

A CONCISE X-RAY OF SOME INTERNATIONAL ENVIRONMENTAL LEGAL INSTRUMENTS

By

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Abstract

Since the 1972 United Nations conference at Stockholm, in Sweden, the United Nations has been in a steady and continuous expression and demonstration of environmental concerns, steadfast and firm pursuits of the global environmental objectives through its various organs, agencies, multilateral environmental agreements (MEA), summitries and several negotiations, adoptions and ratifications of resolutions by conference of parties (COPs) and respective member states, aimed at consolidating sustainable development, towards earth survival, through the ecosystem preservation, biodiversity conservation and climate change control programmes. Pursuant to this huge and crucial global environmental agenda, the United Nations and the international community has put in place several legal instruments which serves as the fulcrum for sustainable development and effective environmental governance. The intendment of this paper is to concisely x-ray some of these international environmental legal instruments.

Keywords: *International, Environmental and Legal Instruments*

1.0 Introduction

The international environmental law- making process begins when two or more subjects of international law identify an environmental issue which in their view requires concerted international action. The states then agree on a forum or institution for their negotiations. For a global issue, the UN may be the institutional architecture. For regional concerns, a forum of a regional organization might be more appropriate. If the negotiations are successful, an agreed text is adopted by the states and signed by their representatives. States then undertake their own national procedures to ratify the treaty. After a certain period specified in the treaty, it enters into force and becomes binding upon states parties. States may decide that an issue is better addressed by a soft law instrument. In such case, they may use one of the existing structures to decide on a declaration or develop guidelines, codes of conduct or global plans or actions. Sometimes, these soft law instruments may be further developed over time and eventually form the basis of a treaty.

States are responsible for implementing international law at the national level. National governments must give effect to their treaty obligations through their national law and policy.

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For example, to fulfill their obligations resulting from a species-protecting convention, such as convention on international trade on endangered species (CITES), states may need to enact a law to authorize a national body to issue permits or to prohibit the import into the country of protected specimens without a license. Each multilateral environmental agreement (MEA) establishes an institutional structure to allow parties to regularly meet to discuss the implementation of the MEA and assist with developing it further, for example by adopting non-legally binding decisions to provide guidance to parties in implementation of their obligations. To enable and encourage states to implement the commitments of MEAs, international funding agencies provide financial assistance, especially to developing countries.

The guidelines on compliance with and enforcement of multilateral environmental agreements (UN environment programme) provide a useful distinction between the terms compliance and enforcement at international and national level. If a state persistently fails to implement its international obligations, there are only limited mechanisms for enforcing compliance at the international level. Cases of noncompliance are frequently settled by negotiation and compromise among the parties to a MEA. The most important fora for such negotiations are the regular meetings of the parties, often referred to as the conference of the parties (COP). A COP offers an opportunity to discuss and resolve differences, provide guidance on interpretation as well as to adopt specific mechanisms to deal with compliance issues, such as compliance committees. These approaches are a good mechanism to put pressure on state vis-à-vis their obligations are reputation within the international community. Some of the international environmental instruments are hereunder x-rayed:

2.0 United Nations Conference on the Human Environment (The Stockholm Declaration) 1972²

The UN Conference on the Human Environment (also known as the Stockholm Declaration)³ was initiated by the government of Sweden. The initiative of the Sweden government (Stockholm Conference 1972) also produced proposals for the establishment of a United Nations Environmental Programme (UNEP).

The International Conference on Human Environment⁴ in the year, 1972, at Stockholm, was the turning point in the international environment law. It was for the first time that world nations gathered at a place under the UN leadership to evolve a common strategy to combat environmental degradation, pollution and ecological imbalances. Twenty-six principles were declared in this conference which is known as the Magna Carta on Human Environment.⁵ Principle 21 constitutes the objectives of international environmental law which states that:

²United Nations Conference on Human Environment, held in Stockholm-Sweden in June 1972, the United Nations General Assembly, in Resolution 2997 (xxvii) of 15 December 1972.

³ Stockholm Declaration on the Human Environment, in report of the United Nations Conference on the Human Environment, UN Doc. A/CONF. 48/14, at 2 and Corr. 1(1972).

⁴ UN International Conference on Human Environment, 1972 (5-16 June 1972) available at <http://www.unep.org/environmentalgovernance/portals/8/document/training_manual.pdf> Accessed 24th November, 2021

⁵ United Nations Conference on the Human Environment, held in Stockholm in June 1972, the General Assembly, in Resolution 2997 (XXVII) of 15 December 1972

States have, in accordance with the Charter of the United Nations and the principle of international law, the sovereign right to exploit their own resources pursuant to their own environmental priorities, and the 'responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

The decades after Stockholm Conference saw the emergence of several treaties, convention and protocols dealing with the protection of the environment. The Stockholm Declaration also became a basis for subsequent development of environmental law and a persuasive springboard for environmental governance in the form of numerous bilateral and multilateral conventions and other legally binding instruments. It would be necessary to point out that this conference opted for a non-binding declaration of the principles and as observed it contains the principles "embodying the aspirations of the world for a sustainable environment". It did not impose specific obligations on the World States to fulfil the duties and obligations agreed in the Stockholm Declaration, In spite of the "non-binding character" of the principles; it is regarded as the foundation of modern international environmental law.

Some of the principles of this declaration are as follows:

- a. **Principle 1:** Man has the fundamental right to freedom, equality and adequate conditions of life in an environment of quality that permits a life of dignity and well-being and he bears a solemn responsibility to protect and improve the environment for present and future generations.
- b. **Principle 2:** The natural resources of the earth including air, water, land, flora and fauna must be safeguarded for the benefit of present and future generation through careful planning and management.
- c. **Principle 22:** States shall co-operate to develop the international law relating to liability and compensation for the victims of pollution and other environmental damage.

Thus, it can incontrovertibly be concluded that the Stockholm Declaration of 1972 became the springboard and the main force of the modern international environmental law. It has principles dealing with renewable and non-renewable resources, toxic substances, sea pollution and the marine ecosystem, use of science and technology, environmental education to develop national institution to enhance quality of environmental co-operation for trans-boundary pollution, and nuclear weapons amongst several others.

3.0 The Paris Agreement, 2015

The international climate change regime consists of the United Nations framework convention on climate change of 1992,⁶ its Kyoto protocol of 1997 and the Paris Agreement of 2015.⁷ The

⁶ Adopted in New York on 9 may 1992, entry into force on 21 March 1994

⁷ Adopted in Paris on 12 December 2015, entry into force on 4 November 2016

ultimate objective of the convention is the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.⁸ The convention is a framework instrument establishing general principles, basic obligations and institutional arrangements. It does not contain binding, individual quantified emission reduction targets and time tables, but developed country parties and other parties listed in annex 1 of the convention are enjoined to adopt national policies and take corresponding measures.⁹

Under the Paris Agreement, each country is to determine, plan and regularly report on the contribution that it undertakes to mitigate global warming. No mechanism forces a country to set a specific target pursuant to a specific date, but each target are to exceed previously set targets. In June 2017, U.S President Donald Trump announced his intention to withdraw his country from the agreement. Under the agreement, the earliest effective date of withdrawal for the U.S. is November 2020, shortly before the end of President Trump's term. In practice, changes in United States policy that are contrary to the Paris Agreement have already been put in place.

In July 2017 French Environment Minister Nicolas Hulot announced a plan to ban all petrol and diesel vehicles in France by 2040 as part of the Paris Agreement. Hulot also stated that France would no longer use coal to produce electricity after 2022 and that up to 64 billion will be invested in enhancing energy efficiency. To reach the agreement's emission targets, Norway will ban the sale of petrol- and diesel-powered cars by 2025; the Netherlands will do the same by 2030. Electric trains running on the Dutch national rail network are already entirely powered by wind energy. The House of Representatives of the Netherlands passed a bill in June 2018 mandating that the Netherlands will cut by 2050 its 1990 greenhouse-gas emission level by 95% exceeding the Paris Agreement goals.

The Paris agreement is basically aimed at climate change control through global cooperation and partnership towards the rapid and gradual reduction of GHG by developed and developing states, respectively and collectively¹⁰.

4.0 The Kyoto Protocol, 1992

The Kyoto Protocol¹¹ is an international treaty which extends the 1992 United Nations Framework Convention on Climate Change (UNFCCC) that commits state parties to reduce greenhouse gas emissions, based on the scientific consensus that (part one) global warming is occurring and (part two) is extremely likely that human-made CO₂ emissions has predominantly caused it. There are currently 192 parties (Canada withdrew from the protocol,

⁸ UNFCCC, art. 2

⁹ D Bodansky, 'The United Nations Framework Convention on Climate Change: A Commentary' (1993)(18)(2) *Yale Journal of International Law*

¹⁰ Articles 2, 4, 5, 7 and 8 of the Paris Agreement.

¹¹ Adopted in Kyoto, Japan, on 11 December 1997, entry into force on February 16 2005.

effective December 2012) to the Protocol. The protocol was adopted in Kyoto, Japan, in December, 1997, within the United Nations framework convention on climate change. According to the protocol, industrialized countries (32 countries listed in the Annex 1 of the convention) agreed to reduce their anthropogenic emission of the greenhouse gases by 5% in average, in relation to the levels emitted in 1990 in the period between 2008 and 2012.

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The Kyoto Protocol implemented the objective of the UNFCCC to reduce the onset of global warming by reducing greenhouse gas concentrations in the atmosphere to “a level that would prevent dangerous anthropogenic interference with the climate system” (Article 2). The Kyoto Protocol applies to the six greenhouse gases listed in Annex A: Carbon dioxide (CO₂), Methane (CH₄) Nitrous oxide (N₂O), hydro-fluorocarbons (HFCs) Per-fluorocarbons (PFCs) and Sulphur hexafluoride (SF₆).

The Protocol is based on the principle of common good but differentiated responsibilities: it acknowledges that individual countries have different capabilities in combating climate change, owing to economic development, and ergo puts the obligation to reduce current emissions on developed countries on the basis that they are historically responsible for the current levels of greenhouse gases in the atmosphere.

The Protocol's first commitment period started in 2008 and ended in 2012. A second commitment period was agreed on in 2012, known as the Doha Amendment to the Kyoto Protocol, in which 37 countries have binding targets: Australia, the European Union (and its 28 member states), Belarus, Iceland, Kazakhstan, Liechtenstein, Norway, Switzerland and Ukraine. Belarus, Kazakhstan and Ukraine have stated that they may withdraw from the Kyoto Protocol or not put into legal force the Amendment with second round targets. Japan, New Zealand and Russia have participated in Kyoto's first-round but have not taken on new targets in the second commitment period. Other developed countries without second-round targets are Canada (which withdrew from the Kyoto Protocol in 2012) and the United States (which has not ratified). As of July 2016, 66 states have accepted the Doha Amendment, while entry into force requires the acceptances of 144 states of the 37 countries with binding commitments, 7 have ratified.

Negotiations were held in the framework of the yearly UNFCCC Climate Change Conferences on measures to be taken after the second commitment period ends in 2020. This

resulted in the 2015 adoption of the Paris Agreement, which is a separate instrument under the UNFCCC rather than an amendment of the Kyoto Protocol.

5.0 United Nations Convention on the Law of the Sea (UNCLOS) 1982

UNCLOS¹² is considered to be a comprehensive and widely recognized legal document on the Law of the Sea. In addition to the coastal State sovereign rights over natural resources in its EEZ¹³ or continental shelf, including beyond 200 nm,¹⁴ the UNCLOS establishes a general obligation for state parties to protect the marine environment.¹⁵ More specifically, Part XII of the UNCLOS provides an extensive and the most important legal instrument, as it lays down the fundamental obligation of all States to protect and preserve the marine environment.

Perhaps the most important provisions in Part XII can be found in Articles 194(3), 208 and 204 of the UNCLOS. With regard to offshore oil and gas exploration, under UNCLOS States are obliged to undertake all necessary measures to prevent reduce and control pollution of the marine environment in the areas under their jurisdiction.¹⁶ Accordingly, States are further obliged to adopt laws and regulations to ensure that exploration and exploitation activities within the area of their maritime jurisdiction do not cause damage by pollution.¹⁷

Under UNCLOS, every State is obliged to undertake measures to protect and preserve the marine environment, but within the areas of national jurisdiction, it is the Coastal States' responsibility to protect the marine environment from pollution resulting from any exploration and exploitation activities. Consequently, only the Coastal State has the exclusive right to authorize exploration and exploitation activities and subsequently regulate these activities in the areas under their maritime jurisdiction. Therefore, UNCLOS establishes a balance between the rights of the State to exploit its natural resources and obligations to protect the marine environment.

Given the fact that the Coastal States can adopt their own environmental policies related to offshore activities, it is also their responsibility to ensure that exploration activities within their maritime jurisdiction or control do not cause any environmental damage or pollution to other States or areas beyond their national jurisdiction.¹⁸ Accordingly, UNCLOS provides a set of obligations on States including responsibility to carry out environmental monitoring and surveillance on the risks or effects of pollution of the marine environment, while publishing the obtained information.¹⁹ Also, to carry out an assessment of potential effects of offshore

¹² United Nations Convention on the Law of the Sea, 10 December 1982 and entered into force on 16 November 1994, 1833 U.N.T.S. 3 [UNCLOS].

¹³ UNCLOS 1982, art 56(1)(a).

¹⁴ UNCLOS 1982, art 77(1).

¹⁵ *Ibid*, arts 56, 77, and 193.

¹⁶ UNCLOS 1982, arts 192 and 194(1).

¹⁷ *Ibid*, art 208.

¹⁸ *Ibid*, art 194(2) and (4).

¹⁹ *Ibid*, art 204 and 205.

activities to the marine environment and communicate such reports when there is a reasonable ground that planned actions under their jurisdiction or control may cause substantial pollution and harmful changes to the marine environment.²⁰

6.0 Rio Declaration on Environment and Development, 1992²¹

The Rio Conference was held on the 3rd of June 1992 with about 7,000 delegates representing 178 countries attended the Conference. At that time, concern for the environment had become a global issue. The Rio Conference reached an agreement on a previously drafted Declaration on the Environment and Development, together with two proposed Conventions on Biodiversity and Climate Change, as well as Agenda 21 (an 800-page blueprint for sustainable development in the 21st century)²².

Principle 21 of the Stockholm Declaration was rewritten as Principle 2 of the Rio Declaration, except that “environmental priorities” was changed to “environmental and development policies”. Principle 15 emphasizes the need for the adoption of the Precautionary principle which states that;

In order to protect the environment, the precautionary approach shall be widely applied by states according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

The concern to preserve the ecosystem was later fostered by the developed Nations when they realized the side effect of dangerous gases release to the atmosphere at the 1992 Rio Earth summit. The government of almost all the world's nations gathered to decide ways to encourage sustainable development defined by the world on environment and development as: Development which meets the needs of the presents without compromising the ability of future generation to meet their own needs. Issues including climate change, biodiversity trade, health and agriculture were discussed. However, there was also recognition of the need to involve individuals in this action; local agenda 21 (as an agenda for life in the 21st centuries) was born. In total 175 Nations, including the UK, signed local agenda 21 treaty at Rio.

Principle 17 of the Rio Declaration indicates “Environmental impact assessment, as a national instrument, to be undertaken for proposed activities that are likely to have significant adverse effect on the environment and are subject to a decision of a competent national authority.” In same vein, Magraw and Ruis opined thus:

²⁰UNCLOS 1982, Article 206.

²¹Adopted in Rio de Janeiro, Brazil, on 5 June 1992, entry into force on 29 December, 1993.

²²Rio Declaration on Environment and Development, in report of the United Nations Conference on Environment and Development, UN Doc. A/CONF.151/26 (Vol.1), 12 August 1992, Annex 1.

Experience and scientific expertise demonstrate that prevention of environmental harm should be the “Golden Rule” for the environment, for both ecological and economic reasons. It is frequently impossible to remedy environmental injury; the extinction of a species of fauna or flora, erosion, loss of human life and the dumping of persistent pollutants into the sea for example, create irreversible situations. Even when harm is remediable, the costs of rehabilitation are often prohibitive. An obligation of prevention also emerges for the international responsibility not to cause significant damage to avoid environment extra-territorially, but the preventive approach seeks to avoid harm irrespective of whether or not there is trans-boundary impact or international responsibility.²³

Local people are vitally important to the success of local agenda 21. Quality of life depends on our sense of community and belonging as well as our environment and materials, with application of moral respect for the development and making others know what we think about our environment that true progress towards sustainable living can be achieved.

7.0 International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990

At the international level, the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) and the International Maritime Organization (IMO) developed international legal framework that regulates the issues of response, preparedness and cooperation to oil pollution incidents. The OPRC 1990 requires State Parties to establish effective national and regional pollution incident response system amongst other relevant mechanisms including establishing a competent national authority and a national contingency plan.²⁴ In addition, States shall require operators of offshore platforms to have an oil pollution emergency plan in place²⁵ and report the discharges or presence of oil at sea.²⁶ Accordingly, upon receiving such reports, States shall communicate this information with parties whose interest may or likely be affected by the incident.²⁷ The OPRC 1990 extends its application to any fixed or floating offshore structure engaged in gas or oil exploration, exploitation or production activities.²⁸

In accordance with the OPRC 1990, States are encouraged to cooperate in exchanging information, research and development and practical experiences in oil spill response as well as establish national and regional levels cooperation in preparedness and response.²⁹ Despite

²³D Magraw and R Barbara, “Principles and Concepts of International Environmental Law”,

²⁴OPRC 1990, Article 6.

²⁵*Ibid*, art 3

²⁶*Ibid*, art 4 (c)

²⁷*Ibid*, art 5

²⁸*Ibid*, art 2

²⁹*Ibid*, arts 3(2), 4(1) lit. (a) (ii) and lit. (b) (ii), 5(1) lit. (c), 6, 7(3), 8, 9 and 10.

the lack of a comprehensive international legal regime that regulates pollution of the marine environment from seabed activities in particular offshore oil and gas exploration, this convention is perhaps the most vital legislation in this regard.

8.0 Convention on the Control of Trans-boundary Movement of Hazardous Wastes and their Disposal (Basel Convention) 1992³⁰

The Basel Convention which was signed on 22nd March 1987 and entered into force on 5th May 1992³¹. There are currently 186 parties to the convention with only the United States as the only developed nation which did not ratify it. The Convention expressly focused on international trade (export and import) and its attendant transportation of waste products, particularly hazardous waste. The major obligations under the Basel Convention are as follows:

- (a) Parties are generally prohibited from exporting covered wastes to non-parties, or importing covered wastes from non-parties;³²
- (b) Parties are committed to prevent the export or import of hazardous wastes if they have reason to believe that the wastes in question “will not be managed in an environmentally sound manner”;³³
- (c) Parties may not initiate the export of hazardous or other wastes without detailed written confirmation that the importing country and any transit states have consented to the transaction, and have provided for environmentally sound management of the wastes in question;³⁴
- (d) If a trans-boundary movement cannot be completed in accordance with the terms of a contract concluded in accordance with the Convention, the state of export is required to take back the exports if alternative arrangements for their disposal cannot be made within 50 days or other agreed time.³⁵

9.0 Vienna Convention for the Protection of the Ozone Layer 1985³⁶

The Vienna Convention for the Protection of the Ozone Layer is a multilateral environmental agreement signed on 22nd March 1985 in Vienna, Austria. The objective of the Convention is to protect human health and the environment against adverse effects resulting from modifications of the ozone layer.³⁷ Paragraph 3 of the Preamble of the Vienna Ozone Convention,³⁸ provides thus:

³⁰ Adopted in Basel, Switzerland on 22 March 1989, entry into force May 5, 1992.

³¹ UNED Doc. IG.80/3 (1989), 28 ILM 657 (1989)

³² Basel Convention 1992 Art 4(5)

³³ Basel Convention, Art 4(2)(e), 4(2)(g) and 8

³⁴ *Ibid*, Art 6 and Annex VA

³⁵ Basel Convention 1992 Art 8

³⁶ Adopted in Vienna on 22 March 1985, entry into force on September 22, 1988.

³⁷ ECOLEX, Vienna Convention for the protection of the Ozone Layer, available at <<https://www.org/details/treaty/Vienna-convention-for-the-protection-of-the-ozone-layer-tre-000829>> accessed 24th November, 2021

³⁸ The Vienna Convention for the Protection of the Ozone Layer,

Recalling the pertinent provisions of the Declaration of the United Nations Conference on the Human Environment, and in particular principle 21, which provides that ‘States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.’

Under the Convention, states are obligated to cooperate in research concerning processes that modify the Ozone layer on human health and environmental effects of such modifications, on the state of the ozone layer.³⁹ States also undertake to cooperate in controlling activities that cause adverse effects through modification of the ozone layer, and particularly, in the development of protocols of such purposes.⁴⁰

- (e) The Convention encourages States to exchange scientific, technical, socio-economic, commercial and legal information relevant to the Convention, and cooperate in the development and transfer of technology and knowledge.⁴¹

10.0 Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matters (London Convention) 1972

Dumping at sea is considered as one of the major sources of marine environmental pollution. It still remains a major threat both to the marine environment and human health specifically in some areas around the world. The negative impact of the offshore oil and gas exploration to the marine environment is not limited to exploration and production of petroleum resources, but also extends to disused or decommissioned facilities offshore. Abandoned or disused offshore installations and structures represent a serious threat to the marine environment, safety, and navigation. Furthermore, since the offshore oil and gas production has become more routine, it is estimated that there are currently around 900 large-scale oil and gas platforms around the world. Initially, under UNCLOS, Coastal States are allowed to construct, operate and use such installations and structures in the areas where they enjoy jurisdiction.⁴² However, States are also obliged to undertake measures of pollution prevention, as well as safety of construction and use of offshore installations and structures.⁴³

It is stated that the obligation of the removal of abandoned or disused offshore installation or structures is not well defined under UNCLOS, but it is rather left for the Coastal States to decide.⁴⁴ It is also imperative to highlight that Article 5(5) of the 1958 Convention on the

<<http://ozone.unep.org/pdfs/viennaconvention2002.pdf>> Accessed, 24th November, 2021.

³⁹ Art 2 Vienna Convention for the Protection of the Ozone Layer 1985

⁴⁰ Art 2 and 4 Vienna Convention for the Protection of the Ozone Layer 1985

⁴¹ *Ibid*, Art 4

⁴² UNCLOS 1982, Article 60, 80, 56(1) lit. (b).

⁴³ *Ibid*, art 60.

⁴⁴ *Ibid*, art 60(3), 147(2) lit. (a) and 249(1)(g).

Continental Shelf⁴⁵ which states “... Any installations which are abandoned or disused must be entirely removed.” This Article sets an explicit obligation on the issue, but it has been superseded by the UNCLOS. Therefore, the major international law concerning the disposal of offshore installations is the 1972 London Convention.⁴⁶

11.0 The UN Convention on Biological Diversity (UNCBD) 1992

The notion of an international convention on bio-diversity was conceived at a United Nations Environment Programme (UNEP) ad hoc working group of experts on biological diversity in November 1988. The subsequent year, the Ad Hoc Working Group of Technical and Legal Experts was established for the drafting of a legal text which addressed the conservation and sustainable usefulness of biological diversity, as well as benefits sharing accruable from their utilization with sovereign states and local communities. In 1991, an intergovernmental negotiating committee was put in place, tasked with finalizing the convention’s text.

A conference for the adoption of the agreed text of the convention on biological diversity⁴⁷ was held in Nairobi, Kenya, in 1992, and its conclusions were distilled in the Nairobi Final Act. The convention’s text was opened for signature on 5 June 1992 at the United Nations conference on environment and development (the Rio “Earth Summit”). By its closing date, 4 June 1993, the convention had received 168 signatures. It entered into force on 29 December 1993.

The convention acknowledged for the first time in international law voyage that the conservation of bio-diversity is “a common concern of humankind” and is an integral part of the development process. The agreement covers all ecosystems, species, and genetic resources. It links traditional conservation efforts to the economic goal of using biological resources to achieve environmental survival and sustainability. It sets principles for the fair and equitable sharing of the benefits arising from the use of genetic resources, notably those designated for commercial use. It also covers the rapidly expanding field of biotechnology through its Cartagena Protocol on Biosafety, addressing technology development and transfer, benefit-sharing and biosafety issues. Importantly, the convention is legally binding; countries that join it (‘Parties’) are under obligation to implement its provisions. The convention reminds decision-makers that natural resources are not infinite and sets out a philosophy of environmental ethics. While past conservation efforts were aimed at protecting particular species and habitats, the convention recognizes that ecosystems, species and genes must be

⁴⁵ Convention on the Continental Shelf 1958, adopted 29 April 1958 and entered into force 10 June 1964, 499 U.N.T. S 311 [1958 Convention on the Continental Shelf]

⁴⁶ Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter, 29 December 1972 and entered into force on 30 August 1975, 1046 U.N.T.S. 120 [1972 London Convention]

⁴⁷ Secretariat of the Convention on Biological Diversity, Global Biodiversity Outlook 3 (2010); Millennium Ecosystem Assessment, Ecosystems and Human Well-Being: Synthesis (Island Press, 2005); Secretariat of the Convention on Biological Diversity, Global Biodiversity Outlook 4 (2014); 1992 UN Conference on Environment and Development Adopted the Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests (A/CONF.151/26/Rev.1(Vol.1)).

used for human benefit. However, this should be done in a way and at a rate that does not lead to the long-term decline of biological diversity.

The convention also offers decision-makers guidance based on the precautionary principle which demands that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid, evade or ameliorate such a threat. The convention acknowledges that substantial investments are required to conserve biological diversity. It argues, however, that conservation will bring us significant and efficient environmental, economic and social benefits in return.⁴⁸ The Convention⁴⁹ provides a broad definition of Biological diversity' as the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic organisms and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.'

The purpose of securing conservation and sustainable use of biodiversity must therefore be the conservation of the natural genetic resources, for current and future use. The overall objective, therefore, should be to define and identify, within the current legislative framework, coherent measures that lead to the preservation or rehabilitation of biodiversity where it is perceived as being under threat due to fishing⁵⁰ or aquaculture activities. In the CBD Communication, three areas were identified as requiring action as regards fisheries:

- i. To promote the conservation and sustainable use of fish stocks and feeding grounds through control of exploitation rates and through the establishment of technical conservation measures to support the conservation and sustainable use of fish stocks. Measures available include inter-alia fishing exclusion areas (mainly for the protection of dense aggregations of juvenile fish), and mesh sizes. Each measure should be applied according to its merits and expected conservation effect.
- ii. To reduce the impact of fishing activities and other human activities on non-target species and on marine and coastal ecosystems to achieve sustainable exploitation of marine and coastal biodiversity.
- iii. To avoid aquaculture practices that may affect habitat conservation through occupation of sensitive areas, that is mangroves in third countries and inter-tidal areas within the Community, pollution by inputs and outputs from fish farms and genetic contamination by possible releases or escapes of farmed species or varieties.

⁴⁸ Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 3* (2010); Millennium Ecosystem Assessment, *Ecosystem and Human Well-Being: Synthesis* (Island Press, 2005).

⁴⁹ Article 2, The UN Convention on Biological Diversity adopted 5 June 1992, It came into force 29 December 1993. <http://www.mpil.de/files/pdf2/mpunyb_lang_3.pdf3> accessed 20th October, 2021

⁵⁰ In this context the words fisheries, fishing and fish stocks make reference, where appropriate, not only to fish species but also to crustaceans, molluscs and other aquatic organisms.

In ‘The Future We Want’ countries reaffirmed the intrinsic value of biodiversity, as well as the ecological, genetic, social, economic, scientific, educational, cultural recreational and aesthetic value; critical role in maintaining ecosystems services that are foundations for sustainable development and human wellbeing. The Strategic Plan for Biodiversity 2011- 2020 underscores how biodiversity underpins human well-being, including sustainable economic development and poverty eradication, achieved through safeguarding and restoring ecosystems and the sustainable use of biological resources, addressing the underlying drivers of biodiversity loss, and mainstreaming biodiversity into policies, planning, and sectors, and enhanced human capacities. Addressing sustainable development through the biodiversity lens ensures that its essence, an intergenerational and forward reaching approach where protecting the health and resilience of ecosystems offers long-term solutions for improving human wellbeing at its tenth meeting in 2010, the Conference of the Parties (COP) to the Convention adopted the Strategic Plan for Biodiversity 2011-2020 along with time bound biodiversity targets, collectively known as the ‘Aichi Biodiversity Targets’. Targets 6 and its parallel, Target 7 for agriculture, forestry and aquaculture are of particular relevance to mainstreaming in commercial sectors which make use of, or otherwise impact biodiversity. These were commitments, adopted by consensus of Parties to the CBD, by contrast Target 6 is more exhaustive:

By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that 1. Overfishing is avoided; 2. Recovery plans and measures are in place for all depleted species; 3. Fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems; and 4. The impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

Both targets include a reference to sustainability of harvests in the introduction, however, for target 6 there is also a specific focus on the “legality of harvests that addresses the desire to eliminate illegal fisheries. A reference is also included to the “ecosystem-based approach”, a well-established concept in global policy on conservation and sustainable use.

Fishing also has physical effect on the habitat. Beam trawling and otter trawling disturbs the seabed, decreasing habitat diversity and causing nutrients sealed in the sediments to be cycled into the water column. This can lead to higher local production and increasing availability of energy to lower levels in the food web. Science suggests that such variations in resource availability may affect the energy transfer upwards and may alter the relative abundance of predator species. The consequences of such changes are uncertain and more research is needed but a risk of unwanted changes in relative abundance of fish species may exist, which might not be beneficial for the fishing sector. Although the effects of short to medium-term impacts can be identified and management actions to remedy such changes can be designed, changes in biodiversity occurring over long periods, such as changes in genetic diversity, may be more difficult to identify and mitigate. There is a growing awareness that decades of excessively

high harvest rates may have influenced the genetic diversity of at least some commercially harvested stocks. If such changes have occurred, they might be reversible only very slowly or may even be irreversible.

There is a potential risk in such cases that stocks will not respond as expected to management actions or will have an impaired capacity to adapt to natural changes in the environment. The aquaculture sector is also dependent on conservation of biodiversity as a basis for further development and use of new species.

12.0 International Convention for the Prevention of Pollution from Ships (MARPOL) 1973/1978

MARPOL 73/78⁵¹ primarily deals with vessel-source pollution, but it also covers floating offshore platforms within its definition of a ship.⁵² Accordingly, this definition encompasses floating production storage and offloading unit and floating and storage unit. In this respect, when above-mentioned structures are engaged in offshore exploration activities, it is required to comply with requirements applicable to ships of 400 gross tonnage and above other than oil tankers.⁵³ In addition, other requirements such as oil discharge monitoring and controlling systems, maintaining a record of all operations, prohibition of discharge of oil or oil in mixtures into the sea except when content is less than fifteen parts per million, as well as installing with tanks for oil residues and oil filtering equipment.⁵⁴

Although MARPOL 73/78 is mainly focused on pollution from ships and does not specifically address operational discharges from offshore oil and gas production. There are, however, some provisions applicable and with their proper enforcement can contribute towards the protection of the marine environment from pollution resulting from offshore platforms. These provisions include those regulating the monitoring and reporting of incidents and conducting casualty investigations, procedures for the settlement of disputes, communication of information and promotion of technical cooperation. Apart from that, it is worth to highlight that the only operational discharge from offshore oil and gas activities that fall within the scope of MARPOL 73/78 are the discharges of drill cuttings and other solid waste.

13.0 Brundtland Commission Report, 1987

Brundtland Report, otherwise known as *Our Common Future*,⁵⁵ publication released in 1987 by the World Commission on Environment and Development (WCED) that introduced the concept of sustainable development and outlined how it could be achieved. Sponsored by the United Nations (UN) and chaired by Norwegian Prime Minister Gro Harlem Brundtland, the

⁵¹ International Convention for the Preservation of Pollution from Ships, 2 November 1973 and entered into force on 2 October 1983, as amended by the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, 1340 U.N.T.S. 61 [MARPOL 73/78].

⁵² MARPOL 73/78, art 2.

⁵³ Annex I, reg 39.

⁵⁴ Annex I, reg 39; IMO Guidelines: MEPC3 11(73); MEPC. 139(53) and MEPC/Circ.406.

⁵⁵ World Commission on Environment and Development (WCED), *Our Common Future* (OCF), Oxford: Oxford University Press, 1987, reprinted 2009, 40; <<https://www.WCED, OCF, 109-110> accessed 28 June 2019.

WCED explored the causes of environmental degradation, attempted to understand the interconnections between social equity, economic growth, and environmental problems, and developed policy solutions that integrated all three areas.

The Brundtland Report included chapters covering, among other topics within sustainable development, the role of the international economy, population and human resources, food security, species and ecosystems, energy, industry, and proposed legal principles for environmental protection, of all the topics covered, however, the Brundtland Report is most often cited for its definition of sustainable development as “(evelopment that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Implicit in this definition are the concept of needs, which emphasized the goal of providing for the essential requirements of the world’s poor, and the idea that technology and social organization imposes limits on the ability of the environment to provide for the world’s present and future needs. Concept of sustainable development and outlined how it could be achieved. Sponsored by the United Nations (UN) and chaired by Norwegian Prime Minister Gro Harlem Brundtland. The WCED explored the causes of environmental degradation, attempted to understand the interconnections between social equity, economic growth, and environmental problems, and developed policy solutions that integrated all three areas.⁵⁶

The Brundtland Report also highlighted global population growth that could not continue indefinitely. It predicted that in the 21st century the world population would stabilize somewhere between 7.7 billion and 14.2 billion people and that more people would live in cities than in rural areas. Although some of the highest population-growth rates were among developing countries, the report pointed out that the environmental impact of an additional individual born in an industrialized country was much greater than of one born in a developing country. The report noted also that declining birth rates of the industrialized world would translate into a greater burden on the younger generations to support an aging population. For the developing world improved health and education, especially among women, were presented as solutions to the resource and demographic challenges posed by high birth rates.

In addition, the Brundtland Report called on the UN to establish the UN Programme of Action on Sustainable Development to carry out the directives outlined in the report. The report laid the foundations for the Rio Summit, held in Rio de Janeiro in 1992, which then ultimately led to the creation of the UN Commission on Sustainable Development that same year.

14.0 The Montreal Protocol, 1987

The Montreal Protocol,⁵⁷ finalized in 1987, is a global agreement to protect the stratospheric ozone layer by phasing out the production and consumption of ozone-depleting substances

⁵⁶ G H Brundtland, *Madam Prime Minister*, New York; Farrar, Strauss and Girous, 2002, 192- 3; UN Press Release SG /A/316, 23 Dec 1983, S-1051- 0014- 05, United Nations Archive (UNA).

⁵⁷ The Montreal Protocol to the Vienna Convention of 1987, Adopted in Montreal, Canada, on 16 September 1987, entry into force on January 1, 1989.

(ODS). The stratospheric ozone layer filters out harmful ultraviolet radiation, which is associated with an enhanced prevalence of skin cancer and cataracts, reduction of agricultural productivity, and disruption of marine ecosystems. The United States ratified the Montreal Protocol in 1988 and has joined four subsequent amendments. The United States has been a leader within the Protocol throughout its existence, and has taken strong domestic action to phase out the production and consumption of ODS such as chlorofluorocarbons (CFCs) and halons.

The Montreal Protocol has proven to be innovative and successful, and is the first treaty in history to achieve universal consensus and global ratification by all countries in the world, thereby making it a model for global cooperation. Leveraging worldwide participation, the Montreal Protocol has sent clear signals to the global market and placed the ozone layer, which was in peril, on a path to repair. Full implementation of the Montreal Protocol is expected to result in avoidance of more than 280 million cases of skin cancer, approximately 1.6 million skin cancer deaths, and more than 45 million cases of cataracts in the United States alone by the end of the century, with even greater benefits worldwide. The Montreal Protocol's Scientific Assessment Panel estimates that with implementation of the Montreal Protocol we can expect near complete recovery of the ozone layer by the middle of the 21st century. It is important to note that the U.S domestic implementation of the Montreal Protocol is and remains the global lead pathfinder on domestic implementation of the Montreal Protocol.

15.0 The Minamata Convention on Mercury, 2013⁵⁸

Mercury and mercury compounds are recognized as chemicals of global concern as a result of their long-range transport in the atmosphere, persistence in the environment, ability to bioaccumulate in ecosystems and significant negative effect on human health and the environment⁵⁹. The 2013 Minamata convention on mercury obligates parties to reduce or control sources of mercury pollution in order to protect human health and the environment.⁶⁰ Reporting is the principal basis for evaluating both individual government compliance and the overall effectiveness of the Minamata Convention. Robust monitoring as well as independent evaluation and verification of data will be crucial. Some experts have suggested that a consistent and comprehensive data collection system needs to be established to best evaluate the effectiveness of the convention. There is no specific guidance on content and format for data reported under article 21 of the convention at this time, nor does the data allow for assessing collective progress. Furthermore, monitoring of the global levels could be complemented by observations on the local and regional scale.⁶¹ There is a general lack of knowledge regarding local situations, especially in developing countries, due to the dearth of

⁵⁸ Adopted in Kumamoto, Japan, on 10 October 2013, Entry into Force 16 August 2017.

⁵⁹ UNEP, Global Mercury Assessment (2002); UNEP, the Global Atmospheric Mercury Assessment: Sources, Emissions and Transport (2008).

⁶⁰ H H Eriksen and F X Perez, "The Minamata Convention: a Comprehensive Response to a Global Problem", Review of European, Comparative and International Law, vol. 23, No. 2 (July 2014)

⁶¹ C D Evers and other, "Evaluating the Effectiveness of the Minamata Convention on Mercury: Principles and Recommendations for next steps", Science of the Total Environment, vol. 569-570, No. 1 (November 2016)

data and the high cost of sampling and analysis.⁶² It can also be argued that there is a need to collect and compile better export and import data in support of the convention's trade provisions.⁶³

Simultaneously addressing mercury supply and demand in a coordinated way presents an essential governance challenge.⁶⁴ It might be necessary to identify other sources of mercury emissions and releases, develop and update guidance on best available techniques and best environmental practices and/or introduce new provisions to account for cross-media mercury management. In addition, the conference of the Parties to the Minamata convention may wish to expand its focus to additional mercury-containing products and processes. The implementation of the Minamata convention also intersects with other multilateral environmental agreements, thereby raising the issue of coordination. In this regard, the environmentally safe handling and disposal of mercury wastes creates policy making and management linkages with parallel efforts under the Basel convention on the control of transboundary movements of Hazardous wastes and their disposal, since the Basel and Stockholm convention regional centers also assist countries with mercury abatement.⁶⁵ As mercury is a by-product of fossil fuel combustion, implementation of the Minamata convention will also significantly contribute to mitigating climate change.⁶⁶

⁶² H Selin and Others, "Linking Science and Policy to Support the Implementation of the Minamata Convention on Mercury", *Ambio*, (47) (2) (March 2018).

⁶³ UNEP, *Global Mercury: Supply, Trade and Demand* (2017).

⁶⁴ *Ibid*

⁶⁵ H Selin, *Global Governance of Hazardous Chemicals: Challenges of Multilevel Management* (MIT Press, 2010).

⁶⁶ Sands and Others, *Principles of International Environmental Law*, p. 276.