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Authorities and Compensation for Seabed Exploitation beyond the Territorial Jurisdiction

Hashem Ghasemi[1], Ali Reza Zaheri*[2], Sharareh Mofidian[3]

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Abstract

The seabed chamber of the International Tribunal for the Law of the Sea is an authority for dispute settlement in seabed area cases. This chamber, in nature, is a specific judiciary for dispute resolution of this marine area in the tribunal. First, the governments must settle their disputes based on one of the peaceful resolution methods, and then should refer to the tribunal in case of agreement. Compared to the International Court of Justice in referring to dispute settlement, the most important feature of the tribunal and its chamber is the creation of a specific chamber and dispute settlement through arbitration and the presence of a special judge for dispute parties. Moreover, the seabed chamber can issue an advisory opinion, if required. Therefore, the jurisdiction of the chamber depends on two kinds of optional and compulsory jurisdictions of the tribunal, so that contractors and their guaranteeing states have joint liability for international seabed authority. It should be noted that states are responsible for an action and omission of the act causing harm in the seabed and under the seabed only in case of failure to apply their regulatory advice for contractors. The first and most important compensation for harm to the seabed is prevention from more hazards against seabed and under the seabed. Furthermore, immediate notification to coastal authorities and states, postliminium (restoration of the status formerly possessed), and complete compensation are forms of respective actions.

Keywords: International Tribunal for the Law of the Sea, International Seabed Authority, 1982 Convention, Compensation;

[1] Department Of Law, Faculty of Law, Islamic Azad University, Tehran Branch, Tehran, Iran, Email: hghasemi@live.com

[2] Department Of Law, Faculty of Law, Islamic Azad University, Tehran Branch, Tehran, Iran, (corresponding author), Email: Azaheri878@gmail.com

[3]Department Of Law, Faculty of Law, Islamic Azad Uinversity, Tehran Branch, Tehran, Iran, Email: Dr.sharareh.mofidian@gmail.com

1. Introduction

After the United Nations Convention on the Law of the Sea became enforceable on 16 November 1994, many attempts were done to establish International Tribunal for the Law of the Sea (ITLOS). ITLOS is an intergovernmental organization created by the mandate of the Third United Nations Conference on the Law of the Sea. ITLOS was established on 21 October 1996 with optional jurisdiction, so that states can refer their agreement and dispute to the Convention based on the agreement under the jurisdiction of ITLOS. The Tribunal shall be composed of a body of 21 independent members, elected from among persons enjoying the highest reputation for fairness and integrity and of recognized competence in the field of the law of the sea,(Kapoor, 2017; "Law of the Sea convention, supra note 2, Annex VI, art. 2(1),") The members of the Tribunal shall be elected for nine years re-elected based on their impartiality(Law of the Sea Convention). Dispute parties can refer to the tribunal under the arbitration agreement to request for a special arbitration chamber to a lawsuit for the dispute; the chambers can deal with a particular dispute employing specialized judges ("Law of the Sea Convention," ; Law of the Sea Convention; Law of the Sea convention; Oceans and the Law of the Sea). Members of the chambers are not elected by member states but by judges of tribunal(Law of the Sea Convention Annex VI). Dispute parties must approve the composition of chamber's members; in case of disputes on the seabed, the members of the special chamber are elected by the seabed chamber(ITLOS; Law of the Sea Convention).The tribunal's respect for parties' requests for the composition of these special chambers makes the dispute settlement system of convention flexible for parties. Technological advances made humans think of exploitation from seabed beyond the boundaries of their national and territorial jurisdiction. Regarding the sensitivity of many countries to activities of developed countries in space and beyond that, such sensitivity transferred to the seabed in the 1982 Convention on Seas. Accordingly, seabed areas were known as public areas limited only to specific exploratory and scientific cases. Therefore, an institution called the "International Seabed Authority" (ISA) was established in the 1982 Convention to protect and monitor seabed areas

under an extensive jurisdiction. The authority has three organs, including one Assembly, one Council, and one Secretariat. The Assembly comprises all ISA members, and a supreme organ supervising two other organs. All members of the Assembly have equal right to vote. Voting is done by the majority or qualified majority. On the other hand, Council is an executive organ with a membership limit. In the council, members also have equal right to vote, while voting is done through a different method of simple two-thirds or three-fourth majority with consensus. Finally, the Secretariat supports other organs of the authority, including principal and subsidiary organs. The authority is responsible to monitor seabed exploitation, preventing hazards to this area, and resolute disputes among members. Accordingly, a specific chamber has been formed in the 1982 Convention. The extant paper aims to answer the question about how authorities compensate the harms against seabed areas in international law on seas.

2. International Seabed Authority

According to Article 136 of the 1982 Convention on the law of seas, the seabed area and resources are the common heritage of mankind, and Article 153 describes how to carry out the case. The commission of area authority is responsible to monitor the seabed. It can be stated that organizational authority means the power of an independent(Yoshifumi, 2018). The jurisdiction of the authority is similar to the jurisdiction of legislation and law enforcement. According to Article 17 of Annex III about the legal jurisdiction of the authority, "The Authority shall adopt and uniformly apply rules, regulations, and procedures following article 160, paragraph 2(f)(ii), and article 162, paragraph 2(o)(ii), for the exercise of its functions as outlined in Part XI on, inter alia, the following matters: administrative procedures relating to prospecting, exploration, and exploitation in the Area." Moreover, the commission of the Authority adopts necessary measures to protect the marine environment and human life("Convention on Law of the Sea," 1982). This obligation associates with the Authority's jurisdiction for doing the action. In terms of execution, the most important power of the Authority under the mechanism designed in the convention is deciding about delegation of exploration and exploitation contracts after evaluating the work plan provided for the commission of the Authority by

contractors. According to paragraph 3 of Article 153, the Authority decides on the authorization of any terms or permission for activities in the area. In addition, the Authority is allowed to impose penalties upon the contractors violating their contracts based on Annex III 18(1). The Authority can suspend or terminate the contracts violated by contractors. Moreover, Paragraph 2 of Article 18 allows the Authority to impose monetary penalties in place of violation seriousness. According to paragraph 1 of Article 158, the Authority comprises three principal organs, including an Assembly, a Council, and a Secretariat. The Assembly includes all member states and has the highest power in the Convention. The Council comprises 36 members elected by the Assembly considering various cases such as equitable geographical distribution between developed and developing countries, under paragraph 3 of Article 15. The Secretariat is headed by Secretary-General. Besides the mentioned three principal organs, Article 163 creates subsidiary organs of the Council, including the Economic Planning Commission (EPC) and Legal and Technical Commission (LTC). The EPC should manage the financial activities of the Authority, and LTC must control legal and technical affairs, such as monitoring exploratory and mineral actions. However, following paragraph 1 of Article 4 of Annex's part IA, measures and tasks of EPC are now done by LTC. The function of LTC has been described in Article 165 giving many qualifications to it. Therefore, activities of LTC regarding exploration and exploitation of the area are highly crucial(Harrison, 2011). However, it should be noted that the composition of LTC members indicates their interests in the development of mineral resources rather than protecting the marine environment. The reason for such interest stems from membership of financial supports in the Council since 2018. Furthermore, some member states of the Commission simultaneously work in developed countries to support the states or contractors(Lee). The Authority shall protect the seabed against the direct effects of approved projects on the environment, marine environments, and human life. In terms of marine environment protection, particular attention must be paid to the need for protection from harmful effects of such activities as drilling, dredging, excavation, disposal of waste, construction, and operation or maintenance of installations, pipelines, and other devices related to such activities. The prevention of

damage to the flora and fauna of the marine environment is the most critical protection case("Convention on Law of the Sea," 1982). Since 2011, seabed and submarine's dispute settlement chamber in the International Tribunal for the Law of the Sea has been appointed to protect the marine environment(ITLOS, 2011s).

2.1. Exploitation of Seabed

The International Seabed Authority itself and as an institution working under the supervision of the Convention on Law of Seas can exploit and process the resources of seabed(Salehi, 2019). Moreover, 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, when sponsored by such States, or any group of the foregoing which meets the requirements provided in the Convention on Law of Seas and its annexes can exploit the resources of the seabed("Convention on Law of Seas "). The mentioned members and individuals can exploit following a formal written plan of work drawn up for exploitation of mentioned resources. Under the supervision of the International Authority of Seabed, a Council reviews the request, and after the legal and technical of entities was approved, they can carry out the measures. After the approval, the written plan of the work of the considered individual or entity must be submitted to the Authority. In addition, the contracts are signed as joint arrangements by states parties or individuals, which possess the nationality of state parties under the supervision of the Authority. The International Authority of Seabed controls all activities in the area carried out following terms and conditions of Convention on Law of Seas, annexes, work of plan, and other regulations set by the Authority regarding marine protection and optimal exploitation. In this lieu, states parties help the Authority to control their subordinates by doing measures contained in Article 139 of the Convention on Law of Seas. In place of responsibilities and tasks of the Authority, this institution can exercise any required measure at any time to comply with terms and conditions contained in respective documents and to set some requirements in contracts signed with contract parties. Moreover, the Authority can monitor the measures and installations carried out in the area by the contract parties. Accordingly,

private individuals can exploit the resources of high seabed, provided so requesting and signing the contract with the Authority for exploitation under the supports of their states. The Authority controls the technical and financial capability of private individuals and their states, which are of their nationality with effective control over them. After the capability is approved, exploitation of seabed resources is allowed. According to paragraph 1 of Article 139 of the Convention on Law of Seas, state parties are responsible for activities carried out by juridical persons, which are effectively controlled by them or their nationals. State parties are indeed responsible for compliance of public or private individuals, as well as effective control over the compliance with legislative rules and regulations about the exploitation of seabed. In terms of international organizations, the international organization must direct and control the exploiter organization(Esmaeili, 2018).

The notion of "sponsorship" is a key element in the system for the exploration and exploitation of the resources of the Area(ITLOS, 2011r). In association with the Authority, States Parties, or state enterprises or natural or juridical persons can carry out activities in the Area(UNCLOS). However, natural or juridical persons can carry out activities in the area based on two conditions:

1) They must possess the nationality of States Parties or are effectively controlled by them or their nationals(ITLOS, 2011k; UNCLOS), and

2) They must(ITLOS, 2011k) be sponsored by such States(ITLOS, 2011k)

It is worth noting that state parties that are active in seabed extraction are directly bound to obligations contained in the Convention without requiring sponsorship (ITLOS, 2011l; UNCLOS, 1982a, 1982d). Sponsorship creates a partnership between the entity and sponsoring state(ITLOS, 2011l). The connection is in form of nationality or effective control, which ensures the sponsorship of that state. The connection between States Parties and domestic law entities, including nationality and effective control requires all contractors and applicants for contracts to secure and maintain the sponsorship of the State or States of which they are nationals. If another State or its nationals exercise effective control, the sponsorship of that State

is also necessary (ITLOS, 2011l; UNCLOS, 1982a, 1982c). All sponsoring countries are jointly and severally responsible in such circumstances; otherwise, other arrangements are set in the Authority's rules and signed contract(ITLOS, 2011m).

2.2. Regulatory Framework for Mineral Exploitation in the Area

To develop the draft of the Regulatory Framework for Mineral Exploitation in the Area, the Authority designed and distributed a survey among contractors and its members for the first time in February 2014. The survey was designed in a way that respondents expressed their interest in membership or exploitation of the seabed and deep seabed. The Authority also aimed to explain judicial approaches in national and international scope by executing Regulatory Framework for Mineral Exploitation. In March 2015, the Authority issues two consultative documents for reference members and all beneficiaries:

1. Creation of a regulatory framework for mineral exploitation in the area, reporting it to all members of the Authority and stakeholders, and describing the payment mechanism development and implementation in the area. The previous draft document was a framework including the plan of work framework for the development of further regulations reflecting survey results of stakeholders in 2014. The practical plan of this framework was reformed four months later than the principal version in June 2015(International Seabed Authority, 2015a).

2. Another issued document was the payment mechanism for exploitation activities in the area. In other words, this financial document is one of three subjects of regulations related to exploitation (among environmental and administrative issues). Both mentioned documents bind stakeholders to give their opinions(International Seabed Authority, 2015b).

In February 2016, the Authority issued the first draft on standard terms and conditions of the contract on the exploitation of mineral resources in the seabed and deep seabed areas. In January 2017, then, a detailed framework was issued for the development and setting rules of exploitation of mineral resources in the area (environmental cases). The two documents included administrative and environmental issues.

However, in August 2017, the Authority merged three issues in one document called Regulatory Framework for Mineral Exploitation in the Area. The regulatory framework included all three applicable fields. Moreover, the framework has simplified the report of issues and reform of regulations(ISBA/24/C/CRP.1, 2018). The Legal and Technical Commission issued two statements about environmental measures regarding management and control of environmental protection against environmental effects for contractors and dealers in 2018. The statements can be used in case of environmental standard disagreements of the Authority:

1. Draft Regulations on Exploitation of Mineral Resources in the Area Amendments(ISBA/24/LTC/WP.1, 2018).

2. Environmental Impact Statement Template(ISBA/24/LTC/WP.1/Add.1, 2018)

3. Dispute resolution following ITLOS

The 1982 Convention on the Law of the Sea established the ITLOS. This tribunal started working in Hamburg. The international tribunal of the sea is an independent judicial institution with a close connection with the UN. According to Article 20 of the ITLOS statute, states parties of the convention on the law of sea can submit the disputes rose from the regulations of the convention. Moreover, the tribunal can investigate the environmental issues beyond the convention's territory since this tribunal can hear and judge the cases under the other relevant international documents and international waters. ITLOS is one of few international judicial institutions with mandatory jurisdiction over cases related to the rules of the founding treaty. Although this tribunal is not the only dispute resolution mechanism for state parties of the Convention, the tribunal has mandatory jurisdiction for specific dispute settlements caused by articles of the Convention. Moreover, the tribunal has mandatory jurisdiction in case of disputes not submitted to any dispute resolution mechanism(Avgerinopoulou, 2006).

According to Part XIV of the 1982 Convention on Law of Seas, marine dispute settlement is based on the free choice of two compulsory and

optional procedures. Therefore, the countries must use compulsory methods ensuring binding decisions if they cannot resolute their disputes through non-compulsory methods. This dispute resolution system has four features(Moradi, 2019):

- The existing dispute settlement system is a secondary system i.e., dispute parties shall proceed expeditiously to an exchange of views regarding its settlement by negotiation or other peaceful means (Article 283 of 1982 Convention on Law of Seas), and then they can agree to choose peaceful means for dispute settlement based on Articles 280 and 281 of the Convention.
- According to section part XIV of the 1982 Convention on Law of Seas, jurisdiction is compulsory, i.e., dispute parties can submit their request to the court unilaterally (Art. 286). However, there are some exceptions in disputes, such as exclusive economic zone or continental shelf (Article 297), territorial boundaries, and sovereignty (Article 298).
- In those cases the fifth part of the 1982 Convention on Law of Seas is executor, the outcome is a binding decision that dispute parties must adhere to it.
- The last element of dispute settlement contained in Part XIV of 1982 Convention on Law of Seas in the choice of procedure, i.e., each state party can choose one of four dispute settlement, including the International Court of Justice, the International Tribunal for the Law of the Sea, an arbitral tribunal, and a special arbitral tribunal (Article 287). This procedure is called the "Montreux formula," which means compulsory arbitration otherwise the dispute parties have agreed in advance on dispute settlement through one of the other three procedures contained in Article 287, in deceleration notice or specific cases.

In disputes submitted to the states try to follow the optional procedure that is a type of arbitration. The majority of disputes referred to the tribunal have been based on the agreement on such proceeding. The followings are some examples:

- Tuna cases (New Zealand v. Japan; Australia v. Japan)

- Ireland v. United Kingdom (MOX Plant Case)
- Maritime dispute between Singapore and Malaysia
- Barbados v. Trinidad and Tobago
- Bay of Bengal Maritime Boundary Arbitration between Bangladesh and India
- Chagos Marine Protected Area Arbitration (Mauritius v. the United Kingdom)
- Maritime dispute between China and Vietnam
- Argentina v. Ghana
- The Duzgit Integrity Arbitration (Malta v. São Tomé and Príncipe)
- The Arctic Sunrise Arbitration (the Netherlands v. Russia)
- The Atlanta-Scandian Herring Arbitration (The Kingdom of Denmark in respect of the Faroe Islands v. The European Union)
- Maritime dispute of Guyana v. Suriname(UNCLOS) (Cour Permanente D'arbitrage)
- According to the cases submitted to the tribunal, dispute parties tend to settle disputes through arbitration since they can have their specific chamber and judge to resolute the dispute and be flexible in the case on issue vote. The mentioned features are the specific superiority of the International Tribunal for the Law of the Sea compared to the International Court of Justice.

3.1. Seabed Authority of Internal Tribunal for the Law of the Sea

A specific seabed chamber has been established in ITLOS covering the compulsory dispute settlement mechanism in disagreements on the seabed and deep seabed(Nelson, 2011). The seabed chamber is almost independent in the tribunal(Tuerk, 2010) that has jurisdiction for hearing disputes between a member state and the International Authority of Seabed. This chamber comprises 11 members elected from tribunal's judges based on the

majority votes of members. The equitable geographical distribution must be observed for elected judges for the seabed. The mission duration of these judges is three years, which is extendable. In case of disputes submitted to the chamber, parties can introduce special judges. The seabed chamber itself can establish a specific chamber with three members who immediately and simply investigate special cases or settle the cases that are not highly serious. According to Article 37 of Statute of ITLOS, the following individuals with jurisdiction can refer to the chamber:

1. State Parties and the Authority of Seabed

2. Natural and real individuals

The most important disputes are seen in some of the following cases:

1. Violation of regulations between the Authority and state party

2. Violation of rules contained in Convention on Law of Seas (XI) by a contracting party(UNCLOS, 1982b).

However, some authors assume that the Authority can investigate a case in the seabed chamber that claims a coastal country has violated the seabed or deep seabed area with or without imposing itself. It means that some authors believe that if International Authority of Seabed claims of exploration or excavation of a state beyond its territorial or maritime jurisdiction, the case can be submitted to the seabed chamber(Boyle, 2008). However, some authors do not believe in such rights in terms of jurisdiction and procedure(UNCLOS, 1982b) since the excessive development may cause political interference of countries with seabed chambers.

The seabed chamber can issue a non-binding advisory opinion(Wolfrum, 2021). The requested advisory opinion is about the dispute so that the chamber issues the advisory opinion based on the contract signed by parties, 1982 Convention on Law of Seas, and maritime law procedures. The issued opinion is non-binding with the only advisory application for dispute settlement between parties. It should be noted that the Assembly or Council of International Authority of Seabed could request an advisory opinion(De Brabandere, 2011).

It must be noted that the Seabed Disputes Chamber shall not pronounce itself on the question of whether any rules, regulations, and procedures of the Authority are in conformity with the 1982 Convention, nor declare invalid any such rules, regulations, and procedures. In other words, the chamber cannot control the Authority through judicial revision of legislation procedures, but its jurisdiction is confined to deciding on individual cases(Caflisch, 1983; LOSC; Nelson, 2011). However, the Seabed Chamber can decide whether regulation of the Authority comply with the Convention and Part IA in case of an advisory opinion. Nevertheless, due to the non-binding effect of advisory opinions, any decision on possible reforms in regulations is made by the Authority(Harrison, 2011). However, it is important to determine dispute settlement mechanism for cases related to the seabed and seabed in the Convention and subsequently in ITLOS(ITLOS, 2011n).

It is worth noting that despite the extensive jurisdiction of the chamber, it is not a unique jurisdiction. Disputes concerning the interpretation or application of Part XI and respective annexes shall be submitted, at the request of any party to the dispute, to a specific international maritime tribunal or Seabed Dispute Chamber. It should be noted that disputes between States Parties and International seabed Authority concerning the interpretation or application of a commercial contract shall be submitted, at the request of any party to the dispute, to binding commercial arbitration, unless the parties otherwise agree(LOSC). However, a commercial arbitral tribunal to which the dispute is submitted shall have no jurisdiction to decide any question of interpretation of this Convention(LOSC). When the dispute also involves a question of the interpretation of Part XI and the Annexes relating thereto, concerning activities in the Area, that question shall be referred to the Seabed Disputes Chamber for a ruling.

The proceeding in the tribunal is done when dispute parties submit their case to the tribunal's clerk by notifying the agreement or filing a lawsuit. The clerk then immediately notifies the submission and respective annexes to the part or parties of the lawsuit. Pursuant to Article 44(3) of the procedure of ITLOS, the clerk must observe the rules on formal conditions of the lawsuit, including signs or approval letters of the Authority. Articles

47 and 288(2) of ITLOS have pointed to the individuals with jurisdiction mentioned above. The proceeding is done within two stages, so that it begins after recording the lawsuit, exchanging and notifying the submissions and relevant evidence (written step). According to Article 52, the hearing of statements given by witnesses, experts, and lawyers of dispute parties is done in oral part. A third party also can enter the proceeding, and the tribunal can deem to file a lawsuit based on the agreement rules, etc. according to Article 287. The right is optional for the tribunal. In case of any objection to the tribunal's jurisdiction before the procedure, the tribunal investigates its jurisdiction and issues an individual vote for the case. Moreover, dispute parties can have a counterclaim before the legal procedure, under Article 96 of Rules of ITLOS, so that the claim must be respected and under the jurisdiction of the tribunal. The third beneficiary can enter the case optionally. However, in case of interpretation of the case or implementation of the 1982 Convention or relevant treaties, the clerk of the tribunal must notify other members of the convention to enter the case.

Decisions are made by the Tribunal and its chambers based on the majority of votes so that the chief justice issues the final vote in the case of vote equality. Moreover, the Tribunal interprets the vote in case of any objection to the issues vote. According to the statute of the Tribunal, it is possible to request for revision of the issue vote if the truth is discovered based on the effective evidence, and if the party relying on the evidence has not hidden the evidence. Moreover, following Article 15(4) of ITLOS' procedure, revision is not possible ten years after the vote issues. According to Article 117 of the procedure, revision is done by the tribunal or the chamber that issued the vote. Following Article 28 of the procedure, the absence of one of the parties does not prevent the tribunal to issue the vote. In this case, an absentee vote is issued. Under Article 104, dispute parties can submit the case and request for a lapse of the case.

3.2. Dispute settlement in marine scientific research

Peaceful settlement means of international disputes caused by marine scientific research activities in the 1982 Convention of the Law of Seas provide a diverse set of methods for states, so they feel free to choose those

means adapted to their interests. General peaceful means of dispute settlement contained in the 1982 Convention of the Law of Seas that provide some binding rules have been presented in Part 13 of the Convention, except for disputes concerning interpretation or application of Articles 246 and 253. These disputes are covered by the conciliation procedure in Annex V, Section 2 of the Convention(Madani, 2013). Special arbitration is one of dispute settlement means.

According to Annex VIII of the 1982 Convention, special arbitration exists in four scopes, including marine scientific research. The list of experts in these scopes is prepared by authorized international organizations, of which dispute parties can select the members of the arbitration tribunal based on Annex VIII. Each member state of the Convention on the Law of Seas selects two experts. Executive secretariat of Intergovernmental Oceanographic Commission prepares the list of experts in marine scientific research under Annex VIII(Madani, 2013).

4. Responsibility in seabed exploitation

States' commitment to environmental protection (either in their territory or beyond their boundaries) has an inclusive aspect since it is an international obligation(Shiravi & Shaabani jahromi, 2018). In the case of nuclear tests between Australia and New Zealand with France, the International Court of Justice explained that such violations cause environmental damages to public commonalities (high sea) harming interests of other countries, as well as international society. Moreover, extensive, permanent, and severe environmental degradation has been introduced as an international crime in three important international documents. Article 35(2) of 1977 Protocol I additional to Geneva Convention, Article 18 of the statute of the International Court of Justice, and EU 1998 Strasbourg Convention have had a criminal approach to the environment(Javandel Jananloo, 2015). In addition to international documents, commitment to marine environmental compensation has also been determined in judicial procedure, such as the following case:

- Corfu Channel (the United Kingdom of Great v. Albania), 1949
- Lake Lanoux Arbitration (France v. Spain), 1957

- Nuclear Test Cases Australia and New Zealand v. France, 1973
- Fisheries Jurisdiction (the United Kingdom and Northern Ireland v. Iceland), 1974
- Slovakia v. Hungary on Gabcikovo-Nagymaros Project, 1997
- Southern Bluefin Tuna (Australia, New Zealand, Japan), 1999

Compensation has been pointed in the cases mentioned above.

First, compensation is done if there is any damage. An action in sea and seabed is an oversea activity, so that UN's economic commission defines damage as a basis for compensation, in case of responsibility for overseas pollution(Shahhosseini. A., 2017c):

A) Loss of life, injury, or personal loss

B) Any damage to or loss of property, and non-profit

C) Any harmful change in the ecosystem, including 1) cost of reasonable measures done to restore the actualized situation or measures that must be done, 2) extra losses

D) Cost of preventive measures and extra damages caused by the measures

According to the 1982 Convention, applicant-sponsoring enterprises of the area exploration and exploitation are responsible to compensate for the environmental damages caused by exploitation. In case of lack of compensation, the states sponsoring enterprises are responsible(UNCLOS, 1982g). Requested by Nauru, International Marine Tribunal issues an advisory opinion about responsibilities and obligations of states concerning activities in the area on 1 February 2011(ITLOS, 2011p). In this case, Nauru requested a common plan of work for marine exploration in the seabed and mineral extraction activities by submitting the case to Seabed Authority. However, the concern was about whether debts or possible costs caused by financial sponsorship for a mineral institution go beyond the financial capacities of that developing country(Handl, 2011). The tribunal issued the advisory opinion based on the following rules of liability got seabed:

1. The rules concerning liabilities of state parties (Article 139(2), first sentence),

2. The rules concerning sponsoring state liability (Article 139(2), second sentence), and

3. The rules concerning the responsibility of the contractor and the Authority (referred to Annex III, Article 22).

From the wording of article 139, paragraph 2, of the Convention, it is evident that liability arises from the failure of the sponsoring State to carry out its responsibilities. The sponsoring State is not, however, liable for the failure of the sponsored contractor to meet its obligations. There is, however, a link between the liability of the sponsoring State and the failure of the sponsored contractor to comply with its obligations, thereby causing damage(ITLOS, 2011q).

4.1. Obligation of state for due diligence (secondary liability based on fault)

Contractors or applicants for sponsoring contract states in seabed exploration and exploitation have many responsibilities and obligations under the 1982 Convention. The obligations that are so-called "direct obligations(ITLOS, 2011a)," which the most important of them are among sponsoring states(ITLOS, 2011a):

1. Obligation to assist the Authority in controlling activities in the area;

2. Obligation to use the precautionary approach in the activity;

3. Obligation to use the best environmental measures;

4. Obligation to adopt the appropriate measures in the case of urgent orders issues by the Authority regarding marine environment protection;

5. Commitment to ensuring accessibility of compensation for pollution-caused damage;

6. Commitment to assess the environmental effects on the activity and exploitation.

Whereas the liability of the sponsoring State for failure to meet its direct obligations is governed exclusively by the first sentence of article 139, paragraph 2, of the Convention, its liability for failure to meet its obligations concerning damage caused by a sponsored contractor is covered by both the first and second sentences of the same paragraph. The nature of these obligations also determines the scope of liability. According to an advisory opinion issued in 2011 by ITLOS, obligations of the sponsored state of the contractor create an internal procedure in commitment to exploitation measures to ensure the appropriate exploitation(ITLOS, 2011b). Moreover, sponsoring state remains liable for damage even after completion of the exploration phase(ITLOS, 2011o).

The wording of article 139, paragraph 2, of the Convention clearly establishes two conditions for liability to arise:

1) The failure of the sponsoring State to carry out its responsibilities

2) The occurrence of damage(ITLOS, 2011c)

The failure may consist of an act or an omission that is contrary to that State's responsibilities under the deep seabed-mining regime(ITLOS, 2011c). The failure of a sponsoring State to carry out its responsibilities entails liability only if there is damage. Therefore, according to paragraph 2 of Article 139 of the Convention, sponsoring state has no liability in absence of mentioned conditions(commentaries, 2001; International Law Commission; ITLOS, 2011c)[4]. Therefore, for the sponsoring State's liability to arise, a proven causal link(ITLOS, 2011d) must be between the failure of that State and the damage caused by the sponsored contractor(ITLOS, 2011e). However, not every violation of an obligation by a sponsored contractor automatically gives rise to the liability of the sponsoring State(ITLOS, 2011f). The tribunal emphasizes in its advisory opinion that State's obligation is an obligation to deploy adequate means, to exercise the best possible efforts, to do the utmost, to obtain this result. In international law, this obligation may be characterized as an obligation

[4] It should be noted that this is an exception of Customary International Law Rule on liability that a state may remain liable based on the Customary International Law Rule even if there is no damage caused by failure to carry out its international responsibilities due to legal rules.

"of conduct" and not "of the result." Therefore, the obligation of conduct is done through an accurate regulatory measure(ITLOS, 2011g). In terms of regulatory measure in the obligation of conduct, the International Court of Justice explains in the case of Argentina v. Uruguay that It is an obligation that entails not only the adoption of appropriate rules and measures but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators(Pulp Mills on the River Uruguay, 2010). It is the same case in the International Law Commission(International Law Commission, 2001). Therefore, the tribunal confirmed that sponsoring states are the only ones responsible for their appropriate measures. Moreover, sponsoring state must adopt the reasonable "appropriate" measures in its legal system for securing compliance with damage level(ITLOS, 2011j) that compliance with these obligations can also be seen as a relevant factor in meeting the due diligence "obligation to ensure" and that the said obligations are in most cases couched as obligations to ensure compliance with a specific rule(ITLOS, 2011a). Sponsoring states also have another obligation according to article 235(2) of the Convention: states shall ensure that recourse is available following their legal systems for prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment by natural or juridical persons under their jurisdiction.

If the sponsoring state has adopted "appropriate" measures observing the accurate standard under the 1982 Convention, the state is not liable for damages caused by the liable contractor(ITLOS, 2011j; UNCLOS, 1982e, 1982f). However, it may be envisaged that the damage in question would include:

1) Damage to the area

2) Damage to the Area and its resources constituting the common heritage of mankind

3) Damage to the marine environment(ITLOS, 2011e)

International Seabed Authority, institutions working on seabed exploitation, seabed exploiters, and coastal states working in the seabed are examples mentioned in the tribunal as individuals that can compensate the area pollution(ITLOS, 2011e). In case of claims against the contractor (sponsored by state), if the contractor has paid the actual amount of damage, there is no room for reparation by the sponsoring State(ITLOS, 2011h). As mentioned, sponsoring state remains liable because of International Seabed Authority if it has failed to carry out its obligation, so it should compensate the damage, while the sponsoring state has no obligation if the contractor does not have adequate assets or has not failed to carry out its obligation. Therefore, three assumptions can be considered for non-actualization of joint and several responsibilities:

- When a state carries out all necessary or appropriate measures explained in international law, and guiltless measures of contractor cause damage to the environment;
- When a state carries out necessary or appropriate exploitation measures and a private contractor is the only liable, but the contractor enterprise is bankrupted or its assets are beyond the sponsoring states' capacity;
- If sponsoring state has not carried out the necessary measures, but there is not any causal connection with environmental harms(Anton, 2011).

Although these issues may cause a lack of response to damage, Article 304 of the Convention has considered other rules regarding responsibility and liability under international law depending on the exploitation of and damage to the seabed by the executor. However, the following patterns can be presented for liability and compensation to prevent non-responsibility of damage to seabed based on the existing procedure and doctrine in international law:

1. Insurance requirement for subsidiaries under domestic law regarding seabed and seabed pollution damage

According to ITLOS, sponsoring states may apply more strict standards on marine environment protection by contractors to ensure prompt and adequate compensation(ILC, 2006a). Such standardization can compensate for the damage under the domestic insurance requirement. Norwegian Petroleum Act("Lov om petroleumsvirksomhet ", 1996) is a great example of strict liability of the contractor for damage caused by oil pollution that not only has not limited the interest of national and international enterprise in discovering and drilling oil and gas but also developed it.

2. Pollution damage fund under the supervision of International Seabed Authority

ITLOS suggested that International Seabed Authority creates a damage fund as a means to cover damage to deep seabed so that member states and contractors should pay the fund(ITLOS, 2011i). Seemingly, pollution damage fund is a perfect method to create a second security level to ensure pollution damage compensation in the seabed and deep seabed if contractors have not compensated or the insurance coverage is less than the damage(ILC, 2006c). This fund should serve as an international regulatory institute collecting seabed-specific costs under the supervision of the Authority(ISA, 2017). However, as mentioned, the Authority has designed a procedure to create insurance funds with environmental liability.

4.3. Remaining responsibility of sponsoring state

As mentioned before, the sponsoring state is not responsible for damage caused by omission or non-compliance of action by the contractor with governmental advice and requirements(Makgill, 2010). It seems that the state guarantees contractor's measures in the last step(ILC, 2006b) since the sponsoring states determine the financial obligations of the contractor and can expand financial assistance to contractors. Moreover, the security obligations of contractors done to reduce the hazard of its measures for the area environment, which is known as the common heritage of mankind, should not be harmed in case of prevention.

5. Compensation solutions

One purpose of civil liability is ensuring the right of harmed individuals and supporting them, as well as preventing possible damage and removing the violation(Heidary, 2021). The fault is the necessary condition for the actualization of civil liability in customary international law, while international law on environment considers the strict liability due to diversity of pollutant sources and difficulty in detecting the offender(s), as well as the effect of some elements such as time and distance on such pollutions. It means that the damage occurs or attributing it to the action or omission of action by the ship owner proves the liability of the owner with no need for proof of fault or carelessness. Hence, international documents e.g., The International Convention on Civil Liability for Oil Pollution Damage, 1969 and its amendment protocol 1992 have recognized the strict liability. Nowadays, commitment to compensation for environmental damage is introduced as the fundamental principle of protecting and preserving the environment under general rules of international liability(Hakimzade Khoei., 2019).

5.1. Necessity of primary provision to prevent further damage

One of the primary principles in the procedure of ITLOS is taking precautionary measures to prevent further damage. The provisional principle has been claimed in many cases by international tribunals. The most relevant case included the disagreement between Australia, New Zealand, and Japan, 1999. In this case, ITLOS ceased the experimental fishing of Japan. Although it was tried not to use the term "precautionary" in the vote, the term "lack of scientific certainty" directly refers to the fundamental factor of precautionary as mentioned in Principle 15 of the Rio Declaration. In this vote, the parties are asked to act cautiously to effectively protect fish and prevent any damage to them. The provisional measure was also prescribed based on the precautionary approach(Nory Yoshanloey, 2014). In this case, Australia and New Zealand submitted the case to ITLOS and requested the Tribunal to prescribe as provisional measures that Japan immediately cease unilateral experimental fishing until the formation of an arbitration tribunal based on Annex VII. Japan then challenged the prima facie jurisdiction of the tribunal by rejecting the

possible irreversible damage and arguing that the claim of applicants had no immediate or necessity, while the mentioned conditions should exist to prescribe the provisional measure based on Article 290 of the convention. The applicants requested for precautionary principle and declared that it is applicable pursuant to Article 119 of the 1982 Convention. These countries assume that the precautionary principle is applicable as a customary rule of international law in case of any hazardous and irreversible damage to the environment. On 27 August, the Tribunal prescribed six provisional measures that had an extensive and constructive effect on the law of seas. Firstly, dispute parties were asked to take no action, which might aggravate or extend the disputes, or any prejudice in decisions made on the case. The dispute parties must take into consideration that Bluefin tuna resources be protected, and they should not exceed their national allocation preventing any experimental fishing unless the relevant national allocation is considered. The tribunal must encourage Australia, Japan, and New Zealand to resume negotiations without delay with a view to reaching an agreement on measures for the conservation and management of southern bluefin tuna. The parties must act precautionary ensuring that effective preservative measures are taken to prevent severe damages to bluefin tuna resources. The provisional measure ensures that preservative measures are taken based on a lack of scientific certainty(Moradi. M 2019).

However, it should be noted that ITLOS, according to the first part of Annex of 1994 Agreement and Article 24 of 1982 Convention on the law of seas requires states to ensure environmental assessment for economic activity in deep seabed. In case of possible damages to the marine environment, TLOS obliges the states to inform other states influenced by such damages and authorize global and regional international organizations, and remove pollution cooperatively(Banafi, 2017)

5.2. Reinstatement and Compensation

International liability is a legal institute making a government or international organization- that has taken measures against international law- prevents the damage or compensates the damage of harmed state or international organization following the international law. When states join a convention, accept some obligations that any violation of such

commitments makes the states compensate the damage equally even if it has not been considered in the treaty. Hence, only violation of international obligations will be obligatory even if in absence of damage. However, compensation is done differently in each case. However, the state's responsibility for prevention, safety, notifying, and dealing with damages are before the compensation. In case of any violated international obligation, compensation arises as a secondary obligation, while this is a primary commitment in case of liability for not-prohibited actions i.e., such liabilities do not depend on any violated international obligation or prohibited action. Therefore, international responsibility means a legal status in which, the violating state must compensate for the material and spiritual damages resulting from the action or omission of illegitimate action that is against international (customary or contractual) law. International responsibility can be considered as a sanction on illegal measures under the jurisdiction of states in the international law(Darabpour, 2011).

Following the first solution of the seabed, compensation for environmental damages requires paying common costs for reinstatement, stabilizing the environment, and taking preservative measures. The most common solution in the procedure of states and international treaties is to consider a certain predetermined amount of money as maximum compensation and an alternative to reinstatement(Shahhosseini. A., 2017a). The International Seabed Authority can adopt such a method as primary prevention in its contracts to exploit mineral resources or take exploratory scientific actions.

In another compensation case, the polluter must pay indemnity equivalent to the value of the environmental elements to the harmed party. Accordingly, environmental elements are divided into two categories: A) those environmental elements traded in the market at a certain price. The price in which, the environmental resources are transacted in the market will be simply chosen as a valuation metric in the first category. B) Those elements without market price that their economic value is determined based on recreational or pleasures values of these resources i.e., general evaluation and assessment is used to determine the approximate value of such environmental elements(Shahhosseini. A., 2017a). Nevertheless,

compensation must be matched with the imposed damage accurately and precisely. The possible damage must be taken into account in the calculation of compensation even if damage has a material aspect. Therefore, any kind of damage should be evaluated financially(Shahhosseini. A., 2017b).

Reinstatement means restoring the pre-damage status. If the compensation is possible in practice, it will be named indemnified in domestic law. According to European Commission, in those cases where money can compensate for the environmental damage, the money must be paid just for reinstatement. According to paragraph 8 of Article 2 of Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, 1993 Lugano defines "reinstatement" as any reasonable measures aiming to reinstate or restore damaged or destroyed components of the environment. If the damage were material, reinstatement would be material. For instance, refinement and cleaning oil pollution in the sea means reinstatement of the sea. Another type of reinstatement includes the legal aspect if the damage to the environment occurs because of a rule. In this case, repeal or non-enforcement of that rule can contribute to reinstatement(Asadzadeh. Kh Hakimzade Khoei. P., 2019).

A conviction for compensation may be individual or common, but the individual conviction has been considered in domestic and international procedures. For example, Erica sank off the coast of France in 1999. This ship had a cargo of heavy fuel oil, sank, and released the oil into the sea. More than 3400 compensation claim lawsuit was filed against the owner of the ship. Moreover, some lawsuits were also filed against the ship's owner and Total Company, as ship user, in France courts, and it was requested to introduce both owners and use individually and commonly liable for compensation not covered by Convention on Civil Liability, 1992. In 2008, Total Company was sentenced to pay €375.000, as guilty of imprudence in recognizing defects of Erica Old Ship. Moreover, the Paris Criminal Court sentenced Total Company and other partners to pay €192 million to private applicants of the case. After the Prestige oil tanker accident in 2002 that polluted coastal waters in France and Spain, the approach taken by EU courts to fill the lawsuit against character, manager, and the operator was

stabilized after this case(Nory Yoshanloey. J, 2014). The most important point in damage is determining environmental damage accurately. Accordingly, damage's consequences for other or prevention of activity of exploiters in the seabed and deep seabed may be considered as an action done by another person if damage influences them, to be prevented from doing something else. For example, the mentioned points have been considered in the issued votes in two cases of environmental damages mentioned above. In the Amoco Cadiz case, the court introduced compensation for depreciation and cost of governmental building as a necessity; moreover, the reconstruction cost of coasts and ports by districts and other divisions of coastal cities polluted by oil was identified as compensable. In the Exxon Valdez event that happened on 25 June, many jobs were destroyed due to the large environmental harms. Therefore, Exxon Company was sentenced to pay indemnity to many claims caused by the event and its economic losses(Asadzadeh. Kh. Hakimzade Khoei. P., 2019).

6. Conclusion

The resources existing in the seabed and deep seabed have been introduced as the common heritage of mankind. The establishment of ITLOS, a deep seabed chamber was formed to investigate the disagreements on deep seabed. It can be stated that this specific chamber has been working independently as a specialized chamber in the tribunal. Marine disputes are under the jurisdiction of ITLOS first, and then under the jurisdiction of the seabed chamber. Following its inclusive jurisdiction over signing contracts with contractors exploiting the bed and seabed, International Seabed Authority determines the type of exploration and exploitation in the respective contract or scientific investigation based on the type of area and existing resources in the area. However, contract parties must protect mineral resources and biodiversity in the seabed and seabed. Besides the Articles contained in the 1982 Convention on marine environment protection, other environmental rules, and international law must be observed in the area.

One of the important issues in signing exploitation contracts between deep seabed international authority and contractors includes financial guarantee

granted to the Authority by states sponsoring the contractor regarding the rules and regulations followed by the contractor. The mentioned case creates joint liability. The liability of sponsoring states stems from their failure to fulfill responsibilities, while the liability of contractors arises from non-compliance with contractual and regulatory rules by the sponsoring state. The two forms of liability exist simultaneously and in parallel. Therefore, sponsoring state is responsible only in case of non-compliance with its advisory regulatory rules, so that the state will be liable for doing the action. The specific chamber of deep seabed in an international tribunal is the competent institution with two optional and compulsory jurisdictions for investigating the seabed and deep seabed disputes. Seemingly, regarding the cases submitted to the tribunal and optional jurisdiction of it, states tend to settle their disputes through arb arbitration and the establishment of a specific arbitration chamber. After the submission of the case and exchange of bills, the seabed chamber investigates the dispute based on the contract signed between the Authority and contractor. If the contract violation and fault of compensation are proved, the vote will be issued. The most substantial compensation methods include preventing damage to the marine environment in the first step and then reinstatement and compensation completely based on the imposed damage.

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