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Building a comprehensive framework to tackle plastic pollution in the marine environment - A case study on the Arctic.

A case study on the Arctic.

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List of Abbreviations

ALDFG	Abandoned lost and discarded fishing gear
BBNJ	Biodiversity Beyond National Jurisdiction
CAFF	Conservation of Arctic Flora and Fauna
CAOFA	Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean
CBD	Convention on Biological Diversity
CMS	Convention on Migratory Species
EEA	European Economic Area
FAO	Food and Agriculture Organization
GAIRS	Generally Accepted International Rules and Standards
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities
GPML	Global Partnership on Marine Litter
ICJ	International Court of Justice
IMO	International Maritime Organization
INC	International National Committee
ITLOS	International Tribunal for the Law of the Sea
IWC	International Whaling Convention
LOSC	Law of the Sea Convention
MARPOL	International Convention for the Prevention of Pollution from ships
MEPC	Marine Environment Protection Committee

NAES	North-East Atlantic Environment Strategy
NAPS	National Action Plans
NEAFC	North-East Atlantic Fisheries Commission
PAME	Protection of the Arctic Marine Environment
PRF	Port Reception Facilities
RAP-ML	Regional Action Plan on Marine Litter
RFMO	Regional Fisheries Management Organization
SUP	Single Use Plastic Products
UNEA	United Nations Environment Assembly
UNEP	United Nations Environment Programme
UNFSA	United Nations Fish Stock Agreement
VCLT	Vienna Convention on the Law of Treaties

Chapter 1. Introduction

1.1 Plastic pollution: a growing issue

Plastic pollution is an increasing issue in the world oceans. Since the 1930s and 1940s plastic has been used ever more through packaging and other applications.[1] Several elements corroborate that statement. First, by focusing on the actual state of industrial plastic production. According to Plastics Europe, 400 million tonnes of plastic were produced in 2022, six million tonnes more than in 2021.[2] However, these data alone are not adequate to show to what extent this issue is of a great concern for all mankind. One of the current problems is the quantity of plastic that ends up in the oceans. Every year, more than eight million tonnes of plastic waste are discharged into the ocean.[3] Following this trend, some studies have predicted that in 2050s there will be more plastic than fish, by weight, in the oceans.[4]

In the Arctic, even if it is, or at least has been, considered as a remote and inaccessible place, the plastic issue is not unknown. In fact, the concern grows alongside the advent of climate change. Indeed, through years, the formation of sea ice has concentrated the plastic debris, in form of microplastics (particles smaller than 5mm), among others.[5] As such, the current and future melting of sea ice will affect all the ecosystem and, consequently, the food chain.[6] The dangers for the marine environment are numerous and diverse. A working group of the Arctic Council, the PAME, which stands for Protection of the Arctic Marine Environment, has

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[1] JR Jambeck et al, 'Plastic waste inputs from land into the ocean' (2015), 347 *Science* 6223, p 768.

[2] Plastic Europe, *Plastic - the fast Facts* (2023), available at https://plasticseurope.org/knowledge-hub/plastics-the-fast-facts-2023/

[3] D Jung. (2023). 'An International Legal Framework for Marine Plastics Pollution: Time for a Change to Regulate the Lifecycle of Plastics' in A Pozdnakova and F J Platjouw (ed), *The Environmental Rule of Law for Oceans* (Cambridge University Press 2023), p 46.

[4] World Economic Forum, Ellen MacArthur Foundation and McKinsey & Company, *The New Plastics Economy: Rethinking the future of plastics* (2016), p 17, available at https://www.weforum.org/publications/the-new-plastics-economy-rethinking-the-future-of-plastics/

[5] I Peeken et al, 'Arctic sea ice is an important temporal sink and means of transport for microplastic' (2018) 9 *Nature Communications* 1505, pp 2-7.

[6] Arctic NOAA, I Peeken et al, 'Microplastics in the Marine Realms of the Arctic with Special Emphasis on Sea Ice', *Arctic Report Card* (2018), p 89, available at https://arctic.noaa.gov/report-card/report-card-2018/microplastics-in-the-marine-realms-of-the-arctic-with-special-emphasis-on-sea-ice/

highlighted three different threats for the marine environment.[7] The first one is ingestion. It stands for a risk for the marine animals for two main reasons: physical problems, such as internal injuries, and intoxication, due to the chemicals added to plastic during transformation.[8] It may be noted that plastic has been found in the body of seabirds, marine mammals, sharks, fishes, and invertebrates.[9] The second threat is entanglement, which occurs because of abandoned, lost, or discarded fishing gear (ALDFG), a topic that will be addressed further in the development. Again, many species are in danger of entanglement, but it can be noted that, even if it is outside the scope of the thesis, terrestrial species are also impacted.[10] The last known risk for the marine environment is the introduction of foreign and invasive species. This threat is deeply linked to climate change. Indeed, in theory the Arctic is protected from invasive species by the coldness of its waters. However, now, floating plastics can bring with them species that can survive in the Arctic environment because the ocean is warming.[11]

Plastic pollution is a topic widely discussed and developed at the global level. Indeed, a considerable number of agreements or conventions deal with this issue. The fact is that the current legal framework is fragmented and sometimes regimes overlap with each other.[12] At the global scale it was demonstrated that most of the marine plastic comes from land-based sources.[13] However, it has been shown that sources of plastic in the Arctic Ocean specifically are mainly coming from shipping and fishing.[14] These two origins are particularly relevant to study in the Arctic regarding the evolving climate and the increasing human activities in the Area.

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[7] PAME, *Desktop Study on Marine Litter including Microplastics in the Arctic* (May 2019) pp. 43-61. Available at https://pame.is/projects-new/arctic-marine-pollution/marine-litter-highlights/429-desktop-study-on-marine-litter

[8] *Ibid.*, p 50.

[9] *Ibid.*, p 45.

[10] *Ibid.*, pp. 56-59.

[11] *Ibid.*, p 61.

[12] E Kirk and N Popattanachai, 'Marine Plastics: Fragmentation, Effectiveness and Legitimacy in International Lawmaking' (2018) *Review of European,* 27 *Comparative & International Environmental Law*, pp 222-233.

[13] J Wang et al, 'Chapter 25: Marine Debris' in United Nations (ed), *The First Global Integrated Oceans Assessment: World Ocean Assessment I* (Cambridge University Press 2017), p 3.

[14] S Dewey and S Mackie, 'Managing plastic pollution in the Arctic Ocean: An integrated quantitative flux estimate policy study' (2023) 59 *Polar Record* 36, pp 1-11.

Several thoughts arise from these observations. First, plastic pollution comes from various sources and as such may be regulated by separate agreements, hence it can create both overlaps and gaps in the legal framework. Historically, sources of marine pollution are regulated by separate international agreements but currently the legal framework overlap through LOSC. Secondly, the Arctic region is a specificity, for example regarding the importance of vessel-source plastic pollution and the difficulty to access this remote region. Another aspect, partly connected with these two observations, is the question of how to ensure compliance with and enforcement of the different provisions existing in global instruments.

As explained above, the impacts of climate change in the Arctic require a response in terms of governance regarding marine plastic pollution. Currently, the framework is already evolving. Indeed, at the global scale, negotiations have started with the ambition to conclude a treaty by the end of 2024, for adoption in 2025.[15] Accordingly, studying the legal framework regulating plastic pollution in the Arctic is particularly relevant in the current situation.

In light of the above, this thesis aims to answer the following main research question: to what extent does the current international legal framework sufficiently cater for the specifics of plastics pollution in the Arctic? This question will guide the analysis. It places the emphasis on the need to assess the current legal framework and at the same time, it allows for the possibility to highlight the challenges that can, and should, be addressed. This overarching question can be divided into the following subquestions. First, what is the international legal framework for plastics, and what are its main regulatory techniques? Secondly, what are the specifics of plastics pollution in the Arctic, and what are the needs of this region regarding the international framework? Finally, how does and should the international legal framework cater for the specifics of plastics pollution in the Arctic? In other words, the aim will be to evaluate whether the international legal framework for plastics pollution is tailored to the Arctic and its specifics. These specifics may come from the differences between the mains sources of pollution in the Arctic and in the rest of the globe for instance, or on the regional capacities in terms of infrastructure.

[15] UNEA. *End plastic pollution: towards an international legally binding instrument*. UNEP/EA.5/Res.14.

1.2 Purpose and scope of the thesis

The main objective of this thesis is to map and critically assess whether the current international framework is tailored to face the challenges of plastics pollution in the Arctic and allows a more specific regional approach. To do so, both the regional and global regimes will be first evaluated independently. Then, it will be necessary to focus on the interaction between them. This analysis of the current regime is meant to provide insights on potential developments and way of improving it. For these purposes, the weakness of the regime will be highlighted. These weaknesses can be of different nature. For example, the geographical scope is important while dealing with the Arctic because of how the regional governance is organised.

The same goes for the substantive aspects of the legal framework for plastics' regulation. In fact, it will not only be necessary to examine the relevant legal instruments, their normativity and influence, but also to study the institutions in charge of the regional governance. As it was explained before, one of the main goals is to evaluate how the international framework supports the regional one. Therefore, trying to understand how the multilevel decision-making can be implemented, or is implemented, in the Arctic will be a core aspect of the work. Keeping that objective in mind, the future Plastic Treaty will be important for the future of the region. Necessarily, this legal instrument will impact the regional regimes, not only in the Arctic. If it is not the case, then it may say something about the integrated approach advocated by researchers.[16]

Following the objectives of the thesis, its scope will be limited both in geographical and substantive senses. First, for the geographical scope, as it is a case study on the Arctic, it will naturally be limited to that area. As it was developed previously, there are several definitions and boundaries for this region. However, here the main topic being the legal framework for plastics regulation, the idea will be to follow the relevant legal instruments' spatial scope. In that regard, this delimitation may be interesting to interpret and to highlight while evaluating the actual success of the framework. Although this thesis does not engage in a comparative

[16] J Vince and BD Hardesty, 'Plastic pollution challenges in marine and coastal environments: from local to global governance' (2017) 25 *Restoration Ecology*, pp 123-128.

study, the Mediterranean provides a useful reference to highlight the gaps of the regional approach in the Arctic [Section 3.3].[17]

Secondly, several things can be said about the substantive scope of the thesis. Primarily, as it was explained earlier, the main topic is plastic pollution. Therefore, marine litter is relevant because plastics is part of it.[18] However, it is not the main concern, it will only be addressed as a category of which plastics are part. Then, the subject is related to plastic pollution in the marine environment. Consequently, the work will be restricted to plastics found in the marine environment, which will encompass beaches as evidence of marine pollution.[19] About the origin of plastic pollution in the Arctic marine environment, the classification provided by the LOSC will be used extensively. This thesis will be limited to the study of pollution coming from land-based sources, dumping and vessel-source pollution because these are the most significant sources of plastics pollution in the Arctic. Atmospheric pollution and pollution coming from seabed activities do not concern plastics in a significant proportion. Therefore, these two last sources of pollution will not be examined in this thesis.

1.3 Terminology

Before delving deeper into the analysis, it is necessary to provide a few definitions. First, defining the term plastic is crucial. Plastic is a generic term which is used to refer to a group of synthetic polymers. This group is composed of two categories: thermoplastic and thermoset.[20] Thermoplastic is generally shortened by this term and for example, polyethylene is part of this group. Such elements are found in fishing gears or bottles. Thermoset on the other side, can be found in tyres.[21] Plastic is also known for its considerable impact on the marine environment

[17] MC Fossi et al., 'Assessing and mitigating the harmful effects of plastic pollution: the collective multi-stakeholder driven Euro-Mediterranean response' (2020) 184 *Ocean and Coastal Management*, p 2.

[18] PAME, *Regional Action Plan on Marine Litter in the Arctic* (May 2021)

[19] UNEP, *Marine plastic debris and microplastics - Global lessons on research to inspire action and guide policy change* (UNEP, 2016)

[20] United Nations Environment Programme (UNEP), *Marine Plastic Debris and Microplastics: Global Lessons and Research Inspire Action and Guide Policy Change* (UNEP, 2016) p 26.

[21] N Oral, 'From the Plastics Revolution to the Marine Plastics Crisis' in R Barnes and R Long (eds.), *Frontiers in International Environmental Law: Oceans and Climate Challenges* (Brill Nijhoff 2021) pp 283-284

once it fragments, due to out-of-control impacts such as sunlight or biotic interactions, into microplastic and nanoplastic. The difference here is not the nature of plastic but only its size. Microplastic refers to plastic when it is smaller than 5mm and nanoplastic when it is smaller than 1µm.[22] Often, the term plastic is associated with the expression marine litter, because the latter encompasses the former. Indeed, marine litter is described by the United Nations Environment Programme (UNEP) as "any persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine coastal environment".[23] These words have different meaning however, many instruments tackle plastic pollution through marine litter. Therefore, if studying marine litter may be relevant in dealing with plastic pollution, the distinction should be kept in mind.

Plastics in the ocean are coming from different sources that need to be distinguished. Following the classification provided by the LOSC, pollution can come from land-based sources, from dumping and from vessels. According to article 207 of the LOSC, pollution from land-based sources includes the plastic derived from rivers, estuaries, pipelines and outfall structures [Section 2.1.1]. The pollution by dumping is designed by the LOSC through several provisions. Firstly, article 1(4) provides definitions of different terms use throughout the Convention, one of them is dumping. It explains what dumping is and what it is not. Concretely dumping corresponds to the "deliberate disposal of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea"[24]. This definition is sufficiently broad to encompass the many forms of plastic. This provision is completed by article 210 of the LOSC, which is designed to regulate pollution by dumping. The LOSC also deals with pollution from vessels through article 211 but does not provide any definition of what it is. Therefore, the focus should be on the instruments adopted by the IMO and more specifically the MARPOL Convention, which is the most significant global legal instrument for the prevention of marine pollution from vessels.[25] The purpose of this convention is to prevent the pollution of the marine environment from discharge of harmful substances or effluents containing such substances.[26] It

[22] M Bergmann et al., 'Plastic pollution in the Arctic' (2022) 3 *Nature Reviews / Earth Environment*, p 323.

[23] UNEP, *Global Programme of Action for the Protection of the Marine Environment from Land-based Activities* (UNEP, 1995) Available at https://wedocs.unep.org/handle/20.500.11822/13422

[24] United Nations Convention on the Law of the Sea (LOSC), Article 1

[25] Md S Karim, *Prevention of Pollution of the Marine Environment from Vessels, The Potential and Limits of the International Maritime Organization*, Springer International Publishing, Switzerland, 2015, p 6.

[26] International Convention for the Prevention of Pollution from Ships (MARPOL), Article 1 paragraph 1.

should be noted that harmful substances correspond to any substance which, when introduced into the sea, create hazards to human health, harm living resources and marine life, damage amenities and interfere with legitimate uses of the sea.[27] Still according to the MARPOL Convention, the term discharge does not mean dumping within the meaning of the London Convention but the release howsoever caused by a ship. It can be through escape, disposal, spilling, leaking, pumping, emitting or emptying.[28]

In this thesis, the objective is to evaluate the legal framework related to plastic pollution with a special attention to the role of global and regional governance. Governance has numerous definitions and is subjected to conceptual debates. However, in relation to plastic pollution it seems relevant to highlight what is called global environmental governance. In fact, the plurality of actors, from States to regional and international organizations, and the weak role of borders make this type of governance unique.[29] In its definition, Vogler used the term network to illustrate the fluidity and the fragmentation of the conventions and norms that regulate the conduct of States and other international actors.[30] On a more complete perspective, governance can be understood as the "steering of practices by public and private authorities, including through international institutions, state legislation, non-governmental standards, corporate code of conduct, and societal norms of right and wrong".[31] This definition permits to apprehend the complexity of governance and its many components.

In this thesis, the global framework will be evaluated but only for the purpose of studying the situation in the Arctic region. The fact is that there is no unique definition of the Arctic. Notably, it is possible to find different boundaries of the Arctic from the working groups of the Arctic Council, depending on their substantive scope. A more classical definition is the Arctic Circle, which is the southernmost latitude in the Northern Hemisphere at which the sun remains

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[27] MARPOL, Article 2 paragraph 2.

[28] MARPOL, Article 2 paragraph 3.

[29] R Dominguez and RV Flores, 'Global Governance' in *Oxford Research Encyclopedia of International Studies* (2018) p 10.

[30] J Vogler, 'The European Contribution to Global Environmental Governance' (2005) 81 *International Affairs (Royal Institute of International Affairs 1944-),* p 835.

[31] P Dauvergne, 'Why is the global governance of plastic failing the Oceans' (2018) 51 *Global Environmental Change*, p 23.

continuously above or below the horizon for twenty-four hours.[32] Moreover, as it will be proved later, there is a geographical fragmentation in terms of norms applicable to plastic pollution in the Arctic.

1.4 Sources and methods

The methodology is crucial to describe this master thesis project. The core of the thesis will follow the legal-dogmatic approach. Indeed, the main objective here will be to assess the legal framework regarding plastic pollution in the Arctic, and how it is organised as a system.[33] The mapping of the legal framework will be done through the general doctrinal research method, which means identifying sources of law, defined by article 38 of the ICJ Statute,[34] and interpreting them in the light of general rules of interpretation, ascertain by the Vienna Convention on the Law of Treaties. Then, to provide a specific analysis of the framework in the Arctic, relevant scholarly literature and institutional reports will again be examined closely. This study is useful to understand the facts of plastic pollution in the Arctic before delving once more in the doctrinal legal research to establish what is the law specifically applicable to the Arctic. This methodology of research is relevant in this case because it permits to reveal gaps in the existing law.

Moreover, to complete this descriptive angle, the legal doctrine approach is designed to use data collected in the first place to convert it into prescriptive considerations. The idea is to look for the best solutions to fill gaps highlighted in previous sections. In this thesis, the goal is not to propose a new regime but to provide some ways of improving the legal framework as it stands. A considerable part of the legal framework that will be analysed is part of public international law. Generally, this branch of law is explained through the sources' theory. The International Court of Justice Statute is one the founding documents of public international law.

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[32] Arctic Portal, *Arctic Definitions Combined* (lastly updated 2016), available at https://arcticportal.org/maps/download/arctic-definitions/2426-arctic-definitions.

[33] J M Smits, 'What is Legal Doctrine? On the Aims and Methods of Legal-Dogmatic Research' in R van Gestel, H-W Micklitz and E L Rubin (eds), *Rethinking Legal Scholarship: A Transatlantic Dialogue*, New York (Cambridge University Press) 2017, p 5, Maastricht European Private Law Institute Working Paper No. 2015/06. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2644088

[34] International Court of Justice Statute (ICJ Statute), Article 38.

Its article 38 provides the list of norms that can be applied by the International Court of Justice to solve a public international law dispute. Therefore, public international law is, according to that document, composed of international conventions, international customs, general principles of law recognized by civilized nations and, as a subsidiary means, judicial decisions, and the teachings of the most highly qualified publicists.[35] In addition, these components of international law have been dissected to know how to recognize and interpret them. For example, the interpretation of treaties and international conventions is regulated by the 1969 Vienna Convention on the Law of Treaties. Article 31 of this Convention, which deals with the general rules of treaties interpretation, will be used throughout the thesis to analyse every treaty provision encompassed. However, some have argued that public international now goes beyond the content of article 38 of the ICJ Statute. Soft law is also relevant while studying a legal framework. A debate still exists regarding the nature of these norms but following a wide definition it refers to legal norms that lack legal bindingness while still going beyond political or moral declarations.[36] According to some authors there is no doubt that soft law is a reality, an instrument with its own place in the current international governance and which cannot be avoided.[37] This is also true while studying the framework related to plastic pollution of the marine environment in the Arctic region.

For this purpose, two different elements will be look at. First, pursuing this methodology, the interactions between the global instruments and regional ones are to be investigated. It will facilitate the understanding of the relationship between these two scales, not only the material aspect of it but also its institutional side. Secondly, a comparative approach may be used in several sections, or subsections, to provide a horizontal perspective. Compare the framework in the Arctic to the framework in other regions, in this thesis the Mediterranean, will complete the assessment by providing way of improvements or showing how to avoid failures.

In following this methodology, the legal framework will be analysed as a system and therefore at different levels. Indeed, global instruments such as the Law of the Sea Convention (LOSC), the London Convention and its Protocol, the MARPOL Convention (Annex V), the Basel

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[35] International Court of Justice Statute (ICJ Statute), Article 38.

[36] C Eggett et al., 'Sources of International Law' in S G Hauck, R Kunz and M Milas (eds.) (2024) *Public International Law*, p 403.

[37] J D'Aspremont and T Aalberts, 'Which Future for the Scholarly Concept of Soft International Law: Editor's Introductory Remarks Symposium on Soft Law' (2012) 25 *Leiden Journal of International Law*, p 310

Convention, Convention on Biological Diversity (CBD), the Biodiversity Beyond National Jurisdiction Treaty (BBNJ) or the Stockholm Convention for example might be of relevance. This listing shows one aspect of the current issues regarding plastic pollution, the pertinent provisions are widely spread among different instruments. Therefore, these agreements will not be studied deeply but only the provisions linked with plastic pollution to show that important provisions are spread among numerous texts. At the regional level, there are less instruments to consider. First, the OSPAR Convention and the different action plans conducted inside its area of competence will be studied. In parallel, some instruments such as the Barcelona Convention, and the regime which follows, will also be studied to provide the required comparative approach. Then, it will also be relevant to discuss the role of the Arctic Council, for example its Regional Action Plan on Marine Litter in the Arctic.

Apart from the spatial fragmentation described by the listing of these sources, there is also a difference in terms of normativity. Indeed, where some instruments are binding, others are merely guiding principles with a restricted legal force, such as the Voluntary guidelines for the marking of fishing gear introduced by the FAO,[38] or some UNEP instruments.

1.5 Structure of the thesis

The thesis will follow a structure derived from the title of the project and the research question. Moreover, each chapter corresponds to a subquestion. As it was explained earlier, the legal framework to deal with marine plastic pollution in the Arctic is fragmented both in term of substance and in term of spatial application. Therefore, chapter 2 will consist of a mapping of the relevant instruments to show how the framework is constructed and describe its composition. Once the framework has been deconstructed and mapped properly, the strengths and drawbacks of each level of decision-making and governance will be examined closely. Building on that assessment, chapter 3 is meant to evaluate the necessity of having a multilayered approach. The core aspect of this part will be to look at the interactions between the global scale and the regional one. This analysis will provide insights on the degree of

[38] Food and Agriculture Organization (FAO), *Voluntary Guidelines on the Marking of Fishing Gear* (FAO Committee on Fisheries, 2019) Available at https://www.fao.org/responsible-fishing/resources/detail/en/c/1470106/

cooperation and the synergies between them. Finally, chapter 4 will bring general conclusions and express thoughts on future developments.

Chapter 2. A multilayered and fragmented framework

The goal of this chapter is to map the legal framework applicable to marine plastic pollution in the Arctic. Firstly, it will allow for a better understanding of how the framework is constructed Then it shows what are the specificities and therefore, the needs, of the Arctic region. This framework is composed of diverse instruments coming from both primary and secondary law. Currently, there is not a unique instrument which deals with plastic pollution in the marine environment. In fact, it is quite the opposite, this field of international law is known for its fragmentation and the numerous instruments that form this framework (2.1).[39] In addition, governance of the oceans is a process not only done at the global level. Indeed, regional instruments are a crucial part of the legal framework (2.2).[40] The mapping of the framework in the Arctic will allow to highlight its gaps and limitations (2.3).

2.1 The diverse components of the Global Framework

The legal framework regarding marine plastics pollution is composed, at the global level, of several instruments with various degrees of generality. Each convention has a specific role to play in dealing with pollution of the marine environment by plastic. Indeed, some of them deal exclusively with certain type of pollution, they are called sectoral conventions, while the LOSC, for example, is more like a constitution. The substantive scopes of these conventions are different, and it explains their number (2.1.1). The substantive scope is not the only difference between the various instruments, the normative value is also a relevant criterion. Binding conventions and treaties are indeed part of the framework, but norms of soft law should not be neglected (2.1.2).

[39] D Jung. (2023). 'An International Legal Framework for Marine Plastics Pollution: Time for a Change to Regulate the Lifecycle of Plastics' in A Pozdnakova and F J Platjouw (ed), *The Environmental Rule of Law for Oceans* (Cambridge University Press 2023), pp 47-50.

[40] IJ Adewumi, 'Exploring the Nexus and Utilities Between Regional and Global Ocean Governance Architecture' (2021) 8 *Frontiers in Marine Science*

2.1.1 The spreading of plastic related provisions among various binding instruments

The first convention that needs to be addressed while discussing marine pollution, including plastics pollution, is the United Nations Convention on the Law of the Sea (LOSC). It has been described as 'a constitution for the Oceans' and, as such, was meant to be a comprehensive instrument which would resist throughout the decades.[41] As for now, the LOSC remains in force and the new challenges that the oceans are facing are still analysed in light of this Convention. That is also true for the pollution of the marine environment by plastic. Indeed, the LOSC provides a definition of pollution at article 1(4) which is sufficiently broad to encompass plastics in the oceans.[42] According to the last ITLOS Climate Advisory Opinion, the LOSC sets out three cumulative criteria that allows to determine what constitutes pollution. First, there must be a substance or energy. Then, it must be introduced by humans directly, or indirectly, into the marine environment and, finally, this introduction must result or be likely to result in deleterious effect.[43] Plastics are a substance introduced by humans either directly or not into the sea with clear deleterious effects, as it was shown in the introduction. From there it opens many opportunities to apply the LOSC to marine plastic pollution. First it is crucial to mention that article 192 has a central situation regarding the protection of the marine environment. The ITLOS Climate Advisory Opinion explained that this provision was not only a legal obligation but also a state of principle around which the legal framework for the protection of the marine environment is constructed.[44] Indeed, the *South China Sea Arbitration* interpreted article 192 in a very extensive way. Not only it confirmed that this article contains a duty of due diligence but also that it was composed of both positive and negative obligations. States must protect from future damage and preserve the existing conditions. The ICJ in its judgment *Pulp Mills on the River Uruguay,* described due diligence as an obligation not only to adopt "appropriate rules and measures but also to exercise a certain level of vigilance in their enforcement and the

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[41] TB Koh, 'A Constitution for the Oceans' in *The Law of the Sea: United Nations Convention on the Law of the Sea* (1983)

[42] L Osmundsen, 'Port reception facilities and a regional approach: A bridge for abating plastic pollution in the Arctic?' (2023) 148 *Marine Policy*, p 2.

[43] *Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law* (*Advisory Opinion*) [2024] ITLOS, [161].

[44] *Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law* (*Advisory Opinion*) [2024] ITLOS, [184].

exercise of administrative control over public and private operation".[45] Therefore, there is a duty to take positive measures to ensure the protection of the marine environment and a duty to prevent or at least mitigate significant harm to the environment.[46]

Speaking more particularly of marine pollution, article 194 is the primary provision. The ITLOS recognized three main obligations in this article. [47] The first one is the duty to take measures to prevent, reduce and control marine pollution. Secondly, there is an obligation to make sure some situations related to pollution do not occur. The last comes from paragraph 5 and the obligation to take necessary measures to protect and preserve rare or fragile ecosystems. Article 194 applies to pollution from all sources, and as it was said earlier plastic pollution is pollution in the meaning of article 1(4). In its advisory opinion, the ITLOS reflected extensively on the wide application of this provision and its comprehensive nature. It does not only mean to address the issue of the future pollution but also the existing pollution.[48] Regarding the current quantity of plastics in the Arctic and the growing activity in the Arctic, such as tourism and potentially fishing, it is particularly relevant in this thesis.

Viewing the LOSC as a constitution and a framework makes even more sense while focusing on the source-based approach it proposes. Indeed, LOSC makes a distinction between pollution from land-based sources, vessel-based sources, and pollution by dumping. Currently, the LOSC is still the only global binding treaty dealing with pollution from land-based sources in the marine environment.[49] Article 207 deals with this type of pollution, its paragraphs 1 and 2 require States to create laws and regulations, or take other measures necessary measures, to prevent, reduce and control marine pollution.[50] However, it is necessary to bear in mind that it is merely a framework provision. Firstly, it only requires adopting documents without

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[45] *Pulp Mills on the River Uruguay* (*Argentina v. Uruguay*) [2010] ICJ, [197].

[46] *South China Sea Arbitration (The Republic of Philippines v The People's Republic of China)*, Award, 12 July 2016, PCA Case No 2013-19, [941].

[47] *Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law* (*Advisory Opinion*) [2024] ITLOS, [195].

[48] *Ibid.*, [198].

[49] N Oral, 'From the Plastics Revolution to the Marine Plastics Crisis' in R Barnes and R Long (eds.), *Frontiers in International Environmental Law: Oceans and Climate Challenges* (Brill Nijhoff 2021) p 288.

[50] LOSC, article 207(1)(2)

explaining in detail what should be their content.[51] Then, the provision is phrased as a rule of reference and States conserve an arbitrary power to decide what measures to take. A rule of reference is a term used to refer to provisions allowing the incorporation into the Convention of other rules and standards.[52] These norms are stemming from sectoral or regional conventions. The system of rule of reference itself is not the problem here, the gap in the binding effect comes from the wording "taking into account internationally agreed rules, standards and recommended practices and procedures". This duty to take into account is weak because States are not compelled to follow international rules. Besides, it is not clear which agreements and conventions can provide the relevant international rules.[53] Regarding other sources of pollution, the LOSC is not the unique instrument but remains the basic one. Sometimes plastic pollution coming from dumping, fishing and shipping is grouped under the category sea-based sources of pollution, but there are distinctions to make between them[54].

Pollution by dumping is addressed in the LOSC through article 210 but article 1(5) is also relevant because it states a definition of dumping. According to the latter provision, dumping means "any deliberate disposal of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea".[55] It seems clear that plastic debris fit in this broad definition when it is a deliberate disposal and that it is not part of the normal operations of a vessel, an exception covered by the MARPOL, which concerns vessel source pollution and not dumping. Therefore, when article 210 paragraph 1 requires States to adopt laws and regulations to prevent, reduce and control pollution by dumping, it applies to plastic. Unlike the measures to face pollution coming from land-based sources, the rule of reference in this provision is more restrictive for States. According to paragraph 6, the laws and regulations adopted by the States shall not be less effective than the global rules and standards. Similarly, pollution from vessels is described at article 211 of the LOSC. This type of pollution is about the seaworthiness of the ship, the disposal of waste incidental to normal operation of vessels or accidents between them.

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[51] E Kirk and N Popattanachai, 'Marine Plastics: Fragmentation, Effectiveness and Legitimacy in International Lawmaking' (2018) *Review of European,* 27 *Comparative & International Environmental Law,* p 223.

[52] LN Nguyen, 'Expanding the Environmental Regulations Scope of UNCLOS Through the Rule of Reference: Potentials and Limits' (2020) 52 *Ocean Development & International Law,* pp 419-444.

[53] E Kirk and N Popattanachai, 'Marine Plastics: Fragmentation, Effectiveness and Legitimacy in International Lawmaking' (2018) *Review of European,* 27 *Comparative & International Environmental Law,* p 224.

[54] J Schäli, *The Mitigation of Marine Plastics Pollution in International Law*, p 80.

[55] LOSC, article 1(5)(a)(i)

The wording is not exactly the same as in article 210 but the necessity to respect the minimum standard provided by the competent international organization is still here.[56] In fact, States must take measures with at least the same effects as generally agreed international rules and standards (GAIRS). For these two last sources of pollution, binding agreements exist to complete the LOSC on these specific aspects. Therefore, the system provided by the LOSC, namely a source-based approach, is partly responsible for the fragmentation of the framework mentioned earlier.

To build on what was exposed before, three main instruments are relevant to address pollution at sea. In each case, the International Maritime Organization (IMO) plays a key role. Firstly, regarding the pollution by dumping sea, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, also known as the London Convention, was enacted prior to the LOSC. This Convention adopted in 1972 was completed by the London Protocol in 1996. These two instruments define wastes as "material and substance of any kind, form or description".[57] Plastic debris fall under this definition without any doubts.[58] The London Convention established a principle of listing, it is legal to dump everything which is not contained in those lists. Article IV(1)(a) and Annex I(4) of this Convention prohibit dumping of "persistent plastics"; netting and ropes for example. The London Protocol adopted another approach called the reverse list.[59] This process comes from a precautionary approach, it means that every dumping that is not expressly authorised is prohibited.[60] This approach is progressive and could have a great impact on pollution by dumping, considering that it is not expressly authorized to dump plastics. However, if the London Convention is quite extensively ratified, with 87 parties, it is not the same for the London Protocol. In fact, currently there are only 53 Parties to the Protocol which reduce its relevance.[61]

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[56] LOSC, Article 211 paragraph 2

[57] Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention), article III(4) ; London Protocol, article 1(8)

[58] L Osmundsen, 'Port reception facilities and a regional approach: A bridge for abating plastic pollution in the Arctic?' (2023) 148 *Marine Policy*, p 2.

[59] R Churchill, V Lowe and A Sander, *The Law of the Sea*, Manchester University Press, 2022, p 1080.

[60] UNEP, *Marine Plastic Debris & Microplastics: Global Lessons and Research to Inspire Action and Guide Policy Change*, 2016

[61] https://www.imo.org/en/OurWork/Environment/Pages/London-Convention-Protocol.aspx

For pollution from vessels, the IMO is also recognised as the international organization at the origin of GAIRS mentioned at article 211 of the LOSC.[62] The International Convention for the Prevention of Pollution from Ships (MARPOL) is linked with these obligations, particularly Annex V. Concretely, Annex V deals with the pollution of the environment from the discharge of harmful substances or effluents containing these substances. Regulation 3 paragraph 1(a) of Annex V prohibits the disposal into sea of all plastics. This prohibition includes synthetic fishing nets and ropes but is not limited to that.[63] The second paragraph of this provision mentions another requirement. When the plastic is mixed with other types of discharges, the strict prohibition not to discharge plastic still applies.[64] Furthermore, in some places, for technical reasons or ecological conditions, the duty to adopt mandatory regulations to prevent sea pollution is accentuated. These places are called ”Special Areas” and are regulated and designated following a MARPOL's procedure.[65] Lastly, MARPOL Annex V also regulates the disposal of plastic in ports. At least, under regulation 8(1) of Annex V, it is required to establish adequate facilities at ports for the reception of garbage, which shall not cause undue delay to vessels. However, a flaw remains in certain aspects of this regulation. Indeed, the requirement of having a garbage management plan and a garbage book record only applies to vessels above 400 tons gross tonnage.[66] The problem is that according to some research, a majority of the fishing fleet is below this limit.[67]

These last provisions highlight the key role of fishing vessels in pollution of the marine environment by plastic coming from ships. Indeed, it is for a reason that MARPOL and London Convention/Protocol mention fishing gear to give examples of plastic disposal at sea. The Agreement for the Implementation of the Provisions of the United Nations Convention on the

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[62] D Jung. (2023). 'An International Legal Framework for Marine Plastics Pollution: Time for a Change to Regulate the Lifecycle of Plastics' in A Pozdnakova and F J Platjouw (ed), *The Environmental Rule of Law for Oceans* (Cambridge University Press 2023), p 48.

[63] MARPOL, Regulation 3(1)(a), Annex V.

[64] MARPOL, Regulation 3(2), Annex V.

[65] L Osmundsen, 'Port reception facilities and a regional approach: A bridge for abating plastic pollution in the Arctic?' (2023) 148 *Marine Policy*, p 3.

[66] N van Truong and C Beiping, 'Plastic marine debris: sources, impacts and management' (2019) *International Journal of Environmental Studies*, p 963

[67] CL Chen and TK Liu, 'Fill the gap: Developing management strategies to control garbage pollution from fishing vessels' (2013) 40 *Marine Policy*, p 35.

Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA) allows to deal with fishing-related sources of marine pollution by plastic. Article 5(g) is designed to enhance the creation of conservation and management measures to protect the biodiversity, and, as it was developed in the introduction, marine biodiversity is endangered by ALDFG. Besides, according to article 5(f), States have the duty to minimize pollution and catch by lost or abandoned gear. Therefore, the regime created by the UNFSA to protect marine biodiversity is quite strong. However, in a geographical perspective, UNFSA applies only to straddling and highly migratory fish stocks, which reduce considerably the impact of its provisions.[68] .

The primary document regarding protection of the biodiversity is the Convention on Biological Diversity (CBD), ratified by 196 States. The Convention does not deal itself with plastic pollution, but some provisions are of some relevance. Firstly, article 6 requests States to take measures for the conservation and sustainable use of biodiversity, such as the development of national strategies.[69] Secondly, article 8 is useful to face the challenges of plastic pollution on several aspects. It creates the possibility of establishing protected areas, it requires States to promote the protection of habitats and asks them to restore degraded ecosystems.[70] However, the regime created by the CBD still faces several limitations. Article 4 paragraph (a) recalls that the jurisdictional scope, while dealing with the components of biological diversity, is restricted to the areas within national jurisdiction. In addition, the wording of article 8 informs that a form of arbitrary power remains in the end of Contracting Parties. Indeed, they shall take the measures include in this article "as far as possible and as appropriate".

The last branch of international law that is of concrete relevance while dealing with plastic pollution is the regulation of harmful substances. The two main conventions in this field are the Stockholm Convention on Persistent Organic Pollutants and the Basel Convention on the Control of Hazardous Wastes and their Disposal. The Basel Convention has an important role to regulate the transport by sea of hazardous wastes but according to the Report of the Open-

[68] N Oral, 'From the Plastics Revolution to the Marine Plastics Crisis' in R Barnes and R Long (eds.), *Frontiers in International Environmental Law: Oceans and Climate Challenges* (Brill Nijhoff 2021) p 303.

[69] Convention on Biological Diversity (CBD), article 6(a)

[70] CBD, article 8(a)(d)(f)

ended Ad hoc Working Group.[71] Concretely, the Basel Convention pursues several goals. The first one concerns the reduction of waste. Indeed, through the waste management principle, minimisation is encouraged by the Convention. Minimisation is the first step of waste management because the current production of plastics, in terms of quantity, is already a problem. The second step of waste management according to the Basel Convention concerns the existence of facilities for waste disposal. Following the principles of proximity and least transboundary movement, the disposal of waste should be dealt with close to the place of production and the movement of waste should be minimised.[72] The Basel Convention appears to be of great potential for a more sustainable plastic economy, but some plastic wastes still escape regulatory control.[73] An open-ended list of plastic wastes are presumed to be non-hazardous and therefore are not subjected to the same regulation.[74] The problem is almost the same for the Stockholm Convention. Indeed, this instrument is only relevant because plastics are carriers of persistent organic pollutants. Nonetheless, even if their connection to plastic pollution is indirect or somehow unstable, it does not delete the fact that these conventions offer another angle to tackle this issue.

Mapping the legal framework applicable to plastic pollution in the marine environment is not an easy task considering the number of instruments and the spreading of relevant provisions among them. However, this method shows that unlike some fields of law, at least pollution by plastics does not exist in a complete vacuum. Furthermore, several non-binding mechanisms aim at assisting and completing the binding ones. They will be studied extensively in the following subsection.

2.1.2 Non-binding instruments related to plastic pollution

Like binding instruments, soft law mechanisms tackling plastic pollution of the marine environment are diverse and numerous. They constitute an integral part of the framework and

[71] UNEP, Report on possible options available under the Basel Convention to further address marine plastic litter and microplastics, 2018, paragraph 25

[72] E van der Marel, 'Trading Plastic Waste in a Global Economy: Soundly Regulated by the Basel Convention?' (2022) 34 *Journal of Environmental Law*, pp 481-482.

[73] *Ibid.*, p 497.

[74] *Ibid.*, p 485.

are sometimes more precise than the binding instruments regarding the actions needed. Following the pattern of binding tools, these instruments are often related to the source-based approach. However, it is not always the case, and some are more comprehensive than others. Non-binding instruments are also referred to as soft law, which are not in the scope of article 38 of the Statute of the International Court of Justice. This notion covers a wide range of instruments such as codes of conduct, guidelines and resolutions, adopted by UN programs for example.[75] The influence of soft law should not be underestimated, it is not considered as law *per se* but can be seen as evidence of existing law, when drafting in normative terms, or formative of the *opinion juris* and even as evidence of state practice that will generate international law in the future.[76] To conclude, soft law complements and interacts with the other sources of international law to adapt the regulatory regime.[77]

The 2011 Honolulu Strategy is an example because it is a framework within the global framework designed to face plastic pollution in the marine environment. It is meant to apprehend all the impacts of marine debris, including plastics.[78] Like the LOSC, the Honolulu Strategy addresses both plastic pollution from land-based sources and sea-based sources.[79] This document is composed of three goals and nineteen strategies to reach them. These strategies go from employ market-based instruments, to support solid waste management develop and promote use of fishing gear modifications or alternative technologies to reduce the loss of fishing gear.[80] To illustrate the potential and importance of this instrument, the United Nations Environment Assembly formally encouraged States to implement it.[81] A year after the conclusion of the Honolulu Strategy, the Global Partnership on Marine Litter

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[75] A Boyle, 'Soft law' in L Rajamani and J Peel (eds.) *The Oxford Handbook of International Environmental Law* (Oxford University Press), p 420.

[76] A Boyle, 'The Choice of a Treaty : hard law versus soft law', in S Chesterman (ed.) et al. *The Oxford Handbook of United Nations Treaties*, (Oxford University Press 2019), pp 104-105.

[77] *Ibid.*, pp 105-106.

[78] J Schäli, *The Mitigation of Marine Plastic Pollution in International Law* (Brill Nijhoff Leiden Boston 2022) p 123

[79] E Kosior and I Crescenzi, 'Solutions to the plastic waste problem on land and in the oceans' in T Letcher (ed.), *Plastic Waste and Recycling* (Amsterdam Academic Press 2020) p 438.

[80] J Schäli, *The Mitigation of Marine Plastic Pollution in International Law* (Brill Nijhoff Leiden Boston 2022) pp 124-125.

[81] UNEA, Resolution 1/6 Marine Plastic Debris and Microplastics

(GPML) was launched at Rio+20.[82] This partnership takes several forms. It is a platform for all stakeholders to cooperate (public and private), an instrument to raise awareness and actor of actions plans. In the end, it is structured as a support for the actions dedicated to face the challenges of marine litter.[83] As it will be shown later in the thesis, the GPML is also important to link the global level with the regional one.[84]

The GPML is not an independent document, it is part of the even more englobing Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA) enacted in 1995 under the UNEP. In fact, it is the Manila Declaration on Furthering the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (Manila Declaration) that called for the establishment of the GPML. Therefore, all this structure is linked to the UNEP and provides support, information and guidance to governments. Regarding that aspect, it is also necessary to mention the Clean Seas campaign, launched in 2017 by the UNEP. At first, it was 5-year campaign to eliminate microplastics in cosmetics and the excessive usage of single-use plastic.[85] However, currently this campaign was integrated into the GPML framework.

Alongside these general programmes of cooperation and wide documents, some quite specific soft law instruments exist. Often, they are guidelines and action plans derived from the binding sectoral conventions studied previously. The first example is the galaxy of instruments deriving from MARPOL. In 2017, the Marine Environment Protection Committee (MEPC) adopted the Guidelines for the Implementation of MARPOL Annex V, which was discussed in the previous section. Guidance regarding how vessels are supposed to deal with plastic to comply with MARPOL Annex V can be found throughout all this instrument. For example, it gives recommendations concerning garbage management including plastics mixed with non-plastic

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[82] JC Prata, 'Plastic Litter in Our Oceans: A Case for Government Action' (2018) 32 *Ocean Yearbook Online*, p 306.

[83] Global Partnership on Marine Litter (2021). *Global Partnership on Marine Litter (GPML) - Framework Document*. https://wedocs.unep.org/20.500.11822/41633.

[84] N Wienrich, L Weiand and S Unger, *Stronger together: The role of regional instruments in strengthening global governance of marine plastic pollution*, 2021, p 14.

[85] E Kosior and I Crescenzi, 'Solutions to the plastic waste problem on land and in the oceans' in T Letcher (ed.), *Plastic Waste and Recycling* (Amsterdam Academic Press 2020) pp 439-440.

garbage.[86] It is also possible to mention the 2012 Guidelines for the Development of a Regional Reception Facilities Plan, which play an important role in the Arctic as it will be studied in a future section.[87] In addition, one of the main contributions of the IMO to the struggle against plastic pollution of the marine environment is the Action Plan to Address Marine Litter from Ships, adopted in 2018. This action plan introduces a timeframe for achieving its objectives. The year of 2025 has been chosen to be in line with the Sustainable Development Goal 14.[88] These thirty measures range from conducting a study on marine plastic litter to reviewing the application of garbage management plans prescribed by MARPOL Annex V, and include cooperation with other international organisations, such as the Food and Agricultural Organization (FAO).[89] This Action Plan was supplemented by the 2021 Strategy to Address Marine Plastic Litter from Ships, meant to guide, monitor and oversee the implementation of the Action Plan.[90]

Resolutions are also used to complement conventions that protect biodiversity. For example, Parties to the Convention on the Conservation of Migratory Species (CMS) concluded two different resolutions to address marine debris and plastics. They are not binding but they still recommend adopting certain practices and measures necessary to face plastic pollution.[91] The situation is similar for the International Whaling Commission (IWC). The Convention itself does not deal about plastic pollution and marine debris. However, a lot of work has been done by the Scientific Committee, particularly regarding ALDFG. Guidelines on gear marking, safe and rescue techniques have notably been addressed extensively.[92]

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[86] International Maritime Organization (OMI), *Guidelines for the implementation of MARPOL Annex V*, 2017, pp 11-12.

[87] L Osmundsen, 'Port reception facilities and a regional approach: A bridge for abating plastic pollution in the Arctic?' (2023) 148 *Marine Policy*, p 3.

[88] IMO, *Action Plan to Address Marine Plastic Litter from Ships*, 2018

[89] N Oral, 'From the Plastics Revolution to the Marine Plastics Crisis' in R Barnes and R Long (eds.), *Frontiers in International Environmental Law: Oceans and Climate Challenges* (Brill Nijhoff 2021) p 297.

[90] IMO, *Strategy to Address Marine Plastic Litter from Ships*, 2021

[91] N Oral, 'From the Plastics Revolution to the Marine Plastics Crisis' in R Barnes and R Long (eds.), *Frontiers in International Environmental Law: Oceans and Climate Challenges* (Brill Nijhoff 2021) p 307.

[92] UNEP, *Marine Plastic Debris & Microplastics: Global Lessons and Research to Inspire Action and Guide Policy Change* (2016) p 16.

As for now, the question of gear marking has mainly been addressed by soft law instruments, the main actor of this framework being the FAO. In 1995, the FAO adopted the Code of Conduct for Responsible Fisheries, which addresses specifically ALDFG.[93] It is a voluntary instrument that recommends measures to minimize ALDFG and use, to the extent possible, environmentally safe fishing gear.[94] This Code was complemented more than a decade later by the conclusion of the Voluntary Guidelines for the Marking of Fishing Gear. The role of this document, realised in 2018, speaks for itself. However, as it was recently argued regarding the forthcoming Plastic Treaty, it seems that norms related to ALDFG, including FAO documents, illustrate the concerns of fragmentation.[95]

In the scientific literature, several reasons are recognized to pick soft law as an alternative to binding treaties. The first argument concerns the adoption of the instrument. Concretely, the negotiation of a binding treaty is exhaustive and can take some time. In addition, the lack of bindingness is attractive for States that do not want their freedom of action restricted. Moreover, the reduced consequences arising from any non-compliance makes it less demanding for States. This way, the development of a field of law previously empty was accelerated.[96] Another attractive aspect of soft law rests in its flexibility in terms of amendments or replacement. Most of the time only a resolution of the relevant international institution is enough to adapt the regulation.[97]

If, to a certain extent, the existence of some specific instruments to deal with precise issues may be relevant, a framework fragmented at this point imply opacity and implicates considerable concerns. The variation in standards, and the forum shopping that flows from it, is an example of fragmentation's consequences. The impossibility of getting each State to ratify every convention related to plastic pollution, has also an immediate effect on implementation and

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[93] N Oral, 'From the Plastics Revolution to the Marine Plastics Crisis' in R Barnes and R Long (eds.), *Frontiers in International Environmental Law: Oceans and Climate Challenges* (Brill Nijhoff 2021) p 303.

[94] FAO, *Code of Conduct*, paragraph 7.2.2.g

[95] See ER van der Marel and A Söfen-O'Brien, 'Accommodating a Future Plastics Treaty: the 'Plasticity' of the UN Convention on the Law of the Sea' (2024) *The International Journal of Marine and Coastal Law*, p 10.

[96] A Boyle, 'The Choice of a Treaty : hard law versus soft law', in S Chesterman (ed.) et al. *The Oxford Handbook of United Nations Treaties*, (Oxford University Press 2019), pp 102-103.

[97] *Ibid.*, pp 102-103.

enforcement of the relevant measures. The reality is even more complicated because the framework is also composed of instruments adopted at the regional level.

The numerous non-binding instruments contribute to the opacity of the global legal framework. To understand the rules applicable to pollution by plastics in the Arctic marine environment, considering both the binding requirements and the soft law is important. This mapping is the first step to evaluate the ability of the legal framework of being suited to the Arctic's needs, which is part of the research question posed in this thesis. However, to evaluate the entire legal framework this thesis will set out the existing instruments at the regional level, in the section that follows.

2.2 A Regional Response to Plastic Pollution

The Arctic is a region with unique characteristics, as shown in the introductive chapter. Indeed, unlike in the rest of the world, in this region plastic pollution is not mainly coming from land-based sources but from shipping and fishing.[98] This fact impacts the construction of the applicable framework. However, the regional framework is also fragmented between several instruments of different normative value each of which will be discussed here.[99] This section is divided as follows. In a first part, it will consider the role of regional actors with a broad mandate involved in governing marine plastics in the Arctic (2.2.1). In a second part, the focus will be put on instruments enacted by sectoral actors with restricted fields and areas of competence (2.2.2). In the end, there are several institutional instruments that are relevant to plastic pollution in the marine environment. The region does not appear to be a legal vacuum.

2.2.1 The key role of regional actors with a broad mandate

Arctic governance is a complex subject, the region being composed of areas both under and beyond national jurisdiction. Throughout time, it has been made clear that the Arctic coastal States (Norway, the United States of America, Russia, Canada and Denmark) were the main actors of the Arctic Ocean governance.[100] However, these States, alongside three others, namely Sweden, Iceland and Finland are cooperating in the Arctic Council. This high-level forum was

[98] S Dewey and S Mackie, 'Managing plastic pollution in the Arctic Ocean: An integrated quantitative flux estimate policy study' (2023) 59 *Polar Record* 36, pp 1-11.

[99] SE Mackie and K Hossein, 'Governance of Plastics in the Arctic' in ..., p 1.

[100] Ilulissat Declaration

created by the non-legally binding Ottawa Declaration of 1996 and its mandate encompasses environmental protection in the Arctic.[101] The Arctic Council is not an international organisation, and its legal personality is not separated from the legal personality of the eight member States. International legal personality can be described as the ability to be a subject of international law, with rights and obligations in the international legal order. Mainly, the Arctic Council is a place of cooperation based on the sovereignty and state-to-state relations.[102] Plastic pollution has become a topic of interest within the Arctic Council, particularly during the Icelandic Chairmanship.[103] Before that period, the Arctic Council had concluded a Regional Program of Action for the Protection of the Arctic Marine Environment from Land-Based Activities in 1998, updated in 2004 and 2009, but it was not specifically designed for plastic pollution.[104] Following the completion by the PAME of the *Desktop Study on Marine Litter, including Microplastics, in the Arctic*, the emphasis on this issue culminated in 2021 with the release of the Regional Action Plan on Marine Litter in the Arctic (RAP-ML). Composed of 59 actions, regrouped in eight different categories, this Action Plan is designed to support efforts to reduce marine litter in the Arctic.[105] Across its chapters, this document addresses at the same time pollution from ships, particularly caused by ALDFG, and onshore, notably through waste management.[106] Regarding ALDFG, it is worth noting that it is possible several references to instruments coming from different organisations (FAO, IMO). For instance, action 8, which is part of the chapter called Reducing Marine Litter Inputs from Fisheries and Aquaculture asks for the support of the implementation of the *IMO Action Plan to address marine plastic litter.* The wording of the RAP-ML remains non-binding and throughout all the document it seems clear that it is more a support than a creator of rules. Indeed, each action is introduced by a non-binding term such as promote or support. The supporting activities can be divided into several categories. First, the emphasis is put on scientific tasks, or at least to increase the knowledge. Many actions concern the identification of elements crucial to set up a regulatory framework.

[101] Declaration on the Establishment of the Arctic Council. Ottawa, Canada. 1996, Article 1(a)

[102] N Loukacheva, 'The Arctic Council and "Law-Making"' (2020) *The Northern Review*, p 110.

[103] N Loukacheva, 'The Arctic Council and its "legislative" activities' in Y Tanaka, R Johnstone and V Ulfbeck (eds.) *The Routledge Handbook of Polar Law*, London, p 364.

[104] N Loukacheva, 'The Arctic Council and "Law-Making"' (2020) *The Northern Review*, p 126.

[105] PAME, *Regional Action Plan on Marine Litter in the Arctic*, 2021

[106] PAME, *Regional Action Plan on Marine Litter in the Arctic* (RAP-ML), Themes I, II and III

It can be to identify the hot spot of ALDFG in the Arctic[107], or to identify the impacts of marine litter on the ecosystems and human life.[108] Then, other actions relate to the implementation of instruments coming from international institutions. For example, Action 20 is about the contribution and the support of the *IMO Action Plan to Address marine plastic litter from ships.*[109] Another aspect of the RAP-ML is the development and sharing of best practices and guidelines.[110] These actions are the only ones that resemble norms creations through regional cooperation. If they remain non-binding by nature, they are still crucial in terms of sharing and improvement of way to face the issues of plastic pollution in the Arctic marine environment. Moreover, it is important to notice that the Action Plan encourages the participation of Arctic States to the IMO, notably for the development of regional arrangements for port reception facilities.[111]

The Arctic Council conserves the special attachment to indigenous and traditional knowledge, which partly explains the uniqueness of this region. The Action Plan is not only about preventive actions and accumulation of data, in fact, a theme is dedicated solely to the cleaning of Arctic coasts. Although its lack of binding effect affects its effectiveness, the Action Plan remains a complete instrument and acts as a coordinator. In addition, the PAME is currently working on an implementation plan.[112]

The RAP-ML is the only document that applies to the Arctic in its entirety, but some specific areas in this region are also regulated by other instruments. Firstly, this overlapping is caused by the existence of the European Union. Indeed, the EU has enacted two Directives of relevance regarding plastic pollution: EU Directive 2019/104 on Port Reception Facilities (PRF Directive) and EU Directive 2019/904 on reduction of environmental impacts of single-use plastic products (SUP Directive). Unlike Regulations, Directives in the EU Law need to be implemented by States in their own legal order. However, that does not mean they are not binding. These specific directives are applicable to areas of the Arctic through the European

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[107] RAP-ML, Action 8.

[108] RAP-ML, Actions 39 and 40.

[109] RAP-ML, Action 20.

[110] RAP-ML, Actions 21 and 28.

[111] RAP-ML, Actions 17 and 18.

[112] SE Mackie and K Hossein, 'Governance of Plastics in the Arctic' in E Kirk et al. (eds.), *Research Handbook on Plastic Regulation: Law, Policy and the Environment,* Edward Elgar, p 12.

Economic Area (EEA), to which Norway and Iceland are parties. Indeed, they have been, or will be, incorporated in the EEA Agreement and therefore, Iceland and Norway are bound to implement them.[113] Naturally, these norms do not apply to Russia, Canada and the United States but it still applies to their ships while trading with EU countries. This ability of the EU to create extraterritorial rules comes from what is called the Brussels Effect. Accordingly, the EU is now able to supply global standards and to impose its own regulatory measures because five conditions are met: the EU has a large domestic market, has a sufficient regulatory capacity, has a preference for stringent standards, has a tendency to regulate inflexible targets and its rules are non-divisible.[114] The reach of the European legislation should not be underestimated while dealing with plastic pollution. The standards set by the EU have a practical influence on the struggle against plastic pollution in the marine environment beyond its geographical limitations.

The second regional institution that englobes parts of the Arctic is the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR). This regional sea programme is not only designed for the Arctic, but it also covers a wide area split into five regions. One of these regions is situated in the Arctic but does not encompass all of it.[115] The Convention was adopted in 1992 by fifteen States, including four arctic States, Denmark, Iceland, Norway and Sweden (Finland through the EU).[116] The Convention is a binding agreement that forces States parties to take steps to prevent and eliminate pollution from land-based sources, notably through its article 3, which stipulates that "Contracting Parties shall take, individually and jointly, all possible steps to prevent and eliminate pollution from land-based sources".[117] This provision is a clear implementation of article 207 of the LOSC. Especially

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[113] See more details in L Osmundsen, 'Port reception facilities and a regional approach: A bridge for abating plastic pollution in the Arctic?' (2023) 148 *Marine Policy*, p 4.

[114] A Bradford, *The Brussels Effect: How the European Union Rules the World*, Oxford University Press, 2020, pp 25-65

[115] Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention), 1992.

[116] E Kosior and I Crescenzi, 'Solutions to the plastic waste problem on land and in the oceans' in T Letcher (ed.), *Plastic Waste and Recycling* (Amsterdam Academic Press 2020) pp 420.

[117] Y Tanaka, 'Regulation of Land-Based Marine Pollution in International Law: A Comparative Analysis between Global and Regional Legal Framework' (2006) 66 *Zeitschrift fur Auslandisches Offentliches Recht und Volkerrecht,* pp 556-558.

when it comes to regional specificities developed in paragraph 3 and 4. Nonetheless, this instrument is limited and does not deal with plastic pollution extensively because it does not mention plastic directly and does not apply to pollution coming from vessels. These gaps are, to a certain extent, filled by the adoption of soft law norms. First of which is the OSPAR Regional Action Plan for Prevention and Management of Marine Litter in the North-East Atlantic.[118] The first section of this RAP-ML is composed of the guiding principles, such as the precautionary approach or the ecosystem approach. [119] These principles have different normative values but almost all of them were endorsed in the Rio Declaration.[120] This recall of international environmental law principles creates a link between this instrument and the rest of the framework. The RAP-ML grounds all its actions on these principles. As such, it can be said that international environmental law is at the core of the measures to address marine litter. This integration strengthens this Action Plan because if the precautionary principle is perhaps not yet of customary nature, it has at least been recognized by the ITLOS that there is a trend towards making the precautionary approach part of customary international law.[121] In addition, throughout the Action Plan numerous references to other instruments are made, including MARPOL Annex V and the EU law.[122] It should also be noted that this time some actions are dedicated to combat pollution from sea-based sources, such as improving implementation of ISO standards related to port reception facilities or analysing the fines and penalties issued by contracting States for waste disposal offences to highlight the gaps in the framework.[123] Once more, the emphasis was also put on the removal actions. Regarding that aspect, the Action Plan

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[118] Regional Action Plan (RAP) for Marine Litter (OSPAR Marine Litter RPA), available at: https://www.ospar.org/work-areas/eiha/marine-litter/regional-action-plan

[119] A Boyle and C Redgwell, *Birnie, Boyle, and Redgwell's International Law and the Environment*, Oxford, Oxford University Press, 2021.

[120] R Churchill, V Lowe and A Sander, *The Law of the Sea*, Manchester University Press, 2022, p 989.

[121] *Responsibilities and obligations of States with respect to activities in the Area* (*Advisory Opinion*) [2011] ITLOS, [135]. See also J Peel, 'Precaution' in L Rajamani and J Peel (eds), *The Oxford Handbook of International Environmental Law*, 2nd edition, Oxford Handbooks, 2021, pp 302-318, and B Sage-Fuller, *The Precautionary Principle in Marine Environmental Law: With Special Reference to High Risk Vessels*, Taylor & Francis Group, 2013

[122] R Karasik et al., *20 Years of Government Responses to the Global Plastic Pollution Problem, The Plastics Policy Inventory*, Nicholas Institute for Environmental Policy Solutions, Durham, 2020

[123] Regional Action Plan (RAP) for Marine Litter (OSPAR Marine Litter RPA), Action 34 and Action 38, available at: https://www.ospar.org/work-areas/eiha/marine-litter/regional-action-plan

was completed by the Recommendation 2016/1 and the promotion of Fishing for Litter initiatives, which intend to remove marine litter from the marine environment within fishing areas directly by fishermen. At the beginning of the current decade, the OSPAR established the North-East Atlantic Environment Strategy 2023 (NAES). It provides twelve strategic objectives to achieve clean seas, grouped under four themes.[124] In a second part the NAES developed operational objectives with specific timeframes. Under the fourth Strategic Objective the goal was set to adopt an updated Action Plan by 2022.[125] Such an instrument was indeed concluded in 2022 and expressly mentions its purpose of implementing NAES 2030.[126] Concretely, this Action Plan is more complete and addresses new issues like microplastics in greywater discharges[127] or microplastic contamination in artificial grass.[128] In addition, this Action Plan is meant to be follow closely through previously determined impact criteria.[129]

The participation of these regional actors to the framework designed to tackle plastic pollution in the marine environment is completed by sectoral instruments. I turn to this next.

2.2.2 Sectoral instruments

As it was developed previously the Arctic is a special region in terms of plastic pollution's origin. Indeed, the principal sources are shipping and fishing.[130] Therefore, some instruments and organizations dedicated to these issues contain specific regulations or may do so. Regarding fisheries, several bodies are relevant in the Arctic. The only currently regarded as a Regional Fisheries Management Organisation (RFMO) is the North-East Atlantic Fisheries Commission

[124] OSPAR Agreement 2021-01, *Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2030*, p 4.

[125] *Ibid.*, p 10.

[126] OSPAR, *The second OSPAR Regional Action Plan on Marine Litter*, p 5.

[127] *Ibid.,* Action B.1.2

[128] *Ibid.*, Action A.5.2

[129] *Ibid.*, p 17.

[130] S Dewey and S Mackie, 'Managing plastic pollution in the Arctic Ocean: An integrated quantitative flux estimate policy study' (2023) 59 *Polar Record* 36, pp 1-11.

(NEAFC),[131] which only regulates the southern part of the Arctic Ocean.[132] Nevertheless, some regulations designed by this RFMO are of relevance while dealing with marine plastic pollution.[133] Indeed, the marking and retrieval of fishing gear for example is regulated under the NEAFC Scheme of Control and Enforcement.[134] These regulations are legally binding and are quite demanding in terms of tracking and reporting, which make them even more relevant.[135] To be more precise the provision related to plastic pollution in the Arctic are divided in three part in the new Scheme of Control and Enforcement. The first part concerns the duty of States to ensure that their fishing vessels mark their gear consistently with the Convention.[136] That obligation is the basis of the regulatory framework regarding ALDFG, and the other provisions derived from it. For instance, article 7a of the Scheme of Control and Enforcement offers the possibility to the States to remove and dispose of the gear that is not marked, when the marking is mandatory. Article 7b of the same instrument focuses on the retrieval of lost gear and the corresponding duties. It creates an obligation for States to require that their fishing vessels do not deliberately discharge or abandon the fishing and the garbage into the sea. This provision is expressly based on the duties arising from the MARPOL Annex V on Regulations for the Prevention of Pollution by Garbage from Ships discussed earlier.[137] Concretely, it seems that the NEAFC Scheme of Control and Enforcement implements the measures adopted by MARPOL Annex V and the UNFSA. As it was expressed before, the UNFSA merely deals with pollution by plastics through the conservation and management measures without

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[131] V Schatz, A Proelss and N Liu, 'The 2018 Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean: A Critical Analysis' (2019) 34 *The International Journal of Marine and Coastal Law*, p 203.

[132] Convention on Future Multilateral Cooperation in North-East Atlantic Fisheries (NEAFC), Adopted in 1980, Article 1.

[133] L Finska et al., 'Waste Management on Fishing Vessels and in Fishing Harbors in the Barents Sea: Gaps in Law, Implementation and Practice' (2022) 53 *Ocean Development & International Law*, p 298.

[134] North East Atlantic Fisheries Commission, NEAFC Scheme of Control and Enforcement, Arts. 7 and 7(b) at: https://www.neafc.org/scheme/ERS-Schemes (accessed 10 june 2021)

[135] N Oral, 'From the Plastics Revolution to the Marine Plastics Crisis' in R Barnes and R Long (eds.), *Frontiers in International Environmental Law: Oceans and Climate Challenges* (Brill Nijhoff 2021) p 303.

[136] North-East Atlantic Fisheries Commission (NEAFC), *New Scheme of Control and Enforcement*, Article 7,.

[137] NEAFC, *New Scheme of Control and Enforcement*, article 7b

precision on specific rules to adopt. Therefore, the NEAFC uses the UNFSA has a framework and goes beyond the restricted obligations.

In the future, the Central Arctic Ocean Fisheries Agreement (CAOFA), adopted in 2018, may be relevant to regulate in a more comprehensive way fisheries in the region.[138] Indeed, with the adoption by the five Arctic coastal States of exclusive economic zones, there are now high seas enclaves in the Arctic, such as the *Donut Hole* and the *Loop Hole*, and a more important area further north. The CAOFA does not apply to the enclaved areas of the high sea but exclusively to the Area lying between the waters of Canada, the kingdom of Denmark, the Kingdom of Norway, the Russian Federation and the United States of America.[139] Currently there is a ban on unregulated commercial fishing.[140] The goal of the Agreement is to prevent unregulated fisheries in the high seas portion of the Arctic Ocean through the application of precautionary conservation measures.[141] The focus of this Agreement is much more about the protection of the marine environment through the fish stocks than through plastic pollution. Commercial fisheries could be conducted in the central Arctic Ocean by following conservation and management measures adopted by a RFMO, or arrangement, or by respecting interim conservation and management measures established by the Parties to the Agreement pursuant to Article 5 paragraph 1(c)(ii) of the CAOFA.[142] Yet it is not the case. Coming back to plastic pollution, as it was developed earlier, regulations to face marine plastic pollution are part of conservation and management measures in the sense of the UNFSA. Therefore, regarding the conservation and management measures of the CAOFA, or the future regional fishery body, it may be a point of interest.

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[138] Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean (CAOFA), Adopted on 3 October 2018.

[139] CAOFA, Article 1, Adopted on 3 October 2018.

[140] V Schatz, A Proelss and N Liu, 'The 2018 Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean: A Critical Analysis' (2019) 34 *The International Journal of Marine and Coastal Law*, pp 220-222.

[141] AN Vylegzhanin, OR Young and PA Berkman, 'The Central Arctic Ocean Fisheries Agreement as an element in the evolving Arctic Ocean governance complex' (2020) 118 *Marine Policy*, p 8.

[142] V Schatz, A Proelss and N Liu, 'The 2018 Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean: A Critical Analysis' (2019) 34 *The International Journal of Marine and Coastal Law*, p 222.

On a different perspective, the Polar Code, which consists of amendments to MARPOL and entered into force in 2017, creates a stricter regime for shipping in polar areas to protect the marine environment. However, none of its provisions mention plastic wastes and facilities to deal with marine litter.[143] Nowadays, the Polar Code deals only with specific type of garbage without encompassing plastic. These amendments concern mainly the discharge of food wastes and cargo residues. They go beyond the requirements of regulation 4 of MARPOL Annex V.[144] Therefore, another amendment to MARPOL may regulate this specific topic but as for now it is merely conjectures.

To conclude, it seems clear that numerous regional instruments take part in the construction of the legal framework designed to tackle marine pollution by plastics. However, this mapping of the framework has highlighted a number of gaps and limitations that need to be evaluated deeper. Delving into those considerations will allow a better perception of what is necessary to improve it.

2.3. Gaps and limitations of the international legal framework for plastics

Global warming has considerable impact on the Arctic Ocean. Whilst this area was once considered as isolated, this is no longer the case nowadays. The increase of human activities in but also the geographical characteristics of the Arctic Ocean, such as the currents and the frozen areas, make the region even more sensitive to the pollution of the marine environment. This fact is particularly true for plastic pollution. To face this relatively new issue, some instruments have been created at the regional scale. However, the efficiency of these instruments remains a question, and some gaps still exist. In answering the wider question of how the international legal framework for plastics should cater for the specifics of plastic pollution in the Arctic, this section turns to identifying these gaps.

[143] L Osmundsen, 'Port reception facilities and a regional approach: A bridge for abating plastic pollution in the Arctic?' (2023) 148 *Marine Policy*, p 3.

[144] IMO, *International Code for Ships Operating in Polar Waters* (Polar Code), 2015.

The following key gaps will be discussed. First, the insufficient legal coverage of the Arctic Ocean (2.3.1). Secondly, the weakness of normative value of key instruments and the lack of coordinated implementation (2.3.2).

2.3.1. Geographical gaps in the coverage of the Arctic Ocean

On the one hand, the Arctic Ocean faces a problem in terms of scope of application of the different regional instruments. As it was illustrated through the mapping of the legal framework, not only there are several instruments in charge of dealing with plastic pollution in the Arctic, with different mandates, but they also differ in terms of spatial application. For instance, the OSPAR regime (2.2.1), is perhaps the most complete regional instrument but it suffers from its scope of application. According to the OSPAR convention, the maritime areas covered by its regime do not encompass all the Arctic ocean.[145] Therefore, the two Regional Action Plan on Marine Litter do not apply in the Russian Arctic. As such, if the Arctic is considered as a subdivision of the OSPAR maritime area, there are still gaps in the regional framework and a lack of harmonization. The assessment is similar for the North-East Atlantic Fisheries Commission. Indeed, article 1 of the NEAFC Convention provides a definition of what is the area where the Convention is applicable, and it shows clearly that this zone is restricted.[146] A considerable part of the Central Arctic Ocean is not covered by the Convention, the spatial competence extends only to the southern tip of the ocean.[147]

On the other hand, some tools simply cannot be used in the Arctic. For instance, port reception facilities are a crucial issue considering the importance of vessel-source pollution in the Arctic. Reception facilities are described by the IMO as "any fixed, floating or mobile facility capable of receiving MARPOL wastes/residues from ships and fit for that purpose".[148] Nonetheless, a useful tool, namely "Special Areas", are missing in the Arctic. Special areas are zones where for different reasons, such as technical issues, oceanographic, ecological of vessel traffic

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[145] OSPAR Convention, Article 1.

[146] Convention on Future Multilateral Cooperation in North-East Atlantic Fisheries (NEAFC Convention), Article 1.

[147] V Schatz, A Proelss and N Liu, 'The 2018 Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean: A Critical Analysis' (2019) 34 *The International Journal of Marine and Coastal Law*, p 203.

[148] IMO, *Consolidated Guidance for Port Reception Facility Providers and Users*, MEPC.1/Circ.834/Rev.1, 2018

conditions, the adoption of mandatory methods for preventing marine pollution by garbage is authorized.[149] These areas are named under MARPOL and the Arctic is not of them. This gap is an issue because Regulations 1(14) and 8(2) of Annex V to the MARPOL Convention make the existence of adequate port reception facilities mandatory in such areas. Currently, this tool cannot be used in the Arctic and the designation process being lengthy it is not something to be expected soon. Some have argued that to a certain extent, the Polar Code already imposes stricter requirements in terms of pollution prevention measures as we discussed it earlier. Indeed, the Polar Code plays a key role in protecting the marine environment in the Arctic, but it does not mention plastics wastes and port reception facilities throughout its amendments.[150]

Gaps in the legal regime are not the only limitation of the framework in force in the Arctic area. Indeed, even though there are some instruments applicable to the region, some of them lack legal force.

2.3.2. The low level of bindingness

A look at the mapping realized in the previous sections allows the assessment that many of them are of non-binding nature. Whether it concerns the framework designed by the OSPAR or the Arctic Council, they are mainly instruments of soft law. For instance, the Regional Action Plan on Marine Litter issued by the Arctic Council does not have the legal force and effect of a binding the rule but, how it was express previously, it permits the interpretation of existing global rules in a regional context.[151] However, soft law instruments have some clear drawbacks. The first one is related to the creation of these norms. Indeed, they are often adopted without being discussed within legislative and government bodies. Here, the opacity of the process is the problem and move democratic decisions away. Obviously, the lack of enforcement measures and binding third-party dispute settlement are also particularly responsible of the weakness of soft law.

On the other side, hard law instruments have several advantages. First, the commitment from States is more credible considering the sanctions arising from non-compliance and violation of

[149] L Osmundsen, 'Port reception facilities and a regional approach: A bridge for abating plastic pollution in the Arctic?' (2023) 148 *Marine Policy*, p 3.

[150] *Ibid.*, p 3.

[151] *Ibid.*, p 5.

the rules. Then, the strength of hard law instruments also come from their potential direct legal effects in national jurisdictions, or the duty to implement them through domestic legislation. This requirement adds some credibility to rules of hard law. Finally, hard law instruments often provide two types of mechanisms useful for the concrete application of the rules. It is possible to find both mechanisms for the interpretation of the legal commitments and for the monitoring and enforcement of those commitments.[152]

Turning strictly to the Arctic, a comparison between the OSPAR regime and the Barcelona Convention may help to understand the limitations it suffers. The Barcelona Convention is a framework within which it is possible to find the first binding Regional Plan for Marine Litter.[153] On that aspect, the wording of the instrument is clear. Indeed, the term "shall" is used to strengthen States' obligations. This Regional Action Plan on Marine Litter deals with marine litter coming from land-based sources and sea-based sources.[154] Besides, once again these provisions do not come from a vacuum, they reflect explicitly the obligations arising from MARPOL Annex V.[155] The requirements designed by the Action Plan are associated with dates who serve at timeframe within which States are asked to respect their duties. Moreover, the Barcelona Convention framework is not only composed by the Action Plan. For example, in 2016, the Regional Cooperation Platform on Marine Litter in the Mediterranean was established to help with the implementation of the Action Plan. This platform acts as a support and its composition illustrates the degree of cooperation that is needed. It gathers more than twenty international and regional partners of different natures, which might be the way to ensure a high level of implementation. The call for a high degree of implementation is also perceptible through article 6 of the Regional Plan for the Marine Litter Management in the Mediterranean which requires a coherent implementation. The outcomes of the Barcelona Convention's framework on marine litter management have been studied closely. One of the main conclusions was that it helps the development of national action plans, as it will be discussed

[152] G Schaffer and MA Pollack, 'Hard Law vs. Soft Law : Alternatives, Complements and Antagonists in International Governance' (2009) *Minnesota Law Review*, p 19.

[153] UNEP, *Contributions of Regional Seas Conventions and Action Plans to a Healthy Ocean*, Nairobi, 2022, p 29.

[154] Regional Plan for the Marine Litter Management in the Mediterranean, Article 9.

[155] Regional Plan for the Marine Litter Management in the Mediterranean, Article 9 paragraph 5.

in section 3.3 of the thesis, and of regional guidelines such as the one concerning the "Fishing-for-Litter" initiative.[156]

In conclusion, it seems that the legal framework applicable to plastic pollution of the marine environment is very diversified and sometimes opaque. Indeed, a wide range of international conventions cover some aspects of pollution by plastics but none of them provide a comprehensive set of rules. The Arctic region being different than the rest of the world, especially regarding the preponderance of plastics pollution originating from vessels, numerous regional instruments were established. However, if there are some regional instruments applicable to the Arctic, they suffer limitations such as non-binding nature or restricted scope. In the end,

In the next chapter, the inherent strengths and the weaknesses of both regional and global instruments will be assessed. At the same time, the conclusions drawn from these interrogations will be useful to determine the complementarity of these two levels of governance and to what extent the global legal framework caters for plastic pollution specifics in the Arctic.

[156] UNEP, *Contributions of Regional Seas Conventions and Action Plans to a Healthy Ocean*, Nairobi, 2022, p 91.

Chapter 3. Complementarity between global and regional approaches

The framework related to plastic pollution of the marine environment in the Arctic is composed of instruments adopted at different levels of decision-making. Understanding the interaction between the global and regional perspective from a legal point of view, which this chapter aims to do so, is crucial to understand how the international law on plastics caters for the specifics of a regional Arctic approach, and how should it do so. On one hand, regarding the international nature of plastic pollution issues, public international law is a relevant tool to deal with them. However, international law of the sea and international environment law are facing inherent, but also circumstantial, limitations in terms of how it relates to regionalisation (3.1). The aim of this first subsection is to identify the limitations of the global legal framework and therefore indicate its capacity of being tailored to the Arctic specifics. On the other hand, regional instruments provide other options to face the challenges but the question of their ability to overcome them remains (3.2). The solution to these challenges come from the synergies between global and regional instruments. To evaluate that aspect, the focus will be put on the institutional relations and the links between their instruments (3.3). The analysis will focus on evaluating how much the global legal regime currently, can or should support the regional instruments.

3.1 Global instruments, at once necessary and limited to cater for Arctic specifics

The oceans, and by extension marine plastic pollution, do not respect boundaries. The travelling of plastics throughout the world's oceans, which was illustrated in the introductive chapter, cannot be dealt with exclusively by local policies. The goal of this first section is therefore dual. On the one hand it is to evaluate the necessity of having a global regime. On the other hand, the objective is to determine whether a global regime is sufficient to face the challenges of plastic pollution in the marine environment on its own. The emphasis will be put firstly on the fact that because of its fluidity, plastic pollution and its multiple sources require international cooperation (3.1.1). Second, the focus will turn to the weaknesses of global instruments. Often, these limitations are structural and depend upon the nature of international law but sometimes they are mainly due to the essence of plastic pollution (3.1.2).

3.1.1 Global instruments, the creation of founding principles

The negotiations surrounding the new treaty on plastic pollution offer some insights into the role of global instruments to address the numerous challenges. Indeed, being a global issue, plastic pollution needs to be addressed in a comprehensive manner. That is why the INC has been mandated to negotiate an international legally binding instrument which may include both binding and voluntary approaches and that covers the full life cycle of plastic.[157] Such an approach makes the involvement of the private sector even more important. Indeed, it can set up standards directly applicable to the industry. That offers the possibility to reduce the risk of pollution upstream.

In addition, a global instrument permits to set common objectives and minimum standards.[158] The fact that plastics in the ocean can be transported by the currents to different regions makes the creation of common objectives and standards crucial. The transboundary nature of plastics implies the need for a transboundary agreement. For instance, the material scope of the Plastic Treaty, regarding the size of plastics, may impact every instrument that derived from it.[159]

The purpose is usually to agree on a common approach, sometimes by setting minimum or maximum standards. For example, the INC was asked to take into consideration the need to promote cooperation and coordination with relevant regional and international conventions to avoid duplication and enhance complementarity.[160] The need for cooperation is not only meant between instruments but also between States. In terms of sharing of best practices, capacity building, training and financial support, global agreements have a great responsibility. Indeed, to address global challenges, it is necessary that each State participate to a certain extent. This is particularly true regarding pollution issue. The construction of vessels or the formation of a crew need to be harmonized to avoid accidents as much as possible. Obligations to provide

[157] UNEA, Resolution 1/6 : Marine plastic debris and microplastics, 2016, [3]

[158] J-S Fritz, 'Governing Plastics Pollution in the Ocean : From Anarchy to Mission Orientation' (2020) 34 *Ocean Yearbook*, p 237.

[159] S O'Brien, 'The Prospects of an International Treaty on Plastic Pollution' (2022) 37 *The International Journal of Marine and Coastal Law*, p 732.

[160] *Ibid.*, pp 730-731.

financial support and capacity building written in global instruments are crucial to guarantee a reasonable level of implementation.[161]

The UNEA recognized also a crucial need for a global instrument to implement resolutions on plastic pollution. The need was particularly visible in terms of coordination, cooperation and governance.[162] In the end, the UNEA favoured the creation of a forum within the UNEP to enable multi-stake holders participating in a sharing of experiences and knowledge. The final objective being the coordination of actions between these actors.[163]

However, there is still a considerable number of limitations that need to be addressed. Some considerations are applicable mainly to the plastic pollution issue, but others are inherent to global instruments.

3.1.2 Limitations to a global approach to plastics regulation

The global approach has some drawbacks that are inherent to its structure. First, it is difficult to create effective enforcement and compliance mechanisms at the global level. For example, ship-sourced pollution and reception facilities in port are addressed by the IMO through the MARPOL Convention, but in the end the implementation of these standards is not uniform. Strictly speaking, States are submitted to the same legal regime but in fact there is a lack of compliance mechanisms.[164] The question of incentivizing compliance and participation is a crucial challenge for the design of an effective global treaty.[165] Some States need more support to implement these requirements and the global scale might not be the best to face these practical challenges. According to Tanaka, the economic, technological and geographical

[161] N Wienrich, N Weiand and S Unger, *Stronger together : The role of regional instruments in strengthening global governance of marine plastic pollution, Institute for Advanced Sustainability Studies* (IASS), 2021, p 8.

[162] UNEA Resolution 4.6 Marine Plastic Litter and Microplastics

[163] R Karasik et al., *20 Years of Government Responses to the Global Plastic Pollution Problem, The Plastics Policy Inventory*, Nicholas Institute for Environmental Policy Solutions, Durham, 2020, p 165.

[164] J Vince and BD Hardesty, 'Governance Solutions to the Tragedy of the Commons That Marine Plastics Have Become' (2018) *Frontiers in Marine Science*, p 2.

[165] GRID-Arendal, *Exploring the option of a new global agreement on marine plastic pollution – a guide to the issues*, 2021, p 30.

divergence in the world make it difficult to establish uniform rules at the global level.[166] This fact is true for plastic pollution but is not limited to this field.

However, some limitations of the global governance and regulations are specific to plastic pollution. These limitations justify the need for a new treaty on plastics as it was developed in the previous part. Currently, the hard law instruments do not specifically target the life cycle of plastic, and mainly concern sea-based sources of plastic pollution.[167] In addition, as it was demonstrated in the second chapter of the thesis, the global framework is highly fragmented, and there is a lack of coordination and enforcement mechanisms to constitute a coherent whole.[168] The fragmentation of the legal framework and of the authority is responsible for the loopholes in markets regulations. Indeed, it offers opportunities for the industry to evade responsibility and to limit the scope of reforms.[169]

The emphasis on hard law instruments was made on purpose. In fact, as the mapping suggested, there is a considerable number of soft law instruments dedicated to plastic pollution and the problem of compliance with these rules is even harder because there are no enforcement measures to support them. Several inefficiency and execution issues related to the implementation of soft law instruments exist and are hard to overcome.[170]

The global approach has its limits, that is a fact, but the question is how to overcome them. The regional approach is part of it. Its proximity to territorial actors and local particularities offers opportunities to deal with plastic issues in a different manner.

3.2 A crucial regional approach

Regional instruments are participating actively in the struggle against marine pollution in the Arctic and their importance should not be underestimated. The goal of this section is to evaluate

166 Y Tanaka, 'Regulation of land-based marine pollution in international law: A Comparative Analysis Between Global and Regional Legal Frameworks' (2006), Heidelberg Journal of International Law, p 549

167 Thomas Maes et al., 'A little less conversation: How existing governance can strengthen the future global plastics treaty' (2023) Cambridge Prisms: Plastics, p 2.

168 *Ibid.,* p 3.

169 P Dauvergne, 'Why is the global governance of plastics failing the oceans?' (2018) 51 Global Environmental Change, p 25.

170 Thomas Maes et al., 'A little less conversation: How existing governance can strengthen the future global plastics treaty' (2023) Cambridge Prisms: Plastics, pp 2-3.

the role of regional instruments and to reflect on their efficiency in the Arctic regions. In the first subsection, the focus will be put on how these documents act at the same time as supportive tools and concrete norms creators (3.2.1). In a second time however, similarly to the global instruments, they are facing diverse limitations (3.2.2). Lastly, by using the elements collected in the thesis, the objective will be to evaluate to what extent the synergies between different scale are a crucial aspect of the future Treaty on Plastics (3.2.3).

3.2.1 Regional instruments, essential tools to face marine plastic pollution

Marine plastic pollution is a global issue, but it does not mean they have exactly the same concerns everywhere. For instance, as it was explained in the introductive chapter, unlike other regions, the Arctic is particularly subject to pollution from sea-based sources. Similarly, States do not have the same problems in terms of capacity building, need for financial supports, types of pollution. The considerable number of tourists creates a high pressure on the marine environment.[171]

Regional governance instruments provide the opportunity to develop and implement agreements, strategies, action plans and programmes tailored to the needs and regional characteristics. More than that, it is also easier to implement monitoring programmes and regional compliance.[172] For instance, in the Arctic there is a lack of adequate waste management infrastructure. Therefore, the Regional Action Plan on Marine Litter adopted in 2021 put the emphasis on identifying best practices and supporting Arctic States contributions to the IMO to develop Arctic-specific amendments to MARPOL.[173] It was recognized that regional instruments can fill the gaps of the global framework when it is necessary. In the Arctic, the Arctic Council has played this role to a certain extent.[174]

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[171] UNEP, *Marine Litter Assessment in the Mediterranean*, 2015, p 15.

[172] Thomas Maes et al., 'A little less conversation: How existing governance can strengthen the future global plastics treaty' (2023) Cambridge Prisms: Plastics, p 3.

[173] PAME, *Regional Action Plan on Marine Litter*, 2021

[174] L Osmundsen, 'Port reception facilities and a regional approach: A bridge for abating plastic pollution in the Arctic?' (2023) 148 *Marine Policy*, p 5.

Moreover, States remain central actors in terms of environmental decision-making and action, therefore there is a need to coordinate national policies at a scale corresponding to an ecosystem. Often the regional level is tailored to that need.[175]

However, the influence of the Arctic Council is restricted and illustrates the challenges faced by regional actors and regional instruments. The next subsection will deal with these challenges bearing in mind the overarching goal of how the legal framework should be constituted to be tailored to the Arctic.

3.2.2 Challenges for the regional approach's effectiveness

The first issue at stake for regional instruments concerns their legal effect. Indeed, not all of them are binding. Quite the opposite, most of actions and rules adopted by regional instruments are soft in nature. That results in a lack of authority and resources to implement and ensure compliance.[176]

However, it is crucial to nuance that conclusion. First, as it was demonstrated previously in the thesis, soft law instruments are relevant and useful in different manners to face the challenges of plastic pollution in the marine environment.

Secondly, being soft law instruments is not the only problem. Indeed, regional governance also suffers from a lack of human and financial capacities, geographic gaps and variation in the level of implementation.[177] According to some papers, the four main challenges that need to be addressed to improve regional actions to face plastic pollution in the marine environment are: the level of implementation, monitoring and assessment, the multi-stake holder approach and the private sector engagement.[178] The lack of financial capacities and monitoring activities is illustrated by the sporadic data reported in some regions.[179] Regarding plastic pollution at the global level, the UNEA acts as an orchestrator, but as it was expressed by the IASS there is still

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[175] United Nations Environment Programme, Contributions of Regional Seas Conventions and Action Plans to a Healthy Ocean, Nairobi, 2022, p 19.

[176] Thomas Maes et al., 'A little less conversation: How existing governance can strengthen the future global plastics treaty' (2023) Cambridge Prisms: Plastics, p 4.

[177] *Ibid.*, p 4.

[178] N Wienrich, N Weiand and S Unger, Stronger together : The role of regional instruments in strengthening global governance of marine plastic pollution, Institute for Advanced Sustainability Studies (IASS), 2021, p 6.

[179] *Ibid.*, p 6.

room for improvement on that aspect for regional actors. Orchestration is understood as the act of bringing third parties into the governance arrangement to act as intermediaries between itself and the target.[180] Therefore, regarding the fact that numerous action plans and guidelines are elaborated at the regional level, that scale relies heavily on the role of orchestrator. Indeed, the proximity with the practical issues, such as the ocean clean up, makes the collaboration with the private sector even more interesting to adapt the relevant instruments.

However, these two scales do not evolve completely independently, the collaboration and the synergies between them exist and are essential. Both a bottom-up approach and a top-down approach can be noticed.

3.3 Synergies between scales, a crucial aspect of the future Plastic Treaty

The link between the regional governance and the global governance is a two-way relationship. Indeed, there are constant interactions and both levels are competent to address the sectoral issues, including regarding plastic pollution. If sometimes it appears to be a frictional relationship, there is a need for cooperation regarding their overlapping interests.[181]

The study of the global framework allows the partial understanding of the synergies between these two scales. Indeed, far from being absent, the regional level is mentioned several times in global instruments. In fact, it is not only mentioned but the regional cooperation is an obligation. For instance, regarding pollution from land-based sources, article 207 of the LOSC stipulates in its third paragraph the duty to make efforts to harmonize policies at the appropriate regional level.[182] Here is the role of coordinator mentioned in the previous subsection. Nevertheless, this role is not the only one falling to regional actors. In fact, paragraph 4 extends this obligation from promoting harmonization to a duty to support the adoption of regional rules. On that

[180] E Cowan et al., 'Orchestration within plastics governance – From global to Arctic', 197 Marine Pollution Bulletin, p 2.

[181] IJ Adewumi, 'Exploring the Nexus and Utilities Between Regional and Global Ocean Governance Architecture' (2021) Frontiers Marine Science, p 13.

[182] LOSC, article 207 paragraph 3

aspect, States must consider the characteristics of the regional features.[183] This provision can be seen as weak and without binding effect because of the term endeavour.[184] However, article 197 establishes a clear obligation of cooperation towards the establishment of rules, standards and procedures on a regional basis when it is appropriate.[185] Thus, behind this soft obligation remains a wider obligation that encompasses it.

In addition, the global is also organizing to a certain extent the regional cooperation through some programmes. For instance, the UNEP Regional Seas Programmes plays a key role in the protection of the marine environment. Indeed, this programme facilitates the implementation of obligations.[186] It was created in 1974 and evolved since that time until reaching eighteen instruments nowadays. Moreover, it is not only about respecting obligations, but it also concerns the setting of target tailored to the corresponding region and the partnering with institutions. In the last Regional Seas Strategic Directions, for the period 2022-2025, the programme targeted the reduction of marine plastic pollution has a goal to reach diverse, resilient and productive marine and coastal ecosystems.[187] It has been argued that the Regional Seas Programme have pioneered the development of regional seas action plans.[188] Thus, the global scale played a key role in the development of a regional system of cooperation and of decision-making. The situation is similar for port reception facilities. Indeed, at the global level, the IMO is responsible for this issue. To adapt the global framework to the regional scale, the IMO adopted in 2012 the Guidelines for the Development of a Regional Reception Facilities Plan.[189] The ability of converting the global requirements into regional specific features offer the possibility to create a regime tailored to the needs of the Arctic.

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[183] LOSC, article 207 paragraph 4

[184] N Oral, 'From the Plastics Revolution to the Marine Plastics Crisis' in R Barnes and R Long (eds.), *Frontiers in International Environmental Law: Oceans and Climate Challenges* (Brill Nijhoff 2021), p 289.

[185] LOSC, Article 197

[186] D Jung. (2023). 'An International Legal Framework for Marine Plastics Pollution: Time for a Change to Regulate the Lifecycle of Plastics' in A Pozdnakova and F J Platjouw (ed), *The Environmental Rule of Law for Oceans* (Cambridge University Press 2023), p 50.

[187] UNEP, *Regional Seas Strategic Directions 2022-2025*, 2021.

[188] J Jambeck et al., 'Challenges and Emerging Solutions to the Land-Based Plastic Waste Issue in Africa' (2018) 96 *Marine Pollution*, p 260.

[189] L Osmundsen, 'Port reception facilities and a regional approach: A bridge for abating plastic pollution in the Arctic?' (2023) 148 *Marine Policy*, p 3.

Not only cooperation and synergies between the two scales exist, but it is also necessary. That is why the question of a new global treaty is essential. To address complex challenges, it is necessary to adopt a policy of coherence and to promote holistic decision-making.[190] Regarding more specifically plastic pollution, the life cycle approach summarizes this need.[191] It concerns the entire production and consumption cycle of plastics and necessarily implies the cooperation of numerous actors such as the industry and the governments.[192] In practice, the law will be more complete and the responsibility will not rest on a limited number of persons. Indeed, at several stages of the process, actors will be subjected to obligations set by an international agreement. The main objective of following such an approach is to provide an equal distribution across the value chain of the costs associated with the fight against plastic pollution.[193] The new treaty regarding plastics pollution is meant to cover the full-life-cycle of plastic, as it was recommended by the draft resolution and as it is described in the objectives of the revised draft text.[194]

In the same spirit, the Zero Draft of the new plastic treaty introduced another aspect of the global governance's influence: national action plans (NAPs). NAPs are, as for now, non-binding instruments composed of priorities and actions adopted by a government to implement international, regional or national obligations.[195] Pollution of the marine environment by plastics is not the only matter in which it is possible to find NAPs. For instance, a considerable part of the Paris Agreement relies on the development and the adoption by States of such instruments.[196] However, the NAP-based approach of the Paris Agreement was not a complete success, some interesting conclusions may be drawn from its failure. The major shortcomings

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[190] Thomas Maes et al., 'A little less conversation: How existing governance can strengthen the future global plastics treaty' (2023) Cambridge Prisms: Plastics, p 8.

[191] JC Prata, 'Plastic Litter in Our Oceans : A Case for Government Action' (2018) 32 *Ocean Yearbook*, p 311.

[192] S O'Brien, 'The Prospects of an International Treaty on Plastic Pollution' (2022) 37 The International Journal of Marine and Coastal Law, pp 733-734.

[193] S Simons et al., 'A binding agreement to address the life cycle of plastics, To eliminate plastic pollution, a holistic approach is needed' (2021) 373 *Science*, p 43.

[194] UNEP, Revised draft text of the international legally binding instrument on plastic pollution, including in the marine environment, 2023.

[195] A March et al., 'National Action Plans : Effectiveness and requirements for the Global Plastics Treaty' (2024), *Cambridge Prisms : Plastics*, p 2.

[196] *Ibid.*, p 5.

of this approach concern the lack of transparency, the weak compliances measures and the lack of funding.[197] Following the Zero Draft text, the Parties have a duty to develop and implement plans to deal with specific issues such as waste management and fishing gear.[198] Analysis of previous instruments using NAP-based approach have highlighted several key recommendations.[199] The first assessment was that when there is a clear governance framework supported by financial and political commitment, the NAPs will be much more efficient.[200] Secondly, it was argued that the NAPs with strict compliance measures were more likely to be effective. However, that conclusion has been contested. Similarly, to the debate regarding the effectiveness of *soft law*, it has been said that the flexibility and the fact that some provisions are enforceable is the key to a wide participation. To conclude, several recommendations relate to measures adopted after the establishment of NAPs, or at least that are supportive of them. For instance, it is crucial to have monitoring programmes with a complete transparency, a technical and financial assistance and clear implementation measures.[201] The Zero draft text of the international legally binding instrument on plastic pollution describes the format for national plans. The all content is not yet available, but Annex G of the Treaty is dedicated to that aspect. Furthermore, the regional scale has also a role in facilitating the implementation of these plans, or at least in coordinating them through regional plans.[202] The role of regional instruments towards NAPs is already developed in some cases. For instance, the Mediterranean Action Plan on Marine Litter, part of the Barcelona Convention's framework, has resulted in

[197] A March et al., 'National Action Plans : Effectiveness and requirements for the Global Plastics Treaty' (2024), *Cambridge Prisms : Plastics*, p 5.

[198] UNEP, Revised draft text of the international legally binding instrument on plastic pollution, including in the marine environment, 2023

[199] A March et al., 'National Action Plans : Effectiveness and requirements for the Global Plastics Treaty' (2024), *Cambridge Prisms : Plastics*, p 11.

[200] E Charani et al., 'An analysis of existing national plans for antimicrobial resistance – Gaps and opportunities in strategies optimising antibiotic use in human populations' (2023) 11 *The Lancet Global Health*, pp 467-468.

[201] To read more on that aspect See : A March et al., 'National Action Plans : Effectiveness and requirements for the Global Plastics Treaty' (2024), *Cambridge Prisms : Plastics*, pp 11-12.

[202] UNEP, Revised draft text of the international legally binding instrument on plastic pollution, including in the marine environment, 2023, Part IV, National plans, 1.5.

the adoption of nineteen NAPs. Therefore, the future treaty on plastics will merely complete the framework by providing a solid basis issued by a binding international agreement.[203]

As it was expressed several times throughout this thesis, ensuring compliance with legal obligations is at the core of pollution by plastics' challenges. The LOSC does not especially deal with compliance measures because it functions through a dispute settlement mechanism.[204] However, it is expected that a compliance mechanism will be created through the new Plastic Treaty.[205] A committee will be established and will examine compliance issues with the application of the Treaty. Currently, there is no compliance mechanisms neither in the Regional Action Plan on Marine Litter in the Arctic, adopted by the Arctic Council,[206] nor in the OSPAR Regional Action Plan on Marine Litter.[207] Therefore, even if the regional instruments provisions support, to a certain extent, the content of the Plastics Treaty it is not the compliance with the former ones that will be studied but the latter ones. However, it is possible to consider that some aspects of regional texts are implementing obligations include in the future Plastics Treaty.

In conclusion, the need for a more comprehensive binding treaty on pollution by plastics in the marine environment is certain. Whether it concerns compliance or implementation, the current framework lacks a supportive global instrument that enables and grounds a proper regional cooperation, necessary to face the shape-shifting nature of plastics pollution.

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[203] United Nations Environment Programme, Contributions of Regional Seas Conventions and Action Plans to a Healthy Ocean, Nairobi, 2022, p 11.

[204] LOSC, Part XV

[205] UNEP, Revised draft text of the international legally binding instrument on plastic pollution, including in the marine environment, 2023, Part IV, Implementation and compliance.

[206] PAME, *Regional Action Plan on Marine Litter in the Arctic*, May 2021.

[207] OSPAR, *Regional Action Plan on Marine Litter*, 2014.

Chapter 4. Conclusive chapter

The purpose of this thesis is to assess whether the current international legal framework cater for the specifics of plastic pollution in the Arctic. To do so, it was first necessary to map the legal framework applicable to plastic pollution of the marine environment in the Arctic. This analysis led to the conclusion that a wide range of instruments, both legally binding and of *soft law*, were composing the international legal framework. However, it was also obvious that there was no comprehensive instrument dedicated to plastic pollution and that could be an issue considering the nature of pollution by plastics itself. The regional framework does address plastics pollution to some extent, such as the different action plans for instance. Nonetheless, it suffers some limitations, for example, the lack of bindingness of the different instruments or their restrictive scope.

In addressing this overarching question, the goal was to study the relationship between global and regional instruments. The analysis of their synergies was central to evaluate to what extent the international legal framework sufficiently caters for the specifics of plastics pollution in the Arctic. It showed that on some aspects the global framework is implemented through regional instruments. Therefore, international agreements may ground central provisions of the regional instruments, particularly MARPOL Annex V, itself related to the LOSC Convention. Nonetheless, on other aspects such as port reception facilities for plastics, the international framework is failing the Arctic specifics.

In the end, issues regarding Arctic specifics may be solved by the future Plastics Treaty. Indeed, the weaknesses of the international framework will be reduced by the duty to build national actions plans supported by regional agreements. Allegedly, the limitations of the framework highlighted in terms of pollution from vessels and port reception facilities will be covered, or at least should be. The importance of pollution from vessels and fact that the number of vessels navigating is supposed to increase because of climate change might put even more the arctic environment under pressure. The same goes for the fisheries question in the Central Arctic Ocean. If the moratorium stays as it is now, the dangers will be limited but it is not sure yet.

In general, a more comprehensive approach is necessary to face the issues of plastic pollution in the marine environment. The current fragmented regime needs to evolve and even though the Arctic region got its specifics, that statement also corresponds to this area.

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