When the United Nations Convention of Law of the Sea (UNCLOS III) was prepared in December 1982, it was hailed as one of the most significant landmarks in the history of international law in general and law of the sea in particular. The preparatory work of UNCLOS III started in 1971, with the first formal session in 1973. The most noteworthy and controversial provisions of the Convention deal with the resources of the deep seabed. The first and second United Nations Conferences on the Law of the Sea did not deal with deep seabed for two reasons: firstly, the knowledge of the wealth lying in deep seabed was not widely known, and secondly, because the technology for exploration and exploitation of these resources was not well advanced so as to seriously think of commercial ventures in the deep seabed.

The Maltese Ambassador Arvid Pardo proposed in the U.N. General Assembly in 1967 that a 'Declaration and Treaty concerning the reservation exclusively for peaceful purposes of the seabed and ocean floor underlying the seas beyond the present limits of national jurisdiction, and the use of their resources in the interest of mankind, be adopted. This was the beginning of the process which later led to the passage of certain resolutions in the General Assembly and eventually, the UNCLOS III. Good deal of literature has been written on the Conference and what transpired during it.¹ The Conference took so long to arrive at an

acceptable draft for various reasons, like reconsideration of the existing law of the sea, differences between the States to arrive at an acceptable formula, adoption of a consensus in arriving at the decision rather than majority vote and the difficulties in securing the agreement upon certain matters, especially deep seabed resources.

When the Convention was opened for signature, the United States announced that it is not going to ratify the Convention because it fails to secure its vital interests and also convinced its allies that the Convention will not protect the interests of the industrialised countries as a whole. These States then went on to create an alternative regime known as the 'reciprocating States' which proclaimed almost uniform legislation on deep seabed. This led to a rift, once again, between the industrialised nations and the Group of 77 because the hopes of the latter group to internationalise the resources of the deep seabed by characterising them as the 'common heritage of mankind' and reaping considerable economic advantages out of it was shattered. The support of the Western industrialised nations was crucial for the success of the Convention because the technology for exploration and exploitation of the deep seabed resources was developed and possessed by the Western States exclusively. The future of the 1982 Convention thus hung in unpredictable suspense.

Environmentalists' disappointment

The groups of people who were greatly distressed because of the Convention’s bleak future were environmentalists and environmentally conscious States. Because, the Convention can be regarded as one of the most comprehensive and innovative environmental agreement which regulates the conduct of man over two-thirds of the planet. It has been claimed that if ever there was an opportunity to demonstrate that environmental consciousness has fundamentally transformed international law, this is it. This is substantiated by a number of provisions incorporated in the Convention which were formulated after sorting out

competing claims of two groups of States. First, there were more environmentally conscious States which wanted to extend enforcement powers of coastal and port States against foreign vessels because the flag States were extremely lax in enforcing pollution prevention legislations and regulations against ships carrying their flags. The other group was that of maritime States which was attempting to limit enforcement jurisdiction of coastal States because increased jurisdiction would hamper navigation and increase the cost of maritime transport. What actually resulted was a balance between the two opposing stands. There are several provisions in the Convention which enhance the powers of the coastal and port States on the one hand and incorporate safeguards to ensure that there is no abuse and unnecessary hindrance to maritime transport, on the other.

The Convention requires the States to follow generally accepted international rules and standards established through the competent international organization or general diplomatic conference. Thus, the pollution prevention standards, rules and principles developed by the International Maritime Organization (IMO) and incorporated in a number of independent Conventions, Declarations and Codes of Practices are made obligatory by reference. Although this may be tantamount to compelling States parties which ratify the Convention and also to follow standards developed by other Conventions dealing with pollution prevention at sea, yet it has a very positive impact from environmentalists' point of view. Because, these standards will eventually acquire the status of customary international law for non-parties to the IMO Conventions and will enhance respect to, and credibility of, these standards.

On the whole, the Convention dealt with environmental concerns quite satisfactorily by imposing a variety of obligations on States parties. Thus, it requires the States to:

a) ensure that activities under their jurisdiction do not cause environmental damage to other States or result in the spread of pollution beyond their own off-shore zones;
b) minimise the release of harmful substances into the marine environment from land based sources;

c) protect the rare and fragile ecosystems;

d) conserve the living resources of the seas;

e) prevent introduction of alien species into the marine environment; and

f) provide for environmental impact assessment of planned activities and environmental monitoring of ongoing activities and contingency planning for pollution emergencies.3

It is true that today we have a number of international Conventions which are directly and indirectly aimed at protection of the natural environment on global level on the basis of international co-operation. The distinctiveness of UNCLOS III are: there are many attractive provisions in the Convention which might secure wider ratification; and the Convention contains compulsory dispute settlement mechanism which will ensure compliance with Convention obligations to the greatest extent possible. It may be noted that many States refuse to ratify environmental treaties because they do not provide any immediate material return and contain only severe obligations. As to the compulsory dispute settlement mechanism, all international lawyers will concede that this is a remarkable achievement because this mechanism gives teeth to the Convention. The violators of obligations under the Convention will not go scot-free as in case of many other Conventions.

In 1982 and shortly thereafter when it became clear that there is bound to be considerable opposition to the Convention from Western industrialised States whose participation in the Convention was crucial for its success, the environmentalists got greatly disappointed. So in July 1990, Mr. Peres de Cuellar, the then U.N. Secretary General initiated informal consultations aimed at reaching a compromise between the Western industrialised States and the developing countries so that

3. Id., p. 494.
the 1982 Convention receives wider acceptance. These negotiations were continued and encouraged by Mr. Boutros Boutros Ghali in the same spirit and hope in which Mr. Cuellar initiated them. Eventually, in June 1994 an agreement was reached between the concerned groups of States and on 28th July 1994, the General Assembly passed a resolution and adopted the Agreement with 121 votes in favour, none against and seven abstentions. The agreement titled as 'Agreement Relating to the Implementation of Part XI UNCLOS III (hereinafter referred to as the 1994 Agreement), was opened for signature on 29th July 1994 and has been signed by more than fifty States including the United States and almost all industrialised States.

Although it is not yet clear as to exactly what factors were instrumental in reaching the agreement, it is possible to surmise a few. It has been suggested that by the year 1993 it became clear that the 1982 Convention would come into force because it received the requisite number of sixty ratifications which did not include any of the industrialised States who objected to the Convention when it was opened for signature. Had the Convention come into force only for the developing countries who ratified it, it would have created a strange situation as far as law of the sea is concerned. Because, some States would have been governed by customary law if they were not parties to 1958 and 1960 Conventions on the Law of the Sea, some by these Conventions, still some by the 1982 Convention. It has now been established very well that many of the non-seabed provisions of the 1982 Convention have passed into customary law even for the States who are parties to the 1958 and 1960 Conventions, with the result that they would be

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6. For the text of the Agreement see International Legal Materials, 1994, pp.1313 to 1327.
7. Supra, n. 4 at p.687.
regulated by the 1958 and 1960 Conventions as modified by the subsequent customary law influenced by the 1982 Convention. Thus a very complicated situation was foreseeable. Again, it was not possible to reconcile the deep seabed regime created by the reciprocating industrialised States with that of the 1982 regime. This could have led to competing claims in respect of mining sites.

Another possible reason could be that some of the developing States including India were seriously attempting to develop technology for deep seabed mining and if this effort succeeded, the Western States’ monopoly over the technology was about to be lost.\(^8\) Although it is time that attempts have been made to develop the technology, yet in view of the economic cost involved as well as consumption of, and market for, metals to be derived from deep seabed, very few Governments would seriously pursue the challenging task in the near future. Therefore, perhaps the developing countries also thought it unwise to insist on mandatory transfer of technology and heavy fees for mining consortia and reap whatever advantage that is possible by reaching an understanding with the Western States.

As will be seen from the text of the Agreement, most of the U.S. objections to the 1982 Convention have been accommodated. It is apparent that the 1982 Convention represented a statist and interventionist economic philosophies insofar as the system for exploitation of deep seabed resources are concerned. During the recent past these philosophies have given way to market oriented philosophies which were not popular when the 1982 Convention was negotiated and drafted. The demise of the Soviet Union and liberation of Eastern Europe from the yoke of Communism and gradual embracement of market oriented economic philosophies by many developing and former socialist States could be one of the strongest factors that facilitated adoption of the 1994 Agreement.

It has also been pointed out that the growing concern for global environment was one of the reasons why States decided to compromise

their differences and ensure that the provisions of the 1982 Convention, especially those relating to the environment, come into force and create strong binding obligations. It may be pointed out here that the United Nations Conference on Environment and Development, 1992 (UNCED) (the Rio Conference) did not pay a serious attention to the environment of the oceans. This was because already there existed a comprehensive instrument dealing with the environment of oceans concluded under the auspices of the United Nations as the 1982 Law of the Sea Convention and that there was a vague possibility in 1992 that the Convention might come into force on account of renewal efforts aimed at bridging the gap between the Western and developing States which were initiated in 1990 by the U.N. Secretary General.

Environment of the oceans and the 1994 Agreement

Whatever factors contributed to the conclusion of the 1994 Agreement and whatever economic and political repercussions it may have, it is necessary to examine how far this Agreement takes care of profound concern of environmentalists insofar as the environment of the oceans is concerned.

The preamble to the Agreement reiterates the importance of the 1982 Convention for the protection and preservation of the marine environment and of the growing concern for the global environment. It must now be seen how far this concern is actually reflected in the text of the Agreement. Most of the important operative provisions of the Agreement are incorporated in the Annex which is divided into various sections whereas, the opening Articles deal with formal matters like relationship between the Agreement and the Convention, signature, ratification, entry into force, etc.

The International Seabed Authority (hereinafter referred to as the Authority) is the organisation through which activities in the deep seabed area are organised and controlled. The Convention has conferred

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9. Supra, n. 4 at p.688.
adequate powers on the Authority. It is hoped that there will be some
time-gap between the entry into force of the Convention and the
approval of the first plan of work for exploitation. During this interim
period, the Authority is expected to take certain preparatory measures
which will facilitate eventual exploitation. Among other things, the
Authority is expected to concentrate on:

(1) Adoption of rules, regulations and procedures incorporating
applicable standards for the protection and preservation of the
marine environment;

(2) Promotion and encouragement of the conduct of marine sci-
entific research with respect to activities in the Area and the
collection and dissemination of the results of such research and
analysis, when available, with particular emphasis on research
related to the environmental impact of activities in the Area;

(3) Acquisition of scientific knowledge and monitoring of the
development of marine technology relevant to activities in the
Area, in particular, technology relating to the protection and
preservation of the marine environment; and

(4) Timely elaboration of rules, regulations and procedures for
exploitation, including those relating to the protection and pres-
servation of the marine environment.

The primary objective of the 1994 Agreement is to facilitate deep
seabed mining operations by mining consortia of the industrialised
countries within a framework that is acceptable to the international
community as a whole. For processing the applications of such consor-
tia, procedure is laid down in the Agreement, which is different from the
one prescribed by the 1982 Convention. In this connection, besides
fulfilling legal, financial and technological requirements and qualifica-
tions, section 1(7) requires that:

11. Id., Section 1(5) (g).
12. Id., Section 1(5) (h).
13. Id., Section 1(5) (i).
“An application for approval of a plan of work shall be accompanied by an assessment of the potential environmental impacts of the proposed activities and by a description of a programme for oceanographic and baseline environmental studies in accordance with the rules, regulations and procedures adopted by the Authority.”

The provisions are further supplemented by section 2 of the Annex which deals with the functions of the Enterprise - the mining arm of the Authority. It is expected that the Enterprise will not become operational immediately. In the interim period, the Secretariat of the Authority will discharge the function of the Enterprise.\textsuperscript{15} These functions are outlined in section 2 of the Agreement. As far as environmental responsibilities are concerned, section 2(1) (b) and (d) provide that the Secretariat is responsible for:

i) Assessment of the results of the conduct of marine scientific research with respect to activities in the Area, with particular emphasis on research related to the environmental impact of activities in the Area; and

ii) Assessment of technological developments relevant to activities in the Area, in particular technology relating to the protection and preservation of the marine environment.

Earlier it was pointed out that the provisions relating to mandatory transfer of technology for deep seabed mining by mining consortia to the Enterprise were not acceptable to the Western industrialised States. This was one of the reasons why they refused to accept the Convention. During the recent negotiations that led to the 1994 Agreement, the developing countries agreed that they will not insist on mandatory transfer of technology and that if the technology is to be transferred to the Enterprise, it will be done on the basis of fair and reasonable commercial terms. This understanding has been incorporated in section 5 of

\textsuperscript{15} Id., Section 2 (1).
the Agreement. As regards technology for protection and preservation of the marine environment, it provides:

"As a general rule, States Parties shall promote international technical and scientific cooperation with regard to activities in the Area either between the parties concerned or by developing training, technical assistance and scientific cooperation programmes in marine science and technology and the protection and preservation of the marine environment."\(^\text{16}\)

This obligation is not very strong. It only requires the States parties to promote cooperation for the protection and preservation of the marine environment. There is no guarantee that the Authority will be able to acquire the technology necessary to protect the environment of the Area from mining activities. In our submission, there ought to have been an obligation for transfer of technology which is necessary for protecting the environment of the Area from the threats posed by mining activities there.


Now it must be seen what is likely to be the impact of both - the 1994 Agreement and the 1982 Convention - on the preservation and protection of the environment of the oceans. The 1994 Agreement and the 1982 Convention are to be read together. The provisions of the 1994 Agreement and provisions of the 1982 Convention dealing with deep seabed are to be interpreted and applied together as a single instrument and in the event of any inconsistency between the two, the provisions of the Agreement are to prevail.\(^\text{17}\) If here is any conflict between the provisions of the 1994 Agreement and provisions of the 1982 Convention except Part XI, which deals with deep seabed, the Agreement will not prevail over the Convention.

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16. *Id.*, Section 5(1)(c).
17. *Id.*, Article 2(1).
The responsibility of the Authority to adopt rules, regulations and procedures incorporating standards for the protection and preservation of the marine environment as outlined in the 1994 Agreement, must be read with Article 145 of the 1982 Convention which contains elaborate provisions in this respect. There does not appear to be any conflict and hence Article 145 which is more comprehensive, will govern this responsibility of the Authority. It recognizes the fact that activities in the Area are likely to threaten the marine environment of the oceans and to protect it necessary measures ought to be taken. The Authority is enjoined to adopt appropriate rules, regulations and procedures to prevent, reduce and control pollution and other hazards to the marine environment of the oceans and coastlines and to avoid interference with the ecological balance of the marine environment. The Authority is also required to give particular attention to the need for protection from harmful effects of activities in the area like drilling, dredging, excavation, disposal of waste, construction and operation or maintenance of installations, pipelines and other devices related to such activities and to adopt rules, etc., for the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment.

The Authority is thus required to develop the law in the form of rules, regulations and procedures for protection of the marine environment of the Area from deep seabed mining operations conducted by the private mining consortia, the State parties as well as the Enterprise. The rules, regulations and procedures of the Authority in this respect must be adopted by the Council subject to approval by the Assembly. In adopting these rules, the Council is supposed to act on the advice of the Legal and Technical Commission.

In view of the revised Constitution of the Council and its decision making procedure as incorporated in the 1994 Agreement, it is obvious

18. Supra, n.11.
21. Id., Article 162(2) (o)(ii).
that the Western industrialised States in general and the U.S. in particular will have a dominant role. Thus, any legislative measure that the Authority is required to adopt for preservation of the environment of the Area needs the approval of the U.S. As a matter of fact most of the mining operations in the initial phase are likely to be carried out by Western mining consortia. It is therefore doubtful how far the U.S. will take a lead role in developing stringent legislation for environmental protection, especially if such legislation is likely to increase the cost of mining operation. Since the U.S. will virtually have a veto in the Council, it is doubtful to what extent the environmentally conscious States as well as non-governmental organizations will succeed in developing a fool-proof, comprehensive and efficient legal framework for protection of the environment of the Area.

It is the responsibility of State Parties to the Convention to adopt laws and regulations to prevent, reduce and control pollution of the marine environment from activities in the Area undertaken by vessels, installations, structures and other devices flying their flag or their registry or operating under their authority. The States are required to model these laws on the lines of, and shall not be less effective than, the rules, and procedures developed by the Authority.22

Mere mechanism for law-making is not enough. It must be ensured that the international rules, regulations and procedures as well as national laws based on these are properly enforced and the violaters are sternly punished. Part XI which deals with the Area is virtually silent as regards enforcement of international standards in this respect. Neither the Assembly nor the Council is specifically enjoined with responsibility to enforce these standards. The only provision which may enable the 'Authority' to take some steps to safeguard the marine environment of the Area is a power given 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.23 This is a power which the Council is expected to

22. Id., Article 209.
23. Id., Article 162 (2)(w).
exercise in exceptional situations where there is a likelihood of a very serious harm to the environment. It does not deal with routine supervision of the activities in the Area, nor does it enable the Council to take any measure other than emergency orders like suspension of operations.

This weakness in the legal regime appears to be deliberate. Perhaps the maritime States did not want any international inspectorate to supervise the activities in the Area. Therefore they undertook the responsibility to enforce the environmental legislation against the vessels, institutions, structures and other devices flying their flag of their registry or operating under their authority, as the case may be. Thus, the Convention provides that:

States Parties shall have the responsibility to ensure that activities in the Area, whether carried out by States Parties, or state enterprises or natural or juridical persons which possess the nationality of States Parties or are effectively controlled by them or their nationals, shall be carried out in conformity with this Part (XI). The same responsibility applies to international organisations for activities in the Area carried out by such organisations.24

The latter part of the above provision further suggests that in respect of activities carried out by the Enterprise in the Area, enforcement will be by the Enterprise and the Authority. As regards activities of private entities and States in the Area, although this provision requires the concerned States to enforce their legislation, Article 153 which deals with system of exploration and exploitation, empowers the Authority to exercise such control over activities in the Area as is necessary for the purpose of securing compliance with the relevant provisions of the Convention and the rules, regulations and procedures of the Authority. Further, the Authority is also empowered to take at any time any measures provided under Part XI to ensure compliance with its provisions and the exercise of the functions of control and regulation assigned to it.

24. Id., Article 139 (1).
thereunder or under any contract. The Authority shall have the right to inspect all installations in the Area used in connection with activities in the Area.\textsuperscript{25}

It is thus theoretically possible for the Authority to conduct inspection of the Area with a view to ensure compliance with its rules, regulations and procedures. The Legal and Technical Commission is empowered in this behalf to make recommendations to the Council regarding the direction and supervision of a staff of inspectors who shall inspect activities in the Area to determine whether the provisions of Part XI, the rules, regulations and procedures of the Authority, and the terms and conditions of any contract with the Authority are being complied with.\textsuperscript{26} Whenever the inspectorate is established, it must be ensured that it is totally impartial and is given adequate powers to discharge the responsibilities entrusted to it.

It is possible for the Authority to take very severe action against a State party who or whose private entities have grossly and persistently violated the rules, regulations and procedures of the Authority. The concerned State party may be suspended from the exercise of the rights and privileges of membership by the Assembly upon the recommendation of the Council. But such action is possible only when the Seabed Disputes Chamber has found that the concerned State has grossly and persistently violated the provisions of Part XI.\textsuperscript{27} This resembles the power of the U.N. Security Council and the General Assembly. Now the U.S. has virtually secured a veto in the Council of the Authority it is reasonable to foresee politicisation of this Council as well. The reason why this power of the U.N. Security Council was not invoked in cases of apparently gross and persistent violations of the Charter obligations will also validly apply here to ensure that self-interest and political alliances are protected and preserved. Thus, although the Convention may theoretically have provided a remedy, the 1994 Agreement concessions in favour of the U.S. and other industrialised States have ensured

\begin{itemize}
\item \textsuperscript{25} Id., Article 153 (5).
\item \textsuperscript{26} Id., Article 165 (2) (m).
\item \textsuperscript{27} Id., Article 185.
\end{itemize}
that such drastic measures, though essential in the circumstances, will not be taken at any rate.

The mechanism of deep-seabed disputes settlement as adopted by the 1982 Convention has not been diluted by the 1994 Agreement. The 1982 Convention is one of the rare international treaties which has incorporated good mechanism for settlement of disputes relating to the law of the sea. As regards the deep seabed activities, in the absence of agreement upon some other means of settlement, disputes are to be referred to the Seabed Disputes Chamber, or an *ad hoc* Chamber unless it relates to a contract which would be submitted to commercial arbitration under UNCITRAL rules. The provisions are not only elaborate, but complicated as well. Without going into their details, it is possible to argue that disputes relating to protection of the environment of the Area can also be settled by adopting this procedure. This is a remarkable advance especially because most of the treaties aimed at global environmental protection do not establish a mechanism for compulsory dispute settlement.

One strategy to ensure protection of the environment of the Area is to insist on environmental impact assessment of proposed activities and refuse those plans which are likely to cause a threat to that environment or where the plans do not envisage adequate protective measures. The 1982 Convention enables 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. In addition to this, the Convention also requires the contractors to give an undertaking that they will comply with rules, regulations and procedures established by the Authority. In extreme cases of disrespect to the rules and regulations of the Authority suspension or termination of a contract is also contemplated. But again the Council plays a decisive role in taking such penal action which, in all probability, may not be taken against a contractor who enjoys support of the Western industrialised States.

28. *Id.*, Article 162 (2) (x).
29. *Id.*, Annex III, Article 18.
On the whole, the 1982 Convention did not insist on environmental impact assessment as far as activities in the Area are concerned. Whereas, the 1994 Agreement is an advancement in this respect. Because, the Agreement insists that an application for approval of a plan of work shall be accompanied by an assessment of the potential environmental impacts of the proposed activities. It also requires the applicant to furnish description of a programme for oceanographic and baseline environmental studies in accordance with the rules, regulations and procedures adopted by the Authority. As noted earlier, the Authority is also required to promote and encourage marine scientific research on environmental impact of activities in the Area and disseminate the result of such research. The Authority is required to develop rules, regulations and procedures governing the approval of plans of work. This will enable the Authority to elaborate and incorporate detailed rules and regulations regarding environmental impact assessment of proposed activities in the Area and insist on all the precautionary measures necessary to preserve the marine environment of the Area. By reference, these rules, regulations and procedures can be made part of the contract which a mining operator is required to conclude with the Authority. So that violation of these rules or regulations will amount to breach of the contract and necessary action for such a breach will be easy in accordance with the Convention.

Conclusion

The effectiveness and success of the provisions contained in the Convention and the Agreement insofar as they relate to the protection and preservation of the marine environment of the Area will depend on three factors. Firstly, the Authority has to frame, and adopt, elaborate, and foolproof regime of rules which will be adequate and effective in realising their objectives. Utmost care needs to be taken at this stage

30. Supra, n.10, Section 1 (7).
31. Ibid.
32. Supra, n.10, Section 1(5) (h).
33. Supra, n.10, Section 6(7).
because the standards set by the Authority will lay down the parameters of the environmental regime to be created for the Area. The Authority may seek the assistance of the Legal and Technical Commission or form an *ad hoc* group of experts for this purpose. Still, there is enough time to do this exercise because we are now at the initial stage of preparing for actual exploitation of the resources of the Area. Secondly the enforcement and execution of the legal regime so developed and adopted by the Authority without an effective executive arm, may meet the fate of similar exercises done under some other Conventions. The Convention makes a provision for inspectorate to oversee several activities. Protection and preservation of the environment of the Area should form one of the major responsibilities of the proposed inspectorate. To that end, it must be equipped with necessary powers, infrastructure and expertise. It must also be ensured that it acts independently and is not likely to be dominated or influenced by the States who have undertaken activities in the Area. Finally, it must be seen that violations of the rules, regulations and procedures are sternly dealt with by the Authority by exercising its powers under the Convention and the Agreement. If necessary, action may also be initiated under the dispute settlement mechanism established by the Convention. The Convention has dealt with the issue of responsibility to ensure compliance with its provisions and liability for damage. These can be validly made applicable to the rules, regulations and procedures to be developed by the Authority for the protection and preservation of the environment of the Area. Since the Convention has developed and adopted effective dispute settlement mechanism, it is hoped that it will be instrumental in protecting and preserving the environment of the Area.

34. *Supra.* n.19, Articles 139 and 235.