



**UiT** The Arctic University of Norway

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# **Comparative Study of Mineral Resource Management and Environmental Protection in the Area and Antarctica**

A study through the lens of the rights and obligations of developing States

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## **Foreword**

*The handing in of this thesis marks the culmination of two unforgettable years of personal and academic growth studying as part of the NOMPEL programme. I would like to give thanks to my family for the constant support and encouragement, to each and every one of the professors that have lectured us at the University of Uppsala, the University of Eastern Finland, and the Arctic University of Norway, for all the knowledge imparted; to all my NOMPEL friends and classmates for all the shared memories and experiences and to whom I wish bright and successful futures; and to my supervisor, Eva Romée van der Marel, for the guidance that has made this thesis possible.*

**Abstract**

In this thesis, I shall compare the different regimes regulating mineral resource management and environmental protection in the Area and Antarctica, and how these two regimes affect the rights and obligations of developing States. In order to do this, I shall make use of a doctrinal legal research approach to describe each regime, and shall additionally make use of elements from comparative legal methodology in analysing the differences described. Through these methods, I have observed that these regimes share some important similarities regarding environmental protection, peaceful use, and the promotion of scientific research, but more importantly present notable differences with regards to the treatment of developing States, and the management of mineral resources. The increasing need for mineral resources, advances in technology allowing access to ever more remote regions, and the exponential increase in environmental damage caused by human activities all contribute to the significance of this research, and to the need of having a proper understanding of the international community's approach towards these remote, resource rich, yet delicate ecosystems.

## Table of Contents

<b>Abstract</b> .....	<b>i</b>
<b>Abbreviations</b> .....	<b>v</b>
<b>Chapter 1: Introduction</b> .....	<b>1</b>
<b>1.1 Background</b> .....	<b>1</b>
<b>1.2 Purpose and Research Questions</b> .....	<b>2</b>
<b>1.3 Methodology</b> .....	<b>3</b>
<b>1.4 Scope</b> .....	<b>9</b>
<b>1.5 Structure</b> .....	<b>10</b>
<b>Chapter 2: The legal regime of the Area with regard to mineral resource management</b>	<b>11</b>
<b>2.1 What is the Area?</b> .....	<b>11</b>
<b>2.2 The Common Heritage of Mankind Principle</b> .....	<b>12</b>
<i>2.2.1 History of Common Heritage of Mankind</i> .....	12
<i>2.2.2 What is Common Heritage of Mankind?</i> .....	13
<b>2.3 The International Seabed Authority</b> .....	<b>18</b>
<i>2.3.1 International Seabed Authority Functions and Structure</i> .....	18
<i>2.3.2 Environmental Protection</i> .....	22
<b>Chapter 3: The legal regime of Antarctica with regard to mineral resource management</b>	<b>26</b>
<b>3.1 What is Antarctica?</b> .....	<b>26</b>
<b>3.2 The Antarctic Treaty System</b> .....	<b>26</b>
<i>3.2.1 History of Antarctic governance</i> .....	26
<i>3.2.2 Antarctic Treaty System Structure and decision-making process</i> .....	29
<b>3.3 The Convention on the Regulation of Antarctic Mineral Resource Activities</b> .....	<b>31</b>
<i>3.3.1 History: creation and ultimate rejection of the Convention on the Regulation of Antarctic Mineral Resource Activities</i> .....	31

3.3.2 <i>Proposed environmental obligations</i> .....	32
<b>3.4 The Protocol on the Environmental Protection to the Antarctic Treaty (Madrid Protocol)</b> .....	<b>37</b>
3.4.1 <i>Rights and obligations</i> .....	37
3.4.2 <i>Committee for Environmental Protection</i> .....	40
<b>Chapter 4: The role of developing States under the regime of the Area and under the regime of Antarctica</b> .....	<b>42</b>
<b>4.1 What is a Developing State?</b> .....	<b>42</b>
<b>4.2 Developing States in the Area</b> .....	<b>44</b>
4.3.1 <i>1994 Implementation Agreement</i> .....	44
4.3.2 <i>Technology transfer</i> .....	46
4.3.3 <i>Benefit Sharing and Parallel Development</i> .....	48
4.3.4 <i>International Tribunal for the Law of the Sea Advisory Opinion</i> .....	50
<b>4.4 Developing States in Antarctica</b> .....	<b>56</b>
4.4.1 <i>Developing States during Antarctic Treaty System negotiation and establishment</i> 56	
4.4.2 <i>Liability Regime</i> .....	58
<b>Chapter 5: Implications of the differences between the regimes governing mineral resource management in the Area and Antarctica with regards to the rights and obligations of developing States</b> .....	<b>62</b>
<b>5.1 Differential Treatment and Justice</b> .....	<b>62</b>
5.1.1 <i>What is differential treatment?</i> .....	62
5.1.2 <i>Difference between corrective and distributive justice</i> .....	66
<b>5.2 Implications</b> .....	<b>67</b>
<b>Chapter 6: Conclusion</b> .....	<b>69</b>
<b>List of References</b> .....	<b>i</b>
<b>Literature</b> .....	<b>i</b>
<i>Articles</i> .....	i
<i>Books</i> .....	viii

**Treaties .....xii**

**Official Sources.....xiii**

**Jurisprudence ..... xv**

*Arbitration Tribunal* ..... xv

*International Court of Justice* ..... xv

*International Tribunal for the Law of the Sea*..... xv

**Internet Sources..... xvi**

**Abbreviations**

ABNJ: Areas Beyond National Jurisdiction

ACC: Antarctic Circumpolar Current

AD: Anno Domini

AIJ: Activities Implemented Jointly

APEI: Area of Particular Environmental Interest

ASMA: Antarctic Specially Managed Area

ASPAs: Antarctic Specially Protected Area

ATCM: Antarctic Treaty Consultative Meeting

ATS: Antarctic Treaty System

BC: Before Christ

BRICS: Brazil, Russia, India, China, South Africa

c.: Circa

CBD: Convention on Biological Diversity

CBDR: Common but Differentiated Responsibilities

CCAMLR: Convention for the Conservation of Antarctic Marine Living Resources

CCAS: Convention for the Conservation of Antarctic Seals

CCZ: Clarion-Clipperton Zone

CEE: Comprehensive Environmental Evaluations

CEP: Committee for Environmental Protection

CGTMT: Criteria and Guidelines on the Transfer of Marine Technology

CHM: Common Heritage of Mankind

CLCS: Commission on the Limits of the Continental Shelf

COP: Conference of the Parties

CRAMRA: Convention on the Regulation of Antarctic Mineral Resource Activities

CTCN: Climate Technology Centre & Network

DSM: Deep Sea Mining

EEZ: Exclusive Economic Zone

EIA: Environmental Impact Assessment

EIT: Economies in Transition

EMP: Environmental Management Plan

EU: European Union

GATT: General Agreement on Trade and Tariffs

GOSEAC: Group of Specialists on Environmental Affairs and Conservation

GDP: Gross Domestic Product

ICJ: International Court of Justice

IEE: Initial Environmental Evaluation

ILA: International Law Association

ILC: International Law Commission

IOC: Intergovernmental Oceanographic Commission

ISA: International Seabed Authority

ITLOS: International Tribunal for the Law of the Sea



IWC: International Whaling Commission

LDC: Least Developed Countries

LN: League of Nations

LOS: Law of the Sea

LTC: Legal and Technical Commission

Ma: Mega Annum

MPA: Marine Protected Area

MS: Member States

MSR: Marine Scientific Research

NIEO: New International Economic Order

nm: Nautical Mile

OECD: Organisation for Economic Co-operation and Development

OHRLLS: Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States

PIL: Public International Law

REMP: Regional Environmental Management Plan

REA: Regional Environmental Assessment

SCAR: Scientific Committee on Antarctic Research

SEA: Strategic Environmental Assessment

TTSSCC: Technology Transfer South-South Cooperation Centre

UK: United Kingdom

UN: United Nations

UNDP: United Nations Development Programme

UNESCO: United Nations Educational, Scientific and Cultural Organisation

UNFCCC: United Nations Convention on Climate Change

UNGA: United Nations General Assembly

US: United States

USSR: Union of Soviet Socialist Republics

VCLT: Vienna Convention on the Law of Treaties

WTO: World Trade Organisation

## Chapter 1: Introduction

This chapter introduces the topic of this thesis, giving background and presenting the research question as well as developing the methodology to be used and establishing the thesis scope and structure.

### 1.1 Background

As human societies over the centuries have developed, and their technology has advanced, both their need for more and new mineral resources, and their ability to access ever more remote deposits, have increased. As early as the 5<sup>th</sup> millennium BC, neolithic populations were already digging mines up to 16 metres deep in order to reach flint deposits.<sup>1</sup> Since then, our technology and ambitions have come very far, as have the rules which govern how, where, when, and by whom mining activities can take place.

Traditionally, the laws regulating mining activities have been national domestic laws, seeing as most of the deposits being accessed were located within territory under the sovereign control of States. As far back as the 2<sup>nd</sup> century AD, the Roman *Lex metalli Vispascensis* regulated mining related activities in the district of Vipasca.<sup>2</sup>

Some much more recent developments, however, are our growing awareness of the acute environmental crisis the world is facing,<sup>3</sup> and the plethora of environmental measures that have been passed into law in an attempt to combat it.<sup>4</sup> Mining is one area which has become subject to many environmental controls, due to its numerous negative effects on biodiversity,<sup>5</sup> air quality, and water quality,<sup>6</sup> among other things.

There are areas beyond national jurisdiction (ABNJ) and therefore beyond the sovereignty of any State, laden with great mineral wealth, and near pristine and incredibly fragile environments. Interest in ABNJ is growing exponentially, as can be seen for example in the

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<sup>1</sup> UNESCO 2000

<sup>2</sup> Morcillo 2008, p. 263.

<sup>3</sup> Palsson et al. 2012, p.3

<sup>4</sup> Gunningham et al. 2016, p.2

<sup>5</sup> Sonter et al. 2018, p.1

<sup>6</sup> Muma et al. 2020, p.287

recent (at time of writing) announcement of a so-called ‘High Seas Treaty’, of particular relevance to marine genetic resources.<sup>7</sup> Two other ABNJ stand out as the only two areas on Earth where commercial mining does not yet take place: the seabed beyond national jurisdiction (the Area), and the southern ice-covered continent of Antarctica.<sup>8</sup> Both regions have no permanent human inhabitants, and are very difficult to reach without advanced technology. Both have vast mineral deposits<sup>9</sup> which are very difficult and expensive to exploit, and both have fragile and unique natural ecosystems.<sup>10</sup> And yet, despite these many similarities, the international community has devised very different regimes to regulate and manage each region. It is against this background that the next section formulates the objective of this thesis, and the main research questions.

## **1.2 Purpose and Research Questions**

There are two key concerns that must be addressed in examining mining regimes. The first is how mining affects the environment. The second is how it relates to developing States. Developing States often struggle to benefit from the wealth produced from mining as much as developed States and their enterprises and corporations do.<sup>11</sup> Conversely, developing States are currently suffering the direst consequences of environmental degradation, especially climate change.<sup>12</sup> Issues like this are at the forefront of public international law (PIL), and force us to ask questions about if developing States are being treated differently, or if they should be, and what consequences this all may have.

Against this backdrop, the main purpose of this thesis is to conduct a comparative study of the different regimes regulating mineral resource management and environmental protection in the Area and Antarctica, and to examine how these two regimes affect the rights and obligations of developing States in this regard. The main research question that this thesis seeks to answer is therefore the following:

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<sup>7</sup> UN News 2023

<sup>8</sup> World Ocean Review, 2021, p.150

<sup>9</sup> United States Department of the Interior 1994, p.3; Levin et al 2020, p.1

<sup>10</sup> McCarthy et al 2022, p.1; Weaver et al 2018, p.226

<sup>11</sup> Honest Accounts 2017, p.4

<sup>12</sup> UN-OHRLLS 2009, p.5

*What are the main differences between the regimes governing mineral resource management in Antarctica and the Area regarding the rights and obligations of developing States, in particular with regards to environmental protection, and what are the implications of these differences?*

This overarching question can be broken down into four sub-questions that are to be tackled separately, these being the following:

1. *What is the regime governing mineral resource management in the Area, in particular with regards to environmental protection?*
2. *What is the regime governing mineral resource management in Antarctica, in particular with regards to environmental protection?*
3. *What rights and responsibilities do developing States have under each regime, and how do they compare?*
4. *What are the implications of these differences?*

### **1.3 Methodology**

First and foremost, the initial chapters of this thesis, which will be descriptive in nature, demand a mainly doctrinal legal research approach. Jan M Smits describes doctrinal legal research as research which:

Aims to give a systematic exposition of the principles, rules and concepts governing a particular legal field or institution and analyses the relationship between these principles, rules and concepts with a view to solving unclarities and gaps in the existing law.<sup>13</sup>

The main aims of doctrinal legal research are thereby commonly those of description, prescription, and justification.<sup>14</sup> In responding to the first two sub-questions presented in the previous section, this thesis will describe the applicable currently existing law, the *lex lata* in each regime, which corresponds to the first of these aims. The methodology for identifying what is international law (sources, method of interpretation) is as follows.

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<sup>13</sup> Smits 2015, p.5

<sup>14</sup> *Ibid*, p.8

Article 38(1) of the Statute of the International Court of Justice (ICJ),<sup>15</sup> which sets out the sources that the ICJ is to apply when deciding its cases, is widely recognised as the starting point for establishing the sources of international law.<sup>16</sup> Article 38 recognises three main sources of international law, these being “international conventions, whether general or particular, establishing rules expressly recognised by contesting parties”, “international custom, as evidence of a general practice accepted as law”, and “the general principles of law recognised by civilised nations”. Beyond this, Article 38(1)(d) recognises two subsidiary means of determining rules of law, these being “judicial decisions” and “the teachings of the most highly qualified publicist of the various nations”.

Regarding the first of these sources, in order to understand what a treaty is and how it is to be interpreted we must turn our attention to the 1969 Vienna Convention on the Law of Treaties (VCLT);<sup>17</sup> commonly considered to be the treaty that codifies the international customary law rules on treaties.<sup>18</sup> Article 2(2) VCLT defines a treaty as “an international agreement concluded between States in written form and governed by international law, whether embodied in a single instrument or in two more related instruments and whatever its particular designation”. Regarding how a treaty works, Article 26 VCLT informs us of the principle of *pacta sunt servanda*,<sup>19</sup> that is to say that “every treaty in force is binding upon the parties to it and must be performed by them in good faith”. Conversely, Article 34 VCLT informs us that “A treaty does not create either obligations or rights for a third State without its consent”. Both the regime governing the Area, and the Antarctic regime, are based on treaties. In the case of the Area, the main relevant treaties are the 1982 United Nations Convention on the Law of the Sea (UNCLOS),<sup>20</sup> which currently has 168 Parties,<sup>21</sup> and the 1994 Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea (the

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<sup>15</sup> United Nations, Statute of the International Court of Justice (adopted 18 April 1946)

<sup>16</sup> Roberts et al. 2018, p.90

<sup>17</sup> United Nations, Vienna Convention on the Law of Treaties (done at Vienna on 23 May 1969, entered into force on 27 January 1980)

<sup>18</sup> Roberts et al 2018, p.91

<sup>19</sup> Fitzmaurice 2018, p.151

<sup>20</sup>United Nations Convention on the Law of the Sea (signed 10 December 1982, entered into force 16 November 1994)

<sup>21</sup> United Nations Treaty Collection

Implementation Agreement),<sup>22</sup> which is a document that while outside of UNCLOS itself, gives instructions on how to read Part XI,<sup>23</sup> and has 151 Parties.<sup>24</sup> In change when looking at Antarctica, the entire system of governance is constructed upon the Antarctic Treaty,<sup>25</sup> which is supplemented by other treaties hierarchically below it, such as the Protocol to the Antarctic Treaty on Environmental Protection of 1991 (the Madrid Protocol).<sup>26</sup>

When it comes to the interpretation of treaties, Article 31 VCLT sets out the general rule on treaty interpretation. Namely, that a treaty is to be “interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its objective and purpose”, as per Article 31(1)(a) VCLT. Beyond the text of the treaty itself, additional agreements relating to the treaties made by the parties must be taken into account, as per Article 31(2)(a) VCLT. Subsequent agreements regarding the interpretation of the treaty or the application of its provisions shall also be taken into account, as per Article 31(3)(a). In the context of this thesis, this means taking into account the Implementation Agreement when interpreting UNCLOS, even if this document is itself a treaty in its own right. The interpretation of the treaty can also be guided by relevant rules of international law, as per Article 31(3)(c) VCLT.

The second source of law identified in Article 38 of the ICJ Statute is custom, which is binding on all States, even those that did not actively participate in the process or formation of the custom.<sup>27</sup> The only exceptions are special or local customary law, which is only binding on a specific and defined group of States, and the so-called persistent objector doctrine, whereby a State persistently and consistently objects to a customary rule during its formation.<sup>28</sup> Custom is relevant in this thesis, as the deep sea mining (DSM) regime as a whole has widely come to

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<sup>22</sup> Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (registered 1994, entered into force 28 July 1996)

<sup>23</sup> Meyer 2022, p.241

<sup>24</sup> United Nations Treaty Collection

<sup>25</sup> Antarctic Treaty (signed 1959, entered into force 1961)

<sup>26</sup> Protocol on Environmental Protection to the Antarctic Treaty (signed 4 October 1991, entered into force 14 January 1998)

<sup>27</sup> *Ibid.* p.92

<sup>28</sup> *Ibid.* p. 97

be considered customary law.<sup>29</sup> Also, the Common Heritage of Mankind principle (CHM), one of the major principles governing the Area, is considered customary law by some,<sup>30</sup> though this classification is controversial.<sup>31</sup> Furthermore, some of the key provisions of the Antarctic Treaty System (ATS), such as non-militarisation, environmental protection, and a prohibition on mining are considered to be reflected in customary law.<sup>32</sup> For custom to be considered as such, two elements need to be present, these being State practice, and *opinio juris*.<sup>33</sup> The first of these refers to a general and consistent practice carried out by the organs representing the State, and the second refers to the belief on the part of the organs of the State that they are carrying out said practice because it is accepted as law.<sup>34</sup> The line between these two elements can appear to be blurred when a treaty comes to reflect a custom. When this happens, a non-State party of the treaty may still be bound by the norm as custom,<sup>35</sup> which is of particular relevance to this thesis, seeing as neither treaty system is universally ratified, and custom does have an important role to play. The third major recognised source of international law is general principles, which is not of particular relevance in this thesis and therefore not addressed in detail here.

Besides these primary sources of law, this thesis shall also draw from relevant international jurisprudence and the teachings of publicists and scholars in the form of literature, in order to help interpret and draw conclusions from the primary sources listed above. Moreover, this thesis will refer to sources of normativity that are not explicitly listed under Article 38 of the ICJ Statute. As for instance recognized by Anthea Roberts and Sandesh Sivakumaran, there are sources of law not mentioned in Article 38, such as unilateral declarations of States, resolutions of the UN Security Council, *Jus cogens* norms (norms of general international law from which no derogation is permitted<sup>36</sup>), and some resolutions of the UN General Assembly (UNGA).<sup>37</sup>

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<sup>29</sup> Dingwall 2020, p.152

<sup>30</sup> Wolfrum 1983, p.53

<sup>31</sup> Jabour 2013, p.247

<sup>32</sup> Blackie 2016, p.10

<sup>33</sup> Wolfrum 1983, p. 92

<sup>34</sup> *Ibid.*

<sup>35</sup> *Ibid.* p.91

<sup>36</sup> Murphy 2020, p.69

<sup>37</sup> Roberts et al. 2018, p.101-104



Several UNGA resolutions specifically shall be referenced and mentioned throughout this thesis as containing relevant developments, although their normative status (law/non-law) will not be discussed further.

It should also be noted that Article 38 of the ICJ Statute does not capture the true dynamism of international law making. It fails to recognise the role of non-State actors, and State-empowered entities in the formation and development of PIL,<sup>38</sup> or the relevance of soft-law and non-binding sources such as International Law Commission (ILC) reports and draft articles.<sup>39</sup> For the purposes of this thesis, ILC reports and draft articles will help clarify such concepts as the fragmentation of international law and State responsibility.

In addition to describing the law, this thesis aims to compare two legal regimes, and analyse the implications of these differences. The third and fourth subsidiary research question as set out above compare the rights and responsibilities of developing countries under the regimes governing the Area and Antarctica respectively, and analyse the implications of these differences. This part of the thesis is more analytical than descriptive, and requires a comparative methodology rather than a doctrinal one.

In comparing the regime of the Area and the regime of Antarctica, this thesis compares two subsets of PIL. The differences between subsets of PIL is known as the *fragmentation* of PIL.<sup>40</sup> This is at the crux of the issues this thesis concerns itself with. Despite the material similarities or parallelisms that exist between the Area and Antarctica, the regimes that govern and regulate them emerged to respond to different technical and functional requirements. The issue with this, as the ILC points out, is that the emergence of ‘self-contained regimes’ and limited treaty-systems is that they create problems of coherence in international law.<sup>41</sup> In dealing with the issues that come about with fragmentation, this thesis shall take the approach of fitting fragmented PIL into a general PIL system, and seeing how the different areas of PIL influence and affect (or may influence and effect) one another. This analysis (Chapters 4 and 5) is shaped by elements from comparative law methodology. Although the literature on comparative law

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<sup>38</sup> *Ibid.* p.108

<sup>39</sup> *Ibid.* p.113

<sup>40</sup> Roberts et al 2015, p.469

<sup>41</sup> ILC 2006, p. 5

research is more geared towards the comparison of national legal systems,<sup>42</sup> when looking at its aims, the following key takeaways from the literature on comparative research are also relevant here.

First, the so-called pragmatic, or utilitarian aim of comparative law, whereby one may seek to develop and optimise a legal system by comparing it to a different system.<sup>43</sup> Second, the emphasis on understanding and taking into account socio-economic and especially historical context.<sup>44</sup> In the case of this thesis, the historical contexts to take into account are the respective periods in which each regime came into being. Third, the importance of not relying only on legislation for performing a good comparison, but also taking into account Jurisprudence, States' declarations, and the literature.<sup>45</sup>

In identifying the methods via which comparisons may take place, Geoffrey Samuel recognises six 'schemes of intelligibility',<sup>46</sup> which Van Hoecke effectively uses to in turn develop a series of comparative methods, of which the following are of relevance to this thesis: functional method, analytical method, historical method, and the law-in-context method.<sup>47</sup> These can be briefly described as follows.

The functional method focuses on examining how common legal problems are dealt with in different systems.<sup>48</sup> The common legal problems of both how to manage mineral resources and how to protect the environment (and how the legal solutions to these problems affect developing States) are dealt with in both the regimes being compared, making this method relevant. Furthermore, the functional method also asks which institutions perform equivalent functions in each system, which here as described later in this thesis means for example looking at the International Seabed Authority's (ISA) Legal and Technical Commission (LTC) and the ATS' Committee for Environmental Protection (CEP).

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<sup>42</sup> Van Hoecke 2015, p.3

<sup>43</sup> Glenn 2006 p.60

<sup>44</sup> Van Hoecke 2015, p.6

<sup>45</sup> *Ibid*

<sup>46</sup> Samuel 2014, p.81

<sup>47</sup> Van Hoecke 2015, p.8

<sup>48</sup> *Ibid*, p.11

The analytical method's relevance comes in Wesley Newcomb Hohfeld's distinguishing of different conceptions of rights. Hohfeld points out that a right can be understood to mean a claim, a power, a liberty, an immunity, or a privilege.<sup>49</sup> This is how the rights and obligations of developing States in each regime shall be categorised in Chapter 5 of this thesis.

The law-in-context method and its subset, the historical method, both focus emphasis on giving each system being compared adequate context.<sup>50</sup> The descriptive chapters of this thesis shall draw on this method when introducing each regime. In describing rights specific to developing States, this thesis will directly explain differential treatment in Chapter 5. Furthermore, in describing the function of this differential treatment under each regime, the same chapter will elaborate on different ways differentiation can take place, such as corrective or distributive justice. This will serve as the main framework for understanding the comparison of specific rights of developing States, and the implications of the differences between the Area and Antarctica.

The last thing that remains to be addressed is the role of non-legal sources, such as those from scientific, historical, or geopolitical disciplines. The contribution of these sources shall be limited, but in order to give context, they shall play an auxiliary role, as understood by Bart van Klink and Sanne Taekema.<sup>51</sup> This means that material derived from other disciplines may contribute to legal argumentation.<sup>52</sup>

#### 1.4 Scope

The two legal regimes being compared in this thesis are very different. They came about in different historical contexts, to fulfil different objectives. The common element that links these two regimes, the *tertium comparationis* that makes this comparison make any sense in the first place is the fact that both are ABNJ, that is to say, areas that form part of *the global commons*. The global commons are understood to be the areas and resources beyond national jurisdiction.<sup>53</sup> There are however other areas that fall within this classification, notably outer

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<sup>49</sup> *Ibid*, p.13

<sup>50</sup> *Ibid*, p.16

<sup>51</sup> Van Klink et al 2011 p.12

<sup>52</sup> *Ibid*, p.10

<sup>53</sup> Vogler 2012 p.61

space, the global atmosphere, and the high seas, not examined here. While a much wider investigation of the rights and obligations of developing States in the global commons in general could have been of great interest, this falls outside the scope of this thesis. No doubt such types of investigations are becoming ever more important and interesting, as the law of the commons continues to develop.

Furthermore, regarding the contents of the comparison, a full comparison of every aspect of both regimes would be too comprehensive a task for this thesis. Therefore, this thesis uses the lens of the rights and obligations of developing States regarding the management of mineral resources to focus the discussion.

## **1.5 Structure**

The remainder of the thesis is structured across five chapters, with one dedicated to answering each of the four subsidiary research questions, and a final concluding section.

Starting with the descriptive part of the thesis, Chapter 2, titled “The legal regime of the Area with regard to mineral resource management” answers the question “*What is the regime governing mineral resource management in the Area, in particular with regards to environmental protection?*”. This will be followed Chapter 3, titled “The legal regime of Antarctica with regard to mineral resource management”, which in giving a description of the regime governing the southern continent, shall respond to the question “*What is the regime governing mineral resource management in Antarctica, in particular with regards to environmental protection?*”? Chapter 4, titled “The role of developing States under the regime of the Area and under the regime of Antarctica”, shall mark the beginning of the analytical part of the thesis. It shall be dedicated to answering “*What rights and responsibilities do developing States have under each regime, and how do they compare?*” This will be followed by the Chapter 5, “Implications of the differences between the regimes governing mineral resource management in the Area and Antarctica with regards to the rights and obligations of developing States”, which will respond to “*What are the implications of these differences?*” Finally, Chapter 6 concludes.

## **Chapter 2: The legal regime of the Area with regard to mineral resource management**

This chapter sets the scene by briefly setting out the mineral resource management regime of the Area, its institutions, and core obligations. To the extent that these create rights and obligations for developing states, this is discussed in detail in Chapter 4.

### **2.1 What is the Area?**

The ocean is vast. It covers 70% of the Earth's surface, and contains an estimated 1'35 billion cubic kilometres of water.<sup>54</sup> The ocean is legally divided into a series of different maritime zones, as defined and delimited in UNCLOS. Some of these zones are subject to State sovereignty, to a greater or lesser extent. These include internal waters, the territorial sea, the contiguous zone, and the Exclusive Economic Zone (EEZ). Beyond this point, the water column falls outside State jurisdiction, and is governed by the freedom of the high seas, as per Article 87 UNCLOS. On the seabed beyond 200 nm from the baseline, there is the continental shelf, which grants coastal States jurisdiction and control over its mineral resources.<sup>55</sup> The reasoning here was that the continental shelf was but an extension of the land-mass of the coastal nation, and the mineral deposits found therein were but an extension of those found on the continent above sea level.<sup>56</sup> In certain regions of the ocean, the continental shelf extends beyond 200 nm. During UNCLOS negotiations, this prompted a lot of debate, with some States, known as the 'broad margin States', claiming that the continental shelf beyond 200 nm should be subject to their sovereign rights, whilst others claiming it should be part of the Area.<sup>57</sup> The former group ended up prevailing, with two compromises, namely, that the broad margin States would have to make payments to the ISA for the exploitation of non-living resources on the continental shelf beyond 200 nm, and that they would have a much more limited right of refusing consent for foreign researchers to conduct marine scientific research (MSR) in the continental shelf beyond 200 nm.<sup>58</sup> Within UNCLOS, the Continental Shelf is defined and

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<sup>54</sup> National Geographic, 2023

<sup>55</sup> Mossop 2016, p.54

<sup>56</sup> *Ibid.*

<sup>57</sup> *Ibid.*, p.60

<sup>58</sup> *Ibid.*, p.61

delineated in Article 76. Paragraph 1 of this Article gives two possible ways of determining the continental shelf: either up to a distance of 200 nm from the baselines from which the territorial sea is measured, or up to the edge of the continental margin. Paragraph 6 of the same Article clarifies that the outer limit of the continental shelf shall not exceed 350 nm from the baseline.

The Area, then, is what remains, covering about 50% of the seabed.<sup>59</sup> Specifically, UNCLOS defines the Area in Article 1(1) as “the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction”. Activities in the Area are governed by UNCLOS Part XI, and by the Implementation Agreement. Due to the profound impacts the Agreement has had on developing States, it shall be properly examined in section 4.3 of this thesis.

Section 2, Part XI of UNCLOS details the principles governing the Area, where Article 136 states that “the Area and its resources are the common heritage of mankind”. This principle is developed in the following section.

## **2.2 The Common Heritage of Mankind Principle**

### *2.2.1 History of Common Heritage of Mankind*

The history of the principle of CHM is a history closely tied to developing States and their interests. Some of its contents can be traced all the way back to Roman law applicable to common space resources, as well as values and principles found in religious traditions.<sup>60</sup> The concept was associated with the oceans in the 19<sup>th</sup> Century, when Venezuelan jurist Andres Bello argued that “marine resources could be considered as the inherited property of mankind”.<sup>61</sup> However, the most relevant event that made CHM a part of modern PIL and tied the concept to the seabed can be traced back to August 1967, to a speech of the then Ambassador of Malta to the UNGA, Arvid Pardo.<sup>62</sup> In 1970 the UNGA passed Resolution 2749 (UNGA Declaration of Principles governing the Sea-bed)<sup>63</sup> which in its first Article declared that: “The sea-bed and ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction

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<sup>59</sup> Levin et al 2020, p.4

<sup>60</sup> Noyes 2012, p.457-458

<sup>61</sup> Wang et al 2020, p. 2

<sup>62</sup> *Ibid*, p.456

<sup>63</sup> Declaration of Principles Governing the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction, UNGA, UN Doc A/RES/2749(XXV), 17 December 1970.

(hereinafter referred to as the area), as well as the resources of the area, are the common heritage of mankind”.

In 1986 the International Law Association (ILA) made the Seoul Declaration,<sup>64</sup> which contained twelve principles, among which we can find CHM.<sup>65</sup> This declaration was however made in the context of the New International Economic Order (NIEO), an initiative that authors ultimately see as not having been brought to fruition.<sup>66</sup> However, the principles put forth in the Seoul Declaration did not die with the NIEO, as is evidenced by the ILA’s 2002 New Delhi Declaration on Sustainable Development,<sup>67</sup> which in its Preamble directly reaffirms the Seoul Declaration.

But CHM does not merely exist as a principle of PIL, but has over the years been incorporated into treaty law as well. For example, Article 11 of the Agreement Governing the Activities of States on the Moon and Other Celestial bodies (Moon Treaty)<sup>68</sup> mentions CHM explicitly. However, the 1982 UNCLOS and its subsequent 1994 Implementation Agreement (discussed in more detail in Chapter 4) are thus far the only agreements that have devised rules and procedures for the implementation of CHM.<sup>69</sup> It is because of this that CHM is primarily tied to the Area, and is such a fundamental part of understanding the regime that governs and regulates it. But, a discussion on the practical implementation of the principle cannot be had before a proper examination of *what* exactly CHM is and means.

### 2.2.2 *What is Common Heritage of Mankind?*

The status of CHM in PIL is not something universally agreed upon.<sup>70</sup> Some have classified it as a *jus cogens* obligation.<sup>71</sup> Others, such as German jurist Rüdiger Wolfrum, have argued that

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<sup>64</sup> Seoul Declaration on Progressive Development of Principles of Public International Law Relating to a New International Economic Order, 1986

<sup>65</sup> French 2008, p. 13

<sup>66</sup> *Ibid*, p. 31

<sup>67</sup> New Delhi Declaration of Principles of International Law Relating to Sustainable Development, 2002

<sup>68</sup> Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (adopted 1979, entered into force July 1984)

<sup>69</sup> Noyes 2012, p.461

<sup>70</sup> Owolabi 2016, p.53

<sup>71</sup> *Ibid*, p.53-54

it clearly forms part of international customary law.<sup>72</sup> Yet others, such as American academic Christopher C. Joyner, still deny that this principle fulfils the criteria to achieve the status of customary international law.<sup>73</sup> The aforementioned Seoul and New Delhi Declarations do seem to suggest that the international community does accept CHM as customary law. Regardless of its status, doubts as to the contents of the norm, or indeed its very meaning, still need to be addressed.

Despite the long history of the principle, no universally accepted clear definition actually exists.<sup>74</sup> There is even debate on how to interpret what is meant by ‘mankind’, with there not being absolute clarity on if the concept refers to “all States, all nations, all living human beings, or all human beings including future generations”<sup>75</sup> Some authors choose to go with the interpretation that ‘mankind’ in this context refers to all States, seeing as States are the subjects of PIL, and act as the medium to represent all of mankind.<sup>76</sup> While it is true that identifying all of mankind with States presents its problems (ie, tribal communities or citizens of ‘failed States’ not getting representation under this understanding),<sup>77</sup> it is true that States, using the ISA, are the medium through which in practice the shared resources of mankind are managed.<sup>78</sup>

Regarding the content of the principle, when Pardo first proposed CHM, he recognised it to contain five elements, these being that “CHM cannot be appropriated”, “an active sharing of benefits, including not only financial benefits but also benefits derived from shared management and exchange and transfer of technologies”, “the reservation for peaceful purposes”, “the transmission of the heritage substantially unimpaired to future generations”, and “the use of CHM required a system of management in which all users must share”.<sup>79</sup> Each of these elements shall briefly be examined in turn.

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<sup>72</sup> Wolfrum 1983, p.336

<sup>73</sup> Joyner 1986, p. 198

<sup>74</sup> Loan 2004

<sup>75</sup> Baslar, 1998 p.73

<sup>76</sup> Wang et al 2020, p.3

<sup>77</sup> Baslar, 1998, p.75

<sup>78</sup> Wang et al 2020, p.3

<sup>79</sup> Ronald et al 1986, p.654



The first element to be examined shall be that of “non-appropriation by individuals or States”, which has been an important element of the commons in general for a very long time, and is not unique to CHM.<sup>80</sup> It can be traced back to Dutch diplomat Hugo Grotius and his 1609 work *Mare Liberum*,<sup>81</sup> where he claims that navigation and fishing should be “free and open to all”.<sup>82</sup> More recently, with regards to CHM and the Area, the 1970 UNGA Declaration of Principles governing the seabed declares in its second Article that “The Area shall not be subject to appropriation by any means by States or persons, natural or juridical, and no State shall claim or exercise sovereignty or sovereign rights over any part thereof”. Article 3 of the same Declaration affirms that:

No State or person, natural or juridical, shall claim, exercise or acquire rights with respect to the Area or its resources incompatible with the international regime to be established and the principles of this Declaration.<sup>83</sup>

However, it must be added that in more recent times, some authors have put forth the idea that non-appropriation is not actually an essential element of CHM.<sup>84</sup> The reasoning here is that if the main consideration of CHM is the common interest of mankind in the resource or region in question instead of freedom of use, then this principle could apply to resources in areas beyond the commons.<sup>85</sup> However, developing States desired a regime that would avoid a small group of advanced maritime developed States from monopolising control of the resources of the Area to the detriment of the rest of mankind.<sup>86</sup>

This raises the question of what is meant by the “active sharing of benefits”. This element is perhaps the most relevant with regards to the particular interests of developing States. Article 7 of the 1970 UNGA Declaration of Principles governing the Seabed in establishing that the exploitation of the resources of the Area shall be carried out for the benefit of mankind as a

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<sup>80</sup> Owolabi 2016, p.52

<sup>81</sup> Borg 2012, p.26

<sup>82</sup>Grotius 1916, p.26

<sup>83</sup> Declaration of Principles Governing the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction, UNGA, UN Doc A/RES/2749(XXV), 17 December 1970, p.24

<sup>84</sup> Loan 2004

<sup>85</sup> *Ibid.*

<sup>86</sup> Wang et al 2020, p. 2

whole, adds that particular consideration must be taken in “the interests and needs of the developing countries”. This inclusion is a result of developing States consistently pushing for their particular interests to be accommodated during the negotiation process for UNCLOS.<sup>87</sup> The benefits sharing regime as it currently exists under the ISA, and its implications for developing countries, is explored in more detail in section 4.3.

The third element highlighted by Pardo is that of “peaceful use”. The concept of common interest of mankind has been closely tied to peaceful use, since at least the 1958 UNGA Resolution on the Question of the Peaceful Use of Outer Space.<sup>88</sup> It makes sense that this element was emphasised as CHM was developed in the tense context of the Cold War. However, this element is also of an obvious practical utility, as violent or aggressive uses of common areas could easily result in the destruction of the resources therein.<sup>89</sup> Some authors have argued against this element being a fundamental element of CHM though, seeing as it was not included as such in the 1986 ILA Seoul Declaration.<sup>90</sup>

Another, sometimes somewhat controversial element is that of “transmission of heritage to future generations”. Intergenerational solidarity as a concept gained prominence in the field of environmental law with the 1987 Report of the World Commission on Environment and Development: Our Common Future (the Brundtland Report).<sup>91</sup> The idea is far older though. Almost a century before the Brundtland Report, German economist and philosopher Karl Marx wrote that:

Even a whole society, a nation, or even all simultaneously existing societies taken together, are not the owners of the globe. They are only its possessors, its usufructuaries, and, like *boni patres familias*, they must hand it down to *succeeding generations* (emphasis added) in an improved condition.<sup>92</sup>

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<sup>87</sup> Adar 1987, p.668

<sup>88</sup> Question of the peaceful use of outer space, UNGA, UN Doc A/RES/1348(XIII), 13<sup>th</sup> December 1958

<sup>89</sup> Noyes 2012, p.451

<sup>90</sup> Owolabi 2016, p.52-53

<sup>91</sup> Report of the World Commission on Environment and Development: Our Common Future. United Nations General Assembly Document A/42/427

<sup>92</sup> Marx 1996, p.567

The environmental protection implicit in the idea of passing on a natural heritage to future generations places a burden on all States that must be shared.<sup>93</sup> So, not only are the benefits of exploitation to be shared, but the responsibility of preservation is as well. Despite the strong environmental connotations of this element though, it must be remembered that CHM did not fundamentally develop as a means to protect the environment, but rather, as a way of managing the exploitation of resources in a controlled, responsible and equitable manner.<sup>94</sup>

Yet another fundamental element that must be discussed is the necessity for a “shared system of management”. One of the fundamental obstacles that any approach towards the commons faces is ‘the tragedy of the commons’. This idea, briefly explained, postulates that when a resource isn’t appropriated by any one person or State, and can be used by all, every individual will be incentivised to extract the maximum benefit from the communal resource, seeing as the short-term benefit of this conduct outweighs the cost.<sup>95</sup> This inevitably results in the depletion of the communal resource, as all self-interested parties seek to exploit the resource before their competitors do.<sup>96</sup>

Shared management of the CHM resource is one way to help solve this tragedy.<sup>97</sup> Exploitation of the resource ceases to be a ‘free for all’, with all interested parties cooperating in the management. That specifically the ocean’s resources should be managed by the international community was proposed by French jurist A.G de Lapradelle, who proposed these resources be administered by the League of Nations (LN).<sup>98</sup> In the case of the Area, this shared management manifests in the institution of the ISA,<sup>99</sup> which shall be examined in more detail next.

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<sup>93</sup> Balsar 1998, p.101

<sup>94</sup> Loan 2004

<sup>95</sup> Hardin 1968, p. 1244

<sup>96</sup> *Ibid.*

<sup>97</sup> Loan 2004

<sup>98</sup> Pfirter 2006, p.5

<sup>99</sup> Jaeckel et al. 2016, p.2

## 2.3 The International Seabed Authority

### 2.3.1 International Seabed Authority Functions and Structure

The ISA was, along with the International Tribunal for the Law of the Sea (ITLOS) and the Commission on the Limits of the Continental Shelf (CLCS), one of the Law of the Sea (LOS) institutions that was newly created by UNCLOS to facilitate its implementation.<sup>100</sup> Its establishment comes with Article 156(1) of UNCLOS, with the second paragraph of the same Article informing us that all UNCLOS States Parties are “*ipso facto* members of the Authority”. The nature and fundamental principles of the ISA are to be found in Article 157 of UNCLOS, the first paragraph of which makes clear that the function of the ISA is to “organise and control activities in the Area, particularly with a view to administering the resources in the Area”.

It is possible to identify a number of key elements of the UNCLOS DSM regime that the ISA heads. Firstly, as has been explored above, the deep seabed and its resources are the CHM.<sup>101</sup> Also, the ISA must take the interests of developing States into account, as well as develop mechanisms to guarantee equitable sharing of benefits obtained from the Area, both things that will be elaborated more in Chapter 4.3.<sup>102</sup> Additionally the ISA is also charged with the protection of the environment.<sup>103</sup> Finally, other actors besides the ISA are prohibited from conducting unilateral DSM activities.<sup>104</sup> Though acceptance of UNCLOS is not universal, it has been proposed that the DSM regime of the ISA may at this stage be considered customary law.<sup>105</sup> Indeed, this regime fulfils the criteria recognised by the ICJ for passing from treaty law to customary law of being norm-creating in character, having widespread and representative participation, and extensive and uniform State practice.<sup>106</sup>

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<sup>100</sup> Mendenhall 2019, p. 35

<sup>101</sup> Dingwall 2020, p.145

<sup>102</sup> *Ibid.* p.146

<sup>103</sup> *Ibid.*

<sup>104</sup> *Ibid.*

<sup>105</sup> *Ibid.* p.152

<sup>106</sup> *North Sea Continental Shelf Cases* (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands), Judgement, ICJ Reports (1969), paragraphs 71-73

Beyond these key elements of the DSM regime the ISA oversees, the ISA is also empowered to develop a full Mining Code, though this process has not yet been completed.<sup>107</sup> It is incredibly rare for one international body to exercise administrative, legislative and executive functions as the ISA does.<sup>108</sup> One of the major roles of the ISA is administering the Parallel System of Reserved Areas, a system to guarantee the participation of developing States in the activities of the Area.<sup>109</sup> This topic, as well as that of technology transfer under the regime governing the Area, shall be tackled in detail in section 4.3.

The ISA is formed out of the following organs: the Secretariat, the LTC, the Finance Committee, the Economic Planning Commission, the Enterprise, the Council, and the Assembly.<sup>110</sup> Each organ shall be briefly examined in turn.

Firstly, the Secretariat, which conducts the ISA's administration.<sup>111</sup> It is led by a Secretary-General, who is required to support all ISA meetings, among other administrative duties.<sup>112</sup>

Secondly, the Legal and Technical Commission, or the LTC, is a particularly interesting and rather eclectic organ. Regulated by UNCLOS Article 165, it is composed of 30 experts who meet bi-annually to prepare recommendations and advisory inputs to the Council.<sup>113</sup> It is also responsible for:

Reviewing formal written plans of work, and making recommendations to the Council thereon; developing ISA regulations, supervising all phases of contractor performance, preparing assessments of the environmental implications of mining activities, and keeping on top of contractor compliance including through roles in reviewing reports, monitoring, inspection and review of activities and developing additional recommendation.<sup>114</sup>

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<sup>107</sup> *Ibid.*, p.140

<sup>108</sup> Wolfrum 2010, p.917

<sup>109</sup> Zalik 2018, p.6

<sup>110</sup> Levin et al 2020, p.7

<sup>111</sup> Dingwall 2020, p.146

<sup>112</sup> Levin et al 2020, p.7

<sup>113</sup> Kirkham et al 2020, p.9

<sup>114</sup> *Ibid.*

The broad and varied workload of the LTC further includes making recommendations to the Council to disapprove areas for exploitation in cases where “substantial evidence indicates a risk of serious harm to the marine environment”, and making recommendations to issue emergency orders.<sup>115</sup> Furthermore, as per Section 7(2) of the Annex to the Implementation Agreement, the LTC has in fact also been charged with assuming the functions envisaged for the Economic Planning Commission.<sup>116</sup> With such a varied and vast workload, only 30 members, and meetings occurring biannually, some believe that the LTC is ill equipped to adequately give all its various tasks the proper attention they require.<sup>117</sup> As a result, there have been calls for the creation of newer, more specialised committees to deal with scientific or environmental matters, for example.<sup>118</sup> Due to its role in environmental management, parallelisms have been drawn between it and the CEP of Antarctica, which will be explored in section 3.4.

Of less relevance to this thesis is the Finance Committee, which is a subsidiary organ of the Assembly,<sup>119</sup> and as the name suggests, it is tasked with the overseeing of the ISA’s administrative budget.<sup>120</sup>

Then there is the Economic Planning Commission. This organ is planned to be responsible for examining the impacts of mining in the Area on land-based mining economies.<sup>121</sup> This is in order to fulfil Sections 1(5)(e) and 5(1) of the Annex to the 1994 Implementation Agreement, which require that mining in the Area is to not negatively affect the economies of developing States derived from terrestrial mining, or if it does, it must compensate them. As has been said above, its functions are currently being carried out by the LTC.

One of the most interesting organs of the ISA is the Enterprise. As per Article 153(2)(a) of UNCLOS, the Enterprise is to be the organ through which the ISA carries out activities in the Area directly. Its tasks, as per UNCLOS Article 170, would include the transporting,

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<sup>115</sup> *Ibid.*

<sup>116</sup> *Ibid.*

<sup>117</sup> *Ibid.*

<sup>118</sup> *Ibid.*

<sup>119</sup> Dingwall 2020, p.147

<sup>120</sup> Levin et al 2020 p.7

<sup>121</sup> *Ibid.*

processing, and marketing of minerals from the Area. The Enterprise may submit applications for approval of work in the Area, as may State parties or contractors sponsored by them.<sup>122</sup> However, as of time of writing, the Enterprise is not yet operational, with its functions currently being carried out by the Secretariat.<sup>123</sup> The development of the Enterprise remains an important priority for developing States, but is nearly completely ignored by developed States, and in fact there is currently no planned process for establishing the Enterprise in place.<sup>124</sup> In 2012 there was a proposal by mining company Nautilus Minerals Inc. to form a joint venture with the Enterprise to operate in the Clarion-Clipperton Zone (CCZ) in the Pacific, but the Council found that it was still “premature for the Enterprise to function independently”.<sup>125</sup>

One of the most important organs is the Council, which functions as the executive body of the ISA, and comprises 36 Member States (MS), elected into a series of chambers representing different interests.<sup>126</sup> These chambers include:

Major consumers or importers of the relevant metals, the largest investors in deep-sea mining in the Area, major exporters of the relevant metals from land-based sources, developing countries with special interests, and five regional geographic groupings.<sup>127</sup>

The Council reports to the Assembly, and can make recommendations to adopt rules, regulations and procedures.<sup>128</sup> It can also veto to overturn LTC recommendations for approval of an exploration or exploitation contract, though admittedly this majority is difficult to reach in practice.<sup>129</sup>

This finally leaves the Assembly, which comprises all 168 ISA MS, and meets at least annually at the ISA’s headquarters in Kingston Jamaica.<sup>130</sup> Along with the Council, the Assembly has

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<sup>122</sup> Oyarce 2016, p.318

<sup>123</sup> Levin et al 2020, p.7

<sup>124</sup> Zalik 2018, p.11

<sup>125</sup> Ning, 2012, p.9

<sup>126</sup> Levin et al 2020, p.7

<sup>127</sup> *Ibid.*

<sup>128</sup> *Ibid.*

<sup>129</sup> Zalik 2018, p.6

<sup>130</sup> *Ibid.*

the authority to establish subsidiary organs to fulfil the ISA's duties.<sup>131</sup> It is empowered to consider and approve recommendations of the Council on "the adoption of rules, regulations and procedures".<sup>132</sup> Regulations particularly are an important part of how the ISA's mandate is applied in practice, and they are also an important tool through which the ISA attempts to impose environmental protection, as shall be properly explored in the following section.

### 2.3.2 *Environmental Protection*

As mentioned above, the ISA is empowered to develop The Mining Code. This code is formed out of all of the Regulations, Guidelines, and Recommendations surrounding the issues of prospecting, exploration, and exploitation.<sup>133</sup> Thus far, only three Regulations have been implemented, regarding prospecting and exploration activities for three different mineral types, these being polymetallic nodules,<sup>134</sup> polymetallic sulphides,<sup>135</sup> and cobalt-rich ferromanganese crusts.<sup>136</sup> These Regulations are very similar in their content and format, the main differences being attributed to the differences in the mineral resources they each regulate.<sup>137</sup> As per these Regulations, ISA exploration contracts require firms to carry out ecological research along with their exploration activities.<sup>138</sup>

Beyond the already established Exploration Regulations, the ISA is currently working on draft Exploitation Regulations, with the latest revised version having been submitted in 2018.<sup>139</sup> In the comments on the draft regulations, the ISA Secretariat makes direct mention of the precautionary principle, one of the most relevant principles of environmental law with regards

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<sup>131</sup> Kirkham et al. p.9

<sup>132</sup> Chircop 2020, p.376

<sup>133</sup> Tunncliffe et al 2020, p.1

<sup>134</sup> ISA, Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area (adopted 13 July 2000) ISBA/6/A/18, (updated 25 July 2013) ISBA/19/C/17 (Nodules Regulations)

<sup>135</sup> ISA, Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area (adopted 7 May 2010) ISBA/16/A/12/Rev.1 (Sulphides Regulations)

<sup>136</sup> ISA, Regulations on Prospecting and Exploration for Cobalt-Rich Ferromanganese Crusts in the Area (adopted 27 July 2012) ISBA/18/A/11 (Cobalt Regulations)

<sup>137</sup> Lodge et al. 2014, p.67

<sup>138</sup> Zalik 2018, p.5

<sup>139</sup> ISA, 2023



to DSM.<sup>140</sup> The most widely accepted definition<sup>141</sup> of the precautionary approach can be found in in the 1992 Rio Declaration on Environment and Development (Rio Declaration):<sup>142</sup>

Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation<sup>143</sup>

No obligation to apply the precautionary approach can be found explicitly in UNCLOS,<sup>144</sup> however, it has come to be accepted that the precautionary approach has become an implicit part of UNCLOS<sup>145</sup> and customary international law.<sup>146</sup> Judge Treves stated in the *Southern Bluefin Tuna* cases<sup>147</sup> that a precautionary approach is inherent in the notion of provisional measures.<sup>148</sup> Provisional measures are foreseen in Article 290(1) UNCLOS. Therefore, when developing the rules and regulations for activities in the Area, the ISA is required to use the precautionary approach, as it is reflected in the Rio Declaration.<sup>149</sup> Principle 15 of the Rio Declaration puts an emphasis on several factors of interest. For example, the precautionary approach “shall be widely applied by States according to their capabilities”, which leaves a lot to discuss in regards to developing States, as shall be looked into in Chapter 4.

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<sup>140</sup> ISA Council (2018), p.4

<sup>141</sup> Cranor 2004, p.261

<sup>142</sup> Rio Declaration on Environment and Development UN Doc. A/CONF.151/26 (vol. I), 31 ILM 874 (1992)

<sup>143</sup> Rio Declaration on Environment and Development UN Doc. A/CONF.151/26 (vol. I), 31 ILM 874 (1992), p.3

<sup>144</sup> Kirkham et al 2020, p.2

<sup>145</sup> Jaeckel 2015, p.112

<sup>146</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.16, para.135

<sup>147</sup> *Southern Bluefin Tuna Cases (New Zealand v Japan, Australia v Japan)*, Provisional Measures, 27 August 1999, ITLOS Cases No 3 & 4, 27

<sup>148</sup> *Ibid.* (Separate Opinion of Judge Treves), paragraph 9

<sup>149</sup> Wedding et al 2013, p.2

Given just how deep our current uncertainty is with regards to the deep-sea ecosystem, and the effects that DSM may have on it,<sup>150</sup> this environmental principle has become of central relevance to a regime originally conceived for resource management and benefits sharing.

International actors are aware of both the uncertainties surrounding activities in the Area, and of the inevitable environmental damage that DSM would result in, with the European Union (EU) Parliament calling for a temporary moratorium on seabed mining in 2018.<sup>151</sup>

Part of the strategy to adhere to the precautionary approach and gain more certainty can be found in the contractual obligations exploration contractors have with the ISA, whereby they are obliged to undertake environmental baseline studies and perform annual progress reports.<sup>152</sup> The LTC issues recommendations for the guidance of contractors for their assessment of possible environmental impacts, which allows for information to be gathered during the 15 year long exploration contracts.<sup>153</sup> Beyond individual contractors exploring individual sites, the ISA itself is also developing assessment strategies to cover larger regions.<sup>154</sup> Generally, this sort of process tends to be Regional Environmental Assessments (REA) or Strategic Environmental Assessments (SEA).<sup>155</sup> These assessments may result in the creation of Regional Environmental Management Plans (REMP).<sup>156</sup> The most prominent is the CCZ Environmental Management Plan (EMP), approved by the ISA Council in 2012.<sup>157</sup> The CCZ EMP aims for a holistic approach to environmental management, allowing for nine Areas of Particular Environmental Interest (APEIs), where mining activities are prohibited, and only MSR is permitted.<sup>158</sup> The creation of these APEIs was based on generally accepted principles for the design of marine protected area (MPA) networks.<sup>159</sup> This is significant, seeing as out of the

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<sup>150</sup> Wedding et al 2015, p.145

<sup>151</sup> European Parliament, 2018

<sup>152</sup> Lodge et al. 2014, p.67

<sup>153</sup> *Ibid.*

<sup>154</sup> Jones et al. 2019, p.4

<sup>155</sup> *Ibid.*

<sup>156</sup> *Ibid.*

<sup>157</sup> Lodge et al. 2014, p.67

<sup>158</sup> Jones et al. 2019, p.5

<sup>159</sup> Lodge et al. 2014, p. 68

thirty exploration contracts the ISA has issued, sixteen are in the CCZ.<sup>160</sup> Though the CCZ EMP remains unique thus far, it may well serve as a model for the development of MPA networks and REMPs in other regions of the Area, such as the Mid-Atlantic Ridge, the Indian Ocean, or the Western Pacific.<sup>161</sup>

To conclude, this Chapter has established a broad picture of what the Area is, how CHM plays a role in its management, what the ISA is and how it works, what environmental protections there are in the Area, and what core obligations States operating in the Area have. The next Chapter will do the same for the regime governing Antarctica.

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<sup>160</sup> Levin et al. 2020, p.3

<sup>161</sup> Wedding et al. 2015, p. 145

## **Chapter 3: The legal regime of Antarctica with regard to mineral resource management**

This chapter briefly sets out how mineral resources are (or rather could have been) managed in Antarctica, and the relevant institutions of and core obligations under the Antarctic Treaty and related instruments. To the extent that this regime creates rights and obligations for developing states, this is discussed in detail in Chapter 4.

### **3.1 What is Antarctica?**

Geographically speaking, Antarctica is radically different from the Area. It is a landmass, and is in fact the fifth largest continent by land area.<sup>162</sup> It originally formed part of the southern supercontinent of Gondwana, before it finished separating from Australia c. 45Ma, and from South America c.30 Ma.<sup>163</sup> Antarctica is the only continent that does not have a native human population.<sup>164</sup> The Antarctic continent is surrounded by the Antarctic Circumpolar Current (ACC), which effectively acts as a barrier isolating the seas to its south and the fauna found therein from the rest of the world's oceans.<sup>165</sup> Beyond the continent itself but within the ACC there are a series of islands generally considered to form part of the Antarctic region, such as the South Orkney Islands, South Shetland Islands, South Georgia Islands, and the South Sandwich Islands.<sup>166</sup> However, the area where the ATS regime is of relevance is clearly defined in Article 6 of the Antarctic Treaty as “the area south of 60° South Latitude”. What exactly the ATS is and how the frozen continent is governed shall be the purview of the following sections.

### **3.2 The Antarctic Treaty System**

#### *3.2.1 History of Antarctic governance*

Unlike other regions of the global commons, Antarctica has a history of States claiming sovereignty over its territory. Human interaction with the southern continent began with the

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<sup>162</sup> National Geographic, 2023

<sup>163</sup> Van den Ende et al. 2017, p.219

<sup>164</sup> Dodds 2006, p.60

<sup>165</sup> Moore et al. 2018, p.10621

<sup>166</sup> National Geographic, 2023

Russian expedition of Thaddeus von Bellingshausen in 1819-1821.<sup>167</sup> However, it would not be until 1908 that Britain would make the first claim of Antarctic territory.<sup>168</sup> This claim would lead to a colonial style “scramble for Antarctica”, with subsequent claims coming from New Zealand in 1923,<sup>169</sup> France in 1924,<sup>170</sup> Norway in 1928,<sup>171</sup> Australia in 1933,<sup>172</sup> Chile in 1940,<sup>173</sup> Argentina in 1943,<sup>174</sup> and Ecuador in 1967 (Ecuador’s claim being the only one made after the establishment of the ATS regime, and often being completely ignored or disregarded by the literature).<sup>175</sup> A major proposal to change the international community’s approach to Antarctica began in 1948, when Dr Julian Huxley of UNESCO suggested the internationalisation of scientific research in Antarctica, and the establishment of an international research organisation fully controlled and financed by the UN.<sup>176</sup> Even as late as 1956, New Zealand Prime Minister Walter Nash proposed establishing the continent as a ‘world territory’ under the control of the UN.<sup>177</sup> This is quite remarkable, as it comes long before Arvid Pardo’s speech on CHM. However, in the same way that LN control of the oceans as proposed by A.G de Lapradelle never came to fruition,<sup>178</sup> so too the ideas of UN control over Antarctica were firmly rejected, and instead, on December 1<sup>st</sup> 1959 twelve States (Australia, Argentina, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the Soviet Union (USSR), the United Kingdom (UK), and the US),<sup>179</sup> known as ‘the original parties’, signed the Antarctic Treaty.<sup>180</sup> The coming into force of the Treaty has not resulted in the claimant States repudiating their claims, and in fact, Article 4 of the treaty makes clear that the Treaty does not require any

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<sup>167</sup> Tammiksaar 2016, p.579

<sup>168</sup> Headland 2020, p.7

<sup>169</sup> *Ibid*, p.9

<sup>170</sup> *Ibid*, p.10

<sup>171</sup> *Ibid*, p.1

<sup>172</sup> *Ibid*, p.13

<sup>173</sup> *Ibid*.

<sup>174</sup> *Ibid*.

<sup>175</sup> *Ibid*, p.8

<sup>176</sup> Hanessian, 1960, p.449

<sup>177</sup> *Ibid*, p.450

<sup>178</sup> Pfirter 2006, p.5

<sup>179</sup> Herber 1991, p.395

<sup>180</sup> Dodds 2010, p.108

Contracting Party to renunciate their previously asserted rights or claims. However, the Treaty does not confirm these claims either. Furthermore, Article 4(2) of the Antarctic Treaty makes it clear that “no new claim, or enlargement of an existing claim, to territorial sovereignty in Antarctica shall be asserted while the present Treaty is in force” (which is why the Ecuadorian claim is generally not considered<sup>181</sup>). And even if the Treaty doesn’t force previous claims to be renounced, it does go a long way to limit what any given State can do in Antarctica. Article 1(1) of the Antarctic Treaty prohibits “any measures of a military nature”, which includes “the establishment of military bases and fortifications, the carrying out of military manoeuvres, as well as the testing of any weapons”. A parallelism can be observed between this provision, and the principle of ‘peaceful use’ contained within CHM. This is complemented by Article 5(1) of the Antarctic Treaty, which forbids “any nuclear explosions in Antarctica, and the disposal there of radioactive waste material”, in fact making the Antarctic Treaty the first nuclear arms agreement of the cold war.<sup>182</sup> This focus on peace and demilitarisation is the cornerstone of the Antarctic Treaty, and it is in the context of peaceful use that the Antarctic Treaty invokes the concept of ‘mankind’, in its preamble, which reads as follows:

it is in the interest of all mankind that Antarctica shall continue for ever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord.

This focus on mankind may seem reminiscent of section 2.2 of this thesis and the CHM. It is true that interest of all mankind served as a precedent to and foundation for the later development of other regimes of the commons, such as outer space, and the Area, which make use of CHM.<sup>183</sup> Despite this, the interest of all mankind is not the same as the CHM principle. While CHM in the Area focuses on humanity’s right to the mineral resources there, the ATS use of the common interest of mankind is limited to use for peaceful purposes, and freedom of scientific investigation.<sup>184</sup> And even while the parties to the treaty recognise that scientific

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<sup>181</sup> Headland 2020, p.7

<sup>182</sup> Berkman 2011, p.17

<sup>183</sup> *Ibid*, p.25

<sup>184</sup> Blackie 2016, p.12

cooperations and the sharing of information are in the interest of mankind, they do not consider that they are obliged to share the benefits of their research, as a CHM regime would suggest.<sup>185</sup>

Despite this, the repeated use of the words ‘in the interest of all mankind’ in different Recommendations and other texts and documents of the ATS does imply that the Consultative Parties to the ATS do have the goal to manage the continent in the interest of all of mankind, and not just in the interest of their own citizens.<sup>186</sup> Consensus on global recognition of the legitimacy of this regime was not achieved until 1994 though.<sup>187</sup> And even when accepted, the concrete implications of ‘in the interest of all mankind’ are not fully clear, with no more precise definitions or elaborations being offered anywhere in the ATS documents.<sup>188</sup> This does not pose an obstacle to the general management and governance of the southern continent though. The question of how exactly the ATS is structured, decisions are made, and how this is different from the regime of the Area, shall be discussed in the section below.

### *3.2.2 Antarctic Treaty System Structure and decision-making process*

The legal regime that governs the southern continent is formed by four major conventions, along with over 150 related agreements,<sup>189</sup> that together make up what is known as the ATS.<sup>190</sup> These agreements are the Antarctic Treaty of 1959, the Madrid Protocol, which shall be examined in more detail in section 3.4 of this thesis, the Convention for the Conservation of Antarctic Seals of 1972 (CCAS)<sup>191</sup>, and the Convention on Conservation of Antarctic Marine Living Resources of 1980 (CCAMLR).<sup>192</sup> Unlike in UNCLOS, the ATS never provided for the creation of an international organisation to administer Antarctica, so there is no ISA analogue.<sup>193</sup> Instead, the main governance mechanism comes in the form of yearly Antarctic

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<sup>185</sup> Bastmeijer 2015, p.562

<sup>186</sup> *Ibid*, p.561

<sup>187</sup> Scully 2011, p.37

<sup>188</sup> Bastmeijer 2015, p.561

<sup>189</sup> Zang 1991, p.727

<sup>190</sup> Brazovskaya et al, 2020, p.131

<sup>191</sup> Convention for the Conservation of Antarctic Seals (signed 1 June 1972, entered into force 11 March 1978)

<sup>192</sup> Convention on the Conservation of Antarctic Marine Living Resources (signed 20 May 1980, entered into force 7 April 1982)

<sup>193</sup> Loan 2004

Treaty Consultative Meetings (ATCM) provided for in Article 9 of the Antarctic Treaty.<sup>194</sup> However, not all parties to the ATS are equal, and not all have equal access to the ATCMs.<sup>195</sup> The twelve original signatories are known as the ‘original parties’, and out of these, seven have formal territorial claims on the continent.<sup>196</sup> These in turn are known as ‘claimant states’.<sup>197</sup> Besides these seven claims, two states, namely the US and USSR (whose place is now taken by Russia) reserved themselves the right to make a claim in future.<sup>198</sup> The Antarctic Treaty is open to accession by any UN MS, and since the original parties, an additional forty-four States have acceded.<sup>199</sup> However, in order to participate in the ATCMs, newly acceding States must fulfil the criteria set forth in Article 9(2) of the Antarctic Treaty, namely, they must demonstrate interest in Antarctica by “conducting substantial research activity there”. The twelve original parties, along with the additional seventeen<sup>200</sup> States that have successfully conducted substantial research activity in the southern continent, are collectively known as the Antarctic Treaty Consultative Parties (ATCPs), and they effectively retain all decision-making and policy-making power within the ATS governance system.<sup>201</sup> What is more, since the decision-making process functions via consensus, each ATCP effectively has veto power.<sup>202</sup> That leaves the remaining twenty-seven parties as Non-Consultative Parties, which are invited to attend the ATCMs, but cannot partake in the decision-making process.<sup>203</sup> Despite this rather narrow participation of a regime claiming to consider the interests of all of mankind, its effects are felt throughout the international community, with some key provisions of the treaty system, such as non-militarisation, environmental protection, and the current mining prohibition, considered to be reflected in international customary law.<sup>204</sup> Out of these, specifically the prohibition of mining is of particular interest to this thesis. This prohibition is in fact of relatively recent origin.

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<sup>194</sup> Dodds 2010, p.110

<sup>195</sup> *Ibid.*

<sup>196</sup> Herber 1991, p.395

<sup>197</sup> *Ibid.*

<sup>198</sup> *Ibid.*

<sup>199</sup> Secretary of the Antarctic Treaty

<sup>200</sup> *Ibid.*

<sup>201</sup> Dodds 2010, p.110

<sup>202</sup> Jacobsson 2011, p.7

<sup>203</sup> Secretary of the Antarctic Treaty

<sup>204</sup> Blackie 2016, p.10



As discussed next, it was adopted following the non-entry into force of a 1988 Convention seeking to regulate mining activities;<sup>205</sup> a regime which nevertheless remains worthy of attention as a possible source of inspiration, be it for the ongoing development of the ISA mining code, or for any future mining instrument that may develop in Antarctica, due to the strict environmental protection obligations it would have put into place.<sup>206</sup>

### **3.3 The Convention on the Regulation of Antarctic Mineral Resource Activities**

#### *3.3.1 History: creation and ultimate rejection of the Convention on the Regulation of Antarctic Mineral Resource Activities*

Despite the initial focus on peace and science, parties to the ATS began to turn their attention to the possibilities of mining on the continent in the 70s, triggered in part by the 1973 oil crisis.<sup>207</sup> In 1982, the ATCPs began work on an Antarctic mineral regime, and after six years, the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) was opened for signature.<sup>208</sup> The possibility of mineral extraction in Antarctica was considered so important, that the years of CRAMRA's negotiation saw a rapid influx of nations with no prior Antarctic activities of any sort sign up to the Treaty.<sup>209</sup> Enthusiasm for a mineral regime was motivated further by fear of unilateral mining action, which would jeopardise the freezing of territorial claims established in Article 4 of the Antarctic Treaty.<sup>210</sup> Therefore, the negotiation of CRAMRA was less about regulating mining itself, and more-so about preventing future conflict.<sup>211</sup>

For some non-ATCP States though, especially Malaysia, CRAMRA was no more than a tool to ensure exclusive development rights for the ATCPs.<sup>212</sup> Malaysia's outspoken critique of CRAMRA was part of 'The Question of Antarctica',<sup>213</sup> a discussion that took place at the

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<sup>205</sup> Joyner 1991, p.161

<sup>206</sup> Scully 2011, p.35

<sup>207</sup> Zang 1991, p.725

<sup>208</sup> *Ibid*, p.731

<sup>209</sup> Brady et al, 2012, p.76; Orheim et al 2011, p.210

<sup>210</sup> Francioni 1990, p.259

<sup>211</sup> Jacobsson 2011, p.10

<sup>212</sup> Tepper et al 2005, p.116

<sup>213</sup> Hamzah 2013 p.97

UNGA during which Malaysia strongly critiqued the dominance of developed States within the ATS.<sup>214</sup> This, and the effect it had on developing States, shall be examined in section 4.4 of this thesis.

However, environmental concerns (rather than developing State critique) ended up convincing Australia and France ultimately to reject CRAMRA in 1989, leading to its eventual non-ratification and, therefore, non-entry into force.<sup>215</sup> This left a regulatory void that spurred the subsequent negotiation of the Madrid Protocol, and with it, a prohibition on all mining related activities in Antarctica, discussed in section 3.4. Despite its ultimate rejection, CRAMRA has served as a precedent for subsequent environmental agreements.<sup>216</sup> The regime that CRAMA would have created is particularly worthy of study in light of the ongoing development of the ISA mining code, by providing an example of a mining regime for a hostile and remote ABNJ, with robust environmental standards.<sup>217</sup> These standards have been considered the most stringent ever developed for resource activities,<sup>218</sup> and shall be the focus of the following section.

### *3.3.2 Proposed environmental obligations*

The idea behind CRAMRA was not to function as a mining code per se, like the one currently under development by the ISA, but instead to provide a regulatory authority and operational framework for Antarctic mineral resource activities.<sup>219</sup> The definition of ‘Antarctic mineral resource activities’ is given in Article 1(7) of CRAMRA, and is understood to mean “prospecting, exploration, or development, but does not include scientific research activities”, making the concept somewhat similar to that of ‘activities in the Area’. Prior to this, prospecting activities had instead generally been considered as research.<sup>220</sup>

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<sup>214</sup> Hamzah 2010, p.187

<sup>215</sup> Blay 1992, p.378

<sup>216</sup> Scully 2011, p.35

<sup>217</sup> Kirkham et al 2020, p.3

<sup>218</sup> Scully 2011, p.35

<sup>219</sup> Kirkham et al 2020, p.4

<sup>220</sup> Francioni 1990, p.261

One important element of CRAMRA is its pioneering use of the ecosystem-based approach.<sup>221</sup> The ecosystem-based approach as a concept rose to prominence in 2000, when the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) adopted it as its framework of action.<sup>222</sup> They defined it as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way”.<sup>223</sup> Reflecting this, in its preamble, CRAMRA sets forth that “the protection of the Antarctic environment and dependent and associated ecosystems must be a basic consideration in decisions taken on possible Antarctic mineral resource activities”

As for the exact environmental obligations States would have had when carrying out mineral activities under CRAMRA, we can see them addressed at different stages of the process.<sup>224</sup> Prospecting would not have required prior licencing, but would have required the sponsoring State to notify the project at least nine months in advance, and certify the technical and financial ability to comply with the liability regime established in Article 8(1) of CRAMRA, which establishes that the operator shall “take necessary and timely response action, including prevention, containment, clean up and removal measures, if the activity results in or threatens to result in damage(...)”. The operator would also have had to ensure the removal of equipment and installations and site rehabilitation after it concluded its activities.<sup>225</sup> All prospecting installations would have been subject to inspection by individual States under Article 7, and prospecting activities would have been subject to dispute settlement if considered prejudicial to the environment.<sup>226</sup>

Moving on to the exploration and development stage, the process can be summarised in the following steps. First, the interested party would have presented an application specifying the type of mineral activities, methods of operation, and a detailed impact assessment study, as per Article 39 CRAMRA. This application would have been circulated among, and considered by, all CRAMRA Parties, an advisory committee competent for scientific, technical, and

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<sup>221</sup> Kirkham et al 2020, p.5

<sup>222</sup> Convention on Biological Diversity; Waylen et al 2014, p.1216

<sup>223</sup> Secretariat of the Convention on Biological Diversity 2009, p.34

<sup>224</sup> Francioni 1990, p.261

<sup>225</sup> *Ibid.*

<sup>226</sup> *Ibid.*

environmental questions (Article 40).<sup>227</sup> The organ responsible for accepting the application, the CRAMRA Commission, would have been composed of representatives from the ATCPs at time of signature, other Parties when engaged in substantial scientific, technical or environmental research, or other Parties sponsoring Antarctic mineral resource exploration, as per Article 18(2) of CRAMRA. While the CRAMRA Commission would not have been bound by the advisory committee and the rest of the Parties, it would have been obliged to take “full account of the views and conclusions of the advisory committee”, as well as taking “full account of the views and giving special weight to the conclusions of the Special Meeting of Parties”.<sup>228</sup> However, the decision of the Commission to accept would have had to be taken by consensus.<sup>229</sup> If the project were to be accepted, a Regulatory Committee would have been formed to set requirements and conditions of general applicability, and, once these were fulfilled, would elaborate a management scheme, which in turn would have included measures and procedures to protect to Antarctic environment and dependent and associated environments, as well as plans for contingency plans, and clean up and restoration plans in case of accidents.<sup>230</sup> Finally, even after the approval of all of this, there would have been a strict liability regime as laid down in Article 8 CRAMRA making the operator liable for damage to the Antarctic environment or dependent or associated ecosystems. Beyond this liability of the operator, there would also have been a subsidiary liability of the sponsoring State if they failed to exercise proper supervision of their sponsored operators.<sup>231</sup>

The principles underlying this multi-stage development of environmental standards can be traced to Article 4 of CRAMRA, titled ‘Principles Concerning Judgments on Antarctic Mineral Resource Activities’.<sup>232</sup> These can be condensed into two central norms, these being, firstly, “the paramount consideration of protection for the Antarctic’s environment and its dependent and associated ecosystems”, and secondly, “that sufficient information regarding environmental impacts to enable informed judgements will be made available before approving

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<sup>227</sup> *Ibid.*

<sup>228</sup> *Ibid.*

<sup>229</sup> *Ibid.*

<sup>230</sup> *Ibid.*, p.263

<sup>231</sup> *Ibid.*

<sup>232</sup> Kirkham et al 2020, p.5

plans for mineral resource activities”.<sup>233</sup> These central norms are propped up by five concepts that stand out due to their absence in the DSM regime of the Area.<sup>234</sup> These concepts are also relevant as they greatly contributed to the later Madrid Protocol, which will be discussed below.<sup>235</sup> These five concepts are as follows, and will be briefly examined in turn due to their relevance to Antarctic environmental protection: dependent and associated ecosystems, the sufficient information requirement, cumulative impact assessments, the alternative of not proceeding, and, the independent role of review by an environmental committee.

In the first place, there is the concept of dependent and associated ecosystems. In its preamble, CRAMRA recognises that “Antarctic mineral resource activities could adversely affect the Antarctic environment or dependent or associated ecosystems”, and that “the protection of the Antarctic environment and dependent and associated ecosystems must be a basic consideration in decisions taken on possible Antarctic mineral resource activities”.

Tying the concept back to the principles contained in Article 4 of CRAMRA, Article 4(2) makes explicit that no Antarctic mineral resource activity shall take place until it is judged that said activity would not cause adverse effects on air or water quality, changes in atmospheric, terrestrial or marine environments, significant changes in the distribution, abundance, or productivity of populations of species of fauna or flora, jeopardy to endangered species or populations of species, or degradation of, or substantial risk to, areas of special biological, scientific, historic, aesthetic or wilderness significance, on the Antarctic environment, or, on dependent or associated ecosystems. Considering the global consequences of local transformations caused by actions in Antarctica,<sup>236</sup> this inclusion of associated environments would have given this article an incredibly vast reach.<sup>237</sup> This global perspective is reinforced in Article 4(3) of CRAMRA, which prohibits Antarctic mineral resource activities if they may cause “significant adverse effects on global or regional climate or weather patterns”.

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<sup>233</sup> *Ibid.*

<sup>234</sup> *Ibid.*

<sup>235</sup> *Ibid.*

<sup>236</sup> Kennicutt et al 2014, p.23

<sup>237</sup> Kirkham et al 2020, p.6

Next, there is the sufficient information requirement, seen in Article 4(1), which mandates that decisions shall be “based upon information adequate to enable informed judgments to be made about their possible impacts”. This represents an application of the precautionary principle,<sup>238</sup> a concept also relevant to the regime of the Area and explored in section 2.3 of this thesis. As it appears in CRAMRA, this requires a ‘threshold of knowledge’ on the effects of any activity that must be reached before said activity is permitted.<sup>239</sup> If the technology required to ascertain this level of information is not available, then activities shall not be permitted.<sup>240</sup>

Next is the concept of cumulative impact assessments, called for in Article 4(5) of CRAMRA. This concept refers to the need to consider all the impacts of possible Antarctic mineral resource activities, both by themselves, and in combination with other activities and other, different uses of Antarctica.<sup>241</sup>

Following this is the introduction of the concept of the alternative of not proceeding. This concept is introduced in Article 26(4)(d), where it is determined that, in undertaking comprehensive environmental and technical assessments of proposed projects, “the means and alternatives by which such direct or indirect impacts might be reduced, including environmental consequences of the alternative of not proceeding” must be considered.

The last major concept is the creation of an independent scientific, technical and environmental advisory committee, which was introduced in CRAMRA Article 23, and was envisioned to advise the CRAMRA Commission and Regulatory Committees on scientific, technical, and environmental aspects of Antarctic mineral resource activity, as per Article 26(1) CRAMRA.

Despite these standards, ultimately it was recognised that no level of regulation could guarantee the total avoidance of accidents.<sup>242</sup> Moreover, it was feared that the mining regime could also detract from scientific cooperation, and could even lead to disputes and eventual conflicts, thus defeating the original purpose of the Antarctic Treaty altogether.<sup>243</sup> Ultimately, no matter how

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<sup>238</sup> Redgwell 1994, p.608

<sup>239</sup> *Ibid.*

<sup>240</sup> *Ibid.*

<sup>241</sup> Kirkham 2020, p.8

<sup>242</sup> Joyner 1996, p.170

<sup>243</sup> *Ibid.*

high the environmental standards were, it was decided that a total prohibition of mining was preferable to any form of regulation.<sup>244</sup> This new environmental focus gave rise to the Madrid Protocol, examined next.

### **3.4 The Protocol on the Environmental Protection to the Antarctic Treaty (Madrid Protocol)**

#### *3.4.1 Rights and obligations*

Almost immediately after the rejection of CRAMRA, the ATCPs decided in 1989 to start negotiating an international instrument focused instead on Antarctic environmental protection.<sup>245</sup> The result of this process was the Protocol on the Environmental Protection to the Antarctic Treaty, often referred to as the Madrid Protocol, signed in 1991. The Protocol was concluded much faster than CRAMRA, in part because it avoided raising any contentious sovereignty related issues.<sup>246</sup> It was, when it came into effect, the most comprehensive multilateral document adopted on the international protection of the environment, despite it in effect merely supplementing the Antarctic Treaty, as established in its Preamble.<sup>247</sup>

One of the most important changes introduced in the Protocol can be found in Article 2, where the parties agree to designate Antarctica as “a natural reserve, devoted to peace and science”. This specific wording, with a particular focus on science and nature, was a deliberate move to distance the concept from anything related to CHM.<sup>248</sup> This creates in essence a continent spanning natural park in which environmental protection is the single highest priority.<sup>249</sup> The relationship between environmental protection and scientific research is sometimes framed as complementary, but often they appear as competing principles, with environmental protection often being given the priority treatment.<sup>250</sup> For example, while Article 3(3) of the Protocol emphasises the importance of scientific research, Article 3(4) adds that these activities must be

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<sup>244</sup> *Ibid*, p.171

<sup>245</sup> Redgwell 1994, p.604

<sup>246</sup> *Ibid*, p.605

<sup>247</sup> Blay 1992, p.377

<sup>248</sup> Redgwell 1994, p.606

<sup>249</sup> Bastmeijer 2018, p.231

<sup>250</sup> Redgwell 1994, p.606

“modified, suspended or cancelled if they result in impacts upon the Antarctic environment or dependent or associated ecosystems(...)”. There is no equivalent provision mandating the modification or cancelation of activities that negatively impact scientific research.<sup>251</sup>

The idea of Antarctica as a natural reserve is further complicated by the limitations imposed on it by other conventions. The environmental commitments found in the Madrid Protocol are not considered by the ATCPs to apply to matters covered by the Whaling Convention and the International Whaling Commission (IWC), UNCLOS, or CCAMLR.<sup>252</sup> The exclusion of matters such as fishing, whaling, and other harvesting of marine living resources in Antarctic waters from the purview of the Madrid Protocol does raise questions as to how one is meant to interpret ‘dependent and associated ecosystems’.<sup>253</sup>

The biggest departure from CRAMRA can be found in Article 7, which establishes a prohibition of mineral activities altogether, other than scientific research, set in place to avoid irreversible environmental damage.<sup>254</sup> However, this prohibition is not necessarily permanent, and several mechanisms exist to amend Article 7, and the Protocol, altogether,<sup>255</sup> which does open the door to a new minerals regime developing in Antarctica in the future. First, Article 25(1) of the Madrid Protocol allows itself to be amended in accordance with the procedure set forth in Article 12(1)(a) of the Antarctic Treaty, which allows for amendment or modification by unanimous agreement of the ATCPs. Second, the Madrid Protocol foresees the possibility for a Review Conference, which may be requested 50 years after the entry into force of the Protocol by any ATCP (Article 25(2)). Article 25(3) states that a modification must then be adopted by a majority of parties, including  $\frac{3}{4}$  of all the States that were ATCPs at the time of the adoption of the Protocol. For such an adopted modification to actually enter into force though, Article 25(4) of the Protocol states that  $\frac{3}{4}$  of the ATCPs, including all the States which were ATCPs at the time of the adoption of the Protocol, must ratify, accept, approve or accede the modification. Most important of all though is Article 25(5)(a) of the Protocol, which establishes that the prohibition on Antarctic mineral resource activities shall continue in place unless there is in

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<sup>251</sup> *Ibid*, p.607

<sup>252</sup> Hemmings 2012, p.146

<sup>253</sup> *Ibid*.

<sup>254</sup> Bastmeijer 2018, p.231

<sup>255</sup> Kirkham et al 2020, p.4



force a binding legal regime on Antarctic mineral resource activities. This means for the prohibition in Article 7 of the Protocol to be removed, CRAMRA would have to be revived, or an entirely new instrument would have to be negotiated and entered into force.

Despite this grand departure from CRAMRA, it was not all considered unsalvageable. Specifically, the principles enshrined in Article 4 of CRAMRA were considered of such importance that they were preserved in the Madrid Protocol, mostly manifesting in its Article 3.<sup>256</sup> However, their scope of application is changed, from mining activities, to all activities within the ATS, on a holistic basis.<sup>257</sup>

Beyond this, the concepts explored in the previous section remain mostly unchanged, with the exception of the concept of sufficient information that received under the Protocol a change of emphasis.<sup>258</sup> Article 4(4)(b) of CRAMRA states that “No Antarctic mineral resource activity shall take place” until:

there exists the capacity to monitor key environmental parameters and ecosystem components so as to identify any adverse effects of such activity and to provide for the modification of operating procedures as may be necessary in the light of the results of monitoring or increased knowledge of the Antarctic environment or dependent or associated ecosystems

That is to say that, until an information threshold is reached, activity is prohibited. This contrasts with the phrasing of the equivalent provision in the Madrid Protocol, Article 3(2)(c), which merely states that:

activities in the Antarctic Treaty area shall be planned and conducted on the basis of information sufficient to allow prior assessments of, and informed judgments about, their possible impacts on the Antarctic environment and dependent and associated ecosystems and on the value of Antarctica for the conduct of scientific research

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<sup>256</sup> Kirkham 2020, p.5

<sup>257</sup> Redgwell 1994, p.605

<sup>258</sup> *Ibid.*, p.608

This means that under the Madrid Protocol, Environmental Impact Assessments (EIAs) are conducted based on the assumption that the activity will proceed unless it is demonstrated that adverse effects are likely.<sup>259</sup>

Another concept that appeared in CRAMRA but was developed in the Madrid Protocol is that of the mandatory formation of a scientific, technical, and environmental advisory committee. This idea manifested in the creation of the CEP described below.

### 3.4.2 *Committee for Environmental Protection*

The CEP was established under Article 11 of the Protocol, and functions as an advisory body in the ATCMs.<sup>260</sup> Before the Madrid Protocol entered into force in 1998, CCAMLR already provided for an advisory body within the ATS in the form of the Scientific Committee on Antarctic Research (SCAR), which, despite focusing on scientific advice, had taken up the role of advising on environmental management issues through a group of specialists, the Group of Specialists on Environmental Affairs and Conservation (GOSEAC).<sup>261</sup> Difficulties involving overlapping functions were overcome, with SCAR focusing on scientific advice, and the CEP focusing on environmental advice.<sup>262</sup> The existence of several advisory bodies specialising in different areas allows the CEP to spend a lot more of its time and resources on environmental matters than the LTC under the ISA can.<sup>263</sup> Specifically, during the ATCMs, the CEP provides advice on the effectiveness of measures taken, the implementation of EIA procedures, and minimising or mitigating environmental impacts.<sup>264</sup>

The CEP also comes into play whenever a party wishes to partake in an activity that is determined to have ‘more than a minor or transitory impact’.<sup>265</sup> The party will be required to prepare a draft Comprehensive Environmental Evaluation (CEE) and forward it to the CEP.<sup>266</sup>

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<sup>259</sup> Hemmings 2012, p.147

<sup>260</sup> Scovazzi 2007, p.380

<sup>261</sup> Orheim et al 2011, p.212

<sup>262</sup> *Ibid.*

<sup>263</sup> Kirkham et al 2020, p.9

<sup>264</sup> *Ibid.*

<sup>265</sup> Orheim et al 2011, p.215

<sup>266</sup> *Ibid.*

The activity shall not be allowed to proceed until the CEP has had opportunity to consider the CEE, as per Annex I to the Protocol.<sup>267</sup>

Another role of the CEP is the consideration of management plans for Antarctic Specially Protected Areas (ASPAs), and Antarctic Specially Managed Areas (ASMAs).<sup>268</sup> ASPAs, introduced in Article 3 of Annex V to the Madrid Protocol, represent the single highest level of environmental protection a site under the ATS regime can receive.<sup>269</sup> These areas, which can be marine or terrestrial, are designated to protect “outstanding environmental, scientific, historic, aesthetic, or wilderness values, or ongoing planned scientific research” as per Article 3(1) of the Annex. Entry by anyone into an ASPA is prohibited under Article 3(4) of the Annex, unless a permit is secured as per Article 7 of the same Annex. ASMAs on the other hand are regulated in Article 4 of the same Annex, and may be declared over marine or terrestrial areas for the purpose of “assisting in the planning and co-ordination of activities, avoiding possible conflicts, and improving cooperation between parties or avoiding environmental impacts”, as per Article 4(1) of the Annex. Article 4(2) clarifies that these may include areas where activities pose risks of mutual interference or cumulative environmental impacts, or where sites or monuments of recognised historic value may be found. All ASPAs and ASMAs require a management plan as per Article 5 of Annex V to the Madrid Protocol, and it is up to the CEP to consider these plans formulated by the parties, and to review them every five years.<sup>270</sup> Despite all of this, issues such as modest funding<sup>271</sup> and the rollback of standards for the precautionary approach compared to CRAMRA in EIA<sup>272</sup> has led some to conclude that the CEP is currently unable to properly uphold the protections envisioned in the Protocol.<sup>273</sup>

Having set out in some detail the structure and core obligations of both the regimes of the Area and Antarctica through the last two chapters, the next chapter shall examine the role and treatment of developing States under each of them.

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<sup>267</sup> *Ibid.*

<sup>268</sup> *Ibid.*, p.217

<sup>269</sup> Hughes 2013, p.122

<sup>270</sup> Orheim et al 2011, p.216

<sup>271</sup> Kirkham et al 2020, p.5

<sup>272</sup> Hemmings 2012, p.146

<sup>273</sup> Kirkham et al 2020, p.5

## **Chapter 4: The role of developing States under the regime of the Area and under the regime of Antarctica**

This Chapter briefly establishes the relevance of developing States, before examining their rights and obligations under the regimes governing the Area and Antarctica in turn.

### **4.1 What is a Developing State?**

In order to respond to the question what rights and responsibilities developing States have, we must first clarify what is meant with ‘developing States’, in order to both understand what specific States are being referred to, as well as to more broadly understand the importance and relevance of the classification. Arguably the division of the world along the lines of the Developed-Developing dichotomy is but the latest iteration of a long history of models classifying the world into asymmetric halves.<sup>274</sup> Earlier examples include the Hellene-Barbarian, the Christian-Pagan, and the Civilised-Uncivilised dichotomies,<sup>275</sup> the latter of which the modern Developed-Developing dichotomy traces its conceptual roots to.<sup>276</sup> The Civilised-Uncivilised conceptualisation of the world was first formulated by Spanish thinkers such as Bartolomé de las Casas and Juan de Torquemada in the context of their contact with the native peoples of the Americas,<sup>277</sup> and was further developed in the context of the Enlightenment<sup>278</sup> where the familiar concept of stages of development States can progress through was introduced by French thinkers such as François Guizot and Nicolas de Condorcet.<sup>279</sup> The innovation of the conception of States as underdeveloped, or developing, as opposed to uncivilised was the emphasis on the very real poverty, human suffering and fewer economic means of these countries instead of on their perceived ‘inferiority’. Nowadays the main characteristics for identifying developing States generally tend to be their low per capita income, and their colonial or semi-colonial past.<sup>280</sup> Under this understanding, most modern

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<sup>274</sup> Lepenies 2008, p.203

<sup>275</sup> *Ibid.*

<sup>276</sup> *Ibid.*, p.221

<sup>277</sup> Matsumori 2004, p.168

<sup>278</sup> *Ibid.*, p.174

<sup>279</sup> Lepenies 2008, p.218

<sup>280</sup> Scott 2017, p.3

States are developing States, and they constitute over 80% of the world's population.<sup>281</sup> While it is true that within the global *economic* system there is a tangible and clear cut difference between the countries in the economic core, and those in the periphery,<sup>282</sup> the term 'developing States' is not a *legal* term, with the United Nations Development Programme (UNDP) itself admitting that for legal purposes the terms 'developed' and 'developing' were "somewhat arbitrary".<sup>283</sup>

Specific criteria related to income, human assets, and economic and environmental vulnerability have allowed for the UN to group together the 46 most vulnerable developing States under the label of Least Developed Countries (LDCs). But beyond this, groups of States considered as 'developing' using more ambiguous criteria have organised themselves into different subgroups. 134 States are gathered under the G-77 for the purpose of upholding developing States interests within the UN, while those developing States that share some of the biggest economies (Brazil, Russia, India, China, and South Africa) have gathered together under BRICS, just to name a couple.<sup>284</sup> When it comes to the classification of developing States within the context of international environmental law, the climate regime is often referenced.<sup>285</sup> Under the UNFCCC, developing States are identified with 'Non-Annex I States', that is to say, those that were neither members of the Organisation for Economic Co-operation and Development (OECD) in 1992, nor were former Soviet of eastern bloc States (the so-called 'Economies in Transition', or EIT at the time). Within these, 49 LDCs are signalled out as especially vulnerable.

With this in mind, it is now possible to examine the rights and obligations of these countries under the regimes of the Area and Antarctic, respectively.

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<sup>281</sup> *Ibid.*

<sup>282</sup> Petras 1981, p.149

<sup>283</sup> UNDP 2009, p.21

<sup>284</sup> Scott 2017, p.3

<sup>285</sup> Pauwelyn 2013, p.34

## 4.2 Developing States in the Area

### 4.3.1 1994 Implementation Agreement

Throughout the 1990s, following the end of the Cold War, there were a series of important changes in PIL instruments and institutions that greatly affected developing States. Within the context of the global movement of trade liberalisation of the 90s<sup>286</sup> old agreements were renegotiated, and new institutions were created.<sup>287</sup> The process of liberalisation implies a shift from the use of public policy instruments towards market mechanisms.<sup>288</sup> Market mechanisms can be defined as arrangements where at least one significant characteristic of the market is present.<sup>289</sup>

In trade law, the General Agreement on Trade and Tariffs (GATT) was largely replaced with the more neoliberal<sup>290</sup> World Trade Organisation (WTO).<sup>291</sup> In the area of climate change law, the UNFCCC introduced ‘activities implemented jointly’ (AIJ), to allow investors to play a greater role in the funding of emission reduction projects.<sup>292</sup> These are just a couple of examples of a general trend towards a greater inclusion of market mechanisms in PIL.<sup>293</sup> Liberalisation tends to have a big, and according to some authors an often negative effect on developing States.<sup>294</sup> This general trend of liberalisation also reached the regime of the Area in the form of the Implementation Agreement.<sup>295</sup>

Besides this more general trend, the Implementation Agreement was more specifically born in an attempt to accommodate the concerns of developed States, specifically the US,<sup>296</sup> in a way

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<sup>286</sup> Sindzingre 2003, p.38

<sup>287</sup> Benvenisti et al 2007, p.1

<sup>288</sup> Dunne 2017, p.8

<sup>289</sup> Blöndal 2005, p.79

<sup>290</sup> Zalik 2018, p.7

<sup>291</sup> *Ibid*, p.12

<sup>292</sup> Gupta 2010, p.642

<sup>293</sup> Van Aaken 2009, p.33

<sup>294</sup> Amin 2013, p.134

<sup>295</sup> Feichtner 2019, p.621

<sup>296</sup> Oxman 1994, p.687

that some authors have identified as being to the detriment of developing States.<sup>297</sup> One change that the Implementation Agreement brought forth concerned the representation of States in ISA organs, and ISA voting procedures.<sup>298</sup> In response to US concerns, the Implementation Agreement guarantees a seat on the ISA Council to the State that has the largest economy in terms of gross domestic product (GDP), which is the US.<sup>299</sup> Furthermore, the Agreement introduces the concept of ‘chambers’ in the Council, bodies that take decisions on questions of substance and are made up of States with particular interests.<sup>300</sup> The membership of these chambers heavily favours developed States over developing States.<sup>301</sup> Also, regarding financial matters, Section 3(7) of the Annex to the Implementation Agreement establishes that “Decisions by the Assembly or the Council having financial or budgetary implications shall be based on the recommendations of the Finance Committee”, which is a body that functions by consensus, and on which the US and other major contributors to the administrative budget are guaranteed seats.<sup>302</sup> These measures were effective in gaining the desired approval of developed States, with the US and most of its allies signing the Implementation Agreement, even though the US still didn’t actually sign UNCLOS itself.<sup>303</sup>

Despite these provisions seeming to favour developed States, the particular needs of developing States are also addressed throughout the Implementation Agreement. For example, Section 1(5)(e) of the Annex also refers to “minimising difficulties and assisting” developing States which are land-based producers of the same minerals that are targeted by DSM.

The most pertinent consequences for developing States of the Agreement come in the form of the fleshing out of the technology transfer regime, and the proper development of the parallel development regime, which are explained in turn in the sections that follow.

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<sup>297</sup> Zalik 2018, p.2

<sup>298</sup> *Ibid*, p.2

<sup>299</sup> Oxman 1994, p.690

<sup>300</sup> *Ibid*.

<sup>301</sup> Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (entered into force 28 July 1996) Annex, paras. 9, 10, 15

<sup>302</sup> Oxman 1994, p.690

<sup>303</sup> Meyer 2022, p.239

#### 4.3.2 *Technology transfer*

Marine technology transfer regarding all maritime zones was introduced in Part XIV and Article 5 of Annex III of UNCLOS, and further developed in Section 5 of the Annex to the Implementation Agreement. Though none of these parts details a clear-cut regime with exact rights and obligations,<sup>304</sup> Article 268 UNCLOS tells us that technology transfer should include “the acquisition, evaluation and dissemination of marine technological knowledge” and “the development of appropriate marine technology”. Article 144 in Part XI UNCLOS regulates technology transfer in the Area specifically. Article 144(1) UNCLOS foresees that the ISA shall take measures to “acquire technology and scientific knowledge relating to activities in the Area”, and “promote and encourage the transfer to developing States of such technology and scientific knowledge”. In order to reach these goals, the Enterprise and all States Parties shall initiate and promote “programmes for the transfer of technology to the Enterprise and to developing States (...) under fair and reasonable terms and conditions”, as per Article 144(2)(a). They shall also initiate and promote “measures directed towards the advancement of the technology of the Enterprise and the domestic technology of developing States” by providing opportunities for “training in marine science and technology”, as put forth in Article 144(2)(b) UNCLOS. The concept of technology transfer then requires both the transfer of technology itself, and of the scientific knowledge required to effectively make use of said technology.<sup>305</sup> However, the definition of what exactly is meant by ‘technology’ is not clear cut. Annex III, Article 5 of UNCLOS did provide a definition, but Section 5(2) of the Annex to the 1994 Agreement declared that Annex III Article 5 of UNCLOS would no longer apply. The exclusion of this Article leaves Articles 273 & 274 UNCLOS as the main sources for identifying what is meant by technology.<sup>306</sup> They establish that “transfer of technology itself” involves “skills”, “technical documentation on the relevant equipment, machinery, devices and processes”, while the “transfer of scientific knowledge” includes “training” and the “acquisition of necessary equipment, processes, plant and other technical know-how”.<sup>307</sup>

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<sup>304</sup> Ning 2021 p.2

<sup>305</sup> *Ibid*, p.3

<sup>306</sup> *Ibid*.

<sup>307</sup> *Ibid*.



Since the ratification of UNCLOS, some international organisations have taken it upon themselves to attempt to further promote or develop the concept of technology transfer, with perhaps the most important example being the Intergovernmental Oceanographic Commission (IOC), a body of UNESCO,<sup>308</sup> which in 2005 published the IOC Criteria and Guidelines on the Transfer of Marine Technology (CGTMT).<sup>309</sup> The IOC was in fact recognised by the UN as the competent international organisation in the field of transfer of marine technology.<sup>310</sup> It recognises marine technology to refer to “instruments, equipment, vessels, processes, and methodologies required to improve the study and understanding of the nature and resources of the ocean and coastal areas”.<sup>311</sup> As for the criteria for how this technology should be transferred, the IOC establishes that it “should be conducted on fair and reasonable terms and conditions”, and that “such transfer should be done free of charge, or at a reduced rate for the benefit of the recipient country”.<sup>312</sup>

This vision is not reflected in the Implementation Agreement however, with Section 5(1)(b) of the Annex establishing that if the enterprise or a developing State are unable to obtain DSM technology, they should seek to acquire such technology “on fair and reasonable commercial terms and conditions, consistent with the effective protection of intellectual property rights.” The Agreement has also amended UNCLOS so that technology transfer is no longer a compulsory obligation, even if it still advocates for it.<sup>313</sup> This is reflected in the current ISA exploration contracts, none of which have provisions providing for concrete duties on technology transfer.<sup>314</sup> The fact remains though that most developing States simply lack the capital to be able to acquire this technology on ‘fair commercial terms and conditions’.<sup>315</sup> One mechanism to serve this issue could be the establishment of an ISA fund through which patented technology could be purchased,<sup>316</sup> though the issue of how this fund would itself be financed

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<sup>308</sup> IOC 2005, p.3

<sup>309</sup> Ning 2021, p.3

<sup>310</sup> IOC 2005, p.3

<sup>311</sup> *Ibid*, p.9

<sup>312</sup> *Ibid*, p.10

<sup>313</sup> Ning 2021, p.5

<sup>314</sup> *Ibid*, p.4

<sup>315</sup> *Ibid*, p.6

<sup>316</sup> *Ibid*.

would remain. Another proposed alternative could be the sidestepping of developed States altogether, with developing States focusing on South-South cooperation to develop and share technology.<sup>317</sup> This method gains relevance in the context of the rising influence and growing technological advancements of a handful of developing States, such as India<sup>318</sup> or Singapore,<sup>319</sup> but especially China, as demonstrated with the launching of the Technology Transfer South-South Cooperation Centre (TTSSCC) in 2019.<sup>320</sup> China has gone a long way in opening training programs, running intergovernmental technical exchange programs, setting up joint laboratories and research centres, and directly transferring applicable technologies in different fields besides DSM.<sup>321</sup> It could be argued though that focusing on South-South cooperation defeats the whole purpose of a technology transfer regime for the Area, especially since at present, only developed States truly have the institutions, vessels, instruments, expertise, and financial resources to exploit the Area.<sup>322</sup> However, none of this means that developing States have actually been ‘locked out’ of the Area. Their participation is guaranteed through the proposed sharing of benefits, and the development of the so-called parallel development system, to which the next section turns.

#### *4.3.3 Benefit Sharing and Parallel Development*

Despite the changes to the technology transfer regime described above, the Implementation Agreement still reaffirms the Area as CHM<sup>323</sup> which, as established in Chapter 2, requires a level of sharing of benefits and taking into account the needs of developing States.<sup>324</sup> To this end, when a State-sponsored contractor proposes a work plan, it must specify a total area for exploration or exploitation “sufficiently large and of sufficient estimated commercial value to allow two mining operations”, and it must indicate “coordinates dividing the area into two parts of equal estimated commercial value.<sup>325</sup> One of these two parts would then be designated a

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<sup>317</sup> *Ibid*, p.11

<sup>318</sup> *Ibid*, p.12

<sup>319</sup> Jaeckel et al. 2016, p.1

<sup>320</sup> CTCN

<sup>321</sup> State Council Information Office of the People’s Republic of China, Section VI (2), 2021

<sup>322</sup> Long 2007, p. 308

<sup>323</sup> Jaeckel et al 2016, p.2

<sup>324</sup> Ronald et al 1986, p.654

<sup>325</sup> Dingwall 2020, p.150

‘reserved area’, which was originally envisioned to only be exploited by the ISA through the Enterprise, or in association with developing States, as per Annex III, Article 8 of UNCLOS. However, as seen in section 2.3, the Enterprise has been temporarily suspended, with its role currently being performed by the Secretariat.<sup>326</sup> Instead, as per Section 2(5) of the Annex to the Implementation Agreement, the State or entity which first puts forth a reserved area has the right of first refusal to enter into a joint venture with the Enterprise to explore and exploit said area. Only if the right of first refusal is not exercised, may developing States and the entities sponsored by them apply to explore and exploit the reserved area.<sup>327</sup> If this right of first refusal is utilised by a developed State, as is quite likely, then the effective participation of developing States is seriously undermined, being limited merely to “participation as a part of the Enterprise’s share of operations in the joint venture”.<sup>328</sup> The Enterprise itself would receive a share of any profits of at least 20%, and up to 50% if so negotiated.<sup>329</sup> This system is further detailed in the Sulphides and Cobalt Regulations, which allows the applicant to forgo the submission of a reserved area altogether in exchange of offering an equity interest in a joint venture to the Enterprise for the entire area.<sup>330</sup>

As of 2016, nine out of ten contractors undertaking exploration work for sulphides and cobalt crusts had selected the joint venture option over the reserved area option.<sup>331</sup> Making the reserved areas optional essentially undermines the main mechanism for developing the DSM capabilities of developing States that UNCLOS envisioned.<sup>332</sup> On the other hand, the joint venture option may be a more stable and secure source of revenue for the Enterprise, which may lead to more economic benefits to developing States. The redistribution of financial and other economic benefits is overseen by the ISA.<sup>333</sup> Article 140(2) UNCLOS establishes that these benefits should be shared “equitably, and on a non-discriminatory basis”, though the exact

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<sup>326</sup> *Ibid.*

<sup>327</sup> *Ibid.*

<sup>328</sup> Kirton et al. 2002, p.93

<sup>329</sup> Jaeckel et al. 2016, p.4

<sup>330</sup> Kirton et al.2002, p.151

<sup>331</sup> Jaeckel et al 2016, p.4

<sup>332</sup> *Ibid.*

<sup>333</sup> Dingwall 2020, p.151

mechanism through which this shall take place is yet to be determined.<sup>334</sup> Overall then, we can see how since the Implementation Agreement the rights of developing States have been somewhat limited compared to the original text in UNCLOS. These new conditions force developing States to call into question what responsibilities and obligations they have when engaging in activities in the Area. This was addressed in the 2011 ITLOS Advisory Opinion, as discussed next.

#### *4.3.4 International Tribunal for the Law of the Sea Advisory Opinion*

The 2011 ITLOS advisory opinion on *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* was of historical significance. Not only was it the first time the advisory jurisdiction of ITLOS was invoked, but it was also the first time the Seabed Disputes Chamber (the Chamber) was called upon.<sup>335</sup> It was also the very first time ITLOS had reached a fully unanimous ruling, a rare thing indeed for international courts and tribunals.<sup>336</sup> This advisory opinion can be traced back by a request made by the island State of the Republic of Nauru seeking clarification on the responsibilities and obligations it and other developing States would face when sponsoring entities to undertake exploration activities in the Area.<sup>337</sup> This came after Nauru and fellow pacific island nation Kingdom of Tonga both sent in applications for approval of exploration plans to the ISA in April 2008.<sup>338</sup> However, by May 2009 both applicant States requested that consideration for their applications be postponed.<sup>339</sup> In March 2010, Nauru requested via a document (ISBA/16/C/6)<sup>340</sup> that the ISA seek an advisory opinion from the Seabed Disputes Chamber.<sup>341</sup>

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<sup>334</sup> *Ibid.*

<sup>335</sup> Freestone 2011, p.759

<sup>336</sup> *Ibid.*

<sup>337</sup> French 2011, 529

<sup>338</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.16, para.4

<sup>339</sup> *Ibid.*

<sup>340</sup> ISA, Proposal to seek an advisory opinion from the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea on matters regarding sponsoring State responsibility and liability, (5 March 2010) ISBA/16/C/6

<sup>341</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.16, para.4

The motivations for the postponement and subsequent request for an advisory opinion are laid out in the document. Namely, Nauru highlighted the fact that it, and indeed most developing States, lacked the technical and financial resources to undertake DSM themselves, requiring them to instead depend on private sector entities.<sup>342</sup> Furthermore, Nauru pointed out how developing States could not afford to expose themselves to the legal and liability risks related to activities in the Area.<sup>343</sup> Clarity on what was expected of a State such as Nauru was required before the application process could go any further. Nauru's request prompted the ISA to turn to ITLOS with three, slightly more concise questions. Each of these questions, along with the tribunal's responses and their implications shall briefly be examined in turn throughout this section.

The first question submitted to the Chamber, and discussed here, focused on what were the legal responsibilities and obligations of State Parties with respect to the sponsorship of activities in the Area.<sup>344</sup>

The first step the Chamber took in answering this question was to determine the meaning of the terms 'sponsorship' and 'activities in the Area'. Starting with sponsorship, Article 153(2) UNCLOS makes it clear that for a natural or juridical person to participate in activities in the Area, it must fulfil two requirements. The first of these requirements is that the person must either be, or be effectively controlled by, nationals of a State Party. The second requirement is that the person must be sponsored by such States. The reason for this is to make the obligations of UNCLOS, normally only binding on States Parties, binding on private entities.<sup>345</sup> As for 'activities in the Area', the Chamber let itself be guided by Article 145, and Annex III Article 17(2)(f) UNCLOS.<sup>346</sup> Though there were also provisions in the Exploration Regulations that could help define 'activities in the Area', the Chamber decided that the provisions in UNCLOS would take precedence in establishing the definition, seeing as the Regulations are after all

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<sup>342</sup> *Ibid.*

<sup>343</sup> *Ibid.*

<sup>344</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.32, para 72

<sup>345</sup> *Ibid.*, p.32, para.75

<sup>346</sup> Tanaka 2013, p.208

instruments subordinate to UNCLOS.<sup>347</sup> What the Chamber concluded then is that ‘activities in the Area’ included “the recovery of minerals from the seabed and their lifting to the water surface”,<sup>348</sup> and activities directly connected to that, such as “the evacuation of water from the minerals” and the “preliminary separation of materials of no commercial interest, including their disposal at sea”,<sup>349</sup> as well as the transportation within the part of the high seas superjacent to the part of the Area where the metals are extracted from, “when directly connected with extraction and lifting”.<sup>350</sup> This definition then excludes activities such as processing,<sup>351</sup> and transporting of minerals to points on land.<sup>352</sup> With this clarity of terms now in place, the Chamber could address the responsibilities and obligations of sponsoring States.

The Chamber recognised that the primary obligation of sponsoring States is to ensure that activities in the Area are carried out in conformity with UNCLOS, as is quite clearly laid out in Article 139(1) UNCLOS.<sup>353</sup> This obligation is recognised by the Chamber as an obligation of conduct, or due diligence, not of result.<sup>354</sup> The Chamber found the ‘obligation to ensure’ to be an obligation of due diligence,<sup>355</sup> the standard of which had previously been set out by the ICJ in *Pulp Mills on the River Uruguay* (Pulp Mills case), and to which the Chamber referred with approval.<sup>356</sup> It held that due diligence requires a State to “adopt regulatory or administrative measures, and to enforce them”.<sup>357</sup> What is more, the Chamber considered that the precautionary approach, which is of great importance to the regime of the Area as discussed in

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<sup>347</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.36.37, para.93

<sup>348</sup> *Ibid*, p.37, para.94

<sup>349</sup> *Ibid*, p.37, para. 95

<sup>350</sup> *Ibid*, p.37, para.96

<sup>351</sup> *Ibid*, p.37, para.95

<sup>352</sup> *Ibid*, p.37, para.96

<sup>353</sup> Freestone 2011, p.757

<sup>354</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.41, para.110

<sup>355</sup> Freestone 2011, p.758

<sup>356</sup> *Case concerning Pulp Mills on the River Uruguay* (Argentina. Vs. Uruguay.), Judgement, ICJ Reports (2010)

<sup>357</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.41, para.111

previous sections, constitutes an integral part of due diligence.<sup>358</sup> Some authors, such as Yoshifumi Tanaka, have found issue with this interpretation. Tanaka points out how due diligence stems from ‘the principle of prevention’, which is triggered when ‘convincing evidence’ demonstrates harm may take place, whilst precaution requires action in cases of scientific uncertainty regarding the harm that may or may not take place.<sup>359</sup>

The Chamber also recognised other, secondary obligations which States have, which are required in order to fulfil the obligation ‘to ensure’, or exist independently of it. It terms these ‘direct obligations’.<sup>360</sup> These direct obligations include: the obligation to assist the ISA in the exercise of control over activities in the Area, the obligation to apply a precautionary approach, the obligation to apply best environmental practices, the obligation to take measures to ensure the provision of guarantees in the event of an emergency order by the ISA for protection of the marine environment, the obligation to ensure the availability of recourse for compensation in respect of damage caused by pollution, and the obligation to conduct EIAs.<sup>361</sup>

The question remains, however, whether all these obligations and responsibilities apply equally to developed and developing States. Article 148 UNCLOS provides that “The effective participation of developing States in activities in the Area shall be promoted as specifically provided for in this Part [XI], having due regard to their special interests and needs (...)”. Despite this, the Chamber seems to have rejected the principle of common but differentiated responsibilities (CBDR).<sup>362</sup> This principle recognises that, in combating issues of global significance, imposing equal obligations on States with unequal conditions is unjust, and may entail unfair burdens on the more disadvantaged States, even though all States have a common responsibility towards their common goal.<sup>363</sup> Despite this principle being reflected in several environmental law treaties, such as the Montreal Protocol, or the United Nations Framework

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<sup>358</sup> *Ibid*, p.46, para.131

<sup>359</sup> Tanaka 2013, p.215

<sup>360</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.44, para.121

<sup>361</sup> *Ibid*, p.44, para 122

<sup>362</sup> Tanaka 2013, p.217

<sup>363</sup> Deluil 2012, p.271

Convention on Climate Change (UNFCCC),<sup>364</sup> it is not a part of judicial discussion.<sup>365</sup> Here, the Chamber opted for an overall approach of formal equality, stating that “it may therefore be concluded that the general provisions concerning the responsibilities and liability of the sponsoring State apply equally to all sponsoring States, whether developing or developed”.<sup>366</sup> The reasoning given by the Chamber was so as to avoid ‘sponsoring States of convenience’, that is to say, to avoid enterprises based in developed States from simply setting up companies in developing States in order to benefit from laxer standards.<sup>367</sup>

Nevertheless, a degree of differentiation can be observed. The Chamber does allow for the rules setting out direct obligations of sponsoring States to “provide for different treatment for developed and developing sponsoring States”.<sup>368</sup> Another area where the Chamber recognises the possibility of differential treatment is in the application of the precautionary approach.<sup>369</sup> The Chamber follows the text of Principle 15 of the Rio Declaration, which states that the precautionary approach shall be applied by States ‘according to their capabilities’. This leads to the Chamber concluding that the requirements for fulfilling the precautionary approach may be stricter for developed States than developing States.<sup>370</sup>

The second major question, and perhaps the most relevant to Nauru’s original request, concerned itself with the liability of State Parties for failure to comply with the provisions of UNCLOS.<sup>371</sup>

Seeing as the obligation to ensure is a due diligence obligation, a sponsoring State shall not be liable for damage caused by an entity it sponsors if the State Party has taken all necessary and appropriate measures to secure effective compliance, as established in Article 139(2) UNCLOS. For a State to be held liable, the Chamber makes clear that two conditions must both

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<sup>364</sup> Matsui 2004, p.95

<sup>365</sup> French 2011, p.556

<sup>366</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.54, para.158

<sup>367</sup> *Ibid*, p.54, para. 159

<sup>368</sup> *Ibid*, p,54, para 160

<sup>369</sup> *Ibid*, p.54, para 161

<sup>370</sup> *Ibid*.

<sup>371</sup> *Ibid*, p.55, para 164



be met: these being the failure of a sponsoring State to carry out its responsibilities, and the occurrence of damage.<sup>372</sup> The Chamber thus acknowledges that there is a gap in liability when damage is caused but the State fulfilled its due diligence.<sup>373</sup> This is quite an exceptional case in customary international law. In the *Case concerning the Rainbow Warrior Affair*<sup>374</sup> New Zealand claimed France was liable, even if there had been “no physical or direct injury to persons or property resulting in an identifiable economic loss”.<sup>375</sup> This claim by New Zealand was based on, and reinforced by, Article 2(9) of the 2001 ILC Draft Articles on Responsibility of States for Internationally Wrongful Acts<sup>376</sup>, which states that:

(...) the obligation under a treaty to enact a uniform law is breached by the failure to enact the law, and it is not necessary for another State party to point to any specific damage it has suffered by reason of that failure<sup>377</sup>

Despite this apparent gap, the Chamber fully recognises that a strict liability regime could be introduced, and at numerous points suggest the creation of a trust fund to address residual liability.<sup>378</sup> As to who would be the parties claiming compensation, the Chamber recognises the ISA, entities engaged in DSM, and coastal States.<sup>379</sup> Following the principle of CHM, the Chamber also recognises that each and every State Party may be entitled to claim compensation due to the obligation to preserve the environment of the Area being towards the international community as a whole, that is to say, an obligation *erga omnes*.<sup>380</sup> This entails that every state therefore has a legal interest in ensuring compliance with these obligations, and will have

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<sup>372</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.59 para 178

<sup>373</sup> *Ibid.*, p.65 para 209

<sup>374</sup> *Rainbow Warrior* (New Zealand/France) (Arbitration Tribunal) 82 ILR

<sup>375</sup> *Ibid.* p.267, para 108

<sup>376</sup> International Law Commission (ILC), (2001) *Draft Articles on Responsibility of States for Internationally Wrongful Acts*

<sup>377</sup> *Ibid.*, p.36

<sup>378</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.65 para 205; p.66 para 209; p.77

<sup>379</sup> *Ibid.*, p.59, para 179

<sup>380</sup> *Ibid.*, p.59, para 180

standing to challenge a breach without the usual need to show injury as per the rules on state responsibility.<sup>381</sup>

Finally, the last question addressed by the Chamber concerned itself with what measures should a sponsoring State take in order to fulfil its obligations.<sup>382</sup> In order to meet their obligation to ensure compliance, sponsoring States must not only adopt, but also enforce the necessary laws, regulations, and administrative measures.<sup>383</sup>

#### **4.4 Developing States in Antarctica**

##### *4.4.1 Developing States during Antarctic Treaty System negotiation and establishment*

The regime of the ATS has no equivalent to the parallel development system or the technology transfer regime of the Area. There is no equivalent to Article 148 of UNCLOS guaranteeing ‘the effective participation of developing States’ in the ATS regime. But this does not mean that developing States are not affected by, or concerned with, the ATS regime.

The rejection of CRAMRA and the adoption of the Madrid Protocol appears to stand in stark contrast with the general trend of ‘liberalisation’ of PIL characteristic of the 90s, as suggested earlier in the thesis. This is in part due to unique interplay of the sovereignty issues of the Antarctic regime, and the growing pro-environmental movement of the era. Claimant States, especially Australia, feared that the establishment of a multilateral minerals regime would weaken their claims to sovereignty on the continent,<sup>384</sup> and give access to resources they considered theirs to the entire world for nothing in return.<sup>385</sup> This, combined with domestic and

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<sup>381</sup> International Law Commission (ILC), (2001) *Draft Articles on Responsibility of States for Internationally Wrongful Acts, Article 48(1)(b); Case Concerning the Barcelona Traction, Light and Power Company, Limited (Belgium vs Spain)*, Judgement, ICJ Reports (1970), p.32, para. 33

<sup>382</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.66, para 212

<sup>383</sup> *Ibid*, p.68, para 219

<sup>384</sup> Joyner 1996, p.164

<sup>385</sup> Redgwell 1994, p.601

international appeals to environmental concerns, guaranteed for developing States (and for everyone) a very different regime in Antarctica than in the Area.<sup>386</sup>

On paper, there is no special impediment or disadvantage to developing States within the ATS, with the system being open for all to join.<sup>387</sup> However in practice, economic limitations have served to exclude most developing countries from active participation in the regime.<sup>388</sup> Even when developing countries are able to join, they do so too late to make use of the best locations for scientific research and resource exploitation, as most of these were effectively occupied by the original parties long ago.<sup>389</sup> Even today, in China, one of the most prominent developing States and an ATCP, leading Antarctic specialists remain very critical of the ATS, with Chinese academic Guo Peiqing describing it as a “rich man’s club”.<sup>390</sup> This sort of sentiment in developing States is nothing new, with the development of the ATS system often running parallel to strong critiques from developing States outside of the treaty system, during what came to be known as the debates on the Question of Antarctica.<sup>391</sup>

Starting in 1982, the same year UNCLOS was rejected by several developed States due to concerns about the DSM regime,<sup>392</sup> Malaysia, then led by Prime Minister Mohammed Mahathir (perhaps the single public figure most opposed to the ATS) mobilised developing States to call for the southern continent to be put under the jurisdiction of the UN,<sup>393</sup> stronger environmental protections, and for CHM to be applied, instead of the current regime.<sup>394</sup> This came in the context of the NIEO,<sup>395</sup> touched upon in section 2.2. One of the major critiques Malaysia and its allies made of the ATS was its perceived exclusivity, and ‘colonial traces’,<sup>396</sup> with CRAMRA specifically being seen as an attempt by developed States to ‘carve up’ the

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<sup>386</sup> *Ibid.*

<sup>387</sup> Brady 2013, p.41

<sup>388</sup> *Ibid.*

<sup>389</sup> *Ibid.*

<sup>390</sup> *Ibid.*

<sup>391</sup> Hamzah 2013, p.96

<sup>392</sup> Molenaar 2021, p.11

<sup>393</sup> Ismail et al, 2012, P.43

<sup>394</sup> *Ibid.*, p.97

<sup>395</sup> Blackie 2016, p.9

<sup>396</sup> Dodds 2011, p.235

continent.<sup>397</sup> Over the following years, the international legitimacy of the ATS was improved by the accession of some key developing States, such as India, China, and Brazil,<sup>398</sup> and their rapid graduation to the status of ATCP,<sup>399</sup> as well as the rejection of CRAMRA and the adoption of the Madrid Protocol.<sup>400</sup> In 1994, the UNGA adopted by consensus a Resolution recognizing the merits of the ATS and its governance of Antarctica.<sup>401</sup>

As of 2023, out of the twenty-nine ATCPs, under a third of them are developing States, and only one of them is an African State.<sup>402</sup> While a further twelve developing States (not a single one African) can be found among the twenty-seven Non-Consultative Parties, it remains true that the path to becoming an ATCP depends on the interested party conducting ‘substantial scientific research’<sup>403</sup> a requirement that effectively creates economic boundaries too high for the vast majority of developing States, especially LDCs, to effectively participate in the regime.<sup>404</sup> In the DSM regime of the Area, one of the major economic concerns of developing States was the question of liability, as seen in the ITLOS Advisory Opinion discussed in section 4.2. The ATS too has a liability regime, covered next.

#### *4.4.2 Liability Regime*

Starting in 1970 the ATCPs agreed that they should “assume responsibility for the protection of the environment and the wise use of the Treaty area”.<sup>405</sup> Article 8 of CRAMRA dealt with liability, and, while serving as a precursor to the liability regime of the Madrid Protocol, is widely considered to have been much more stringent than it.<sup>406</sup> The reasoning for this was that

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<sup>397</sup> Redgwell 1994, p.601

<sup>398</sup> Scully p.37, 2011

<sup>399</sup> Dodds 2006, p.66

<sup>400</sup> Hamzah 2010, p.189

<sup>401</sup> UNGA Resolution A/RES/49/80 on the Question of Antarctica, 15 December 1994; Molenaar 2021, p.12

<sup>402</sup> Secretariat of the Antarctic Treaty

<sup>403</sup> Rothwell 2021, p.5

<sup>404</sup> Brady 2013, p.41; Brady 2012, p.451

<sup>405</sup> Recommendation VI-4 (ATCM VI- Tokyo, 1970)

<sup>406</sup> Hemmings 2018, p.6

mineral resource activities were considered an inherently dangerous activity, and therefore required a more stringent general approach.<sup>407</sup>

Article 16 of the Madrid Protocol foresees the adoption of a civil liability regime relating to damage arising from activities taking place in the ATS area and covered by the Protocol.<sup>408</sup> This Article must be read in conjunction with Article 15 of the Protocol which establishes the obligation to provide prompt and effective response action to environmental emergencies that may arise during the performance of human activities.<sup>409</sup> The regime envisioned in Article 16 came to be in the form of Annex VI to the Madrid Protocol, sometimes referred to as ‘the Liability Annex’, which, despite having been adopted in 2005,<sup>410</sup> is as of 2023 not yet in force.<sup>411</sup> It shall enter into force once approved by all ATCPs.<sup>412</sup> Despite not yet being in force, it is considered to be an integral part of the ATS legal system, even by the ATCPs that have not yet ratified it.<sup>413</sup> It should be noted that there is no mention anywhere in the Liability Annex of developing States specifically.

Article 1 of Annex VI establishes the scope of the liability regime, establishing that it shall apply to “environmental emergencies in the Antarctic Treaty area”. This provides two major limitations, as firstly, environmental emergencies are but a subset of what can be covered under liability, and secondly, there is no mention of dependent and associated ecosystems.<sup>414</sup> Article 2(b) of Annex VI defines an environmental emergency as:

any accidental event that has occurred, having taken place after the entry into force of this Annex, and that results in, or imminently threatens to result in, any significant and harmful impact on the Antarctic environment

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<sup>407</sup> Pilcher 2008, p.12

<sup>408</sup> Jacobsson 2011, p.10

<sup>409</sup> Proelss et al 2023, p.539

<sup>410</sup> Hemmings 2018, p.3

<sup>411</sup> Proelss et al 2023, p.539

<sup>412</sup> Li 2020, p.7

<sup>413</sup> *Ibid.*

<sup>414</sup> Hemmings 2018, p.9

The focus on accidental damage is noteworthy, as generally speaking intentional damage is considered to cause more liability under most international law regimes.<sup>415</sup> However, in this context ‘accidental’ is understood to mean ‘unforeseen’ or ‘unanticipated’ damage.<sup>416</sup> According to Article 1(1) of Annex I to the Madrid Protocol, on Environmental Impact Assessment, activities shall be considered via appropriate national procedures. Article 1(2) of the same Annex then elaborates that, if an activity is determined as having less than a minor or transitory impact, then the activity may proceed. If not, then an Initial Environmental Evaluation (IEE) and full EIA would be undertaken.<sup>417</sup> However, if the damage ends up being greater than the applicable domestic procedures anticipated, the damage is then considered ‘accidental’, and the operator in question is held liable.<sup>418</sup>

Operators are defined in Article 2(c) of Annex VI as “any natural or juridical person, whether governmental or non-governmental, which organises activities to be carried out in the Antarctic Treaty area”. Despite the definition including non-government actors, the Liability Annex remains a PIL instrument, and therefore the implementation and enforcement of the liability regime rests solely with States.<sup>419</sup> With this in mind, State parties must require their operators to undertake reasonable preventive measures as per Article 3 of Annex VI, and to establish contingency plans to respond to damage, as per Article 4 of the Liability Annex. Therefore, it is up to States to hold non-State operators liable via the adoption of laws, regulations, administrative actions and enforcement measures.<sup>420</sup> In case of an environmental emergency, Article 5(1) demands States require each of their operators take prompt and effective response action, even if the emergency was only caused by one operator. If said prompt and effective response action is not taken by an operator, they would be liable to pay the costs of the required response action, as per Article 6 of the same Annex. State liability is explored in Article 10 of the Liability Annex, which establishes that States will not be liable for the failure of an operator, lest it be a State-run operator, granted the State party has taken adequate measures such as the adoption of laws regulations and enforcement measures. Article 6(3) of the Liability Annex

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<sup>415</sup> Proelss et al 2023, p.541

<sup>416</sup> *Ibid.*

<sup>417</sup> *Ibid.*

<sup>418</sup> *Ibid.*

<sup>419</sup> Wolfrum 2008, p.822

<sup>420</sup> Proelss 2023, p.552

establishes that “liability shall be strict”, which means that operators shall be held liable without proof of fault.<sup>421</sup>

There are exemptions from liability though, recognised in Article 8 of the Liability Annex. Namely, Article 8(1) states that operators won’t be liable if the environmental emergency was caused by an “an act or omission necessary to protect human life or safety”, “an event constituting (...) a natural disaster of an exceptional character, which could not have been foreseen (...) provided all reasonable preventive measures have been taken”, “an act of terrorism”, or “an act of belligerency against the activities of the operator”. Regarding State parties or their operators specifically authorised by them, Article 8(2) states they will be exempt from liability if the emergency is caused by them taking a response action to another environmental emergency as foreseen in Article 5(2). Limits of liability are defined in Article 9 of the Liability Annex. Some have critiqued the maximum amounts for which an operator may be liable are noticeably lower than other comparable liability regimes.<sup>422</sup> However, Article 9(4) does permit a review of the limits every three years, or sooner still if requested by any party, so these issues are not set in stone.

Having examined the position of developing States under the liability regimes of both the DSM and Antarctic systems, notable parallelisms and similarities, but especially differences can be perceived. This holds true when comparing the position of developing States in the Area and Antarctica in general, as has been demonstrated throughout this thesis. This leaves the vital question remaining of what is to be made of all of this. The implications of the differences between these regimes shall be explored in the next and final chapter of this thesis.

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<sup>421</sup> Vöneky 2008, p.183

<sup>422</sup> Proelss 2023, p.546

## **Chapter 5: Implications of the differences between the regimes governing mineral resource management in the Area and Antarctica with regards to the rights and obligations of developing States**

This Chapter examines in more detail the concept of differential treatment, and evaluates the implications of the differences in treatment of developing States between the regimes of the Area and Antarctica when it comes to the management of mineral resources and environmental protection.

### **5.1 Differential Treatment and Justice**

#### *5.1.1 What is differential treatment?*

The modern idea of differential treatment in international law is often traced back to the demands of developing States for a NIEO.<sup>423</sup> It was based on the French concept of *Droit International du développement*, an approach to the body of PIL inspired by the demands of the G-77 that sought to promote harmonious development and focus on economic equality rather than focus on more classical conceptions of formal legal and sovereign equality.<sup>424</sup> Therefore it is argued that in order to achieve effective equality, or equity, differential and special treatment for developing States is required.<sup>425</sup> In the 1982 *Case Concerning the Continental Shelf* (Tunisia/Libyan Arab Jamahiriya), the ICJ stated that “Equity as a legal concept is a direct emancipation of the idea of justice”,<sup>426</sup> and that the legal concept of equity is a “general principle directly applicable as law”.<sup>427</sup> Despite this, the ICJ doesn’t consider the pursuit of equity to require consideration of socio-economic factors in every instance, as evidenced in the 1985 *Case Concerning the Continental Shelf* (Libyan Arab Jamahiriya/Malta) where the Court states that:

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<sup>423</sup> Rajami 2006, p.13

<sup>424</sup> *Ibid*, p.14-15

<sup>425</sup> *Ibid*. p.15

<sup>426</sup> *Case Concerning the Continental Shelf* (Tunisia/Libyan Arab Jamahiriya), Judgement, ICJ Reports (1982), p.60, para.71

<sup>427</sup> *Ibid*.



The Court does not however consider that a delimitation should be influenced by the relative economic position of the two States in question, (...) Such considerations are totally unrelated to the underlying intention of the applicable rules of international law<sup>428</sup>

This was reinforced in the 1993 *Case Concerning Maritime Delimitation in the Area Between Greenland and Jan Mayen*,<sup>429</sup> where the Court, in dealing with a maritime delimitation dispute, concluded that “there is no reason to consider either the limited nature of the population of Jan Mayen, or socio-economic factors as circumstances to be taken into account”.<sup>430</sup>

Unlike in cases of maritime delimitation, socio-economic differences are considered as a sufficient basis to justify differential treatment in the field of international environmental law. Differential treatment on socio-economic grounds is best captured by the principle of CBDR,<sup>431</sup> a principle briefly explained in section 4.3. CBDR is described in Principle 7 of the Rio Declaration, which reads as follows:

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.<sup>432</sup>

CBDR stands on two assumptions. First, that all States share a common responsibility towards the environment and must cooperate,<sup>433</sup> and second, that this responsibility, whilst common and shared, is not equal for all States.<sup>434</sup> So whilst all countries must cooperate on the common goal

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<sup>428</sup> *Case Concerning the Continental Shelf (Libyan Arab Jamahiriya/Malta)*, Judgement, ICJ Reports (1985) p.41, para.50

<sup>429</sup> *Case Concerning Maritime Delimitation in the Area Between Greenland and Jan Mayen* (Denmark vs Norway), Judgement, ICJ Reports (1993)

<sup>430</sup> *Ibid*, p.38, para.80

<sup>431</sup> *Ibid*, p.305

<sup>432</sup> Rio Declaration on Environment and Development UN Doc. A/CONF.151/26 (vol. I), 31 ILM 874 (1992), p.2

<sup>433</sup> Rajami 2006, p.134

<sup>434</sup> *Ibid*, p.136

of combating environmental degradation, there is a differentiation between States with regards to the nature of the measures they must implement.<sup>435</sup> CBDR differentiates between countries according to two criteria, these being their contribution to environmental degradation, and their capacity and resources to take response measures.<sup>436</sup> For the purposes of this thesis, ‘contribution to environmental degradation’ is not of too much relevance. However, ‘distinctions in capacity’ are referred to on multiple occasions. For example, in the 2011 ITLOS Advisory Opinion, when discussing the precautionary approach, the Chamber makes reference to Principle 15 of the Rio Declaration stating that:

Principle 15 provides that the precautionary approach shall be applied by States “according to their capabilities”. It follows that the requirements for complying with the obligation to apply the precautionary approach may be stricter for the developed than for the developing sponsoring States.<sup>437</sup>

The Chamber therefore ‘did not exclude’ that the rules setting out direct obligations of sponsoring States could provide for differential treatment for developed and developing States.<sup>438</sup>

In order to further illustrate the specific rights of different States (including developing States) under this regime, this thesis has chosen to classify them through the lens of Hohfeld’s conception of different types of rights mentioned in the methodology of this thesis, depending on if they can be considered as claims, powers, liberties, immunities, or privileges. This looks as follows.

First, all States including developing States have a claim to the benefits the Area has to offer, and these benefits should be shared as per Article 140(2) UNCLOS, with particular consideration being taken in the interests and needs of developing States, as per Article 148 UNCLOS. Developing States also have a claim to the technology of developed States being transferred to them according to the IOC vision for the technology transfer regime, though this

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<sup>435</sup> *Ibid.*

<sup>436</sup> Rajami 2006, p.130

<sup>437</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.54, para.161

<sup>438</sup> *Ibid.*, p.54, para.160

vision ultimately was rejected in the Implementation Agreement. Developing States also have a claim to the reserved areas under the parallel development system, even though developed States have the power of first refusal under Section 2(5) of the Annex to the Implementation Agreement, as well as the power to forgo the reserved area altogether under the Sulphides and Cobalt Regulations. Arguably the voting procedures for the ISA introduced in the Implementation Agreement could also be said to be a power granted to developed States to the detriment of developing States. Every and any State, regardless of their level of development, also has the power to claim compensation for damage in the Area due to the *erga omnes* nature of the obligations Sponsoring States have in the Area.<sup>439</sup> Both developed and developing States have the liberty to sponsor activities in the Area. Due to the nature of differential treatment regarding the precautionary approach and direct obligations in the Area, it could be argued that developing States have a partial immunity to the full effect of these obligations.

Regarding the Antarctic regime, the only normative differential treatment that can be observed is that favouring the ATCPs over the non-Consultative Parties, regardless of their level of development. This means then that all Parties have the liberty to access Antarctica in order to conduct scientific research on the continent, even though as discussed previously this does entail significant economic hurdles to developing States. Both ATCPs and Non-Consultative Parties have the power to attend ATCMs, but only ATCPs have the power to actively participate in them, and ATCPs retain all decision and policy making power. All UN States have the liberty to join the ATS. The claimant States are unique in having the privilege of having territorial claims over the continent.

Before considering the implications of these rights and the differences in rights between these regimes, it is important to examine the conception of justice that underpins them, as differential treatment can have different underlying justifications. The two most important conceptions of justice that may underpin differential treatment are those of corrective justice, and redistributive justice, explained in the next section.<sup>440</sup>

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<sup>439</sup> *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Rep (2011) 10, p.59, para.180

<sup>440</sup> Cullet 2016, p.308

### 5.1.2 *Difference between corrective and distributive justice*

While both corrective and distributive justice lead to differential treatment, they follow fundamentally different conceptions of justice,<sup>441</sup> and are arguably sometimes each more adequate for different situations. Corrective justice focuses more on the historical contributions of different States to the environmental issues in question, an approach often brought up in discussions on climate change and greenhouse gas emissions, though fully rejected by developed States which refuse to grant CBDR a historical dimension.<sup>442</sup> Despite the advantages that developed States have in the Area and Antarctica (access to more financial resources and technology, among others), developed States do not have a long history of environmental degradation in these regions due to their historical remoteness, and, as discussed throughout this thesis, many of the environmental standards and measures are geared towards recent, or even future activities. Therefore, it would seem that the corrective justice notion cannot adequately explain the reason for differential treatment in these regimes. The idea of justice here then is that the States responsible for doing the most damage must take a greater part in addressing this damage.

Distributive justice on the other hand focuses on addressing existing inequalities in human development instead of historical contributions to environmental degradation.<sup>443</sup> The terminology may lead to confusion, as while currently existing inequalities are directly and inextricably linked with the past actions and policies of developed States<sup>444</sup> that arguably need correcting measures to address, within international environmental law the aforementioned corrective justice refers to correcting the damage done to the environment, not to developing States. While the formulation of distributive justice does not address *why* different States are unequal, it does attempt to address these differences, seeking to achieve equality of results through the differentiation of measures.<sup>445</sup> This perspective has been widely accepted in PIL for decades.<sup>446</sup> It appears to be this perspective that the regime of the Area at least adheres to

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<sup>441</sup> *Ibid.*

<sup>442</sup> *Ibid.*

<sup>443</sup> *Ibid.*, p.309

<sup>444</sup> Rodney 1973, p.169

<sup>445</sup> Cullet 2016, p.308

<sup>446</sup> *Ibid.*, p.309

when concerning measures explicitly favouring developing States, though the same cannot be said for Antarctica. The implications of this difference, and the sum of all the other differences between the regime of the Area and Antarctica shall be analysed in the next section.

## **5.2 Implications**

As has been established in Chapters 2 and 3, the processes that led to the regimes governing the Area and Antarctica were very distinct. The end results show perhaps two differing focuses with regards to the international community's policy towards the commons. This thesis has highlighted that the Area highlights the CHM, with its sharing of benefits and other associated factors, whilst Antarctica, despite Malaysia's struggle during the debate on the Question of Antarctica, focuses more absolutely on environmental protection and scientific research. Despite this differentiation, there is a level of overlap. Environmental protection and scientific research are both important aspects of the regime of the Area. The concept of all of mankind is relevant to the Antarctic regime, though, given quite a different focus than CHM. While the Area under CHM seeks to have the resources of the Area be used to the benefit of all of mankind, the ATS seeks to keep Antarctica as a conflict free zone in the interest of all of mankind.

This thesis' comparison of the two regimes, with a comparative or utilitarian aim in mind, demonstrates ways they could potentially influence and better each other. For example, despite it ultimately not being ratified, the ISA could take a lot out of CRAMRA with regards to environmental protection measures. Arguably the LTC would better be able to fulfil its objectives if it were to be split into different organs, the way the CEP and SCAR are in the Antarctic regime. On the other hand, the Antarctic regime could incorporate some of the focus on distributive justice in benefit of developing States that can be seen within the regime of the Area (despite the weakening of said focus since the Implementation Agreement), thus turning the conducting of scientific research in Antarctica into an opportunity for developing States instead of a hurdle for them to overcome.

Perhaps one of the most fundamental implications of these differences is that they demonstrate a lack of consensus and a lack of coherence over how, conceptually, to govern the commons in general. While it is true that no two regions of the commons are the same, and each one does require particular considerations unique to its material conditions, the processes that have led to the establishment of each of these regimes has been highly political. While there have been

parallelisms and similarities in the creation of each regime, international law as it applies to the commons is fragmented, each new agreement subject to the political whims of the moment. With the very recent negotiation of the so-called High Seas Treaty which has not yet been signed or ratified, the constant evolution of climate change measures meant to address damage to the global atmosphere, and a slow but constant advance in humanity's capabilities to access outer space, further regulation of different areas of the commons is just over the horizon. And while the differences between the commons should not be ignored, it could do good moving forward to take some of the best elements from Antarctica and the Area, improve on them, and try to build some basic general principles regarding environmental protection and differential treatment that all regimes of the commons may share as a common base of sorts, thus guaranteeing some modicum of consistency and legal certainty moving forward.

Strong environmental protection in order to guarantee the preservation of these regions and their ecosystems in the interest of mankind, and for future generations. The creation of especially protected areas, such as the APEIs of the Area, or the ASPAs of Antarctica. Comprehensive management plans for said protected areas, or other areas of particular interest. The reservation of these regions for exclusively peaceful and non-military uses. The promotion and encouragement of scientific research. And, in the case it is deemed that a material benefit should be obtained from activities in these regions, making sure all of humanity, especially that section of it that lives in developing States, benefits. These tentatively proposed principles, among others, taken from the regimes of the Area and Antarctica, could serve as the skeletal framework onto which a consistent international policy towards the commons may be constructed in future, in order to guarantee a fruitful, environmentally sound, responsible, but especially, a *fair* use of the commons moving forward.

## Chapter 6: Conclusion

This thesis asked the question ‘What are the main differences between the regimes governing mineral resource management in Antarctica and the Area regarding the rights and obligations of developing States, in particular with regards to environmental protection, and what are the implications of these differences?’ As has been seen, the Area and Antarctica are governed by regimes that show stark differences. The Area is CHM, whilst Antarctica is a natural reserve. The Area is managed by the ISA, whilst Antarctica is managed directly by the ATCPs via ATCMs. The regime of the Area allows mining, whilst, for now at least, the regime in Antarctica does not. The regime of the Area distinguishes between developed and developing countries and has norms set in place in attempt to meet the needs of the latter, whilst the regime of Antarctica does not.

However, both regimes also share striking similarities. They both share an emphasis on peace, and the peaceful use of their respective regions. They both promote and encourage scientific research. They both put an emphasis on environmental protection, and have some strong measures and standards in place. They both have their own network of protected areas, APEIs in the case of the Area, and ASPAs in the case of Antarctica.

Yet, one particular similarity sorely sticks out, this being the noticeable disadvantaged position developing States have under each regime. Whilst the regime of the Area does have a solid base of measures that could greatly benefit developing States, the development of the Implementation Agreement has brought into question just how much developing States truly benefit. Developed States maintain an almost monopolistic control of the financial and technological resources necessary for DSM, which they are no longer obliged to transfer. They have wrestled effective control of the ISA’s decision-making organs. The reserved area system is also being largely undermined by the right of first refusal, and is even being disregarded completely in favour of merely offering the Enterprise an equity interest in a joint venture. This has been the price developing States have paid for consensus with the developed world.

In the Antarctic regime, the lack of participation of developing States is even more striking. With the monopoly on decision and policy making held by the ATCPs, and the incredibly high economic cost of being able to join this relatively exclusive club, the active participation of developing States is limited to some of the more powerful developing States, such as Brazil,

India, or China, or those that were original parties or claimant States, such as Argentina, Chile, or South Africa.

Both regimes do have enormous merits in their favour. The focus on environmental protection, peace, and scientific research in each one is commendable. However for the commons to truly be the commons they must properly be held and managed in common by, and preserved for, all of humanity, not just the developed States. Only from this position can a fair management of the mineral resources of the commons arise. Anything less cannot be justice.



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