restatement of almost all aspects of the Law of the Sea. Its basic objective is to establish

*“A legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and the oceans and equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of marine environment.”*¹⁹

A. Stages of Evolution of the Use of Marine Resources

Thus, the evolution of rules of customary international law with regards to marine resources has been crystallised into four stages by a known jurist in international environment law: (1) unrestricted and unregulated freedom of the high seas, (2) reasonable use of the high seas, (3) regulated use of the high seas, and (4) establishment of property rights in the high seas.²⁰ The first stage was in the ancient Roman era which continued until the formation of the modern world as we understand now. The second stage was the concept as evolved under the Convention of the High Seas and the Convention Territorial Seas, where there was freedom of high seas but with due regard to the interests of other nations. Under this approach however, the standards of ‘reasonableness’ were never codified or hardened by law. There was no compulsory dispute settlement procedure and traditional diplomatic processes were banked on. Thus, environmental harm inflicted by coastal States would usually either go unnoticed, or was protected under the doctrine of sovereignty. In the third stage, international law became more regulatory and treaties and regulations

¹⁷Convention on High Seas, Article 1 and 2; *Infra* note 18, UNCLOS, Article 87 and 89.

¹⁸United Nations Convention on the Law of the Sea, Dec. 10, 1982, 21 I.L.M. 12.

¹⁹Preamble of the UNCLOS.

²⁰HERBERT GARY KNIGHT, *MANAGING THE SEA’S LIVING RESOURCES: STUDIES IN MARINE AFFAIRS*, 27, (Toronto: Lexington Books 1977).

drawn up by affected countries have become binding. In the fourth stage, in which we see ourselves now, coastal States have started allocating exclusive tenure to public and private companies through a variety of rights, under the system of exclusive economic zones. The Convention on the Continental Shelf²¹ as well as customary international law accords exclusive access to coastal States to the nonliving resources off their coasts. My understanding suggests that from this stage, we are now not only ready to move to, but also forced to recognise the fifth stage of sustainable and universal use of the high seas and marine resources.

III. THE IMPORTANCE OF BIODIVERSITY IN MARINE ECOSYSTEMS

‘Ecosystem’ means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.²² ‘Biological diversity’ means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.²³

The oceans cover 70% of the planet’s surface area, and marine and coastal environments contain diverse habitats that support an abundance of marine life. Marine organisms of the same species living in a specific area are populations of that particular species. A population never lives in isolation but interact with other populations. A group of plant and animal population living together in the same region is a community. For example, a variety of marine animals in a food chain system coexist. Life in our seas produces a third of the

²¹Convention on the Continental Shelf, April 29, 1958 15 UST 471 (1964), 499 UNTS 311 (1964).

²²*Infra* note 34, Article 2.

²³*Id.*

oxygen that we breathe, offers a valuable source of protein and moderates global climatic change. Some examples of important marine ecosystems are Oceans, Estuaries and salt marshes, Lagoons, Tropical Communities (Mangrove Forests and Coral Reefs), Rocky subtidal (Kelp Beds and Sea grass Beds) and Intertidal (Rocky, sandy, and muddy shores). The many marine ecosystems coupled together sustain the larger, complex, and intricately interlinked global ecosystem - ecosphere.²⁴

Marine ecosystems are a part of the largest aquatic system and environmental resources on the planet, covering over seventy percent of the Earth's surface. The habitats that make up this vast system range from the productive near-shore regions to the barren ocean floor. Marine ecosystems are very important in to the overall health of both marine and terrestrial environments. According to the World Resources Center, coastal habitats alone account for approximately one-third of all marine biological productivity, and estuarine ecosystems (i.e., salt marshes, seagrasses, mangrove forests) are among the most productive regions on the planet. In addition, other marine ecosystems such as coral reefs provide food and shelter to the highest levels of marine diversity in the world.²⁵

IV. THREATS TO THE MARINE ENVIRONMENT

Today, there is broad recognition that the seas face unprecedented human-induced threats from industries such as fishing and transportation, the effects of waste disposal, excess nutrients from agricultural runoff, and the introduction of exotic species. If we fail to understand both the vulnerability and resilience of the living sea, the relatively brief history of the human species will have to face tragic

²⁴FRED T. MACKENZIE AND JUDITH A. MACKENZIE, *OUR CHANGING PLANET: AN INTRODUCTION TO EARTH SYSTEM SCIENCE AND GLOBAL ENVIRONMENTAL CHANGE* 94 (Prentice Hall, Upper Saddle River, 1995).

²⁵<http://www.epa.gov/bioindicators/aquatic/marine.html>. accessed on 30th December, 2009.

destiny. While socio-economic and political interests of the nations may be fragmented, reliance upon shrinking ocean and coastal resources, international trade and foreign investment capital are the most important factors that are common in all economies. According to the Millennium Ecosystem Assessment, the world's oceans and coasts are highly threatened and subject to rapid environmental change. Major threats to marine and coastal ecosystems include:²⁶

- Land-based pollution and eutrophication
- Overfishing, destructive fishing, and illegal, unreported and unregulated (IUU) fishing
- Alterations of physical habitats
- Invasions of exotic species
- Global climate change

The main conclusion of the 'International Conference on Impacts of Population and Markets on Sustainability of the Ocean and Coastal Resources: Perspectives of Developing Economies of the North Pacific Rim', held in Seattle from June 2-3, 1999 was that '*there is an urgent need to start a regional study on impacts of population and market pressures on environmental health of the ocean and coastal resources of the region.*'²⁷ It has been 10 years since that conference, and we are yet to see any major environmental impact assessment undertaken in our country, particularly for the coastal regions.

A. Coastal tourism

A major threat to the marine environment is coastal tourism. Major environmental and social consequences result from uncontrolled tourism development. Tourism development without due attention to the health of the coastal environment can damage the coastal

²⁶Convention on Biological Diversity, *What's the problem*, (Oct. 8, 2009. <http://www.cbd.int/marine/problem.shtml>).

²⁷VLAD M. KACZYNSKI, *Integrative Analysis of Human Impacts on Oceans and Coasts in the Asia-Pacific*, 10. Presented at the Pukyong National University - University of Washington Joint Seminar: Impact of Population and Markets on Marine Environment: Perspectives of the Asia-Pacific Economies, Mar. 13, 2001, Busan, Korea.

ecosystems by destroying coral reefs and mangroves leading to siltation of coastal waters. In addition, beach erosion, oil leaks from boat engines, the physical damage to the reef and sea grass bottoms caused by divers and snorkellers, improper waste and sewage disposal, and the leakage of tourism income to outsiders is all negative consequences of tourism development. Tourism in many of islands in Southeast Asia are especially under increasing pressure due to their limited resource base such as fresh water and land and limited capacities of waste disposal. Tourism impact may be more severe in islands because tourists and tourist amenities tend to concentrate near the ecologically and geomorphologically dynamic coastal environment. The small size of many islands also means that they are bound to locate in the coastal zone.

Many of today's coastal settlements can be traced back to the early 20th century when trade and commerce began to flourish inter-regionally within the world. The ports became critical supply points for the settlers as they moved to hinterlands and for the traders who began to look for newer markets. In fact, post 1950s in United States, the demand for coastal housing, recreational as well as permanent became great. Since this area of coastal lands is finite, developers all across the world started to "reclaim" the fertile wetlands. Areas totally unsuited for housing development are "hardened" to accommodate burgeoning coastal communities, usually with no semblance of planning and environmental concern. Apart from housing, shipping industries have also contributed in multifarious ways to upset and destroy the delicate balance of environment in coastal regions. The offshore oil industries have grown dramatically in recent years in many countries. There have been oil-spills connected with production and transport operations that have affected coastal resources. While the environment continues to adapt to meet the demands of human population, due to its assimilative nature, there are limits to this assimilation also. Understanding the nature of

conflicting uses of coastal resources provides a clearer basis for management actions that follow.

Tourism is promoted in many economies because it can generate economic and social development, and alleviate poverty in many coastal nations. It can add to the GNP considerably and bring in export earnings. However, coastal areas are one of the most frequently visited areas. Because the coastal zone is a highly sensitive geographic space bordering land and water, they are vulnerable to environmental pressure, and thus, sustainable tourism practice is encouraged such as ecotourism. GESAMP 2001 report also mentions that tourism is the world's biggest industry, and is rapidly growing. Unfortunately, tourism lacks sufficient management in the environmental area. Most tourist places are located near the coast and this causes extreme environmental pressure. Tourists generate much waste. Today, marine tourism is facing the dilemma between increasing tourists and improper disposal of waste.²⁸

B. Overfishing

Overfishing is widely acknowledged as one of the greatest single threat to marine wildlife and habitats. The Food and Agriculture Organization (“**FAO**”) of the United Nations reports, that nearly 70% of the world's fish stocks are now fully fished, overfished or depleted. Such global and/or regional trend naturally raises an important question on fisheries/resources sustainability. That is to say, how can coastal states with limited but transboundary²⁹ marine living resources provide their people with seafood in a sustainable manner under the restrictive conditions? Technological advances in the modern practices of fishing can be ascribed as a major reason for this

²⁸A Sea of Troubles, GESAMP, (Jan. 2001), <http://www.gesamp.org/publications/a-sea-of-troubles>.

²⁹Marine transboundary issues arise from transmigration nature of marine living resources and pollutants across the national ocean boundaries.

depletion. Modern trawlers swallow large fish stocks.³⁰ These vessels can catch twice as much fish in an hour as a sixteenth-century ship could haul in a whole season.³¹ FAO estimate that a ton of unwanted “by-catch” is caught for every three tons of fish netted a total of 27 million tons of this by catch is killed each year.³² ‘Bottom trawling’ is also detrimental to benthic sea bed.

Many experts on marine ecosystem and resources believe that ocean carrying capacity may no longer allow overexploitation of marine living resources. In reality, North Pacific coastal states and international fishery organizations have put much more efforts on resource management over their jurisdictional waters as well as the high seas than ever before. This is a clear sign that cheap marine fisheries operation in the oceans will be no longer possible throughout the region.³³ The ninth meeting of the Conference of the Parties to the Convention on Biological Diversity (“**CBD**”)³⁴ as well as other relevant UN/international fora, such as the 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters and the 1996 London Protocol, sounded a warning on the potential adverse impacts of direct human-induced ocean fertilization on marine biodiversity. The Conference of the Parties to the CBD, in its ninth meeting, also raised its concerns on the potential impacts of ocean acidification.³⁵ The necessity to combat the degradation and depletion of fish stocks, both in the zones under national jurisdiction and in the high seas and its causes, such as overfishing and excess fishing capacity, by-catch and discards, has

³⁰THOMAS TELESKA, *Sovereignty or the Precautionary Principle: Which will save Our Fish?* 12 SOUTHEASTERN ENVTL. L.J. 23 (2003).

³¹*Id.* at 45.

³²COLIN WOODARD, *OCEAN’S END* 42 (Basic Books 2000).

³³Seong K. Park and Jae M. Choi, *Transboundary Marine Ecosystem and Living Resource Problems in the North Pacific*, Presented for the Open Meeting of International Science Planning Committee (ISPC), (Oct. 6-8, 2001).

³⁴1760 U.N.T.S. 143, 1992; 31 I.L.M. (1992) 822.

³⁵Secretariat of the Convention on Biological Diversity, Statement of Dr Ahmed Djoghlaif, Executive Secretary, at the Meeting of Steering Committee Global Form on Oceans, Coasts and Islands Washington DC, USA 5 - 6 February 2009.

been one of the recurrent topics in the process of implementation of the programme of action adopted in Rio de Janeiro.

As far as the world's coral reefs are concerned, about 20% of them have been effectively destroyed and show no immediate prospects for recovery; about 16% of them were seriously damaged by coral bleaching in 1998, but of these about 40% have either recovered or are recovering well; about 24% of the remaining reefs are under imminent risk of collapse through human pressures; and a further 26% are under a longer-term threat of collapse.³⁶

C. Pollution

The late 1980s and early 1990s were a time when the world population came to terms with the rising menace of environmental pollution. Awareness of the impact of pollution on coastal environments, on fisheries, and on human populations became widespread by 1980s. Real problems of over fishing, loss of marine biological diversity and degradation of marine ecosystems has become more apparent recently.³⁷ For these reasons, protection of the marine ecosystem and the sustainable use and development of its resources have become significant issues in the modernization of the law of the sea. A study group on unintended occurrence of pesticides in marine environment organized by Organization for Economic Co-operation and Development³⁸ (“OECD”) has started a programme of monitoring residue levels in aquatic wildlife. This group states that production of H₂S is a serious coastal pollution problem where sea water containing sulphate is reduced by large amounts of organic

³⁶Secretariat of the Convention on Biological Diversity, Statement of Dr Ahmed Djoghlaif, Executive Secretary, at the Meeting of Steering Committee Global Form on Oceans, Coasts and Islands Washington DC, USA 5 - 6 February 2009.

³⁷Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), *The State of Marine Pollution*, (UNEP 1990).

³⁸Founding Convention of the Organization for Economic Co-operation and Development ('OECD Convention'), 888 UNTS 179.

matter in sediments and stagnant waters.³⁹ Lead concentration have elevated in higher organisms near the end of marine food chains. Accumulation of industrial lead in surface layers of near-shore sediments has elevated lead levels in shellfish.⁴⁰

Every coastal State is granted jurisdiction for the protection and preservation of the marine environment of its exclusive economic zone. Such jurisdiction allows coastal States to control, prevent and reduce marine pollution from dumping, land-based sources or seabed activities subject to national jurisdiction, or from or through the atmosphere. With regard to marine pollution from foreign vessels, coastal States can exercise jurisdiction only for the enforcement of laws and regulations adopted in accordance with the UNCLOS for “*generally accepted international rules and standards.*” Such rules and standards, many of which are already in place, are adopted through the competent international organization, namely the International Maritime Organization (“**IMO**”).⁴¹

D. Illegal trade of marine biological species

Trade in rare wildlife and marine life species is thought to be the second most lucrative illegal trade in the world.⁴² The Convention on International Trade in Endangered Species of Wild Flora and Fauna⁴³ (“**CITES**”) emphasizes environmental trade measures. CITES is a non-self executing treaty and cannot be implemented until specific legislation has been adopted by each member State.⁴⁴ The failure to adopt domestic legislative framework and regulatory measures

³⁹CHARLES S. PEARSON, INTERNATIONAL MARINE ENVIRONMENTAL POLICY: THE ECONOMIC DIMENSION (California: John Hopkins University Press, 1975).

⁴⁰EDWARD D. GOLDBERG, A GUIDE TO MARINE POLLUTION, SCRIPPS INSTITUTE OF OCEANOLOGY (La Jolla, California, Gordon and Breach Science Publishers).

⁴¹ALAN E. BOYLE, *Marine Pollution Under the Law of The Sea Convention*, 79 AM. J. INT. LAW 1985.

⁴²P.K.RAO, INTERNATIONAL ENVIRONMENTAL LAW AND ECONOMICS 178 (Blackwell Publishers, 2002).

⁴³993 U.N.T.S. 243: 119, 125, 127, 140; Signed at Washington, D.C., on 3 Mar. 1973, Amended at Bonn, on 22 June 1979.

⁴⁴CITES, art. VIII.

prevents parties from adopting the required trade measures envisaged under CITES. An important issue is the State's obligation to ensure environmental measures in international trade, in relation to the provisions of the World Trade Organization⁴⁵ ("WTO"), which came into existence based on an agreement of 1994. For WTO members who are also a party to CITES, provisions of CITES could have prevailed according to the principles of customary international law. According to this view, *lex posterior* would have prevailed. However, Article II.4 of the WTO Agreement clarifies that "*The General Agreement on Tariffs and Trade 1994 is legally distinct from The General Agreement on Tariffs and Trade 1947*". It thus appears that GATT now postdates CITES. Here it may be argued that *lex specialis* will prevail, because specific environmental agreements are not as broad-based as GATT/WTO.⁴⁶ This issue remains relevant for years to come and are subject to interpretations in specific combinations of agreements and their provisions.

V. PROVINCE OF ALL MANKIND: ARGUMENTS FOR PROTECTION OF MARINE RESOURCES BY ALL STATES

A. *Argument Under Principles of Customary International Law*

There exists in international environmental law, a real and binding primary obligation of the States for the protection of the environment, whose breach involves responsibility for a wrongful act.⁴⁷ These real

⁴⁵33 I.L.M. (1994) 15.

⁴⁶P.K.RAO, INTERNATIONAL ENVIRONMENTAL LAW AND ECONOMICS (Blackwell Publishers, 2002).

⁴⁷RICCARDO PISILLO-MAZZESCHI, FORMS OF INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM, IN INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM (Francioni & T. Scovazzi eds., 1991).

and binding obligations are guided by the due diligence rule.⁴⁸ International decisions,⁴⁹ practice and opinion now clearly evidence the emergence of an international obligation designed to check the potentially intrusive liberty of states with respect to environmental matters: *sic utere tuo, alienum non laedas*. The International Court in *Corfu Channel*⁵⁰ case referred to ‘every State’s obligation not to allow knowingly its territory to be used for acts contrary to the rights of other State.’ The obligation to prevent ‘transboundary harm’ has also been stated by the Court repeatedly.⁵¹ The obligation to prevent conduct in State territory from causing material damage to the environment in the territory of another State has risen to the dignity of a rule of customary international law.⁵² The logic of due diligence can be extended to the exercise of legal authority by a State over private activities in areas such as the contiguous zone, the continental shelf and the exclusive economic zone to prevent environmental harm to another state.⁵³ The States are under an obligation to ensure that their territories are not utilized for any activity that may be potentially hazardous to the environment of the other States.⁵⁴ This principle is also extendable to harm caused by the activities of the State in and around the coastal areas. Even while performing their legitimate

⁴⁸Convention on the Non-Navigational Uses of International Watercourses, Draft Report of the International Law Commission, G.A.O.R., 43d Sess., U.N. Doc. A/CN.4/L.463/Add.4, (1991), 3 COLO. J. INT’L ENV’T L. 1 (1992) Articles 8-19, 26, 27.

⁴⁹Trail Smelter case, (US v. Canada) 3 RIAA (1905).

⁵⁰The Corfu Channel case, (UK v. Albania) (1949) ICJ 4, 22.

⁵¹The Nuclear Tests case, (Australia v. France) (1974) ICJ 253; The Lac Lanoux case, (1957) (Spain v. France) 12 RIAA 281.

⁵²Caflich, *International Law and Ocean Pollution: the Present and the Future*, 8 REVEU BELGE DROIT INTERNATIONAL 7, 15 (1972); Legault, *The Freedom of the Seas: A License to Pollute?*, 31 U. TOR L.J. 211, 217 (1971).

⁵³Amerasinghe, *Basic Principles relating to the International Regime of the Oceans*, 6 J. MAR. L & COMM. 213 (1975).

⁵⁴Convention on the Non-Navigational Uses of International Watercourses, Draft Report of the International Law Commission, G.A.O.R., 43d Sess., U.N. Doc. A/CN.4/L.463/Add.4, (1991), reprinted in 3 COLO. J. INT’L ENV’T L. 1 (1992) Articles 8-19, 26, 27.

activities, States are under an obligation to prevent, abate and control transfrontier pollution to such an extent that no substantial injury is caused in the territory of another State.⁵⁵ For marine resources, this obligation requires States to utilise their biological resources, and also coastal environment in a way that is not harmful to other States. The various activities of damaging nature carried out by States in the fragile marine ecosystems are harming not just the coastal States but also States in the hinterland.

B. Obligations under treaties and multilateral agreements

The real awakening in the field of international environment law began with the historic conference held in Stockholm in 1972 called the Declaration of the UN Conference on the Human Environment (“**Stockholm Declaration**”).⁵⁶ The process of developing a new international environmental law was also given a substantial impetus by the Declaration on Environment and Development (“**Rio Declaration**”).⁵⁷ Recommendations of the Stockholm Declaration led directly to the adoption of the 1972 London and Oslo Dumping Conventions, and the 1973 (“**MARPOL**”) Convention for the Prevention of Pollution from Ships. Conservation of biological diversity is a common concern of humankind.⁵⁸ In this light, States cannot disregard environment of common places and other States.⁵⁹ The CBD expresses the willingness of the Contracting States to conserve and sustainably use biological diversity for the benefit of

⁵⁵Article 3, “ILA Montreal Rules of International Law Applicable to Transfrontier Pollution (1982)”, in Report of the International Law Commission on the work of its fiftieth session First report on “Prevention of transboundary damage from hazardous activities” UN Doc. A/CN.4/487/Add.1 Geneva, 20 April-12 June 1998.

⁵⁶Declaration of the United Nations Conference on the Human Environment, June 16, 1972, Principle 21, U.N. Doc. A/C, 48/14 (1972), reprinted in 11 I.L.M. 1416 (1972).

⁵⁷U.N. Doc. A/CONF.151/26/REV.1(1992), Vol. 1, Aug. 12 1992.

⁵⁸CBD, Preamble.

⁵⁹U.N. G.A. Res. 3281 (XXIX) (1974), Charter of Economic rights and duties of states; UNCLOS art. 193; Rio Declaration, art. 2; CBD, art. 3.

present and future generations.⁶⁰ UNCLOS mandates the state parties for conservation and management of living resources of High seas.⁶¹ Further States have the obligation to protect and preserve the marine environment.⁶² Besides, Article 2 of the Rio Declaration is also similarly worded and says that

“States have ... the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.”

Principle 21 of the Stockholm Declaration embodies a State’s sovereign right over their own resources, but also the responsibility to ensure that activities within their jurisdiction do not cause transboundary harm.⁶³ There are several treaties which have adopted this principle of due diligence to ensure that activities of the State refrain from causing transboundary harm.⁶⁴ This rule, established in principle 21, is now a general principle of international law.⁶⁵

C. Human rights argument

Prior to World-War II, how a State chose to treat its nationals and its internal resources was a matter beyond the reach of international law. Since then, it has become a matter of international concern and a proper subject of regulation by international law.⁶⁶ Freedom from environmental degradation and injury is identified as a protected human right.⁶⁷ The requisite international interest is the community’s

⁶⁰*Id.*

⁶¹UNCLOS, art. 119.

⁶²UNCLOS, art.192.

⁶³Dupuy, P.M., *International Law And Pollution*, in INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 337 (Edith Brown Weiss et al., 1998).

⁶⁴McCaffrey & Stephen C., *International Environmental Law*, in International Environmental Law And Policy 504 (Edith Brown Weiss et al., 1998).

⁶⁵RICCARDO PISILLO-MAZZESCHI, FORMS OF INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM, IN INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM (Francioni & T. Scovazzi eds., 1991).

⁶⁶Universal Declaration of Human Rights, G.A. Res. 217 A, 10 Dec. 1948 (A/810) 71.

⁶⁷Ho, *UN Recognition of the Human Right to Environment Protection*, 2 EARTH LJ 225 (1976).

concern for the protection of the human right to be free from the adverse effects of environmental degradation. The right to environmental protection is implicit in the right to health; the relationship between the wellbeing of an individual and the quality of the natural environment is patent.⁶⁸ Thus, there is a duty cast on all States to ensure that the delicate environment around aquatic regions is not disturbed so as to cause health hazards to populations in other States.

D. Environmental unity argument

Earth's biosphere represents a single indivisible system characterised by the inter-relations of its various ecological subsystems. The disruption of any one promotes the breakdown of another.⁶⁹ As a corollary, injury to any part of the ocean environment, even within an exclusive juridical zone, constitutes by definition, injury to the whole resource. Resources in the marine environment are thus in some sense 'international' even if within the zone of exclusive territorial authority. 'Natural Solidarity' of the sea renders all regions a part of a continuous biosphere. Such pollution may affect system wide resources, such as migratory species of fish and overall biological stock of other species.⁷⁰ Of late, it has been recognized that "*it is one of the advances in maritime international law, resulting from the intensification of fishing, that the former laissez-faire treatment of the living resources of the sea in the high seas had been replaced by the recognition of a duty to have due regard to the rights of other States and the needs of conservation for benefit of all.*"⁷¹ As a result, the rationale of sovereignty will not hold ground if the exploitation of

⁶⁸International Covenant on Economic Social and Cultural Rights, Annex, General Assembly Resolution 2200, 21 UN GAOR Supp (No. 16) UN Doc A/6316.

⁶⁹Handl, *Territorial Sovereignty and the Problem of Transnational Pollution*, 69 AJIL 50,53 (1975).

⁷⁰Topping, *Sewage and the Sea*, Marine Pollution 303 at 322-333.

⁷¹The Fisheries case, (United Kingdom v. Iceland), (1974) ICJ Reports 3.

marine resources of a Coastal State are done in a manner contrary to the international environmental policies.

E. Protecting the seas

Thus, as seen from general principles and specific obligation of international environment law and other arguments, ‘*marine ecosystem approach and management*’ has been recognized in various treaties⁷² and other international instruments.⁷³ All States are obliged to undertake measures to protect the marine environment.⁷⁴ Ecosystem approach has longed formed a corpus of customary international law and general principles of international law. Ecosystem-based management is currently a highly topical issue and is being widely discussed in the context of fisheries management.⁷⁵ The Action Plan for the Human Environment adopted at the Stockholm Declaration recommends that States ‘ensure that ocean dumping by their nationals anywhere...is controlled.’⁷⁶ The introductory general statement of obligation in the UNCLOS implies a duty to take all possible steps, including exercise of extraterritorial authority, to prevent marine pollution.⁷⁷ The 1975 US draft of UNCLOS required States to implement marine pollution laws of international standards or higher with respect to any spatial areas over which they possess jurisdiction, flag vessels, and nationals.⁷⁸ Thus, it may easily be said that there are enough number of treaties, multilateral agreements and general obligations under customary

⁷² UNCLOS; UNFSA; CBD.

⁷³1992 The FAO Code of Conduct for Responsible Fisheries; CBD; UN General Assembly Resolution 56th Meeting 2004. UN Doc. A/59/122, of July 1 2004. See inter alia paras 4-6, 56-62, 67-68 and 74-89.

⁷⁴UNCLOS, art 192 & 194.

⁷⁵Introduction of the new Common Fisheries Policy in January 2003 focused on this approach as the way forward to a sustainable fishing industry.

⁷⁶Stockholm Declaration, Recommendation 86.

⁷⁷UNCLOS, art. 192.

⁷⁸US: Draft Articles on the Protection of the Marine Environment and the Prevention of Marine Pollution, Article 4, U.N. Doc. A./AC 138/SC iii/L 40.

international law for the States to prevent causing harm to the environment in general and the oceans in particular.

**VI. SUSTAINABLE DEVELOPMENT OF MARINE
ECOSYSTEMS: TRADE POLICIES AND SOVEREIGN
RIGHTS V. THE ENVIRONMENT AND PRIVATE
RIGHTS**

“One Nature, One World, Our Future” was the motto of the ninth meeting of the Conference of the Parties—the Bonn Biodiversity Summit—held in May 2008, the largest-ever gathering of the biodiversity family. In Bonn, the Parties to the Convention reaffirmed that our future lies in the ocean and recognized that strong evidence has been compiled to emphasize the need for urgent action to protect biodiversity in selected seabed habitats and marine areas in need of protection.⁷⁹ The role of indigenous and local communities in the future process was also highlighted, and the Conference of the Parties called on Parties to integrate the traditional, scientific, technical and technological knowledge of indigenous and local communities, and to ensure the integration of social and cultural criteria and other aspects for the identification of marine areas in need of protection as well as the establishment and management of marine protected areas. Further, an understanding of the legal relationships among obligations of the States, private rights, public rights, public interest and public trust doctrine is essential to more effectively manage the coastal resources, and in appreciating the quandary between sovereignty, international trade and development on one hand and conservation of the marine environment on the other. As we have seen that some of the main deficiencies from the coastal resources management are

⁷⁹Secretariat of the Convention on Biological Diversity, “Sustaining the Blue Planet: Our Ocean Our Future”, Message of Dr Ahmed Djoghlaif, Executive Secretary, on the occasion of The World Ocean Day 8 June 2008.

externalities, collective goods and common pools.⁸⁰ In order to overcome these deficiencies, certain ways which may be taken towards the sustainable development of the marine ecosystems are given as conclusions.

A. International trade policies

It goes without saying that no international organization is above international law. Accordingly, international organizations are mandated to respect international environmental laws and not seek to promote an era of global environmental externalities in the *res nullius*, particularly in the marine environment. In general, international economic laws should integrate environmental considerations in order that economic policies remain sustainable.

International trade policies have a major impact on the earth's biodiversity, potentially interfering with and undermining national and international conservation laws and policies. Trade liberalization can also increase exploitation of biological and natural resources and exacerbate the associated negative impact on the society. The economic question of 'optimal biodiversity' and the prioritization of environment cannot be addressed without sufficient clarity about the future roles of different ecological and economic factors in welfare maximization in a sustainable sense. Whether a trade ban is effective in achieving its goal of environment preservation and enhancement depends crucially on the discount rate, which is an object of a country's macro-economic policies, as much as it is on the intervention by the international community to protect wildlife species.⁸¹ Imperfectly competitive trade leads to environmental deterioration, especially when national governments tend to "rent-shift" with lax environmental policies and protection of domestic industry competitiveness against foreign rivals.

⁸⁰ROBERT B. DITTON ET AL. COASTAL RESOURCES MANAGEMENT, 99, (Toronto: Lexington Books, 1977).

⁸¹Van Kooten and Bulte, 335 (2000).

WTOs ‘*environmental provisions*’ maybe summarised under the following heads:

1. GATT Article XX (b) and (g): policies affecting trade in goods for protecting human, animal, or plant life or health are exempt from normal GATT disciplines under certain conditions.
2. Technical Barriers to Trade (product and industrial standards) and Sanitary and Phytosanitary Measures (animal and plant health and hygiene): recognition of some environmental objective.
3. Agriculture: environmental programs exempt from cuts in subsidies.
4. GATS Article 14: policies affecting trade in service for protecting human, animal, or plant life or health are exempt from normal GATS disciplines under certain conditions.

There is a need for the WTO to give specific recognition to environmental values. Article XX (b) and XX (g) of the GATT 1994 should be amended to provide a general exception for trade measures that are reasonably necessary for the protection of domestic environment. In addition, Article XX may also amended to incorporate a safe harbour for multilateral environmental agreements that employ trade measures, which are reasonably necessary and related to the subject matter of the agreement.⁸² In this regard, even the WTO Committee on Trade and Environment suggested that if a dispute arises between WTO members, that are parties to a multilateral environmental agreement, over the use of trade measures they are applying amongst themselves pursuant to the agreement, “*they should consider trying to resolve it through the dispute settlement mechanism given under the agreement.*”⁸³

⁸²AUTAR KRISHEN KAUL, THE GENERAL AGREEMENT ON TARIFFS AND TRADE/WORLD TRADE ORGANIZATION: LAW, ECONOMICS AND POLITICS, 568, (New Delhi: Satyam Books, 2005).

⁸³P.K.RAO, INTERNATIONAL ENVIRONMENTAL LAW AND ECONOMICS, 269, (Blackwell Publishers, 2002).

B. Allocation of resources to include environmental costs

Market institutions play a major role in governance of economic resources; however, this is not true for environmental resources that do not have a market. Problems of irreversibility are more relevant in international environmental laws. Without market price for use of marine environmental services in production, the private prices for goods and services do not reflect the full social cost of production. Usually, marine resources are not allocated to competing uses on the basis of highest productivity, but are used and abused as dumping grounds for waste disposal. There is no economic incentive to reduce waste loads through treatment, recycling etc. Market cost should include marginal social cost of production, including the cost to the society of using marine resources. Such users never pay a price of these resources despite their economic value, and consider them as 'free' goods. Such costs are called 'externalities', which are created by users of marine environmental resources and borne by others.⁸⁴ If such externalities are left uncontrolled, there would be no incentive left for output reduction. In such cases, States should ask their governments to step-in in the management of marine resources to improve allocation efficiency and social welfare. Trade liberalization combined with appropriate internalization of environment costs promises to augment global welfare in the short run as well as long run, and hence maybe sustainable.

C. Private property rights and 'public trust' doctrine

Private property owners of land that border on the coastline have all rights of ownership plus some additional rights because of their location. Riparian rights include access to and from the water and use of the water in front of the property for navigation, fishing, swimming, and other purposes. The right of a riparian owner to use

⁸⁴R.Coase, *The Problem of Social Cost*; G. Calabresi, *Transaction Cost, Resource Allocation and Liability Rules*, Economics Of The Environment (Dorfman and Dorfman eds, Norton, 1972).

the public water offshore from his property is an excellent example of how private and public property is interrelated. Many coastal resource regulations dealing with matters of wetlands and shoreline protection limit the use of private property, in all of these regulations, the one that raises many legal questions is the process of ‘taking’, which refers to acquisition of land by government without paying any compensation.

The *public trust* doctrine provides a rational and legal precedent for placing ecological protection above private property rights.⁸⁵ This doctrine has been advocated in some court opinions, for example “*the duty of the State [is] to protect the people’s common heritage of streams, lakes, marshlands and tidelands, surrendering that tight of protection only in rare cases when the abandonment of the right is consistent with the purposes of the trust.*”⁸⁶ When the object or public purpose is to prevent destruction of wetlands, there are alternatives to regulations. One way is to have the state exercise its power of eminent domain and acquire land in fee simple or to acquire lesser interests in the property such as developmental rights. At a general level, the economic principle of conservation would require that the optimal level of biotic conservation would seek to equate marginal social cost of conservation with marginal social benefit.⁸⁷

D. Bioprospecting

Activities such as ‘bio prospecting’, undertaken by different entities, should form part of an overall package and resources should then be utilized from a mix of sharable rents and public fiscal financial resources. Bio prospecting ‘rents’ in some cases are very significant and possess the potential to finance relevant bio conservation. However, bio prospecting and rent-seeking aspects of genetic resource exploitation, combined with misappropriation of indigenous

⁸⁵Hurlbut, 398, (1994).

⁸⁶National Audubon Society v. Superior Court of Alpine County, 658 P.2d 709 (Cal 1983).

⁸⁷Batabyal, (2000).

knowledge in the use of biological products, stand out as areas of global discontent, particularly between developing and developed countries. Owing to methodological flaws, primarily based on the assumption of uninformed or no *a priori* information regarding the potential likelihood of a plant or biotic product being employed in medicinal or related uses,⁸⁸ suggested that returns to genetic assets of bio prospecting may not be sufficient to create significant self-supporting conservation incentives.

E. Recognition of rights of the indigenous communities

Granting intellectual property rights to innovations and knowledge products is a conventional method of converting public goods to private goods in the industrial countries. However, patenting and commercialization is not a standard practice in many societies, especially in relation to indigenous knowledge. In the absence of external influences, such as multinationals, the knowledge base is preserved and localised for the benefit of the local people.

It has long been recognised that “[I]ndigenous people and their communities ... have a vital role in environmental management and development ... States should recognize and duly support their ... and enable their effective participation in the achievement of sustainable development.”⁸⁹ Some ‘development projects’ tend to routinely dislocate the life and livelihood of indigenous people, without the latter’s consent in the process. The CBD recognizes the dependency of indigenous and local communities on biological diversity and the unique role of indigenous and local communities in conserving life on Earth. This recognition is enshrined in the preamble of the Convention and in its provisions. It is for this reason that in Article 8(j) of the CBD, Parties have undertaken to “*respect, preserve and maintain the knowledge, innovations and practices of indigenous and local communities relevant for the conservation of biological diversity*

⁸⁸Simpson et al. (1996).

⁸⁹*Supra* note 58, Principle 22.

and to promote their wider application with the approval of knowledge holders and to encourage equitable sharing of benefits arising out of the use of biological diversity.” In this regard, Parties to the Convention adopted the Akwé: Kon Guidelines⁹⁰ for the conduct of cultural, environmental and social impact assessments regarding developments proposed to take place or which are likely to impact on sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities. These guidelines are intended to provide a collaborative framework ensuring the full involvement of indigenous and local communities in the assessment of cultural, environmental and social concerns and interests of indigenous and local communities of proposed developments. Moreover, guidance is provided on how to take into account traditional knowledge, innovations and practices as part of the impact-assessment processes and promote the use of appropriate technologies.

VII. CONCLUSION

The duty of the States to protect the marine environment extends not only towards the territorial seas and zones of exclusive jurisdiction, but also towards any activity carried out by a State that may have the potential to harm the aquatic bionetwork of any region. International trade policies affecting the seas, particularly at the WTO level, should be made keeping in mind the plausible harm that they might cause to the marine resources. States will have to contemplate and implement innovative ways to conserve the dwindling biodiversity in the marine ecosystems, both in the coastal regions and in the high seas. One way would be to revert back to the more traditional and non-invasive ways

⁹⁰Akwé: Kon (A holistic Mohawk term meaning ‘everything in creation’ provided by the Kahnawake community located near Montreal, where the guidelines were negotiated) Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment regarding Developments Proposed to Take Place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities.

of exploiting the natural resources. This can be done by integrating the traditional knowledge of the local communities in the modern technology. Further, imposition of rents on multinationals while giving them licenses for bioprospecting is another way to ensure that rampant industrialization does not swallow up the delicate environmental balance of the coastal region. Coastal tourism needs to be made more eco-friendly, particularly in areas of high marine biodiversity, such as estuaries and marshlands. Newer industrial establishments must be made to absorb and integrate the damage to the environment in their production costs, so that it gives them an incentive to adopt more environmental friendly production techniques. Above all, as citizens of the world, and as inhabitants of the blue planet, we must play an active role in the conservation of earth's biological diversity in the oceanic territories.