Obligations of Coastal States towards each other to prevent accidental pollution of the Continental Shelf

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Tajda Brlec

Innhold

1 Introduction

1.1 Topic

Pollution is a global issue for the modern world and should therefore be given a great amount of attention. Attention has been drawn to it on various occasions by international tribunals, lawyers and scholars and it is regulated by several international legal sources. Nonetheless, there seems to be a lacuna in the regulation of environmental pollution, since the problem of how to prevent acute pollution has not been considered as much as long-term pollution in general. There is no definition of acute pollution available in international law, but it could however be explained by the identification of certain characteristics. Acute pollution is understood as being pollution which appears suddenly and causes a tremendous amount of damage to the environment within a short time period, so is distinct from pollution which appears over a longer period of time, and which can be better controlled and regulated. Some countries include a definition of acute pollution in their national legislation. An example of this is the Norwegian Control Pollution Act, which may provide a better explanation of what is considered as acute pollution. Under the Norwegian Pollution Control Act, pollution is considered as being acute pollution and where it is "*a major pollution incident which occurs suddenly and which is not permitted under the provisions of or pursuant to the Pollution Control Act*."[1] For better distinction and given the lack of any definition within internatinal law, I will refer to such pollution as "accidental pollution".

Accidental pollution can appear either on land or in water (sea) and can be transferred by various means (such as through air, through water or even by becoming part of the soil on land). Since global (and also regional) pollution affects both the territories of States and their environments, it is an important issue of environmental law.

[1] Norwegian Pollution Control Act, Act of 13 March 1981 No.6 Concerning Protection Against Pollution and Concerning Waste

Since the focus of this paper is the obligations of Coastal States towards each other in cases of accidental pollution of the continental shelf, the paper will be divided into three parts, in order to answer this primary focus. The first part of the paper will analyse the obligations of States where pollution appears on land and in inland waters; the second part of the paper will place its focus on the general obligations of States in cases of marine pollution; and the third part will focus on what the obligations of the Coastal States are or should be in cases where their activities have caused accidental pollution to the continental shelf, which has then been transferred from the continental shelf of another State. In order to conclude, I will make use of the legal methodology and interpretations of the available legal sources,[2] in order to see which of the obligations applying under international environmental law can also be applied directly to the accidental pollution of the continental shelf.

In cases of transboundary environmental pollution, several principles have been applied and established as the leading principles in that area. One of the first cases where the issue of transboundary environmental pollution appeared was that of the Trail Smelter Arbitration.[3] In that case, the Tribunal identified three principles to which the polluting State was required to adhere. The reason for mentioning these principles is that those principles have become fixed by time and case law in the area of international environmental law, and as a result States are obliged to follow these principles in order not to be held liable in cases where pollution appears and is transferred over the borders of the polluting State territory.

The first principle from this case was that "*no State has the right to use or permit the use of its territory in such a manner that causes injury … on the territory, properties and persons on the territory of another State in the case where there is serious consequence and the injury is established by clear and convincing evidence*". That principle can be explained as meaning that although a State has sovereignty over its own territory, its

[2] Customary international law, case law, regional and global treaties and opinions of international legal scholars.

[3] Arbitral Trib., 3 U.N. Rep. Int'l Arb. Awards 1905 (1941)

sovereignty is limited by the rights of another State. Therefore, every State, when undertaking activities that could potentially cause harm beyond its borders, must do everything in its power to prevent such damage, and in cases where that is not possible, it may then need to refrain from such activities.

The second principle that the Tribunal established was that States should consider the rules of international law in cases of transboundary pollution. States therefore need to take into account not only their own national rules, but also international legislation, principles and case law. It is therefore very important to undertake a full consideration of the potential consequences and of the regulation under international law. That could mean that if they do not undertake such a full consideration, the State could be held liable for the damage it has caused by such activities. As discussed later in the paper, this principle to some extent reflects the State's obligation to carry out an Environmental Impact Assessment.

The third principle established by the Tribunal in this case was the nowadays well established "polluter pays" principle. Where a State is the polluter that has caused damage to the territory of another State, it must pay an amount in a form of a reimbursement to the polluted State.

The abovementioned principles are relatively well established under international environmental law, and in cases similar to the abovementioned, tribunals tend to rule in light of these principles. The question that arises in relation to these principles is whether such principles also apply directly in cases where accidental pollution occurs to the continental shelf. Since accidental pollution may be more dangerous and have greater consequences than long term pollution, but is still pollution, one could say that coastal States are obliged to adhere to the principles.

If one looks at the obligations of States in cases of marine pollution, one can see that there have been several obligations developed for such situations. They can once again be used in cases of pollution of the continental shelf, but the question that appears is whether the same rules can be applied in cases of accidental pollution. A particularly important case in this regard is that of the Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area

(on which the International Tribunal for the Law of the Sea (ITLOS) gave its Opinion in 2011).

One important aspect of this case is the liability of a State. In the case of Responsibilities and Obligations of Sponsoring States, the Tribunal stated in its Opinion that damage caused by the failure of a State Party or international organisation to carry out its responsibilities under Part XI of the United Nations Convention on the Law of the Sea (UNCLOS) would entail liability. On the other hand, a State should not be held liable for damages caused by a State-sponsored person if the State has taken all necessary and appropriate measures. The question arising from such a situation is whether it is enough for a State to have simply announced that it has taken such measures, or whether the measures that are taken must fulfil some specific material obligation which the State is supposed to follow. Beyond this, it is vital to know, if such material obligations do exist, how these are going to be taken into account. According to ITLOS' Opinion, it was determined that in order to establish liability, the rules of international law concerning liability should be considered and that they should supplement the rules set out in UNCLOS. Sponsoring States also have certain obligations which they need to fulfil in relation to the activities. If the obligations are not fulfilled, then the States' liability arises. Therefore, each Sponsoring State, before allowing certain activities, must make sure that it fulfils all of its applicable obligations in order not to be held liable for any damage that occurs. However, States cannot be liable if they have adhered to all their applicable obligations.

The issue of the paper regarding the abovementioned provision is then: what obligations must a State fulfil, where confronting an accidental pollution which is being transferred to the continental shelf of another State, in order not to be held liable? Should a State indirectly follow the general rules set out under international law relating to States' obligations for transboundary pollution or marine pollution, or should special rules apply in cases of acute pollution?

Some cases have appeared that were labelled as being cases of pollution, but their consequences and characteristics show that they are actually cases of accidental pollution with devastating consequences. The

majority of such cases arise from oil spill accidents. One of these cases is the Montara oil spill which took place in the territory of Australia, but was allegedly transferred into Indonesian waters. In that case, the accidental oil spill occurred in the Timor Sea and the oil slicks and sheen then extended to 5800 square miles, resulting in very extensive pollution. This had major consequences, especially to the marine environment, economic activities and development of Indonesia. The spill allegedly polluted Indonesian waters to the extent that most of the fish being fished by local fishermen died and the seaweed plantations were destroyed.[4]

The biggest issue for accidental pollution is how to determine whether an apparent accident can be considered as such. Until now, cases that arose after environmental accidents did not attract any separate attention from cases of long-term pollution and were not considered as distinct from the latter, although long term and accidental pollution have different characteristics. The question that appears here is, since these cases do in fact involve elements of accidental pollution and the rules and principles of these cases have been established, could those be used in cases that will, in the future, be considered as cases of acute pollution?

1.2 Research Question

The main research question of this paper is: What are the obligations of Coastal States in cases of acute pollution to the Continental shelf, and in which situations should States be held liable for damage arising from such accidents?

An important aspect of this question is how to distinguish the States' responsibilities from the States' liabilities, since the two terms present different issues for the States.

[4] Australian Lawyers Alliance, After the Spill: Investigating Australia's Montara oil disaster in Indonesia, p. 5

1.3 Structure

The paper is divided into three main parts. The first part of the paper researches the obligations and responsibilities of the State whose actions cause acute pollution to the territory of another State. In this, I first present the legislative sources dealing with obligations of States and additionally, I will make references to cases which relate to pollution and its effects on the environment. The relevant cases will be described briefly and analysed to the extent applicable to the topic of the research.

Since the research question focuses on the Continental Shelf of the Coastal States, the second part of the paper will analyse the general duties and responisibilities of States in relation of the continental shelf. In the second part, the relevant academic articles and papers will be analysed. One of the important aspects of the second part of the paper is also the sovereignty of the States for activities on the continental shelf.

The first two parts of the paper will answer general questions on the responsibilities of States in cases of acute pollution, set against their general responsibilities and obligations towards the continental shelf. The third part, which is also the main focus and concern of this paper, will then combine the first two parts and analyse the responsibilities of States in cases of acute pollution of the continental shelf. In the third part the analysis will therefore focus solely on identifying the obligations of States in cases of acute pollution of the continental shelf. In order to reach a conclusion, this third part will also consider whether States have the same obligations to the continental shelf as they have in relation to land. In the third part, the decisions of the International Tribunals in cases regarding transboundary pollution will be analysed, in order to determine the extent of their influence on the treatment of acute pollution in the continental shelf.

1.4 Methodology and Sources

As the topic of this paper is rather under researched, various legal sources need to be taken into consideration. In order to answer the research ques-

tion I will look at the relevant case law of the International Tribunals, such as the International Court of Justice and the relevant Arbitral Tribunals regarding transboundary pollution. Furthermore, a part of the research of this paper will also be based on the relevant academic papers regarding, directly or indirectly, the research question. For a general view of the regulation regarding the paper's topic, relevant legislation will be used.[5]

[5] Such as UNCLOS.

2 Principles of international environmental law

Principles of international environmental law form part of international environmental legal sources, so making them relevant and extremely useful for the purposes of this paper. Since the principles are a legal source of international law, States are required to act in accordance with them. Since prevention of pollution of the continental shelf is also part of international environmental law, the principles also apply to such cases and are therefore important for the topic of this paper.

2.1 Sovereignty over natural resources and the responsibility not to cause damage to the environment of other States or to areas beyond national jurisdiction

The principle of sovereignty over natural resources is part of international environmental law and has therefore followed its development in two directions. The principle is therefore divided into two parts: one part giving States sovereign rights over their own natural resources, and the other part requiring States not to cause damage to the environment.[6] The principle of sovereignty over natural resources means that States are free, subject to international law, to carry out activities on their own territory, even if they might cause harm to their own territory.[7]

2.2 Principle of preventive action

The principle of preventive action is closely connected to the principle of prevention of damage. This principle requires the prevention of damage to the environment, and the reduction, limitation or control of activities

[6] Principles of International Environmental Law (2012), pp. 190–191

[7] Id., p. 187

that might cause or risk such damage.[8] The preventive principle puts States under a responsibility to avoid harm to the environment and it requires steps to be taken at an early stage, before the harm has even occurred.[9] The preventive principle, through the legislation based upon it, establishes authorisation procedures, commitments on environmental standards, obligations for exchange of information and imposes environmental impact assessment.

2.3 Cooperation

The principle of good-neighbourliness from Article 74 of the UN Charter has been understood as being the development and application of rules promoting international environmental cooperation, which is traditionally referred to as the application of the Roman civil law maxim *sic utere tuo et alienum non laedas*.[10] This maxim means that one should use their own property in such a way that he does not injure other's. This maxim was also used in the Trail Smelter case and is also applicable to cases of prevention of accidental pollution.

2.4 Sustainable development

The principle of sustainable development is a general principle of international environmental law and is comprised of four elements:

1) The need to preserve natural resources for the benefit of future generations, also known as the principle of intergenerational equity,
2) The aim of exploiting natural resources in a manner which is sustainable, prudent, rational, wise or appropriate, also known as the principle of sustainable use,

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8 Principles of International Environmental Law (2012), pp. 190–191

9 General Principles of International Environmental law, https://nsuworks.nova.edu/cgi/viewcontent.cgi?article=1069&context=ilsajournal/

10 Principles of International Environmental Law (2012), p. 202

3) The equitable use of natural resources, which implies that use by one State must take into account of the needs of other States, which is understood as the principle of equitable use or intragenerational equity, and
4) The need to ensure that environmental considerations are integrated into economic and other development plans, programmes and projects, and that development needs are taken into account when applying environmental objectives, which is also known as the principle of integration.[11]

2.5 Precautionary principle

The precautionary principle is a rather new principle of international law. It ensures that a substance or activity which poses a threat to the environment is prevented from adversely affecting the environment. The principle is still used, even where there is no conclusive scientific proof linking the particular substance or activity to environmental damage. The principle's purpose is to encourage decisionmakers to consider whether the activity is likely to cause harm to the environment, before undertaking the activity.[12]

2.6 Polluter pays principle

The polluter pays principle follows the belief that the person responsible for causing the pollution should pay the costs. The polluter pays principle is a commonly accepted practice, and it suggests that the costs that polluters should bear are the costs of managing prevention of damage to human health or the environment. The principle is used in regulation of pollution on land, water and air.[13] The principle relates to the rules

[11] Principles of International Environmental Law (2012), p. 207

[12] Cameron, Abouchar, 1991

[13] What is the polluter pays principle? http://www.lse.ac.uk/GranthamInstitute/faqs/what-is-the-polluter-pays-principle/

governing civil and State liability for environmental damage,[14] which is an important aspect of the topic of this paper, regarding the obligations of Coastal States to prevent accidental pollution to the continental shelf.

But special attention needs to be put to the Norwegian law on Nature diversity.[15] For the topic of this paper two paragraphs of Nature diversity law need to be taken upon consideration. The first is §2[16] that regulates which paragraphs are applicable for activities on the continental shelf. The second paragraph that needs to be considered is §12[17] that regulates the polluter pays principle. §12 says that in order to avoid or limit damage to the natural diversity, it should be based on such operating methods and such techniques and localization as, based on an overall assessment of past, present and future use of diversity and economic conditions, provide the best social results.[18] The regulation of the polluter pays principle is rather exhaustive and provides a good legal base for the future activities. But for the topic of this paper the regulatory work is rather complicated, as the §2 that regulates which paragraphs of the law are applicable to the continental shelf, does not include §12 as a part of regulation applicable for continental shelf.

2.7 Principle of common but differentiated responsibility

The principle of common but differentiated responsibility has developed from the application of equity under international law, and from recognition of the special needs of developing countries.[19]

The principle is constituted of two elements. The first element is concerned with the fact that it is the common responsibility of States to

14 Principles of International Environmental Law (2012), p. 229
15 Lov om forvaltnig av naturens mangfold (Naturmangfoldloven) LOV-2009-06-19-100
16 LOV-2009-06-19-100, §2
17 LOV-2009-06-19-100, §12
18 LOV-2009-06-19-100, §12
19 Principles of International Environmental Law (2012), p. 233

protect the environment.[20] The second element is concerned with the need to take into account the circumstances of different countries in relation to each State's contribution to the creation of a particular environmental problem, and furthermore each such State's ability to prevent, reduce or control such a threat.[21] The two elements could also be described as common and differentiated responsibility.

The first element deals with the shared obligation of two or more States to protect a particular environmental resource. The second element is widely accepted in international legal practice, stating that there are differentiated environmental standards which establish the bases for factors such as special needs and circumstances, future economic development of developing countries and historic contributions causing the environmental pollution.[22]

[20] Principles of International Environmental Law (2012), p. 233

[21] Id.

[22] Id.

3 Application of principles of international environmental law in cases of pollution

3.1 Sovereignty over natural resources and the responsibility not to cause damage to the environment of other States or to areas beyond national jurisdiction

The objectives of States' sovereignty over their natural resources are set in the Principle 21 of the Stockholm Declaration, which states 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 own 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".*

The principle was also supported by the decision of the UN General Assembly in 1962, which stated that the"*rights of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their natural wealth and resources nust be exercised in the interest of their national development of the well-being people of the State concerned".*[23] With this decision, the right to permanent sovereignty over national resources has been enshrined as an international legal right, which has also been accepted by several international tribunals.

However, since activities that harm the territory of the State exercising them can also cause harm to the territories of other States, the limits of application of sovereignty of States were established, and it was recognised that States need to cooperate in order to protect the environment.[24]

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[23] U.N. General Assembly Resolution on Development and Environment

[24] Principles of International Environmental Law (2012), p. 192

As the Arctic is an area where pollution can have much greater consequences than in the other areas, due to its specific characteristics,[25] it is also possible that stricter rules should apply for protection against accidental pollution in the Arctic, to which Arctic Coastal States would be obliged to adhere, in order to prevent it.

It was decided in the Stockholm Declaration on the Human Environment that although States have the sovereign right to exploit their own resources pursuant to their environmental policies, States still have a responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or to areas beyond the limits of national jurisdiction.[26] Although this principle is today recognised as a basic norm of customary international law, the principle itself was an essential and delicately preserved balance between the State parties.[27] That fact shows the development of the principle of preserving the environment in international environmental law. Another important aspect of the principle is also its wording. In its wording, the principle provides that States are held responsible for not only the acts within their jurisdiction, but also for acts that are under their control. One could therefore say that States are obliged to take certain measures either when performing activities under their jurisdiction or when controlling activities under their control. That could lead to the conclusion that a State needs to consider the possible negative consequences of the activities they are planning to perform. That could mean that if a State concludes that a planned activity could potentially cause harm that would be transferred across the border, it should make every effort to prevent such pollution. In order to prevent such pollution, a State should fulfill certain obligations to prevent such situation. The question that appears here is just what kind of obligations States have, in order to prevent such pollution.

25 Arctic Pollution (2011)

26 Stockholm Declaration on Human Environment, Principle 21

27 Shelton, (2008)

3.1.1 Sovereignty to exploit in Rio Declaration

The Rio Declaration on environment and development sets out the rights of the people to be involved in the development of their economies and the responsibilities of human beings to safeguard the common environment. It is also a very important source of general principles regarding protection of the environment. Although the principles themselves may not be a binding legal source, they are nonetheless important, since some of them can, due to their relevance to international law, become general principles of international law which become legally binding. Some of the principles are also found in other legal sources and could therefore be considered as a part of customary international law, either if exercised by States or as general principles of international law.

Principle 2 of the Rio Declaration gives States on the one hand the sovereign right to exploit their own resources, while on the other hand imposing a responsibility on them to ensure that activities performed under their jurisdiction do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

3.1.2 Sovereignty and extra-territoriality

The sovereign right to exploit natural resources is not straightforward: it also includes the right to be free from external interference over their exploitation, which is important in cases when States' activities are taking place beyond the borders of their own national jurisdiction.[28]

States usually have their own national rules on environmental standards, which in some cases are stricter than international rules. In such cases they may seek to extend their application to activities that are carried out beyond their territory and where such activities cause significant environmental damage to shared resources,[29] but that is rather an open issue of international law. This issue was raised in several cases,

[28] Principles of International Environmental Law (2012), pp. 192–193

[29] Id., p. 193

such as the Lotus case[30] and the Fisheries Jurisdiction case,[31] but the international tribunals did not precisely define the circumstances in which States can apply their national measures beyond the national jurisdiction. But although the situation might seem unclear, States might have a strong position in cases where the damage was being caused to the environment of the home State and also to areas beyond its jurisdiction.[32]

But on the other hand, the Rio Declaration is not supportive of the idea of States extending their national jurisdictions on environmental law. Its Principle 12 declares that unilateral actions addressing environmental challenges outside the jurisdiction of the importing country should be avoided and that environmental measures should, as far as possible, be based on an international consensus.[33] However, that opinion is not absolute, States may still be able to extend their jurisdiction in cases of environmental issues, but it is a challenge of international law to establish the limit up to which the States are able to extend their jurisdiction.

This principle is important for cases of prevention of accidental pollution of the continental shelf for several reasons. First of all, when exploiting the natural resources of the continental shelf, States have, in many cases, shared resources with other States. Secondly, accidents that happen on the continental shelf due to the use of natural resources have environmentally damaging effects on the continental shelves of other States. Thirdly, if the activities on one State's continental shelf do cause damage and the polluting State's national environmental standards are higher than international standards, than the polluting State would want to extend their jurisdiction in order to deal with the consequences of such accidental pollution.

30 France v. Turkey

31 Germany v. Iceland

32 Principles of International Environmental Law (2012), p. 195

33 Rio Declaration, Principle 12

3.1.3 Responsibility not to cause environmental damage

As seen above, States have sovereignty over their territories to use their natural resources, but there exists a counterpart to this principle, which is that States are internationally responsible to not cause environmental damage. States' responsibility to not cause damage to the environment of other States or to areas beyond their jurisdiction is accepted as an international obligation of all States and does not need to be applied on a case by case basis.[34] This responsibility of States was also considered in the Advisory Opinion on The Legality of the Threat or Use of Nuclear Weapons, which confirmed that there is no question that Principle 21 reflects a rule of customary international law, placing international legal constraints on the rights of States in respect of activities carried out within their territory or under their jurisdiction. But although the opinion of the International Court of Justice (ICJ) seems to make a clear Statement, the question remains as to the application of the principle to specific cases of international environmental law, such as what is considered as being environmental damage, and what is prohibited. It is also important to define the standard of care that States need to follow in cases of such environmental damage and what is the extent of liability of States for such environmental damage.

The responsibility of States not to cause environmental damage in areas beyond their jurisdiction was also established in the Trail Smelter Arbitration case.[35]

While the Tribunal in the Trail Smelter Arbitration case was deciding on the question of the damage caused, it took into consideration the United States' claim that the activities of the Trail Smelter caused 'violation of sovereignty'.[36] The Tribunal decided, on the basis of its investigations, that the Dominion of Canada was responsible under international law for the conduct of Trail Smelter, that it was therefore Canada's duty to act in conformity with the obligations of the Dominion

[34] Principles of International Environmental Law (2012), pp. 195

[35] The Trail Smelter case is discussed later.

[36] USA v. Canada, p. 1933

under international law. In its decision the State Tribunal stated that: *"under the principles of international law,(…), no State has the right to use or permit the use of its territory in such a manner as to cause injury (…) in or on the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence."*.

The abovementioned wording importantly established that a State's sovereignty to carry out activities on its own territory is limited by the rights of other States not to have their own territory affected by such activities. That means that if a State decides to carry out an activity, it is first of all obliged to take into consideration the possible consequences which that activity might have on the environments of other States and then it must also to fulfil its obligations to prevent possible pollution to the territories of other States. This principle is applicable to cases of accidental pollution of the continental shelf, since the Tribunal in the Trail Smelter case stated *"under the principles of international law (…)…"* which indicates that the abovementioned rule is not only established by this specific case, but also by principles of international law, which are a mandatory legal source in that field. On this basis, it means that principles of international law apply to all issues of international law and can therefore also be applicable to the cases of topic of this paper, since it means that States are obliged to take into consideration the possible impacts of activities exercised within their jurisdiction on the continental shelves of other States. In cases where such activities could cause pollution following an accident, it could be concluded that they should either refrain from or not start the activity, or else that they are obliged to take further measures in order to prevent such accidental pollution from happening. The question that arises after consideration of the latter is what kind of obligations those would be. This will be therefore discussed later in the paper.

The principle was also confirmed in the Corfu Channel case where the ICJ stated that "*the obligation of every State* [is] *not to allow its territory to be used for acts contrary to the rights of other States*".[37]

[37] UK v. Albania, p. 22

The principle gained an even stronger position under international law with the UN General Assembly's resolution adopted in relation to radioactive fallout, which stated that: *"The fundamental principles of international law impose a responsibility on all States concerning actions which might have harmful biological consequences for the existing and future generations of peoples of other States, by increasing the levels of radioactive fallout."*.[38] Although the resolution was dealing with harmful effects of radioactive fallout, it could also be considered to other types of trans border pollution, as well as in cases of accidental pollution, as the UN General Assembly's resolution is leaning towards the responsibility of states to protect environment for future generations.

The principle was also confirmed in Article 30 of the Charter of Economic Rights and Duties of States, which states that "*All States have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.*"

The principle of responsibility not to cause environmental damage is also set out in UNCLOS, which means that it is also applicable for pollution in the sea, as well as for accidental pollution of the continental shelf. UNCLOS states in Article 193 that "*States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment".*

Furthermore, the principle was also confirmed in the Advisory Opinion in the Legality of the Threat or Use of Nuclear Weapons, where the ICJ Stated that *"The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment"*[39]. With this Statement the ICJ to some extent widened the applicability of the principle.[40]

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38 Report of the United Nations Scientific Committee on the Effects of Atomic Radiation

39 Legality of the Threat or Use of Nuclear Weapon, International Court of Justice

40 Principles of International Environmental Law, (2012), p. 197

Since the principle of responsibility not to cause environmental damage is a general principle of international environmental law and has also been established in several cases by international tribunals, the principle is also applicable to the topic of this paper. States therefore have an obligation not to cause harm by undertaking activities on the continental shelf that cause accidental pollution, which can be satisfied by doing everything in their power to prevent such accidents from happening.

3.1.4 Aerial Herbicide Spraying case[41]

In the Aerial Herbicide Spraying case that arose between Ecuador and Colombia, the Republic of Ecuador asked the International Court of Justice to decide on the actions taken by Colombia when spraying toxic herbicides in the area bordering on to Ecuador. Since, according to Ecuador's complaint, Colombia caused damage to human health, property and environment, Ecuador requested the Court to rule that Colombia should indemnify Ecuador for any damage or loss caused by its unlawful acts.[42]

Furthermore, and of great relevance to the theme of this paper, is the fact that Ecuador requested the Court to determine that Colombia should respect the sovereignty and integrity of Ecuador. In making this claim, Ecuador requested the Court to decide on the sovereignty of a State upon its territory regarding the environment, which should not be violated by actions of other States.

The Court was unfortunately not given the chance to decide the case, through which it could then set and confirm certain principles of environmental law regarding transborder pollution and sovereignty of States, but the countries did agree on the further actions that would be enforced by Colombia, in order not to cause damages to persons, property and environment of Ecuador. That once again confirms the principle of

41 Equador v. Colombia

42 Ibid.

protecting sovereignty of States and prevention of cross-border pollution by activities in which a potential polluting State might be or is engaged.

However, the ICJ was at the same time obtaining a follow-up, through the case of Nicaragua v. Colombia.[43] In the new case, Nicaragua requests an expansion on the borders fixed last year by the court, and "beyond its 200 nautical miles".[44] This is important in the issues regarding cross-border pollution in a way that new borders would mean sovereignty over bigger territory for Nicaragua and that would lead to new considerations to where the states have sovereignty and where they need to take considerations regarding prevention of cross-border pollution.

3.2 Principle of preventive action

This principle was mentioned in the Iron Rhine case where the arbitral tribunal Stated that *"today, in international law, a growing emphasis is being put on the duty of prevention"* and that "*much of international environmental law has been formulated by reference to the impact that activities in one territory may have on the territory of another."*[45] That being said, the tribunal settled the principle in international case law. In its decision the tribunal also declared that the duty of prevention is now a principle of general international law that *"applies not only in autonomous activities but also in activities undertaken in implementation of specific treaties between the Parties"*[46].

The principle of preventive action is also mentioned in UNCLOS in Articles 194 and 195. Under Article 194, States are required to take all appropriate measures to prevent, reduce and control pollution of the marine environment. The Article refers to other provisions of UNCLOS, by stating the appropriate measures that the States take to need to be consistent with UNCLOS. Furthermore, the provision of article 194/2 regulates that States need to take all necessary measures to ensuree that

43 EJIL Talk: Aerial Herbicide Spraying Case dead in the air – September 17, 2013

44 BBC News: Nicaragua files new claim against Colombia over San Andres

45 Kingdom of Belgium v. Kingdom of Netherlands (2005), para. 59

46 Id, para. 222

the activities exercised on the territory of the State do not cause any damage pollution to other States and their environment, and that pollution arising from incidents, activities or use of technologies[47] under their jurisdiction or control does not spread beyond the areas where States have sovereign rights. Article 194/3 also states that Part XII deals with all sources of pollution, which is important for the applicability of these Articles to the topic of this paper. Under Article 195, States must not transfer any damages or types of pollution, when taking measures to prevent and control pollution.

The principle of preventive action was also used in the Pulp Mills case, as described in greater detail in paragraph 3.5.1. In the Pulp Mills case, the ICJ stated that *"the principle of prevention, as a customary rule, has its origins in the due diligence that is required of a State in its territory"*.[48] The ICJ further developed the principle and connected it to the due diligence obligation in the Pulp Mills case, stating that it is *"an obligation which 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"*.[49] By stating that, the ICJ established a rule of international law, that in order for States to fulfill their obligation under the discussed principle of international environmental law, they need to be both continuously active in their monitoring of activities that might cause transnational harm, and also actively involved in preventing the pollution from happening. In cases of accidental pollution of the continental shelf, this would mean that a State is in breach of its international obligation to prevent such pollution, not only in cases where a State failed to adopt appropriate rules and measures in order to prevent the pollution, but also if it did not enforce the rules to a certain degree, as well as exercising some administrative control over public and private operators who are carrying the risky activities, whether on its continental shelf or otherwise under the State's control.

47 UNCLOS art 194, art 196

48 Argentina v. Uruguay, para. 101

49 Id., para. 197

The principle of preventive action is also reflected in international legislation. The International Law Commission's (ILC) Articles on Prevention of Transboundary Harm from Hazardous Activities use an approach that reflects the principle of preventive action in its Article 3.[50] That Article states that States need to *"take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof"*. The ILC meant by this is that Article 3's purpose is not to guarantee complete prevention of significant harm in cases where that is not possible, but that States are required to use their best possible efforts to minimize the risk of preventative harm.[51] In cases of accidental pollution of the continental shelf, this means that States, when engaging in or permitting risky activities of the continental shelf, should do everything in their power to prevent accidents that could cause harm. While it cannot be expected from a State to completely prevent harm in cases where that is simply not possible, States need to do everything in their power to prevent it to the greatest extent possible. That leads to the conclusion that, based on Article 3, when the State's liability is being evaluated, all the activities and regulatory work undertaken by the State to prevent such accidents should be taken into account. If it is concluded that the State did take all necessary and possible measures to prevent accidents, than it should not be held liable for the harm caused. The question that emerges from such consideration is what kind of actions by States would impose strict liability.The answer to this question could go either way, but it does seem that it is more leaning against strict liability, since it cannot be expected from States to do the impossible. The only action that States might be able to impose is to stop, or even not start, activities that could cause such transborder accidental pollution of the continental shelf, in cases where the research and consideration show that such accidents are bound to happen and that they cannot be prevented.

The principle of preventive action is in addition to the case law, as well as some international soft law also supported by the practice of ITLOS,

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50 ILC, Draft Articles on Prevention of Transboundary Harm from Hazardous Activities

51 Commentaries to the Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, *Yearbook of the International Law Commission, 2001 para. 7*

which is reasonable to address for the topic of this paper, since ITLOS is dealing with issues covered by UNCLOS. The Seabed Disputes Chamber of ITLOS agreed and confirmed the principle of preventive action in its Advisory Opinion on Responsibilities and Obligations in the Area. In its Opinion, ITLOS stated that due diligence obligations *"may not easily be described in precise terms"* since the concept may change over time, despite the fact that the standard *"has to be more severe for the riskier activities"*.[52] As a consequence of such situation, *"measures considered sufficiently diligent at a certain moment may become not diligent enough in light... of new scientific or technological knowledge"* and can *"change in relation to the risks involved in the activity"*.[53] The Chamber concluded that due diligence requires a State sponsoring activities in the Area (where Area is defined by ITLOS as the seabed area beyond the limits of national jurisdiction) *"to take reasonably appropriate measures within its legal system"*.[54] That being said, it means that the obligation to prevent pollution is also closely linked to procedural obligations, one of which is also environmental impact assessment, as discussed later in this paper.

It is also important to take into account the fact that the preventive principle requires action to be taken before the damage has actually occurred.[55] The principle is therefore reflected in State practice in several aspects of the environment; however, for the purposes of this paper I will limit it to the aspect of preventing damage of the continental shelf. The principle, in broad terms, prohibits a State from engaging in an activity that causes, or may cause, damage transnationally. However, due to the sovereignty of States on one hand, and consideration of pros and cons of activities on the other hand, it is not possible to prohibit all activities that might cause damage. The principle of prevention is also supported in the domestic legislation on environmental protection. It is therefore

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52 Responsibilities and Obligations of States sponsoring Persons and Entities with Respect to Activities in the Area ITLOS, 1 February 2011, para. 117

53 Id. para. 117

54 Id. paras. 117–120 in: Sands, P. et al. Principles of International Environmental Law, p. 201

55 Gabcykovo Nagymaros project in: Principles of International Environmental Law (2012), p. 201

important to take into account the fact that the principle of prevention takes on various forms, such as the use of penalties and the application of liability rules.[56]

In addition to international practice, the principle was also endorsed in the Stockholm Declaration and the draft of the United Nation Environment Principles (UNEP), as well as in the Rio Declaration. Both of the Stockholm and Rio Declarations are discussed further in this paper. The wide range of applicability of the principle demonstrates its wide support under international law, as well as its importance. It is therefore perfectly safe to say that the principle is extremely important and applicable to cases of prevention of accidental pollution of the continental shelf and that it helps in understanding States' obligations in relation to the prevention of such pollution.

3.3 Cooperation

The principle of cooperation is also set out in Principle 24 of Stockholm Declaration, which states that "*International matters concerning the protection and improvement of the environment should be handled in a cooperative spirit by all countries, big and small, on an equal footing*".

The principle is, in addition, also set out in Principle 27 of the Rio Declaration, which states that "*States and people shall cooperate in good faith and in a spirit of partnership in the fulfilment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development*". Principle 14 also requires States to cooperate effectively to discourage or prevent the transfer of harmful substances to other States. In additional, Principle 18 also requires States to immediately notify other States of any emergencies or natural disasters that are likely to produce sudden harmful effects on the environment of those States. Furthermore, the international community is supposed to make efforts to help afflicted States. The question here is whether States will be held liable if they do not make efforts to help the afflicted States.

[56] Gabcykovo Nagymaros project in: Principles of International Environmental Law (2012), p. 202

Both the Rio and Stockholm Declarations are very important in international environmental law despite their non-binding nature, since the principles arising from these Declarations have been used in international practice on various occasions and therefore seem to have support, to some extent, in customary international law. Apart from the two Declarations, the principle of cooperation is also included in several bilateral and international agreements, which gives it a stronger position in international law. One example of this is Article 4 of the ILC Draft Articles on Prevention of Transboundary Harm, which states that "*States concerned shall cooperate in good faith and, as necessary, seek the assistance of one or more competent international organizations in preventing significant transboundary harm or at any event in minimizing the risk thereof".*

The principle of cooperation is also discussed in relation to marine pollution in UNCLOS. According to Part XII, States need to cooperate with each other in order to formulate and elaborate international rules, standards and practices that are in consistency with UNCLOS, for the protection and preservation of the marine environment.[57] However, in cases where the danger of damage still appears, States have an obligation to inform other States that might be affected by the damage in question.[58] In situations where such damage occurs, the States in the affected area are obliged to cooperate with each other in order to prevent the damage from occurring, or in a worst case scenario, minimise the damage. In order to do that, States are required to develop and promote contingency plans to respond to pollution incidents in the marine environment.[59] The question that is related to the topic of this paper, and which appears in connection to Article 198 of UNCLOS is whether the contingency plans that States are required to conclude also applicable to cases of preventing pollution, and not just to cases when pollution has already occurred.

Apart from contingency plans, States also need, through cooperation, to undertake programmes of scientific research and encourage the

[57] UNCLOS, Art 197
[58] Id., Art 198
[59] Id., Art 199

exchange of information about pollution of the marine environment, in order to make an assessment of the nature and extent of pollution, as well as its risks and remedies.[60]

States are required to endeavour to observe, measure, evaluate and scientifically anlyse, the risks of pollution of the marine environment and they are required to keep both to track of and survey the effects of any activities happening on their territory.[61] If the effects are polluting the environment, they should then either be stopped or changed in such a way that they do not affect the environment. In such cases, States are required to assess the potential effects of the activities on the marine environment and then send reports to the relevant international organisations.[62]

Beyond this, the principle is, as stated earlier, also confirmed under international case law by international courts and tribunals, such as the Lac Lanoux case, the MOX Plant case and Gabcikovo-Nagymaros project case.[63] The latter case is discussed later in in this paper in chapter 3.4.1.

Nonetheless, since the principle of cooperation was a very important aspect of the MOX Plant case, and this case plays an important role in the topic of this paper, the case will be discussed further in this chapter.

3.3.1 MOX Plant case

In the MOX Plant case, Ireland claimed that the United Kingdom failed to adhere to Articles 123 and 197 of UNCLOS, which require States to cooperate. Furthermore, Ireland claimed that the United Kingdom failed to adhere to the principle of cooperation because it failed to reply to Ireland's communications and requests in a timely manner, as well as by withholding environmental information requested by Ireland, and by refusing to prepare a supplementary environmental statement.[64]

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60 UNCLOS, Art 200

61 Id., Article 204

62 Id., Articles 204–206

63 Principles of International Environmental Law, (2012), p. 204

64 Application, 25 October 2001, para. 33

ITLOS confirmed, to some extent, the claims made by Ireland and stated that a "*duty to cooperate is a fundamental principle in the prevention of pollution of the marine environment under Part XII of the Convention and general international law*".[65]

ITLOS ruled in its decision that Ireland and the United Kingdom needed to cooperate and enter into consultations in order to: 1. exchange further information with regard to possible consequences for the Irish Sea arising out of the commissioning of the MOX Plant; 2. monitor risks or effects of the operation of the MOX Plant for the Irish Sea; and 3. devise, as appropriate, measures to prevent pollution of the marine environment which might result from the operation of the MOX Plant.[66]

ITLOS also indirectly ruled on a precautionary approach, in stating that prudence and caution required the two States to take cooperative measures in order to fulfill their duties to cooperate, which is considered as a fundamental principle of general international law.

The MOX Plant case is important for the topic of this paper, as the Tribunal stated that States need to cooperate in order to implement measures to prevent pollution of the marine environment. If the decision of the MOX Plant case is implemented in cases of prevention of accidental pollution, it means that in cases where activities are exercised of the continental shelf of one State, that State should then cooperate with other States that could be affected by such activities in the event of damage caused by an accident arising from such activities. In order to prevent such pollution, the active State should forward information, such as an environmental impact assessment, to States that could be affected, and then take into consideration other States' proposals for the prevention of such accidental pollution. Furthermore, States have an obligation to cooperate and implement possible steps which could help with prevention of accidental pollution of the continental shelf.

[65] Ireland v. UK, para. 82

[66] Id., para. 83

3.3.2 Whaling in the Antarctic case

In the case of Whaling in the Antarctic between Japan and Australia, Japan allegedly violated international obligations under the International Convention for the Regulation of Whaling and, as a result, entered into a dispute with Australia[67] where the latter claimed that the large-scale programme of whaling under the Japanese Whale Research Program represented a breach of obligations under the Convention and other international obligations for preservation of marine mammals and marine environment.[68] *"Japan's continued pursuit of a large-scale program of whaling under the Second Phase of its Japanese Whale Research Program under Special Permit in the Antarctic ('JARPA II'), in breach of obligations assumed by Japan under the International Convention for the Regulation of Whaling..., as well as its other international obligations for the preservation of marine mammals and the marine environment."*[69]

In this case, the ICJ was deciding whether JARPA II involved the exploitation of an area which was the subject of a dispute relating to delimitation, or of an area adjacent to such an area. Australia claimed that a part of JARPA II was taking place in the maritime zone, which thus made the ICJ competent to decide on the issue.

Australia proposed that JARPA was not a programme for the purposes of research within the meaning of the Article VIII of the Convention. On this basis, Australia claimed that Japan had allegedly breached and was continuing to breach three obligations under the Schedule to the Convention, being its obligation to respect the moratorium setting zero catch limits for the killing of whales from all stocks for commercial purposes; its obligation not to undertake commercial whaling of fin whales in the Southern ocean; and finally, its obligation to observe the moratorium on the taking, killing or treating of all whales except minke whales, by factory ships or under catches attached to them.[70]

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67 And New Zealand as intervening party.

68 Australia v. Japan; New Zealand Intervening

69 Id. p. 12

70 Australia v. Japan; New Zealand Intervening, Judgment summary, p. 2

The Court took into consideration the claims made by Australia. The Court examined the grant of a special permit authorisation for taking whales for scientific research.[71] In order to reach a conclusion, the Court considered JARPA II in light of Article VIII of the abovementioned Convention. In its consideration, the court concludeded that collecting samples was not reasonable in relation to achieving the programme's objectives. Further, the Court then concluded that first of all, the broad objectives of JARPA and JARPA II overlapped considerably, that the sample sizes for fin and humpback whales were too small to provide information to pursue the JARPA II research objectives, based on Japan's own calculation in preventing the random sampling of fin whales. Secondly, the processing of facts was transparent, and thirdly, adjustments were needed to achieve a far smaller sample size.

The importance of this case for the topic of this paper is in the Court's application of the principle of cooperation. Even though the application of the principle is indirect, it is still important that it was used.

The Court therefore decided, in relation to Australia's contention, that Japan was not acting in conformity with its obligation under paragraph 10e for each of the years in which it had been granted permits for JARPA II; that Japan did not act in conformity with its obligations under paragraph 10d during each of the seasons during which fin whales were taken, killed and treated within the JARPA II programme; and finally that Japan had not acted in conformity with its obligation under paragraph 7b during each of the seasons of JARPA II in which fin whales had been taken.[72]

The way in which the Court considered the principle of cooperation was through a claim that Japan was not providing sufficient information to the Australian government in order for Australia to preserve its marine environment against Japan's killing of whales. By considering that, the Court recognised the importance of the principle of cooperation under international environmental law.

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71 Australia v. Japan; New Zealand Intervening, Judgment summary, p. 3

72 Id., paras. 228–233

Applying this to the topic of this paper, it means that in cases where there is a possibility that an activity of the continental shelf could result in pollution caused by an accident, States are under an obligation to cooperate with other States that could be affected by it. Such cooperation should be done in the form of exchanging information and also cooperation on how to prevent such accidental pollution from happening.

3.3.3 Duty of cooperation

The principles of general international law which apply to planned activities that might cause transboundary marine pollution of the marine environment were clarified in two decisions of ITLOS: the Mox Plant case and the case concerning Land Reclamation by Singapore in and around the Straits of Johor.[73] The duty of States to cooperate is, in the eyes of ITLOS, a fundamental principle in tpreventing pollution of the marine environment, as both discussed under the Part XII of UNCLOS and found in general international law. For example, in the MOX Plant case, Ireland and the UK were instructed to cooperate and enter into consultations in order to: "*a) exchange further information with regard to possible consequences for the Irish Sea arising out of the commissioning of the MOX plant, b) monitor risks or the effects of the operation of the MOX plant for the Irish Sea, c) devise, as appropriate, measures to prevent pollution of the marine environment which might result from the operation of the MOX plant*".[74] In the case of Malaysia v. Singapore, the Tribunal confirmed its Statement from the MOX Plant case, stating that the duty to cooperate is a fundamental principle.

As fundamental principles of international law are one of the mandatory sources of international law, States are obliged to abide by them. It is therefore an obligation of every State to ensure that such cooperation is given, and States are furthermore responsible if transboundary pollution occurs and causes harm to other States.

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[73] Transboundary Pollution: Evolving Issues of International Law and Policy. (2015), pp. 143

[74] Ireland v. United Kingdom, para 82

On the other hand, the ICJ's wording in the Pulp Mills case does not seem to support the view that a State needs to prove that the planned activity will not harm the environment.[75] However, although ITLOS and the ICJ do not seem to agree on the precautionary approach, ITLOS did suggest in its Advisory Opinion on Seabed Activities that the precautionary approach might be read into UNCLOS.[76] In its Opinion, ITLOS says that the precautionary approach is incorporated into several international treaties and instruments and that the Chamber bases its approach on Article 31 of the Vienna Convention, which states that the interpretation of a treaty should also take into account the relevant rules of international law applicable to the relations between the parties.[77]

If one interprets UNCLOS according to the rules of international law, there could then be several rules of UNCLOS relating to the obligations and responsibilities of States which might be interpreted more widely than they are if understood solely by reference to the wording of UNCLOS.

3.4 Sustainable development

The following four elements of the principle are closely related to each other and used in combinations, demonstrating that their status is not completely established, but is still very important in international environmental law, and also for the topic of this paper. For a better understanding, classification and consideration of the applicability of the principle to this paper's topic, I will address each of the elements of the principle separately and then show how the principle as a whole was used in the case of the Gabcikovo Nagymaros project.

3.4.1 Future generations

This element of the principle has been used by several international legal sources, including the Stockholm and Rio Declarations. The Stockholm

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75 Argentina v. Uruguay, supra note 15 at para 64

76 Advisory Opinion on Seabed Activities, supra note 10, para 135

77 Vienna Convention on the Law of Treaties, Art 31, para 3(c)

Declaration includes it as its Principle 1, stating that man has a *"solemn responsibility to protect and improve the environment for present and future generations"*. Furthermore, the Rio Declaration considers the principle in its Principle 3, where it states that *"the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations"*.

Because both Declarations are very important in international environmental law and are mostly followed by the States' practice, it is also applicable and important for States to follow this principle in preventing accidental pollution of the continental shelf. Therefore, in cases where States engage in such activities, they are obliged to take into consideration environmental protection, not only for present, but also for future generations.

3.4.2 Sustainable use of natural resources

The element of sustainable use of natural resources is very important in the cases of marine living resources, in requiring that exploitation to be conducted at levels that are *"sustainable"* and *"optimal"*.[78] This means that in relation to activities of the continental shelf which might cause accidental pollution, States must also take into consideration the conducting of such activities in a sustainable and optimal manner.

The principle was also used as a concept for non-marine resources, such as in the African Nature Convention (1968), the International Tropical Timber Agreement (2006) and the ASEAN Agreement (1992). This confirms the importance of the principle in international environmental law and, going beyond that, confirms the obligation of States to act in accordance with this principle.

The principle is also considered in the Rio Declaration, which expressly defines the concept and actively asks for the "*further development*

[78] Fish Stocks Agreement in: Principles of International Environmental Law, (2012) p. 210

in the field of sustainable development", so demonstrating the earlier existence of the concept in international law.[79]

The principle was also stated in the Legal Experts Group of the World Commission on Environment and Development, which stated that: *"the management of human use of a natural resource or the environment in such a manner that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations. It embraces preservation, maintenance, sustainable utilisation, restoration and enhancement of a natural resource or the environment."*[80]

Given all this, it can be seen that a great effort has been made to implant this perspective of a sustainable development principle into the field of international environmental law, which means that is also applicable for the purpose of this paper. This is further demonstrated by the provisions of UNCLOS, which require conservation at a "*maximum sustainable yield*" for the living resources of the territorial and high seas, the "*optimum utilization*" of the living resources found in the Exclusive Economic Zone (EEZ), and the "*rational management*" of the resources in the Area in accordance with "*sound principles of conservation*".[81] The fact that UNCLOS takes the principle into consideration is important for the topic of this paper. Although UNCLOS does not explicitly consider the continental shelf, this still has important implications for the other areas of the sea, meaning that the rules also indirectly apply to the continental shelf.

All in all, the significance of the principle is in the fact that it recognises the limits placed by international law on both usage and the manner of exploitation of natural resources, especially those shared between two or more States.[82]

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79 Rio Declaration, Principles 5, 7, 8 and 12 in: Principles of International Environmental Law, (2012) p. 212

80 1986 WCED Legal Principles, para. (i)

81 UNCLOS, Preamble, Articles 61(3), 62(19, 119(1)(a) and 150(b) in:. Principles of International Environmental Law, (2012) p. 212

82 Id., (2012) p. 213

3.4.3 Equitable use of natural resources

Equitable principles are frequently used in international environmental texts, which demonstrates their importance. The concept is also addressed in Principle 3 of the Rio Declaration, which invokes the "right to development' as a means of "equitably" meeting the developmental and environmental needs of future generations. Principle 3 states that States have a right to development, but when exercising that right, they need to meet the environmental needs of future generations. By applying the principle to future generations, it supports the abovementioned principle of sustainable development of States.

The concept is also applied in the Gabcikovo Nagymaros Project case, discussed later in this chapter, as well as in the Pulp Mills case, discussed in Chapter 3.5.1. This shows the importance and inclusion of the concept in international law practice.

The concept has also considered in several international legal agreements, including the Montreal Protocol and the Climate Change Convention.

The concept is important for cases of accidental pollution of the continental shelf, since it establishes an obligation for States, in that States need to exercise their rights over them while sharing in an equitable and reasonable way, as also stated in the Gabcikovo Nagymaros Project case. That means that in cases of exploitation of natural resources, States must make use of such natural resources in an equitable manner with other States.

3.4.4 Integration of environment and developments

The element of integration is considered in the form of a commitment to integrate environmental considerations into economic and other developmental considerations and in interpreting and applying environmental obligations.[83]

[83] Principles of International Environmental Law, (2012) p. 215

The concept has also been applied in case law, such as the Iron Rhine arbitration case which confirmed that the integration of appropriate environmental measures into the design and implementation of eonomic development activities is a requirement of international law.[84] This concept is important because of its formal application, requiring the collection of environmental information and furthermore, the conducting of environmental impact assessments, as already discussed in this paper.[85]

The principle was also discussed in Principle 13 of the Stockholm Declaration which requires States to adopt *"an integrated and co-ordinated approach to their development planning so as to ensure that their development is compatible with the need to protect and improve environment for the benefit of their population"*. It seems that this principle has, to some extent, been followed by States.

The Rio Declaration equally did not emerge empty handed on the consideration of the concept and it stated in its Principle 4 that "*In order to achieve sustainable development, environmental protection shall constiute an integral part of the development process and cannot be considered in isolation from it"*. This is a very important consideration, since it means that environmental considerations should be be an integral part of international economic policy and law.

The concept was also confirmed in various other international legal sources, so confirming its role in international environmental law. Therefore, and equally in cases of prevention of accidental pollution of the continental shelf, States need to take into consideration the environment, both in order to prevent accidents from happening to the greatest extent possible and to contribute to sustainable development.

As stated earlier, the principle of sustainable development was also discussed in the Gabcikovo Nagymaros Project case; this is now considered further below.

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[84] Iron Rhine case, paras. 59 and 243 in: Principles of International Environmental Law, p. 215

[85] Id., p. 215

3.4.5 Gabcykovo Nagymaros Project case

The Gabcykovo Nagymaros Project case also deals with cross border pollution, but this time in the inland waters, so it is not directly linked to this paper's topic. Nonetheless, it does set out some rules that could indirectly be applied to cases of cross border accidental pollution of the continental shelf.

In this case, there was an agreement between Hungary and, at that time Czechoslovakia, concerning a joint investment in the locks on the Danube river, that flows through territories of both States. The main aim of this agreement was hydroelectricity production,[86] while it also included undertakings by the parties to ensure that water quality was not impaired as a result of the Project and that to comply with obligations over the protection of nature arising in connection with the construction and operation of the system of river locks. [87]

The parties entered into a dispute, because Hungary first decided to suspend the works until various environmental studies on the project had been completed, and then, due to allegedly environmental issues, abandoned works on the project. [88] The case was then brought before the International Court of Justice over the question of whether this was a breach of obligation under international law. Although the primary question of the case is not of great relevance to this paper, the ICJ still considered the consideration of the environmental perspective to be a very relevant aspect of the case.

In considering environmental perspectives, the Court referred to Articles 15, 19 and 20[89] of the Treaty in relation to the project, and stated that those Articles were relevant for implementation of the afore-mentioned new norms of international environmental law.

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86 Hungary v. Slovakia, p.2

87 Id.

88 Id., p.3

89 The Articles referred to here required that the quality of water in the Danube River must not be not impaired and that the nature should be protected, and that consideration of environmental norms in reaching agreement on the means to achieve this should be specified in the Joint Contractual Plan.

The ICJ xtated that States are under an obligation to consider precautionary measures around potential projects in order to protect the environment. As part of its consideration, it referred to the following statement from the Opinion on the Threat or Use of Nuclear Weapons: "*The environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn. The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment."(Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I. C. J. Reports 1996,* pp. 241 -242, para. 29.)[90].

The International Court of Justice also invoked the concept of sustainable development in relation to future generations and said: *"Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past this was often done without consideration of the effects upon the environment. Owing to new scientific insights and to a growing awareness of the risks for mankind – for present and future generations – of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed and set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities, but also when continuing with activities begun in the past. This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development. For the purposes of the present case, this means that the Parties together should look afresh at the effects on the environment of the operation of the Gabcikovo power plant. In particular they must find a satisfactory solution for the volume of water to be released into the old bed of the Danube and into the side-arms on both sides of the river.*[91]

[90] Hungary v. Slovakia, p.38

[91] Id. 140

In stating this, the ICJ confirmed that sustainable development has a legal function within international law.[92] Additionally, by making the abovementioned Statement, the ICJ confirmed once again that an international obligation of States is to respect the environment of other States and of areas beyond their jurisdiction. As this principle is a part of international environmental law, it is important for the topic of this paper. It could therefore be concluded that States are under an obligation to respect the environment of continental shelves of other States when conducting activities on their own continental shelves. If they do not respect the environment and consequently do not impose measures to prevent accidental pollution, they are in breach of their obligations under international law and therefore could be held liable for the damages that arise from any such accident.

The alleged reason for which Hungary terminated the contract was ecological necessity,[93] a reason then studied by the Court. If the Court had found that ecological necessity existed, then Hungary would have legitimately terminated the contract. That fact shows that if great danger exists towards the environment, than the State would, under its obligation to protect and preserve the environment, be obliged to abandon such activity, or revise it in order to prevent pollution. If this is applied to this paper's topic, then it could be concluded that under obligations of international environmental law, if an ecological necessity exists where the State might cause accidental pollution of the continental shelf, it would have to abandon or revise its activities. In order to reach a conclusion as to which action would be most appropriate, a State would first of all have to conclude an enviromental impact assessment and then, based on its findings, consider which measures should be taken in order to prevent accidental pollution from happening.

While the Court was considering the state of necessity, it also took into consideration the fact that a state of necessity could also be *»a grave danger to . . . the ecological preservation of all or some of [the] territory*

92 Principles of International Environmental Law, (2012) p. 208

93 Hungary v. Slovakia para. 40, p. 36

[of a State]."[94] That fact meant that the Court confirmed that States have on the one hand the right to terminate their international obligations in cases where a grave danger exists to the environment either of only its own territory or of that of other States as well. On the other hand, that means that States also have an obligation to make the activities in which they engage, safe for the environment and to ensure that they do not pose a grave environmental danger to the territories of another States. In cases of accidental pollution of the continental shelf, it means that States have an obligation to make sure that the activities on their continental shelves do not pose a grave danger to their continental shelves or to the continental shelves of other States.

Furthermore, in its consideration of the State of necessity, the court also considered the new, at that time, principle of sustainable development in international environmental law. In that consideration, the Court leant on its statement that the environment should be seen in a long-term perspective, as stated above.[95]

This is a very important consideration of the principle by the Court, since the principle has proved to be a part of mandatory international law, since it has been recognised in the Court's practice more than once. The principle therefore imposes an obligation on States to ensure that their activities respect the environments of other States and areas beyond their sovereignty, and consequently they are also obliged to protect and preserve the environment for future generations, and therefore need to take into consideration the potential future pollution that their activities may cause.

3.5 Precautionary principle

This principle was discussed in Principle 15 of the Rio Declaration, which stated that "*Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing*

[94] Hungary v. Slovakia, para. 53, p. 38

[95] Legality of the Threat or Use of Nuclear Weapons, pp. 241–242, para. 29. In: Hungary v. Slovakia para. 53, p. 38

cost-effective measures to prevent environmental degradation". Further on, Principle 15 also provides that *"the precautionary approach shall be widely applied by States according to their capabilities"*. The latter wording brings some ambiguity into the strength of the approach. It could be in one way be understood as meaning that the principle of precautionary approach is relative, as it would depend on the developmental and economic situation a State is in. However, on the other hand, this would clash with the earlier Statement in Principle 15, which states that a lack of scientific certainty cannot be used as a reason for postponing measures to prevent environmental degradation. The question that arises here is whether a lack of scientific certainty can be understood as meaning a lack in the sense that science has not yet developed to such an extent in general, or as meaning that a State lacks the funds and knowledge to conclude scientific research to a greater extent. It seems that the answer leans towards the first interpretation, which means that in cases where science has yet not developed enough to provide certainty about potential environmental harm, States cannot start carrying out such possible risky activities. That would also, even more importantly, apply in cases of activities of the continental shelf, which could cause accidents resulting in environmental transnational pollution.

The principle has been adopted in several environmental treaties. The principle has also been relied upon in relation to measures to protect a range of different marine environments. One example is the Ministerial Declaration of the International Conference on the Protection of the North Sea, which states in its Preamble that *"States must not wait for proof of harmful effects before taking action"*, which is important since damage of the marine environment can be irreversible or remediable only over the long term. In line with this Statement, the Ministerial Declaration on the Second North Sea Conference concluded that *"in order to protect the North Sea from possibly damaging effects of the most dangerous substances, a precautionary approach is necesary"*.[96] The North Sea Conference went even further in the application of the precautionary approach, which was thenalso applied in the 1990 Bergen Ministerial Declaration on

[96] Principles of International Environmental Law, (2012) p. 219

Sustainable Development in the UN Economic Commission for Europe Region, which was also the first international instrument to treat the principle as being a generally applicable principle linked to sustainable development. In the Declaration it is stated that *"In order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation".* However, the principle of precautionary approach cannot be applied in absolute terms; the threat of environmental damage must be serious or irreversible. That fact was also confirmed by the UNEP Governing Council, which stated that *"waiting for scientific proof regarding the impact of pollutants discharged into the marine environment could result in irreversible damage to the marine environment and in human suffering"* and it also recommended that governments should adopt the precautionary principle in regard to the prevention and elimination of marine pollution as the basis of their policy.[97]

This seems to be one of the reasons why the precautionary principle was included in various international treaties, such as the Bamako Convention,[98] the Watercourses Convention[99] and the Biodiversity Convention.[100] Another international source that applied the precautionary principle is the 1992 OSPAR Convention, which linked prevention with precaution and has a vision that "*preventive measures are supposed to be taken in cases of reasonable grounds for concern…even when there is no conclusive evidence of a causal relationship between the inputs and the effects.*"[101] The provision of the OSPAR Convention provides a rather imprecise rule on the application of the precautionary principle, but on the other hand, the Baltic Sea Convention offers a slightly more stringent

97 Principles of International Environmental Law, (2012) p. 220
98 1991 Bamako Convention
99 1992 Watercourses Convention
100 1992 Biodiversity Convention
101 OSPAR Convention, Article 2(2)(a)

approach, stating that preventive measures should be taken *"when there is reason to assume"* that harm might be caused *"even when there is no conclusive evidence of a causal relationship between inputs and their alleged effects"*.[102] The principle has also played an important role in the EU and is included in the 1992 Maastricht Treaty, demonstrating its recognition within the European Union.

As shown above, there are several considerations relating to, and definitions of, the precautionary principle, which on the one hand means that there is no single clear definition of the principle recognised in international law, but on the other hand demonstrates its general recognition, as well as its recognition as a general principle of international environmental law.

An important turn in the development of case law on the principle was made in the Pulp Mills case, where the court stated that although the precautionary approach was relevant to the interpretation and application of the Uruguay River Statute, the principle did not work as a reversal of the burden of proof.[103] The case is further discussed below.

3.5.1 Pulp Mills case

The Pulp Mills case[104] concerns a dispute between Argentina and Uruguay regarding pollution in the river basin of the river Uraguay. In this case, the Argentine Republic filed an Application for proceedings against the Eastern Republic of Uruguay in relation to a dispute concerning a breach of obligations under the Statute of the River Uruguay.[105] Argentina claimed in its submission that there was a breach of international obligations because the activities on the river Uruguay affected the river's water quality.[106] The dispute dealt with transboundary water pollution, which

[102] Baltic Sea Convention, Article 3(2) in: Principles of International Environmental Law, (2012) p. 219

[103] Argentina v. Uruguay, para. 164

[104] Id.

[105] Id.

[106] Id. instituting proceedings

is, to some extent, relevant to the topic of this paper. The case also sets out one of the customary principles of international environmental law.

In the dispute, Uruguay had constructed the Botnia plant on the River Uruguay itself and the Argentine Republic was protesting as a result of this. However, the International Court of Justice than concluded, after consideration of independent verifications,[107] that the plant's technology was not in breach of anti-pollution requirements.[108]

In its consideration of the case, the Court also touched on the question of States' obligations in cases of alleged transboundary pollution, which is important for the topic of this paper. One of the obligations that the Court took into consideration is the precautionary principle. In relation to this, the Court said that the precautionary approach might well be important for the interpretation and application of the Statute on the River Uruguay, but that a treaty should also take into account any relevant rules of international law applicable to the relations between parties to the Treaty.[109]

Closely connected to the consideration of due diligence is also the principle of prevention, to which consideration was given in this case. This principle is also considered and recognised in customary international law. In its judgment, the ICJ Stated: *"The Court points out that the principle of prevention, as a customary rule, has its origins in the due diligence that is required of a State in its territory"*.[110] It is *"every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States."*[111] A State is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State. This Court has established that this obligation *"is now part of the corpus of international law relating to the environment."*[112]

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[107] Independent verifications and research made by IFC and a report made by AMEC.

[108] Id. Uruguay's rejoinder, para. 4.23, p. 212

[109] Id. para. 164, p. 71

[110] Id. para. 101, pp. 45

[111] UK v. Albania, Merits, Judgment, p. 22

[112] Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, p. 242, para. 29

3.5.2 Conclusion

Since the principle of prevention is recognised as a principle of customary international law, it is also applicable to cases of accidental pollution of the continental shelf. According to the principle, States that are planning or engaging in activities of the continental shelf[113] need, at all times, to research and maintain their knowledge to the greatest extent possible, as to the possibility of an accident occuring and, in such a situation, to instruct the operator or implement regulations to stop accidental pollution. In cases where the danger is too grave of the continental shelf and such an accident appears too probable, States are under an obligation to stop such dangerous activities.

All of the above demonstrates the importance of the principle in international environmental law and in its continuing development. As has been seen, the principle was also applied in the situations relating to marine pollution, such as in the provisions of UNCLOS,[114] the OSPAR Convention[115] and the Baltic Sea Convention,[116] which play an important and relevant role for the topic of this paper. In cases of accidental pollution of the continental shelf, the principle means that just because sufficient scientific knowledge does not exist as to whether there is a threat, or whether possible consequences of the activities might include damage by pollution caused by accidents, States do not consequently have the right to carry out the activities.

3.6 Polluter pays principle

Although the third principle has not received as much attention as some other principles of international environmental law, it has still been

[113] As i.e. oil exploration or exploitation activities since they present the biggest threat to the pollution of the continental shelf if accidents occur.

[114] United Nations Convention on the Law of the Sea of 10 December 1982

[115] The Convention for the Protection of the Marine Environment of the North-East Atlantic 1992

[116] Convention on the Protection of the Marine Environent of the Baltic Sea, 1992

applied over a long period. The principle was first applied in the Trail Smelter case, as discussed later in this chapter.

The principle was also discussed in the Rio Declaration, Principle 16, where it is provided that *"National authorities should endeavour to promote the internalisation of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the costs of pollution, with due regard to the public interests and, without distorting international trade and investment"*. The polluter pays principle is also discussed indirectly in Principle 13 of the Rio Declaration, which requires States to develop national law on liability and compensation for victims of pollution, and that States should therefore cooperate with each other in order to further develop international law regarding liability and compensation for adverse effects of environmental damage, caused by activities within their jurisdiction or control, to areas beyond their jurisdiction.

The polluter pays principle has also been used in several other international instruments, such as the 1960 Paris Convention, the 1963 Vienna Convention, and the OECD Council recommendation on Guiding Principles Concerning the International Economic Aspects of Environmental Policies.

The latter defined the principle to some extent, as meaning that the polluter should bear the expenses of necessary measures to protect the environment and it states that *"In other words, the cost of these measures should be reflected in the cost of goods and services which cause pollution in production and/or consumption. Such measures should not be accompanied by subsidies that would create significant distortion in interntaional trade and investment."*.[117]

The polluter pays principle, as has been said, is also a part of the EU law, whereby the European Council adopted a Recommendation regarding cost allocation and action taken by public authorities on environmental matters,[118] and it states that: *"national or legal persons*

[117] Recommendation of the Council on Guiding Principles concerning International Economic Aspects of Environmental Policies, para. 4

[118] Principles of International Environmental Law (2012), p. 231

governed by public or private law who are responsible for pollution must pay the costs of such measures as are necessary to eliminate that pollution or to reduce it so as to comply with the standards or equivalent measures laid down by the public authorities".[119] The formulation of the principle in this Recommendation is broader than that of the OECD, but on the other hand leaves room for exceptions from the principle,[120] which makes it in a way less strong.

The polluter pays principle was also used in several other international legal instruments, as well as stated, in the case of Trail Smelter.

3.6.1 Trail Smelter Arbitration

One of the first decisions on international environmental law, and especially on the issues of cross-border pollution, is the Trail Smelter arbitration. Arbitral Tribunal in this case was determining if effects of the acitivity exercised on the river Trail in Canada were having an impact on the territory of the United States and if Canada was therefore obliged to pay for damage caused to the environment, persons and territory of the United States. This case is important for the topic of this paper, because first of all, it sets out the principles of international environmental law which have been used in several cases following this decision, and secondly, because it deals with the issue of cross-border pollution.

Since the Trail Smelter case addresses pollution through air on the land, and since the pollution did not appear due to accident, the rules and principles of this case are not directly applicable to the topic of this paper. However, on the other hand, both Trail Smelter and cases of accidental cross-border pollution of the continental shelf deal with some form of pollution, and both deal with the issue of limiting a State's sovereignty, in order not to affect the territories of other States. In addition, some of the principles stated in the Trail Smelter arbitration became general principles of international environmental law, and could therefore be applicable to the cases of accidental pollution of the continental shelf.

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[119] Council recommendation 75/436/EURATOM, EEC of March 3 1975, Annex, para. 2

[120] Principles of International Environmental Law, (2012) p. 231

In the Trail Smelter case, the Tribunal was deciding whether the Trail Smelter was required to refrain from causing damage in the State of Washington going forward, and if so, to what extent. The Tribunal also needed to decide what measures should be adopted or maintained by the Trail Smelter. The final question was of what indemnity or compensation should be paid arising from any decision rendered by the Tribunal.

While the Tribunal was deciding on the question of the damage caused, it took into consideration the United States' claim that the activities of the Trail Smelter caused 'violation of sovereignty'.[121] Although the Tribunal did not determine whether there was a violation of sovereignty, it is still important that it took it into consideration, since it shows that it was established quite early on that States have sovereignty over their own territories, which cannot be violated by the activities of other States. That is also important in cases of accidental pollution of the continental shelf, since it means that States are obliged to take into consideration the possible impacts of activities exercised within their jurisdiction on the continental shelves of other States. In cases where such activities could cause pollution following an accident, it could be concluded that they should either refrain from or not start the activity, or else that they are obliged to take further measures in order to prevent such accidental pollution from happening. The question that arises after consideration of the latter is what kind of obligations those would be. This will be therefore discussed later in the paper.

An important decision of the Tribunal was that Canada was required to pay compensation for damages caused to the territory of Washington in an amount of $78.000.[122] In deciding that, the Tribunal established the very well known principle of international environmental law: the polluter pays principle. Another important decision made by the Tribunal was that the activities of the Trail Smelter had to be prevented from causing any future damage within the State of Washington. [123]

[121] USA v. Canada, p. 1933
[122] USA v. Canada, p. 1934
[123] Id., the primary decision, p. 1934

Another important remark that was made in the Trail Smelter case is that of responsibility of States for pollution of other States by activities carried out under the polluter States' jurisdiction. In that case the Tribunal stated: *"Considering the circumstances of the case, the Tribunal holds that the Dominion of Canada is responsible in international law for the conduct of the Trail Smelter. Apart from the undertakings in the Convention, it is, therefore, the duty of the Government of the Dominion of Canada to see to it that this conduct should be in conformity with the obligation of the Dominion under international law as herein determined."*[124] That means that States have obligations under international law to prevent cross border pollution caused by activities under their jurisdiction. If they do not take such preventive measures, they are held responsible for pollution. As the Tribunal stated in the Trail Smelter case, Canada was responsible under international law for the harm caused to the State of Washington. If this rule is applied to cases of cross-border pollution of the continental shelf, then the conclusion would be that States can be held responsible for pollution that occurs to other States from the activities exercised by the polluting State. If States are responsible for pollution caused to other States' territories, then it could be concluded that the same rule applies for cases of accidental pollution. Although long term pollution differs than accidental pollution, the latter is still a type of pollution, it is just that it appears suddenly rather than over a period of time, and therefore the above discussed rule should also be applicable for cases of accidental pollution.

Furthermore, in order for States not to be held responsible, they need to fulfill their obligations under international law. In cases of cross border pollution, this would mean that they need to prevent pollution from happening or, in cases where pollution has already occurred, refrain from the activity that is causing cross border pollution and possibly pay compensation for the damages caused by such activities. If the analogy to accidental pollution of the continental shelf can be made, it means that States need to do everything in their power to prevent accidents that cause pollution of the continental shelf of other States. Since the

[124] USA v. Canada, p. 1966

pollution occurs suddenly in cases of accidents, the case for refraining from activities that cause pollution is irrelevant, as the damage has already been done.

An important fact relating to States' responsibility is that States need take into account not only their rules of their national legislation, but also international law. As discussed in the section of this paper relating to the ILC's Articles on States' responsibility, international law will prevail in cases of internationally wrongful acts, so leading to the conclusion that, even if national legislation does not require States to have consideration for or obligations to prevent pollution, or even if such national legislation required that they should not undertake such obligations, the international law would still prevail.

The well known "polluter pays" principle was therefore established in the Trail Smelter case, where the Dominion of Canada was obliged to pay the fine of $78,000, as compensation for the damages caused by the activities of the Trail Smelter. This principle has been used in several cases of international environmental law and it has become one of its general principles. This principle is therefore also applied to cases of accidental pollution of the continental shelf, but it unfortunately does not impose any obligations to prevent such pollution.

3.6.2 Conclusion

At first sight, the "polluter pays" principle seems not to hold a particularly strong position in international law, but looks can be deceiving, since the principle has been included in various sources of international environmental law. Firstly, it was included in international legal acts, such as Rio Declaration and the Recommendation of the European Council. Despite these being in effect "soft" laws, they still play an important role in the general implementation of the principle. Secondly, the principle has been used in case law, which also strengthens its position.

With respect to States' obligations to prevent accidental pollution of the continental shelf, the principle seems to be important for the practice and action of States. Since the principle is one of the international envi-

ronmental principles, States are required to adhere to it. On that basis, States may therefore, despite their possible lack of interest in preventing pollution, consider activities of the continental shelf in a different manner. That means that, since a State knows that it is bound by the polluter pays principle, it may reconsider its potential activities or the continuation of activities already being carried out on its continental shelf. If such activities might, to the State's knowledge, lead to possible accidents that would cause pollution to the continental shelves of other States, then that State might reconsider the performance of such activities, if the remedial costs would be extremely high, or instead might try to implement measures that would prevent,to a greater extent, the occurrence of such accidents.

3.7 Principle of common but differentiated responsibility

Principle 7 of the Rio Declaration includes the Statement that: "*States shall co-operate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.*". As can be seen, Principle 7 refers to the principle of sustainable development, which means that the two principles of "common but differentiated responsibility" aim to achieve a similar goal and are interconnected.

4 Rights and Obligations of States on the Continental Shelf

In this chapter obligations of States will be considered, as in the previous chapter principles of international law were discused. Despite the fact that the principles and obligations of international environmental law may sometimes seem very similar, they are rather different. On the one hand, principles are considered as being more general and applicable to all the subjects of international law, with their content not being fully defined, but instead rather left open for interpretation by international tribunals and State practice. On the other hand, obligations are not generally applicable, but are instead applicable to those States which are parties to various conventions and treaties, but with their content being entirely drawn from the wording of these sources.

To better understand the obligations of States in cases of environmental transboundary pollution, the paper will examine the Principles in the ILC's Draft Articles concerning States' responsibilities for internationally wrongful acts and then each of the relevant obligations will be discussed in further chapters.The reason to do so is as it is presumed that it is an internationally wrongful act when a State causes pollution to the territory of another State. Closely connected to responsibility is also the issue of liability of States, which is why this topic will also be discussed. Additionally, it is also important to look into the question of liability of States that occurs in cases of damages caused by State's activities.

4.1 International Liability of States for Marine Pollution

Liability has become a primary rule of customary international law obligating a recalcitrant State to pay compensation or make amends for the resulting damage for which the State is accountable.[125]

[125] Sucharitkul (1996) p.1

Function of liability may be seen as having a dual character, where the primary rule of liability, as derived from the maxim : *"sic utere tuo ut alienum non laedas* ", entails a secondary obligation to restore or restitution and to make reparation.[126] These are measures *ex nunc* and *tunc* under the law of State responsibility which is engaged as soon as a primary rule of international obligation is breached.[127] The final consequences of secondary rules of State responsibility may also encompass the adoption of measures *ex ante* or preventive measures, now perfectly consistent with the precautionary principles advocated for all conducts of States in environmental law.[128]

There have been some cases in international law regarding liability of States. In the Chorzow Factory case, the PCIJ decided that *"it is a principle of international law, and even a general conception of law, that any breach of any engagement involves an obligation to make reparation"*.[129] That means that, in cases of accidental pollution of the continental shelf, if the accident occurred due a fault by the acting State, that State is held liable for the damaging consequences and furthermore for any transnational pollution. Therefore, when a State causes damages which spread to the continental shelves of other States, that acting State is obliged to make reparation of damages, to the extent possible. Although there are no generally applicable mandatory rules of international law found in environmental cases governing responsibility and liability of States, the ILC's Articles on State's Responsibility[130] create the set of rules for this issue, making them generally applicable in international law, and these can, in addition, be supported by international legal practice.

When imposing liability on a State for accidental marine pollution, one needs to keep in mind that it is a theoretical challenge to define, when the States are supposed to be liable for such pollution, whether

126 Sucharitkul (1996), p. 1
127 Id.
128 Id.
129 Germany v. Poland, Ser. A No. 17, at 47
130 That are discussed in the Chapter 2 of this paper.

pollution of the continental shelf is also included.[131] According to the Principle 21 of the Stockholm Declaration, the State's liability is based on pure causality between the action of the State and the transnational damage caused by such action. This means that the State's liability for accidental transboundary pollution damage in general is contingent upon the act by the State which is causing the damage being wrongful under international law.[132]

In order to determine the State's liability, proof needs to exist that the State lacked due care, which leads to a conclusion that the States are obliged to undertake due diligence on the transnationally damaging event. However, since the due diligence requires a breach of State's due care, it means that there is a lacuna in cases where a State did act with due care, and the conception seems retrogressive, in the sense of being against the strict liability of States.[133] One example is the Corfu Channel case,[134] where Albania's obligation to avert harm by verifying that Albania had knowledge of the existence of the minefield and of the approaching British convoy, inquired specifically into whether Albania had also been capable of discharging this obligation. Since it was concluded that Albania failed to utilize the existing opportunity to do this, it was determined that Albania was liable for the damaging effects of the accident.[135]

In addition to case law and international legal theory, there are also various treaties that favour strict liability for damage caused by accidents involving certain hazardous activities. Increasingly, conventional State practice reflects the international acceptance of strict liability in cases of transnational damage. Unfortunately, State practice, given this strict liability, is insufficient. The notion that the creation of transnational risk should entail a strict standard of international accountability in

131 Handl (2011) p. 94

132 If this rule is applied to accidental pollution of the continental shelf, it means that the acting State would be held liable in cases when it breaches its obligations under international law.

133 Handl (2012) p. 97

134 UK v. Albania

135 Id., Judgment, Merits, ICJ GL No 1, [1949] ICJ Rep 4, ICGJ 199 (ICJ 1949)

the event that harm is likely to occur transnationally, is expressive of a general principle of law.

Nonetheless, strict liability is clearly still present to some extent in international law, such as in the ILC Draft articles on Responsibility of States for Internationally Wrongful Acts, although, in the Draft Convention on the Law of the Sea, the provisions only regulate basic responsibility and liability for marine pollution.[136] The Convention provides that "*States are responsible for fulfillment of obligations concerning the protection and preservation of the marine law. They shall be liable in accordance with international law*".[137] This merely confirms the previous assumption, that in cases where a State did not fulfill its obligations to prevent accidental pollution of the continental shelf, it would be held liable under international law. This means that States will be liable under general rules of liability, but it does not confirm that States would be held strictly liable for accidental pollution of the continental shelf. However, when damage caused by accidental pollution is really substantial, it rather seems unfair that there would be no one held liable for accidental pollution which also results in such major consequences to the continental shelves of other States. In such situations, it would therefore be only fair for States to be held strictly liable, since they initially decided to engage in potentially environmental damaging activities known to potentially cause enormous impact on the environment, including the continental shelf.[138]

However, a State's international liability can still be said to be engaged, even in the absence of a failure to recognize a clearly identifiable significant risk of harm, typical of risks being occurred by the State, either in its territory or under its jurisdiction. Risks that fall into this category

[136] Handl (2012), pp. 103

[137] UNCLOS, art 235(1)

[138] There are only a handfull Conventions in International Environmental Law considering strict liability, and those are rather limited to the activities in the outer space (such as The Convention on International Liability for Damage Caused by Space Objects). One attempt important for this paper is the Liability Annex mandates the Secretariat of the Antarctic Treaty.

would seem to include, but not be limited to, those for which the so-called "private law liability" establishes a strict liability regime.[139]

The regime of strict liability is also found in international law theory. Some theorists contend that when an injury or loss has occurred which nobody foresaw, there is a commitment, in the nature of strict liability, to make good the loss. In the end, strict liability would simply be contingent upon the occurrence of unforseeable transnational injury, since it should be evident that unforseeable transnational damage to the marine environment cannot be claimed as causing the acting State to be liable, simply as a matter of law upon its occurence.

4.2 The Principles in the ILC's draft Articles concerning States' responsibilities for internationally wrongful acts

The draft Articles concern the responsibility of States for internationally wrongful acts, in cases where States breach their international obligations. Although the focus of the Articles is on the responsibility of States for wrongful acts, the Articles do not impose international obligations, since they form part of "soft" international law.[140] Despite this, the Articles play an important role. First of all, if respected and used in practice by various States, the Articles then become part of customary international law, which is a mandatory source of public international law. The Articles might also come in useful for the purpose of this paper, since States do have a general national obligation not to create an environmental impact on the territories of other States, as well as other international obligations connected to the prevention and preservation of the environment. Therefore, if States breach these obligations, they commit international wrongful conduct and that is where the draft Articles may be applicable, since they are concerned with the responsibility of States in such cases. Since States have an obligation under international environmental law not

[139] Handl (2012) p. 105

[140] Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, p. 31

to affect the environment of other States' territories through pollution, and more specifically an obligation to protect and preserve the marine environment,[141] the draft Articles are applicable in cases of breach of such obligations.

The Articles are divided into four parts: the internationally wrongful act of a State; the content of the international responsibility of a State; the implementation of the international responsibility of a State; and certain general provisions applicable to the Articles as a whole. For the purpose of this paper I will look deeper into parts 1 and 2 of the Draft Articles.

4.2.1 Article 1 – entailing international responsibility

Article 1 reads as follows: *"Every internationally wrongful act of a State entails the international responsibility of that State"*. Article 1 underpins the content of the Articles, by stating the basic principle that a breach of international obligation entails responsibility of a State.[142] International responsibility is, in the Articles, understood as being "new legal relations, which arise under international law by reason of the international wrongful act of a State".[143] That principle is important for the obligations of States to prevent accidental pollution of the continental shelf because, on the one hand States have sovereignty over actions on their own territory, but on the other hand, they have an obligation not to exploit or affect the territories of other States, which means that, in relation to this paper's topic, a State has an obligation to prevent pollution that might affect the continental shelf of another State, and if they do not adhere to their obligations, they are in breach - which is when Article 1 might be applicable.

The importance of the Draft Articles lies in their usage in various cases where both the ICJ and international tribunals applied Article 1, to some extent. The wording of the Article can therefore be understood

[141] As regulated in UNCLOS.

[142] Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, p. 32

[143] Id.

as being a part of international case law. The principle was supported by the ICJ in number of cases, such as in the Corfu Channel case, the Nicaragua case and Gabčikovo-Nagymaros Project case.

Every internationally wrongful act of a State entails the international responsibility of that State and gives rise to new international legal relations, additional to those which existed before the wrongful act took place, a fact which has been widely recognised both before and especially since Article 1 was first formulated by the Commission.[144] This fact is important since Article 1 represents a non mandatory legal source, but, given its support by various case law, one could say that its essence became a part of customary international law. Furthermore, Article 1 has been applied in various cases addressing different international legal obligations and it can therefore be applied in the case of transboundary accidental pollution of the continental shelf. That leads to a conclusion that a State has an obligation to do everything in its power to prevent such a type of pollution, or otherwise would be held responsible. Despite discussions on whether States are responsible towards the general community or just one or several other States, the conclusion is that each State is responsible for its own conduct in respect of its own international obligations.[145] This conclusion might be plausible in the sense that even if one were come to the conclusion that there is not a mandatory general international law obligation on States to prevent accidental pollution of the continental shelf, nevertheless if States have bilateral or multilateral agreements regarding such obligations, or if they have established such a regional practice, at least some States would be obliged to fulfill such obligations. If a representative sample of States acting in such a manner as described above were to become large enough, then those obligations would become a part of customary international law.

144 Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, p. 33

145 Id., p. 34

4.2.2 Article 2 – State's breach of interational obligation

Article 1 provides a general rule for States' responsibility, but, in order to determine when a State is in breach of its obligations and is therefore acting wrongfully, it is important to understand what is understood as an internationally wrongful act of a State. In Article 2 an internationally wrongful act is considered as such, when *"conduct consisting of an action or omission: a) is attributable to the State under international law and b) constitutes a breach of an international obligation of the State"*.[146]

Article 2 could be applicable to cases of accidental pollution of the continental shelf which could be or actually is transferred of the continental shelf of another State. In order to achieve this, the two conditions established in Article 2 need to be fulfilled. First of all, the conduct or omission need to be attributable to the State, which means that it was: "*crucial that a given event is sufficiently connected to conduct (whether an act or omission) which is attributable to the State under one or other of the rules set out in chapter II*".[147] Under international law, for conduct to be attributed to the State, it needs to be executed by governmental organs or by other persons who have acted under the *"direction, instigation or control"*[148] of governmental organs, such as State agents.[149]

If we apply these two conditions to cases of accidental pollution of the continental shelf, a State would be acting wrongfully if both of these two conditions were fulfilled. Those obligations can be found either in case law, UNCLOS, in customary rules of international law, or else in bi/multilateral agreements to which a State is party.

Secondly, it needs to be proved that the accident which caused the pollution of the continental shelf is a result of a breach of international obligation with which the State is obliged to adhere. In practice, that

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[146] Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, article 2

[147] Id., pp. 35, para. 7

[148] Id., pp. 38, para. 2

[149] Such explanation is recognized both by international legal scholars (i.e. I. Brownlie: System of the law of Nations; State responsibility, and case law (i.e. Iran-US claims Tribunal)

would be the breach of an obligation, such as that of protecting and preserving the marine environment, or breach of obligations of a procedural nature, such as failing to conclude an up to date environmental impact assessment, or adhering to the precautionary principle.

4.2.3 Article 3 – Internationally wrongful act

Article 3 characterises when a State's action is considered as being internationally wrongful. Such characterisation comprises two elements. The first element is that a State's action is only characterised as being internationally wrongful in cases where it constitutes a breach of an international obligation. The second element is linked to the first one, stating that a State is bound by international obligations, despite the fact that the internal law of that State might compel it to act in a manner contrary to its international obligations.

In cases of accidental transboundary pollution of the continental shelf, this would mean that States are not permitted to breach obligations which are defined in the international legal sources by which they are bound.

4.2.4 Article 3 - Breach of an international obligation

Article 3 defines the concept of a breach of an international obligation, to the extent that this is possible in general terms.[150] This Article determines whether there has been a breach of an international obligation, when it was took place and the duration of the breach. Although Article 3 does not determine general international obligations, it does set out some general principles of international law regarding States' obligations. Article 3 may be of importance in the context of this paper, since the Articles identify the abovementioned principles, which could be applicable in the cases of transboundary accidental pollution of the continental shelf.

[150] Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, p. 54, commentary, para. 1

4.2.5 Article 12 – Non-conformity with international obligations

Article 12 states a general rule that a State is in breach of an international obligation if it does not act in conformity with what is required by that obligation.

In the case of transboundary accidental pollution of the continental shelf, a polluting State would be understood as being in breach of an international obligation if it did not conform with all the rules required to prevent the pollution. An example would be if a State did not conclude an environmental impact assessment, it did not adopt in accordance with the precautionary approach principle, and if it did not take necessary and appropriate measures to prevent the accidental pollution.

In order for a State to be held responsible, specific further conditions need to be taken into account, relating to the breach of obligations of international law. When analysing whether a State has been in breach of an obligation, it is important to take into account the State's aim and intention, as well as the specific facts of the case.[151] I will then explain which facts need to be taken into consideration, according to the provisions of Article 3, and furthermore apply those facts to an actual case of transboundary accidental pollution.

In order for international obligations in general to be binding on a State, and for a State to be in breach if it does not adhere to such them, obligations do not need to be written down in a specfic law or adopted by a special procedure.[152]

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[151] Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, p. 54, Article 12, commentary, para. 1

[152] The ICJ has used expressions such as incompatibility with the obligations of the State, acts contrary to, or inconsistent with a given rule, and failure to comply with its treaty obligations. The ICJ also allows in some cases that a State may be held responsible even if it only partially breached an international obligation by which it was bound. (Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, p. 55, Article 12, commentary, para. 2) Obligations that can be taken into account are extremely wide ranging. It is understood that this may apply to all obligations of international law, regardless of their origin. (Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, p. 55, Article 12, commentary, para. 3) This fact is important because it could therefore

The commentary of the Articles states that even the fundamental principles of international law do not have a basis in an international law and have not been adopted by any specially regulated procedure.[153] The Articles also refer to the provisions of the Vienna Convention, in particular Article 53, which states the rule that a peremptory norm is a norm that is accepted and recognised by the international community "of States as a whole".[154] According to the Article 53, States have a "special creators"[155] role, as the holders of normative authority on behalf of the international community. This means that States create these norms through their acts in the international community which can be confirmed by simple practice or by the creation of internal norms which then appear within international community in the form of actions. Although international law recognises that while a State's sovereignty allows it to choose which international obligations it will engage with,[156] it is still obliged to adhere to international obligations that are recognised globally and intended to be adopted by all States, such as the basic principles of international law. That means that a State cannot escape its obligation to adhere to the fundamental and basic obligations of international law. The question that appears here is which of the obligations dealing with transboundary pollution are considered as jus cogens and therefore a State could not escape abiding by them. In my opinion, these would be the general principles of environmental law, such as the "no harm" principle and the "polluter pays" principle.

This principle is important for the content of this paper as it means that a polluting State must fulfill its obligations in accordance with

be concluded that this provision will therefore also apply to cases where States do not fulfill their obligations to prevent accidental pollution of the continental shelf.

153 Id., p. 56, Article 12, commentary, para. 7

154 Vienna Convention 1969, Article 53. Article further States: "*from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character.*"

155 By special creators role I mean that only States as parts of international community can recognize norms in a way for them to become a part of customary international law.

156 As Stated in the *S.S. "Wimbledon"* case, "the right of entering into international engagements is an attribute of State sovereignty".

States' practice under international law. States' practice and case law have already established some generally recognised principles, such as the "no harm" principle, the "polluter pays" principle and the principle of sustainable development.[157] A polluting State is therefore in breach and held responsible if it does not follow the abovementioned principles. Furthermore, it is also important for the polluting State to have followed international obligations as established by international law practice and regulations, such as those described in both this and the next Chapter. Therefore, if an accident occurs leading to pollution of the continental shelf, the State is held responsible under international law if it did not fulfill its obligations and also follow the relevant principles as set in international law.

In order to assess if a State has breached obligations of international law, it is important for a panel to look into the international practice established by States, both in cases of transboundary accidental pollution of the continental shelf, and in cases where they assess risky operations which could lead to such accidents.

4.2.6 Article 13 – Main elements that constitute a breach

The provisions of Article 12 and its explanatory commentary are important because these are closely connected to the provision of Article 13 which states that *"an act of a State does not constitute a breach of an international obligation unless the State is bound by the obligation in question at the time the act occurs"*.

Despite the clear provision of the Article 13, the rule is not absolute. International Tribunals made determinations in several cases as to when a State is held responsible. In the *James Hamilton Lewis* case[158] the

[157] These principles are described further in this paper.

[158] In the James Hamilton Lewis case the arbitral tribunal was deciding whether the seizure and confiscation by Russian authorities of United States' vessels engaged in seal hunting outside Russia's territorial waters should be considered internationally wrongful. The tribunal in the case concluded that the case need to be considered *"according to the general principles of the law of nations and the spirit of the international agreements in force and binding upon the two High Parties at the time of the seizure of the vessel"*.

tribunal concluded that since a State is obligated, not only by contractual obligations, but also by general principles of international law, Russia had no right to seize the American vessels, since it was against the general principles that were recognized at the time.

If we apply the provision and interpretation of Article 13 to the case of accidental pollution of the continental shelf, we could conclude that in cases where an accident occurs on the continental shelf, the responsibility of the polluting State depends on two conditions. First of all, it is important to consider the international obligations by which the State was bound at the time of the accident and, secondly, if internationally binding principles existed which bound the State to act in such a manner as to prevent the pollution.

If a polluter State was not a party to any international agreement imposing an obligation to prevent, pollution or an obligation to take all necessary measures and considerations into account before and during the carrying out of a risky activity, then the State cannot be held responsible under the international contractual obligations. In such a case, it is even more important to examine principles of international environmental law in order to see if any of them were internationally binding at the time when the accident occurred, since only then can the State be held responsible.

4.2.7 Article 14 paragraph 3 - Time frame of a breach

The provision of the third paragraph of Article 14 could be important for the cases of accidental pollution, since it touches upon the breach of obligations to prevent acts of a non-continuing character. This provision states that: *"The breach of an international obligation requiring a State to prevent a given event occurs when the event occurs and extends over the entire period during which the event continues and remains not in conformity with that obligation."*.

The provision of Article 14 (3) appears very important for the content of this paper, as it considers States' obligations to prevent accidental pollution of the continental shelf. Since, according to the discussed provision,

a State is in breach of its obligation from the time the event occurs and the whole time the event continues, it means that a polluting State is in breach from the time that the accident occurred and furthermore during the entire period that the consequences of the accident are happening.

Obligations of prevention are understood by the Articles as being best effort obligations that require States to take all reasonable and necessary measures to prevent a given event from occurring, but without warranting that the event will not occur.[159] The commentary also refers to continuing wrongful acts and states that breach of the obligation of prevention can also be a continuing wrongful act. It gives, as an example, the Trail Smelter arbitration where, as seen earlier in this paper, Canada breached its obligation over an extended period and was, as a result, in breach for as long as the pollution continued to be emitted.

4.2.8 Article 31- Full reparation - in line with polluter pays principle

Article 31 is in two parts: it discusses the content of the international responsibility of a State, and it also requires the responsible State to make a full reparation for the injury caused by the internationally wrongful act. Injury is understood as being damage, which can be material, as is the case with accidental pollution.

The commentaries explain what is intended by the term "full reparation", which was clarified in the Factory at Chorzow case: "*The essential principle contained in the actual notion of an illegal act—a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals—is that reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed.*"[160]

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[159] Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, p. 62, Article 14, commentary, para. 14

[160] Germany v. Poland

In cases of transboundary pollution, there is a general principle regulating the consequences of such responsibility, which is the "polluter pays" principle, as already discussed in relation to the Trail Smelter arbitration.

In cases of transboundary accidental pollution of the continental shelf, we can see that a polluting State, if held responsible, would need to pay damages to the State whose continental shelf suffered the consequences, in the amount arising due from the accident.

Another commentary of the discussed Article 13 could also come in useful. In international law it is understood that "*in the theory of international responsibility, damage is necessary to provide a basis for liability to make reparation*".[161]

If that decision is applied to the cases of accidental pollution of the continental shelf, once i.e. an oil spill has occurred on the continental shelf, the spilled oil would be likely to cause damage to its own continental shelf and most probably to the continental shelves of the bordering States. That would lead to the conclusion that the State that engages in the oil activities on its own continental shelf is liable for the damages arising from the spill.

Furthermore, the provision of the 2nd paragraph of Article 31 can only be applied if there is a causal link between the wrongful act under international law and the injury. If there is such a link then, under the abovementioned provision, a State is obliged to make full reparation.[162] The phrase "*injury caused by the internationally wrongful act of a State*", used in the Article 31(2), makes it clear that the subject of the reparation is the specific injury, not all the consequences that arose from the wrongful international act. In order to prove causality between the breach of obligation and the resultant injury, there are several factors that need to be taken into consideration. The ILC suggests some considerations, such as whether State organs deliberately caused the harm in question, or whether the harm caused was within the ambit of the rule which

[161] Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, p. 92, Article 31, commentary, para. 7

[162] Id., p. 93, Article 31, commentary, para. 9

was breached, having regard to the purpose of that rule.[163] Additionally, there may also be two or more factors which lead to the injury and are considered as breaches of international law.[164]

In cases of accidental pollution of the continental shelf the injury caused by the internationally wrongful act would be one of an environmental nature, caused by an accident on the territory of one State that was then transferred of the continental shelf of the other State. In order for a State to be in breach of international obligations in such situations, the State would need to have breached some obligations, such as obligations under UNCLOS to prevent and protect the marine environment, to complete an environmental impact assessment, to act within the limits of the precautionary approach etc. As discussed earlier, what is considered as being an act of a State is an act of its organs and of the State's agents. If these entities deliberately acted to cause harm or if that harm was caused by the State entities breaching the scope of the rule, in this case to cause transboundary pollution of the continental shelf that is spread to the other State, than it can be considered that a State is in a breach of its obligation to prevent accidental pollution of the continental shelf.

4.2.9 Article 33

The Articles also take into consideration the responsibility of several States in the event of breach of an obligation. Article 33 specifically deals with that issue, stating that: "*The obligations of the responsible State… may be owed to another State, to several States, … depending in particular on the character and content of the international obligation and on the circumstances of the breach.*"[165].

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[163] Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, p. 93, Article 31, commentary, para. 10; see also: e.g., the decision of the Iran-United States Claims Tribunal in *The Islamic Republic of Iran* v. *The United States of America*, cases A15 (IV) and A24, Award No. 590–A15 (IV)/A24–FT, 28 December 1998, *World Trade and Arbitration Materials*, vol. 11, No. 2 (1999), p. 45.

[164] Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, p. 93, Article 31, commentary, para. 11

[165] Id. p. 95, Article 33

This Article is important for the cases of pollution in the sea, since that is easily spread to seas belonging to several countries and may originate from the sea which is controlled by several States.

It appears that the ILC also took into consideration the abovementioned situations, as it stated in the commentary that: *"pollution of the sea, if it is massive and widespread, may affect the international community as a whole or the Coastal States of a region; in other circumstances it might only affect a single neighboring State. Evidently, the gravity of the breach may also affect the scope of the obligations of cessation and reparation"*.[166] In such cases, it could mean that a breach affected several countries who may also be parties to a treaty or to a legal regime established under customary international law.[167]

In cases of accidental pollution of the continental shelf, it can very easily happen that e.g. oil is spilled across the continental shelves of several States if they have a common sea border, or if the spill is so massive that it is transferred across the borders of more than one State. In such cases too, problems arise.

First of all, the initial polluting State is responsible to the affected States to which the spill was transferred. The State can be held responsible, either if the affected States had a regional agreement on obligations to prevent accidental pollution of the continental shelf, or according to obligations established by global international agreements and customary international law.[168]

Secondly, a case may arise where an oil spill is transferred from the continental shelf/sea of a polluting State of the continental shelf of a second State, which then does not do enough to prevent the spill from being transferred further to a continental shelf of the third State. In such a situation, what I am questioning about is, will the primary polluter State be held solely responsible for the damages or does it share responsibility with the second State that did not stop the spill from being transferred

[166] Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, p. 95, Article 33, commentary, para. 1

[167] Id., p. 95, Article 33, commentary, para. 2

[168] As described in the paper.

further, since it has a sovereignty over its own territory, but retains an obligation not to affect territories of other States when exercising that sovereignty.

4.3 Obligation to apply precautionary approach

The precautionary approach finds its roots in German national environmental law, at that time being known as the principle of precautionary action, 'Vorsorgeprinzip'.[169] The precautionary approach is, in a way, the result of an improvement of the precautionary action, shifting the priority towards safety and caution.[170] The precautionary approach is based on a new set of assumptions which include the vulnerability of the environment, the limitations of science in actually predicting environmental threats, and the availability of alternative, less harmful processes and products.[171]

4.4 Obligation to apply best available technology

The obligation to apply the best available technology is one of the newest obligations under international environmental law. The obligation is also defined in UNCLOS, where it is stated that States are obliged to take all necesary measures to prevent pollution from any source, *"using the best practicable means at their disposal and in accordance with their capabilities"*.[172] As it will be seen later in this paper, this obligation to apply the best available technology has also been discussed in several other international legal sources. The reason why the obligation to apply best available technology must be fulfilled is because it is through the best available technology that the risks of environmental pollution can be reduced or even eliminated.

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169 McIntyre, Mosedale, 1997, p. 221

170 Id., p. 222

171 McIntyre, O., Mosedale, T. The Precautionary Principle as a norm of Customary International Law, p. 222

172 UNCLOS, Art 194

The obligation to apply the best available technology is also closely connected to the obligation to conduct an environmental impact assessment.

4.5 Obligation to conduct environmental impact assessment

The obligation to conduct an environmental impact assesment is recognised by international environmental law and especially by international environmental law relating to the law of the sea. It also deals with actions to prevent pollution and is therefore very important for the topic of this paper.

Environmental impact assessment should be seen as a very important element at the planning stage, where considerations of the environment are integrated into a decision-making process which includes measures that might have adverse environmental effects.[173] The aim of the environmental impact assessment is to provide a basis for a decision through analysis of the anticipated environmental impact in order to reveal the main risks of the project, so providing possibilities for modifications of the plan in order to make adverse environmental effects less severe.[174]

4.6 Obligation to exercise sovereign rights for the purpose of exploring and exploiting natural resources without unjustifiable interference with the rights and freedoms of other States

The obligation to exercise sovereign rights for the purpose of exploring and exploiting a State's natural resources without unjustifiable interference with the rights and freedoms of other States is set out in Article 77 of UNCLOS. Paragraph 1 of Article 77 States that: "*the Coastal State exercises sovereign rights for the purpose of exploring and exploiting its*

[173] Wirth, (2007), p.420

[174] For example, 1991 UNECE Convention on Environmental Impact Assessment in a Transboundary Contect (Espoo Convention)

natural resources",[175] which means that States are entitled to make use of their own territory to exploit their natural resources, but need to take into account the risks of environmental damage that such activities may cause to the territories of other States. If their assessment shows that such activities might cause harm to the environment of other States, the polluting State needs to take measures to prevent such pollution from occurring.

4.7 Obligation of prevention, reduction and control of marine pollution

The obligation to prevent, reduce and control marine pollution is one of the most important obligations of international environmental law regarding the marine environment. This obligation is discussed both in UNCLOS as well as in the ILC draft Articles on Responsibility of States for Internationally Wrongful Acts.

In UNCLOS, the obligation is described as follows: "*States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention*."[176].

The obligation is also connected with the ILC draft Articles on Responsibility of States for Internationally Wrongful Acts, where a breach of a State's international obligation is considered as entailing responsibility by that State.

If we look specifically into the obligation of prevention, reduction and control of marine pollution and apply it to the definition of a breach of obligation by a State, which is defined as being: "*when an act of that State is not in conformity with what is required of it by that obligation, regardless*

[175] UNCLOS, Art 77
[176] Id., Article 194 (2)

of its origin or character,"[177] it can then be concluded, in cases where States do not act in conformity with the abovementioned obligation, that the States are held responsible for such a breach.

4.8 Obligation to take measures to ensure the provision of good environmental practices

The obligation to take measures to ensure the provision of good environmental practices was discussed in connection with the case of Responsibilities and obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, where the ITLOS Chamber decided that the State would not be held liable, according to UNCLOS Article 139(2) second sentence, if the sponsoring State has taken all necessary and appropriate measures to secure effective compliance.[178]

[177] ILC Draft Articles on Responsibility of States for Internationally Wrongful Acts, 2001

[178] Principles of International Environmental Law, (2012) pp. 732

5 Application of Rights and Obligations of States in relation to their activities on the Continental Shelf

5.1 Obligation to apply precautionary approach

The precautionary approach is an important obligation of international environmental law and is therefore also important in cases of prevention of accidental pollution of the continental shelf. As seen above, the approach was named in the case of Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, where the ITLOS Seabed Disputes Chamber stated that sponsoring States are under an obligation to apply the precautionary approach and that the application is furthermore also obligatory under international legislation.[179]

The approach is nevertheless also used in cases regarding marine pollution, into which category falls accidental pollution of the continental shelf. It was included in several different conventions, which emphasised it as being an obligation on States. The precautionary approach was used in the Bremen Ministerial Declaration of the International Conference on the Protection of the North Sea,[180] where it was decided that it was required in order to protect the North Sea from possibly damaging effects from the most dangerous substances.[181]

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[179] See Chapter 4.1

[180] Concern among North Sea states that the large inputs of various harmful substances via rivers, direct discharges and dumping of waste at sea could cause irreversible damage to the North Sea ecosystems as well as some countries' dissatisfaction with the slow progress made by competent international organisations in protecting the marine environment, resulted in the first International Conference on the Protection of the North Sea, in Bremen in 1984. See also: https://www.ospar.org/about/international-cooperation/north-sea-conferences

[181] Bremen Ministerial Declaration of the International Conference on the Protection of the North Sea, 1984

The approach was also used in other intenational or regional acts, such as the Paris Convention for Prevention of Marine Pollution from Land Based Sources,[182] the Barcelona Convention for the protection of the Mediterranean Sea against pollution, the Nordic Councils Convention on Pollution of the Seas and in the UN Environmental Programme Governing Convention.[183]

In the Preparatory Commission for the UN Conference on Environment and Development the Commission's priority was placed on the applicability of the precautionary approach. The Commission stated that all governments should adopt the principle of precautionary action as the basis of their policy on the prevention and elimination of marine pollution. The Commission also stated that the precautionary approach should be implemented through clean production methods at the global, regional and national levels, targeting all synthetic and persistent substances that harm the environment.[184] The UN Conference's decision is important because it applies globally, which makes the precautionary approach lean towards being part of customary international law.

It is very important to apply the obligation of precautionary approach in areas where accidental pollution presents an even greater level of devastating harm than in other areas. An example of this would be the Arctic. Another example is the North East Atlantic Fisheries Commission (NEAFC), where the precautionary approach was introduced.[185]

5.2 Obligation to apply the best technology available

As discussed earlier in Chapter 4, the obligation to apply the best technology available is one of the key obligations of environmental law, and this has been given a more prominent role in recent times, due to constant technological development. As Stated in Article 194 of UNCLOS, States

[182] Paris Convention for Prevention of Marine Pollution from Land Based Sources

[183] UN Environmental Programme Governing Convention

[184] Doc A/CONF i5 i/PC/WG II/L I. See Nollkaemper, p.8, para 20

[185] Convention on Future Multilateral Cooperation in Northeast Atlantic Fisheries (NEAFC Convention), Article 4 (2)(b)

are obliged to use the best means practicable, in order to prevent marine pollution.[186]

However, in order to understand the obligation, it is important to understand what is considered to be the best technology available, as well as if the term is absolute, or relative to the capabilities of each State. As mentioned above, the obligation to apply the best technology available is indirectly included in Article 194 of UNCLOS, through the wording: "best practicable means at their disposal", as well as by other instruments that regard the means that States must adopt in order to protect marine environment.[187] Since it is stated in 194(1) UNCLOS that States should employ the best practicable means at their disposal, it can be concluded that, under UNCLOS, States have an obligation to apply best technology available, relative to their capabilities. In other words, there is no single absolute criterion with which the obligation is fulfilled, but it rather depends on the economic capability and technological development of each State, when in a situation where it must prevent marine pollution.

In the Quito Protocol,[188] the obligation of best available technologies, together with best environmental practices, was specified rather early on, in 1982. The aim of the two obligations was to ensure that the quality of sea water is high enough to guarantee the preservation of human health, living resources and ecosystems.[189] According to the Protocol, States are obliged to establish "*special requirements for effluents that must be treated separately*".[190] In addition, the Quito Protocol mentions that States should employ the best technology available in accordance with their economic

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186 UNCLOS, Art 194

187 Under UNCLOS, States are obliged to protect the marine environment from all sources of degradation, to use either the best practicable means at their disposal or apply the rules, standards and recommended practices and procedures that are formulated and elaborated internationally. In: Dzidzornu, D. M., Marine Environment Protection under Regional Conventions: Limits to the Contribution of Procedural Norms, 33 Ocean Dev. And International Law (2002), p. 276

188 Quito Protocol, mechanisms: https://unfccc.int/process/the-kyoto-protocol/mechanisms

189 Id.

190 Id., Art VI(b)

capacity,[191] which once again confirms that the substance of the obligation depends on the economic capacity of each State.

The obligation to use the best technology available is also considered in a regional Act, named as the Wider Caribbean Land Based Sources Protocol[192] in Article I(e), where best technology available it is considered as being the most appropriate technology for each member State, with the same view taken for the most appropriate management approaches.[193]

In cases of accidental transboundary pollution of the continental shelf, this would therefore mean that States fulfill their obligations when they employ the best technology available which is at their disposal according to their economic situation and development. That further means that the obligation is stricter for the more developed and wealthier States than it is for developing States, but that does not mean that the application of obligation is unfair, it merely means that it cannot be expected from each State to apply the obligation to the same extent if their capabilities do not allow them to do so, due to lack of finances and State of development.[194]

5.2.1 Obligation to use best technology available – obligation of result or of conduct?

The obligation to employ the best technology available seems to be more an obligation of conduct, as the conduct needs to be constantly supervised and adjusted to the current circumstances. The obligation must also be monitored and reported, and, as stated earlier, States which might be affected by potential pollution need to cooperate with each other in order to prevent potential pollution from happening. The question that might appear here is

[191] Quito Protocol, Article IV, para. 2, Art. V 2.

[192] The Protocol Concerning Pollution from Land-Based Sources and Activities (LBS Protocol)

[193] Wider Carribean Land Based Sources Protocol, supranote 10 to Article 1 (e) See also: http://www.cep.unep.org/cartagena-convention/lbs-protocol

[194] See also: Dzidzournu: Even substantive best available techniques and best environmental practices norms are flexible, functional tools largely subject to the technical and economic capacity of States and subject to their discretion indeciding what those tools may actually be in every situation.

which requirements are imposed on the work that a state does in order to prevent pollution.

If we apply the obligation to apply the best technology available to the issue of accidental marine pollution, we can say that the obligation applies here too, and plays an important role in this area. It is important that this obligation is fulfilled, as it is of great help in preventing accidental pollution from happening, or to at least reducing the possibility of pollution.

Last but not least, it is important to look at the obligation to use best technology available together with the obligation to prevent, reduce and control marine pollution, as well as the obligation of cooperation. That is because the best available technologies and best environmental practices need to be applied in order to achieve the latter obligation of cooperation. In addition, States which can be jointly affected by potential marine pollution need to cooperate in order to prevent such pollution from occurring. As a result, the three obligations need to be viewed both together and separately.

5.3 Obligation to conduct environmental impact assesments

For a better understanding of what this obligation means, it is important to understand the term "environmental impact assessment". In general, the environmental impact assessment is understood as being a study of the adverse effects that a planned activity may have on the environment.[195] The purpose of the environmental impact assessment is to ensure consideration is given to the environmental impacts of a project and to influence policy making by predicting the implications of a project and aiming to mitigate and alleviate any harm.[196]

No clear and defined standards exist for the process of concluding the environmental impact assessment, although it is important for States to have some guidelines in order to successfully fulfill this obligation. That being said, some general observation could be made on the kind

[195] Preiss, (1999)

[196] Id., p. 310

of process by which the environmental impact assessment is usually undertaken. The common features that States are supposed to take into consideration in order to fulfill their obligation to undertake an environmental impact assessment are as follows: States need, at the preliminary stage, to choose a decisionmaker, describe the proposed activities and review the applicable legislation. Next, States need to impose a stage of impact identification or scoping, where a range of the various potential impacts must be studied. In this impact identification the magnitude, extent, significance and special sensitivity of certain areas to certain harms should be taken into account. In order to be able to compare the position before and after the proposed activity, a comparison must be carried out of the area affected prior to the proposed action. The environmental impact assessment process documentation then leads to the creation of a detailed environmental impact statement deliminating the comparison of alternatives and decisionmaking, arising from which policymakers then determine the parameters of the project, based upon the environmental impact assessment.[197]

What might be seen as a difficult point is the fact that the environmental impact assessment is limited to the direct effects of a project, where the pollution from accidents of the continental shelf could be included, but only if those accidents were directly connected to the activity; whereas in other cases, where it is not directly linked to the activity, States would not be held liable by breaching the obligation to carry out an environmental impact assessment.

It is therefore important that the guidelines for the environmental impact assessment should be determined. If that were done, the process of the environmental impact assessment would reduce the uncertainty and malleability of the resultant environmental impact statement, and thus improve its overall effectiveness. That being said, there should be explicit, formal mandates requiring environmental impact assessments so that officials can be held accountable when the process is not used in decisionmaking. Further, the obligation to carry out an environmental impact assessment should probably be considered as an obligation of

[197] Preiss, (1999), pp. 310

conduct and not of result. That would mean that in cases where the State carried out an environmental impact assessment, where it included all the abovementioned considerations in an ongoing, it would not be held liable for the damages, but if there was found to be some lack of proper consideration in the assessment, the State should then be held liable for resulting damages in the case of accidents of the continental shelf.

The environmental impact assessment has also been used by several international legal sources.

In the European Union, the environmental impact assessment is regulated by Directive 85/337, where the Directive regulates the environmental impact assessment for both public and private projects and States that it must identify both the direct and indirect effects of a project.[198]

The obligation to carry out an environmental impact assessment was also mentioned in the well known Stockholm Declaration.[199] In Principle 17 it stated that: "*Appropriate national institutions must be entrusted with the task of planning, managing or controlling the 9 environmental resources of States with a view to enhancing environmental quality.".* In stating that, the Stockholm Declaration required States to engage institutions to carry out environmental impact assessments in situations where activities which might affect the environment are planned to be undertaken.

Regarding the marine environment and the continental shelf, it is very important that the obligation to carry out an environmental impact assessment is also included in UNCLOS. Article 206 states that: "*When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205.".* Nonetheless, the wording of Article 206 might not suffice in cases where accidental pollution occurs, since the wording of the Article says: "*when States have*

[198] European Council Directive No. 85/337

[199] Declaration of the United Nations Conference on the Human Environment http://www.un-documents.net/unchedec.htm

reasonable grounds for believing…may cause substantial pollution…". That could be understood as meaning that in cases of accidental pollution, where it might have not been reasonable to expect it, States would not have an obligation to conduct environmental impact assessment, rather than staying on the safe side and conducting an environment impact assessment in any case, just to ensure that the State did everything in its power to prevent accidental pollution of the continental shelf.

The opinion in the case of Responsibilities and obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area[200] also considers the obligation to conduct an environmental impact assessment as being one of the obligations that States should fulfill in order to prevent pollution in the area. In the opinion, it was stated that States should conduct environmental impact assessments and that these needed to be carried by the contractor.[201] In the environmental impact assessment, States must take into consideration potential harm that might not be visible at the very start of the activities in the Area, but which might appear over time and present potential harm to the Area. It is important that the States carry out an environmental impact assessment, since they are subject to a direct obligation under UNCLOS, as well as under customary international law.[202] The ITLOS Chamber also decided that the obligation of States to carry out environmental impact assessments extended from the inland area, to the Area. The question is one of whether the obligation to make an environmental impact assessment also extends of the continental shelf of a sponsoring State. According to the language of the Chamber's opinion that might be possible, but it could not be stated for certain, as the Chamber was deciding specifically on the activities in the Area.

Another example is the Pulp Mills case, where the Court discussed the obligation to complete environmental impact assessments. In its

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200 ITLOS Seabed Disputes Chamber. Advisory opinion of 1 February 2011. Responsibilities and obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area

201 Id., par. 141, see also: Annex to the 1994 Agreement, section 1, para. 7

202 Id., par. 145

judgment, the ICJ stated that this obligation had, in recent years, gained so much acceptance among States that it could now be considered as a requirement under general international law. Environmental impact assessment needs, according to the Court's own words, to be carried out "*in cases where there is a risk that the proposed industrial activity may have significant adverse impat in a transboudary context...*".[203] In cases where States do not complete an environmental impact assessment, they are liable for breach of due diligence, as well as of the duties of vigilance and prevention.

This is a very important Statement by the ICJ for the topic of this paper, since it means that the obligation to complete an environmental impact assessment is an obligation of customary international law. That means that States are obliged to undertake an environmental impact assessment whenever they wish to carry out activities of the continental shelf which could cause cross border pollution to the continental shelves of other States. According to other international legal documentation, the assessment also needs to be updated constinuously during the period that the activities are being carried out, if it was not concluded at the start that the activities had too great an impact on the environment. The issue that appears here is the content of the environmental impact assessment. The question is, how detailed does it need to be, in order for States not to be held liable if accidents causing transboundary pollution then occur. It could be concluded that the environmental impact assessment needs to be undertaken on the basis of opinions of experts or expert groups that are independent and not influenced by economic interests. Furthermore, in cases where a State completes out a very generalised environmental impact assessment, or one which is out of date, or omits some considerations, then, although the State has fulfilled its obligation under environmental international law, it could still be held liable due to an insufficient environemntal impact assessment.

As already seen and stated, the obligation to conclude an environmental impact assessment is included in several international law legal sources, but some of these are not binding, such as the Stockholm

[203] Argentina v. Uruguay, para. 164, pp. 71

Declaration. On the other hand, environmental impact assessments are widely used in the field of environmental law when activities are being undertaken that may harm the environment. However, the concern here is that, there is no clear procedure required when States are conducting environmental impact assessments. It seems that States could easily avoid liability by conducting environmental impact assessments without taking into account any detailed consideration, so leaving the activities' potential harmful effects and the future of such activities as still uncertain. Furthermore, UNCLOS' wording is more advisory rather than a requirement, as it says that States "*shall as far as practicable*" make an assessment, rather than that they either should or must.

If the obligation to carry out an environmental impact assessment is applied to the field of prevention of accidental pollution of the continental shelf, it then becomes obvious that the obligation also implies such situations. As a result, everything mentioned above would also be applicable to cases of prevention of accidental pollution of the continental shelf.

5.4 Obligation to exercise sovereign rights for the purpose of exploring and exploiting a State's natural resources without unjustifiable interference with the rights and freedoms of other States

The rights and obligations of Coastal States on the continental shelf are regulated by Part VI of UNCLOS. The specific obligation is dealt with in Article 77 of UNCLOS. Paragraph 1 of Article 77 States that a Coastal State exercises sovereign rights over the continental shelf for the purpose of exploring it and exploiting its natural resources. This provision therefore gives rights to the Coastal States to exercise activities in the area of the continental shelf and sets out the nature of those rights.[204] However, those activities are to some extent limited by the obligations of States to prevent pollution of the marine environment.

[204] United Nations Convention on the Law of the Sea, 1982: commentary : Supplementary documents. (2012)

According to Article 78, paragraph 2 of UNCLOS, the exercise of Coastal States' rights over the continental shelf must not infringe or result in any unjustifiable interference with the rights and freedoms of other States. This means that when States undertake such activities, they are not allowed to cause accidental pollution that would affect the continental shelves of other States and must therefore do everything in their power in order to prevent such pollution. Article 78(2) derives from Articles 3 and 5(1) of the 1964 Convention on the Continental Shelf. The latter specifies navigation, fishing, conservation of the living resources and "*fundamental oceanographic or other scientific research*" as being activities with which the Coastal State was not to unjustifiably interfere.[205] This provision could be interpreted as meaning that, in cases where a State carries out activities on its own continental shelf, such as exploration and exploitation, which it is entitled to do, it is obliged to take into consideration the fact that its activities might infringe on the rights and freedoms of another State. If the evaluation of possible consequences shows that these might impact on the territories of other States, then they are not allowed to perform such activities, in accordance with the Article 78(2) of the 1964 Convention.

This obligation was also considered in the Aegan Sea case.[206] In the case the ICJ argued that: "*As the Court explained in the above-mentioned cases, the continental shelf is a legal concept in which "the principle is applied that the land dominates the sea" (I.C.J. Reports 1969, p. 51, para. 96); and it is solely by virtue of the coastal State's sovereignty over the land that rights of exploration and exploitation in the continental shelf can attach to it, ipso jure, under international law. In short, continental shelf rights are legally both an emanation from and an automatic adjunct of the territorial sovereignty of the coastal State. It follows that the territorial régime-the territorial status-of a coastal State comprises, ipso jure, the rights of exploration and exploitation over the continental shelf to which it is entitled under inter- national law. A dispute regarding those rights*

[205] United Nations Convention on the Law of the Sea, 1982: commentary : Supplementary documents. (2012) Part VI

[206] Greece v. Turkey

would, therefore, appear to be one which may be said to "relate" to the territorial status of the coastal State."[207]

5.5 Obligation of prevention, reduction and control of marine pollution

The obligation of prevention, reduction and control of marine pollution can be divided in two parts; pollution from land-based sources and oil installations, and pollution from ships.[208] Part XII of UNCLOS provides that States cannot become parties to UNCLOS without accepting its detailed provisions on the prevention, reduction and control of marine pollution. That can be read as meaning that when States become parties to UNCLOS, they are obliged to follow provisions on prevention, reduction and control of marine pollution. The provisions of UNCLOS need to be read together with the ILC 2001 Articles on Responsibility of States for Internationally Wrongful Acts.[209]

Article 194(1) of UNCLOS regulates the general obligation on States to take all measures consistent with UNCLOS that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best means practicable at their disposal and in accordance with their capabilities. Article 194(2) of UNCLOS imposes an obligation on States regarding transboundary pollution from activities under their jurisdiction and control, i.e. activities by ships flying their flag, by entities engaged in seabed activities subject to their jurisdiction, etc. That provision can be read as meaning that States have an obligation to take all necessary measures to prevent accidents that would cause accidental transborder pollution.

Article 194(3) of UNCLOS sets out the types of pollution against which measures must be undertaken to protect and preserve of the marine environment, including pollution from hazardous and noxious substances, pollution from vessels, and pollution from installations and

[207] Greece v. Turkey, para. 86

[208] For better oversight the two parts will be divided in two chapters.

[209] Draft articles on Responsibility of States for Internationally Wrongful Acts, 2001

devices used in exploration or exploitation of the natural resources of the seabed and subsoil.

Article 208 of UNCLOS places an obligation on Coastal States to adopt laws and regulations and take other measures to prevent, reduce and control pollution of the marine environment from their activities, and requires that these measures shall not be less effective than international legal sources. States must also establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from their activities. However, no such global rules, standards and recommended practices and procedures (as listed in Article 208) have been established. However, some IMO conventions do establish rules and standards for certain seabed activities, such as the International Convention on Oil Pollution Preparedness, Response and Cooperation.[210]

In cases where ships have the potential to cause a disaster via an accident when sailing through a sea that is under jurisdiction of another State, it is important that States have obligations to try to prevent pollution from their ships. Although the size of ships might not be as great as that of installations carrying out offshore drilling, they can still cause a natural disaster to the continental shelf.

There is a general obligation on States to take all measures necessary that are consistent with UNCLOS to prevent, reduce and control pollution of the marine environment from any source. States therefore need to use the best means practicable which are at their disposal and in accordance with their capabilities to achieve this.[211]

States are also obliged to take all necessary measures to ensure that activities under their jurisdiction or control are exercised in such a way that they do not cause pollution damage to other States and their environments, and furthermore, that the pollution caused by incidents or activities under their jurisdiction or control does not spread beyond the areas over which they exercise sovereign rights in accordance with

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[210] Transboundary Pollution: Evolving Issues of International Law and Policy. (2015) p. 151

[211] Id., p. 140

UNCLOS.[212] This means that States are under an obligation not to cause harm to areas that are not under their jurisdiction or within their territory.[213] One could therefore conclude that States need to ensure that pollution on their continental shelf does not spread to the area of continental shelf of another State. In connection with Article 194(2), it could be concluded that States that do not fulfill their obligation to prevent, reduce or control transboundary pollution caused by activities carried out by them, are responsible for the harm that is a consequence of such pollution.

The obligation to prevent transboundary pollution is connected to the principle of preventive action. As discussed in Chapter 3.2, both the principle of preventive action and the obligation to prevent transboundary harm date back to the Trail Smelter Arbitration. The obligation to prevent transboundary harm is also discussed in the Pulp Mills case, the Corfu Channel case[214] and in the opinion of Legality of Threat or Use of Nuclear Weapons.[215] In both the Corfu Channel case and the Nuclear Weapons' case, the ICJ determined that the obligation of prevention can be breached by either an act of State or by an omission.[216] If we apply the rule from these two cases to the cases of prevention of accidental transboundary pollution of the continental shelf, it could be understood as meaning that a State is held in breach of its obligation. This would be the case first of all in situations where it, for example, pursued the activities on the continental shelf, when it knew that the activities might cause an accident that would then lead to environmental harm on the continental shelves of other States. And secondly, a State would be in breach of its obligation to prevent transboundary harm in cases of omission, which would mean, in cases of transboundary accidental pollution of the continental shelf,

[212] UNCLOS, Art 194(2)

[213] The responsibility of States to ensure to prevent, reduce and control pollution is, as read in the light of the reasoning in the *Advisory Opinion on Seabed Activities,* an obligation due diligence and is an obligation of conduct.

[214] UK v. Albania

[215] Legality of Threat or Use of Nuclear Weapons (Advisory Opinion),

[216] UK v. Albania Rep 4 at para 22, Legality of Threat or Use of Nuclear Weapons (Advisory Opinion), Rep 226 at para. 9

that the State did not impose actions when it was obliged to do so. In such cases we can make a connection to the obligation to conduct an environmental impact assessment, which was discussed earlier. In cases where a State fails to do so, it would be in a breach of the obligation to prevent transboundary pollution.

5.5.1 Montara Oil Spill Case

A case regarding the Obligation to prevent, reduce and control pollution is also a case of the Montara Oil Spill. In the Montara Oil Spill case, an oil spill occurred in the Timor Sea in the Australian waters where, within days, oil slicks and sheen extended across 5800 square miles and from Australian to Indonesian waters.[217] Because there was a dispute about who was responsible to carry out the research into the environmental damages from the spill and considerations of liability, the Montara Commission of Enquiry was established. This Commission, established by the Australian government, first reported that the evidence before the Inquiry showed that the oil spill entered Indonesian waters and the Timor Leste waters.[218] However, transboundary damage was not included in the terms of reference of the Enquiry. The Indonesian government therefore requested compensation from PTT Exploration and Production Public Company in Australasia (Later: PTTEPAA) for damage caused, and in September 2014 the Indonesia government wrote to the Australian government to encourage PTTEPAA to resolve the case. However, the Australian government did not require PTTEPAA to take any action to ensure that Indonesia was not affected by the spill, and instead it only stated that any negotiations must be between the government of Indonesia and PTTEPAA.[219] In addition, Australian government did not, at any stage, put significant pressure upon PTTEPAA to investigate, remediate or negotiate in good faith regarding

[217] IMO, LEG 97/14/1 Proposal to add a new work programme item to address liability and compensation for oil pollution damage resulting from offshore oil exploration and exploitation, Submitted by Indonesia, par. 6

[218] Australian Lawyers Alliance, After the Spill: Investigating Australia's Montara oil disaster in Indonesia, p. 4

[219] Id., p. 7

the claims emanating from Indonesia.[220] The case was later examined by the Australian Lawyers Alliance that discovered new evidence, such as eyewitnesses that saw the oil spill being transferred to the Indonesian coast, causing death of a big amount of fish.[221] The Australian Lawyers Alliance also presented the evidence by PTTEP Australasia Inquiry that found that the Northern Territory Department of Resources made a major error in approving the Phase 1B Drilling Program and 'did not take adequate steps to ensure that PTTEPAA actually complied with the requirement of good oilfield practice.'[222] Despite the fact that the opinion of the Australian Lawyers Alliance might not be legally binding, they yet make some valid points that Australia might have been in a breach of the obligation to prevent, reduce and control pollution.

5.5.2 The Deepwater Horizon oil spill

Another example of possible breach of obligation to prevent, reduce and control pollution in cases of accidents is the Deepwater Horizon oil spill. The spill did not apppear in a single monolithic spill, but instead in in thousands of smaller disconnected spills, which threatened the coastlines of five Gulf Coast States.[223] It was reported that the significant risks of a well blowout a mile below the surface of the Gulf was underestimated, and therefore the contingency plan was not sufficient to respond to a discharge of such a magnitude.[224] Because of the significance of the oil spill, the Spill of National Significance and the National Incident Commander designations tested the existing laws, regulations, policies and procedures that govern oil spill response and the fundamental principles relating to the roles of reponsible parties and governments in oil spill response.[225]

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220 Australian Lawyers Alliance, After the Spill: Investigating Australia's Montara oil disaster in Indonesia, p. 4

221 Id., pp. 5–7

222 Montara Commission of Inquiry, par. 13-14

223 IMO The National Incident Commander Report MC252 Deepwater Horizon Oil spill, p. 6

224 Id.

225 Id.

Although in the Gulf of Mexico oil spill case the responsible parties were private entities and the matter was one of federal, not international, nature, it is still a good example of how the oil spilled is transferred from the maritime environment of one state to another, and furthermore, how it pollutes the continental shelves of several states. Regarding the latter, the case is also useful for the purposes of analysis of state practice in the prevention of accidental pollution of the continental shelf. And despite the fact that the oil spill happened on the US continental shelf over which the US has jurisdiction, the US still needs to take into consideration its international obligation to prevent transboundary pollution of continental shelf.

5.5.3 Dispute concerning delimination of the maritime boundary between Ghana and Cote D'Ivoire in the Atlantic Ocean

Yet another important example is the dispute between Côte D'Ivore and Ghana, where the activities of oil exploration and exploitation being exercised by Ghana on the outer limits of its continental shelf at the Jubilee field,[226] allegedly (as claimed by Côte D'Ivoire) caused serious harm to Côte D'Ivoire's marine environment. Furthermore, traces of pollution were also found in the TEN area that had been connected with the dumping of drilling mud and degassing hydrocarbon spills from ships and platforms in the area.[227] Based on these discoveries, Côte d'Ivoire claimed[228] that, according to Article 193 UNCLOS, Ghana needed to act »*in accordance with their duty to protect and preserve the marine environment*.«

ITLOS confirmed Côte D›Ivoire›s standing to some extent and ordered Ghana to take all necessary steps to ensure that no new drilling, either by Ghana or under its control, take place in the disputed area as defined in paragraph 60 of the order, and to carry out strict and continuous

[226] Cote D'Ivoire submission, par. 47
[227] Id., par. 47
[228] Cote D'Ivoire claim, par. 17

monitoring of all activities undertaken by Ghana or with its authorization in the disputed area, with a view to ensuring the prevention of serious harm to the marine environment.[229]

ITLOS also ordered both parties to the dispute to take all necessary steps to prevent serious harm to the marine environment, including the continental shelf and its superjacent waters, in the disputed area and that they must cooperate in doing so.[230] In doing that, ITLOS confirmed the obligation to take all necessary steps to prevent environmental.[231]

A State needs to be aware that offshore activities present a high risk of causing pollution of the area where the activities are being undertaken. If the impact of the activities is not monitored on a regular basis and the necessary actions to prevent pollution are not being undertaken, that could lead to serious damage and harm to the environment and, specifically, of the continental shelf. That might be especially problematic in cases such as the one considered here, where the outer limits of the continental shelf are not clear and settled, so one State might be causing pollution to the other State's continental shelf. It is therefore important that ITLOS decided that Ghana was not allowed to start any new drilling in the area, and, in addition, that it would monitor the current activities. On the other hand, even if the outer limits of continental shelf of one country are settled, a State might also need to take into consideration the streams and regular winds. As was the case in Côte D'Ivoire and Ghana, Côte D'Ivoire claimed that the winds are blowing westwards, which meant that it might bring the pollution even as far as the undisputed area of the Côte D'Ivoire's continental shelf.

Although the case was about ruling on continuous pollution and not accidental pollution of the continental shelf, there seems to be no reason why the same reasoning cannot be applied in cases of accidental pollution of the continental shelf. Both types of pollution lead to the same result, environmental harm, and the consequences of both might be devastating, or at least very harmful.

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229 Ghana v. Cote D'Ivoire, p. 22

230 Id.

231 The latter was detailed in the earlier in this paper.

5.5.4 Draft articles on Prevention of Transboundary Harm from Hazardous Activities

It is also important to look into the draft Articles on Prevention of Transboundary Harm,[232] that were finalized by the International Law Commission in 2001, dealing with *"the concept of prevention in the context of authorization and regulation on hazardous activities which pose a significant risk of transboundary harm"*.[233] The reason to do so is because in some UNCLOS cases, the provisions of UNCLOS have to be read together with them.[234]

Draft articles establish rules regarding transboundary harm, but one needs to keep in mind that the articles are not legally binding on either side, and that the draft articles are dealing with transboundary harm in general, and not with the transboundary harm of the continental shelf in particular. As a result, they cannot be directly applicable for the topic of this paper, but are nonetheless still useful, as they show the position of international law in situations of transboundary pollution, and beyond that can also be of help in concluding how the international law tribunals would act in future cases of accidental pollution happening of the continental shelf. The articles might also be useful as they touch upon the issues concerning liability. An important aspect of the articles is also that they underline the importance of prevention of harm, rather than compensation after the harm has already occurred. Prevention of transboundary harm appears a very important aspect of international environmental law, and, as stated earlier in this chapter, it is also emphasised in practice, as confirmed in the ICJ's advisory opinion on the Legality of the Threat or Use of Nuclear Weapons, and additionally in Principle 2 of the Rio Declaration on Environment and Development.

Article 1 sets out the applicability of the articles and their scope and requires that articles apply to those activities that are allowed by international law, but which involve a risk of causing significant transboundary

[232] International Law Commission Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, 2001

[233] Id., paragraph 1

[234] Id.

harm through their physical consequences. According to the commentary, the article also covers so called "ultrahazardous activities", which are understood as being activities which involve a danger that is rarely expected to materialize, but which might assume serious and substantial proportions. Such a definition could be understood as meaning that the articles also apply to activities that lead to acute pollution (i.e. as defined in the Norwegian Prevention of Pollution Act) of the continental shelf. It is important that the scope of the articles is solidly settled, as that will then affect what kind of actions and occasions may fall within the scope of the articles.

In order to apply the articles to the issue of prevention of accidental pollution of the continental shelf, it is important to understand the criteria for when the articles are applicable. The first criterion refers to "activities not prohibited by international law".[235] The reason for this approach, according to the International Law Commission, is to separate the topic of international liability from the topic of States' responsibility. Furthermore, the criterion is important in that it allows a State which is likely to be affected by an activity involving the risk of causing significant transboundary harm, to demand from the State that might cause harm that it comply with obligations of prevention, even though the activity itself is not prohibited.[236]

The second criterion is connected to the issue of where preventive measures are applicable. In the criterion three concepts are used: territory, jurisdiction and control. An interesting fact is that the Commission decided to frame the wording in such as way as to include the term "territory", which leads to the conclusion that it wanted to underline the importance of the territorial link between activities under the articles and a State, and underlines the fact that territory is used as evidence of a State's jurisdiction, meaning that territorial jurisdiction is a dominant criterion for the purpose of the Articles.[237] In cases relating to activities

[235] ILC Draft articles, Article 1
[236] Id., Article 1, comment 6
[237] ILC Draft articles, Article 1, comment 8

of the continental shelf, it is therefore important to consider that the activities are happening of the continental shelf of the polluting State.

The third criterion analyzed is that activities must involve a risk of causing significant transboundary harm, where the term "transboundary harm" is intended to exclude activities that cause harm solely within the State's own territory and there exists no possibility of harm to the territory of any other State.

The last, but not least, criterion to which the consequences apply is that the significant transboundary harm must have been caused by the physical consequences of such activities, meaning that it excludes consequences of any nature other than physical.[238]

Article 3 deals with the problem of prevention. The article states that "*the State of origin shall take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof".* That article is based on the fundamental principle *sic utere tuo ut alienum non laedas,* and on principle 21 of the Stockholm Declaration, which provides the rule that States have a right to use their resources, but also the responsibility that the environmental impacts of their activities are not transferred to the territory of jurisdiction of another State. Article 3 provides a rule for States to take all appropriate measures to prevent significant transboundary harm, and in cases where that is not possible, to minimize the risk. The term "all appropriate measures" refers to all the specific actions and steps specified in articles 9 and 10, which explain the substance of prevention.

Article 9 requires the States to consult, at a State's request, in order to achieve acceptable solutions to prevent significant transboundary harm (as explained in Article 3) or to minimize its risk. Such consultations can happen, either prior to the authorization of the potential harmful activity, or during its performance.[239] As such consultations need to lead to the provision of preventive security measures, the parties need to enter consultations in good faith and consult the other parties, in order to adopt an acceptable solution regarding the abovementioned measures.

[238] ILC Draft Articles, Article 1, comment 16

[239] Id., Article 9, comment 1

According to the purpose of the article, the parties should first and foremost aim at selecting those measures which may avoid any risk of causing significant transboundary harm, and only in cases where that is not possible, aim to minimize its risk.[240] Another important fact is that the measures that the parties are required to discuss are of a continuous nature and should therefore be executed throughout the entire period that the activity is being performed.

In the cases of accidental pollution of the continental shelf, the application of Article 9 would mean that the State that is planning to, or is already carrying out activities of the continental shelf that might cause accidental pollution, needs to select such measures as woould minimize the risk of such an accident, and evaluate the possible risks on a continous basis.

Article 10 provides guidance to States that are engaged into consultations. An interesting aspect is the precautionary principle included in the article, which has, according to the commentary, also been affirmed in the "pan-European" Bergen Ministerial Declaration on Sustainable Development in the ECE Region.[241] Article 10 finds its meaning in the wording of the Rio Declaration, where it is stated that the precautionary principle constitutes a general obligation of prudent conduct. Another consideration in the Article 10 is that if States are likely to be affected, they should be prepared to contribute to the expense of preventative measures, where it may be reasonable to expect that the potential polluter State will undertake costly but more effective preventative measures. However, according to the articles, this should not underplay the other State's obligation to take appropriate measures. Considerations of the abovementioned sentences are in line with the policy of the polluter pays principle as well.[242]

Articles 3, 9 and 10 together form a harmonious ensemble and show in which direction the International Law Commission is leaning. The question that then appears here is whether, since the two principles apply

[240] ILC Draft Articles, Article 9, comment 6

[241] Id., Article 10, comment 6

[242] Id., Article 10, comment 9–10.

within international law in general, there is any element involved of *lex specialis* regarding the obligations of States in cases of a threat of acute pollution of the continental shelf. As far as is known, no specific rules that would be negative to the abovementioned principle have been applied, so leading to the conclusion that States should fulfill their obligations in the light of no harm and polluter pays principles.

5.5.5 Conclusion

Regarding this obligation, the question remains of whether the breach of obligation is considered as an objective responsibility or if it is a due diligence obligation. In considering this question, both the ICJ and ITLOS concluded that the nature of the general obligation to prevent transboundary harm is one of due diligence.[243] This means that when a State plans to carry out activities (including of the continental shelf), it must undertake due diligence as to the possible transboundary environmental effects.[244] But on the other hand, it is hard to determine the content of the due diligence, as it is rather elusive in the context of transboundary environmental harm.[245]

5.6 Obligation to prevent vessel source pollution

Ships can also be a source of transboundary accidental pollution and may cause disasters with enormous consequences to the continental shelves of several States. Therefore it is important that States are under an obligation to prevent pollution from vessels.

[243] Argentina v. Uruguay, supra note 1, para 197
[244] Plakokefalos (2012), pp. 4–5
[245] Plakokefalos (2012), p. 5

5.6.1 UNCLOS obligations of Flag States to Prevent Pollution from Vessels

UNCLOS offers detailed provisions on governing ship-source pollution, with regards to pollution of the marine environment.

The Convention shows a balance between the right of States to have their ships flying their flag when navigating on the seas, and the interests of Coastal States and the international community in preventing, reducing and controling pollution of the marine environment by vessels.[246]

Article 94 of UNCLOS that imposes an obligation to prevent, reduce and control marine pollution,[247] imposes also an obligation on States to take such measures for ships flying their flag.[248]

In addition, Article 211(2) provides that States have an obligation to adopt laws and regulations governing pollution from ships flying their flag which have the same effect or better than the generally accepted international rules and standards adopted by the IMO. In doing so, States ensure that the ships flying their flag comply with both the detailed rules and standards in the MARPOL 73/78 Convention, as well as with the IMO codes concerning the carriage of dangerous goods.

In cases where ships have the potential to cause a disaster through an accident when sailing across a sea that is under the jurisdiction of another State, it is important that States have obligations to try to prevent pollution from such ships. Although the size of ships might not be as large as the installations carrying out offshore drilling, they could still cause a natural disaster on the continental shelf. The obligation to prevent this is therefore still quite relevant for the topic of this paper. Additionally,

246 Transboundary Pollution: Evolving Issues of International Law and Policy. (2015) p. 148

247 Because of imposing obligation to prevent, reduce and control marine pollution in cases of ships, the article is important here as well.

248 Article 94(7) of UNCLOS reads as follows: "*Each State shall cause an inquiry to be held by or before a suitably qualified person or persons into every marine casualty or incident of navigation on the high seas involving a ship flying its flag and causing loss of life or serious injury to nationals of another State or serious damage to ships or installations of another State or to the marine environment. The flag State and the other State shall cooperate in the conduct of any inquiry held by that other State into any such marine casualty or incident of navigation.*".

shipping accidents that cause pollution of the sea are rather frequent. One of such examples is the Full City accident.[249]

5.6.2 Obligation to implement MARPOL 73/78

The International Convention for the Prevention of Pollution from Ships[250] (later: MARPOL 73/78) is the main international instrument regulating the prevention of pollution of the marine environment by ships from operational or accidental causes. Regulations for the Prevention of Pollution by Oil are regulated by Annex I of the Convention. These rules are important for the topic of the paper because ships, when causing an accident,[251] can cause serious damages to the environment, either from oil spillage from the ship or by the shedding of dangerous substances that were on the ship.

Annex I of MARPOL 73/78 mainly covers the regulation of the construction of ships to increase safety in order to prevent pollution of the marine environment, and, most relevant for this paper, pollution of the continental shelf, but obligations are also included which States need to fulfill in order to prevent accidental pollution from ships. One example is Regulation 8.2, which allows States to deny entry to ships that present danger, in order to protect life at sea.

States that are parties to the Convention must undertake to give effect to the provisions of the Protocol and Annex, as well as the modifications of the Convention.[252] That means that in the event of a shipping accident leading to environmental damage of the continental shelf, the flag State could be held liable if it did not implement and exercise the Convention, its Protocols and Annexes.

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249 Report on the Full City accident

250 International Convention for the Prevention of Pollution from Ships MARPOL 73/78, 02.10. 1983

251 Accidents of ships are caused due to structural failure or lack of maintenance of the ships, adverse weather conditions, inappropriate manouvers during navigation, incidents during cargo loading and unloading operations and problems related to the cargo.

252 MARPOL 73/78, Article 1

Article 1 of the Convention's Protocol also sets out the general obligations of States that are parties to the Convention, where such States are obliged to undertake to give effect to not only the present Protocol and Annexes, but also to modifications and additions of the Convention that are or will be set out in the Protocol.[253] That means that States need to be careful when implementing the Convention and must therefore take into account all its modifications, because otherwise it could be held liable.

One example of the implementation of MARPOL is its implementation in the Norwegian legal system. The MARPOL is implemented in the Norwegian Regulations on environmental safety for ships and mobile offshore units.[254]

5.6.3 Cases related to MARPOL Convention – Prestige oil spill

The Prestige oil spill was one of the largest ship pollution accidents and it occurred when a Russian tanker transporting heavy oil started to leak near the Galician coast.[255] Due to the winds and tide, the oil spill was transferred along the Spanish coast and caused an enormous amount of pollution. As a result, there have been many controversies about who was responsible for the accident and who should pay the costs of the damages, but the relevance for this paper is the question of which obligations the States have to prevent such accidents.

One of the primary questions of the case was that of who was liable for the environmental damages that occurred from the accident. The primary liability is on the shipowner who is personally liable for the accident. This liability is private liability, not the State's liability. However, what is important for this paper is that in academic circles, the discussion then arose as to what the international community could do in order to prevent future Prestige-like incidents.

253 MARPOL 73/78, Protocol, Article I

254 Forskrift om miljømessig sikkerhet for skip og flyttbare innretninger, FOR-2012-05-30-488 – need to translate this

255 Gonzaleza, J.J. et al. Spatial and temporal distribution of dissolved/dispersed aromatic hydrocarbons in seawater in the area affected by the Prestige oil spill

If ships are flying the flag of a State that is a member of MARPOL, the flag State needs to inspect the vessel at periodic intervals to ensure the seaworthiness of ships flying their flag. That is important to prevent accidental pollution of the continental shelf, since if the ships are seaworthy, there is a much lower likelihood of damage arising if an accident does happen, and, in addition, it is also a good form of prevention, since there is a smaller likelihood of an accident occurring.

In some ways connected to the Prestige case, some changes were also made in the EU[256] after the accident, regarding the rules on prevention of accidental vessel source pollution. The rules on the State's obligations to prevent the ship source pollution were implemented in the form of Directive 2005/35/EC on ship source pollution, and in the introduction of penalties for infringements, which were then replaced by a new Directive 2009/123/EC.

The Directive was implemented in order to specify which sanctions were to be imposed in relation to prohibition of polluting discharges into the sea. Article 1(1) sets out the purpose of Directive, which was to incorporate international standards for ship-source pollution into Community law, and to ensure that persons responsible for the discharge of polluting substances were subject to adequate penalties in order to improve maritime safety, as well as to enhance protection of the marine environment from pollution by ships. Under Article 4(2), each Member State must take the necessary measures to ensure that any natural or legal person who commits an infringement within the meaning of paragraph 1 can be held liable thereof.

Article 8(b) of the Directive 2009/123/EC regulates the liability of legal persons and sets out an obligation for each Member State to take necessary measures to ensure that legal persons can be held liable for criminal offences. Paragraph 9 of Article 8(b) of the Directive places an obligation on Member States to comply with the rules of international law. Furthermore, according to the paragraph 10 of the same article, States shall, where appropriate, act in close collaboration with the

[256] Although EU is not a member of MARPOL, it is still important to acknowledge that EU is following a similar direction as MARPOL.

European Maritime Safety Agency in order to develop the information systems necessary for effective implementation of the Directive and to establish common practices and guidelines on the basis of those existing at international level, such as monitoring and early identification, reliable methods and effective enforcement.

The attempts by the European Union to make stricter rules for Member States show that the European Union is trying to prevent accidental pollution, which also means that the rules would apply to accidental pollution of the continental shelf.

The obligation to prevent, control and reduce marine pollution and the obligation to prevent vessel source pollution are also closely connected to obligation to the obligation to take measures to ensure the provision of good environmental practices.

5.7 Obligation to take measures to ensure the provision of good environmental practices

The obligation to take measures to ensure the provision of good environmental practices was discussed in connection with the case of Responsibilities and obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, as stated in the chapter 4.8. where The ITLOS Chamber decided that the State would not be held liable, according to UNCLOS Article 139(2) second sentence, if the sponsoring State has taken all necessary and appropriate measures to secure effective compliance.[257] That being said, the decision was only made in relation to States sponsoring activities in the area,[258] so the question that appears here is that of whether States need to fulfill the same obligation in cases of accidental pollution of the continental shelf, where they are not acting as sponsoring States. The answer could be positive, since the consequences

[257] Sands, P. et al. Principles of International Environmental Law, pp. 732

[258] ITLOS Seabed Disputes Chamber. Advisory opinion of 1 February 2011. Responsibilities and obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area

of the damaging effects would be the same, and it would therefore seem reasonable to apply the same obligation to Coastal States.

In addition, although the Tribunal did not decide on the content of measures that States are obliged to take, it did nevertheless propose several requirements for such measures. States need, according to the Tribunal's decision, to aim to secure compliance when taking the measures, and furthermore, make sure that at all times when the contract with the relevant authority is in force, measures are implemented which address the contractor's obligations after completion of the exploration phase. In addition, States must undertake a regular review of measures, in order to ensure that they meet current standards and that the contractor meets its obligations effectively, without detriment to the common heritage of mankind.[259]

In order for sponsoring States to fulfill the obligation to take measures to ensure the provision of environmental practices, general consideration needs to be given by States when making their choice of measures under the relevant provisions.[260] If the rules around the obligation can be applied to Coastal States, when engaging in activities on the continental shelf, the same observation would be applied in the cases of accidental pollution of the continental shelf.

However, since no direct reference has been made to Coastal States' activities on the continental shelf, it cannot be claimed for certain that such States are bound by this obligation. But on the other hand, as stated earlier in this paragraph, activities in the Area and activities on the continental shelf, no matter whether they are exercised by States or only sponsored by them, can cause the same damaging environmental effects, and therefore it should be taken into consideration that the same rule could apply to both situations.

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[259] ITLOS Seabed Disputes Chamber. Advisory opinion of 1 February 2011. Responsibilities and obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, par. 218

[260] Principles of International Environmental Law, (2012) p. 732

6 Conclusion

As seen throughout the paper, there is no one binding document that regulates all international obligations on States to prevent accidental pollution of the continental shelf, and instead the obligations are rather a system of rules of international law which include case law, non-binding legal instruments supported by States' practice, general principles of international law and some binding documents of international law. Additionally, most of the legal sources focus on the long-term pollution rather than specifically on accidental pollution.

Therefore, it is possible to divide the sources, that the States are obliged to, into two categories: general principles of international law and the obligations that form part of international legislative rules.

States are obliged to follow the general principles of international law in cases of prevention of accidental pollution of the continental shelf and are therefore obligated to act in accordance therewith. States are, under general principles of international law, bound to act in such a way as to not cause damage to the other State's environment when exploiting their natural resources. States also need to take preventative actions in order to prevent accidental pollution of the continental shelf, and therefor each State needs to take all the preventative measures in its power to prevent accidents that lead to transboundary pollution of the continental shelf from happening.

States also need to cooperate with States that could be affected by potential accidents arising from the activity at sea, in order to protect and improve the environment.

Furthermore, the States are obliged to act in accordance with the principle of sustainable development when undertaking or planning to undertake activities that could affect the environment of the continental shelf. When doing so, they need to take into consideration the affect of

activities and potential accidents on future generations and need to use their resources optimally and equitably.[261]

In addition, States are bound by the precautionary principle and are bound to apply a precautionary approach, both before and while carrying out the activities, which means that, in applying the precautionary principle, States need to try to prevent accidental pollution to the greatest extent possible.[262]

Besides the general principles of international law, States are also bound by the rules of international law arising from international legislation, such as UNCLOS. Additionally, States may also be bound by the obligations stated in international legally non-binding acts, provided the rules are supported by the customary law or practice of international tribunals.[263]

One such obligation is the obligation to apply a precautionary approach in order to prevent accidental pollution of the continental shelf which could be transferred to the continental shelves of other States. Furthermore, States are also obliged to take measures to ensure the provision of good environmental practices, if they want to be held not liable for the damages caused by accidental pollution.

States that are carrying out a potentially environmentally damaging activity can also be held liable for environmental damages if they did not conduct an environmental impact assessment, or, even if they did, if the environmental assessment was not sufficient to fulfil all the expected conditions.[264]

States also need, when conducting in potentially harmful activities on the continental shelf, to act in a way that does not unjustifiably interfere with the rights and freedoms of other States. In order not to unjustifiably

[261] According to the Stockholm Declaration and the decision in the Gabcykovo Nagymaros Project case.

[262] As also discussed in the Pulp Mills case.

[263] Such as i.e. the ILC draft Articles concerning responsibility of States for their internationally wrongful acts

[264] As seen earlier in the paper, the elements of environmental impact assessment are not explicitly listed in a legally binding document, but there exist requirements that States should follow in order to sucessfully fulfill the obligation to conducting environmental impact assessments.

interfere with the rights and freedoms of other States, States are also obliged, under UNCLOS, to prevent, reduce and control marine pollution. States are of course obliged to try to prevent accidental pollution of the continental shelf, as it is a part of the marine pollution. And although accidental pollution appears suddenly, whereas long-term pollution happens over a longer period, it is still pollution, and therefore it should be considered by the same rules as the letter.

All in all, the States are obliged by several obligations under international law to prevent accidental pollution of the continental shelf, but as seen, the obligations are not set out in one legal act, nor are all of them a part of mandatory law, unless recognised by State's practice. Additionally, the obligations are mostly focused on long-term pollution. However, both types of pollution lead to environmental damages, which means that the overall effect falls into a single category. Therefore, the same set of rules should apply for accidental pollution as well as for long term pollution. Furthermore, despite there have not been many decisions concluded in cases of accidents that caused pollution of the continental shelf, there are nonetheless other decisions regarding long-term pollution of the continental shelf that should be applicable for cases of accidental pollution. When a tribunal is ruling on a case of pollution, its aim is to achieve prevention, or to find the party that is liable for pollution. Since the aim of the decision and the expected result of a judgment is the same in both types of pollution, the decisions about long-term pollution should also be used in cases of accidental pollution. By doing that, it would be easier to define the obligations and liability of States in cases of accidental pollution, and consequently prevent it to a greater extent.

Despite the fact that there is a set of general principles of international law and various different obligations in different international legal acts (and soft law) regarding the prevention of pollution, which States need to follow when engaging in activities on the continental shelf, those might not be sufficient to make States to do everything in their power to prevent pollution from accidents that might affect the continental shelves of other States. Therefore, there is a need for a mandatory act of international law that would include a set of rules regarding obligations

on preventing accidental pollution, that would furthermore be supported by the requirement for inclusion in States' decisions, and that would held States liable in cases where States do not fulfill their obligations on prevention. Additionally, it would also be reasonable to establish rules for when to apply strict liability for States in cases of transnational pollution of the continental shelf.

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