CHAPTER -7

ROLE OF ORGANISATIONS IN THE PROTECTION AND PRESERVATION OF MARINE ENVIRONMENT

I. INTRODUCTION

Repeated marine pollution incidents and the awareness about the protection and preservation of the earth’s ecology have exposed the need for the establishment of the international organization for the protection and preservation of the marine environment. Accordingly the earliest organization is International Council for the Exploration of the sea in 1902. However, this organization was scientific organization having no regulatory powers and confined only to North Atlantic and Baltic seas1.

Marine pollution is happening because of utilization of marine for various purposes, more then 90 percent of the world trade is dependent on the sea borne transportation, because it is most economic and safe form of transportation. In fact shipping industry is an ancient and internationally recognized industry, hence needs effective control and regulation as well as orderly development and a well co coordinated approach at an international level.

Yet there has never been a single central international machinery to organize and regulate various aspects of shipping industry on a world wide basis. Washington Conference of 1889 was asked to create a permanent international commission to facilitate the reformation of international maritime law. However the major shipping states were against the establishment of such body as they felt that the creation of a

1 20U Miami Inter-AM.L.Rev-579
central body might introduce political distractions. Again the titanic disaster of 1912 spawned the first international safety of life at sea convention (SOLAS) which is still the most important treaty addressing maritime safety².

I. INTERNATIONAL MARITIME ORGANISATION (IMCO)

Geneva Convention 1948 has established the Intergovernmental maritime consultative organization (IMCO), to develop and maintain a comprehensive regulatory frame work for safety shipping. IMCO Convention has been designed carefully and attached with numerous reservations. IMCO confined it self to a consultative, advisory and administrative role in matters of a technical nature. However the Inter governmental maritime consultative organization did not enter in to full force until 1958. IMCO finally held its first assembly in 1959 and since that year has been directly and indirectly concerned with the problem of vessel source pollution, despite the fact that the IMCO constitution does not specifically confer jurisdiction over pollution issues on the organization.

Again the convention has been unanimously amended in 1975 to clarify IMCO’S global responsibility in the field of marine pollution and to accord constitutional status to the marine environment protection committee, which is an intergovernmental body open to the full membership of the organization. The marine environment protection committee devotes its attention to the various aspects of the problem of marine pollution³. Work on pollution matters has generally been undertaken under the heading of technical

² Maharaja Narendra Singh, British shipping laws international, maritime laws, forwarded by C.P srivastava, secretary general I.M.O. volume 4, pages no 3160.
matters and marine safety. Initially, this was reflected in IMCO’S succession to the United Kingdom in the administration of the 1954 OILPOL convention, and then in its decision to undertake work which would lead to various amendments of that convention.

However in 1982 the name of the organization was changed from Intergovernmental Maritime Consultative Organization to International Maritime Organization, indicating its rightful assumption of wide ranging responsibilities as the preeminent Maritime body in the UN system. It is a specialized agency of the United Nations with 167 member states and three associate members; IMO is based in the United Kingdom with around three hundred international staff.

A. PURPOSES OF THE ORGANISATION

(a) To provide machinery for cooperation among governments in the field of governmental regulation and practice’s relating to technical matters of all kind affecting shipping engaged in international trade; and to encourage the general adoption of the highest practicable standards in matters concerning maritime safety, efficacy of navigation and the prevention and control of marine pollution from ships and to deal with legal matters related to the purposes set out in this article.

(b) To encourage the removal of discriminatory action and unnecessary restrictions by governments affecting shipping engaged in international trade so as to promote

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5 Part I, Article1,of Geneva convention for the establishment of international maritime organization.
the availability of shipping services to the world trade on non-discriminatory basis\textsuperscript{6}.

(c) To provide for the consideration by the organization of matters concerning unfair restrictive practices by shipping concerns\textsuperscript{7}.

(d) To provide for the consideration by the organization of any matters concerning shipping that may be referred to it by any organ or specialized agency of United Nations\textsuperscript{8}.

(e) To provide for the exchange of information among governments on matters under consideration by the organization\textsuperscript{9}.

B. MEMBERSHIP;

Membership in the organization shall be open to all states\textsuperscript{10}. Members of United Nations may become the members of the organization by becoming parties to the convention, and the states which are non members of the United Nations, but have been invited to send representatives to the United Nations Maritime Conference, convened in Geneva on February 19, 1948, can also become the members of the organization by signing the convention\textsuperscript{11}. Any state which is not either a member of United Nations or a have not been invited to the Geneva conference, can become a member by making an application to the secretary general of the organization, upon the recommendation of the council, approved by two third of the members other than associate members\textsuperscript{12}. The note

\textsuperscript{6} Article 1 (b) of the Geneva convention for the establishment of international maritime organization
\textsuperscript{7} Article 1 (c) of the Geneva convention for the establishment of international maritime organization.
\textsuperscript{8} Article 1 (d) of the Geneva convention for the establishment of international maritime organization.
\textsuperscript{9} Article 1 (e) of the Geneva convention for the establishment of international maritime organization.
\textsuperscript{10} Article 5 of the Geneva Convention for the establishment of international maritime organization
\textsuperscript{11} Article 6&7 of the Geneva Convention for the establishment of international maritime organization
\textsuperscript{12} Article 8 of the Geneva Convention for the establishment of IMO
worthy point is that the associate member shall have the rights and obligations of a member under the convention except that it shall not have the right to vote or eligible for the membership on the council. India is also a member of the International Maritime organization\textsuperscript{13}. However no state can become the member of the organization in contrary to a resolution of the general assembly of the United Nations\textsuperscript{14}.

C. ORGANS OF THE IMO

The International Maritime Organization shall consists of

1. Assembly
2. Council
3. Maritime safety committee
4. Legal committee
5. Maritime Environment Protection Committee and
6. Secretariat.

In addition the organization conferred with the power to establish the subsidiary organs as the organization deems necessary.

Part IX of the convention deals with the provisions relating to the Marine Environment protection Committee. The Marine Environment protection committee shall consist of all the members of the organization\textsuperscript{15}. The MEPC is under the obligation to consider any matter with in the scope of organization concerned with the prevention and

\textsuperscript{13} While accepting the convention on intergovernmental Maritime Consultative Organization, declared that The sole object behind the signature of the convention is to promote the development of its own national shipping and stated that any recommendations relating to this subject that adopted by the organization will be subject to re examination by the government of India. The government of India further expressly state that its acceptance of provisions of the convention neither has nor shall have the effect of altering or modifying in any way the law on the subject in force in the territories of the republic of India.

\textsuperscript{14} Article 11 of the Geneva Convention on IMO

\textsuperscript{15} Article 38 of the Geneva Convention on the establishment of the IMO
control of marine pollution from ships\textsuperscript{16}. Again the MEPC has to perform the functions particularly conferred upon the organization by the international conventions for the prevention and control of marine pollution from ships particularly with respect to the adoption and amendment of regulations or other provisions provided in the conventions\textsuperscript{17}.

Provide for the acquisition and dissemination of scientific, technical and any other practical information on the prevention and control of marine pollution from ships to the states, in particular to developing countries and where appropriate make certain recommendations and develop proper guidelines\textsuperscript{18}. The MEPC is under the obligation to promote cooperation with the regional organizations concerned with the prevention and control of marine pollution from ships\textsuperscript{19}. The Marine Environment Protection Committee has to consider and take action with respect to any other matters falling within the scope of the organization which would contribute to the prevention and control of marine pollution from ships including cooperation on environmental matters with other international organizations\textsuperscript{20}.

Again the Marine Environmental Committee is under the obligation to submit the proposals for regulations for the prevention and control of marine pollution from ships and for amendments to such regulations which the committee has developed\textsuperscript{21}. The committee shall submit the recommendations and guidelines which the committee has developed and also the report on the work of the committee to the council\textsuperscript{22}. However, while performing the duties conferred by the various conventions or other instruments the

\begin{footnotesize}
\textsuperscript{16} Article 39 of the convention of IMO
\textsuperscript{17} Article 39 (a) of the convention on establishment of the IMO
\textsuperscript{18} Article 39 (c) ibid.
\textsuperscript{19} Article 39 (d) ibid
\textsuperscript{20} Article 39 (e) ibid
\textsuperscript{21} Article 40 (a) ibid
\textsuperscript{22} Article 40 (b) and (c) respectively.
\end{footnotesize}
committee shall conform to the relevant provisions of the convention which is in question, particularly with the rules and procedures governing the provisions of such convention\textsuperscript{23}. Further the committee shall meet at least once in a year. It shall elect its officers once in a year and shall adopt its own rule and procedure\textsuperscript{24}.

The organization is the specialized agency of United Nations in the field of shipping, this relationship raised through an agreement in accordance with the Article 63 of the United Nations. Hence organization is under obligation to co operate with any specialized agency, and shall consider such matters and act with respect to them in accord with such specialized agency with in the ambit of the organization\textsuperscript{25}.

Again the organization can make necessary arrangements with the non governmental international organization, to effectively discharge its functions provided in the convention\textsuperscript{26}. In case of any disputes and confusions with regarding to the

\begin{itemize}
\item Article 42 of the convention on the establishment of the IMO
\item Article 41 of the convention
\item Article 55,56of the convention on the establishment of the IMO.
\item Article 58 of the convention on the establishment of the IMO
\end{itemize}

The following intergovernmental organization s is associated with IMCO.

(a) Council of Europe  
(b) Custom cooperation council  
(c) International hydrographic organization  
(d) Organization for Economic co operation and development  
(e) Organization for American states  
(f) Intergovernmental committee for European migration  
(g) Commission of the European communities  
(h) International institute for the unification of private law  
(i) International council for the exploration of the sea  
(j) Council for mutual Economic assistance  
(k) European space agency  
(l) Central office for international railway transport  
(m) Organization of African Unity  
(n) Commonwealth secretariat  
(o) Danube commission  
(p) INTELSAT1975  
(q) League of Arab states  
(r) Organization of Arab petroleum exporting countries  
(s) World tourism organization  
(t) Commission established by the convention for the prevention of marine pollution by dumping from ships and aircraft (Oslo commission )
interpretation of various provisions of the convention, and if any organ of the organization come across with the questions or problems relating to interpretation of the provisions of the convention, shall be referred to the assembly for settlement or shall be settled in such a manner as per the agreement between the parties to the dispute. Again any legal question which can not be settled as provided in the article 65 of the convention then such matters should be referred to the International Court of Justice for an advisory opinion in accordance with Article 96 of the charter of United Nations.

The convention also contains the provisions for withdrawal from the organization by providing written notification to the secretary-general of the United Nations who will immediately inform the other members and secretary-general of the organization of such notification. Notification of withdrawal may be given at any time after the expiration of 12 months from the date on which the convention has come in to force. The withdrawal shall take effect upon the expiration of 12 months from the date on which such notification is received by the secretary general of the United Nations.

Certainly IMO has made substantial progress toward the development of a pollution prevention regime for shipping through its own recommendations and IMO sponsored conferences, seminars, and conventions, but IMO can not itself apply and enforce the rules and standards formed by it. Instead, it can only urge that member states implement IMO conventions as national legislation.

(u) Paris commission  
(v) Permanent commission for the south pacific  
(w) Intergovernmental standing committee on shipping  
(x) International oil pollution compensation fund  
(y) Baltic marine environment protection commission (Helsinki commission)  
(z) International Maritime Satellite Organization.

27 Article 65 of part XVII of the convention for the establishment of the IMO  
28 Article 66 of the convention for the establishment of the IMO  
29 Article 69 of the convention for the establishment of the IMO
Again the IMO approach is often slow and cumbersome, because of two reasons. First reason is the difficulty involved in the drafting and adopting of proposals within IMO and in the formulation of a draft convention. Although these steps may take a substantial period of time, the second time factor related to entry in to force, has caused even more protracted delays. Most IMO conventions include two conditions for entering in to force that a minimum number of states should ratify the convention and that the ratifications represent in aggregation, as well as required a specified total tonnage or percentage of world tonnage. The elapsed time for entry in to force varies and depending upon the stringency of a convention’s conditions, the complexity and importance of the issues involved. Where expensive technical modifications or the provision of facilities are required to meet the terms of the convention, entry in to force may be delayed considerably or may not occur at all.

Further the enforcement of IMO treaty provision depends on the national enforcement system, which is week especially with regarding to the internationally promoted conventional provisions with respect to marine pollution. However the IMO itself has no enforcement power. Again there is a problem with regarding to the coastal state, port state and flag state jurisdiction, because of doubtful enforcement of IMO conventions by the flag state. In fact there is no statistics to illustrate the effectiveness of flag state enforcement in enacting IMO conventions. During the period of 1967 and 1977, 80 violations of this convention were recorded by Canadian authorities and reported to the flag state of the offending vessels. Only 17 of these reports were followed by a flag state investigation and actually resulted in a conviction. Thirty-nine of the reports received no comment from the concerned flag state. The remaining 24 incidents were

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investigated by the flag state, but no prosecution followed. These figures indicate that it is the flag state doctrine which is preventing effective implementation of internationally accepted rules and standards\textsuperscript{31}.

Another crucial aspect is, from the deep observation of the work done by the IMO towards the protection and preservation of marine environment is that, it gave much emphasis on the prevention of oil pollution and vessel based pollution. Again with regarding to the liability regime it put much stress on the liability for oil pollution and vessel based pollution and all most all existing IMO conventions have established the treaty provision to govern this area\textsuperscript{32}.

Further, as a matter of fact it is the only international organization established with the object of protection and preservation of marine environment but confined itself only to the oil and vessel based marine pollution which is contributing only 15 percent of

\textsuperscript{31} Ibid
\textsuperscript{32} The following conventions are IMO conventions established for the protection and preservation of the marine environment

(a) International convention for the safety of life at sea (SOLAS) 1974
(c) Convention on the international regulations for preventing collusions at sea
(d) OILPOL and its amendments
(e) convention on facilitation of international maritime traffic 1965
(f) International convention on load lines
(g) International convention on tonnage measurement of ships.
(h) International convention on the intervention on the high seas in cases of oil pollution causalties
(i) Protocol to international convention on civil liability for oil pollution damage
(j) Special trade passengers agreements
(k) MARPOL 73/78
(l) Fund for oil pollution damage
the total pollution and neglected the pollution that caused due to the other forms of marine pollutions which are contributing more than 85 percent of the total pollution\textsuperscript{33}.

In addition, though IMO gave much importance to the oil and vessel based pollution but not succeeded to prevent the marine pollution even by these sources effectively. Such kind of failures can be attributed to many facts, like inefficient enforcement system, lack of enforcement power, time consuming procedures to be followed while drawing the conventions, lack of technology, and lack of finance when the drafting of convention requires sophisticated technology. Again the IMO liability regime is also not sufficient to compensate the victims effectively. In addition there is no IMO liability regime to provide compensation for the damages caused due to the other forms of marine pollution say land based sources of marine pollution and pollution due to the sea bed activities. However the IMO convention approach is often slow and non comprehensive in nature, because all most all conventions are drawn in an emergency conditions and as a reaction to some major disaster such urgency lacks careful planning, hence it is the right time to introduce effective changes to strengthen the International Maritime Organization and also its conventions.

III. INTERNATIONAL SEA BED AUTHORITY

The international sea bed authority is an intergovernmental body based in Kingston, Jamaica, established to organize and control all mineral related activities in international sea bed area beyond the limits of national jurisdiction. It is an autonomous organization having a relationship agreement with the United Nations. The sea bed

\textsuperscript{33} Henric Ringbom, competing norms in the law of marine environmental protection –focus on ship safety and pollution prevention, research fellow, department of law, Abo Acadami University. Chapter 3, Page no 45-57.
authority is a brilliant child of UNCLOS 1982\textsuperscript{34}. Authority is a creation of UNCLOS - 1982\textsuperscript{35}, and consists of 155 members composed of all parties to the law of the sea convention 1982. The Authority is based on sovereign equality of member states\textsuperscript{36}.

The principle organs of the authority are as follows\textsuperscript{37}.

A. Assembly
B. Council
C. Secretariat
D. Enterprise.

A. THE ASSEMBLY;

The assembly shall consist of all the members of the Authority. Each member shall have one representative in the Assembly, who may be accompanied by alternates and advisers. Each member of the Assembly shall have one vote and any decisions shall be taken by majority of the members present and voting\textsuperscript{38}. Assembly is the sole organ consisting of all members, shall be consider the supreme organ of the Authority to which the other principal organs shall be accountable as specifically provided for in this convention\textsuperscript{39}. The Assembly shall have the power to establish general policies in conformity with the relevant provisions of this convention on any question or matter with in the competence of the authority\textsuperscript{40}. The Assembly has to initiate studies and make recommendations for the purpose of promoting international co-operation concerning

\textsuperscript{34} Supra note number 2. 
\textsuperscript{35} Section 4 sub section A of Part XI of UNCLOS 1982. 
\textsuperscript{36} Article 157 (3) of UNCLOS-1982. 
\textsuperscript{37} Article 158(1) and (2) of UNCLOS-1982. 
\textsuperscript{38} Section 4 sub section B Article 159 (6) (7) of UNCLOS 1982. 
\textsuperscript{39} Article 160 (1) ibid. 
\textsuperscript{40} Ibid.
activities in the area and encouraging the progressive development of international law relating there to and its codification.\textsuperscript{41}

\section*{B. THE COUNCIL}

It is the second principal organ of the Authority. The council shall consist of 36 members of the Authority elected by the assembly.\textsuperscript{42} The council is the executive organ of the Authority. The council shall has the power to establish, in conformity with this convention and the general policies established by the assembly, the scientific policies to be pursued by the authority on any question or matter with in the competence of the Authority. In addition the council shall supervise and co ordinate the implementation of the provisions with in the competence of the Authority and invite attention of the assembly to cases of non compliance.

\section*{1. ORGANS OF THE COUNCIL}\textsuperscript{43}

- Economic planning commission\textsuperscript{44}
- Legal and technical commission\textsuperscript{45}

Each commission shall be composed of 15 members, elected by the council from among the candidates nominated by the state parties. The members of the economic planning commission shall have appropriate qualifications such as those relevant to mining, management of mineral resources activities international trade or international economics. The council shall endeavor to ensure that the membership of the commission reflects all appropriate qualification. The commission shall include at least two members

\textsuperscript{41} Article 160 (2) (j) of UNCLOS -1982
\textsuperscript{42} Article 161 of UNCLOS-1982
\textsuperscript{43} Article 163 of UNCLOS1982
\textsuperscript{44} Article 164 of UNCLOS 1982
\textsuperscript{45} Article 165 ibid
from the developing states whose exports of the categories of minerals to be derived from
the area have a substantial bearing upon their economics.

The members of the legal and technical commission shall have appropriate
qualifications such as those relevant to exploration for and exploitation and processing of
mineral resources, oenology, and protection of the marine environment or economic or
legal matters relating to ocean mining and related fields of expertise.

The council has to prepare assessments of the environmental implications of
activities in the Area\textsuperscript{46}. Make recommendations to the council on the protection of the
marine environment, taking in to account the views of recognized experts in that field\textsuperscript{47}.
It has to formulate rules, regulations, and procedures to the council about all relevant
factors including assessments of the environmental implications of activities in the
area\textsuperscript{48}. The legal and technical committee has to make recommendations to the council
regarding the establishment of a monitoring programe to observe, measure, evaluate and
analyze, by recognized scientific methods on a regular basis, the risk or effects of
pollution of marine environment resulting from activities in the area ensure that existing
regulations are adequate and are complied with and co-ordinate the implementation of the
monitoring programe approved by the council\textsuperscript{49}. Again it has to make recommendations
to the council to issue emergency orders which may include orders for the suspension or
adjustment of operations, to prevent serious harm to the marine environment arising out
of activities in the area. Such recommendations shall be taken by the council on a priority

\textsuperscript{46} Article 165 (d) of UNCLOS-1982
\textsuperscript{47} Article 165 (e) ibid
\textsuperscript{48} Article 165 (e) ibid
\textsuperscript{49} Article 165 of the UNCLOS 1982
basis\textsuperscript{50}. The commission can make recommendations to the council to disapprove areas for exploitation by contractors or the enterprise in cases where substantial evidence indicates the risk of serious harm to the marine environment\textsuperscript{51}.

C. THE SECRETARIAT\textsuperscript{52}

The secretariat of the authority shall comprise a secretary general and such staff as the authority deems necessary. Secretary General shall be elected for four years by the assembly from among the candidates proposed by the council and may be re-elected. Secretary General shall be the chief administrative officer of the authority and secretariat has to perform all administrative functions of the authority\textsuperscript{53}. The secretary General is under the obligation to submit an annual report to the assembly on the work of the authority.

D. THE ENTERPRISE;

The enterprise is the organ of the authority which shall carry out activities in the Area directly, pursuant to article 153 paragraph 2 (a) as well as the transporting, processing and marketing of minerals recovered from the area. Enterprise is enjoying the statute of legal person and with such capacity; it has to act in accordance with the convention, rules, regulations and procedures of the authority. The enterprise shall have its principal place of business at the seat of the authority. The enterprise serves as the authorities own mining operator, but no concrete steps have been taken to bring this in to begin.

\textsuperscript{50} Article 165 (2) (k) of the UNCLOS 1982
\textsuperscript{51} Article 165 (2) (i) of UNCLOS 1982
\textsuperscript{52} Section 4, subsection D, Article 166 of UNCLOS-1982.
\textsuperscript{53} Article 166 (1),(2),(3) of NUCLOS-1982
The legal technical commission of council of international Sea-bed Authority is the commission which has to perform many functions to protect and preserve the marine environment of the sea bed area beyond the national jurisdiction. Rather we can say that legal technical committee is exclusively devoted for the protection and preservation of common heritage of mankind.

However the opponents of the UNCLOS 1982 have questioned the exact nature of International sea bed authority. The United States is the only maritime power that has not ratified the convention. According to them the convention contains certain objectionable provisions such as

(a) Imposition of permit requirements, fees and taxation on sea bed mining, ban on mining absent ISA permission.
(b) Use of collected money for wealth redistribution in addition to ISA administration
(c) Mandatory technology transfer.

Because of these concerns, the United States pushed for modification of the convention; obtaining a 1994 agreement on implementation that some what mitigates them and thus modifies the ISA’S Authority. Despite this change the United States has not ratified the convention and so is not a member of ISA.

IV. UNITED NATIONS ENVIRONMENTAL PROGRAMME (UNEP)

UNEP was conceived at the Stockholm Conference on the Human Environment and created by the UN General Assembly54. UNEP became the agency of United Nations with the specific environmental agenda. The prime objects of UNEP are to facilitate international co-operation in the field of environment, to review the environmental

problems of international significance and to promote the acquisition, assessment and exchange of environmental knowledge. Its present work programme focuses on five areas, they are

1. Environmental information, assessment and research, including environmental emergency response capacity and strengthening of early warning and assessment functions

2. Ensure the coordination of environmental conventions and development of environmental policy instruments

3. Fresh water

4. Industry and technology

5. Support to Africa

A. STRUCTURE OF UNEP:

The UNEP was conceived as a small coordinating body whose mission was to catalyze environmental cooperation with in the UN system and member states. The UNEP has no power to act directly as an executive agency. However the UNEP is governed by three bodies, they are

1. Governing Council

2. Committee of permanent representatives and

3. High committee of ministers and officials.

http://www.unep.ch/regionalseas/legal/conlist.htm
http://www.unep.ch/regional/seas/home/marent.htm
1. Governing Council

The governing council is composed with the representatives of 58 states, elected by the UN General Assembly for a term of four years, based on geographical allocation. The governing council is largely composed of state environment ministers and other representatives of national governments who have environmental and science expertise. The Governing council meets only once in every two years, hence the regular management of UNEP falls to the Executive Director, his staff and to the committee of permanent representatives. The Executive Director of UNEP is appointed by the UN Secretary General in consultation with the member states.

2. The Committee of Permanent Representatives.

The committee of permanent representatives is comprised of representatives of all 187 UN members. This committee is under the obligation to report to the Governing Council. It serves as a communication link between the UNEP and its member’s governments by providing advice on policy, program and financing. In 1990s the UNEP has faced continues budgetary problems which reflected in to lack of confidence in the organization. In addition, many donor countries, particularly the United States and United Kingdom have been dissatisfied with the functioning of the organization. In a United Nations reform paper in 1997, secretary general Kofi Annan has argued and stated that

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56 Sixteen seats are reserved for African Nations; thirteen seats are reserved for Asian Nations, Six for Eastern European Nations, Ten for Latin America and Thirteen for western European and other nations.
57 UNEP has about 300 professionals and 500 general staff and more then sixty percent of this staff is based on headquarters Nairobi, remaining staffs are located in various regional offices located around the world.
58 In the mid of 1990 the committee of permanent representatives came under heavy criticism as a permanent and overpaid bureaucracy. In 1996 the committee met 50 times At the same time the UNEP was suffering with severe budget problems. In recent years many states have reduced their voluntary contributions for example United States gave $21 million in 1993 and 1994 but in 1996 it has been reduced to $7 million in addition the United Nations has reduced its own support for UNEP due to budgetary shortfalls through out the UN system hence UNEP faced continuous fund crises during the 1990s.
few of the goals of UNEP was established to accomplish were being met but resources were being wasted by inefficient management and hence it should be reorganized\textsuperscript{59}.

High-level committee;

As a result of such reorganization the High level committee of ministers and officials was established. This committee is composed with the 36 members. High-Level committee is subsidiary to the governing council and has the same geographic composition. Its mandate includes reviewing the effectiveness, efficiency and transparency of the secretariat’s work and preparing draft decisions for the governing council based on recommendations from the staff.

**Funding:**

There are mainly four distinct sources of resources to the UNEP for the administration and implementation of its programs. They are

- United Nations Members as determined by the UN controller.
- Voluntary Environment Fund established to provide additional financing for environmental programs under UNEP with the guidance of its governing council.
- Trust fund as agreed and negotiated between UNEP and the Donor.
- Counter part contributions, which are extra budgetary resources, providing additional resources to the UNEP programme of work or the programme of work of the trust funds administered by the UNEP\textsuperscript{60}.

The voluntary contributions from the governments to the UNEP Environment Fund are the main source of UNEP finances\textsuperscript{61}.

\textsuperscript{60} http://www.unep.org.rmn/funding.htm
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B. UNEP PROGRAMS

UNEP’s division of programs, located in Nairobi, is responsible for implementation of its natural resource activities. The division of programe includes a specific unit dedicated to promoting Environmental law. Among other things, the environmental law unit prepares draft treaties to be reviewed and revised by ad hoc expert working groups convened by UNEP. Once the working group achieves consensus on non binding language, the draft is submitted to the Governing council for debate and adoption. Alternatively if the draft concerns instruments that are legally binding, then UNEP may convene a diplomatic conference to consider adoption. In past 25 years, more then 40 multilateral treaties have been negotiated Under UNEPs guidance including Convention on the International trade of Endangered Species (CITES) , The Basel Convention on the Control of Transboundary Movement of Hazardous waste and their Disposal, and several regional seas convention. UNEP has also developed some important Soft Law instruments including the world charter for Nature, as well as management of shared resources, marine pollution from land-based sources and environmental impact statements.

Since 1982 UNEP has put its effort to promote the development of international environmental law with the ten years work plan known as MONTEVIDEO PROGRAMMES. The first Montevideo programe ended in 1991 which led to the adoption of Montreal guidelines for the protection of Marine environment against pollution from land-based sources, Basel convention, etc. The second Montevideo

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61 The Environmental fund and administrative and other budgetary Matters, UNEP/ Gc.19/inf.10 (nov.22.1996).and also see UNEP aims for a stronger Global Role, Feb.9.2001, and ENVIRONMENT NEWS SERVICE.

62 Both the Vienna convention for the protection of the Ozone Layer (Vienna convention) and the Montreal protocol were adopted through this approach.
programe runs from 1992 to 2002. which called for action in 18 areas including enhancing the capacity of the state to implement their international environmental obligation, providing wide spread use of environmental impact assessment considering the concepts or principals which may be applicable in the of development of international law in the field of environment and sustainable development. The third Montevideo programe of UNEP has already been adopted and started in 2003.

The UNEP was undoubtedly the single most positive and concrete product of the Stockholm conference at the international level. Despite its limited powers and resources and variety of other handicaps, UNEP has put great efforts for the protection of the global environment. The UNEP mandate was confined to monitoring the global environment and its development. It servers as a house for environmental information, and acts as a catalyst and co coordinator with in the UN system and among its member nations. UNEP has also acted as a sponsor for a variety of multilateral conferences programs plans and agreements covering diverse agenda like human settlements, water resources management, and Transboundary movements of hazardous waste. Air pollution and hazardous waste, biological diversity, land degradation desertification, environmental education and environmental law.

One of the earliest and most successful UNEP initiatives was its regional seas program, particularly its Mediterranean Action Plan. The UNEP regional seas conventions are as follows Barcelona Convention for the protection of the Mediterranean Sea against Pollution (Barcelona Convention). And two protocols

i. A protocol for the prevention of Pollution of the Mediterranean Sea by dumping from ships and air craft (Barcelona Dumping Protocol).
ii. Protocol for the co operation in combating pollution of the Mediterranean sea by oil and harmful substances in cases of emergency. (1976 Barcelona Dumping Protocol).

2. Helsinki convention on the protection of Baltic Sea convention.

3. Kuwait convention for the Gulf

4. Abidjan convention for West Africa.

5. Lima convention for South East Pacific


7. Cartagena convention for the Caribbean

8. Noumea Convention for the south pacific.63

The eight regional seas covered by the UNEP program are as follows

1. Mediterranean
2. Arabian Gulf
3. Gulf of Guinea
4. South-East Pacific
5. Red Sea and Gulf of Aden
6. Caribbean
7. Indian ocean and east Africa
8. South pacific64

UNEP has been established to act as a center for environmental action and co ordination with the United Nations. It points out environmental problems to nations and suggests solutions. It has become an agency that sets out to produce concrete results in terms of treaties negotiated. The existence of sound system for the Protection and

63 Philippe sands, principals of international law 1st frame works, standards and implementation Manchester University Press.
64 Ibid. For detailed provisions of the UNEP regional seas program see chapter 4 section –A, B, C, of this thesis.
preservation of marine environment and for the management of marine eco system at the regional level is because of the UNEP. However the UNEP is criticized for many reasons like the UNEP can push states, probe their policies and plead with them and it can not coerce them UNEP lacks teeth since it has no executive authority. Again the UNEP instruments are based on soft law. Further all UNEP programs are financed by the voluntary contributions from the member states and there are many incidents of decreased amount of contributions from many developed states. In other words there is no permanent source of finance for the UNEP programs. In addition the protection and preservation of marine environment programs needs huge finance, effective co ordination of all developing, developed and under developed nations. Again the effective management of oceans requires proper implementation, effective administration and follows up programs which are a doubtful in the system of UNEP. Hence it is not a fully equipped organization to handle the tasks like protection and preservation of marine environment in general and solid waste in particular.

V. OSPAR COMMISSION

OSPAR commission was established to administer the OSPAR convention. Initially, the commission’s task was to regulate and control the dumping at sea of industrial wastes, sewage sludge and dredged material and the incineration at sea. The following are the duties of the commission.

1. To supervise the implementation of the convention
2. To review the condition of the maritime area, the effectiveness of the measures being adopted, the priorities and the need for any additional or different measures
3. To draw up in accordance with the general provisions of the convention, programmes and measures for the prevention and elimination of pollution and for the control of activities which may, directly or indirectly adversely affect the maritime area such programmes and measures may, when appropriate, include economic instruments.

4. To establish at regular intervals its programme of work.

5. To set up subsidiary bodies as it considers necessary and to define their terms of references. To consider and, where appropriate adopt proposals for the amendments of the convention in accordance with articles 15, 16, 17, 18, 19, and 27.

6. To discharge the functions conferred by articles 21 and 23 and such other functions as may be appropriate under the terms of the convention.

To this end the commission may adopt decisions and recommendations in accordance with article 13\textsuperscript{65}. The commission shall draw up its rules of procedure which shall be adopted by unanimous vote of the contracting parties. The commission shall draw up its financial regulations which shall be adopted by unanimous vote of the contracting parties\textsuperscript{66}. The commission has power to admit an observer, such observers may participate in meetings of the commission but with out the right to vote and may present to the commission any information or reports relevant to the objectives of the rules of procedures of the commission\textsuperscript{67}. The commission has a permanent organ called secretariat and commission shall appoint an executive secretary and determine the duties

\textsuperscript{65} Article 13 deals with various provisions that lay down the various rules and procedures to make recommendations and rules.

\textsuperscript{66} For detailed provisions see ‘the OSPAR convention ‘ in the appendices part of this thesis.

\textsuperscript{67} Such observer may be a state which is not a contracting party to the convention or any international governmental or any non governmental organization the activities of which are related to the convention.
of that post and the terms and conditions upon which it is to be held. The commission may adopt decisions or recommendations by a three-quarters majority vote of the contracting parties. All decisions adopted by the commission shall, where appropriate, be implemented within a specified period. Further, any contracting party may propose an amendment to the convention. The text of the proposed amendment shall be communicated to the contracting parties by the executive secretary of the commission at least six months before the meeting of the commission at which it is proposed for adoption. The executive secretary shall also communicate the proposed amendment to the signatories to the convention for information. The adoption of such amendment needs unanimous vote of the contracting parties.

The contracting parties are under the obligation to report the commission at regular intervals on

1. The legal regulatory or other measures taken by them for the implementation of the provisions of the convention and of decisions and recommendations of the provisions of the convention and of decisions and recommendations adopted there under, including in particular measures taken to prevent and punish conduct in contravention of those provisions.

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68 The executive secretary shall perform the functions that are necessary for the administration of the convention and for the work of the commission as well as other tasks entrusted to the executive secretary by the commission in accordance with its rules of procedure and its financial regulations.

69 A decision shall be binding on the expiry of a period of two hundred days after its adoption for those contracting parties that voted for it and have not with in that period notified the executive secretary in writing that they are able to accept the decision, provided that at the expiry of that period of three-quarters of the contracting parties have either voted for the decision and withdrawn their acceptance or notified the executive secretary in writing that they are able to accept the decision. Such a decision shall become binding on any other contracting party which has notified the executive secretary in writing that is able to accept the decision from the moment of that notification or after the expiry of a period of two hundred days after the adoption of the decision, whichever is later.

70 The adopted amendment shall be submitted by the depository government to the contracting parties for ratification, acceptance or approval. Ratification, acceptance or approval of the amendment shall be notified to the depositary Government in writing.
2. The effectiveness of the measures.

3. Problems encountered in the implementation of the provisions\textsuperscript{71}.

The commission is created by the OSPAR convention 1992. Since the OSLO and Paris Conventions do not adequately controlled many sources of marine pollution and therefore OSLO and PARIS convention has been replaced by the OSPAR convention which covered all most all the sources of marine pollution and its adverse effect on human activities. The convention gave much importance to the precautionary principal and strengthens the concept of regional co operation. OSPAR commission is an active member of the global grope of regional management organizations and co operates closely with its partner organizations e.g. Helsinki commission for the protection of the Baltic Sea and the different programmes established under the UNEP regional seas programme. The OSPAR commission works jointly with other competent management authorities for the North East Atlantic to counter marine pollution and deliver sustainable ocean management in the consensual and robust way. To further strengthen co operation of the OSPAR commission has agreed memoranda of understanding or agreements of co-operation with a number of international organizations including the north east Atlantic fisheries commission (NEAFC), The International Maritime Organization, The International Council for the Exploration of the Sea (ICES) and the UN Economic Commission for the Europe (UNECE). Close collaboration is also mentioned with the European Commission and the European Environmental Agency. OSPAR commission also contributes to the global discussions on marine conservation held in the UN General

\textsuperscript{71} For detailed provisions of the OSPAR convention relating to the marine pollution due to the solid waste, see chapter 4, section A,B,C,and D of this theses.
Assembly, the Conservation of Biological Diversity (CBD) and the International Union for Conservation of Nature (IUCN), and provides regional approaches to protecting the Marine environment and managing Natural resources. Further the North Sea Network of Investigators and prosecutors (NSN) was established as a body of the OSPAR commission following an invitation from the ministerial North Sea Conferences and provides a direct link to the agreement for cooperation in dealing with pollution of the North Sea by oil and other harmful substances (Bonn Agreement). Hence the commission has to work as a watch dog of the OSPAR convention. Further the convention contains only general provisions to curb the marine pollution due to the solid waste, rather specific provisions to regulate the marine pollution due to the all kinds of solid waste. In addition it is a regional commission works for the protection and preservation of marine environment of the North East Atlantic.

VI. HELCOM

Helcom works to protect the marine environment of Baltic Sea area from all sources of pollution through intergovernmental co operation between Denmark, Estonia, and The European community, Finland, Germany, Latvia, Lithuania, Poland Russia and Sweden. Helcom is the governing body of the Helsinki convention. Helcom vision for the future is healthy Baltic sea environment with the diverse biological component functioning in balance, resulting in a good biological status and supporting a wide of sustainable economic and social activities.

In pursuing this objective and vision the riparian countries have jointly poled their efforts in Helcom, which is works as
1. An environmental policy maker for the Baltic sea area by developing common environmental objectives and actions

2. It is an environmental focal point providing information about the marine environment, efficacy of the measures adopted for the prevention of the marine pollution, common initiatives and positions which can form the basis for decision making in other international fora

3. A body for developing, according to the specific needs of the Baltic sea. Recommendations of its own and recommendations supplementary to the measures imposed by the other international organizations.

4. A supervising body dedicated to ensuring that Helcom environmental standards are fully implemented by all parties throughout the Baltic sea area and its catchments area and a coordinating body ascertaining multilateral response in case of major maritime incidents.

Again with the firm determination to assure the ecological restoration of the Baltic Sea area and ensuring the possibility of self regeneration of the marine environment and also to preserve the ecological balance of the Baltic sea area, The convention on the protection on the marine environment of the Baltic Sea Area, 1992 imposed certain duties on the Helcom. They are as follows.

1. To keep the implementation of this convention under continuous observation

2. To make recommendation on measures relating to the purposes of this convention.

3. To keep under review the contents of this convention including its annexes and to recommend to the contracting parties such amendments to this convention including
its annexes as may be required including changes in the list of substances and materials as well as the adoption of new annexes.

4. To define pollution control criteria, objectives for the reduction of the pollution and objectives concerning measures particularly those described in annex III.

5. To promote in close cooperation with appropriate governmental bodies, taking into consideration of this article, additional measures to protect the marine environment of the Baltic Sea Area and for this purpose
   a. To receive process, summarize and disseminate relevant scientific, technological and statistical information from available sources and
   b. To promote scientific and technological research.

6. To seek, when appropriate, the service of competent regional and other international organizations to collaborate in scientific and technological research as well as other relevant activities pertinent to the objectives of this convention.\textsuperscript{72}

   Again the commission itself has to adopt the rules and regulations for its work.\textsuperscript{73} The office of the commission known as the Secretariat and shall be in Helsinki. The commission shall appoint an executive secretary and make provisions for the appointment of such other personnel as may be necessary, and determine the duties, terms and services of the executive secretary. Again the executive secretary is the chief administrative official of the commission and shall perform the functions that are necessary for the administration of this convention, the work of the commission and other tasks entrusted to the executive secretary by the commission and its rules of procedure.\textsuperscript{74}

\textsuperscript{72} Article 20 of the Helsinki convention
\textsuperscript{73} The working language of the commission shall be English, see Article 21 of Helsinki convention, see http://www.helsinki.org
\textsuperscript{74} Ibid
The total amount of the budget, including any supplementary budget adopted by the commission shall be contributed by the contracting parties other than the European Economic Community, in equal parts, unless unanimously decided otherwise by the commission. Again each contracting parties are under the obligation pay the expenses related to the participation in the commission of its representatives, experts and advisers. Helcom gives much importance to the eutrophication, hazardous substances, Land transport sector, and maritime transport sector, environmental impacts of fishery management practices, protection and conservation of marine and coastal bio-diversity, and finally implementation of the joint comprehensive environmental action programme and Helcom recommendations. Hence it is quite clear from the very structure of the Helcom that it is an effective organization which gave equal importance to all kinds of marine pollution problems along with the solid waste management on the land as well as sea. During the span of 15 years the Helcom has achieved the following.

1. lower discharges of organic pollutants and nutrients from point sources
2. A 20-25% over all reduction in the emissions of oxygen consuming substances (BOD) from the 132 originally identified hot spots since the early 1990’s with about 50 hot spots detected from the list.
3. Few beaches closed for bathing, and thanks to improvement in the treatment of industrial and municipal waste water.
4. Significant reduction in the atmospheric nitrogen deposition.
5. Dramatic reductions in emissions of oregano-halogen compounds such as toxic dioxins.

75 The European Economic Community shall contribute no more than 2.5% of the administrative cost to the budget.
6. National regulations banning hazardous substances like PCB and DDT.

7. Strict controls on industry.

8. Improved joint monitoring.

9. The recovery of seal and white-tailed eagle population.

10. Better special legislation to prevent the pollution of the Baltic Sea by shipping developed together with the IMO.

11. Measures to eliminate all illegal discharges by ships in to the Baltic Sea.

12. A major international plan to combat marine pollution with active co operation involving all the contracting parties through Helcom\textsuperscript{76}.

Further the Helcom gave much stress on the precautionary principal, and polluter pay principal and also to the concepts of BAT as well as BET\textsuperscript{77}. Certainly the Helcom is most effective and eminent organization working for the protection and preservation of the marine environment. Since the Helcom is governed by the Baltic sea coastal states, on equality principal one can assume the long life of the Helcom and there by the clean and alive Baltic sea area in near future. But in fact it is a semi enclosed sea having huge traffic the commercial exploitation of this area challenging the existing legal regime and as well as the Helcom\textsuperscript{78}.

\textsuperscript{76} See Bulletin of Helcom.
\textsuperscript{77} For detailed provision of these principals see chapter 5 of this theses.
\textsuperscript{78} Some times the Baltic sea is also called as dead sea and according to the recent survey of IMO the pollution is more then the assimilative capacity of the ocean.
VII. GESAMP- THE GROUP OF EXPERTS ON SCIENTIFIC ASPECTS OF MARINE ENVIRONMENTAL PROTECTION (1969)

The Group of Experts on Scientific Aspects of Marine Environmental Protection acts as an adviser to the United Nations system on the scientific aspects of marine, jointly sponsored by eight UN organizations with responsibilities relating to the management, coordination and collaboration among them. The prime functions of the GESAMP are to conduct and to under-take in depth studies, analyses, and review of specific topics relating to the marine environment. GESAMP consists of approximately 30 experts. GESAMP is presently managed through an executive committee consisting of a representative of each sponsoring organization (i.e. Technical Secretary) and the chairmen and vice chairmen of GESAMP. It is a lead organization, currently IMO, hosts an administrative secretariat which is presently responsible for general administration on behalf of all the sponsoring organizations. The administrative secretary also chairs the executive committee. The primary functions of the executive committee are to plan and approve the GESAMP budget and work plan, select member of GESAMP from the pool of experts, propose provisional agendas for GESAMP sessions and adopt terms of reference for its working groups.

Its mission is to provide authoritative, independent, interdisciplinary scientific advice to organizations and member government to support the protection and sustainable use of the marine environment. Its tasks are to fulfill its mission, as part of its work programme it will upon request

- Integrate and synthesize the result of national thematic assessments and scientific studies to support global assessment of the marine environment

• To provide scientific and technical guidance on the design and execution of marine environmental assessments.

• Provide scientific reviews, analyses and advice on specific topics relevant to the conditions of marine environment. Its investigation, protection or management.

• Provide an overview of the marine environmental monitoring assessment and relative matters and advise on how these activities might be improved and better integrated and co-coordinated.

• Identify new and emerging issues regarding the degradation of marine environment that are relevant to the government of the sponsoring organizations.

Hence it is a group of experts mainly intended to conduct research and developmental activities for the protection and preservation of the marine environment, sponsored by the 8 UN agencies

80. It acts as advising authority to all the agencies who are all engaged in the protection and preservation of the marine environment.

VIll. IAEA- INTERNATIONAL ATOMIC ENERGY AGENCY

For hundreds of years the seas have been used as a place to dispose of wastes from human activities. Although no high level radio active waste has been disposed of in to the sea. Variable amount of packaged low level radio active waste dumped at 47 sites in the north part of the Atlantic and pacific oceans. In 1946 the first sea dumping operation took place at a site in the north east pacific oceans. The last dumping operation was in 1982 at a site off the European continental shelf in the Atlantic Ocean between these two dates on estimated 46 PBQ (1.24MCI) of radio active waste coming from

80 UN sponsors are IMO, FAO, UNESCO-ICO, WMO (SINCE 1968), IAEA (SINCE 1969), UN (SINCE 1971), UNEP (SINCE 1977), and UNIDO (SINCE 2006).
research, medical, military and industrial activities have been disposed of at sea. The present trend through the convention for the prevention of Marine pollution by dumping of waste and other matter and other regional convention, points towards the prohibition of the dumping of any radio active waste in to the marine environment.

The IAEA Marine environment Laboratory called as IAEA-MEL was established in Monaco, in 1961 and there after it acts as a part of the IAEA’s Department of research and Isotopes. It is the only Marine Laboratory with in the UN system working for the promotion of nuclear and isotopic techniques and the improved understanding of marine radio activity and for the protection and preservation of the marine environment.

IX. MARINE CONSERVATION BIOLOGY INSTITUTE (MCBI)

MCBI works to protect and restore the marine life of the west coast, around the United States and beyond, by encouraging research and training in Marine Conservation Biology. The MCBI brings scientists and experts together to examine the crucial marine conservation issues, doing policy research to frame the marine conservation agenda, lecturing, producing books and other publications to further educate the scientists, experts, public and the decision makers on key issues relating to the conservation of marine biodiversity. It also concentrates to build partnerships to solve problems affecting the marine biodiversity and people.
X. THE GLOBAL BIODIVERSITY INFORMATION FACILITY

This facility makes it possible for policy and decision makers, research institutes, expert’s scientists and the general public, all around the world to electronically access the world supply of primary scientific data on biodiversity.

XI. CENTER FOR APPLIED BIODIVERSITY SCIENCE

The mission of the center for applied biodiversity science (CABS) is to strengthen the conservation policies, and also to strengthen the international ability to identify and respond to the elements that threatens the earth’s biological diversity. CABS bring together leading experts in science and technology to collect and interpret the data about biodiversity, and also to develop the strategic plans for conservation and encourage partnerships in all sectors that promote conservation goals. CABS promote public awareness and involvement in saving the planets living resources.

XII. THE ROLE OF NON STATE ACTORS IN THE PROTECTION AND PRESERVATION OF MARINE ENVIRONMENT

Under the traditional views of public international law only states have the rights and responsibilities. Non governmental organizations, industries and sub national governments are not allowed to participate in nor are they subjects of international law. However this traditional approach of international law has ignored the active role of non state actors in modern international environmental law. Normally the non state actors include the NGOs, multilateral corporations etc.

In the recent years number of NGOs has been exploded in the field of environment, because the NGOs are now capable to build networks, gather and analyze
technical information and gain the attention of policy makers in many countries. Now every country has at least one environmental NGO\(^{81}\).

NGOs participating in international issues can be classified into three categories. They are

1. Large membership organizations, like the Natural resource defense council, the environmental defense fund, the national Audubon society the national wild life society etc, which have the resources and technical expertise to work on a full range of environmental issues.

2. The second group includes organizations that are dedicated primarily to global and transnational environmental issues. These include the organizations like world watch, the world resource institute and the center for international environmental law.

3. Third group of organizations are those organizations that operate as part of global networks. Most notable among these are the International Union for the conservation of Nature, which is a network comprised of NGOs and government agencies concerned with nature conservation. Friends of the Earth, which is a network of 63 affiliate organizations, Greenpeace international which is a federation of 26 national organizations with more than 3.3 million members.

These are some examples of NGOs which are increasingly involved in all aspects of international environmental law. The NGOs are playing active role in providing proper support to the policy makers, law makers and implementing mechanism, and hence one

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\(^{81}\) According to the 2000 edition of the year book of international organizations, now there are 29,495 organizations, in addition to 24,326 international NGOs.
can not deny the active and direct role of the NGOs in the development of international environmental law and in its implementation\textsuperscript{82}.

XIII. THE ORGANISATIONS WORKING FOR THE MARINE CONSERVATION, MANAGEMENT, AND ADMINISTRATION IN INDIA

\textbf{TABLE -1}\textsuperscript{83}

<table>
<thead>
<tr>
<th>SL No</th>
<th>INSTITUTE</th>
<th>OBJECTIVE</th>
<th>ADMINISTRATIVE AREA</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Department Of Ocean Development</td>
<td>To promote and coordinate the multifaceted endeavors needed to accomplish the management of coastal zones, Islands Antarctica, ocean and their environment. To conduct basic research in ocean sciences</td>
<td>Applicable to whole country</td>
<td>National</td>
</tr>
<tr>
<td>2</td>
<td>National Institute of oceanography Goa.</td>
<td>To develop a knowledge base relating to physical, chemical, biological, geographical, engineering and pollution related aspects of the seas around India. To built up competence for exploiting the sea resources for the benefit of the country. To develop self sufficiency in marine instrumentation.</td>
<td>Whole country</td>
<td>National</td>
</tr>
</tbody>
</table>

\textsuperscript{82} David Hunter, James Salzmann, and Durwood Zaelke International Environmental law and policy, foundation press Chapter five, Page number 250 -258.

\textsuperscript{83} Marine Administration country Templates –country data, as on dated 13 September 2004.
To extend co-operation to all R&D organizations and academic institutions which are involved in the study of marine sciences, and cater to information needs of the user community.

To foster national and international cooperation in various fields of oceanography in order to facilitate the exploration and exploitation of the sea.

To provide support to various industries government and non-government organizations through consultancy contract, research, training etc.

National hydrographic office. Dehra Dun

The department has well established organization to fulfill its role as the nodal agency for hydrographic surveys in Indian waters. The national hydrographic office situated at Dehradun, is the apex hydrographic office of the country, which co-ordinates the hydrographic requirements of the country, which co-ordinates the hydrographic requirements of the country conducts the surveys as per international standards, archives the data and produces navigational charts and publications.
<table>
<thead>
<tr>
<th></th>
<th>Organization</th>
<th>Responsibilities</th>
<th>Scope</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Survey of India, Dehra Dun.</td>
<td>Responsible for coastal area mapping. Responsible for monitoring Tide Gauge network Sea level estimation.</td>
<td>Whole country</td>
<td>National</td>
</tr>
<tr>
<td>6</td>
<td>Indian Institute of Geomagnetism, Mumbai.</td>
<td>To establish, maintain and manage laboratories. To record, collect, scrutinize process, publish and supply geomagnetic data. To undertake the design, development, construction calibration and standardizing of magnetic instruments. To co operate and collaborate with other national and foreign institutions and international organizations in the field of geomagnetism. To publish scientific papers, bulletins and journals.</td>
<td>Whole country</td>
<td>National</td>
</tr>
</tbody>
</table>

In addition to the above stated organizations the state pollution control boards and central pollution control board, are actively participating in the development and
implementation of laws relating to the marine pollution in general and solid waste in particular. Water (prevention and control of pollution) Act 1974 and Environment Protection Act 1986, has imposed certain obligations on Pollution Control Boards, at present these Boards are acting as a watch dog for the protection and preservation of marine environment from the land based sources of marine pollution. However the practical situation itself is an evident for improper implementation and inefficiency of the pollution Control Boards84.

The NGOs have played significant role in policing the implementation of the existing regulations, and also extended their support to the government officials, policy makers and to the public. But the number of non state actors in India is very less in number and also suffering from most common problems like lack of fund, lack of experts and lack of support from proper authorities. Further the existing organizations are still in infant stage and these organizations gave much importance to the scientific research of available marine resources rather then the prevention and control of marine pollution. In fact marine pollution is a severe problem which can effect the socio economic development of the country and also can cause ecological imbalance in the polluted region. Again the ocean currents will spread such pollution even beyond the national jurisdiction and thereby can cause the Transboundary marine pollution. Further marine pollution is such a problem which tenders the international cooperation, regional cooperation and national efforts towards the development of more stringent rules, regulations, and effective implementation of those rules and regulations. Always there is a problem between the sustainable use of land and effective waste management because these tasks are two sides of the same coin and belongs to the state. But from the survey of

84 For details please refer the chapter 5, section A of this thesis
literature the state is not serious about the problem in the same degree as it is serious about other environmental problems. Infact the protection and preservation of marine environment largely depends on the proper and effective implementation of regulations relating to the land based solid waste because it contributes more then 80% to the total marine pollution problem. Many scalars have argued that the state is much serious about this problem and the existing norms are strong enough to regulate this problem and these regulations are effectively implemented at various levels. But the million dollar question is if the state has opted for an effective integrated solid waste management and opted for the effective coastal zone regulations then how the marine is polluting even in excess of its assimilative capacity?

XIV. CONCLUSION:

The International Maritime Organization is the sole global organization working for the safety and conservation of the marine environment. At the outset IMO gave much importance to the oil pollution and vessel based pollution and ignored all other sources of marine pollution. Again drafting of IMO convention is time consuming and too lengthy process, even if measures are developed at the IMO through deliberations, conference’s and so on ,to gain effect it needs needed ratifications , hence there is a doubt regarding the future existence of the IMO. However, while answering the above stated question the very existence of the IMO is dependent on the degree of responsibility of the developed nations. In other words, soon after completion of the negotiation process of an agreement the developed nations must give serious consideration towards ratifying the instrument, if they do this I think there might be a future for protecting the marine
environment through the IMO. The developed states should give shoulder to the responsibility of ratification. Again the developing countries should bare the same kind of responsibility by recognizing that there is only one marine environment on this planet, we all have to live with in it. Many times developed countries took the defense of lack of resources or technical wherewithal to go about implementing the environmental instruments and it is the responsibility of the developed countries that should consider such lacunas and find a balanced approach.

Secondly, the UNEP has been recognized for its work done for the protection and preservation of the marine environment, but it is also not far from the loopholes. Sir Geoffrey palmer argues that although UNEPs accomplishments have been significant it is incapable of adequately addressing global environmental concerns. Again he pointed out that many of environmental problems were widely recognized but the logical interference from the facts seems politically unpalatable, the only way to cure the problem is to create the proper international environmental agency with in the UN system and also recognized that such reconstruction should be rigorous.

Further there is no machinery to evaluate the gaps that may be found in the international frame work of agreements or to develop means of assessing priorities among competing claims for attention. Nor there is any way to ensure that international environmental issues are effectively co coordinated and integrated at the global level. Literally hundreds of international institutions have laid some claim to a role in environmental protection, but not particularly regarding the marine pollution due to solid waste. Again the existing organizations are insufficient and not able to meet the marine environmental problems since these organizations have been handicapped with the
budgetary problems, limited power and limited support. Hence no organization has the authority or political strength to serve as a central clearing house or co coordinator to curb the marine pollution in general and marine pollution due to solid waste in particular.