

# NOTTINGHAM TRENT UNIVERSITY

The logo of Nottingham Trent University, consisting of the letters 'NTU' in white on a red shield-shaped background.

**REGIONAL COOPERATION ADDRESSING MARINE POLLUTION  
FROM LAND-BASED ACTIVITIES: AN INTERPRETATION OF  
ARTICLE 207 OF THE LAW OF THE SEA CONVENTION FOCUSING  
ON MONITORING, ASSESSEMENT, AND SURVEILLANCE OF THE  
POLLUTION**

**NAPORN POPATTANACHAI**

**This thesis submitted in partial fulfilment of the requirement of  
Nottingham Trent University  
for the degree of Doctor of Philosophy in Law**

**March 2018  
(Revised Version)**

This work is the intellectual property of the author. You may copy up to 5% of this work for private study, or personal, non-commercial research. Any re-use of the information contained within this document should be fully referenced, quoting the author, title, university, degree level and pagination. Queries or requests for any other use, or if a more substantial copy is required, should be directed in the owner(s) of the Intellectual Property Rights.

(74 631 Words)

Signed:

Date: 14 March 2018

## TABLE OF CONTENTS

<b>ABSTRACT .....</b>	<b>v</b>
<b>ACKNOWLEDGEMENTS.....</b>	<b>vi</b>
<b>TABLE OF CASES .....</b>	<b>viii</b>
<b>TABLE OF INTERNATIONAL INSTRUMENTS.....</b>	<b>xiii</b>
<b>GLOSSARY .....</b>	<b>xxviii</b>
<b>Chapter I: Introduction.....</b>	<b>32</b>
<b>I. Research overview and objectives .....</b>	<b>32</b>
<b>II. Research hypothesis, questions and scope of the research .....</b>	<b>35</b>
i. Research hypothesis and questions.....	35
ii. Scope of the research .....	37
<b>III. Research methodology .....</b>	<b>38</b>
<b>IV. Contribution of this research.....</b>	<b>40</b>
<b>V. Structure of the research .....</b>	<b>41</b>
<b>Chapter II: The Rule of Treaty Interpretation as a Means to Clarify the Substance of Article 207 of the LOSC .....</b>	<b>43</b>
<b>I. Introduction.....</b>	<b>43</b>
<b>II. Articles 31 and 32 of the VCLT as tools for treaty interpretation .....</b>	<b>44</b>
i. General rule of treaty interpretation as specified in Article 31 of the VCLT	44
ii. Supplementary means of treaty interpretation (Article 32).....	69
<b>III. Rule of treaty interpretation and its application in this research .....</b>	<b>75</b>
i. Sequence of ingredients to be thrown into the crucible of treaty interpretation .....	76
ii. Difference between subsequent agreement and subsequent practice as set out in Article 31 (3) (a) and (b) of the VCLT .....	77
<b>IV. Conclusion .....</b>	<b>79</b>
<b>Chapter III: Rules and Principles of International Law related to the Protection of the Marine Environment from MPLA.....</b>	<b>81</b>
<b>I. Introduction.....</b>	<b>81</b>
<b>II. Customary and general rules of international law.....</b>	<b>82</b>
i. Sustainable Development.....	82

ii.	Prevention Principle.....	91
iii.	Precautionary Principle.....	98
iv.	Common but Differentiated Responsibilities (CBDR).....	108
v.	Polluter-Pays principle.....	113
vi.	Cooperation.....	116
vii.	Environmental Impact Assessment (EIA).....	119
viii.	Obligations to notify, exchange information and consult.....	126
<b>III.</b>	<b>Conventional rules of international law – The LOSC.....</b>	<b>129</b>
<b>IV.</b>	<b>Conclusion .....</b>	<b>131</b>

**Chapter IV: Ordinary Meaning, Context, and Objects and Purposes of Article 207 of the LOSC .....**

<b>I.</b>	<b>Introduction.....</b>	<b>133</b>
<b>II.</b>	<b>Preliminary interpretation of Article 207 of the LOSC – identifying challenges.....</b>	<b>135</b>
<b>III.</b>	<b>Preliminary consideration of the term ‘pollution of the marine environment’</b>	<b>137</b>
<b>IV.</b>	<b>Interpretation of Article 207 of the LOSC .....</b>	<b>139</b>
i.	Article 207 of the LOSC – Paragraph 1.....	140
ii.	Article 207 of the LOSC – Paragraph 2.....	167
iii.	Article 207 of the LOSC – Paragraph 3.....	169
iv.	Article 207 of the LOSC – Paragraph 4.....	170
v.	Article 207 of the LOSC – Paragraph 5.....	178
vi.	Reading the provision as a whole in its context and the light of object and purpose.....	180
<b>V.</b>	<b>Conclusion .....</b>	<b>182</b>

**Chapter V: Subsequent Practice of States at the Global Level related to the Protection of the Marine Environment from MPLA under Article 207 of the LOSC .....**

<b>I.</b>	<b>Introduction.....</b>	<b>184</b>
<b>II.</b>	<b>Identification of internationally agreed rules, standards, and recommended practices and procedures .....</b>	<b>186</b>
i.	Non-binding instruments.....	187

ii.	Binding instruments.....	191
<b>III.</b>	<b>Single-combined interpretation of the obligation to prevent, reduce, and control MPLA at the regional level .....</b>	<b>195</b>
i.	Adoption of a Regional Plan/Programme of Action (RPA).....	196
ii.	Monitoring, assessment, and surveillance of MPLA.....	204
iii.	Notification, consultation, and exchange of information regarding MPLA .....	213
iv.	Other forms of cooperation related to MPLA .....	218
<b>IV.</b>	<b>Conclusion .....</b>	<b>224</b>

**Chapter VI: Subsequent Practice of States at the Regional Level concerning the Monitoring, Assessment, and Surveillance of MPLA.....226**

<b>I.</b>	<b>Introduction.....</b>	<b>226</b>
<b>II.</b>	<b>Monitoring of MPLA .....</b>	<b>229</b>
i.	Institutional aspect of the monitoring requirement.....	229
ii.	Procedural aspect of the monitoring requirement.....	232
iii.	Substantive aspect of the monitoring requirement .....	237
<b>III.</b>	<b>Assessment of MPLA .....</b>	<b>245</b>
i.	Institutional aspect of the required assessment .....	245
ii.	Procedural aspect of the required assessment .....	247
iii.	Substantive aspect of the required assessment .....	251
<b>IV.</b>	<b>Surveillance of MPLA.....</b>	<b>256</b>
<b>V.</b>	<b>Conclusion .....</b>	<b>256</b>

**Chapter VII: Conclusions.....260**

<b>I.</b>	<b>Introduction.....</b>	<b>260</b>
<b>II.</b>	<b>Methodological complexity of the rule of treaty interpretation .....</b>	<b>260</b>
i.	Sequence of ingredients to be thrown into the crucible of treaty interpretation .....	261
ii.	Differences between subsequent agreement and subsequent practice as set out in Article 31 (3) (a) and (b) of the VCLT .....	263
<b>III.</b>	<b>Outcomes of the interpretation of Article 207 of the LOSC.....</b>	<b>264</b>
i.	What do the ordinary meanings of the terms of Article 207 of the LOSC reveal in relation to the obligation in Article 207 of the LOSC at the regional level? .....	265

ii.	What does the subsequent practice of States at the global level reveal in relation to the obligation of Article 207 of the LOSC? .....	269
iii.	What does the subsequent practice of States through RSPs reveal in relation to the obligation of Article 207 of the LOSC at the regional level?.....	273
<b>IV.</b>	<b>Unfinished business in relation to Article 207 of the LOSC .....</b>	<b>278</b>
	<b>BIBLIOGRAPHY .....</b>	<b>280</b>

## ABSTRACT

Marine Pollution from Land-based Activities (MPLA) has long been recognised as being the biggest contributor to the deterioration of the marine environment. Despite the recognition, this source of pollution remains largely unregulated. The United Nations Convention on the Law of the Sea (LOSC) is the only international agreement that regulates MPLA at the global level. However, Article 207 of the LOSC requiring States to prevent, reduce, and control MPLA has been criticised for its lack of clarity and cannot guide States' action to fulfil their obligation.

This research picks up from this ambiguity and tries to clarify the substance of Article 207 of the LOSC. It specifically focuses on the regional aspect of this provision. The question of this research is 'how and to what extent should States act at the regional level to fulfil their obligation under Article 207 of the LOSC.' In so doing, it answers the question through the lens of treaty interpretation showing what the possible interpretations are and how States have interpreted Article 207 of the LOSC from their subsequent practice both at global and regional levels.

To fulfil this obligation at the regional level, States have interpreted Article 207 of the LOSC as a single combined obligation treating the obligations to prevent, reduce, and control MPLA collectively. Besides, when applying at the regional level, the obligation to prevent, reduce, and control MPLA comprises four key components. In particular, at the regional level, monitoring, assessment, and surveillance of MPLA have been developed to varying degrees to be part of the regional aspect of this obligation. Monitoring and assessment of MPLA are essential and can be part of the obligation, whereas surveillance of MPLA remains to be further developed.

## ACKNOWLEDGEMENTS

First and foremost, my higher legal studies especially this PhD would have never been possible without the utmost kindest support of the Anandamahidol Foundation under the Royal Patronage of His Majesty the King of Thailand who has been supportive of me financially throughout my entire studies. No word can express how grateful I am having received the scholarship, and for that, I would like to express my sincere gratitude to the Foundation. Also, I would like to respectfully offer this PhD thesis as a tribute in memorial of the late King Bhumibol Adulyadej – King Rama IX – and as an evidence of fulfilling His Majesty’s visions to develop Thai education through the establishment of the Foundation and this prestigious scholarship.

Secondly, I would like to thank Faculty of Law, Thammasat University, Thailand for allowing me to further my education and has ensured no disruption to my study. Thirdly, I would like to extend my appreciation and gratitude to the ITLOS-Nippon Capacity-Building and Training Programme on Dispute Settlement under the LOSC at the International Tribunal for the Law of the Sea for the 2016/2017 ITLOS-Nippon fellowship and allowed me to exhaust the Tribunal library for my PhD research. Without the support of this fellowship and the Tribunal, writing up my thesis could have been a lot more difficult. No library is better than the Tribunal’s library!

For the past four years, my PhD study has been quite a journey. It has been quite so because it involves two universities with four supervisors. First and most importantly, this PhD study would not have come this far, and I will never complete this thesis without the consistent support and guidance from my principal supervisor, Professor Elizabeth Kirk. The only supervisor who has been with me for my entire PhD! No word can express how lucky, grateful, and privileged I am to be under her supervision. I would like to pay tribute to Elizabeth for every success happened during my study. Without her kindness and delicate support, I would not have developed myself this much as an academic lawyer and more importantly as a person. Thank you very much, Elizabeth. I could not wish for the better supervisor. At Nottingham Law School, Nottingham Trent University, I would like to thank Professor David Ong who agreed to act as my supervisor and provided thoughtful comments on my work. At the University of Dundee where

everything began, I would like to thank Professor Robin Churchill and Dr Sergei Vinogradov who agreed to be my supervisors during my time in Dundee.

Certainly, PhD is not only an academic degree but also the course of finding the meaning of life. Plenty has been lost, yet so much I have gained on this journey. This PhD has turned me into an ironman and at the same time has brought so many tears to my eyes. I have learned the feeling of doing my best, yet the result is unsatisfactory. Also, I have experienced how bad it can be when I have not put enough effort into my work and my life. Lucky enough, I have my inner-circle friends and colleagues who have always comforted and been faithful to me. There is a never-ending list of people to mention. However, of particular significance, I am indebted for their support and wholeheartedly and sincerely thank; *My family* – my parents, my brothers, and all my relatives for their never-ending supports; *TU Law colleagues* especially Former Dean Narong, Ajarn Piruna, Ajarn Lalin, and Ajarn Kanoknai for their kind support and research assistance; *ITLOS/IFLOS Colleagues* – Mr Registrar Philippe Gautier, ITLOS Librarian Ms Mizerska-Dyba, Jo König, Inês Aguiar Branco, Klaudia Malczewka, and Sebastian Tho Pesch and *EATHAI Restaurant crews* for the wonderful times in Hamburg; *Dundee Friends and Society* – particularly P’Bunchoo, P’Aud, P’Pon, P’Toei, P’Joann, P’Ing, P’Nay, P’Na, Tang, Fern, Gift, Bill Sarakorn, Now, Tarn, and Sis – for being an away-from-home family and for every joyful moment we spent together; *All other inner-circle friends* – especially P’Manida Zimmerman for her kind sponsorship in every sport event, getaway trip and for being my model professional; Chompoo, May, and M for their love, kindness, and constant encouragement; my OSK alumni especially Best for his multi-capacity making my life easier and; last but not least, Titirat Kateratorn for her faith that I could never repay. Finally, thank you to all the unnamed for their kindness. All have blessed this study, and I sincerely could not ask for more.

**Dad, you once said ‘I would be delighted if all my sons have a PhD.’**

**I have done my part, and hopefully, your dream comes true soon.**

## TABLE OF CASES

### International Court of Justice

*Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, (Judgment) [2015] ICJ Rep 665

*Whaling in the Antarctic case (Australia v. Japan: New Zealand intervening)* (Judgment), [2014] ICJ Rep 22

*Pulp Mills on the River Uruguay case (Argentina v. Uruguay)*, (Judgment) [2010] ICJ Rep 14

*Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, (Advisory Opinion) [2004] ICJ Rep 136

*Avena and other Mexican Nationals case (Mexico v. United States of America)*, (Judgment) [2004] ICJ Rep 12

*Legality of Use of Force case (Serbia and Montenegro v. Italy)*, (Preliminary Objections) [2004] ICJ Rep 865

*Sovereignty over Pulau Litigan and Pulau Sipadan case (Indonesia/Malaysia)* [2002] ICJ Rep 625

*Kasikili/Sedudu (Namibia/Botswana) case*, (Judgment) [1999] ICJ Rep 1045

*Gabčíkovo/Nagymaros case (Hungary v. Slovakia)*, (Judgment) [1997] ICJ Rep 7

*Legality of the Threat or Use of Nuclear Weapons*, (Advisory Opinion) [1996] ICJ Rep 225

*Oil Platforms case (Islamic Republic of Iran v. United States of America)*, Judgment [2003] ICJ Rep 161

*Oil Platforms case (Islamic Republic of Iran v. United States of America)*, (Preliminary Objections) [1996-II] ICJ Rep 812

*Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v. France) case*, [1995] ICJ Rep 288

*Territorial Dispute case (Libya Arab Jamahiriya/Chad)*, (Merit) [1994] ICJ Rep 6

*Maritime Delimitation in the Area between Greenland and Jan Mayen case (Denmark v. Norway)*, Judgment [1993] ICJ Rep 38

*Land, Island, and Maritime Frontier Dispute Case (El Salvador/ Honduras: Nicaragua intervening)*, (Judgment) [1992] ICJ Rep 351

*Arbitral Award of 31 July 1989 (Guinea-Bissau v Senegal)*, (Judgment) [1991] ICJ Rep 53

*Military and Paramilitary Activities (Nicaragua v. United States)* (Jurisdiction and Admissibility) [1984] ICJ Rep 392

*Aegean Sea Continental Shelf case (Greece v Turkey)*, (Judgment) [1978] ICJ Rep 3

*Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*, (Advisory Opinion) [1971] ICJ Rep 16.

*Case concerning the Right of the Passage over Indian Territory (Portugal v India)* (Preliminary Objections) [1957] ICJ Rep 125

*Interpretation of Peace Treaties (Second Phase)*, (Advisory Opinion) [1950] ICJ Rep 221

*Corfu Channel case (United Kingdom v. Albania)*, (Judgment) [1949] ICJ Rep 4

### **International Tribunal for the Law of the Sea**

*Advisory Opinion on Responsibilities and obligations of States with respect to activities in the Area*, 1 February 2011, ITLOS Reports 2011, 10

*Land Reclamation in and around the Straits of Johor (Malaysia v. Singapore)*, Provisional Measures, Order of 8 October 2003, ITLOS Reports 2003, 10

*MOX Plant (Ireland v. United Kingdom)*, Provisional Measures, Order of 3 December 2001, ITLOS Reports 2001, 95

*Southern Bluefin Tuna (New Zealand v. Japan; Australia v. Japan)*, Provisional Measures, Order of 27 August 1999, ITLOS Reports 1999

*M/V "SAIGA" (No. 2) (Saint Vincent and the Grenadines v. Guinea)*, Judgment, ITLOS Reports 1999, 10

### **World Trade Organisation**

*European Communities: Measures Affecting the Approval and Marketing of Biotech Products*, Report of the Panel (21 November 2006), WT/DS291/R, WT/DS292/R, WT/DS293/R, Corr.1 and Add.1, 2, 3, 4, 5, 6, 7, 8 and 9

*Canada: Measures Affecting the Export of Civilian Aircraft*, Report of the Appellate Body (2 August 1999) WT/DS70/AB/R, 39

*European Communities — Measures Concerning Meat and Meat Products (Hormones)* (16 January 1998) WT/D26/AB/R

*United States: Import Prohibition of Certain Shrimp and Shrimp Products* – Report of the Appellate Body (12 October 1998) WT/DS58/AB/R

*Japan: Taxes on Alcoholic Beverages* – Report of the Appellate Body (1996) WT//DS/8, 10-11/AB/R

### **International Arbitration**

*The Matter of South China Sea Arbitration case (Philippines v. China)* (Award) PCA Case No. 2013-19, ICGJ 495 (PCA 2016), 12 July 2016 <<https://www.pcacases.com/web/sendAttach/2086>> accessed 12 January 2018

*The Matter of Chagos Marine Protected Area Arbitration (Mauritius v. United Kingdom)* (Award) PCA Case No. 2011 – 03, ICGJ 486 (PCA 2015), 18 March 2015, <<https://files.pca-cpa.org/pcadocs/MU-UK%2020150318%20Award.pdf>> accessed 13 January 2018

*Iron Rhine (IJzeren Rijn) Railway Arbitration (Belgium/Netherlands)* (2005) 27 RIAA 35

*Case concerning the audit of accounts between the Netherlands and France in application of the Protocol of 25 September 1991 Additional to the Convention for the Protection of the Rhine from Pollution by Chlorides of 3 December 1976 (Netherlands/France)* (2004) 25 RIAA 267

*Dispute concerning Access to Information under Article 9 of the OSPAR Convention (Ireland/United Kingdom)*, (2003) 23 RIAA 59

*The Case concerning The Question whether the re-evaluation of the German Mark in 1961 and 1969 constitutes a case for application of the clause in Article 2 (e) of Annex I A of the 1953 Agreement on German External Debts (Belgium, France, Switzerland, United Kingdom and the United States of America v Federal Republic of Germany)* (1980) 19 RIAA 67

*Trail Smelter United States v. Canada* (1941) 3 RIAA 1905

*Island of Palmas Case* (Netherlands/USA) [1928] 2 RIAA 829

**Other cases**

*R v Immigration Officer at Prague Airport ex parte European Roma Rights Centre*,  
[2004] UKHL 55, [2005] 2 AC 1

*Arbitration under Chapter Eleven of NAFTA, Pope & Talbot v Canada (Award in  
respect of Damages)*, [2002] 41 ILM 1347

*Al-Adsani v. United Kingdom* case App No. 35763/97 (ECHR, 21 November 2001)

*Minors Oposa v Secretary of the Department of Environment and Natural Resources*,  
(1994) 33 ILM173

*Golder v. United Kingdom* case App No. 4451/70 (ECHR, 21 February 1975)

## TABLE OF INTERNATIONAL INSTRUMENTS

### Treaties

- 2013** Minamata Convention on Mercury  
(adopted 10 October 2013; entered into force 16 August 2017)  
<[https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg\\_no=XVII-17&chapter=27&clang=\\_en](https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XVII-17&chapter=27&clang=_en)>
- 2012** Additional Protocol to the Abidjan Convention Concerning Cooperation in the Protection and Development of Marine and Coastal Environment from Land-Based Sources and Activities in the Western, Central and Southern African Region,  
(Adopted 22 June 2012; not yet in force),  
<<http://abidjanconvention.org/media/documents/protocols/LBSA%20Protocol-Adopted.pdf>> accessed 7 August 2017
- Protocol to Tehran Convention for the Protection of the Caspian Sea against Pollution from Land-based Sources and Activities (MPLA Protocol to Tehran Convention)  
(Adopted 12 December 2012; not yet in force)  
<[http://www.tehranconvention.org/IMG/pdf/Protocol\\_on\\_Pollution\\_from\\_Land\\_Based\\_Sources\\_and\\_Activities.pdf](http://www.tehranconvention.org/IMG/pdf/Protocol_on_Pollution_from_Land_Based_Sources_and_Activities.pdf)> accessed 7 August 2017
- Treaty on the Functioning of the European Union (Treaty of Lisbon, as amended),  
C 326/134 OJ (26 October 2012)
- 2010** Protocol to Amended Nairobi Convention for the Protection of the Marine and Coastal Environment of the West Indian Ocean from Land-based Sources and Activities  
(Adopted 31 March 2010; not yet in force),  
<<http://www.unep.org/nairobiconvention/protocol-protection-marine-and-coastal-environment-western-indian-ocean-land-based-sources-and>> accessed 7 August 2017

- 2009** Protocol on the Protection of the Marine Environment of the Black Sea From Land Based Sources and Activities,  
(Adopted 17 April 2009; not yet in force) <[http://www.blacksea-commission.org/\\_convention-protocols.asp](http://www.blacksea-commission.org/_convention-protocols.asp)> accessed 7 August 2017
- 2005** Protocol Concerning the Protection of the Environment from Land-Based Activities in in the Red Sea and Gulf of Aden  
(Adopted 25 September 2005; not yet in force)  
<[http://www.persga.org/Documents/Doc\\_62\\_20090211124355.pdf](http://www.persga.org/Documents/Doc_62_20090211124355.pdf)>  
accessed 7 August 2017
- 2004** International Convention for the Control and Management of Ships' Ballast Water and Sediments  
(Adopted 13 February 2004; entered into force 8 September 2017) IMO Doc. BWM/CONF/36
- 2003** Framework Convention for the Protection of the Marine Environment of the Caspian Sea  
(Adopted 4 November 2003; entered into force 12 August 2006)  
<<http://www.tehranconvention.org/spip.php?article4>> accessed 7 August 2017
- 2002** Convention for Cooperation in the Protection and Sustainable Development of the Marine and Coastal Environment of the North-East Pacific  
(Adopted 18 February 2002; not yet in force)  
<<http://drustage.unep.org/regionalseas/north-east-pacific#>> accessed 7 August 2017
- 2001** Convention on the Control of Harmful Anti-Fouling Systems on Ship  
(adopted 5 October 2001; entered into force 17 September 2008) UKTS No.3 (2012)

Stockholm Convention on Persistent Organic Pollutants  
(adopted 22 May 2001; entered into force 17 May 2004) 2256 UNTS 119

**2000** Cartagena Protocol to the Convention on Biological Diversity on Bio Safety  
(adopted 29 January 2000; entered into force 11 September 2003) 2226 UNTS 208

**1999** Protocol to Cartagena Convention Concerning Pollution from Land-based Activities  
(Adopted 6 October 1999; entered into force 13 August 2010),  
<<http://cep.unep.org/cartagena-convention/lbs-protocol/protocol-concerning-pollution-from-land-based-sources-and-activities>> accessed 7 August 2017

**1998** Aarhus Protocol to Geneva Convention on Long-Range Transboundary Air Pollution on Persistent Organic Pollutants  
(adopted 24 June 1998; entered into force 23 October 2003) 2230 UNTS 79

Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade  
(adopted 10 September 1998; entered into force 24 February 2004) 2244 UNTS 337

**1997** Convention on Non-Navigational Uses of International Watercourses  
(adopted 21 May 1997; entered into force 17 August 2014) UN Doc A/RES/51/229 (1997)  
<[https://treaties.un.org/pages/viewdetails.aspx?src=ind&mtdsg\\_no=xxvi-i-12&chapter=27&lang=en](https://treaties.un.org/pages/viewdetails.aspx?src=ind&mtdsg_no=xxvi-i-12&chapter=27&lang=en)>

Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management

(adopted 5 September 1997; entered into force 18 June 2001) 2153 UNTS  
303

Kyoto Protocol to the United Nations Framework Convention on Climate  
Change

(adopted 11 December 1997; entered into force 16 February 2005) 2303  
UNTS 148

**1996** Protocol to the Convention on the Prevention of the Marine Pollution by  
Dumping of Wastes and Other Matters  
(adopted 7 November 1996; entered into force 24 March 2006) (14  
November 1996) IMO Doc. LC/SM 1/6

**1995** Protocol to the Barcelona Convention concerning Specially Protected  
Areas and Biological Diversity in the Mediterranean  
(adopted 10 June 1995; entered into force 12 December 1999) 2102 UNTS  
203

**1994** Convention on Nuclear Safety  
(adopted 17 June 1994; entered into force 24 October 1996) 1963 UNTS  
293

Oslo Protocol to Long Range Transboundary Air Pollution Convention on  
Further Reduction of Sulphur Emissions

(adopted 14 June 1994; entered into force 5 August 1998) 2030 UNTS 122

**1992** Convention for the Protection of the Marine Environment of the North-  
East Atlantic  
(adopted 22 September 1992; entered into force 25 March 1998) 2354  
UNTS 67

Convention on the Protection of the Marine Environment of the Baltic  
Sea Area

(adopted 9 April 1992; entered into force 17 January 2000) 1507 UNTS  
167

Convention on the Protection and Use of Transboundary Watercourses and  
International Lakes

(adopted 17 March 1992; entered into force 6 October 1996) 1936 UNTS  
269

United Nations Framework Convention on Climate Change

(adopted 9 May 1992; entered into force 21 March 1994) 1771 UNTS 107

Convention on Biological Diversity

(adopted 5 June 1992; entered into force 29 December 1993) 1760 UNTS  
79

Convention on the Protection of the Black Sea Against Pollution

(adopted 21 April 1992; entered into force 15 January 1994) 1764 UNTS  
3

Protocol to Bucharest Convention on Protection of the Black Sea Marine  
Environment Against Pollution from Land Based Source

(adopted 21 April 1992; entered into force 15 January 1994) 1764 UNTS  
18

**1991** Convention on Environmental Impact Assessment in a Transboundary  
Context

(adopted 25 February 1991; entered into force 10 September 1997) 1989  
UNTS 309

Environmental Protocol to Antarctic Treaty

(adopted 4 October 1991; entered into force 14 January 1998) 30 ILM  
1455 (1991)

- 1990** International Convention on Oil Pollution Preparedness, Response and Cooperation  
(adopted 30 November 1990; entered into force 13 May 1995) 1891 UNTS 77
- Protocol to Kuwait Convention for the Protection of the Marine Environment Against Pollution from Land-based Sources  
(Adopted 21 February 1990; entered into force 2 February 1993) 2399 UNTS 3
- 1989** Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal  
(adopted 22 March 1989; entered into force 5 May 1992) 1673 UNTS 57
- 1987** Montreal Protocol to Vienna Convention for the Protection of Ozone Layer on Substances that Deplete the Ozone Layer  
(adopted 16 September 1987; entered into force 1 January 1989) 1522 UNTS 28
- 1986** Convention for the Protection of the Natural Resources and Environment of the South Pacific Region  
(Adopted 24 November 1986; entered into force 22 August 1990) [1990] ATS 30
- 1985** Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region,  
(Adopted 21 June 1985; entered into force 30 May 1996) amended in 2010 as  
Amended Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean (Amended Nairobi Convention),  
(Adopted 31 March 2010; not yet in force),  
<<http://web.unep.org/nairobiconvention/who-we-are/structure/legal-and-policy-instruments>> accessed 7 August 2017

Vienna Convention for the Protection of the Ozone Layer  
(adopted 22 March 1985; entered into force 22 September 1988) 1513  
UNTS 293

**1983** Convention for the Protection and Development of the Marine  
Environment of the Wider Caribbean Region  
(Adopted 24 March 1983; entered into force 11 October 1986) 1506  
UNTS 157

Protocol to Lima Convention for the Protection of the South East Pacific  
Against Pollution from Land- Based Sources  
(Adopted 22 July 1983; entered into force 23 September 1986)  
<<http://www.cpps-int.org/index.php/principal>> accessed 7 August 2017

**1982** Regional Convention for the Conservation of the Red Sea and Gulf of  
Aden Environment  
(Adopted 14 February 1982; entered into force 10 August 1985) 9  
Environmental Policy and Law 56 (1982)

United Nations Convention on the Law of the Sea  
(adopted 10 December 1982; entered into force 16 November 1994) 1833  
UNTS 3

**1981** Convention for Co-operation in the Protection and development of the  
Marine and Coastal Development of the West and Central African Region  
(Adopted 23 March 1981; entered into force 5 August 1984) 20 ILM 746

Convention for the Protection of the Marine Environment and Coastal  
Zones of the South-East Pacific  
(Adopted 12 November 1981; entered into force 19 May 1986) in  
Kenneth R. Simmonds, *New Directions in the Law of the Sea* (Looseleaf)  
Doc. J. 18 (Oceana Publications, 1984)

- 1980** Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources  
(adopted 17 May 1980; entered into force 17 June 1983) 1328 UNTS 119  
(amended and renamed on 7 March 1996; entered into force 18 May 2006) as  
Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities
- 1979** Geneva Convention on Long-range Transboundary Air Pollution  
(adopted 13 November 1979; entered into force 16 March 1983) 1302 UNTS 217
- 1978** Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution  
(adopted 24 April 1978; entered into force 1 July 1979) 1140 UNTS 133
- 1976** Convention for the Protection of the Mediterranean Sea against Pollution  
(adopted 16 February 1976; entered into force 12 February 1978) 1102 UNTS 44  
(amended and renamed on 10 July 1995; entered into force 9 July 2004)  
as  
Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean
- 1973** Convention on the International Trade in Endangered Species of Wild Fauna and Flora  
(adopted 3 March 1973; entered into force 1 July 1975) 993 UNTS 243
- International Convention on the Prevention of Pollution from Ships  
(adopted 2 November 1973; entered into force 2 February 1983) 1340 UNTS 184
- 1972** Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter

(adopted 29 December 1972; entered into force 30 August 1975) 1046  
UNTS 138

**1969** Vienna Convention on the Law of Treaties  
(adopted 23 May 1969; entered into force 27 January 1980) 1155 UNTS  
331

**1959** Antarctic Treaty  
(adopted 1 December 1959; entered into force 23 June 1961) 402 UNTS  
7

**1945** Charter of the United Nations  
(adopted 26 June 1945; entered into force 24 October 1945),  
<[https://treaties.un.org/pages/ViewDetails.aspx?src=IND&mtmsg\\_no=I-1&chapter=1&lang=en](https://treaties.un.org/pages/ViewDetails.aspx?src=IND&mtmsg_no=I-1&chapter=1&lang=en)> accessed 6 August 2017

Statute of the International Court of Justice  
(24 October 1945)

<[https://treaties.un.org/pages/ViewDetails.aspx?src=IND&mtmsg\\_no=I-3&chapter=1&clang=en](https://treaties.un.org/pages/ViewDetails.aspx?src=IND&mtmsg_no=I-3&chapter=1&clang=en)> accessed 6 August 2017

### **United Nations Documents**

UNGA Res 70/1 ‘Transforming our world: the 2030 Agenda for Sustainable  
Development’, (25 September 2015) UN Doc A/RES/70/1

UNGA Res 66/288 ‘The Future We Want’, (27 July 2012) UNGA/RES/66/288

UNGA Res 60/30 (LX) (29 November 2005)

UNGA Res 2997 (XXVII) (1972)

UNGA Res 2849 (XXVI) (20 December 1971)

UNGA Res 1803 (XVII) (14 December 1962)

UNGA Res 626 (VII) (21 December 1952)

Draft Articles on the Responsibility of International Organisations, with Commentaries, Yearbook of the International Law Commission, 2011, Vol. II, Part Two, 2 – 104

Draft Articles on the Law of Transboundary Aquifers, with Commentaries’ (Draft Articles on the Law of Transboundary Aquifers), Yearbook of the International Law Commission, 2008, vol. II, Part Two, 27 – 79

UNGA ‘Draft plan of implementation of the World Summit on Sustainable Development’ (26 June 2002) UN Doc A/CONF.199/L.1

Draft Articles on Prevention of Transboundary Harm from Hazardous Activities’, Yearbook of the International Law Commission, 2001, Vol. II, Part Two, 148 – 170

Draft Articles on the Law of Non-Navigational Uses of International Watercourses, with Commentaries, Yearbook of the International Law Commission, 1994, vol. II, Part Two. 88 – 135

United Nations Declaration on Environment and Development, ‘Report of the United Nations Conference on Environment and Development’, (1993) UN Doc A/CONF.151/26/Rev.1 (Vol. I), Annex I

Agenda 21 U.N. GAOR, 46th Sess., Agenda Item 21, (1992) UN Doc A/Conf.151/26

UNGA ‘Canada: Working Paper on Preservation of the Marine Environment’ (undated) Doc. A/AC.138/SC.III/L.26

United Nations Declaration on the Human Environment ‘Report of the United Nations Conference on the Human Environment’, (5 – 16 June 1972) UN Doc A/CONF.48/14/Rev.1

Draft Article on Law of Treaties with Commentaries (Draft Articles on Law of Treaties),  
Yearbook of the International Law Commission, 1966, Vol. II, 187 – 214

### **UNEP/UN Environment Documents**

Washington Declaration on the Protection of the Marine Environment from Land-based  
Activities

<<http://wedocs.unep.org/bitstream/handle/20.500.11822/13421/WashingtonDeclaration.pdf?sequence=1&isAllowed=y>> accessed 8 August 2017

Global Programme of Action for the Protection of the Marine Environment from Land-  
based Activities (5 December 1995) UNEP (OCA)/LBA/IG.27

Montreal Guidelines for the Protection of the Marine Environment against Pollution from  
Land-based Sources (24 May 1985) UNEP Governing Council Decision 13/18/II

## **Intergovernmental Review Meeting on the Implementation of the GPA (IGR Process) Documents**

UNEP, 'Report of the Third session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities' (26 January 2012)  
UNEP/GPA/IGR.3/6

UNEP, 'Progress in implementing the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities at the national, regional, and international levels over the period 2007-2011' (9 November 2011)  
UNEP/GPA/IGR.3/2

UNEP, 'Report of the Second session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities' (23 October 2006)  
UNEP/GPA/IGR.2/7

UNEP, 'The Proposed 2007 – 2011 programme of work of the United Nations Environment Programme Global Programme of Action Coordination Office' (1 August 2006) UNEP/GPA/IGR.2/4

UNEP, 'Guidance on the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities for 2007–2011: Global Programme of Action contribution to the internationally agreed goals and targets for the sustainable development of oceans, coasts and islands', (21 July 2006) UNEP/GPA/IGR.2/3

UNEP, 'Progress in implementing the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities at the international, regional and national levels in the period 2002 – 2006' (9 August 2006)  
UNEP/GPA/IGR.2/2

UNEP, ‘Report of the First Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities’ (22 December 2001) UNEP/GPA/IGR.1/9

UNEP, Building Partnerships and Financing the Implementation of the Global Programme of Actions for the Protection of the Marine Environment from Land-based Activities, (4 September 2001) UNEP/GPA/IGR.1/8

UNEP, ‘The Proposed 2002 – 2006 Work Programme of the Global Programme of Action Coordination Office and Partner Organisations with Indicative Costs’ (12 September 2001) UNEP/GPA/IGR.1/6

UNEP, ‘Review of Accomplishments in the Implementation of the Global Programme of Action, 1995 – 2001’, (12 September 2001) UNEP/GPA/IGR.1/2

UNEP, ‘The Clearing-House Mechanism of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities’ (2 October 2001) UNEP/GPA/IGR.1/INF/9

## **Others**

Memorandum of Cooperation between the Secretariat of the CBD and the Global Programme of Action for the Protection of the Marine Environment from Land based Activities on harmonized implementation of the CBD and the GPA, <<https://www.cbd.int/doc/agreements/agmt-gpa-2000-09-20-moc-web-en.pdf>> accessed 7 August 2017

CBD, ‘Report of the Second Conference of the Parties to the Convention on Biological Diversity’, UNEP/CBD/COP/2/19 30 November 1995, Annex II at Decision II/10.

Pacific Regional Environmental Programme Strategic Plan 2011 – 2015 (Pacific Environmental Strategic Plan)

<[http://www.sprep.org/attachments/000921\\_SPREPStrategicPlan2011\\_2015.pdf](http://www.sprep.org/attachments/000921_SPREPStrategicPlan2011_2015.pdf)> accessed 22 November 2016

2010 – 2020 North-East Atlantic Environment Strategy  
<[https://www.ospar.org/site/assets/files/1200/ospar\\_strategy.pdf](https://www.ospar.org/site/assets/files/1200/ospar_strategy.pdf)> accessed 7 August 2017

Regional Programme of Action for the Protection of the Arctic Environment from Land-based Activities, (2009) <<https://pame.is/index.php/projects/arctic-marine-shipping/older-projects/rpa-reports>> accessed 7 August 2017

2007 HELCOM Baltic Sea Action Plan,  
<[http://www.helcom.fi/Documents/Baltic%20sea%20action%20plan/BSAP\\_Final.pdf](http://www.helcom.fi/Documents/Baltic%20sea%20action%20plan/BSAP_Final.pdf)> accessed 7 August 2017

Plan of Action for the Protection and Sustainable Development of the Marine and Coastal Areas of the North-East Pacific, (2002)  
<[http://wedocs.unep.org/bitstream/handle/20.500.11822/11137/nep\\_action\\_plan\\_en.pdf?sequence=1&isAllowed=y](http://wedocs.unep.org/bitstream/handle/20.500.11822/11137/nep_action_plan_en.pdf?sequence=1&isAllowed=y)> accessed 7 August 2017

Action Plan for the Protection and Management of the Marine and Coastal Environment of the South Asian Seas Region, (1995)  
<<http://www.unep.org/regionalseas/south-asian-seas#>> accessed 7 August 2017

Action Plan for the Protection, Management, and Development of the Marine and Coastal Environment of the Northwest Pacific Region,  
<<http://cearac.nowpap.org/nowpap/text.html>> accessed 7 August 2017

Action Plan for the Protection and Sustainable Development of the Marine and Coastal Areas of the East Asian Region (1994) UNEP(OCA)/EAS IG5/6, Annex IV  
<[http://www.cobsea.org/documents/action\\_plan/ActionPlan1994.pdf](http://www.cobsea.org/documents/action_plan/ActionPlan1994.pdf)>  
accessed 7 August 2017

Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, (1985) UNEP Regional Seas Reports and Studies No. 61

Action Plan for the Protection and Development of the Marine and Coastal areas of the East Asian Region (1983) UNEP Regional Sea Reports and Studies No. 24

Action Plan for the Conservation of the Marine Environment and Coastal Areas in the Red Sea and Gulf of Aden, (1982) <[http://www.persga.org/Documents/Doc\\_62\\_20090211114435.pdf](http://www.persga.org/Documents/Doc_62_20090211114435.pdf)> accessed 7 August 2017

Action Plan for the Caribbean Programme, (1983) UNEP Regional Seas Reports and Studies No. 26

Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region, (1983) UNEP Regional Seas Reports and Studies No. 27

Action Plan for the Protection of the Marine Environment and Coastal Areas of the South-East Pacific, (1983) UNEP Regional Seas Reports and Studies No. 20

Action Plan for the Protection and Development of the Marine Environment and the Coastal Areas of Bahrain, Iran, Iraq, Kuwait, Oman Qatar, Saudi Arabia, and the United Arab Emirates, (1978) <<http://www.ropme.org/Uploads/Events/EBM/11-KAP.pdf>> accessed 7 August 2017

## GLOSSARY

Aarhus Protocol to LRTAP Convention	Aarhus Protocol to the Convention on Long-Range Transboundary Air Pollution on Persistent Organic Pollutants
AFS Convention	IMO Convention on the Control of Harmful Anti-Fouling Systems on Ship
Athens Protocol	Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources
Barcelona Convention	Convention for the Protection of the Mediterranean Sea against Pollution
Basel Convention	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
BAT	Best Available Techniques
BBC	British Broadcasting Corporation
BEP	Best Environmental Practice
BWM Convention	International Convention for the Control and Management of Ships' Ballast Water and Sediments
CBD	Convention on Biological Diversity
CBD/GPA Memorandum	Memorandum of Cooperation between the Coordinating Office of the GPA and the Secretariat of the CBD
CBDR	Common But Differentiated Responsibilities
Chlorofluorocarbon	CFCs
CHM	Clearing House Mechanism
CITES	Convention on the International Trade in Endangered Species of Wild Fauna and Flora
COP	Conference of the Parties
ECHR	European Convention on Human Rights
ECtHR	European Court of Human Rights
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment

Espoo Convention	Convention on Environmental Impact Assessment in a Transboundary Context
EU	European Union
FAO	Food and Agricultural Organisation
GEF	Global Environmental Facilities
GESAMP	Group of Experts on Scientific Aspects of Marine Pollution
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
GPML	Global Partnership on Marine Litter
GPNM	Global Partnership on Nutrients Management
GW <sup>2</sup> I	Global Wastewater Initiative
Helsinki Convention	Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area
Honolulu Strategy	Honolulu Strategy: A Global Framework for the Prevention and Management of Marine Debris
IAEA	International Atomic Energy Agency
ICJ	International Court of Justice
IFCS	Intergovernmental Forum on Chemical Safety
IGR process	Intergovernmental Review Meetings of the Global Programmes of Action for the Protection of the Marine Environment from Land-based Activities
ILC	International Law Commission
IMCZM	Integrated Marine and Coastal Zone Management
IOMC	Inter-organisation Programme for the Sound Management of Chemicals
IPCS	International Programme on Chemical Safety
IPPC	Integrated Pollution Prevention and Control
ITLOS	International Tribunal for the Law of the Sea
Joint Convention	Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management

London Convention	Dumping Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter
LOSC	United Nations Convention on the Law of the Sea
LRTAP	Geneva Convention on Long-range Transboundary Air Pollution
MARPOL 73/78	International Convention on the Prevention of Pollution from Ships (as amended 1978)
Minamata Convention	Minamata Convention on Mercury
Montreal Guidelines	Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources
Montreal Protocol to the Ozone Layer Convention	Montreal Protocol to the Vienna Convention for the Protection of Ozone Layer on Substances that Deplete the Ozone Layer
MOP	Meeting of the Parties
MPA	Marine Protected Area
MPLA	Marine Pollution from Land-based Activities
MPLA Protocol to Barcelona Convention	Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities
Nuclear Convention	Convention on Nuclear Safety
OECD	Organisation for Economic Co-operation and Development
OSPAR Convention	Convention for the Protection of the Marine Environment of the North-East Atlantic
Ozone Layer Convention	Vienna Convention for the Protection of the Ozone Layer
PADH	Physical Alterations and Destruction of Habitats
PIC Convention	Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
PCA	Permanent Court of Arbitration

POPs Convention	Stockholm Convention on Persistent Organic Pollutants
Regular Process	Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-economic Aspects
Rio Conference	United Nations Conference on Environment and Development
Rio+20 Conference	United Nation Conference on Sustainable Development
RPA	Regional Plan or Programme of Action
RSP	Regional Seas Programme
Seabed Committee	Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction
Tehran Convention	Framework Convention for the Protection of the Marine Environment of the Caspian Sea
UN	United Nations
UN Environment	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
VCLT	Vienna Convention on the Law of Treaties
Washington Conference	Intergovernmental Conference to adopt a Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
Washington Declaration	Washington Declaration on the Protection of the Marine Environment from Land-based Activities
Watercourse Convention	Convention on Non-Navigational Uses of International Watercourses
WCED	World Commission on Environment and Development
WHO	World Health Organisation
WTO	World Trade Organisation

## Chapter I: Introduction

### I. Research overview and objectives

On the 16<sup>th</sup> May 2017, the British Broadcasting Corporation (BBC) reported environmental news in an article with the headline ‘Remote island has ‘world’s worst’ plastic rubbish density’,<sup>1</sup> which was based on a scientific article from the Proceeding of the National Academy of Science of the United States of America. It was reported that Henderson Island, one of the United Kingdom’s remote Pitcairn Islands in the South Pacific Ocean has the highest density of marine plastic debris with just under forty million pieces of refuse found on its beaches.<sup>2</sup> The issue of marine plastic debris is hardly surprising in the field of marine environmental protection based on the discovery of a vast amount of plastic litter and garbage at the centre of the gyre in the north-east Pacific since the early 1980s, which became known as ‘the Great Eastern Garbage Patch’.<sup>3</sup> In addition, it was confirmed in a Report issued by the UN Secretary General that ‘the origins of marine debris, including plastic litter, are diverse and include a variety of land- and sea-based sources. It has been determined that about 80 percent of marine debris enters the oceans from the land’.<sup>4</sup>

Marine plastic debris is only one of the various forms of marine pollution caused by land-based activities (MPLA). The international community has long recognised that MPLA accounts for approximately 80 percent of the pollution of the marine environment,<sup>5</sup> as confirmed in the report of the Group of Experts on Scientific Aspects of Marine Pollution

---

<sup>1</sup> BBC, <<http://www.bbc.co.uk/news/world-australia-39931042>> accessed 22 May 2017.

<sup>2</sup> Ibid; For more information about the research, see. Jennifer L Lavers and Alexander L Bond, 'Exceptional and Rapid Accumulation of Anthropogenic Debris on One of the World’s Most Remote and Pristine Islands' (2017) May Proceeding of the National Academy of Science of the United States of America , 1 – 4.

<sup>3</sup> David KA Barnes, 'Remote Islands Reveal Rapid Rise of Southern Hemisphere Sea Debris' (2005) 5 Scientific World Journal 915; Charles James Moore, 'Trash Revisited' Natural History Magazine <<http://www.naturalhistorymag.com/features/172720/trash-revisited>> accessed 5 July 2014; See also, Lorena M Rios and others, 'Quantitation of Persistent Organic Pollutants adsorbed on Plastic Debris from the North Pacific Gyres's "Eastern Garbage Patch"' (2010) 12 Journal of Environmental Monitoring , 2226 – 2227; Evan A Howell and others, 'On North Pacific Circulation and Associated Marine Debris Concentration' (2012) 65 Marine Pollution Bulletin 16, 19.

<sup>4</sup> UNGA, ‘Report of the Secretary General on Ocean and the Law of the Sea’, (2016) UNGA Doc. A/71/74, para. 9.

<sup>5</sup> UNGA, ‘Report of the UN Secretary General on Oceans and the Law of the Sea’, (2004) UNGA Doc. A/59/62/Add.1, para. 97.

(GESAMP) in 1990.<sup>6</sup> It was also more recently stressed that MPLA is the major contributor to the deterioration of the marine environment at the United Nation Conference on Sustainable Development (Rio+20 Conference)<sup>7</sup> and in the 2030 Agenda for Sustainable Development.<sup>8</sup> MPLA is generally understood to originate from land-based discharges from ‘municipal, industrial or agricultural sources, both fixed and mobile’, which enter the marine environment either (i) ‘from the coast, including outfalls discharging directly into the marine environment and through run-off’; (ii) ‘through rivers, canals of other watercourses, including underground watercourses’; or (iii) ‘via the atmosphere.’<sup>9</sup> More recently, the severity of MPLA problems was reaffirmed as one of the pressing international concerns at the United Nations Ocean Conference where MPLA was recognised and continues to be the biggest contributor to the deterioration of the marine environment.<sup>10</sup> At this conference, sewage, nutrients, and marine debris were singled out to highlight the severity of the MPLA.<sup>11</sup>

Despite the magnitude of this problem, the international law and regulations related to MPLA are rather rudimentary compared to those that deal with other sources of marine pollution, such as dumping<sup>12</sup> or vessel-sourced pollution.<sup>13</sup> MPLA is governed by Article 207 of the United Nations Convention on the Law of the Sea (LOSC), which obliges States

---

<sup>6</sup> Ibid; See also, UNEP, ‘*The State of the Marine Environment*’ (1990) GESAMP Reports and Studies No. 39; and UNEP, ‘*Protecting the Ocean From Land-Based Activities: Land-based sources and activities affecting the quality and uses of the marine, coastal and associated freshwater environment*’ (2001) GESAMP Reports and Studies No. 71.

<sup>7</sup> UNGA, ‘*The Future We Want*’ UNGA Res 66/288 (LXVI) (27 July 2012) UN Doc A/RES/66/288, at para.163.

<sup>8</sup> UNGA, ‘*Transforming our world: the 2030 Agenda for Sustainable Development*’, UNGA Res 70/1 (LXX) (25 September 2015) UN Doc A/RES/70/1, Goal 14 at para. 14.1.

<sup>9</sup> UNEP, ‘*Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources*’ (Montreal Guidelines), (24 May 1985) UNEP Governing Council Decision 13/18/II.

<sup>10</sup> UN Ocean Conference, ‘*Concept Paper Partnership Dialogue 1: Addressing Marine Pollution (Advance Unedited Version)*’ (UN Ocean Conference Concept Paper Partnership Dialogue 1) (2017), <<https://oceanconference.un.org/documents>> accessed 16 June 2017, 1.

<sup>11</sup> Ibid, 1 – 3.

<sup>12</sup> Marine pollution from dumping is internationally regulated by the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter amended by the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter. For more information, see, <<http://www.imo.org/en/OurWork/Environment/LCLP/Pages/default.aspx>> accessed 21 May 2017.

<sup>13</sup> Vessel-sourced pollution is regulated by several international agreements adopted under the auspice of the International Maritime Organisation. The main international agreement is the International Convention for the Prevention of Pollution from Ships. For more information see, <<http://www.imo.org/en/OurWork/Environment/PollutionPrevention/Pages/Default.aspx>> accessed 21 May 2017.

to prevent, reduce, and control MPLA.<sup>14</sup> However, the obligation to prevent, reduce, and control MPLA under the LOSC has long been subject to criticism and only general comments can be found in the literature.<sup>15</sup> The provision is criticised for its lack of specific content for States to implement and fulfil their obligation<sup>16</sup> and for failing to provide any ‘detailed environmental standards’.<sup>17</sup> This makes it very difficult for States to handle this source of pollution. Two monographs, which were written with different approaches and published in different decades, specifically address the protection of the marine environment from MPLA. Qing-Nan discussed the international regulation of MPLA during the 1980s,<sup>18</sup> while Hassan discussed the regime in the context of the early twentieth-first century and recommended effective international cooperation to combat MPLA;<sup>19</sup> however, neither specifically mentioned the clarification of the content of the entire Article 207 of the LOSC. In addition, even less literature and fewer comments can be found related to the protection of the marine environment from MPLA at the regional level. In other words, there has been very little discussion in terms of how States should act at the regional level to fulfil their obligation under Article 207 of the LOSC and ultimately protect the marine environment from MPLA.

The question that arises from the above overview of the problem of MPLA and the state of the art in academia is how and to what extent should States act at the regional level to fulfil their obligation under Article 207 of the LOSC, and this is the principal question of this research. In answering this question, an attempt will be made to clarify the regional aspect of Article 207 of the LOSC in order to assist States to fulfil their commitment and further enhance regional cooperation to combat MPLA. For this reason, this introductory chapter firstly contains the research hypothesis, questions, and scope of the research.

---

<sup>14</sup> (Adopted 10 December 1982; entered into force 16 November 1994) 1833 UNTS 3.

<sup>15</sup> Yoshifumi Tanaka, 'Regulation of Land-Based Marine Pollution in International Law: A Comparative Analysis Between Global and Regional Legal Frameworks' (2006) 66 *Heidelberg Journal of International Law* 535; Alan E Boyle, 'Marine Pollution under the Law of the Sea Convention' (1985) 79 *American Journal of International Law* 347; T. Mensah, 'The International Legal Regime for the Protection and Preservation of the Marine Environment from Land-based Sources of Pollution' in A. E. Boyle and D. Freestone (eds), *International Law and Sustainable Development* (International Law and Sustainable Development, OUP 1999), 297 – 324.

<sup>16</sup> Alan E Boyle, 'Land-based Sources of Marine Pollution' (1992) 16 *Marine Policy* 20.

<sup>17</sup> David VanderZwaag and Ann Powers, 'The Protection of the Marine Environment from Land-based Pollution and Activities: Gauging the Tides of Global and Regional Governance' (2008) 23 *International Journal of Marine and Coastal Law* 423.

<sup>18</sup> Meng Qing-Nan, *Land-based Marine Pollution* (Graham & Trotman / Martinus Nijhoff 1987).

<sup>19</sup> Daud Hassan, *Protecting the Marine Environment from Land-based Sources of Pollution* (Ashgate 2006).

Secondly, the research methodology employed to answer the research questions is introduced. Thirdly, the originality of the research and its contribution to the knowledge and international law of the sea scholarship is discussed before ultimately outlining the structure of the research which contains a total of seven chapters.

## **II. Research hypothesis, questions and scope of the research**

### **i. Research hypothesis and questions**

This research is based on general criticism in the literature that Article 207 of the LOSC is broadly stipulated and lacks substance. Furthermore, it is even more dubious in terms of how States should act at the regional level to protect and preserve the marine environment from MPLA. For example, should States cooperate at the regional level to tackle MPLA problem? If so, how should the cooperation be? Should States cooperate in adopting regional standards dealing with MPLA? Or should they create a regional plan to work together for prevention, reduction, and control of MPLA. As a result, this provision cannot guide States on how they should implement their obligation under this provision and effectively prevent, reduce, and control MPLA.

On this basis, the question that, in effect, becomes the main research question is ‘how and to what extent should States act at the regional level to implement their obligations under Article 207 of the LOSC?’ Three subsidiary research questions must be answered in turn in order to fully answer this question, as shown below.

- (1) What does the ordinary meaning of the terms in Article 207 of the LOSC reveal in relation to this obligation at the regional level?

This question is addressed in Chapter IV. The purpose of this question is to understand Article 207 of the LOSC from its ordinary meanings of the terms. The result of the examination of the ordinary meaning of Article 207 of the LOSC will become the basis for further examination of the subsequent practice of States and is part of the operation of the interpretation of this provision. In answering this question, it will be shown which terms of Article 207 of the LOSC can be clarified by their ordinary meanings and which are not possible to do so. Those terms that the ordinary meanings cannot yield the

conclusive results will be the basis for further analysis on the subsequent practice of States regarding the protection of the marine environment from MPLA.

- (2) What does the subsequent practice of States at the global level reveal in relation to their obligation in Article 207 of the LOSC at the regional level?

This question is addressed in Chapter V of the thesis. It picks up from the ambiguities left over in the earlier chapter (Chapter IV) and aims to clarify those ambiguities through the examination of the subsequent practice of States at the global level regarding the protection of the marine environment from MPLA. One of the essential matters is to understand how States interpret and apply the obligation to prevent, reduce, and control MPLA at the regional level in practice. The objective is to find common elements agreed by States for their regional actions to combat MPLA. This will also facilitate the identification of relevant international instruments and forums States consider to be relevant to MPLA and whether or not the common actions identified are in line with the ordinary meaning of the terms examined in the previous section.

- (3) What does the subsequent practice of States through Regional Seas Programmes (RSP) reveal in terms of the implementation of Article 207 of the LOSC?

This question is answered in Chapter VI of the thesis. Having analysed the ordinary meanings of the treaty terms in Chapter IV and State practice related to Article 207 of the LOSC at the global level in Chapter V, the aim of this sub-question is to determine if the subsequent practices of States at the regional level (i) confirm the above interpretation, and (ii) reveal any further substantive content of the provision. This is to further clarify the regional aspect of Article 207 of the LOSC as an aid to the interpretation. It is equally important to note that this examination of the subsequent practice of States through RSPs does not introduce additional obligation to Article 207 of the LOSC.<sup>20</sup> The examination is conducted with a view to elaborate the regional aspect of the provision. In so doing, this thesis examines the subsequent practices of States at the regional level via their practice

---

<sup>20</sup> For more information, see. UN Environment Regional Seas Programme, <<http://www.unep.org/regionalseas/>> accessed 22 May 2017.

in the Regional Seas Programme (RSP) in an attempt to find some common elements of the regional actions to implement Article 207 of the LOSC at the regional level.

## **ii. Scope of the research**

After the examination of the ordinary meanings of the terms of Article 207 of the LOSC in Chapter IV, some terms can be clarified by the consideration of the ordinary meaning. However, the main obligation of Article 207 of the LOSC still requires further examination on the subsequent practice of States in order to complete the operation of treaty interpretation. As a result, the rules of treaty interpretation specified in Articles 31 and 32 of the VCLT instructs this research to look at the global practice which is the consideration of the GPA. Having reviewed the GPA led this research to focus on the procedural and process of the regional aspects of Article 207 of the LOSC. The substantive obligation identified in Chapter IV could have been further addressed in more details. However, as it follows the line from the GPA which sets the procedural and process aspects as part of the objectives of the regional cooperation regarding MPLA,<sup>21</sup> this thesis chooses to focus on the procedural and process aspect of Article 207 of the LOSC. Inevitably, the provision contains the substantive obligations, and they are worth further elaboration. Unfortunately, such fuller elaboration is not within the scope of this thesis. However, the substantive aspect of the obligation will be addressed where relevant to the discussion.

It is important to note that materials related to the protection of the marine environment are scattered across several institutions, both at an international and regional level, and unfortunately they are not all readily accessible. Although the UNEP/GPA Coordination Office website has tried to gather relevant materials in a single place, it has not so far provided a comprehensive database for the study of MPLA, albeit the best information pool by far.<sup>22</sup> Therefore, this limitation in the scope of this research needs to be acknowledged.

Based on the acknowledgement that it is impossible to analyse every single related State practice, only the instruments recognised by States as being relevant to protecting the

---

<sup>21</sup> The GPA, (n 31) below.

<sup>22</sup> For more information, see. UN Environment, <<http://www.unep.org/gpa/>> accessed 22 May 2017.

marine environment from MPLA are analysed in this study. As discussed later, these include both international and regional instruments, both binding and non-binding, recognised in Intergovernmental Review Meetings of the Global Programmes of Action for the Protection of the Marine Environment from Land-based Activities (IGR process) as well as through RSPs.<sup>23</sup> The instruments at the regional level that are discussed in this study are Conventions, MPLA Protocol, and the Action Plans of RSPs.<sup>24</sup>

### III. Research methodology

In terms of the research methodology, the traditional positivist approach of international law and doctrinal legal analysis are adopted in this study, using the rules of treaty interpretation specified in Articles 31 and 32 of the Vienna Convention on the Law of Treaties (VCLT).<sup>25</sup> This is a document-based research, which involves no empirical legal methods, such as individual or group interview or questionnaires; instead, it entails following the rules of treaty interpretation provided in the VCLT and analysing the elements required by these rules. In so doing and to understand the regional aspect of Article 207 of the LOSC, the rules of treaty interpretation specified in Articles 31 and 32 will be employed as an analytical framework for this study. This will help to address general criticisms and clarify the ambiguities and vagueness of Article 207 of the LOSC.<sup>26</sup> As a single operation, this will be achieved by analysing the ordinary meaning of the terms, context, objects and purposes of both Article 207 and the LOSC, together with the subsequent practice of States at global and regional levels via appropriate diplomatic conferences and RSPs. Relevant rules of international law will also be addressed, as required by Article 31 (3) (c) of the VCLT.<sup>27</sup>

---

<sup>23</sup> See, Chapters V below.

<sup>24</sup> See, Chapter VI below.

<sup>25</sup> (Adopted 23 May 1969; entered into force 27 January 1980) 1155 UNTS 331

<sup>26</sup> Patricia Birnie, Alan E Boyle and Catherine Redgwell, *International Law and the Environment* (3rd edn, OUP 2009), 451 – 454; Philippe Sands and Jacqueline Peel, *Principles of international environmental law* (CUP 2012), 372 – 377; Tanaka, 'Regulation of Land-Based Marine Pollution in International Law: A Comparative Analysis Between Global and Regional Legal Frameworks', (n 15); Boyle, 'Marine Pollution under the Law of the Sea Convention', (n 15); Mensah, 'The International Legal Regime for the Protection and Preservation of the Marine Environment from Land-based Sources of Pollution', (n 15); VanderZwaag and Powers, 'The Protection of the Marine Environment from Land-based Pollution and Activities: Gauging the Tides of Global and Regional Governance', (n 17); Boyle, 'Land-based Sources of Marine Pollution', (n 16).

<sup>27</sup> The VCLT, (n 25), Article 31.

Of particular relevance, the analysis will relate to the subsequent practice of States reflected in various instruments such as the Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources (Montreal Guidelines),<sup>28</sup> Agenda 21,<sup>29</sup> the Washington Declaration on the Protection of the Marine Environment from Land-based Activities (Washington Declaration)<sup>30</sup> and the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA).<sup>31</sup> Although not binding, these instruments represent the subsequent practice of States in their attempt to combat MPLA, and arguably establish general principles and guidance for the protection of the marine environment from this type of pollution. The instruments adopted by RSPs, both binding and non-binding, are also examined, especially those for the regulation of MPLA. As mentioned above, based on Articles 31 and 32 of the VCLT, these instruments reflect the subsequent practice of States and establish an agreement related to the interpretation or application of Article 207 of the LOSC.

Apart from the rules of treaty interpretation specified in Articles 31 and 32 of the VCLT, documentary and jurisprudential analyses, where relevant, will be employed to supplement the research. Documents from relevant international, regional organisations and RSPs, as well as the jurisprudence of international judicial institutions, mainly the International Court of Justice (ICJ), the International Tribunal on the Law of the Sea (ITLOS), and the Permanent Court of Arbitration (PCA) (if appropriate) will also be used as evidence in this research. Some relevant cases include *the Trail Smelter*,<sup>32</sup> *Gabčíkovo/Nagymaros*,<sup>33</sup> *Pulp Mills on the River Uruguay*,<sup>34</sup> *MOX Plant*,<sup>35</sup> and *Land Reclamation* cases.<sup>36</sup> Relevant supplementary means of interpretation, such as *travaux préparatoires*, and preparatory

---

<sup>28</sup> UNEP, Montreal Guidelines, (n 9).

<sup>29</sup> UN, 'Agenda 21' (Agenda 21) (XLVI) (1992) UN Doc A/CONF.151/26, Agenda Item 21 at 17.23 – 17.25.

<sup>30</sup> UNEP, 'Washington Declaration on the Protection of the Marine Environment from Land-based Activities'

<<http://wedocs.unep.org/bitstream/handle/20.500.11822/13421/WashingtonDeclaration.pdf?sequence=1&isAllowed=y>> accessed 8 August 2017.

<sup>31</sup> UNEP, 'Global Programme of Action for the Protection of the Marine Environment from Land-based Activities', (5 December 1995) UNEP Doc (OCA)/LBA/IG.27.

<sup>32</sup> *United States v. Canada* (1941) 3 RIAA 1905.

<sup>33</sup> (*Hungary v. Slovakia*) (Judgment), [1997] ICJ Rep 7.

<sup>34</sup> (*Argentina v. Uruguay*) (Judgment), [2004] ICJ Rep 2010 14.

<sup>35</sup> *MOX Plant (Ireland v. United Kingdom)* (Provisional Measures), Order of 3 December 2001, ITLOS Reports 2001, 95.

<sup>36</sup> *Land Reclamation in and around the Straits of Johor (Malaysia v. Singapore)* (Provisional Measures), Order of 8 October 2003, ITLOS Reports 2003, 10.

conference and meeting documents, will be used with the aforementioned instruments and cases to assist the interpretation of Article 207 of the LOSC.<sup>37</sup>

#### **IV. Contribution of this research**

Existing studies based on protecting the marine environment from MPLA only contain a general criticism of the problem, but fail to clarify or attempt to clarify the substance of Article 207 of the LOSC and the literature on the international regulations of MPLA is incomplete. Therefore, this research fills this gap in the literature and the scholarship of the international law of the sea by clarifying Article 207 of the LOSC with its procedural and process aspects of the provision – monitoring, assessment, and surveillance of MPLA at the regional level.

Secondly, it is important to put on record that no journal or monograph has analysed Article 207 of the LOSC through the lens of treaty interpretation. Therefore, this approach not only makes a contribution to the existing understanding of the LOSC provision, but also the use and application of the rule of treaty interpretation stipulated in Articles 31 and 32 of the VCLT. Some complexities related to the application of the rule of treaty interpretation are highlighted in this thesis and an attempt is made to develop the way in which the rule should be applied. As such, it also contributes to knowledge of the law of treaties.

Thirdly, an analysis of the use of the formula, ‘to prevent, reduce, and control’ pollution, indicates the way in which this formula can be interpreted and implemented, and the implementation measures are also proposed in the discussion. Not only is this thesis of benefit to academia, but the findings are also useful to the government, policy and decision-makers for the design of legal and policy structures to deal with the regulation of MPLA. The findings will enable States to better and effectively fulfil their commitments under the LOSC and ultimately ensure the effective protection of the marine environment.

---

<sup>37</sup> The VCLT, (n 25), Article 32.

## V. Structure of the research

This research consists of seven chapters, including this one. Chapter II entitled '*The Rule of Treaty Interpretation as a Means to Clarify the Substance of Article 207 of the LOSC*', contains a discussion of the relevance of the rule of treaty interpretation, as stipulated in Articles 31 and 32 of the VCLT as it may be applied in interpreting Article 207 of the LOSC. The way in which this provision can be interpreted and how the rule of treaty interpretation can be used to clarify the belief surrounding the substance of this provision are illustrated in this chapter. The elements to be considered when interpreting the treaty will be demonstrated in Chapter II and they will provide the framework for the analyses in the following chapters.

Chapter III entitled '*Rules and Principles of International Law related to the Protection of the Marine Environment from MPLA*' provides the relevant rules and principles of international law related to the protection of the marine environment. They act as background and context in which the interpretation of Article 207 of the LOSC operates. The identification of these rules and principles of international law allows for the potentially relevant rules of international law to be considered as part of the element for interpreting Article 207 of the LOSC.

Chapter IV entitled '*Ordinary Meaning, Context, and Objects and Purposes of Article 207 of the LOSC*' contains an analysis of the ordinary meanings of the terms of Article 207 of the LOSC, through which the possible interpretation of Article 207 is discussed and some of the ambiguities surrounding the terms of this provision are clarified. Sub-question (1) will be answered in this chapter.

*Chapter V entitled 'Subsequent Practice of States at the Global Level related to the Protection of the Marine Environment from MPLA at the Regional Level under Article 207 of LOSC'* picks up from the ambiguities left over from the earlier chapter and further clarifies those ambiguities through an examination of the subsequent practice of States at the global level. The chapter is divided into two parts. Firstly, the terms 'internationally-agreed rules, standards, and recommended practices and procedures' recognised by States will be identified. This is also the case for the competent international organisation and diplomatic conference for the establishment global and regional rules and standards for

prevention, reduction, and control MPLA. Then, the single-combined interpretation of Article 207 of the LOSC at the regional level with the four key components as the substance of the obligation is discussed in the second part. Sub-question (2) is answered in this part.

*Chapter VI entitled 'The Subsequent Practice of States at the Regional Level concerning the Monitoring, Assessment, and Surveillance of MPLA'* contains an examination of a specific component identified in the earlier chapter; the monitoring, assessment, and surveillance of MPLA. In this chapter, the content of the monitoring, assessment and surveillance of MPLA at the regional level is illustrated and three specific aspects are identified. Sub-question (3) is answered in this chapter.

*Chapter VII entitled 'Conclusions'* contains the outcome of this research and a summary of the answers to the research questions. It also contains notes on unfinished business with regard to the interpretation of Article 207 of the LOSC.

## Chapter II: The Rule of Treaty Interpretation as a Means to Clarify the Substance of Article 207 of the LOSC

### I. Introduction

MPLA has long been recognised to pose the biggest threat to the marine environment.<sup>38</sup> Apart from sovereignty and political issues, the ambiguity stemming from Article 207 of the LOSC, which deals directly with MPLA, is criticised and blamed for making the problem of MPLA difficult to deal with and neglected.<sup>39</sup> One of the fundamental ambiguities of this provision is that there is no clear explanation of what is required by the adoption of laws and regulations to ‘prevent, reduce, and control’ of MPLA.<sup>40</sup> Having been shown to be ambiguous, Article 207 of the LOSC needs to be clarified to allow States to appreciate and perform their duty with regard to MPLA correctly and effectively. In order to reach such clarification, this article needs to be interpreted in accordance with the rules and methods provided in international law.

For this reason, one of the most important tasks of this research is to properly interpret Article 207 of the LOSC, by the tools used for treaty interpretation. Therefore, those tools and how they are used generally, and particularly in this research, are introduced in this chapter. The tools for treaty interpretation used in this research are those contained in Section 3 of the Vienna Convention on the Law of Treaties (‘VCLT’)<sup>41</sup> entitled ‘Interpretation of Treaties’ and especially those specified in Articles 31 and 32 of the VCLT. This section begins with an explanation of those articles and how these provisions operate in the international legal order. Each element of the provisions will be addressed in turn, as well as the controversies that have been and continue to be the subject of

---

<sup>38</sup> Marine pollution from land-based sources and activities accounts for approximately 80 per cent of total pollution of the ocean whereas other types of pollution, including vessel-source and dumping, share the remaining 20 per cent. See, UN, Report of the Secretary General, (n 5), para 97 – 128; GESAMP, *Pollution in the Open Oceans: A Review of Assessments and Related Studies* (Reports and Studies GESAMP No 79, 2009).

<sup>39</sup> UN, ‘Canada: Working Paper on Preservation of the Marine Environment’ (undated) UN Doc. A/AC.138/SC.III/L.26, 2 – 3; Boyle, *Land-based Sources of Marine Pollution*, (n 16) 26; Andre Nollkaemper, ‘Law of the Sea: Marine Pollution from Land-based sources: Towards a global approach’ (1992) 24 *Marine Pollution Bulletin*, 8 – 12; Arthur Lyon Dahl, ‘Land-based Pollution and Integrated Coastal Management’ (1993) 17 *Marine Policy* 561.

<sup>40</sup> For example, Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 453 – 454; Sands and Peel, *Principles of international environmental law*, (n 26) 372 – 377.

<sup>41</sup> The VCLT, (n 25).

academic debates. Finally, the relevance of treaty interpretation in each part of this research will be explained.

## **II. Articles 31 and 32 of the VCLT as tools for treaty interpretation**

When a term of a treaty is ambiguous and/or is open to more than one possible meaning, legal advisors to States' governments, international organisations, or judges of judicial institutions make recourse to the relevant rules regarding treaty interpretation. As mentioned above, these rules are specified in Articles 31 and 32 of the VCLT and represent the codification of customary international law related to treaty interpretation.<sup>42</sup> Hence, Articles 31 and 32 are applicable to States that are Party to the VCLT as a conventional source of law and to those that are not Party to it as a customary source of law. For this reason, the task of interpreting the LOSC provisions should be performed in the light of the provisions of the VCLT. For now, Articles 31 and 32 of the VCLT will be addressed in turn in order to understand what international lawyers are obliged to consider when performing treaty interpretation.

### **i. General rule of treaty interpretation as specified in Article 31 of the VCLT**

Before proceeding to discuss Articles 31 and 32 of the VCLT, it is important to note that the heading of Article 31 is entitled 'general rule of interpretation.' This signifies that there is only a single rule of treaty interpretation; therefore, it should be 'applied together, not in bits.'<sup>43</sup> The 'general rule of interpretation' in a singular form underlines the relationship between each paragraph in Article 31. According to the International Law Commission (ILC), this is a 'single combined operation' where 'all elements ... would be thrown into the crucible and their interaction would give the legally relevant

---

<sup>42</sup> *Oil Platforms Case (Islamic Republic of Iran v. United States of America)*, (Preliminary Objections) [1996-II] ICJ Rep 812, at para. 23; *Sovereignty over Pulau Litigan and Pulau Sipadan Case (Indonesia/Malaysia)* [2002] ICJ Rep 625, para. 37; *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory* (Advisory Opinion) [2004] ICJ Rep 136, para. 94; *Avena and other Mexican Nationals Case (Mexico v. United States of America)* (Judgment) [2004] ICJ Rep 12, para. 83. See also, A. Aust, *Modern Treaty Law and Practice* (3rd edn, CUP 2013), 207; Richard Gardiner, *Treaty Interpretation* (OUP 2008), 15 – 17.

<sup>43</sup> *Ibid*, Gardiner, *Treaty Interpretation* 141.

interpretation.<sup>44</sup> This means that all the requirements and conditions in Article 31 need to be considered together when interpreting a treaty. As a result, Article 31 does not represent ‘a legal hierarchy of norms for the interpretation of treaties,’ but ‘a consideration of logic’ when lawyers apply this rule of treaty interpretation.<sup>45</sup>

**(i) Good faith, ordinary meaning of terms, context, objects and purposes of a Treaty (Article 31 (1) and (2))**

According to the first paragraph of Article 31 of the VCLT;

“1. A treaty shall 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 object and purpose...”

It can be seen from this paragraph that there are three separate requirements in this provision; (i) the interpretation must be done in good faith; (ii) the ordinary meaning shall be given to the terms of the treaty; and (iii) the ordinary meaning shall be determined in accordance with the context, object and purpose of the treaty.<sup>46</sup> Each principle is addressed in turn below.

**a. Interpretation must be done in good faith**

When aiming to appropriately interpret the terms of a treaty, good faith guides the interpreter as to ‘how the task of interpretation should be undertaken’.<sup>47</sup> This arguably calls upon the *ut res magis valeat quam pereat* principle, which requires that ‘when a treaty is open to two interpretations one of which does and the other does not enable the treaty to have appropriate effects, good faith and the objects and purposes of the treaty demand that the former interpretation should be adopted.’<sup>48</sup> According to this principle, good faith helps to prevent an over-reliance on the literal interpretation of the terms of

---

<sup>44</sup> Draft Article on Law of Treaties with Commentaries (Draft Articles on Law of Treaties), Yearbook of the International Law Commission, 1966, Vol. II, 219 – 220.

<sup>45</sup> Ibid. See also, Aust, *Modern Treaty Law and Practice*, (n 42) 208.

<sup>46</sup> Draft Articles on Law of Treaties, (n 44) 221.

<sup>47</sup> Gardiner, *Treaty Interpretation*, (n 42) 152.

<sup>48</sup> Draft Articles on Law of Treaties, (n 44) 219.

the treaty, provided that it does not lead to an interpretation that ‘would be contrary to their letters and spirit.’<sup>49</sup>

The operation of good faith can be seen from the jurisprudence of the relevant international judicial institutions that deal with the interpretation of treaties. According to case law, good faith provides guidelines for interpreting treaties in many ways. For example, as mentioned earlier, it requires the interpreter to give effect to the interpretation that gives the treaty a suitable meaning when more than one interpretation exists. This aspect of good faith has been referred to by both the ICJ and the Appellate Body of the World Trade Organisation (WTO).<sup>50</sup> Good faith can also instruct the interpreter to balance various elements or competing interests in the interpreted treaty. This can be seen in the WTO regime when the Appellate Body has had to decide whether or not the restrictive measures employed by the USA can satisfy the requirements in Article XX of the GATT 1994 related to general exceptions.<sup>51</sup> In addition, it can help to clarify the meaning of the terms of a treaty provided that it does not fill loopholes that exist in that treaty ‘in a manner that would impose an additional obligation.’<sup>52</sup> This function of good faith helps to interpret Article 207 of the LOSC, since it extends the criteria for resolving the ambiguities in the provision and for choosing an appropriate meaning of the treaty’s terms. This particularly applies to clarifying the obligation to prevent, reduce, and control in the first paragraph of Article 207 of the LOSC.

### **b. Ordinary meaning shall be given to the terms of the treaty**

The second element to be considered is that Article 31 of the VLCT requires the interpreter to give an ordinary meaning to the terms of the treaty. The ordinary meaning of terms can be found in various sources ranging from dictionaries<sup>53</sup> to the technical or

---

<sup>49</sup> *Interpretation of Peace Treaties (Second Phase) (Advisory Opinion)* [1950] ICJ Rep 221, at 229.

<sup>50</sup> *Territorial Dispute Case (Libya Arab Jamahiriya/Chad), (Merit)* [1994] ICJ Rep 6, para 47; WTO, *Japan: Taxes on Alcoholic Beverages* – Report of the Appellate Body (1996) WT/DS8, 10-11/AB/R. This principle can also be called the ‘principle of effectiveness.’

<sup>51</sup> WTO, *United States: Import Prohibition of Certain Shrimp and Shrimp Products* – Report of the Appellate Body (12 October 1998) WT/DS58/AB/R, paras. 158 – 59.

<sup>52</sup> *R v Immigration Officer at Prague Airport ex parte European Roma Rights Centre*, [2004] UKHL 55, [2005] 2 AC 1; see also, Gardiner, *Treaty Interpretation*, (n 42) 155.

<sup>53</sup> WTO, *Canada: Measures Affecting the Export of Civilian Aircraft*, Report of the Appellate Body (2 August 1999) WT/DS70/AB/R, 39, para. 154. The Appellate Body seeks for the meaning of the term ‘a

specialist meanings<sup>54</sup> defined in different disciplines.<sup>55</sup> Therefore, as Villiger observes, the real task of the interpreter is to choose the meaning that reflects the common intention of the parties.<sup>56</sup> How to find such a meaning was addressed by the ICJ in *Arbitral Award of 31 July 1989 (Guinea-Bissau v Senegal)*.<sup>57</sup> Quoting from an *Advisory Opinion on Competence of the General Assembly for the Admission of a State to the United Nations*, the Court stipulated the following;

‘the first duty of a tribunal which is called upon to interpret and apply the provisions of a treaty, is to endeavour to give effect to them in their natural and ordinary meaning in the context in which they occur. If the relevant words in their natural and ordinary meaning make sense in their context, that is an end of the matter. If, on the other hand, when the words in their natural and ordinary meaning are ambiguous or lead to an unreasonable result, then, and only then, must the Court, by resort to other methods of interpretation, seek to ascertain what the parties really did mean when they used these words.’<sup>58</sup>

Based on the above opinion, the first duty is to seek an ordinary meaning of the treaty’s terms. If that meaning is ambiguous or entails an unreasonable result, the interpreter is required to resort to other methods to interpret the Parties’ intended meaning of the terms. In this research, Article 207 of the LOSC contains several terms that are ambiguous; for example, ‘prevent, reduce, and control’ or ‘internationally agreed rules, standards, and recommended practices and procedures’. Therefore, the ordinary meaning of these terms will be analysed based on Article 31 of the VCLT. In addition, since it is possible for the terms of a treaty to have more than one meaning, taking the ordinary meaning in isolation from other elements may lead to an inappropriate result. In this case, the interpreter must

---

benefit.’ See also, WTO, *United States: Measures Affecting the Cross-Border Supply of Gambling and Betting Service*, Report of the Appellate Body (7 April 2005) WT/DS285/AB/R, 54, paras. 164 – 165.

<sup>54</sup> *Kasikili/Sedudu (Namibia/Botswana) Case* (Judgment) [1999] ICJ Rep 1045, para. 30. The Court tried to find the meaning of the term ‘main channel’ of the river.

<sup>55</sup> Gardiner, *Treaty Interpretation*, (n 42) 166.

<sup>56</sup> Mark E Villiger, ‘The 1969 Vienna Convention on the Law of Treaties - 40 Years After’, *Recueil des Cours de l’Académie de Droit International*, vol 344 (Recueil des Cours de l’Académie de Droit International, Martinus Nijhoff 2010), 117.

<sup>57</sup> (Judgment) [1991] ICJ Rep 53.

<sup>58</sup> *Ibid*, para 48.

take account of the ordinary meaning of the term, together with other relevant elements in Articles 31 and 32 of the VCLT.<sup>59</sup>

**c. Ordinary meaning shall be determined in accordance with the context, object and purpose of the treaty**

This requirement consists of considering two elements when determining the ordinary meaning of the terms of the treaty, the first of which is the context and the second, the object and purpose of the treaty. These are discussed in turn below.

**(a) Context**

The first paragraph of Article 31 of the VCLT also requires the interpreter to give the ordinary meaning based on the context of the treaty's terms. As Gardiner notes, the context of the treaty's terms functions as 'an immediate qualifier' of the terms and helps the interpreter to select a suitable ordinary meaning, as well as balancing the subjective and 'over-literal' approaches to treaty interpretation.<sup>60</sup> The context of the treaty's terms can consist of 'the remaining terms of the sentence or of the paragraph, the entire preamble' and/or substantive provisions of the treaty.<sup>61</sup> International judicial institutions have confirmed that various parts of the treaty should be referred to in order to formulate the 'context' for the purpose of interpreting it. Different parts of treaties have also been utilised by international judicial institutions to form the context by which to interpret them. These include the title of the treaty,<sup>62</sup> the construction of a provision in the treaty,<sup>63</sup> or the preambular provision.<sup>64</sup>

A good example of formulating the context is the case of *Land, Island, and Maritime Frontier Dispute (El Salvador/ Honduras: Nicaragua intervening)*,<sup>65</sup> in which the ICJ used the surrounding terms to formulate the context in which to give the ordinary

---

<sup>59</sup> Ibid.; Aust, *Modern Treaty Law and Practice*, (n 42) 209; Gardiner, *Treaty Interpretation*, (n 42) 161 – 162; see also next section

<sup>60</sup> Ibid, Gardiner, *Treaty Interpretation* 177.

<sup>61</sup> Villiger, 'The 1969 Vienna Convention on the Law of Treaties - 40 Years After', (n 56) 118.

<sup>62</sup> *Oil Platforms Case*, (n 42) para. 47.

<sup>63</sup> *Canada: Measures Affecting the Export of Civilian Aircraft*, (n 53) paras. 155 – 156.

<sup>64</sup> *Maritime Delimitation in the Area between Greenland and Jan Mayen Case (Denmark v. Norway)* (Judgment) [1993] ICJ Rep 38, paras. 26 – 27; Gardiner, *Treaty Interpretation*, (n 42) 186 – 187.

<sup>65</sup> (Judgment) [1992] ICJ Rep 351.

meaning to the treaty's term. This entailed considering the meaning of the term, 'determination of legal situation' in order to decide whether or not the delimitation of the maritime boundary was included in the case. In ruling that the case did not cover maritime delimitation, the ICJ decided as follows;

'... No doubt the word "determine" in English (and as the Chamber is informed, the verb "*determinar*" in Spanish) can be used to convey the idea of setting limits, so that, if applied directly to the "maritime spaces" its "ordinary meaning" might be taken to include delimitation of those space. But the word must be read in its context; the object of the verb "determine" is not the maritime spaces themselves but the legal situation of these spaces. No indication of a common intention to obtain a delimitation by the Chamber can therefore be derived from this text as it stands.'<sup>66</sup>

In addition and in the context of the law of the sea, the Annex VII Tribunal in *The Matter of the Chagos Marine Protected Area Arbitration* used other provisions of the LOSC to form the context for the interpretation of Article 2 (3) of the Convention.<sup>67</sup> In this case, in ruling the said provision imposes an obligation, the Tribunal holds that the 'formulation of Article 2(3) is identical to that of Article 87(1), concerning the high seas, and any interpretation the Tribunal may reach regarding the scope of obligation embodied in the former provision would apply equally to the latter.'<sup>68</sup> In so doing, the Tribunal held that:

'...each of the territorial sea (Article 2(3)), international straits (Article 34(2)), the exclusive economic zone (Article 56(2)), the continental shelf (Article 78(2)) and the high seas (Article 87(2)) includes a provision to the effect that States will exercise their rights under the Convention subject to, or with regard to, the rights and duties of other States or rules

---

<sup>66</sup> Ibid, paras. 373 – 374.

<sup>67</sup> *The Matter of Chagos Marine Protected Area Arbitration (Mauritius v. United Kingdom)* (Award) PCA Case No. 2011 – 03, ICGJ 486 (PCA 2015), 18 March 2015, <<https://files.pca-epa.org/pcadocs/MU-UK%2020150318%20Award.pdf>> accessed 13 January 2018.

<sup>68</sup> Ibid, paras. 502 – 503.

of international law beyond the Convention itself. While the language of these provisions is not harmonized, a renvoi to material beyond the Convention must be interpreted in a manner that is coherent with respect to all of the foregoing maritime zones...<sup>69</sup>

From above, it can be seen that the Tribunal used other provisions of the LOSC to form the context of the interpretation of Article 2 (3) of the LOSC. Hence, for the purposes of this research, the context that will be taken into account when interpreting the provision can be the construction of Article 207 itself, other pollution prevention provisions in the same part, the general provisions of Part XII, as well as the preambular provisions of the LOSC in order to select the appropriate meaning for the obligation under Article 207.

### **(b) Object and purpose of the treaty**

As mentioned earlier, interpreting a treaty entails considering all the conditions specified in Article 31 of the VCLT.<sup>70</sup> The interpreter should interpret the treaty's terms in accordance with the object and purpose of the related treaty. This can help the interpreter by shedding light on the search for the ordinary meaning, and as such, it simultaneously helps to identify the scope of the treaty's application.<sup>71</sup> However, it is important to note that the function of 'object and purpose' is to help to elucidate the ordinary meaning of the treaty's terms or 'confirm an interpretation.'<sup>72</sup> This function was confirmed by the ICJ in the case of *Arbitral Award of 31 July 1989 (Guinea-Bissau v Senegal)*. Having decided that the arbitral Tribunal had not gone further than the power it had based on the arbitration agreement between the Parties, it was reiterated that;

‘...when States sign an arbitration agreement, they are concluding an agreement with a very specific object and purpose: to entrust an arbitration tribunal with the task of settling a dispute in accordance with the terms agreed by the parties, who define in the agreement the jurisdiction of the tribunal and determine its limits. In the performance

---

<sup>69</sup> Ibid.

<sup>70</sup> See, above section.

<sup>71</sup> Gardiner, *Treaty Interpretation*, (n 42) 190.

<sup>72</sup> Aust, *Modern Treaty Law and Practice*, (n 42) 209.

of the task entrusted to it, the tribunal "must conform to the terms by which the Parties have defined this task" (*Delimitation of the Maritime Boundary in the Gulf of Maine Area, Judgment, I.C.J. Reports 1984, p. 266, para. 23*) ...<sup>73</sup>

It can be implied from the above that it is impermissible for the use of an object and purpose to trump the clear substantive provision of the interpreted treaty. The object and purpose can be found, as a starting point, in the title, preamble, or substantive provision of a treaty;<sup>74</sup> for example, Judge Weeramantry gave a separate opinion in the *Arbitral Award of 31 July 1989 (Guinea-Bissau v Senegal)* case, as follows;

‘...The preamble is a principal and natural source from which indications can be gathered of a treaty's objects and purposes even though the preamble does not contain substantive provisions. Article 31 (2) of the Vienna Convention sets this out specifically when it states that context, for the purpose of the interpretation of a treaty, shall comprise in addition to the text, the preamble and certain other materials...’<sup>75</sup>

In addition to the above opinion, in the case of *Sovereignty over Pulau Litigan and Pulau Sipadan (Indonesia/Malaysia)*, the ICJ confirmed that the object and purpose of the treaty can be found in the preambular provision. Having decided that, based on its object and purpose, Article IV of the 1891 Convention could not establish the line determining

---

<sup>73</sup> *Arbitral Award of 31 July 1989 (Guinea-Bissau v Senegal) Case*, (n 57) para. 49; See also, *Territorial Dispute (Libya Arab Jamahiriya/Chad) Case*, (n 50), para 47. ‘...The fact that Article 3 of the Treaty specifies that the frontiers recognised are “those that resulted from the international instrument” defined in Annex I means that all of the frontiers resulted from those instruments. Any other construction would be contrary to the actual term of Article 3 and would render completely ineffective one or other of those instruments in Annex I...’

<sup>74</sup> Some treaties contain specific provisions that embrace the object and purpose of the treaty. See, Charter of the United Nations (UN Charter), (adopted 26 June 1945; entered into force 24 October 1945), <[https://treaties.un.org/pages/ViewDetails.aspx?src=IND&mtdsg\\_no=I-1&chapter=1&lang=en](https://treaties.un.org/pages/ViewDetails.aspx?src=IND&mtdsg_no=I-1&chapter=1&lang=en)> accessed 6 August 2017, Articles. 1 – 2; 1992 United Nations Framework Convention on Climate Change (adopted 9 May 1992; entered into force 21 March 1994) 1771 UNTS 107, art. 3; 1992 Convention on Biological Diversity (adopted 5 June 1992; entered into force 29 December 1993) 1760 UNTS 79, Article. 1; 2013 Minamata Convention on Mercury (adopted 10 October 2013; entered into force 16 August 2017) <[https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg\\_no=XXVII-17&chapter=27&clang=en](https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVII-17&chapter=27&clang=en)> accessed 3 August 2017, Article 1.

<sup>75</sup> *Arbitral Award of 31 July 1989 (Guinea-Bissau v Senegal) Case*, (n 57) *per Weeramantry J.* at 142.

the sovereignty of the island out to the sea, the ICJ drew upon the Convention's preambular provision, as well as its schema, to support its interpretation.<sup>76</sup>

In the context of the law of the sea, the Annex VII Tribunal in *The Matter of the Chagos Marine Protected Area Arbitration* also take into account object and purpose of the treaty when it interpret Article 2 (3) of the LOSC. In interpreting that the said provision impose an obligation, the Tribunal ruled that:

‘Recalling the object and purpose of the Convention, the Tribunal notes the express references in its preamble to the need to consider the “closely interrelated” problems of ocean space “as a whole,” and the “desirability of establishing through this Convention, . . . a legal order for the seas and oceans.” In the Tribunal’s view, these objectives—as well as the need for coherence in interpreting Article 2(3) within the context of the provisions for other maritime zones—are more readily achieved by viewing Article 2(3) as a source of obligation. As discussed in the paragraphs that follow, this view is confirmed by an examination of the origin of Article 2(3).’<sup>77</sup>

In some other cases, a treaty may contain several objects and purposes, which may overlap each other. This reality is reflected in regimes such as WTO law where several interests are at stake, for example, trade and the protection of the environment<sup>78</sup> or even in the LOSC itself, since it aims to both utilise the ocean and resources and protect the marine environment.<sup>79</sup> Therefore, the different objects and purposes have to be understood when interpreting a treaty. Article 31 of the VCLT, together with other conditions in this provision, will provide a framework for the interpreter to find an appropriate meaning of the provision and eventually, the most suitable interpretation. If

---

<sup>76</sup> *Sovereignty over Pulau Litigan and Pulau Sipadan Case*, (n 42) para. 51. The preambular provision of the 1891 Convention which pronounced ‘...desirous of defining the boundaries between the Netherlands possessions in the Island of Borneo and the States *in that island* which are under British Protection... [Emphasis added by the Court]’ did not, for delimitation purposes, include the maritime boundary.

<sup>77</sup> *Ibid.*, (n 67) para. 504.

<sup>78</sup> WTO, *United States: Import Prohibition of Certain Shrimp and Shrimp Products* (n 51) para. 17.

<sup>79</sup> The LOSC, (n 14) preambular provision. ‘Recognising the desirability of establishing through this Convention, with due regard for the sovereignty of all States, *a legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment,*’ [emphasis added]

the text, context, objects and purposes of the treaty are insufficient to produce a reasonable interpretation, the interpreter must resort to other available elements of Article 31 of the VCLT in order to ensure that the interpretation is correct. These elements, i.e. subsequent agreements and/or practices, and relevant rules of international law, are discussed in the sections below.

**(ii) Context as specified in Article 31 (2) of the VCLT**

In addition to the context mentioned in the first paragraph, Article 31 also includes additional elements that form part of the context. These elements are enshrined in the second paragraph of Article 31 which reads as follows;

“...The context for the purpose of the interpretation of a treaty shall comprise, in addition to the text, including its preamble and annexes:

(a) any agreement relating to the treaty which was made between all the parties in connection with the conclusion of the treaty;

(b) any instrument which was made by one or more parties in connection with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty...”

According to this paragraph, there are two additional elements that form part of the context; (i) any agreement relating to the treaty which was made between all the parties in connection with the conclusion of the treaty (Article 31 (2) (a)) and (ii) any instrument which was made by one or more parties in connection with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty (Article 31 (2) (b)). Each of these elements is discussed in turn below.

**a. Any agreement relating to the treaty which was made between all the parties in connection with the conclusion of the treaty (Article 31 (2) (a))**

Based on the meaning of this paragraph, an agreement is broader than a ‘treaty’ as defined in Article 2 (1) (a) of the VCLT. If it was meant to be a ‘treaty’, it would have

been expressly used in this place as in other provisions of this Convention.<sup>80</sup> In fact, as observed by Gardiner, what is required here as part of the context is ‘evidence of the fact of an agreement on meaning rather than a formal agreement itself.’<sup>81</sup> Therefore, an agreement, in whatever form, need not be ‘part of the treaty or the treaty itself, but it must clearly express the intention of the Parties.’<sup>82</sup> The requirement of a clear expression of the intention of the Parties is the key characteristic of an agreement according to Article 31 (2) (a). This can be seen from the decision in the case of *Sovereignty over Pulau Ligitan and Pulau Sipadan (Indonesia/Malaysia)* when, in deciding the sovereignty dispute between the Parties, the Court rejected Indonesia’s argument that the Map appended to the Explanatory Memorandum of the Dutch Government was relevant to the treaty interpretation as an agreement within the meaning of Article 31 (2) (a) of the VCLT because that map had never been included in the negotiation between the Parties or accepted by the British government.<sup>83</sup>

More examples can be found in the Annexes to the LOSC, in which the Convention’s provisions are further clarified,<sup>84</sup> diplomatic conference’s Final Act,<sup>85</sup> Protocol of Signature, specific protocols attached to a treaty, or Memoranda of Understanding. The ICJ had the opportunity to draw upon this kind of agreement in the case of *the Territorial Dispute (Libyan Arab Jamahiriya/Chad)* case. In deciding that Article 3 of the 1955 Treaty had the effect of settling and fixing the frontier between the Parties, the Court drew upon the 1955 Convention of Good Neighbourliness between France and Libya as an ‘examination of the context’ concluded ‘between the Parties at the same time as the treaty.’<sup>86</sup>

<sup>80</sup> See, for example, the VCLT, (n 25) Articles 18, 30, 60.

<sup>81</sup> R. Gardiner, 'The Vienna Convention Rules on Treaty Interpretation' in D.B. Hollis (ed), *The Oxford Guide to Treaties* (The Oxford Guide to Treaties, OUP 2014), 483.

<sup>82</sup> Draft Articles on Law of Treaties with Commentaries, (n 44) 221; Aust, *Modern Treaty Law and Practice*, (n 42) 211; Jean-Marc Sorel and Valerie Bore Eveno, '1969 Vienna Convention: Article 31 General Rule of Interpretation' in Oliver Corten and Pierre Klein (eds), *The Vienna Convention on the Law of Treaties: A Commentary*, vol I (The Vienna Convention on the Law of Treaties: A Commentary, OUP 2011), 823 – 825.

<sup>83</sup> *Sovereignty over Pulau Ligitan and Pulau Sipadan Case*, (n 42) paras. 44 – 48.

<sup>84</sup> See, the LOSC, (n 14). Annex I specifies the highly migratory species, Annexes IV and V elaborates the dispute settlement of the LOSC.

<sup>85</sup> UN Environment, 'Final Act of the Conference of Plenipotentiaries on the Minamata Convention on Mercury' (2013) UNEP Doc (DTIE)/Hg/CONF/4, <[http://www.mercuryconvention.org/Portals/11/documents/meetings/dipcon/english/CONF\\_4\\_Final\\_Act\\_e.pdf](http://www.mercuryconvention.org/Portals/11/documents/meetings/dipcon/english/CONF_4_Final_Act_e.pdf)> accessed 13 December 2014.

<sup>86</sup> *Territorial Dispute case (Libyan Arab Jamahiriya/Chad) Case*, (n 50) para. 53.

**b. Any instrument which was made by one or more parties in connection with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty (Article 31 (2) (b))**

Another element in Article 31 (2) of the VCLT is ‘any instrument which was made by one or more parties in connection with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty.’ The term ‘any instrument’ encompasses one or more documents that specify the intention or understanding of a State or States in relation to the interpretation of the treaty. This can be a unilateral or joint instrument used with other Parties in connection with the conclusion of the treaty. Gardiner suggests that this instrument can include ‘an instrument of ratification, accession, or other instrument of like kind,<sup>87</sup> a declaration appended to the instrument of ratification, or ‘an interpretative statement made at the moment of signature.’<sup>88</sup> In addition, based on Article 31 (2) (b), this instrument must be accepted as an instrument related to the treaty by other parties. Relating it to the treaty can be seen from two perspectives. Firstly, the instrument must contain ‘the treaty terms to be interpreted’ and secondly, it must relate to the interpreted treaty.<sup>89</sup> With regard to being accepted by other parties, the acceptance can be directly expressly or, at the very least, other parties need to acquiesce to the use of the instrument.<sup>90</sup>

**(iii) External elements to be considered with the context**

In addition to the elements discussed above, certain circumstances to be considered ‘together with the context’ are stipulated in paragraph 3 of Article 31 of the VCLT, which reads as follows;

“...There shall be taken into account, together with the context:

- (a) any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions;

---

<sup>87</sup> Gardiner, *Treaty Interpretation*, (n 42) 214.

<sup>88</sup> *Ibid*, 215.

<sup>89</sup> Villiger, 'The 1969 Vienna Convention on the Law of Treaties - 40 Years After', (n 56) 121.

<sup>90</sup> Mark E Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties* (Martinus Nijhoff 2009), 430.

- (b) any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation;
- (c) any relevant rules of international law applicable in the relations between the parties...”

Based on the above paragraph, interpreters need to consider three elements; (i) the subsequent agreement regarding the interpretation of the treaty or the application of its provisions; (ii) the subsequent practice in the application of the treaty establishing the agreement of the Parties regarding its interpretation; and (iii) the relevant rules of international law applicable to the relationship between the Parties. Each of these elements is discussed below.

**a. Subsequent Agreement regarding the interpretation of a Treaty or the Application of its provisions (Article 31 (3) (a))**

The subsequent agreement in this paragraph is similar to that discussed in the preceding section in that it is wider than a treaty.<sup>91</sup> The ICJ especially confirmed the wider scope of the subsequent agreement in the case of *Kasikili/Sedudu (Botswana/Namibia)*.<sup>92</sup> This case concerned a frontier dispute, part of which dealt with the river boundary and *Kasikili/Sedudu* island, and the dispute was based on the Anglo-German Treaty of the 1<sup>st</sup> July 1890.<sup>93</sup> After reviewing some events and several documents related to the delimitation of the boundary, including correspondence and reports of the colonial powers at the time, the ICJ concluded that the events and documents reviewed demonstrated ‘the absence of agreement between South Africa and Bechuanaland with regard to the location of the boundary around *Kasikili/Sedudu* island and the status of the island and ‘cannot have given rise to an "agreement between the parties regarding the interpretation of the treaty or the application of its provisions"...’<sup>94</sup> The fact that the

---

<sup>91</sup> See previous section.

<sup>92</sup> (n 54) at para. 11.

<sup>93</sup> Ibid, paras. 49 – 63.

<sup>94</sup> Ibid, para. 63; See also in *M/V ‘SAIGA’ (No. 2) (Saint Vincent and the Grenadines v. Guinea)*, Judgment, ITLOS Reports 1999, 10 at paras 84 – 85. The International Tribunal for the Law of the Sea had also confirmed the interpretation of Article 91 of the LOSC when it dealt with an issue related to a genuine link of nationality between a flag State and a vessel. Its interpretation of the LOSC provision was confirmed

Court reviewed the reports and correspondence implies that the agreement does not necessarily have to be in the form of a ‘treaty’ as long as it is a record of the agreement between the parties.

For this reason, it can be implied that a subsequent agreement can take any form provided that it is a record of the intention of the parties to create a binding legal relationship<sup>95</sup> and the content of the agreement relates to the interpretation or application of the treaty’s provision. Boyle argues that this recorded agreement can even be seen in soft-law instruments.<sup>96</sup> Some examples of the subsequent agreement are the decisions of a Conference of the Parties (‘COP’)<sup>97</sup> or Meeting of the Parties (MOP),<sup>98</sup> minutes of negotiation, exchange of notes,<sup>99</sup> or international declarations of a diplomatic conference.<sup>100</sup>

---

by its reference to ‘the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks opened for signature on 4 December 1995 and the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas of 24 November 1993’ as subsequent agreements regarding the interpretation of the treaty.

<sup>95</sup> Gardiner, *Treaty Interpretation*, (n 42) 217; Hazel Fox, ‘Article 31 (3) (a) and (b) of the Vienna Convention and the *Kasikili/Sedudu Island Case*’ in Panos Merkouris, Elias Olufemi and Malgosia Fitzmaurice (eds), *Treaty Interpretation and the Vienna Convention on the Law of Treaties: 30 Years On* (Treaty Interpretation and the Vienna Convention on the Law of Treaties: 30 Years On, Martinus Nijhoff 2010), 63.

<sup>96</sup> Alan E Boyle, ‘Some Reflection on the Relationship of Treaties and Soft Law’ (1999) 48 *International & Comparative Law Quarterly*, 901 904 – 906.

<sup>97</sup> CBD, ‘Decision III/9: Implementation of Articles 6 and 8 of the Convention of the 3<sup>rd</sup> Conference of the Parties under the Convention on Biological Diversity’ <<http://www.cbd.int/decision/cop/default.shtml?id=7105>> accessed 15 December 2014; CITES, ‘Decision 9.24 (Rev. CoP16): Criteria for Amendment of Appendices I and II of the 9<sup>th</sup> Conference of the Parties under Convention on International Trade in Endangered Species of Wild Fauna and Flora’ (‘CITES’) <<http://cites.org/sites/default/files/eng/res/09/E-Res-09-24R16.pdf>> accessed 15 December 2014.

<sup>98</sup> For the adoption of a non-compliance procedure under Article 8 of the Montreal Protocol on the Substance that Deplete the Ozone Layer, see Decision II/5: Non-compliance procedure of the 2<sup>nd</sup> Meeting of the Parties to the Montreal Protocol <[http://ozone.unep.org/new\\_site/en/Treaties/treaties\\_decisions-hb.php?dec\\_id=27](http://ozone.unep.org/new_site/en/Treaties/treaties_decisions-hb.php?dec_id=27)> accessed 15 December 2014; for the adoption of the Implementation Committee under Article 8 of the Montreal Protocol on the Substances that Deplete the Ozone Layer, see Decision II/5: Non-compliance of the 2<sup>nd</sup> Meeting of the Parties to the Montreal Protocol <[http://ozone.unep.org/new\\_site/en/Treaties/treaties\\_decisions-hb.php?dec\\_id=27](http://ozone.unep.org/new_site/en/Treaties/treaties_decisions-hb.php?dec_id=27)> and Decision IV/5: Non-compliance procedure of the 4<sup>th</sup> Meeting of the Parties to the Montreal Protocol <[http://ozone.unep.org/new\\_site/en/Treaties/treaties\\_decisions-hb.php?dec\\_id=71](http://ozone.unep.org/new_site/en/Treaties/treaties_decisions-hb.php?dec_id=71)> accessed: 15 December 2014).

<sup>99</sup> Richard Gardiner, ‘Treaties and Treaty Materials: Role, Relevance and Accessibility’ (1997) 46 *International & Comparative Law Quarterly* 643 649; Council Regulation (EC) No. 974/98 on the introduction of the euro [1998] OJ L 139/1; see also. Aust, *Modern Treaty Law and Practice*, 213.

<sup>100</sup> Boyle, ‘Some Reflection on the Relationship of Treaties and Soft Law’, (n 96) 904 – 906.

**b. Subsequent practice in the application of the treaty establishing the agreement of the Parties regarding its interpretation (Article 31 (3) (b))**

Confirmation that the interpretation of a treaty is correct can also be seen from the subsequent practice of States regarding that interpretation. In fact, this approach has been taken by the ICJ since 1984, when it addressed the interpretation of its Statute. In the case of *Military and Paramilitary Activities (Nicaragua v. United States)*, it pronounced that its interpretation of a treaty ‘was confirmed by the subsequent conduct of the Parties to the treaty in question, the Statute of the Court.’<sup>101</sup> Pursuant to Article 31 (3) (b) of the VCLT, subsequent practice is one that represents a ‘concordant, common, and consistent’ sequence of acts implying the Parties’ agreement regarding the treaty interpretation.<sup>102</sup> This requirement was confirmed in *Japan: Taxes on Alcoholic Beverages*, when the WTO Appellate Body made the following statement;

‘Generally, in international law, the essence of subsequent practice in interpreting a treaty has been recognised as a "concordant, common and consistent" sequence of acts or pronouncements which is sufficient to establish a discernible pattern implying the agreement of the parties regarding its interpretation. An isolated act is generally not sufficient to establish subsequent practice; it is a sequence of acts establishing the agreement of the parties that is relevant.’<sup>103</sup> [Footnote omitted]

Based on the above quotation, the establishment of subsequent practice requires concordance, commonality, and consistency, and in fact, as Gardiner argues, the notion of practice here resembles the material element of international custom under Article 38 (b) of the ICJ Statute.<sup>104</sup> In addition, the word ‘practice’ implies that it is not necessary for it to be in the form of a treaty; it can be other types of instruments.<sup>105</sup> Examples of subsequent practice are unilateral acts of States, diplomatic correspondence, official manuals on certain legal matters, government press releases or statements to the public,

---

<sup>101</sup> (Jurisdiction and Admissibility) [1984] ICJ Rep, 392 para. 42.

<sup>102</sup> WTO, *Japan: Taxes on Alcoholic Beverages*, (n 50) 13 – 14.

<sup>103</sup> Ibid, (Emphasis original).

<sup>104</sup> Gardiner, *Treaty Interpretation*, (n 42) 226 – 227.

<sup>105</sup> *Kasikili/Sedudu (Botswana/Namibia) Case*, (n 54) para. 11.

or diplomatic conferences. Practice can also be represented by acts of other branches of States, such as legislation, or judicial decisions that deal with particular legal matters.

In addition to concordance, commonality, and consistency, the law requires subsequent practice regarding the interpretation or application of the treaty to be accepted by other Parties to it. This requirement was confirmed in the case of *Kasikili/Sedudu (Botswana/Namibia)*. Apart from the fact that such practice reflects the interpretation of the treaty by the acting State, other States ‘were fully aware of and accepted such conduct as a confirmation of treaty interpretation.’<sup>106</sup> Hence, it can be said that such practice may not require the participation of all State Parties, but their acceptance is required, at the very least, in order to establish subsequent practice under Article 31 (3) (b) of the VCLT.<sup>107</sup> Villiger argues that this acceptance can be seen by the acquiescence of other parties and the fact that they have raised no objection to such practice.<sup>108</sup>

### **c. Relevant rules of international law applicable in the relationship between the Parties (Article 31 (3) (c))**

Another external element to be considered with the context is the relevant rules of international law applicable in the relationship between the Parties. This is because, according to the ICJ in *an Advisory Opinion on Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*;

‘... international instrument has to be interpreted and applied within the framework of the entire legal system prevailing at the time of the interpretation...’<sup>109</sup>

Therefore, the need to interpret the treaty against the backdrop of the international legal system has raised extremely interesting questions about the application of Article 31 (3)

---

<sup>106</sup> Ibid, para. 74; Gardiner, *Treaty Interpretation*, (n 42) 230.

<sup>107</sup> Ibid, Gardiner, 236; Draft Articles on the Law of Treaties with Commentaries, (n 44) 222.

<sup>108</sup> Villiger, ‘The 1969 Vienna Convention on the Law of Treaties - 40 Years After’, (n 56) 122; Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties*, (n 90) 431.

<sup>109</sup> (Advisory Opinion) [1971] ICJ Rep 16, para. 53.

(c) of the VCLT. This has been the subject of a fierce debate for the past decade and many international legal scholars have conducted research on it.<sup>110</sup> As discussed below, the ambiguity of the term in this particular paragraph of Article 31 generates, *inter alia*, three main questions, which are often seen in academia; (i) Does this paragraph include the inter-temporal rule of international law?<sup>111</sup> (ii) What are the ‘relevant rules of international law’?<sup>112</sup> and (iii) is it the rules applicable to the Parties to the Treaty or to the dispute?<sup>113</sup> These issues are discussed below.

---

<sup>110</sup> Philippe Sands, 'Sustainable Development: Treaty, Custom, and the Cross-Fertilization of International Law' in Alan E Boyle and David Freestone (eds), *International Law and Sustainable Development* (OUP 1999), 39 – 60; Rosalyn Higgins, 'A Babel of Judicial Voices? Ruminations from the Bench' (2006) 55 *International & Comparative Law Quarterly* 791; Campbell McLachlan, 'The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention' (2005) 54 *International & Comparative Law Quarterly* 279; Duncan French, 'Treaty Interpretation And The Incorporation Of Extraneous Legal Rules' (2006) 55 *International & Comparative Law Quarterly* 281; Ulf Linderfalk, 'Who Are ‘The Parties’? Article 31, Paragraph 3(C) of The 1969 Vienna Convention and the ‘Principle of Systemic Integration’ Revisited' (2008) 55 *Netherlands International Law Review* 343; B. McGrady, 'Fragmentation of International Law or “Systemic Integration” of Treaty Regimes: EC - Biotech Products and the Proper Interpretation of Article 31(3)(c) of the Vienna Convention on the Law of Treaties' (2008) 42 *Journal of World Trade Law* 589; R. Higgins, 'Some Observation on the Inter-Temporal Rule in International Law', *Themes and Theories* (OUP 2009); Panos Merkouris, 'Article 31(3)(c) of the VCLT and the Principle of Systemic Integration', University of London 2010); P. Sands, 'Treaty, Custom, and Time: Interpretation/Application?' in P Merkouris, Elias, O.A., and Fitzmaurice, M. (ed), *Treaty Interpretation and the Vienna Convention on the Law of Treaties: 30 Years On* (Martinus Nijhoff 2010), 39 – 58.

<sup>111</sup> *Ibid*, Higgins, 'A Babel of Judicial Voices? Ruminations from the Bench'; McLachlan, 'The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention'; French, 'Treaty Interpretation And The Incorporation Of Extraneous Legal Rules'; Higgins, 'Some Observation on the Inter-Temporal Rule in International Law'; Sands, 'Sustainable Development: Treaty, Custom, and the Cross-Fertilization of International Law'; U. Linderfalk, *On the Interpretation of Treaties: The Modern International Law as Expressed in the 1969 Vienna Convention on the Law of Treaties* (Springer 2009); Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties*, (n 90); Gardiner, *Treaty Interpretation*, (n 42); Gardiner, 'The Vienna Convention Rules on Treaty Interpretation', (n 81).

<sup>112</sup> Sands, 'Sustainable Development: Treaty, Custom, and the Cross-Fertilization of International Law' (n 110); McLachlan, 'The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention', (n 110); French, 'Treaty Interpretation And The Incorporation Of Extraneous Legal Rules', (n 110); McGrady, 'Fragmentation of International Law or “Systemic Integration” of Treaty Regimes: EC - Biotech Products and the Proper Interpretation of Article 31(3)(c) of the Vienna Convention on the Law of Treaties', (n 110); Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties*, (n 90); Sands, 'Treaty, Custom, and Time: Interpretation/Application?', (n 110); Villiger, 'The 1969 Vienna Convention on the Law of Treaties - 40 Years After', (n 56); Gardiner, *Treaty Interpretation* (n 42); Gardiner, 'The Vienna Convention Rules on Treaty Interpretation', (n 81);

<sup>113</sup> For those who believe it refers to Parties to the treaty. See, Sands, 'Sustainable Development: Treaty, Custom, and the Cross-Fertilization of International Law', (n 110), 39, 57; Linderfalk, 'Who Are ‘The Parties’? Article 31, Paragraph 3(C) of The 1969 Vienna Convention and the ‘Principle of Systemic Integration’ Revisited', (n 110); Linderfalk, *On the Interpretation of Treaties: The Modern International Law as Expressed in the 1969 Vienna Convention on the Law of Treaties*, (n 111) 178; Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties*, (n 90) 433; Villiger, 'The 1969 Vienna Convention on the Law of Treaties - 40 Years After', (n 56) 123. For those who argue in favour of the Parties to mean Parties to the dispute. See, David Palmeter and Mavroidis Petros C, 'The WTO Legal System: Sources of Law' (1998) 92 *American Journal of International Law* 398, 411; French, 'Treaty Interpretation And The Incorporation Of Extraneous Legal Rules', (n 110) 306; McGrady, 'Fragmentation of International Law or “Systemic Integration” of Treaty Regimes: EC - Biotech Products and the Proper Interpretation of Article 31(3)(c) of the Vienna Convention on the Law of Treaties', (n 110) 589, ;

**(a) Inter-temporal rule of international law**

Central to this debate is whether it is the rule of law in force at the time the treaty was concluded or the current law that helps to determine the ordinary meaning of the treaty terms. This topic triggered an academic debate because of Judge Huber's dicta in the *Island of Palmas Case* (Netherlands/USA).<sup>114</sup> He opined that:

‘...a juridical fact must be appreciated in the light of the law contemporary with it, and not of the law in force at the time when a dispute in regard to it arises or falls to be settled... The same principle which subjects the act creative of a right to the law in force at the time the right arises, demands that the existence of the right, in other words its continued manifestation, shall follow the condition required by the evolution of law....’<sup>115</sup>

However, this dicta has been criticised by some lawyers for offering no assistance, being self-contradictory to a certain extent, or producing an effect that was never intended.<sup>116</sup> In addition, it is unfortunate that the ILC merely states in its commentary that Article 31 (3) (c) of the VCLT encompasses the inter-temporal rule and that its application ‘would normally be indicated by the interpretation in term of good faith.’<sup>117</sup> Indeed, this is by no means helpful to anyone who is trying to appreciate the operation of this particular paragraph of the VCLT.

In this event, it seems that the jurisprudence of relevant international judicial institutions is the only way to understand how the inter-temporal rule is applied in the international legal order. In terms of the jurisprudence, it can be said that the subsequent development of the law should be considered together with the context for the purpose of interpreting

---

Merkouris, 'Article 31(3)(c) of the VCLT and the Principle of Systemic Integration, (n 110) 17 – 19; Gardiner, *Treaty Interpretation*, (n 42) 265.

<sup>114</sup> [1928] 2 RIAA 829, 845.

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

<sup>116</sup> Gardiner, *Treaty Interpretation*, (n 42) 253. He comments that ‘the first proposition ... is too narrow to allow for the range of possibilities which the text of the treaty, and other elements considered in treaty interpretation, might require to be taken into account. The second limb, if applied, in its broadest possible application, could undermine rights properly established where they were acquired and thus negate the first proposition.’; see also, Higgins, 'Some Observation on the Inter-Temporal Rule in International Law' 868.

<sup>117</sup> Draft Articles on the Law of Treaties with Commentaries, (n 44) 222.

a treaty, the terms of which contain an open-text characteristic, ‘carrying the evolving meaning’, ‘changing of the circumstances’<sup>118</sup> or capable of incorporating the evolution of the law.<sup>119</sup> For example, this can be seen from the *Advisory Opinion on Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*, which predates the adoption of the VCLT and indicates that international law should be interpreted against the background of the international legal system prevailing at the time of the interpretation, and that:

‘Mindful as it is of the primary necessity of interpreting an instrument in accordance with the intentions of the parties at the time of its conclusion, the Court is bound to take into account the fact that the concepts embodied in Article 22 of the Covenant—"the strenuous conditions of the modern world" and "the well-being and development" of the peoples concerned-were not static, but were by definition evolutionary, as also, therefore, was the concept of the "sacred trust". The parties to the Covenant must consequently be deemed to have accepted them as such.’<sup>120</sup>

Also, in the case of *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, one of the disputes was based on how the Treaty between the disputed Parties required them to maintain the quality of the water in the Danube. The Court ruled on the relevant part as follows;

‘In order to evaluate the environmental risks, current standards must be taken into consideration. This is not only allowed by the wording of Articles 15 and 19, but even prescribed, to the extent that these articles

---

<sup>118</sup> McLachlan, 'The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention', (n 110) 317 – 319.

<sup>119</sup> Conclusion of the Work of the Study Group on the Fragmentation of International Law: Difficulties arising from the Diversification and Expansion of International Law (Fragmentation of International Law Conclusion), Yearbook of International Law Commission, 2006, Vol. II, Part Two, para 22 – 23; Gardiner, *Treaty Interpretation*, (n 42) 254 – 256; French, 'Treaty Interpretation And The Incorporation Of Extraneous Legal Rules', (n 110), 295 – 300.

<sup>120</sup> (n 109) at para. 53.

impose a continuing - and thus necessarily evolving – obligation on the parties to maintain the quality of the water of the Danube and to protect nature .... new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past....’<sup>121</sup>

It is suggested based on the above quote that the duty to maintain the water quality must be assessed against the development of new environmental standards, which means taking the development of the law into account. This application of the inter-temporal rule was reaffirmed in the case of *Iron Rhine (IJzeren Rijn) Railway Arbitration*,<sup>122</sup> when the arbitral tribunal allowed the consideration of technological development to be taken into account in interpreting the meaning of the Treaty between the Parties. The tribunal made the following statement;

‘In the present case it is not a conceptual or generic term that is in issue, but rather new technical developments relating to the operation and capacity of the railway. But here, too, it seems that an evolutive interpretation, which would ensure an application of the treaty that would be effective in terms of its object and purpose, will be preferred to a strict application of the inter-temporal rule...’<sup>123</sup>

To this end, it can be said that the subsequent development of the law can be considered when interpreting the terms of a treaty where the treaty leaves room for it. There are other areas of law, such as WTO law<sup>124</sup> and maritime delimitation,<sup>125</sup> in which the inter-

---

<sup>121</sup> (n 33) para. 140.

<sup>122</sup> *(Belgium/Netherlands)* (2005) 27 RIAA 35.

<sup>123</sup> *Ibid*, para 80.

<sup>124</sup> *United States: Import Prohibition of Certain Shrimp and Shrimp*, (n 51) para 130. The Appellate Body ruled that ‘the generic term "natural resources" in Article XX (g) is not "static" in its content or reference but is rather "by definition, evolutionary.”’

<sup>125</sup> *Aegean Sea Continental Shelf Case (Greece v Turkey)* (Judgment) [1978] ICJ Rep, 3 para. 77. The Court stated that ‘...Once it is established that the expression "the territorial status of Greece" was used in Greece's instrument of accession as a generic term denoting any matters comprised within the concept of territorial status under general international law, the presumption necessarily arises that its meaning was intended to follow the evolution of the law and to correspond with the meaning attached to the expression by the law in force at any given time. From the perspective of the Court, this presumption is even more compelling in view of the fact that the 1928 Act was a convention for the specific settlement of

temporal rule brings new developments of the law into the interpretation of the terms of the treaty. Although the issue continues to be debated, as Gardiner notes, the above case law seems to suggest that the treaty itself will provide some guidance and signal if there is a place to accommodate the development of the law based on the intention of the Parties.<sup>126</sup>

With regard to this study, it can be argued that Article 207 of the LOSC tends to support the inclusion of the subsequent development of the law into the interpretation of its provision. This can be seen from the terms of Article 207, for example, ‘taking into account internationally agreed rules, standards and recommended practices and procedures’, since at least some of these internationally agreed rules and standards will have been developed subsequent to the adoption of the LOSC. Therefore, a fully-fledged interpretation of Article 207 can arguably only be achieved by considering the subsequent development of the rules of international law as part of Article 31 (3) (c) of the VCLT.

### **(b) What constitutes ‘relevant rules’ of international law?**

As mentioned in the *Advisory Opinion on Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)* above, the treaty has to be interpreted and applied within the framework of the international legal system.<sup>127</sup> This pronouncement actually suggests what, according to the ILC, is called ‘the principle of systemic integration.’<sup>128</sup> This principle is based on an assumption that (i) the Parties intend to refer to customary international law or general principles of law for those questions where the treaty is ambiguous and cannot provide a clear legal solution; and (ii) when, on the conclusion of the treaty, they ‘do not intend to act inconsistently with generally

---

disputes, designed to be of the most general kind and continuing duration, *for it hardly seems conceivable that in such a convention terms like "domestic jurisdiction" and "territorial status" were intended to have a fixed content regardless of the subsequent evolution of international law...* [Emphasis added].

<sup>126</sup> Gardiner, *Treaty Interpretation*, (n 42) 256.

<sup>127</sup> (n 109) at para 53.

<sup>128</sup> Fragmentation of International Law Conclusion, (n 119) paras. 17 – 19.

recognised principles of international law.<sup>129</sup> According to this principle, the interpreter should seek other sources of international law that are relevant and ‘in force at the time of the interpretation’<sup>130</sup> and ‘this may include other treaties, customary rules or general principles of law.’<sup>131</sup>

This reading of the term ‘relevant rules of international law’ is confirmed by international judicial institutions when they refer to other sources of international law (treaties, customary rules, or general principles of law) to interpret the treaty.<sup>132</sup> For example, the Appellate Body of the WTO in the case of *United States: Import Prohibition of Certain Shrimp and Shrimp Products*, referred to the LOSC and the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (‘CITES’)<sup>133</sup> when interpreting whether or not the term ‘exhaustible natural resources’ in Article XX (g) of the GATT includes living resources.<sup>134</sup> Also, the ICJ referred to the customary rule of international law on the use of force in the *Oil Platform case*,<sup>135</sup> as part of the application of Article 31 (3) (c) of the VCLT, when it determined that the conduct of the USA against Iranian oil platforms could not be justified under Article XX (1) (d) of the 1955 Treaty of Amity, Economic Relations and Consular Rights.<sup>136</sup> In addition, the jurisprudence of the European Court of Human Rights (‘ECtHR’) has been seen to refer to other rules of international law when interpreting the European Convention on Human

---

<sup>129</sup> Ibid, para 19; See also, *Case concerning the Right of the Passage over Indian Territory (Portugal v India)* (Preliminary Objections) [1957] ICJ Rep, 125 142. The Court stated that ‘...It is a rule of interpretation that a text emanating from a government must, in principle, be interpreted as producing and as intended to produce effects in accordance with existing law and not in violation of it...’

<sup>130</sup> Villiger, ‘The 1969 Vienna Convention on the Law of Treaties - 40 Years After’, (n 56) 123.

<sup>131</sup> Fragmentation of International Law Conclusion, (n 119) paras. 17 – 18.

<sup>132</sup> See, *Arbitration under Chapter Eleven of NAFTA, Pope & Talbot v Canada (Award in respect of Damages)*, (2002) 41 ILM 1347 para. 46. The tribunal ruled that customary international can be taken into consideration for the purpose of the interpretation of NAFTA. *Al-Adsani v. United Kingdom* case App No. 35763/97 (ECHR, 21 November 2001), para.55 – 67. The European Court of Human Rights (‘ECtHR’) referred to the customary law on state immunity for the interpretation of Article 6 of the European Convention of Human Rights (‘ECHR’); see also, *Golder v. United Kingdom* case App No. 4451/70 (ECHR, 21 February 1975), para.35 – 36. The ECtHR referred to general principles of law as stipulated in Article 38(1) (c) the ICJ Statute for its interpretation of Article 6 of the ECHR.

<sup>133</sup> (adopted 3 March 1973; entered into force 1 July 1975) 993 UNTS 243.

<sup>134</sup> WTO, *United States: Import Prohibition of Certain Shrimp and Shrimp Products*, (n 51) paras. 127 – 134.

<sup>135</sup> *Oil Platforms case (Islamic Republic of Iran v. United States of America)*, Judgment [2003] ICJ Rep 161.

<sup>136</sup> Ibid, at paras 41, 78. This judgment is subject to the criticism of an incorrect application of Article 31 of the VLCT, see. Ibid, 225 *per Higgins J.*; Frank Berman, ‘Treaty “Interpretation” in a Judicial Context’ (2004) 29 *Yale Journal of International Law* 315, 319 – 320; McLachlan, ‘The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention’, (n 110) 309.

Rights ('ECHR'). For example, the ECtHR referred to the customary international law on state immunity when it interpreted Article 6 of the ECHR in the case of *Al-Adsani v. United Kingdom*.<sup>137</sup>

The relevant rules of international law based on international jurisprudence must be the binding rules, as confirmed by the arbitral tribunal in *the Dispute concerning Access to Information under Article 9 of the OSPAR Convention*, when it was clearly stated that the tribunal 'has not been authorised to apply 'evolving international law and practice.'<sup>138</sup> The Tribunal then cited the *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)* case in which it was also ruled that even the ICJ and other international judicial institutions cannot apply the law *in statu nascenti*.<sup>139</sup> However, the ICJ had an opportunity to deal with the law *in statu nascendi*, albeit very briefly, in the case of *Pulp Mills on the River Uruguay (Argentina v Uruguay)*, when it referred to the precautionary approach, stating that the precautionary approach 'may be relevant in the interpretation or application of the provisions of the Statue [Emphasis added].'<sup>140</sup> In noting its ambiguous legal status, the ICJ did not elaborate on how the precautionary approach would be relevant to treaty interpretation.

The relevant rules of international law related to the interpretation of a treaty may appear in the non-binding instruments. The ICJ in *Whaling in the Antarctic* case had an opportunity to deal with the relevance of the non-binding instruments in relation to the treaty interpretation.<sup>141</sup> The Court pointed out that:

'...[These] recommendations, which take the form of resolutions, are not binding. However, when they are adopted by consensus or by a

---

<sup>137</sup> App No. 35763/97 (ECHR, 21 November 2001), paras 55 – 67. See also, *Golder v. United Kingdom* case, App No. 4451/70 (ECHR, 21 February 1975), paras. 35 – 36. The ECtHR referred to general principles of law as stipulated in Article 38(1) (c) the ICJ Statue for its interpretation of Article 6 of the ECHR.

<sup>138</sup> *Dispute concerning Access to Information under Article 9 of the OSPAR Convention (Ireland/United Kingdom)*, (2003) 23 RIAA 59, para. 101.

<sup>139</sup> *Ibid.*

<sup>140</sup> (n 34) at para. 164.

<sup>141</sup> *Whaling in the Antarctic* case (*Australia v. Japan: New Zealand intervening*) (Judgment), [2014] ICJ Rep 22.

unanimous vote, they may be relevant for the interpretation of the Convention or its Schedule....'<sup>142</sup>

From the judgments above, it can be seen that, firstly, the relevant rules of international law must be the binding ones and not the law *in statu nascenti* unless it is endorsed by the judicial institution. Secondly, the relevant rules of international law can exist in the non-binding instruments and become relevant to the interpretation of a treaty if such instruments are adopted by consensus or unanimous vote. This is particularly important for the purpose of interpreting Article 207 of the LOSC where relevant rules of international law related to the protection of the marine environment may exist in the non-binding instruments such as Agenda 21<sup>143</sup>, and the GPA.<sup>144</sup> Apart from examining the potentially relevant rules of international law related to MPLA that exist in treaties, customary international law, and general principles of international law, this research will look into non-binding instruments for the relevant rules accepted by States in the search for the substantive content of Article 207 of the LOSC.

**(c) Are the rules applicable to the Parties to the treaty or the Parties to the dispute?**

Whether the term 'the Parties' means 'Parties to the treaty' or 'Parties to the dispute' is ambiguous in Article 31 (3) (c).<sup>145</sup> In fact, this is the issue that complicates the two preceding limbs set out in Article 31 (3) (a) - (b) of the VCLT. Taking account of the

---

<sup>142</sup> Ibid, para. 46.

<sup>143</sup> Agenda 21, (n 29).

<sup>144</sup> The GPA, (n 31).

<sup>145</sup> Academics divides as to the meaning of the term 'Parties' under Article 31 (3) (c) of the VCLT (and in fact Article 31 (3) more generally). For those who believe it refers to all Parties to the treaty. See, Sands, 'Sustainable Development: Treaty, Custom, and the Cross-Fertilization of International Law', (n 110) 39, 57; Linderfalk, 'Who Are 'The Parties'? Article 31, Paragraph 3(C) of The 1969 Vienna Convention and the 'Principle of Systemic Integration' Revisited', (n 110); Linderfalk, *On the Interpretation of Treaties: The Modern International Law as Expressed in the 1969 Vienna Convention on the Law of Treaties*, (n 110) 178; Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties*, (n 90) 433; Villiger, 'The 1969 Vienna Convention on the Law of Treaties - 40 Years After', (n 56) 123. For those who argue in favour of the Parties to mean Parties to the dispute. See, Palmetter and C, 'The WTO Legal System: Sources of Law', (n 113) 411; French, 'Treaty Interpretation And The Incorporation Of Extraneous Legal Rules', (n 110) 306; McGrady, 'Fragmentation of International Law or ``Systemic Integration" of Treaty Regimes: EC - Biotech Products and the Proper Interpretation of Article 31(3)(c) of the Vienna Convention on the Law of Treaties', (n 110) 589, ; Merkouris, 'Article 31(3)(c) of the VCLT and the Principle of Systemic Integration', (n 110) 17 – 19; Gardiner, *Treaty Interpretation*, (n 42) 265.

immediate context of Article 31 of the VCLT, Gardiner supports the meaning of the parties to the dispute because if all the parties were meant by the term ‘Parties’ in paragraph (c), it would have been written as it was in paragraph (2) (a) of the same article. However, ‘the omission of ‘all’ [in paragraph (c)] is combined with the phrase ‘applicable in the relations between the parties’, wording which may import the idea of significant relations, which make more sense if referring to relations between the parties having an immediate interest in the issue of interpretation rather than to all States parties to the treaty that is being interpreted.’<sup>146</sup> Those who support the opposite position argue that the definition of ‘Parties’ specified in paragraph (c) of Article 2 (1) (g) of the VCLT means the Parties to the treaty. The latter position appeared to have gained the support of the Panel of the WTO in *European Communities: Measures Affecting the Approval and Marketing of Biotech Products*, when it made the following ruling:

‘In considering this issue, we note that Article 31 (3) (c) does not refer to "one or more parties". Nor does it refer to "the parties to a dispute". We further note that Article 2.1 (g) of the Vienna Convention defines the meaning of the term "party" for the purposes of the Vienna Convention. Thus, "party" means "a State which has consented to be bound by the treaty and for which the treaty is in force". It may be inferred from these elements that the rules of international law applicable in the relations between "the parties" are the rules of international law applicable in the relations between the States which have consented to be bound by the treaty which is being interpreted, and for which that treaty is in force.’<sup>147</sup>

Academia continues to debate this issue, despite this ruling of the WTO Panel, with the result that divergent views regarding the interpretation of the term ‘Parties’ in Article 31 of the VCLT will continue to exist until there is further guidance from relevant international judicial institutions, if not through an international agreement.

---

<sup>146</sup> Ibid, Gardiner, *Treaty Interpretation*, (n 42) 265.

<sup>147</sup> WTO, *European Communities: Measures Affecting the Approval and Marketing of Biotech Products*, Report of the Panel (21 November 2006), WT/DS291/R, WT/DS292/R, WT/DS293/R, Corr.1 and Add.1, 2, 3, 4, 5, 6, 7, 8 and 9, para. 7.68.

For this research, it takes the stance that the term ‘parties’ means ‘the parties to the treaty’ and the reasons are twofold. Firstly, the VCLT defines this term as those who have ‘consented to be bound by the treaty and for which the treaty is in force’.<sup>148</sup> To give a different meaning to the term which has already defined by the Convention itself would be illogical. Secondly, if the term ‘the parties’ under Article 31 (3) is treated as ‘parties to the dispute’, as Crema notes, that would rather ‘focus on the resolution of the dispute between the parties than on the interpretation of the treaty’ and neglect ‘many other factors relevant to interpretation including what other parties ... to the same multilateral treaty have said and done.’<sup>149</sup> In addition, to treat such term as meaning, ‘the parties to the dispute’ falls short of explaining how States, in their normal international routine, should interpret the treaty when a dispute does not yet existed. Therefore, as Crawford observes, ‘the normal interpretation of ‘the parties’ must be ‘all the parties’ and not simply ‘some of the parties’’.<sup>150</sup> ‘If not a practice of all the parties’, it is ‘at least opposable to all the parties.’<sup>151</sup> For these reasons and since there has been no dispute on the interpretation or application of Article 207 of the LOSC to date and the task of this research is to interpret Article 207 to clarify its ambiguities, the position that the term ‘Parties’ means the Parties to the treaty will be adopted in this study. This will help to gather as many agreements, practices, and perceptions of LOSC State Parties as possible to form an appropriate interpretation of Article 207.

## ii. Supplementary means of treaty interpretation (Article 32)

While the primary aim of Article 31 of the VCLT is to elucidate the meaning of the treaty terms, Article 32 contains supplementary means of interpretation to ‘confirm the meaning resulting from the application of Article 31.’<sup>152</sup> Obviously, the most significant supplementary means referred to by both international judicial institutions and States is the *travaux préparatoires* or preparatory works of the treaty up to its conclusion. The

---

<sup>148</sup> Ibid, (n 25), Article 2 (g).

<sup>149</sup> Luigi Crema, 'Subsequent Agreements and Subsequent Practice within and outside the Vienna Convention' in Georg Nolte (ed), *Treaties and Subsequent Practices* (OUP 2013) 24.

<sup>150</sup> James Crawford, 'A Consensualist Interpretation of Article 31(3) of the Vienna Convention on the Law of Treaties' in Georg Nolte (ed), *Treaties and Subsequent Practices* (Treaties and Subsequent Practices, OUP 2013) 30.

<sup>151</sup> Ibid.

<sup>152</sup> Aust, *Modern Treaty Law and Practice*, (n 42) 217.

jurisprudence after the adoption of the VCLT suggests that international judicial institutions have adopted a restrictive approach to the scope of the preparatory works. This is limited to those recorded in writing and accessible by all the parties.<sup>153</sup> Thus, it includes, *inter alia*, negotiating documents, that is, statements or declarations of the negotiating States, exchange notes, treaty drafts, and records of the negotiation available to all contracting Parties.<sup>154</sup> Another supplementary means is the circumstances of the conclusion of the treaty. This encompasses ‘political, social, and cultural factors – the *milieu* –surrounding the treaty’s conclusion’<sup>155</sup> and facilitates an evaluation of the ‘*de facto and de jure* situation existing at the time of the conclusion of the treaty’<sup>156</sup> and the identification of the Parties’ common intention.<sup>157</sup>

Apart from the means of interpretation expressly mentioned in Article 32 of the VCLT, recourse may be had to supplementary means, since the provision indicates that these are not exhaustive. It reads ‘Recourse may be had to supplementary means of interpretation, *including* the preparatory work of the treaty and the circumstances of its conclusion ... [emphasis added]’<sup>158</sup> Other supplementary means accepted in the literature include, *inter alia*, the *contra proferentem*, *expression unius est exclusion alterius*, *lex posterior derogat legi priori*, or *lex specilis derogat legi generali* principles.<sup>159</sup> In addition, if the practice of States cannot be counted as a subsequent agreement or practice within the

---

<sup>153</sup> *The Case concerning The Question whether the re-evaluation of the German Mark in 1961 and 1969 constitutes a case for application of the clause in Article 2 (e) of Annex I A of the 1953 Agreement on German External Debts (Belgium, France, Switzerland, United Kingdom and the United States of America v Federal Republic of Germany)* (1980) 19 RIAA 67, para. 34; *Legality of Use of Force case (Serbia and Montenegro v. Italy)*, Preliminary Objections [2004] ICJ Rep, 865 paras. 102 – 113; *Military and Paramilitary Activities in and against Nicaragua Case*, (n 101) para. 33. See also, Luigi Sbolci, ‘Supplementary Means of Interpretation’ in Enzo Cannizzaro (ed), *The Law of Treaties Beyond the Vienna Convention* (OUP 2011), 154 – 155.

<sup>154</sup> Villiger, ‘The 1969 Vienna Convention on the Law of Treaties - 40 Years After’, (n 56) 125 – 126.

<sup>155</sup> *Ibid.*, 126.

<sup>156</sup> Sbolci, ‘Supplementary Means of Interpretation’, (n 153) 157.

<sup>157</sup> *Ibid.*

<sup>158</sup> The VCLT, (n 25) Article 32.

<sup>159</sup> For example, Aust, *Modern Treaty Law and Practice*, (n 42) 220 – 221; Linderfalk, *On the Interpretation of Treaties: The Modern International Law as Expressed in the 1969 Vienna Convention on the Law of Treaties*, (n 111) Ch. 9; Sbolci, ‘Supplementary Means of Interpretation’, (n 153) 158 – 162; Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties*, (n 90) 445 – 446; Gardiner, *Treaty Interpretation*, (n 42) 311 – 312.

meaning of Article 31 (3) (a) and (b), it can be treated as part of the supplementary means of interpretation under this provision.<sup>160</sup>

Recourse to supplementary means may serve as evidence of the Parties' understanding of the treaty terms. However, the interpreter needs to bear in mind that the use of supplementary means is limited to confirming the meaning of the interpretation resulting from Article 31 or when the interpretation under Article 31 cannot provide a clear result or leads to an ambiguous or obscure meaning, or even to manifestly absurd or undesirable results.<sup>161</sup> With this in mind, recourse to supplementary means such as the preparatory works of the LOSC and other relevant agreements will assist this research to the extent that it does not undermine the interpretation given by the operation of Article 31 of the VCLT and the condition provided in Article 32.

However, a review of the preparatory documents and negotiating texts of the LOSC demonstrated that they do not provide much helpful guidance for the interpretation as not much was discussed during the negotiation of the LOSC in relation to MPLA. There are, however, some facts that can be drawn from them. During the meetings of the Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction ("Seabed Committee") in 1968 – 1972, there are at least three facts that explain why Article 207 of the LOSC is as general as it is today. Firstly, Member States agreed that the Sub-Committee III of the Seabed Committee 'had the responsibility to develop the overall legal framework and to draft legal principles to govern the protection of the marine environment'.<sup>162</sup> As such, the fact that it was only the overall legal framework led States to agree that the draft treaty articles will be 'of a general nature'.<sup>163</sup> Secondly, the circumstances surrounding the preparatory meetings showed that MPLA was not the focus of the discussion although MPLA was the biggest contributor to the marine environmental deterioration. Within Sub-Committee III it was recorded that:

---

<sup>160</sup> ILC, 'First report on subsequent agreements and subsequent practice in relation to treaty interpretation by Georg Nolte, Special Rapporteur' (Special Rapporteur Georg Nolte 1<sup>st</sup> Report) (19 March 2013) UNGA Doc A/CN.4/660, 32 – 34 at para. 79 – 83.

<sup>161</sup> Draft Articles on Law of Treaties with Commentaries, (n 44) 223.

<sup>162</sup> UNGA Doc. A/AC.138/SC.III/L.24 'Draft Report of the Sub-Committee III on its work in 1972' (10 August 1972), para. 10.

<sup>163</sup> *Ibid*, para. 12.

‘... 16. While the Stockholm Conference had recognized that the greater part of marine pollution came from activities on land, it was suggested that the Committee should primarily concentrate on the marine-based forms of pollution. Further suggestion was made that this Sub-Committee should concentrate its attention on pollution from vessels.’<sup>164</sup> [Emphasis added]

Another fact that explains the generality of Article 207 of the LOSC is the complexity of the international regulation of the protection of the marine environment from MPLA which was debated during the preparatory process and negotiation. Although it was recorded during the meetings of Sub-Committee III that ‘marine pollution could effectively be dealt with by a combination of global, regional and national rules and standards’ having the global ones fixing the minimum provisions and ‘the regional and national ones laying down particular and stricter provisions as may be required’,<sup>165</sup> States were in battle as to how MPLA should be regulated under the LOSC. This can be seen from the Canadian government as opined in its working paper submitted to the Seabed Committee;

*“[T]he regulation of land-based activities, even though they may have an important impact on the marine environment (and indeed represent by far the most important source of marine pollution) obviously raises problems of a different order, especially jurisdictional terms. Any attempt to have the law of the sea reach inland at this point of time would only add to the already long list of issues to be negotiated and hence jeopardize the possibility of their successful resolution.”* [Emphasis added]<sup>166</sup>

This opinion reflects the complexity of tackling MPLA and also is an example showing the unease of States concerning the regulation of MPLA under the LOSC. However, this view did not share with other States such as the Netherlands whose observation made to

---

<sup>164</sup> Ibid, para. 16.

<sup>165</sup> Ibid, para. 14.

<sup>166</sup> UNGA Doc. A/AC.138/SC.III/L.26 (Canada: Working Paper on Preservation of the Marine Environment) (undated), 2 – 3.

the same Committee was toward the more international regulation of MPLA. It observed that:

“[t]he Netherland Government believes that it would be unwise to disregard certain sources of marine pollution right from the start when making preparation to the Conference. In other words, during the preparation and during the Conference itself, attention should, in principle, be paid to land-based pollution of the sea, since this must be regarded as a major source of marine pollution.”<sup>167</sup>

In contrast to the Canadian government, the Netherland government was more ready to discuss the international regulation of MPLA given the complexity of the issue. These differing ideas as to how far the regulation should go was passed to the UNCLOS III negotiation.<sup>168</sup> During the negotiation, several versions of the draft article were advanced by States. However, the generality of the provision was retained throughout the negotiation.<sup>169</sup> This can be seen, for example, the preparatory document during the UNCLOS III entitled ‘Results of consideration of proposals and amendments relating to the preservation of the marine environment’ where the draft version of Article 207 read:

“1. States shall establish national laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources including rivers, estuaries, pipelines and outfall structures, taking into

---

<sup>167</sup> UNGA Doc. A/AC.138/SC.III/L.35 ‘Observations by the Government of the Netherlands in regard to questions concerning the preservation of the marine environment, including the prevention of marine pollution’ (23 March 1973).

<sup>168</sup> UNGA Doc. A/AC.138/SC.III/L.26 (Canada: Working Paper on Preservation of the Marine Environment) 2 – 3; UNGA Doc. A/AC.138/SC.III/L.27 (Australia: Working Paper on Preservation of the Marine Environment) (6 March 1973) 3, 5; UNGA Doc. A/AC.138/SC.III/L.28 (Canada: Draft Articles for a Comprehensive Marine Pollution Convention) (9 March 1973) Article II at 2; UNGA Doc. A/AC.138/SC.III/L.32 (USSR: Draft Articles for a Convention on General Principles for the Preservation of the Marine Environment) (15 March 1973) Art. II at 1; UNGA Doc. A/AC.138/SC.III/L.51 (Draft Report) (14 August 1973) at para.13; UNGA Doc. A/CONF.62/C.3/L.14 (Note by the Chairman of the informal meetings of the Third Committee on item 12 (Preservation of the marine environment) addressed to the Chairman of the Third Committee) (22 August 1974); see also John R. Stevenson and Bernard H. Oxman, ‘The Preparations for the Law of the Sea Conference’ 68 *The American Journal of International Law* 1 John R. Stevenson and Bernard H. Oxman, ‘The Preparations for the Law of the Sea Conference’ (1974) 68 *American Journal of International Law* 1, 23 – 26.

<sup>169</sup> Myron Nordquist, Shabtai Rosenne and Alexander Yankov, *United Nations Convention on the Law of the Sea 1982 A Commentary*, vol IV (Martinus Nijhoff Publishers 1991) 129 – 134.

account internationally agreed rules, standards and recommended practices and procedures.

States shall also take such other measures as may be necessary to prevent, reduce and control pollution of the marine environment from land-based sources.

2. States shall endeavour to harmonize their national policies at the appropriate regional level.

3. States, acting in particular through the appropriate intergovernmental organizations or by diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources.

[or]

3. States, acting in particular through the appropriate intergovernmental organizations or by diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources, taking into account characteristic regional features, the economic capacity of developing countries and their need for economic development.

4. Laws, regulations and measures, and rules, standards, and recommended practices and procedures referred to in paragraphs 1 and 3 respectively shall include those designed to minimize to the fullest possible extent the release of toxic and harmful substances, especially persistent substances, into the marine environment.”<sup>170</sup>

After some minor cosmetic revisions, the provision was adopted as it appears today and led one writer to observe that ‘the task of spelling out rights and duties of states in relation to the land-based sources of marine pollution was not difficult. The provisions of LOSC

---

<sup>170</sup> UNGA Doc. A/CONF.62/C.3/L.15/ADD.1 (Result of consideration of proposals and amendments relating to the preservation of the marine environment) (6 May 1975), para. X.

on this matter codified an existing agreement on the respective territorial jurisdiction of states.<sup>171</sup> However, it is clear from the discussion above that the complexity as to how MPLA should be regulated could not be settled among the States participating in the UNCLOS III. As a result of such unresolved issue, the general provision of Article 207 of the LOSC arguably is the outcome of the fact that States could not settle how far the regulation of MPLA under the LOSC should do. From the above discussion, it can be seen that the complexity concerning the regulation of MPLA and the disagreement on how to regulation the pollution limited the substantive discussion on the provision. Consequently, limited evidence from the records and preparatory documents of the LOSC can be drawn to assist the interpretation of Article 207 of the LOSC. However, looking from the positive light, the preparatory documents tell us that Article 207 of the LOSC has its global and regional dimensions in addition to the national aspect which had been strongly defended by States in during the preparatory process and the UNCLOS III. This at least supports this research in exploring the regional aspect of the obligation under Article 207 of the LOSC.

### **III. Rule of treaty interpretation and its application in this research**

The rule of treaty interpretation as set out in Articles 31 and 32 of the VCLT is regarded in this thesis as the legal method to clarify the regional aspects of the obligation to prevent, reduce, and control MPLA under Article 207 of the LOSC. The ingredients required in the operation of treaty interpretation have been outlined in the above sections, ranging from the consideration of the ordinary meaning of the terms, context, object and purpose of the treaty in good faith. In addition, the rule of treaty interpretation in Article 31 (3) of the VCLT requires the interpreter to consider subsequent agreements, subsequent practices, and the relevant rules of international law together with the context. Although it is widely accepted that the elements in Article 31 of the VCLT do not represent ‘a legal hierarchy of norms for the interpretation of treaties,’<sup>172</sup> two practical complications should be acknowledged in this thesis; (i) the sequence of ingredients to be thrown into the crucible of treaty interpretation, and (ii) the differences between

---

<sup>171</sup> Jose Luis Vallarta, 'Protection and Preservation of the Marine Environment and Marine Scientific Research at the Third United Nations Conference on the Law of the Sea The Law of the Sea - Where Now' (1983) 46 *Law & Contemporary Problems* 147, 148

<sup>172</sup> *Ibid*, 219 – 220; See also, Aust, *Modern Treaty Law and Practice*, (n 42) 208.

subsequent agreements and subsequent practices as set out in Article 31 (3) (a) and (b) of the VCLT.

**i. Sequence of ingredients to be thrown into the crucible of treaty interpretation**

The first complication concerns the sequence of ingredients to be thrown into the crucible of treaty interpretation. The difficulty faced in this research entails identifying the starting point of the operation of treaty interpretation. The question that arises is whether the operation of treaty interpretation should start by following the order provided in Article 31 of the VCLT or with setting up the background and context in which the interpretation operates.

The approach adopted by this thesis is firstly providing background and context of the interpretation by discussing potential relevant rules of international law applicable to protecting the marine environment from MPLA. The reason for this is twofold. Firstly, the operation of treaty interpretation is performed by international lawyers whose legal consciences are predicated on the international legal system. An example can be drawn from the way in which international judicial institutions, such as the ICJ, ITLOS, and the WTO Appellate Body, deal with disputes. These international judicial institutions are bound to decide the case before them in accordance with international law, unless agreed *ex aequo et bono*. Therefore, the ICJ is bound to decide a case before it ‘in accordance with international law’.<sup>173</sup> Similarly, the Court or Tribunal that has jurisdiction according to the LOSC ‘shall apply this Convention and other rules of international law’ compatible with the LOSC’,<sup>174</sup> and the same applies to the WTO Appellate Body.<sup>175</sup> They all entertain the case, interpret and apply the law, and ultimately adjudicate the dispute against the background of the international legal system, and international lawyers or advocates should interpret a treaty on a similar basis. Although not usually and expressly mentioned, the task of interpreting a treaty is not performed in a legal vacuum, but against

---

<sup>173</sup> Statute of the International Court of Justice (ICJ Statute), (24 October 1945) <[https://treaties.un.org/pages/ViewDetails.aspx?src=IND&mtdsg\\_no=I-3&chapter=1&clang=en](https://treaties.un.org/pages/ViewDetails.aspx?src=IND&mtdsg_no=I-3&chapter=1&clang=en)> accessed 6 August 2017, Article 38.

<sup>174</sup> The LOSC, (n 14) Article 293.

<sup>175</sup> WTO Understanding on Rules and Procedures governing the Settlement of Disputes, <[https://www.wto.org/english/tratop\\_e/dispu\\_e/dsu\\_e.htm](https://www.wto.org/english/tratop_e/dispu_e/dsu_e.htm)> accessed 6 August 2017, Article 3 (2).

the background of the international legal system in order to achieve a coherent and systemic integration of the treaty concerned into the international legal system.<sup>176</sup>

Secondly, it is assumed that States tend to refer to customary international law or general principles of law for a response to those questions to which the treaty is ambiguous and cannot provide a clear legal solution, and that they ‘do not intend to act inconsistently with generally recognised principles of international law’ upon the conclusion of the treaty.<sup>177</sup> As a result, it is important for interpreters to know which are the potentially relevant rules of international law that can help to guide the interpretation. This ensures that the interpretation systemically fits the international legal order and will not result in a conflict of norms. Therefore, it is appropriate that the relevant rules of international law should firstly be determined in order to demarcate the legal space in which the interpretation will be made.

#### **ii. Difference between subsequent agreement and subsequent practice as set out in Article 31 (3) (a) and (b) of the VCLT**

The meaning of the term ‘the Parties’ in Article 31 (3) of the VCLT poses a practical complication, since the interpreter has to review the materials adopted after the conclusion of the treaty and decide to which category they belong. The same complication can be seen in the case of the differentiation between the subsequent agreement and practice of States. Therefore, the question is whether this should be considered as a ‘subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions’ or a ‘subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation’ under Article 31 (3) (a) and (b) of the VCLT.

Since the approach taken by this thesis is to treat the term ‘the Parties’ as meaning ‘all Parties to the treaty’, the repercussion is that it has to treat the subsequent agreement under Article 31 (3) (a) as being of all the Parties to the LOSC and this would require all the LOSC Parties to actively agree on this subsequent agreement. This poses an

---

<sup>176</sup> Fragmentation of International Law Conclusion, (n 119) para. 17 – 19.

<sup>177</sup> Ibid.

inevitable problem in that it is unlikely for an exact same set of LOSC Parties to agree on any subsequent agreement; in fact, it has not happened to date. Although they are recognised as being related to the protection of the marine environment from MPLA and underpinned by Article 207 of the LOSC, international instruments such as the Montreal Guidelines,<sup>178</sup> Agenda 21,<sup>179</sup> the Washington Declaration and the GPA,<sup>180</sup> as well as the outcome of the Intergovernmental Review Meeting on the Implementation of GPA,<sup>181</sup> cannot satisfy the requirement in Article 31 (3) (a) of the VCLT.

However, the requirement for subsequent practice under Article 31 (3) (b) of the VCLT is less burdensome. Although the term ‘the Parties’ is treated as meaning all the Parties to the treaty, practice under this paragraph does not necessarily require all parties to actively contribute to it. ‘All parties must have acquiesced in the interpretation. However, if the circumstances allow for the assumption that a party has consented, even though the party itself did not contribute to the practice, then this shall be sufficient.’<sup>182</sup> According to this reading, international instruments such as the Montreal Guidelines, Agenda 21, the GPA or those adopted during the IGR process can be considered for the purpose of interpreting Article 207 of the LOSC, even though they are not actively adopted by all the LOSC Parties. In addition, this enables the practice of States created through regional cooperation to combat MPLA to be considered. Eighteen RSPs have currently been established and different levels of cooperation have been developed to combat MPLA.<sup>183</sup> It is hoped that the practices of this cooperation will be added to the interpretation of Article 207 of the LOSC. Not only does the term ‘the Parties’ pose a practical complication in the applicability of this rule, it is also difficult in practice to differentiate the analysed materials substantively between a subsequent agreement and a subsequent practice. This distinction, which is acknowledged by the ILC’s Special Rapporteur to be not always clear-cut,<sup>184</sup> is also a problem for this thesis.

---

<sup>178</sup> Montreal Guidelines, (n 9).

<sup>179</sup> Agenda 21, (n 29).

<sup>180</sup> The GPA, (n 31).

<sup>181</sup> For more information, see. UN Environment, <<http://www.gpa.unep.org/index.php/igr-3>> accessed 15 December 2014.

<sup>182</sup> Linderfalk, *On the Interpretation of Treaties: The Modern International Law as Expressed in the 1969 Vienna Convention on the Law of Treaties*, (n 111) 167.

<sup>183</sup> For more information, see. UN Environment Regional Seas Programme <<http://www.unep.org/regionalseas/>> accessed 15 December 2014.

<sup>184</sup> ILC, ‘Report of the International Law Commission on the Works of its 65<sup>th</sup> session’, (6 May – 7 June and 8 July – 9 August 2013) UNGA Doc A/68/10, at 32 (7).

Since it has been noted by the ILC's Special Rapporteur that the distinction is not meant 'to denote a difference concerning their possible legal effect',<sup>185</sup> the documents analysed in this thesis are regarded as belonging to subsequent practice in the application of the treaty, thereby establishing the agreement of the parties regarding its interpretation under Article 31 (3) (b) of the VCLT. This will facilitate the consideration of as many instruments as possible and avoid the aforementioned complication under Article 31 (3) (a) of the VCLT. Ultimately, in cases where it is argued that all the documents analysed do not fall within Article 31 (3) (a) – (b) of the VCLT, meaning that they cannot be treated as subsequent agreement or practice within the meaning of this provision, all the documents analysed in this thesis are treated as part of the supplementary means of interpretation under Article 32 of the VCLT.

#### IV. Conclusion

The rule of treaty interpretation and the legal ingredients that need to be added to the operation of treaty interpretation have been outlined in this chapter. These ingredients range include the consideration of the ordinary meaning of the terms to the context, object and purpose of the treaty in good faith. In addition, the rule of treaty interpretation requires an interpreter to consider the context, together with subsequent agreements, subsequent practices, and the relevant rules of international law, as required by Article 31 (3) of the VCLT. Supplementary means, such as *travaux préparatoires*, preparatory works of the treaty up to its conclusion, or the subsequent practices of States that do not fall within Article 31, can also assist the interpretation. Some methodological complications of the rule of treaty interpretation when it is actually applied were also discussed. In response to this, the relevant rules and principles of international law related to the protection of the marine environment from MPLA will be addressed in the next chapter. Later chapters address subsequent agreements and practice. As observed by ILC's Special Rapporteur that the distinction is not meant 'to denote a difference concerning their possible legal effect',<sup>186</sup> all the analysed documents are treated as part of the subsequent practice of States under Article 31 (3) (b) of the VCLT, in order to take

---

<sup>185</sup> Special Rapporteur Georg Nolte 1<sup>st</sup> Report, (n 160) 29 at para. 70.

<sup>186</sup> *Ibid.*

into account as much evidence as possible for the benefit of the interpretation. This is also to avoid the legal complication discussed above regarding subsequent agreements. The fall-back position of this thesis is that the analysed documents are considered to be supplementary means of interpreting Article 32 of the VCLT should it be disputed that they fall within the scope of Article 31.

### **Chapter III: Rules and Principles of International Law related to the Protection of the Marine Environment from MPLA**

#### **I. Introduction**

This chapter provides the background and context of the interpretation by discussing the potentially relevant rules of international law related to the protection of the marine environment from MPLA. Understanding these rules and principles as the background and context of the interpretation of Article 207 of the LOSC assists States not to act inconsistently with their existing legal obligations and the recognised rules and principles of international law.<sup>187</sup> In this context, the potentially relevant rules and principles of international law include international agreements, customary and general rules and principles of international law.<sup>188</sup> For the purpose of interpreting Article 207 of the LOSC, these potentially relevant rules and principles are identified and discussed in this chapter. As mentioned earlier, they provide the context and demarcate the legal terrain in which the interpretation is operated. It should be noted that there is no definitive list of relevant rules and principles of international law related to the protection of the marine environment. Different lawyers use different lists of relevant rules and principles for this purpose.<sup>189</sup> The rules and principles discussed in this chapter are based on those accepted by academia, practitioners, and international judicial institutions as being relevant or influential to the protection of the marine environment and also the way in which practitioners argue and judicial institutions entertain their cases.

In this respect, the chapter begins with a discussion of the potentially relevant customary and general rules of international law. These are sustainable development, the prevention principle, the precautionary principle, common but differentiated responsibilities (CBDR), the polluter-pays principle, the obligation to cooperate, environmental impact assessment, and obligations to notify, exchange information, and consult. The relationship between these relevant rules and principles of international law and MPLA will also be examined. However, it should be noted that although the legal status of some

---

<sup>187</sup> Fragmentation of International Law Conclusion, (n 119) para. 17 – 19.

<sup>188</sup> *Ibid*, para. 18.

<sup>189</sup> See, for example. Yoshifumi Tanaka, 'Principles of International Marine Environmental Law' in R. Rayfuse (ed), *Research Handbook on International Marine Environmental Law* (Edward Elgar 2015), Ch. 2; Lluís Paradell-Trius, 'Principle of International Environmental Law: an Overview' (2000) 9 *Review of European Community & International Environmental Law* 97, 97 – 99.

of the abovementioned principles remains unsettled, they continue to evolve and influence the discussion, negotiation, and implementation of the LOSC as policy or economic principles. For example, as will be further elaborated, the ICJ noted, in *the Pulp Mills on the River Uruguay* case, that the precautionary principle may be relevant to the treaty interpretation despite its unsettled status.<sup>190</sup> Also, some principles, for example, some elements of common but differentiated responsibilities principle has arguably been implicitly recognised in the LOSC.<sup>191</sup> Therefore, despite their unsettled legal status, they are worth discussing in the context of the protection of the marine environment. After discussing the potentially relevant customary and general rules of international law, this will be followed by a discussion of the conventional rules of international law. In this case, the international agreement that contains the relevant rules of international law in this context is the LOSC especially Section I of Part XII of the Convention, in which the general obligations applicable to the protection of the marine environment from all sources of pollution, including MPLA, are stipulated. The general provisions of the LOSC's Part XII also provide the context as addressed in Article 31 (1) of the VCLT in which Article 207 is to be interpreted. The relevance of these rules of international law related to MPLA will also be highlighted in both parts of the chapter in order to justify their inclusion when considering the interpretation of Article 207 of the LOSC.

## **II. Customary and general rules of international law**

### **i. Sustainable Development**

Sustainable development is one of the most interesting and complex concepts in international law relating to the environment. It is interesting because of its widespread acceptance and adoption in various international instruments and it is complex because of its substantive fluidity and the difficulty in defining its status in international law. While there is no internationally-agreed definition of sustainable development, reference is usually made to the World Commission on Environment and Development (WCED), which defines it as 'development that meets the needs of the present without

---

<sup>190</sup> See, Section II, iii.

<sup>191</sup> See, Section II, iv.

compromising the ability of future generations to meet their own needs'.<sup>192</sup> Although the notion of sustainable development predates the report of the WCED, it was not firmly established in the international community until the United Nations Conference on Environment and Development (Rio Conference).<sup>193</sup> Principle 4 of the Rio Declaration clearly recognises that 'to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.'<sup>194</sup> In addition, sustainable development appears in various international treaties and is arguably part of the objects of those instruments, including the 1992 Convention on Biological Diversity (CBD),<sup>195</sup> the 1992 United Nations Framework Convention on Climate Change (UNFCCC),<sup>196</sup> and Agenda 21,<sup>197</sup> all of which were adopted at the same time at the Rio Conference. However, the complexity of sustainable development revolves around its legal status and content, both of which are discussed in turn below.

### (i) Legal status and substance

The legal status of sustainable development is quite difficult to define. Although academics and international lawyers have proposed various arguments, there has been no consensus to date. For example, in terms of international lawyers, Sands argues that sustainable development has passed into the 'corpus of international customary law

---

<sup>192</sup> UNGA, 'Report of the World Commission on Environment and Development' (Brundtland Report) (4 August 1987) 42<sup>nd</sup> Session UN Doc A/42/427, Ch. 2; See for example, Ellen Hey, *Advanced Introduction to International Environmental Law* (Edward Elgar 2016), 65; Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 119 – 120; Committee on Legal Aspects of Sustainable Development, 'The Fifth and Final Report on Searching for the Contours of International Law in the Field of Sustainable Development' in International Law Association Report of the Seventieth Conference (New Delhi 2002) (International Law Association, New Delhi 2002), (Fifth and Final Report), <<http://www.ila-hq.org/index.php/publications>> accessed 14 June 2017, at 6.

<sup>193</sup> For more information about the Rio Conference, see. <<https://sustainabledevelopment.un.org/milestones/unced>> accessed 5 August 2017. The concept of sustainable development is embedded in several provisions of the LOSC. For example, this can be seen from Article 61 regarding the conservation of the living resources where States are required to adopt measures 'designed to maintain or restore populations of harvested species at levels which can produce the *maximum sustainable yield*'. Sustainable development can also be seen in Article 119 relating the conservation of the living resources in the high seas. [Emphasis added]

<sup>194</sup> For the Rio Declaration, see. UN, 'Report of the United Nations Conference on Environment and Development', (1993) UN Doc A/CONF.151/26/Rev.1 (Vol. I), Annex I.

<sup>195</sup> (n 74) preambular provision, and Article 8.

<sup>196</sup> (n 74) Article 3 (4).

<sup>197</sup> (n 29) preamble and, para 17.1.

requiring different streams of international law to be treated in an integrated manner.<sup>198</sup> Meanwhile, in the *Gabčíkovo-Nagymaros Project* case, Judge Weeramantry gave a separate opinion that the principle of sustainable development ‘is thus a part of modern international law by reason not only of its inescapable logical necessity, but also by reason of its wide and general acceptance by the global community.’<sup>199</sup> Voigt observes that sustainable development is a general principle of law with normative force, which requires the ‘integration of present and future economic, social, and environmental interests within the limits set by certain ecological functions’.<sup>200</sup> It has been legitimised and endorsed by widespread acceptance in national and international legal orders and judicial practice.<sup>201</sup> In contrast, Lowe argues that sustainable development lacks a ‘norm-creating character’.<sup>202</sup> He describes it as ‘a meta-principle, acting upon other rules and principles – a legal concept exercising a kind of interstitial normativity, pushing and pulling the boundaries of true primary norms when they threaten to overlap or conflict with each other.’<sup>203</sup> According to Birnie, Boyle, and Redgwell, sustainable development is not a ‘legal obligation’, but ‘a policy which can influence the outcome of cases, the interpretation of treaties, and the practice of states and international organisations, and may lead to significant changes and developments in the existing law.’<sup>204</sup> The ICJ had an opportunity to deal with this notion in the *Gabčíkovo-Nagymaros Project* case when it pronounced that ‘[this] need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development.’<sup>205</sup>

In this case, to achieve sustainable development, the ICJ advised the parties to the dispute to ‘look afresh at the effects on the environment of the operation of *Gabčíkovo* power plant.’<sup>206</sup> Although it hinted at the status by calling sustainable development a ‘concept’ that required the reconciliation of environmental protection and economic development,

---

<sup>198</sup> Sands, ‘Sustainable Development: Treaty, Custom, and the Cross-Fertilization of International Law’, (n 110) 208.

<sup>199</sup> (n 33) *per Judge Weeramantry*, at 95.

<sup>200</sup> Christina Voigt, *Sustainable Development as a Principle of International Law* (Martinus Nijhoff Publishers 2009), 186.

<sup>201</sup> *Ibid.*

<sup>202</sup> Vaughan Lowe, ‘Sustainable Development and Unsustainable Arguments’ in Alan E Boyle and David Freestone (eds), *International Law and Sustainable Development* (OUP 1999), 23 – 25.

<sup>203</sup> *Ibid.*, 31.

<sup>204</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 127. Some see it as a goal of international community. See, Alistair Rieu-Clarke, *International Law and Sustainable Development Lessons from the Law of International Watercourses* (IWA Publishing 2005), Ch.3.

<sup>205</sup> (n 33) at para 140.

<sup>206</sup> *Ibid.*

the ICJ did not discuss the employment or application of the concept in international law. Indeed, it is by no means easy to determine the legal status of sustainable development. The lack of an internationally-agreed definition of this notion means that divergence still exists among States as to its precise nature and content, as well as application. This makes it difficult to draw a concrete definition. For this reason, taking into account the current debate and the lack of common agreement regarding its definition, it is not possible to precisely determine the legal status of sustainable development. Given that sustainable development influence the way in which States act to protect and preserve the environment, and how multilateral environmental agreements are negotiated, drafted, and adopted, it may arguably be seen as an environmental policy principle that guides States' actions. Regarding the substance of sustainable development some common, but not exhaustive, elements can be observed in the current literature to explain sustainable development. They are drawn from those commonalities of what international lawyers consider to be the substance of this concept. These include (i) integration of environment and development; (ii) equity of sustainable development; (iii) sustainable utilisation of natural resources.<sup>207</sup>

Firstly, sustainable development requires the integration of the environment and development, and this component is contained in Principle 4 of the Rio Declaration as a means to achieve sustainable development. The need to integrate environmental concerns existed even before the birth of sustainable development in the WCED report. Environmental concerns were implicitly realised from the need to ensure the sovereign equality of other States when one State exercises its sovereignty over natural resources.<sup>208</sup> This implicit requirement was later strengthened by the passing of the UNGA resolution, which declared that a 'development plan should be compatible with sound ecology'.<sup>209</sup> Not only the transboundary environmental consideration needs to be taken into account, but States also need to integrate domestic environmental concerns to ensure sustainable development. The integration of environment and development was recognised by Principles 4 and 13 of the Stockholm Declaration during the Stockholm

---

<sup>207</sup> Different commentators list different components for sustainable development; for examples, see, Sands and Peel, *Principles of international environmental law*, (n 26) 206 – 217; Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 115 – 127.

<sup>208</sup> UNGA Res 1803 (XVII) (14 December 1962)

<sup>209</sup> UNGA Res 2849 (XXVI) (20 December 1971); Sands and Peel, *Principles of international environmental law*, (n 26) 215.

Conference, in which it was stated that ‘nature conservation, including wildlife, must, therefore, receive importance in planning for economic development’ and that an integrated and coordinated approach should be adopted in development plans ‘so as to ensure that development is compatible with the need to protect and improve the environment’.<sup>210</sup> Arguably at the core of sustainable development, the integration of the environment and development was later reaffirmed by the ICJ in the cases of *Gabčíkovo-Nagymaros Project*<sup>211</sup> and *Pulp Mills on the River Uruguay*<sup>212</sup> as a requirement to achieve sustainable development. In effect, the integration of the environment and development connects sustainable development with other rules and principles of international law, including the prevention principle, the precautionary principle, the duty to conduct an environmental impact assessment (EIA), common but differentiated responsibilities (CBDR), and cooperation, as will be discussed later in this chapter.

The second component of sustainable development is equity, which is an established principle in international law.<sup>213</sup> Equity is at the core of the WCED definition of sustainable development and consists of two aspects, namely, inter- and intra-generational equity. Inter-generational equity was recognised in Principle 1 of the Stockholm Declaration, in which it was stated that mankind ‘bears a solemn responsibility to protect and improve the environment for present and future generations’. This was reaffirmed in Principle 3 of the Rio Declaration,<sup>214</sup> as well as other international instruments.<sup>215</sup> It was recognised by the ICJ in the *Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons* that ‘the environment is not an

---

<sup>210</sup> UN, ‘Report of the United Nations Conference on the Human Environment’, UN Doc A/CONF.48/14/Rev.1 (5 – 16 June 1972), Ch.1. The Stockholm Declaration was adopted at the United Nations Conference on Human Environment, 1972 (Stockholm Conference). For information about, Stockholm Conference, see. <<https://sustainabledevelopment.un.org/milestones/humanenvironment>> accessed 5 August 2017.

<sup>211</sup> (n 33) at para. 140.

<sup>212</sup> (n 34) at para. 80.

<sup>213</sup> For discussion on equity in general, see. Francesco Francioni, ‘Equity in International Law’ (2013) Max Planck Encyclopedia of Public International Law ; Vaughan Lowe, ‘The Role of Equity in International Law’ (1988) 12 Australian Yearbook of International Law 54; GF Maggio, ‘Inter/intra-generational Equity: Current Applications under International Law for Promoting the Sustainable Development of Natural Resources’ (1997) 4 Buffalo Environmental Law Journal 161.

<sup>214</sup> Rio Declaration, Principle 3 reads ‘The right to development must be fulfilled so as to equitably meet developmental and environmental needs of *present and future generations*’. Emphasis added.

<sup>215</sup> For example, Article 3 (1) of the UNFCCC; Edith Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity* (Transnational Publishers 1989), 37 – 38.

abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn'.<sup>216</sup> However, inter-generational equity is not without doubt, since how future generations can claim their rights and who can represent them is debatable.<sup>217</sup> Another question is how and what criteria can be used to define the equity of the actions of the present generation vis-à-vis the generations unborn. While national courts in some States, such as the Philippines,<sup>218</sup> allow claims based on inter-generational equity, this *locus standi* has not been developed in international law, and there is no prospect that it will be.

In terms of intra-generational equity, this mainly concerns the 'allocation of natural resources as well as responsibility and liability for pollution.'<sup>219</sup> At an international level, this is generally understood to relate to issues between developed and developing countries regarding both the allocation of resources and responsibility for pollution, as clearly reflected in Principle 7 of the Rio Declaration, 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.”

In addition to Principle 7, Principle 5 of the Rio Declaration also recognises the special needs of the developing countries.<sup>220</sup> As will be discussed later, intra-generational equity

---

<sup>216</sup> (Advisory Opinion) [1996] ICJ Rep, 225 at para. 29.

<sup>217</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 121; Lowe, 'Sustainable Development and Unsustainable Arguments', (n 213) 28.

<sup>218</sup> *Minors Oposa v Secretary of the Department of Environment and Natural Resources*, (1994) 33 ILM173.

<sup>219</sup> Edith Brown Weiss, 'Environmental Equity: The Imperative for the Twenty-First Century' in Winfried Lang (ed), *Sustainable Development and International Law* (Graham & Trotman/Martinus Nijhoff 1995), 18 – 23.

<sup>220</sup> Rio Declaration, (n 194) Principles 5 reads: 'All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to

arguably gives birth to the concept of common but differentiated responsibilities, which is integrated into the obligation to protect the marine environment from MPLA.<sup>221</sup> Although intra-generational equity is clearly reflected in the Rio Declaration, its origin predates the Rio Conference in 1992. For example, it can be seen in the 1987 Montreal Protocol to the Vienna Convention for the Protection of Ozone Layer on Substances that Deplete the Ozone Layer (Montreal Protocol to the Ozone Layer Convention), when developing countries were accorded different treatment in the form of a period of grace to meet their commitments.<sup>222</sup> This recognised developing countries' lower contribution to the problem at that time and allowed them to develop further to meet their needs. The recognition of the special needs of developing countries can also be seen in other multilateral environmental agreements, such as the UNFCCC.<sup>223</sup>

The last substantive component of sustainable development is the sustainable use of natural resources. According to Sands, this concept focuses 'on the adoption of standards governing the rate of use or exploration of specific natural resources rather than on their preservation for future generations'.<sup>224</sup> It is important to note that the sustainable use of resources does not prohibit all utilisation; rather, it allows utilisation that facilitates the regeneration of resources. This idea has long been reflected in international instruments. It includes the obligation of coastal states to adopt measures 'to maintain or restore the population of harvested species at levels which can produce the maximum sustainable yield' for the conservation of the living resources in their Exclusive Economic Zone (EEZ),<sup>225</sup> and in the high seas.<sup>226</sup> The sustainable use of resources can also be found in other international environmental regimes, including the UNFCCC<sup>227</sup> and the CBD.<sup>228</sup> Sustainable use is defined in the CBD as 'the use of components of biological diversity

---

decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.'

<sup>221</sup> The LOSC, (n 14) Article 207 (4).

<sup>222</sup> (Adopted 16 September 1987; entered into force 1 January 1989) 1522 UNTS 28, Article 5.

<sup>223</sup> (n 74) at Article 4 (3) – (5), (7).

<sup>224</sup> Sands and Peel, *Principles of international environmental law*, (n 26) 210.

<sup>225</sup> The LOSC, (n 14) Article 61.

<sup>226</sup> The LOSC, (n 14) Article 119. The concept of maximum sustainable yield is different from optimum utilisation of the living resources. See, Elizabeth A Kirk, 'Marine Governance, Adaptation, and Legitimacy' (2011) 22 Yearbook of International Environmental Law 129.

<sup>227</sup> (n 74) Article 2. It requires a greenhouse gases stabilisation level to be 'achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.'

<sup>228</sup> (n 74) preambular provision, Articles 1, 5, 8 and 10.

in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.<sup>229</sup> At the Rio Conference, States agreed with Principle 8 of the Rio Declaration that they ‘should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies’ in order to achieve sustainable development. However, as Sands observes, natural resources have not been utilised sustainably and this reflects the difficulty in translating the concept of sustainable use into action in practice.<sup>230</sup> In addition, although the sustainable use of natural resources has been accepted as one of the main components of sustainable development, whether or not ‘international law now imposes on states a general obligation of conservation and sustainable use of natural resources and the natural environment remains an open question.’<sup>231</sup> It can be said that the requirement to utilise natural resources and the environment sustainably qualifies the way in which States exercise their sovereignty of natural resources. However, the criteria of sustainable use need to be developed further by States and the relevant international organisations responsible for the management of natural resources, or in some cases, they need to be developed by international judicial institutions through the settlement of disputes over natural resources and the environment.<sup>232</sup>

## (ii) Sustainable Development and MPLA

MPLA is fundamentally entwined with States’ economic development based on both economic activities and the daily consumption of nationals. In terms of economic activities, the industrial discharge into rivers and the marine environment is identified as one category of the source of MPLA in every region.<sup>233</sup> Activities range from animal processing plants, tanneries, canneries, and breweries creating organic-rich waste to nuclear-power plant releasing radionuclides or spent fuel into the sea.<sup>234</sup> Agricultural

---

<sup>229</sup> CBD, (n 74) Article 2.

<sup>230</sup> Sands and Peel, *Principles of international environmental law*, (n 26) 211.

<sup>231</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 199 – 200.

<sup>232</sup> Sands and Peel, *Principles of international environmental law*, (n 26) 213.

<sup>233</sup> GESAMP, *Protecting the oceans from land-based activities - Land-based sources and activities affecting the quality and uses of the marine, coastal and associated freshwater environment* (GESAMP Studies & Reports, 2001), 16.

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

activities create ‘the runoff of crop treatment residues and animal wastes.’<sup>235</sup> These activities cause contamination through groundwater and ‘associated diffuse leakage into rivers and coastal waters.’<sup>236</sup> The likelihood that the increased or decreased mobilisation of sediment from development activities will cause MPLA is an issue of concern at both local and regional levels. The former activities include deforestation that causes soil erosion and, hence, mobilises sediment into the sea, whereas the construction of dams reduces the supply of sediment, causing ‘reductions in the natural inflow of chemicals, including nutrients, and the under-nourishment of beaches and fine shelf sediments.’<sup>237</sup>

Sewage and marine litter are more closely related to daily consumption. Sewage has a negative effect on, *inter alia*, bathing water, recreational activities, and some types of mariculture such as shellfish marketability. Although it tends to affect States on a local scale ‘in the vicinity of untreated or incompletely treated discharges,’ this problem is widespread, affecting most coastal States. Therefore, ‘while not a truly “global” problem, the ubiquity of the adverse effects of sewage discharge make it a problem of global socio-economic dimensions.’<sup>238</sup> As for marine litter, this is generally created in highly-populated cities and poses ‘risks to human health and causes the aesthetic deterioration of beaches and coastal waters, thus affecting tourism.’<sup>239</sup> Marine litter is more closely tied to social conditions and behaviour than is usually imagined; for example, footwear is the major component of marine litter in Indonesia, while ‘diverse plastic kitchen and laundry containers and metal and aluminium cans’ are identified as the major cause in many countries.<sup>240</sup> Since all types of marine litter are caused by the consumption trends in particular countries, the solution to this problem is to firmly place environmental consideration at the heart of not only economic development, but also social awareness, in order to induce a change in economic activities and daily consumption.

For this reason, as recognised in the GPA, human activities on land and the marine environment are interdependent and ‘sustainable patterns of human activity in coastal areas depend upon a healthy marine environment, and vice versa.’<sup>241</sup> The marine

---

<sup>235</sup> Ibid, 17.

<sup>236</sup> Ibid.

<sup>237</sup> Ibid, 25.

<sup>238</sup> Ibid, 18.

<sup>239</sup> Ibid, 25

<sup>240</sup> Ibid.

<sup>241</sup> (n 31) at para 2.

environment cannot be protected from MPLA if this issue is not integrated with the planning or operation of economic activities or general consumption within a State. Not only has the relevance of sustainable development in the context of protecting the marine environment been recognised by its very nature, but also in Agenda 21, when States agreed to ‘integrate protection of the marine environment into relevant general environmental, social and economic development policies’<sup>242</sup> and this was reaffirmed at an international level in the World Summit on Sustainable Development,<sup>243</sup> the United Nations Conference on Sustainable Development (Rio+20 Conference),<sup>244</sup> and the United Nations Sustainable Development Summit.<sup>245</sup> For this reason, sustainable development will also be considered in this thesis when interpreting Article 207 of the LOSC.

## ii. Prevention Principle

The prevention principle aims to achieve the sustainable utilisation of natural resources and protect the environment; thus, it attempts to balance the exercise of a State’s sovereignty over its natural resources with the maintenance of the territorial integrity of other States that may risk being damaged by the former.<sup>246</sup> While States have the sovereign right to explore and exploit their natural resources, the prevention principle requires them to exercise their sovereignty in a way that ensures that their activities do not cause significant transboundary harm to other States or areas beyond their national jurisdiction. It was initially believed that State sovereignty was absolute,<sup>247</sup> however, the awareness of international environmental incidents during the 1960s not only affected the global conscience, but also put the exercise of States’ sovereignty into an

---

<sup>242</sup> (n 29) at para 17.22 (b).

<sup>243</sup> UNGA ‘Draft plan of implementation of the World Summit on Sustainable Development’ (26 June 2002) UN Doc A/CONF.199/L.1, para 30 (b).

<sup>244</sup> UNGA Res 66/288 (LXVI) (27 July 2012), paras 158 – 177. See, especially MPLA at para 163.

<sup>245</sup> UNGA Res 70/1 (LXX) (25 September 2015), Goal 14.

<sup>246</sup> Leslie-Anne Duvic-Paoli and Jorge E Viñuales, ‘Principle 2 Prevention’ in Jorge E Viñuales (ed), *The Rio Declaration on Environment and Development: A Commentary* (OUP 2015), 108 – 110, 113 – 118; Pheobe N Okowa, *State Responsibility for Transboundary Air Pollution in International Law* (OUP 2000), 65.

<sup>247</sup> UNGA RES 626 (VII) (21 December 1952), ‘... 1. *Recommends* all Member States, in the *exercise of their right freely to use and exploit their natural wealth and resources* wherever deemed desirable by them for their own progress and economic development, ...’ [emphasis added]; see also, UNGA RES 523 (VI) (12 January 1952); UNGA Res 1803 (XVII) (14 December 1962), (n 208). For a further discussion on the sovereignty of natural resources, see Nico Schrijver, *Sovereignty over Natural Resources* (CUP 1997), Ch. 2

environmental context.<sup>248</sup> It is important to note that not all transboundary harm is prohibited by the prevention principle, but only significant harm, and certain actions need to be taken to deal with it. Therefore, as Birnie, Boyle, and Redgwell rightly observe, it may be more appropriate to call it ‘the responsibility not to cause significant transboundary harm’ instead of the no-harm rule.<sup>249</sup> The substance and legal status of this duty are discussed below.

### (i) Legal status and substance

The responsibility not to cause significant transboundary harm in the prevention principle is usually tied to the principle of *sic utere tuo ut alienum non laedas* or good neighbourliness. It has been elaborated by international courts and tribunals on various occasions, significantly in the cases of *Trail Smelter Arbitration* and *Corfu Channel*. The former case concerned air pollution caused by Canadian smelters that affected those living in the United States. In this case, the arbitral tribunal ruled that ‘no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence....’<sup>250</sup> For the latter, the *dicta* of the ICJ in the *Corfu Channel* case reflects the way the balance between a State’s sovereignty and the territorial integrity of other States should be struck. In this case, the ICJ established the general requirements on the relevant part, that every State has an ‘obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States.’<sup>251</sup> Ultimately, it was recognised by the ICJ in the *Advisory Opinion on Legality of the Threat or Use of Nuclear Weapons* that the responsibility not to cause significant harm is now part of the general international law, when it ruled the following;

‘The existence of the general obligations of States to ensure that activities within their jurisdiction and control respect the environment

<sup>248</sup> Ibid, Schrijver, Ch. 3.; Nico Schrijver, 'Fifty Years Permanent Sovereignty over Natural Resources' in Marc Bungenberg and Stephan Hobe (eds), *Permanent Sovereignty over Natural Resources* (Springer 2015), 19 – 22.

<sup>249</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 137.

<sup>250</sup> (n 32) at 1965.

<sup>251</sup> *Corfu Channel Case (United Kingdom v. Albania)*, Judgment [1949] ICJ Rep 4 at 22.

of other States or of areas beyond national jurisdiction is now part of the corpus of international law relating to the environment...<sup>252</sup>

As declared by the ICJ, this aspect of the prevention principle has been firmly established in international law. Apart from the recognition in the jurisprudence of the Court, the responsibility not to cause significant transboundary harm has been widely recognised in both binding and non-binding international instruments that deal with the protection of the marine environment. Its major appearance was in the Stockholm Conference, where it was pronounced in Principle 21 of Stockholm Declaration, which reads as follows;

‘States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.’<sup>253</sup>

While Principle 21 recognises States’ sovereignty to explore and exploit their natural resources based on their own environmental policies, this is qualified by the need to ensure the protection of the environment that forms part of the territorial integrity of other States. This principle was reaffirmed in Principle 2 of Rio Declaration with the additional reference to ‘developmental policies’ alongside the environmental one.<sup>254</sup> The addition of ‘developmental policies’ to this principle confirms ‘the conviction of developing countries that their environmental policies cannot override their developmental policies.’<sup>255</sup> Although this term only makes nominal changes to the responsibility not to cause transboundary harm,<sup>256</sup> it affirms that the responsibility not to cause significant transboundary harm applies across every branch of national policies.<sup>257</sup>

---

<sup>252</sup> (Advisory Opinion) [1996] ICJ Rep 225 at paras. 19 – 20 ; see also, the *Iron Rhine (IJzeren Rijn) Railway Arbitration (Belgium/the Netherlands)*, (n 122) para. 59 ‘...there is a duty to prevent, or at least such harm. This duty in the opinion of the Tribunal has now become a principle of general international law...’

<sup>253</sup> Stockholm Declaration, (n 210) Ch.1 at Principle 21.

<sup>254</sup> (n 194).

<sup>255</sup> Schrijver, *Sovereignty over Natural Resources*, (n 247) 136.

<sup>256</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 146.

<sup>257</sup> Sands and Peel, *Principles of international environmental law*, (n 26) 191.

The responsibility not to cause significant transboundary harm has repeatedly appeared in several international instruments, including the 1979 Geneva Convention on Long-range Transboundary Air Pollution (LRTAP),<sup>258</sup> the 1992 Convention on Biological Diversity ('CBD'),<sup>259</sup> the 1992 United Nations Framework Convention on Climate Change (UNFCCC),<sup>260</sup> and the 1998 Aarhus Protocol to the Convention on Long-Range Transboundary Air Pollution on Persistent Organic Pollutants (Aarhus Protocol to LRTAP Convention).<sup>261</sup> It is also indirectly referred to in the 1997 Convention on Non-Navigational Uses of International Watercourses (Watercourse Convention)<sup>262</sup> and the 2008 Draft Article of the Law of Transboundary Aquifers,<sup>263</sup> both of which reaffirm the responsibility not to cause transboundary harm.<sup>264</sup>

In terms of the marine environment, the responsibility not to cause transboundary harm to the environment or the areas beyond national jurisdiction has been transformed into a 'duty' not to cause significant harm to the marine environment and areas beyond national jurisdiction. This can be seen from Article 193 of the LOSC, in which it is stipulated that 'States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment.' As Sands points out, transforming 'responsibility' to 'duty' 'shifts the emphasis from a negative obligation to prevent harm to a positive commitment to preserve and protect the environment.'<sup>265</sup> In addition, as part of their obligation to protect and preserve the marine environment from pollution, States are obliged to:

'take all measures necessary to ensure that activities under their

---

<sup>258</sup> (Adopted 13 November 1979; entered into force 16 March 1983) 1302 UNTS 217, preambular provision.

<sup>259</sup> (n 74) Article 3.

<sup>260</sup> (n 74), preambular provision.

<sup>261</sup> (Adopted 24 June 1998; entered into force 23 October 2003) 2230 UNTS 79, preambular provision.

<sup>262</sup> (Adopted 21 May 1997; entered into force 17 August 2014) UN Doc A/RES/51/229, <[https://treaties.un.org/pages/viewdetails.aspx?src=ind&mtdsg\\_no=xxvii-12&chapter=27&lang=en](https://treaties.un.org/pages/viewdetails.aspx?src=ind&mtdsg_no=xxvii-12&chapter=27&lang=en)> accessed 6 August 2017, preambular provision.

<sup>263</sup> The text of the draft articles can be found at <[http://legal.un.org/docs/?path=../ilc/texts/instruments/english/draft\\_articles/8\\_5\\_2008.pdf&lang=EF](http://legal.un.org/docs/?path=../ilc/texts/instruments/english/draft_articles/8_5_2008.pdf&lang=EF)> accessed 12 February 2017.

<sup>264</sup> Both instruments also recognise the responsibility not cause significant harm in Articles 7 and 6 of the respective instruments.

<sup>265</sup> Sands and Peel, *Principles of international environmental law*, (n 26) 198 – 199.

jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.<sup>266</sup>

The responsibility not to cause significant transboundary harm under the LOSC applies to all sources of marine pollution and it has been recognised by specific international agreements related to marine pollution, such as the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Dumping Convention).<sup>267</sup>

Having discussed the general duty of a State not to cause significant transboundary harm to other States or areas beyond national jurisdiction, the question that now arises is how States should implement this duty in practice. In other words, what is the substance of the responsibility or duty not to cause significant transboundary harm? This is another aspect of the prevention principle which, as Sands notes, ‘seeks to minimise environmental damage as an objective in itself’<sup>268</sup> and requires States to ‘take actions at early stages’.<sup>269</sup> In ensuring that it causes no significant transboundary harm, a State is required to act with due diligence. This is integral to the prevention principle and has been widely recognised in the literature<sup>270</sup> and by international law-making institutions<sup>271</sup> and international courts and tribunals.<sup>272</sup>

According to the International Law Commission (ILC), the duty to act with due diligence

---

<sup>266</sup> The LOSC, (n 14) Article 194 (2).

<sup>267</sup> (Adopted 29 December 1972; entered into force 30 August 1975) 1046 UNTS 138, , preambular provision.

<sup>268</sup> Sands and Peel, *Principles of international environmental law*, (n 26) 201.

<sup>269</sup> J. Crawford, *Brownlie's Principles of Public International Law* (8th edn, OUP 2012), 356 – 357.

<sup>270</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 147.

<sup>271</sup> ILC, ‘Draft Articles on Prevention of Transboundary Harm from Hazardous Activities’ (Draft Articles on Prevention of Transboundary Harm), Yearbook of the International Law Commission, 2001, Vol. II, Part Two; International Law Association, *First Report of the ILA Study Group on Due Diligence in International Law*, 2014).

<sup>272</sup> *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, (Judgment) [2015] ICJ Rep 665; *Advisory Opinion on Responsibilities and obligations of States with respect to activities in the Area*, 1 February 2011, ITLOS Reports 2011, 10; *Pulp Mills on the River Uruguay Case*, (n 34).

requires a State ‘to exert its best possible efforts to minimise the risk.’<sup>273</sup> As such, the obligation to act with due diligence ‘is not intended to guarantee that significant harm be totally prevented, if it is not possible to do so.’<sup>274</sup> In the case of *Pulp Mills on the River Uruguay*, the ICJ defined acting with due diligence as a ‘State is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State.’<sup>275</sup> It can be seen from these expressions that the responsibility to act with due diligence is an obligation of conduct, since States are not required to achieve a result, but to behave in a particular way.

If the obligation to act with due diligence does not require a State to entirely prevent harm, what is the threshold of harm required to trigger this obligation? As mentioned above, the prevention principle and the obligation to act with due diligence oblige States to prevent significant transboundary harm. It is suggested that ““significant” is more than “detectable” but need not be “serious” or “substantial””.<sup>276</sup> However, what counts as ‘significant’ is considered on a case-by-case basis, which suggests that there may be a list of activities subject to the duty to act with due diligence. In fact, there is not, but the ILC provides a general idea of two types of activities that may be subject to the due diligence obligation, one of which ‘is where there is a low probability of causing disastrous harm. This is normally the characteristic of ultra-hazardous activities. The other is where there is a high probability of causing significant harm. This includes activities that have a high probability of causing harm which, while not disastrous, is still significant.’<sup>277</sup>

Due diligence may be problematic because it is not easily satisfied, being a changeable concept. The threshold or standard of due diligence may change over time. ‘What might be considered an appropriate and reasonable procedure, standard or rule at one point in time may not be considered as such at some point in the future. Hence, due diligence in ensuring safety requires a State to keep abreast of technological changes and scientific

---

<sup>273</sup> Draft Articles on Prevention of Transboundary Harm, (n 271) 154 at para. 8.

<sup>274</sup> Ibid, 154 at para. 7.

<sup>275</sup> (n 34) at para. 101.

<sup>276</sup> Ibid, 152 at para. 4.

<sup>277</sup> Ibid, 152 at para. 3.

developments.<sup>278</sup> This was later reaffirmed by the International Tribunal for the Law of the Sea (ITLOS) in its *Advisory Opinion on Responsibilities and Obligations of States with respect to Activities in the Area*.<sup>279</sup>

The ILC provides some guidance for fulfilling this duty. Firstly, the conduct of the State proposing activities that risk causing significant transboundary harm will determine its compliance with this duty.<sup>280</sup> In doing so, the measures to be taken include ‘first, formulating policies designed to prevent significant transboundary harm or to minimise the risk thereof and, secondly, implementing those policies. Such policies are expressed in legislation and administrative regulations and implemented through various enforcement mechanisms.’<sup>281</sup> In addition, the ILC commentary, together with the ITLOS advisory opinion, hints at several measures to be taken in response to the evolving nature of due diligence underpinned by interconnected principles or obligations, including the precautionary principle, an environmental impact assessment (EIA), the duty to cooperate, and the duty to notify, consult and exchange information, all of which are further discussed below.

## **(ii) Prevention Principle and MPLA**

The prevention principle is embedded in the obligation to protect and preserve the marine environment. Apart from being applied as a general principle of international law, it can be seen in Articles 194 and 207 of the LOSC, in which States are required to ‘prevent’, reduce, and control marine pollution, including MPLA.

However, there are certain limitations to the prevention principle and due diligence obligation in terms of preventing, reducing, and controlling MPLA. As discussed above, it is important that the application of the duty to act with due diligence targets activities that have the potential to cause significant transboundary harm; therefore, it excludes activities that have ‘a very low probability of causing significant transboundary harm’.<sup>282</sup>

---

<sup>278</sup> Ibid, 154 at para. 11.

<sup>279</sup> *Advisory Opinion on Responsibilities and obligations of States with respect to activities in the Area*, (n 272).

<sup>280</sup> Draft Articles on Prevention of Transboundary Harm, (n 271) 154 at para 7.

<sup>281</sup> Ibid, 154 at para. 10.

<sup>282</sup> Ibid, 152 at para. 3.

In effect, Duvic-Paoli and Viñuales point out that it may fail to address those activities that create pollution with significant harm on a cumulative basis<sup>283</sup> and this is evidently the case for almost all MPLA source-categories. Although MPLA source-categories, such as radioactive substances from nuclear power plant activities, may well be covered by both international regulations of this issue and the prevention principle, most of the activities that cause MPLA *per se* do not create significant harm at the time the pollutants are released, but when they accumulate in the ocean. Agricultural activities, household waste, marine litter or urban development that mobilises sediment and poses significant harm to the marine environment through the accumulation of pollutants at sea are omitted from the equation. This makes it extremely difficult to understand the complex nature of these MPLA source-categories and to establish a causal relationship between the polluter and MPLA.<sup>284</sup> Therefore, it is insufficient to rely on the responsibility not to cause significant harm and the duty to act with due diligence to address the pollution of the marine environment by MPLA.

Although the prevention principle contains a loophole, it still applies to certain source-categories of MPLA. In addition, it influences the establishment of laws, regulations, and other measures necessary for States to deal with MPLA. Therefore, the prevention principle, including its obligation to act with due diligence, will be considered in this thesis for the purpose of interpreting Article 207 of the LOSC.

### iii. Precautionary Principle

The precautionary principle cannot be entirely separated from the duty to act with due diligence, since it helps a State to more diligently deal with scientific uncertainty and the risk of significant transboundary harm.<sup>285</sup> According to the ILC, acting with due

---

<sup>283</sup> Duvic-Paoli and Viñuales, 'Principle 2 *Prevention*', (n 246) 117.

<sup>284</sup> Tanaka, 'Regulation of Land-Based Marine Pollution in International Law: A Comparative Analysis Between Global and Regional Legal Frameworks', (n 15).

<sup>285</sup> The precise term of this concept is still debatable. This work uses the term 'principle' in a neutral sense. For a discussion on precaution, *inter alia*, see Arie Trouwborst, 'The Precautionary Principle in General International Law: Combating the Babylonian Confusion' (2007) 16 *Review of European Community & International Environmental Law* 185; Arie Trouwborst, *Precautionary Rights and Duties of States* (Martinus Nijhoff Publishers 2006); Nicolas De Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules* (OUP 2002); David Freestone, 'Caution or Precaution: "A Rose by Any Other Name..."' (2000) 10 *Yearbook of International Environmental Law* 25; Owen McIntyre and Thomas

diligence ‘could involve, *inter alia*, taking such measures as are appropriate by way of abundant caution, even if full scientific certainty does not exist, to avoid or prevent serious or irreversible damage.’<sup>286</sup> Hence, it can be argued that the precautionary principle further elaborates the duty to act with due diligence by enabling States to take precautionary measures to protect the environment when faced by risk and scientific uncertainty. However, the legal status and substance of the precautionary principle in international law are still subject to debate.<sup>287</sup> These are discussed below.

### (i) Legal status and substance

The legal status of the precautionary principle in international law currently remains unsettled. However, a good starting point to understand the precautionary principle is Principle 15 of the Rio Declaration, in which it is stipulated that:

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

---

Mosedale, 'The Precautionary Principle as a Norm of Customary International Law' (1997) 9 *Journal of Environmental Law* 221.

<sup>286</sup> Draft Articles on Prevention of Transboundary Harm, (n 271) 155 at para. 14.

<sup>287</sup> Trouwborst, 'The Precautionary Principle in General International Law: Combating the Babylonian Confusion' (n 285); Trouwborst, *Precautionary Rights and Duties of States*, (n 285); Sands and Peel, *Principles of international environmental law*, (n 26) 217 – 228; Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 152 – 166; Freestone, 'Caution or Precaution: "A Rose by Any Other Name..."', (n 285); David Freestone and Ellen Hey, 'Origin and Development of the Precautionary Principle' in David Freestone and Ellen Hey (eds), *The Precautionary Principle and International Law: The Challenge of Implementation* (Kluwer International 1996), 3 – 18; James Cameron and Juli Abouchar, 'The Status of the Precautionary Principle in International Law' in David Freestone and Ellen Hey (eds), *The Precautionary Principle and International Law: The Challenge of Implementation* (Kluwer International 1996), 29 – 52; De Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, (n 285) 191 – 224; Ulrich Beyerlin, 'Different Types of Norms in International Environmental Law: Policies, Rules, and Principles' in Daniel Bodansky, Jutta Brunnee and Ellen Hey (eds), *Oxford Handbook of International Environmental Law* (OUP 2007), 425 – 488; Daniel Bodansky, 'Deconstructing the Precautionary Principle' in David D Caron and Harry N Scheiber (eds), *Bringing New Law to Ocean Waters* (Brill 2004); Jon M Van Dyke and Sherry P Broder, 'International Agreements and Customary International Principles Providing Guidance for National and Regional Ocean Policies' in Biliana Cicin-Sain, David L VanderZwaag and Mariam C Balgos (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge 2015), 56 – 57.

Based on a literal reading of Principle 15 above, States are required to recognise the scientific uncertainty of the causal relationship between the proposed activities and their potentially serious or irreversible harm and ensure that the necessary measures are taken to prevent or minimise such harm. This proactive approach is designed to ensure that the environment is better and fully protected from potentially harmful activities.

The precautionary principle has been recognised in many international instruments related to the environment, including, *inter alia*, the UNFCCC,<sup>288</sup> the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention),<sup>289</sup> Stockholm Convention on Persistent Organic Pollutants (POPs Convention),<sup>290</sup> Cartagena Protocol to the CBD on Bio Safety,<sup>291</sup> and the Treaty on the Functioning of the European Union.<sup>292</sup> Despite such widespread recognition, academic opinion of the legal status and content of the precautionary principle is still divergent. For the latter, differences especially exist in the threshold of harm required by the principle and whether or not the burden of proof is shifted to the State proposing the potential harmful activities to prove that those activities will not significantly harm the environment.

International judicial institutions such as the ICJ, the WTO Appellate Body, and the ITLOS, have been reluctant to determine the legal status of the precautionary principle.<sup>293</sup> While the EC, the US, and Canada disputed the legal status of the principle in the *EC Beef Hormones* case,<sup>294</sup> the WTO Appellate Body did not find it necessary to rule on it

---

<sup>288</sup> (n 74) Article 3.

<sup>289</sup> (Adopted 17 March 1992; entered into force 6 October 1996) 1936 UNTS 269, Article 2 (5).

<sup>290</sup> (Adopted 22 May 2001; entered into force 17 May 2004) 2256 UNTS 119, Preambular provision, and article 1.

<sup>291</sup> (adopted 29 January 2000; entered into force 11 September 2003) 2226 UNTS 208, preambular provision, and Article 1.

<sup>292</sup> C 326/134 OJ (26 October 2012), Article 191.

<sup>293</sup> *Pulp Mills on the River Uruguay Case*, (n 34); *European Communities — Measures Concerning Meat and Meat Products (Hormones)* (16 January 1998) WT/D26/AB/R; *Southern Bluefin Tuna (New Zealand v. Japan; Australia v. Japan)*, Provisional Measures, Order of 27 August 1999, ITLOS Reports 1999; *MOX Plant Case*, (n 35); *Land Reclamation in and around the Straits of Johor Case* (n 36); See also, Laurence Boisson de Chazournes, 'Precaution in International Law: Reflection on its Composite Nature' in Tafsir M Ndiaye and Rudiger Wolfrum (eds), *Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas A Mensah* (Martinus Nijhoff 2007), 21 – 34; Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 160.

<sup>294</sup> *Ibid*, *European Communities — Measures Concerning Meat and Meat Products (Hormones)*, para. 122.

before proceeding to other parts of its award.<sup>295</sup> The ICJ had an opportunity to deal with the precautionary principle in the *Pulp Mills on the River Uruguay* case, and although it pronounced that the ‘precautionary approach’ may be relevant to the interpretation and application of the provisions of the Statute,<sup>296</sup> it did not clarify how the precautionary principle could be involved in such a matter. The most liberal pronouncement related to the precautionary principle arguably came from the ITLOS when the Tribunal had the opportunity to deal with the principle in two cases. In the *Southern Bluefin Tuna* case, it ordered the parties to act with ‘prudence and caution’ in ensuring no significant harm to the environment and preserving Bluefin tuna stocks.<sup>297</sup> In addition, it dealt with the precautionary principle more expressively in the *Advisory Opinion on Responsibilities and obligations of States with respect to activities in the Area*, when it made the following ruling;

‘.... [T]he precautionary approach has been incorporated into a growing number of international treaties and other instruments, many of which reflect the formation of Principle 15 of the Rio Declaration. In the view of the Chamber, this has initiated a trend towards making this approach part of customary international law...’<sup>298</sup>

The question that may arise from the above jurisprudence of the relevant judicial institutions is why the courts and tribunals have been reluctant to determine the precautionary principle’s legal status. The answer to this question concerns the unsettled substance of the principle, namely, the threshold of harm and the burden of proof, both of which are discussed below.

---

<sup>295</sup> Ibid, para. 120 – 123. It opined that ‘...the status of the precautionary principle in international law continues to be the subject of debate ... Whether it has been widely accepted by Members as a principle of *general or customary international law* appears less than clear. We consider, however, that it is unnecessary and probably imprudent, for the Appellate Body in this appeal to take a position on this important, but abstract, question.’

<sup>296</sup> *Pulp Mills on the River Uruguay Case*, (n 34) at para. 164.

<sup>297</sup> *Southern Bluefin Tuna Case*, (n 293) at para. 77 – 80. See also separate opinion *per* Laing J. at para. 21 and *per* Shearer J.; *MOX Plant Case* (n 35) at para. 84; *Land Reclamation in and around the Straits of Johor Case* (n 36) at para. 99.

<sup>298</sup> *Advisory Opinion on Responsibilities and Obligations of States with respect to Activities in the Area*, (n 272) at para. 135.

### a. Threshold of harm

Three different thresholds of harm have been utilised in international legal instruments for the precautionary principle; (i) unspecified threshold; (ii) significant harm to the environment; and (iii) serious and irreversible harm to the environment. This divergence has the effect of making the substance of the precautionary principle inconclusive. To begin the discussion, the meaning of the term ‘significant’ should be recalled to establish the different degrees among these three thresholds. As the ILC notes, a ‘significant’ threshold is understood as ‘something more than ‘detectable’, but it need not be at the level of ‘serious’ or ‘substantial’ and the determination of the severity depends on the specific circumstances of the case.<sup>299</sup> The threshold of serious or irreversible harm is the most onerous based on this definition, whereas the unspecified threshold is on the opposite side of the equation leaving the threshold of significant harm between them.

The unspecified threshold of the precautionary principle is in the form of the requirement of the ‘reason to believe’ that the release (of pollution) directly or indirectly will harm the environment. Most of the instruments in this category predate the Rio Conference, which explains why the threshold differs from the one recognised above in Principle 15 of the Rio Declaration. This threshold is applied by the 1992 Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention),<sup>300</sup> as well as the London Dumping Convention, in which the precautionary principle is referred to as follows;

“... the Contracting Parties shall apply a precautionary approach to environmental protection from dumping of wastes or other matter whereby appropriate preventive measures are taken *when there is reason to believe* that wastes or other matter introduced into the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects.”<sup>301</sup>  
[emphasis added]

<sup>299</sup> Draft Articles on Prevention of Transboundary Harm, (n 271) 152.

<sup>300</sup> (Adopted 9 April 1992; entered into force 17 January 2000) 1507 UNTS 167, Article 3(2).

<sup>301</sup> (n 267). London Dumping Convention was amended by the 1996 Protocol. The precautionary principle is referred to in Article 3(1) of the Protocol.

It should be noted that the precautionary principle creates a fundamental change to the London Convention regime in dealing with dumping, namely, it changes the approach from ‘Permitted unless Prohibited’ to ‘Prohibited unless Permitted.’<sup>302</sup> The same threshold has been recognised and can be seen in the declarations from the International Conference on the Protection of the North Sea.<sup>303</sup>

The second threshold is that of ‘significant harm to the environment’, which can be found in several international binding and non-binding instruments. Of particular importance are the 1992 Convention on Biological Diversity, in which it is stipulated in a preambular provision that the precautionary principle shall be applied ‘where there is a threat of significant reduction or loss of biological diversity...’, and the 1995 Protocol to the Barcelona Convention concerning Specially Protected Areas and Biological Diversity in the Mediterranean, where the application of the precautionary principle will be triggered at the same threshold, namely, ‘where there is a threat of significant reduction or loss of biological diversity.’<sup>304</sup> Examples of other non-binding instruments that specify this threshold include the 2002 Declaration on Principles of International Law in the Field of Sustainable Development of the International Law Association, which requires States to ‘avoid human activity which may cause significant harm to human health, natural resource, or ecosystem.’<sup>305</sup>

---

<sup>302</sup> See also, C. Redgwell, ‘From Permission to Prohibition: the 1982 Convention on the Law of the Sea and Protection of the Marine Environment’ in David Freestone, Richard A Barnes and David Ong (eds), *The Law of the Sea; Progress and Prospects* (OUP 2006), 180 – 191; Elizabeth A Kirk, ‘The 1996 Protocol to the London Dumping Convention and the Brent Spar’ (1997) 46 *International & Comparative Law Quarterly* 957.

<sup>303</sup> The London Declaration of the Second International Conference on the Protection of the North Sea (1987), [http://www.ospar.org/site/assets/files/1239/2nsc-1987\\_london\\_declaration.pdf](http://www.ospar.org/site/assets/files/1239/2nsc-1987_london_declaration.pdf) accessed 13 February 2017. It stipulated that; “...VII. *Accepting* that, in order to protect the North Sea from possible damaging effects of the most dangerous substances, a precautionary approach is necessary which may require action to control inputs of such substances even before a causal link has been established by absolutely clear scientific evidence...” See also, 1990 Ministerial Declaration of the Third International Conference on the Protection of the North Sea; the 1995 Ministerial Declaration of the Fourth International Conference on the Protection of the North Sea; the 2002 Ministerial Declaration of the Fifth International Conference on the Protection of the North Sea; and the 2006 Ministerial Declaration of the Sixth International Conference on the Protection of the North Sea. All <<http://www.ospar.org/about/international-cooperation/north-sea-conferences/ministerial-declarations>> accessed 13 February 2017.

<sup>304</sup> (Adopted 10 June 1995; entered into force 12 December 1999) 2102 UNTS 203, preamble provision.

<sup>305</sup> See also, Trouwborst, *Precautionary Rights and Duties of States*, (n 285) 49.

Many international instruments employ the threshold of ‘serious or irreversible harm to the environment’. For example, Principle 15 of the Rio Declaration, Agenda 21,<sup>306</sup> and the GPA<sup>307</sup> embrace the threshold of ‘threats of serious or irreversible harm’. Binding instruments that adopt this threshold include, *inter alia*, the 1976 Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention),<sup>308</sup> the 1980 Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources (Athens Protocol)<sup>309</sup> as amended by the 1996 Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (MPLA Protocol to Barcelona Convention),<sup>310</sup> the UNFCCC,<sup>311</sup> the 2000 Cartagena Protocol to the CBD on Biosafety,<sup>312</sup> and the POPs Convention.<sup>313</sup>

The existence of these different thresholds suggests that States lack a common understanding of the substance and application of the precautionary principle and this complicates the legal status of this principle in international law. Nonetheless, the different thresholds do not render the precautionary principle inapplicable. It still shapes the conduct of States and ensures that they comply with the duty to act with due diligence by raising the level of prudence and caution of those engaged in potentially harmful activities.<sup>314</sup> However, in the midst of the inconsistencies, it may be possible to conclude at this stage that the unsettled threshold of harm confirms the fact that the legal status of the precautionary principle remains elusive and State practice is needed to develop the threshold of harm and ultimately clarify both the application and legal status of the precautionary principle.

---

<sup>306</sup> (n 29) at Ch. 17.22.

<sup>307</sup> (n 31) at para. 24.

<sup>308</sup> (Adopted 16 February 1976; entered into force 12 February 1978) 1102 UNTS 44, Article 4 (3) (a). The treaty was amended 1995 and renamed as the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean.

<sup>309</sup> (Adopted 17 May 1980; entered into force 17 June 1983) 1328 UNTS 119.

<sup>310</sup> *Ibid.*, (Adopted 7 March 1996; entered into force 18 May 2006) <[http://wedocs.unep.org/bitstream/handle/20.500.11822/7096/Consolidated\\_LBS96\\_ENG.pdf?sequence=5&isAllowed=y](http://wedocs.unep.org/bitstream/handle/20.500.11822/7096/Consolidated_LBS96_ENG.pdf?sequence=5&isAllowed=y)> accessed 7 August 2017, preamble provision.

<sup>311</sup> (n 74) at Article 3(3).

<sup>312</sup> (n 291) at preamble provision, and Article 1.

<sup>313</sup> (n 290) at Article 1.

<sup>314</sup> Jon M Van Dyke, 'The Evolution and International Acceptance of the Precautionary Principle' in David D Caron and Harry N Scheiber (eds), *Bringing New Law to Ocean Waters* (Martinus Nijhoff 2004), 378.

## b. Burden of proof

Another substantive aspect is the question of whether or not the precautionary principle shifts the burden of proof to the State that is alleged to perpetrate the harmful activities. This argument has been made by States that have appeared before international judicial institutions, for example, it was made by Argentina in the *Pulp Mills on the River Uruguay* case.<sup>315</sup> The underlying reason for this is that the alleged State is equipped with the relevant information and is better placed to prove that its action or activity will cause no harm to the environment.<sup>316</sup>

There is an emerging trend in multilateral environmental agreements where the reversal of the burden of proof has been adopted by State Parties. These regimes include, *inter alia*, the London Dumping Convention,<sup>317</sup> the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention),<sup>318</sup> the listing procedures under the POPs Convention,<sup>319</sup> and the 2001 IMO Convention on the Control of Harmful Anti-Fouling Systems on Ship (AFS Convention).<sup>320</sup> However, this trend cannot be generalised as an accepted practice of the whole international community. So far, the reversal of the burden of proof has not been accepted by international judicial institutions, such as the ICJ and the ITLOS. The former had an opportunity to decide the issue in the *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v.*

---

<sup>315</sup> The precautionary principle requires those proposing the potentially-harmful activities to prove that the activities do not constitute threats of significant, serious, or irreversible damage to the environment or to prove that their activities are safe. See, *Pulp Mills on the River Uruguay Case*, (n 34) at para. 160.

<sup>316</sup> For the discussion of this debates, see. Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 158 – 159; Sands and Peel, *Principles of international environmental law*, (n 26) 222 – 225; Trouwborst, 'The Precautionary Principle in General International Law: Combating the Babylonian Confusion', (n 285) 192 – 193; Bodansky, 'Deconstructing the Precautionary Principle', (n 287) 390.

<sup>317</sup> (n 267); Redgwell, 'From Permission to Prohibition: the 1982 Convention on the Law of the Sea and Protection of the Marine Environment', (n 302) 180 – 191; Kirk, 'The 1996 Protocol to the London Dumping Convention and the Brent Spar' (n 302).

<sup>318</sup> (Adopted 22 September 1992; entered into force 25 March 1998) 2354 UNTS 67, Annex II; See also, Sands and Peel, *Principles of international environmental law*, (n 26) 223.

<sup>319</sup> (n 290) at Article 8.

<sup>320</sup> UKTS No.3 (2012) (adopted 5 October 2001; entered into force 17 September 2008), <[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/236102/8284.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/236102/8284.pdf)> accessed 7 March 2017; See also, De Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, (n 285) 99.

*France*) case,<sup>321</sup> when New Zealand relied on the precautionary principle to argue that the burden of proof lay with the French government to prove that the test would cause no harm to the marine environment.<sup>322</sup> However, the ICJ did not touch upon the issue regarding the burden of proof, leaving two judges to express their view in their dissenting opinion.<sup>323</sup> Judge Weeramantry referred to ‘the principle of environmental law under which, where environmental damage of any sort is threatened, the burden of proving that it will not produce the damaging consequences complained of is placed upon the author of that damage’ and highlighted the difficulty for potentially affected States to establish such a case.<sup>324</sup> This argument was shared by Judge Palmer in the same case.<sup>325</sup> However, in the *Pulp Mills on the River Uruguay* case, the Court adjudicated that ‘while a precautionary approach may be relevant in the interpretation and application of the provisions of the Statute, it does not follow that it operates as a reversal of the burden of proof.’<sup>326</sup> This position has also been maintained by the ITLOS. As Judge Laing observed in his separate opinion, the ITLOS has not allowed the reversal of the burden of proof in its jurisprudence when dealing with cases related to the precautionary principle.<sup>327</sup> To this end, it may be appropriate to say that the application of the precautionary principle regarding the burden of proof has been developed in specific regimes. However, its generalisation to all areas of international law related to the environment has yet to be affirmed by relevant international judicial institution.

## (ii) Precautionary principle and MPLA

The adoption of the LOSC predates the emergence of the precautionary principle; therefore, it is no surprise that the LOSC does not mention the principle in any of its provisions. However, this does not mean that the precautionary principle is irrelevant to

---

<sup>321</sup> *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court’s Judgment of 20 December 1974 in the Nuclear Tests Case (New Zealand v. France)*, [1995] ICJ Rep 288.

<sup>322</sup> *Ibid*, at para. 298. See also, New Zealand’s Request for Examination of the Situation (*Application instituting Proceedings*) (9 May 1973) <<http://www.icj-cij.org/en/case/97/institution-proceedings>> accessed 6 August 2017, at para. 105.

<sup>323</sup> See also *Gabčikovo-Nagymaros Project Case*, (n 33). The Court did not decide on the issue precautionary principle despite the fact that both parties relied on such principle in support of their claims.

<sup>324</sup> *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court’s Judgment of 20 December 1974 in the Nuclear Tests Case*, (n 321) per Weeramantry J. at 348.

<sup>325</sup> *Ibid*, per Palmer J. at 411 – 412 at para. 87 – 91.

<sup>326</sup> *Pulp Mills on the River Uruguay Case*, (n 34) at para. 164.

<sup>327</sup> *Southern Bluefin Tuna Case*, (n 293); See also separate opinion per Laing J. at para. 21; *MOX Plant Case*, (n 35); *Land Reclamation in and around the Straits of Johor Case*, (n 36).

the LOSC or indeed the protection of the marine environment from MPLA. This principle influences the adoption of measures necessary to protect and preserve the marine environment under the LOSC and MPLA is no exception.<sup>328</sup> The concept of uncertainty is inherent in the definition of the marine pollution, since it means ‘the introduction by man, directly or indirectly, of substances or energy into the marine environment, ... which results or *is likely to result* in such deleterious effects as harm ...’ to the marine environment.<sup>329</sup> The uncertainty of whether this introduction of substances or energy into the marine environment will cause ‘pollution of the marine environment’ brings the precautionary principle into play. Therefore, in the context of MPLA, the precautionary principle is also applied to support the duty to act with due diligence to ensure the prevention of harm and ultimately, the protection of the marine environment.<sup>330</sup> As Rieu-Clarke rightly observes, the precautionary principle can be ‘a logical extension’ of the obligation to act with due diligence to protect the environment.<sup>331</sup>

For this reason, it is unsurprising that the precautionary principle has become one of the guiding principles for States in combating MPLA and has been expressly recognised in several related key international instruments. For example, it was recognised in Agenda 21 that ‘*preventive, precautionary and anticipatory approaches*’ should be applied for the prevention, reduction, and control of marine pollution, including MPLA, ‘so as to avoid degradation of the marine environment, as well as to reduce the risk of long-term or irreversible adverse effects upon it.’<sup>332</sup> Of particular relevance is the recognition of the precautionary principle by the GPA,<sup>333</sup> the global instrument specifically designed to deal with MPLA. It is recognised that the precautionary principle forms part of the legal and institutional framework of the GPA and that States have agreed that it is necessary to implement preventive, precautionary, and anticipatory approaches to fulfil their duty to prevent, reduce, and control MPLA and avoid the degradation of the marine environment.<sup>334</sup> In addition, several regional instruments such as the OSPAR

---

<sup>328</sup> For specific discussion of the precautionary principle dealing with MPLA, see. Benedicte Sage-Fuller, *The Precautionary Principle in Marine Environmental Law* (Routledge 2013), 182 – 214.

<sup>329</sup> The LOSC, (n 14) Article 1 (1) (4). Emphasis added.

<sup>330</sup> Ibid, Article 194. See the previous section on the prevention principle.

<sup>331</sup> Rieu-Clarke, *International Law and Sustainable Development Lessons from the Law of International Watercourses*, (n 204) 73.

<sup>332</sup> Agenda 21, (n 29) at para.17.22.

<sup>333</sup> The GPA, (n 31).

<sup>334</sup> Ibid, para. 9.

Convention<sup>335</sup> and the Barcelona Convention<sup>336</sup> have accepted the precautionary principle as one of the guiding principles for the protection of the marine environment. Therefore, despite its unclear legal status, it can be said that the precautionary principle plays an important role in the protection of the marine environment and influences the way in which States act to prevent, reduce, and control MPLA. For this reason, it is appropriate to consider the precautionary principle as part of the relevant rules of international law for the interpretation of Article 207 of the LOSC.

#### **iv. Common but Differentiated Responsibilities (CBDR)**

##### **(i) Legal Status and substance**

CBDR is another principle related to the protection of the environment, including the marine environment, which is established in Principle 7 of the Rio Declaration. It 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.’

This example illustrates the fact that CBDR is based on two fundamental premises, the first of which is that all States have a common responsibility to conserve, protect, and restore the health and integrity of the earth’s ecosystem in the spirit of global partnership. Interestingly, as French argues, ‘the notion of commonality [as in common responsibilities] is inevitably based on the customary obligation that all States are responsible for ensuring “activities within their jurisdiction or control” do not damage

---

<sup>335</sup> (n 318) at Article 3 (2)

<sup>336</sup> (n 308) at Article 2 (2) (a).

the environment beyond their own territory<sup>337</sup> as shown in Principles 21 and 2 of the Stockholm and Rio Declarations respectively. This is simply because the duty not to cause significant transboundary harm applies equally to all States.<sup>338</sup> Also, the term ‘spirit of global partnership’ signifies that all States are stakeholders in the global environment and they need to act collectively to ensure that it is maintained.

However, the term ‘common responsibility’ does not mean that all States are bound by the same obligations. As Sands points out, it enables them to participate collectively in ‘international response measures aimed at addressing problems relating to sustainable development,’ but the difference is the way in which those response measures are implemented.<sup>339</sup> This argument leads to another premise of CBDR, namely, that States’ responsibility for the conservation, protection, and restoration of the health and integrity of the earth’s ecosystem may be different based on their diverse contributions to environmental degradation and their different technological and financial capacity to address the problem, as recognised in Principle 7 of the Rio Declaration.<sup>340</sup>

Although the term ‘CBDR’ was formally coined in the Rio Declaration, the idea had existed much longer. CBDR was ‘developed from the application of equity’<sup>341</sup> and the ‘general duty of cooperation’ in general international law.<sup>342</sup> The concept was recognised during the Stockholm Conference and reflected in Principle 23 of the Stockholm Declaration as ‘...the systems of values prevailing in each country, and the extent of the applicability of standards which are valid for the most advanced countries, but which

---

<sup>337</sup> Ducan French, 'Developing States and International Environmental Law: The Importance of Differentiated Responsibilities' (2000) 49 *International and Comparative Law Quarterly* 35-45; Lavanya Rajamani, *Differential Treatment in International Environmental Law* (OUP 2006), 116.

<sup>338</sup> Ibid, French, 'Developing States and International Environmental Law: The Importance of Differentiated Responsibilities', 45 – 46.

<sup>339</sup> Philippe Sands, 'International Law in the Field of Sustainable Development' (1994) 65 *British Yearbook of International Law* 344.

<sup>340</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 133. See also, Philippe Cullet, 'Principle 7 Common but Differentiated Responsibilities' in Jorge E Viñuales (ed), *The Rio Declaration on Environment and Development: A Commentary* (OUP 2015), 234. For more discussion on CDBR and equity, see. Philippe Cullet, 'Common but Differentiated Responsibilities' in M. Fitzmaurice, D. Ong and P. Merkouris (eds), *Research Handbook on International Environmental Law* (Edward Elgar 2010), 161 – 181; Christopher D Stone, 'Common but Differentiated Responsibilities in International Law' (2004) 98 *American Journal of International Law* 276.

<sup>341</sup> Sands and Peel, *Principles of international environmental law*, (n 26) 233.

<sup>342</sup> Cullet, 'Principle 7 Common but Differentiated Responsibilities', (n 340) 234.

may be inappropriate and of unwarranted social cost for the developing countries.<sup>343</sup> Principles 6 and 11 of the Rio Declaration, together with Principle 7, recognise ‘the special situation and needs of developing countries’ and their different capacity to cope with environmental problems respectively. The best-known example prior to Rio is the Montreal Protocol to the Vienna Convention, Article 5 of which recognises the special situation of developing countries that produce fewer ozone-depleting substances, which they need for their economic development, by allowing them a longer period for phasing out the regulated substances under the Protocol.<sup>344</sup>

Since its official recognition in the 1992 Rio Conference, CBDR has been formally recognised in various international agreements in diverse forms. Rayamani categorises differential treatments based on CBDR into three categories; (i) differences between developed and developing countries with respect to the central obligation in the treaty; (ii) differences between developed and developing countries with respect to implementation; and (iii) the provision of assistance.<sup>345</sup>

A good example of the first category is found in the UNFCCC<sup>346</sup> which requires different commitments from developed and developing countries. For example, developed countries are required to meet their individual or collective target to reduce greenhouse gas (GHG) emissions, whereas developing countries are required to merely meet some reporting and exchange of information obligations.<sup>347</sup> This can also be seen from the different commitments of the Annex A Parties (developed countries and economy-in-transition countries) to the Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto Protocol) concerning the quantified emission limitation and reduction targets.<sup>348</sup>

---

<sup>343</sup> Stockholm Declaration, (n 210) Principle 23.

<sup>344</sup> (n 222) at Article 5.

<sup>345</sup> Rajamani, *Differential Treatment in International Environmental Law*, (n 337) 93 – 118. Different categorisation is also provided by other commentators, see, for example, Stone, 'Common but Differentiated Responsibilities in International Law', (n 340) 290 – 292.

<sup>346</sup> (n 74) at preambular provision, Articles 3 – 4.

<sup>347</sup> *Ibid*, Article 4 (1) – (2).

<sup>348</sup> (Adopted 11 December 1997; entered into force 16 February 2005), 2303 UNTS 148, Article 3.

The second category concerns differentiation through implementation. Developing countries are granted some leeway in terms of implementing international agreements in recognition of their difficulties and special needs. This can be, *inter alia*, in the CBD.<sup>349</sup> For example, acknowledging the need of financial and technological support for developing countries to fulfil their obligations, Article 6 allows a State to do so ‘*in accordance with its particular conditions and capabilities.*’ Therefore, different States may fulfil the same commitment differently based on their diverse financial, technological, and other pressing needs. The same kind of provisions can be found in the UNFCCC,<sup>350</sup> and in the different periods for phasing out ozone-depleting substances under the Montreal Protocol, as discussed above.

The last category of CBDR differential treatment concerns the provision of assistance whereby developed countries are obliged to provide developing countries with some form of assistance, such as financial or technological. The obvious example is the UNFCCC, in which developed countries are required to provide financial resources to developing countries to enable them to meet their obligations.<sup>351</sup> In addition, whether or not developing countries can effectively fulfil their obligations depends on ‘the effective implementation by the developed countries of their commitment regarding financial resources and technological transfer.’<sup>352</sup> Setting developing countries’ obligations based on those of developed countries is unique to the UNFCCC. This interpretation would not be incompatible with the common responsibilities accepted in CBDR.<sup>353</sup> As mentioned earlier, all States share common responsibilities and duties to protect and preserve the environment under international law. Setting the obligations of developing countries based on those of developed countries highlights the spirit of global partnership and solidarity, and it is this collective action and response of all countries that enables the effective protection and preservation of the marine environment.<sup>354</sup> Differential treatment in the form of providing assistance can be seen in most international environmental agreements relating to the protection of the marine environment from

---

<sup>349</sup> (n 74) at preambular provision, Articles 5 – 6, 16, and 20.

<sup>350</sup> (n 74) at Article 3.

<sup>351</sup> *Ibid*, Article 4 (3) – (4).

<sup>352</sup> *Ibid*, Article 4 (7).

<sup>353</sup> Rajamani, *Differential Treatment in International Environmental Law*, (n 337) 116.

<sup>354</sup> Bimie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 134 – 135.

MPLA including the CBD,<sup>355</sup> the POPs Convention,<sup>356</sup> and more recently, in the Minamata Convention on Mercury (Minamata Convention).<sup>357</sup>

Despite its widespread recognition in major multilateral environmental agreements, the legal status of the CBDR is rather unclear. As Lowe rightly observes, for a norm to have a customary rule status, it must have a norm-creating character and be able to ‘be couched in normative terms.’<sup>358</sup> However, based on its formulation in Principle 7 of the Rio Declaration, apart from the general duty to cooperate for the protection of the marine environment, it is difficult to accredit this principle with a normative term. Hey observes that CBDR cannot qualify as a customary rule ‘given that it cannot apply in an all or nothing fashion,’ but she notes that it is likely to be a principle.<sup>359</sup> Commentators generally take the view that CBDR is not a customary principle.<sup>360</sup>

In Principle 7 of the Rio Declaration, CBDR does not provide the basis for any claim in relation to environmental problems. In a way, CBDR influences the negotiation and manner in which international environmental agreements could be structured in terms of allocating resources and responsibilities. In this sense, as Birnie, Boyle, and Redgwell rightly point out, CBDR ‘is far from being merely soft law, but can be regarded as a ‘framework principle’,<sup>361</sup> which shapes the negotiation and ultimately the structure of international environmental agreements.

## (ii) CBDR and MPLA

Although the LOSC predates the official recognition of CBDR on the international plane, CBDR is, in fact, embedded in the LOSC, particularly with respect to the protection of the marine environment. The recognition of CBDR is implied in the preamble of the

---

<sup>355</sup> (n 74) at Article 20.

<sup>356</sup> (n 290) at preambular provision, Articles 12 – 13.

<sup>357</sup> (n 74) at preambular provision, Article 13

<sup>358</sup> Lowe, 'Sustainable Development and Unsustainable Arguments', (n 213) 24 – 25.

<sup>359</sup> Ellen Hey, 'Common but Differentiated Responsibilities' (2011) Max Planck Encyclopedia of Public International Law, para. 18.

<sup>360</sup> Cullet, 'Principle 7 Common but Differentiated Responsibilities', (n 340) 236; Stone, 'Common but Differentiated Responsibilities in International Law', (n 340) 299; Rajamani, *Differential Treatment in International Environmental Law*, (n 337) 159.

<sup>361</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 135.

LOSC through the term ‘the special interests and needs of developing countries.’ This also becomes particularly obvious in Part XII of the Convention, in which developing countries are entitled to receive scientific and technical assistance,<sup>362</sup> as well as preferential treatment, for the purpose of protecting the marine environment.<sup>363</sup>

CBDR is at heart of the protection of the marine environment in terms of how the ‘global and regional rules, standards and recommended practices and procedures’ related to the prevention, reduction, and control of MPLA are to be adopted. Article 207 of the LOSC requires States to establish such rules, standards, and recommended practices and procedures to take ‘into account characteristic regional features, the economic capacity of *developing States* and their need for economic development.’<sup>364</sup> In addition, CBDR is recognised as being related to the prevention, reduction, and control of MPLA in subsequent international instruments. These include, *inter alia*, Agenda 21,<sup>365</sup> the GPA,<sup>366</sup> and the Manila Declaration on Furthering the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities.<sup>367</sup> On this basis, it is impossible to deny the relevance of CBDR; therefore, it will be considered in the interpretation of Article 207 of the LOSC.

## v. Polluter-Pays principle

### (i) Legal status and substance

The polluter-pays principle is an environmental principle that is widely recognised in the field of environmental protection. The gist of this principle is quite simple on its face. It

---

<sup>362</sup> The LOSC, (n 14) Article 202.

<sup>363</sup> *Ibid*, Article 203.

<sup>364</sup> Emphasis added. See also, Van Dyke and Broder, ‘International Agreements and Customary International Principles Providing Guidance for National and Regional Ocean Policies’, (n 287) 51.

<sup>365</sup> (n 29) at para 17.2.

<sup>366</sup> (n 31) at para 10. ‘As set out in paragraph 17.23 of Agenda 21, States agree that provision of *additional financial resources*, through appropriate international mechanisms, as well as *access to cleaner technologies* and relevant research, would be necessary *to support action by developing countries to implement this commitment.*’ Emphasis added.

<sup>367</sup> UNEP, ‘Report of the third session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities’ (The 3<sup>rd</sup> IGR Report), (26 January 2012) UNEP/GPA/IGR.3/6, Annex. The Manila Declaration emphasises ‘... also *the need to support and enhance developing countries capacity* to manage marine and coastal ecosystem sustainably in the context of the Bali Strategic Plan for Technology Support and Capacity Building, ...’ (emphasis added)

requires the one who pollutes to bear the cost of preventing or controlling the pollution. The polluter-pays principle was introduced by the Organisation for Economic Co-operation and Development (OECD). In its original version, the polluter-pays principle means that ‘the polluter should bear the expenses of carrying out the above-mentioned measures [pollution prevention and control measure] decided by public authorities to ensure that the environment is in an acceptable state.’<sup>368</sup> The polluter-pays principle was not originally introduced as a legal principle; rather, it was an economic principle that was used ‘for allocating costs of pollution prevention and control measures to encourage rational use of scarce environmental resources and avoid distortions in international trade and investment’.<sup>369</sup> The way in which the principle works is through the internalisation of the costs of pollution prevention and/or control in the price of the goods and services resulting from such pollution.<sup>370</sup>

The polluter-pays principle has been increasingly referred to in the field of law related to the protection of the marine environment and adopted in various international instruments, both binding and non-binding. Several international agreements have incorporated polluter-pays as a guiding principle and it was recognised as a general principle of international environmental law in the 1990 International Convention on Oil Pollution Preparedness, Response and Cooperation.<sup>371</sup> Other treaties that have incorporated the principle are the OSPAR Convention,<sup>372</sup> the 1992 Helsinki Convention,<sup>373</sup> Water Convention,<sup>374</sup> and Barcelona Convention.<sup>375</sup> The Rio Declaration is the most influential international non-binding instrument that recognises the polluter-pays principle. Although not clearly delineated, the contents of the principle are embodied in Principle 16 of the Declaration, in which it is stated that ‘national authorities should endeavour to promote the internalisation of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting

---

<sup>368</sup> OECD, Recommendation of the Council on Guiding Principles concerning International Economic Aspects of Environmental Policies (26 May 1972) C (72) 128, para. 4.

<sup>369</sup> *Ibid.*

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

<sup>371</sup> (Adopted 30 November 1990; entered into force 13 May 1995) 1891 UNTS 77, preambular provision.

<sup>372</sup> (n 318) at Article 2.

<sup>373</sup> (n 300) at Article 3.

<sup>374</sup> (n 289) at Article 2.

<sup>375</sup> (n 308) at Article 4.

international trade and investment.’ The European Union (EU) seems to be the most developed regime at the regional level that adopts the polluter-pays principle as part of its environmental law and makes it binding on its Member States.<sup>376</sup> It is also stipulated in Article 192 of the Treaty on the Functioning of the European Union<sup>377</sup> and in several secondary legislations.<sup>378</sup>

Although the polluter-pays principle has been recognised by several international and regional agreements and legislations, its legal status as a principle or rule of international law is still subject to scepticism. The principle was litigated before an international arbitration in the *Rhine Chlorides Arbitration concerning the Auditing of Accounts*.<sup>379</sup> Although the arbitral tribunal recognised its importance for the protection of the environment, the principle was not considered to be part of the general international law.<sup>380</sup> Several international lawyers have different views of its legal status in international law. Sands is reluctant to recognise the polluter-pays principle as a rule of customary international law due to its unsettled interpretation.<sup>381</sup> Beyerlin views it as the most contested legal rule of the EU and the OECD due to several objections to the polluter-pays principle governing inter-state relations,<sup>382</sup> whereas Kravchenko, Chowdhury, and Hossain Bhuiyan see the principle emerging as a customary rule of international law.<sup>383</sup> The ambiguity of its legal status arguably results from the principle’s complex substance. At least two questions remain unanswered by merely reading the

---

<sup>376</sup> For the discussion on the polluter-pays principle in the EU, see Petra E Lindhout and Berthy Van den Broek, 'The Polluter Pay Principle: Guidelines for Cost Recovery and Burden Sharing in the Case Law of the European Court of Justice' (2014) 10 Utrecht Law Review 46; Nicolas De Sadeleer, 'The Polluter-Pays Principle in EU Law - Bold Case Law and Poor Harmonisation' in Inge Lorange Backer, Ole Kristian Fauchald and Christina Voigt (eds), *Pro Natura: festschrift to Hans Christian Bugge* (Universitetsforl 2012).

<sup>377</sup> (n 292).

<sup>378</sup> For example, Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy (EU Water Framework Directive), OJ L 327 (22 December 2000); Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste, OJ L 182 (16 July 1999).

<sup>379</sup> *Case concerning the audit of accounts between the Netherlands and France in application of the Protocol of 25 September 1991 Additional to the Convention for the Protection of the Rhine from Pollution by Chlorides of 3 December 1976 (The Netherland/France) (Rhine Chlorides Arbitration concerning the Auditing of Accounts)*, (2004) 25 RIAA 267.

<sup>380</sup> *Ibid*, para. 103.

<sup>381</sup> Sands and Peel, *Principles of international environmental law*, (26) 228 – 233;

<sup>382</sup> Beyerlin, 'Different Types of Norms in International Environmental Law: Policies, Rules, and Principles', (n 287) 441.

<sup>383</sup> Svitlana Kravchenko, Tareq MR Chowdhury and Jahid Hossain Bhuiyan, 'Principles of International Environmental Law' in Shawkat Alam and others (eds), *Routledge Handbook of International Environmental Law* (Routledge 2014), Ch.3.

principle; (i) Who is considered to be a polluter? and (ii) What cost should be paid by the polluter?<sup>384</sup> It is unlikely that the legal status of the polluter-pays principle will be settled until this complexity is clarified.

### **(ii) Polluter-pays principle and MPLA**

As mentioned earlier, although it was not mentioned in the LOSC, the polluter-pays principle has been recognised by several international agreements related to the protection of the marine environment, including the OSAPR, Helsinki, and Barcelona Conventions. These partly deal with protecting the marine environment from MPLA; thus, the polluter-pays principle applies to the prevention, reduction, and control of MPLA. Although its application at the international or regional levels is still a work in progress, the aims of the polluter-pays principle to increase the efficiency of the use of natural resources and internalise the cost of preventing and controlling pollution can influence and assist the way in which the obligation to prevent, reduce, and control MPLA is implemented. Therefore, noting its unsettled status, the polluter-pays principle is identified as a relevant legal principle for the purpose of interpreting Article 207 of the LOSC.

## **vi. Cooperation**

### **(i) Legal status and substance**

Cooperation generally has its root in the principle of good faith.<sup>385</sup> The term ‘cooperation’ or ‘cooperate’ has not been defined in international law. Wolfrum suggests

---

<sup>384</sup> For more detailed discussion on the polluter-pays principle, see. Hey, *Advanced Introduction to International Environmental Law*, 76 – 78; Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 322 – 326; Eric Thomas Larson, 'Why Environmental Liability Regimes in the United States, the European Community, and Japan Have Grown Synonymous With the Polluter Pays Principle' (2005) 38 *Vanderbilt Journal of Transnational Law* 541; Jonathan Remy Nash, 'Too Much Market? Conflict Between Tradable Pollution Allowances and the "Polluter Pays" Principle' (2000) 24 *Harvard Environmental Law Review* 465; Charles S Pearson, 'Testing the System: GATT + PPP = ? ' (1994) 27 *Cornell International Law Journal* 553; Sanford E Gaines, 'The Polluter-Pays Principle: From Economic Equity to Environmental Ethos' (1991) 26 *Texas International Law Journal* 463.

<sup>385</sup> Peter H Sand, 'Principle 27: Cooperation in a Spirit of Global Partnership' in Jorge E Viñuales (ed), *The Rio Declaration on Environment and Development: A Commentary* (OUP 2015), 617; Sands and Peel, *Principles of international environmental law*, (n 26) 203 – 204; Draft Articles on Prevention of Transboundary Harm, (n 271) 155 – 156.

that it means ‘the voluntary co-ordinated action of two or more States which takes place under a legal regime and serves a specific objective. To this extent, it marks the effort of States to accomplish an objective by joint action, where the activity of a single State cannot achieve the same result.’<sup>386</sup> In the field of international environmental law, cooperation or the obligation to cooperate is vital to the protection of the environment, especially of global commons such as the atmosphere or the ocean.<sup>387</sup> This is simply because the protection of these vast commons and spaces cannot be achieved by a single State alone, but by collective action, and the benefits of such action are shared by all members of the international community.<sup>388</sup> Such collective action can be achieved by the cooperation of States.

The widespread recognition of this obligation allows some international judicial institutions to pronounce that the cooperation or duty to cooperate is part of the general international law. In the context of protecting the marine environment, in the *MOX Plant* case, the ITLOS opined that ‘the duty to cooperate is a fundamental principle in the prevention of pollution of the marine environment under Part XII of the Convention and general international law and that rights arise therefrom which the Tribunal may consider appropriate to preserve under Article 290 of the Convention’<sup>389</sup>. This was later reaffirmed by the same institution in the *Land Reclamation in and around the Straits of Johor* case when the parties were required to cooperate in the exchange of information, monitoring and assessing the risk of land reclamation activities.<sup>390</sup>

In international environmental law, the obligation to cooperate has long been recognised in almost all multilateral environmental agreements and other international declarative instruments. Cooperation was recognised in Principle 24 of the Stockholm Declaration and later reaffirmed in Principles 7 and 27 of the Rio Declaration. In multilateral environmental agreements, cooperation plays a foundational role in enabling States to

---

<sup>386</sup> Rudiger Wolfrum, 'International Law of Cooperation' (2010) Max Planck Encyclopedia of Public International Law, para 2.

<sup>387</sup> Van Dyke and Broder, 'International Agreements and Customary International Principles Providing Guidance for National and Regional Ocean Policies', (n 287) 54.

<sup>388</sup> Jutta Brunnée, 'International Environmental Law and Community Interests: Procedural Aspects' in Eval Benvenisti and Georg Nolte (eds), *Community Obligations in International Law* (Community Obligations in International Law, 2017 (Forthcoming)) <<https://ssrn.com/abstract=2784701>> accessed 6 August 2017.

<sup>389</sup> *MOX Plant Case*, (n 35) para. 82.

<sup>390</sup> *Land Reclamation in and around the Straits of Johor* case, (n 36) para 92.

negotiate and further enhance the development of laws on specific issues. Article 5 of the CBD obliges State parties to cooperate directly among themselves or through a competent international organisation in order to conserve and sustain the use of biological diversity. The obligation to cooperate can also be seen in other regimes that aim to protect the global commons such as the LOSC,<sup>391</sup> the 1985 Vienna Convention for the Protection of the Ozone Layer (Ozone Layer Convention),<sup>392</sup> the UNFCCC,<sup>393</sup> and the Watercourse Convention.<sup>394</sup> The ILC recognised the obligation to cooperate as one of the duties of States in relation to the prevention of transboundary harm<sup>395</sup> and the law on transboundary aquifers.<sup>396</sup>

As Wolfrum notes, cooperation is the voluntary coordinated action of two or more States that serves a specific objective, ‘the significance and value of co-operation depends upon the goal to be achieved’ and, on its own, it ‘has no inherent value.’<sup>397</sup> Thus, if the objective of cooperation is, *inter alia*, the protection of the marine environment, cooperation can serve, together with other international environment principles, as a basis for more concrete obligations, such as the obligations to notify, consult, and exchange information as well as to conduct an environmental impact assessment. These specific obligations are discussed further below.

## (ii) Cooperation and MPLA

As mentioned earlier, cooperation has been recognised as one of the devices that assists States to develop a common understanding and laws to ultimately protect the environment. The LOSC also makes use of cooperation to protect the marine environment. Article 123 requires States bordering enclosed or semi-enclosed seas to cooperate in managing, conserving, exploring and exploiting the living resources and protecting the marine environment. More generally, States are required by the LOSC to cooperate on a global or regional basis to formulate and elaborate relevant international rules, standards and recommended practices and procedures to protect and preserve the

<sup>391</sup> (n 14) at Articles 123, and 197.

<sup>392</sup> (Adopted 22 March 1985; entered into force 22 September 1988) 1513 UNTS 293, Article 2(2).

<sup>393</sup> (n 74) at Articles 3 – 4.

<sup>394</sup> (n 262) Article 5

<sup>395</sup> Draft Articles on Prevention of Transboundary Harm, (n 271), Article 4 at 155 – 156.

<sup>396</sup> *Ibid*, Article 7.

<sup>397</sup> Wolfrum, 'International Law of Cooperation', (n 386) para 2.

marine environment. In terms of MPLA, the fact that it is generated by every State and affects the entire ocean emphasises the need for all States to cooperate in protecting the marine environment from this source of pollution.

In addition, cooperation forms part of the obligation to prevent, reduce and control MPLA, since Article 207 not only requires States to adopt international rules, standards and recommended practices and procedures, but also to harmonise their policies on MPLA at the regional level. It is on this basis that States continue to work together at international and regional levels to find a way to tackle this problem. Although it is non-binding, cooperation enables States to discuss MPLA in various international law conferences and reach some agreements on how to deal with it. This includes some parts of Agenda 21, the Washington Declaration, the GPA and its IGR process.<sup>398</sup> For this reason, as a requirement under general international law, cooperation needs to be considered in the interpretation of Article 207 of the LOSC.

## **vii. Environmental Impact Assessment (EIA)**

### **(i) Legal status and substance**

An EIA is generally a ‘process that produces written statement to be used to guide decision-making, with several related functions.’<sup>399</sup> It informs relevant decision-makers of the potential risks and consequences of proposed projects and the alternatives and any decision taken needs to be based on this information; furthermore, it ensures the right of the affected person to participate in the decision-making process.<sup>400</sup> As such, an EIA is a device that involves both ‘the study of impacts’ and ‘the accompanying process of notification, consultation, and decision-making.’<sup>401</sup> From a technical perspective, EIAs follow ‘an evolving set of practice methodologies that seek to identify and predict environmental outcomes. Best practice in relation to EIAs respond to advances in

---

<sup>398</sup> For more information on the review of the implementation of the GPA, see. <<http://web.unep.org/gpa/who-we-are/governing-gpa>> accessed 27 February 2017.

<sup>399</sup> Sands and Peel, *Principles of international environmental law*, (n 26) 601

<sup>400</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 165. For the study of EIA in international law, see. Neil Craik, *The International Law of Environmental Impact Assessment* (Cambridge Studies in International and Comparative Law, CUP 2008).

<sup>401</sup> Neil Craik, 'Principle 17: Environmental Impact Assessment' in Jorge E Viñuales (ed), *Rio Declaration on Environment and Development: A Commentary* (OUP 2015), 452

scientific knowledge on ecological systems (as well as greater appreciation of the limitations of that knowledge).<sup>402</sup>

This obligation has featured in international environmental law for the past few decades. The notion of utilising EIAs can arguably be traced back to the 1972 Stockholm Declaration. Although implicit, when reading Principles 15 and 18 together, the utilisation of planning and of science and technology encompasses the use of an EIA to avoid having a negative impact on the environment.<sup>403</sup> Twenty years later, the need to conduct an EIA, especially for the protection of the marine environment, was clarified by an obligatory term in Principle 17 of the Rio Declaration, as well as Agenda 21.<sup>404</sup> Several multilateral environmental treaties require an EIA to be conducted to identify potentially significantly harmful activities. Of particular importance are the 1991 Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention),<sup>405</sup> the CBD,<sup>406</sup> and the LOSC.<sup>407</sup>

It has currently been established that States are obliged to conduct an EIA of any proposed activity that may potentially cause significant harm to other States or areas beyond their national jurisdiction. In the *Pulp Mills on the River Uruguay* case, the ICJ declared the following;

‘...it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource. Moreover, due diligence, and the duty of vigilance and prevention which it implies, would not be considered to have been exercised, if a party planning works .... did not undertake an environmental impact assessment on the potential effects of such works...’<sup>408</sup>

---

<sup>402</sup> Ibid.

<sup>403</sup> It is also argued that the EIA can be traced back to Principles 14 and 15. See, Lada Soljan, 'The General Obligation to Prevent Transboundary Harm and Its Relation to Four Key Environmental Principles' (1998) 3 *Austrian Review of International and European Law* 209, 222.

<sup>404</sup> (n 29) at para. 17.5.

<sup>405</sup> (Adopted 25 February 1991; entered into force 10 September 1997) 1989 UNTS 309.

<sup>406</sup> (n 74) at Article 14.

<sup>407</sup> (n 14) at Article 206.

<sup>408</sup> *Pulp Mills on the River Uruguay Case*, (n 34) at para 204.

There are at least two points of this reasoning that need to be substantiated. Firstly, not only does the ICJ recognise the obligation to conduct an EIA as ‘a requirement under international law’ in its own right, but also that an EIA is an environmental tool that can be used to implement the prevention principle and due diligence obligation. This can be seen from the fact that the Court associates the exercise of the due diligence obligation with the conduct of an EIA. An EIA is used at the very early stage of the implementation of the due diligence obligation. The ICJ does not consider whether conducting an EIA is the ‘fulfilment’ of the due diligence obligation, but rather whether or not the due diligence obligation has been exercised. Once it is established that an EIA has been conducted, whether or not it can fulfil the due diligence obligation must be considered as a separate matter.

In addition, the link between prevention, the due diligence obligation and EIAs is recognised by the ILC in its Draft Articles on Prevention of Transboundary Harm as part of the obligation to prevent transboundary harm.<sup>409</sup> In the context of the law of the sea, this was reaffirmed by the ITLOS in the *Advisory Opinion on Responsibility and Obligations of States with respect to Activities in the Area* when the Tribunal held that the ICJ reasoning could be applied to ‘activities with an impact on the environment in an area beyond the limits of national jurisdiction’ including the shared resources and common heritage of mankind.<sup>410</sup> Apart from the above-mentioned cases, the obligation was also subject to international litigation in various cases including the *Gabčíkovo-Nagymaros Project*,<sup>411</sup> *MOX Plant*,<sup>412</sup> and *Land Reclamation in and around the Straits of Johor*<sup>413</sup> before it was given its legal status in the *Pulp Mills on the River Uruguay* case.

Another point is that, although the obligation to conduct an EIA is required under general international law, the ICJ has not determined the substance of an EIA. Instead, it leaves the content of an EIA to be determined by domestic legislation or in the authorisation

---

<sup>409</sup> Draft Articles on Prevention of Transboundary, (n 271) Article 7 at 157 – 159.

<sup>410</sup> (n 272) paras. 147 – 149.

<sup>411</sup> *Gabcikovo-Nagymaros Project Case*, (n 33).

<sup>412</sup> *MOX Plant Case*, (n 35).

<sup>413</sup> *Land Reclamation in and around the Straits of Johor Case*, (n 36).

process of individual projects.<sup>414</sup> On the one hand, it is understandable that the Court should leave it to States to determine the content of EIAs because ‘the discretion granted to States recognises EIA processes will be a product of the unique regulatory and political conditions within each State.’<sup>415</sup> To prescribe too narrowly, or specify the content of an EIA may require a considerable change in national legal systems and could complicate the integration of this requirement into national law.<sup>416</sup> In addition, the content of an EIA can become quickly outdated due to the development of science and technology related to protection from pollution. On the other hand, the reluctance to determine the content leads some lawyers to suggest that the ICJ enables the planning State to determine the content of an EIA in favour of itself and, as a result, fails to protect the rights of the potentially affected States or the environment. In addition, it is a missed opportunity to set an international minimum standard for EIAs.<sup>417</sup> Although States are allowed to prescribe the content of an EIA, the ICJ has provided some indication by stipulating that it should be based on the ‘nature and magnitude of the proposed development project and its likely adverse impact on the environment as well as the need to exercise due diligence in conducting such an assessment.’<sup>418</sup>

Although the ICJ did not determine the content of an EIA, it clarified the relationship between it and other obligations concerning the prevention of transboundary harm, especially due diligence, notification, and consultation. In the *Certain Activities carried out by Nicaragua in the Border Areas and Construction of a Road in along the San Juan River* cases, the ICJ firstly reaffirmed its statement in the *Pulp Mills on the River Uruguay* case that;

‘to fulfil its obligation to exercise due diligence in preventing significant transboundary environmental harm, a State must, before embarking on an activity having potential adversely to affect the environment of another State, ascertain if there is a risk of significant transboundary harm, which

---

<sup>414</sup> *Pulp Mills on the River Uruguay* Case, (n 34) at para. 205.

<sup>415</sup> Craik, 'Principle 17: Environmental Impact Assessment', (n 401) 460

<sup>416</sup> Ibid.

<sup>417</sup> Ilias Plakokefalos, 'Prevention Obligations in International Environmental Law' (2012) 23 Yearbook of International Environmental Law 3, 12 – 14; Owen McIntyre, 'The Preceduralisation and Growing Maturity of International Water Law' (2010) 22 Journal of Environmental Law 475, 495 – 496.

<sup>418</sup> *Pulp Mills on the River Uruguay* Case, (n 34) at para. 205.

would trigger the requirement to carry out an environmental impact assessment.<sup>419</sup>

It then further bridged the obligation to conduct an EIA and comply with the due diligence obligation by ruling that if the EIA ‘confirms that there is a risk of significant transboundary harm, the State planning to undertake the activity *is required, in conformity with its due diligence obligation, to notify and consult* in good faith with the potentially affected States, where that is necessary to determine the appropriate measures to prevent or mitigate that risk.’<sup>420</sup> Although this adds no substance to the EIA itself, it does clarify the content of the due diligence obligation, and therefore the prevention principle, by determining the steps a State has to take to fulfil this obligation. These steps involve three obligations, namely, to conduct an EIA, to notify, and to consult the potentially affected States. This suggests that the latter two obligations (to notify and consult) are contingent upon whether or not the EIA confirms the risk of significant transboundary harm.<sup>421</sup> If so, the State proposing the activity is obliged to notify and consult the potentially affected States regarding such harm. The obligation to notify and consult is discussed later in this chapter.

In the context of the protection of the marine environment, the obligation to conduct an EIA has been further emphasised by the Annex VII Tribunal in *The Matter of the South China Sea Arbitration (Award)*.<sup>422</sup> In this case, the Tribunal held China to have failed to fulfil its obligation under Article 206 of the LOSC regarding its obligation to conduct of an EIA. Not only did the Tribunal reaffirm that the provision encompasses the obligation to conduct an EIA, but it also stressed that the EIA conducted must not be a mere preliminary assessment, but a thorough environmental study.<sup>423</sup> In addition, the Tribunal also stressed that, by Article 206 of the LOSC, the planning State is required to

---

<sup>419</sup> *Construction of a Road in along the San Juan River Case*, (n 272) at para. 104.

<sup>420</sup> *Ibid*, para. 105. Emphasis added.

<sup>421</sup> For a detailed analysis of these obligations, see Brunnée, 'International Environmental Law and Community Interests: Procedural Aspects', (n 388).

<sup>422</sup> *The Matter of South China Sea Arbitration case (Philippines v. China)* (Award) PCA Case No. 2013-19, ICGJ 495 (PCA 2016), 12 July 2016, <<https://www.pcacases.com/web/sendAttach/2086>> accessed 12 January 2018. For comments on the environmental aspects of the case, see. Bernard H Oxman, 'The South China Sea Arbitration Award' (2017) 24 *The University of Miami International and Comparative Law Review* 235; Tim Stephens, 'The Collateral Damage from China's 'Great Wall of Sand' - Environmental Dimensions of the South China Sea Case' (2017) 34 *Australian Yearbook of International Law* 41.

<sup>423</sup> *Ibid*, paras. 988 – 990.

communicate the reports of the EIA results to competent international organisations which will in turn make them available to all LOSC Member States.<sup>424</sup> Although the Tribunal did not further elaborate the substance of the duty to conduct an EIA, the fact that it stressed the duty to communicate the reports of the EIA results to competent international organisation adds transparency and accountability into the relationship between the planning and potentially affected States. Two points can arguably be added at this point. Firstly, for the planning State, the fact that it is obliged to communicate such reports of the EIA results reduces its discretion as to how the EIA should be conducted.<sup>425</sup> Communicating such reports to competent international organisations which will later make such reports available to the other LOSC Member States ultimately results in further scrutiny and cross-examination by not only the potentially affected States but also the others having interests in the protection of the marine environment. As a result, this forces the planning States to be more cautious when conducting the EIA and preparing the EIA results. In effect, this makes it more difficult for the planning State to merely prescribe EIA standards in favour of itself and indirectly ensure a sound EIA process and that sufficient information be accompanied in such reports. For the potentially affected States, this provides an opportunity to examine the EIA process and to initiate consultation regarding the potential significant harm to their States and the environment.

### **(ii) EIA and MPLA**

As briefly mentioned earlier, the obligation to conduct an EIA also applies in the context of the protection of the marine environment. Firstly, the obligation to conduct an EIA for any activity that is likely to cause harm to the marine environment is an obligation of customary law, as was recognised in both the cases of *Pulp Mill on the River Uruguay* and the *Advisory Opinion on Responsibility and Obligations of States with respect to Activities in the Area*. However, there is a loophole in this customary obligation when applied to MPLA, which is that, under customary international law, the obligation to conduct an EIA applies to activities that cause ‘significant harm’ to the marine environment, and although this covers some harmful source-categories of MPLA, it does

---

<sup>424</sup> Ibid, para. 991. See also, LOSC, (n. 14) Article 205.

<sup>425</sup> Maria Gavouneli, 'Protection Standards for the Marine Environment: Updating Part XII of the Law of the Sea Convention?' <<https://ssrn.com/abstract=3073263>> accessed 10 March 2018, 6 – 9.

not cover all of them. Some MPLA source-categories are significantly harmful to the environment by their nature, and as such, an EIA will automatically apply to them. These include, *inter alia*, activities involving radioactive substances such as nuclear power plants or facilities. However, the fact that it only applies to significantly harmful activities omits source-categories that become significantly harmful over time and/or when they are accumulated at sea. This includes sewage, nutrients and marine litter.

In addition, the same threshold is also employed in the LOSC. Every State is obliged to protect and preserve the marine environment and, in doing so, is obliged to prevent, reduce, and control all sources of pollution.<sup>426</sup> Part of the implementation of this obligation is an assessment of the potential effects of activities as established in Article 206. Under this provision, a State shall, as far as possible, assess the potential effects of its planned activity on the marine environment should it find that there are reasonable grounds for believing that this planned activity may cause *substantial* pollution of *or significant* and harmful changes to the marine environment. Thus, it can be said that the obligation to conduct an EIA is limited under general international law and the LOSC. However, this does not mean that EIAs are not required for all source-categories of MPLA because, as mentioned above, some are already subjected to them. In addition, as mentioned earlier in the *Matter of South China Sea Arbitration* case, the LOSC requires States to communicate the report of the EIA results to competent international organisations which will make them available to all States.<sup>427</sup> In this context, it can be argued that the Annex VII Tribunal in the *Matter of South China Sea Arbitration* case stresses the duty to communicate the EIA reports which is the treaty obligation under the LOSC. It is applied together with the general obligation to conduct and EIA under Article 206 of the LOSC under the general international law as embraced in the *Pulp Mills on the River Uruguay* case.<sup>428</sup> Therefore, in terms of its relevance, the obligation to conduct an EIA will also be considered when interpreting Article 207 of the LOSC.

---

<sup>426</sup> The LOSC, (n 14) Articles 192 and 194.

<sup>427</sup> *Ibid*, (n 422) para. 991.

<sup>428</sup> *Ibid*, (n 34) para. 204.

## viii. Obligations to notify, exchange information and consult

### (i) Legal status and substance

The obligations to notify, consult and exchange information are procedural obligations integral to the prevention principle and obligation to cooperate.<sup>429</sup> This set of obligations also forms an essential part of international cooperation and the management of international relations. To begin with the obligation to notify, in the *Corfu Channel* case, the ICJ held that the obligation to prevent harm included the obligation to notify of imminent danger.<sup>430</sup> This obligation is based on ‘certain general and well-recognised principles, namely; elementary considerations of humanity, even more exacting in peace than war; the principle of maritime communication; and every State’s obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States.’<sup>431</sup> Later, in the *Pulp Mills on the River Uruguay* case, the ICJ further clarified the way in which the obligation to notify should be fulfilled, namely, that it should not only be performed as early as ‘at the stage when the relevant authority has had the project referred to it with the aim of obtaining initial environmental authorisation and before granting of that authorisation’<sup>432</sup> but States are also required to ‘look afresh at the effects on the environment’ of the operation of the activities.<sup>433</sup> Thus, it is a continuing obligation to notify a potentially affected State of harm when such activities are being operated.

Further to the obligation to notify potential harm, a State is required to exchange information regarding such potential harm for the purpose of preventing it. As a logical consequence, the notification should be accompanied by relevant information of the harm that may potentially be caused by the proposed activity.<sup>434</sup> An exchange of information enables the relevant States to assess the risk and harm from their perspective and provides a basis for further consultation and negotiation to adopt preventive

---

<sup>429</sup> For a historical review of these obligation, see Mari Kayano, 'The Significance of Procedural Obligations in International Environmental Law: Sovereignty and International Co-operation' (2011) 54 *Japanese Yearbook of International Law* 97.

<sup>430</sup> *Corfu Channel Case*, (n 251) at 22.

<sup>431</sup> *Ibid.*

<sup>432</sup> *Pulp Mill on the River Uruguay Case*, (n 34) at para. 105.

<sup>433</sup> *Gabčíkovo-Nagymaros Project Case*, (n 33) at para. 140.

<sup>434</sup> Draft Articles on Prevention of Transboundary Harm (n 271) Article 9, 160 at para. 9.

measures, and ultimately reach a meaningful solution to prevent pollution. Thus, in the *Pulp Mills on the River Uruguay* case, Uruguay was held in breach of the obligation to notify the plan to Argentina, since it had failed to submit sufficient relevant information for an impact assessment by Argentina. The ICJ ruled that the notification of relevant information enables ‘the notified party to participate in the process of ensuring that the assessment is complete, so that it can then consider the plan and its effects with a full knowledge of the facts.’<sup>435</sup>

The obligation to exchange information appears in various contexts of international environmental law. According to Plakokeflaros, it appears in certain agreements and functions to resolve global environmental problems, as in the case of climate change and transboundary air pollution.<sup>436</sup> An exchange of information can foster cooperation between States to protect shared resources, for example, international watercourses as well as transboundary harm,<sup>437</sup> including the marine environment. In the *MOX Plant* case, the ITLOS ruled that the obligation to exchange information is part of the duty to cooperate and is fundamental to the principle of prevention, since exchanging information about risk or the harmful effects of the activities will help to ‘devise ways to deal with them.’<sup>438</sup>

The last procedural obligation to discuss is the obligation to consult the potentially affected States regarding the potential harm. Once the involved States have been notified and information has been exchanged, they will begin a mutual consultation. The obligation is underpinned by the duty to cooperate, a fundamental principle of international law which is recognised by international judicial institutions.<sup>439</sup> This is also evidently reflected in Principle 19 of the Rio Declaration, as follows;

“States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a

---

<sup>435</sup> *Pulp Mill on the River Uruguay Case*, (n 34) at para.119.

<sup>436</sup> Plakokefalos, 'Prevention Obligations in International Environmental Law', (n 417) 15 – 20.

<sup>437</sup> Ibid.

<sup>438</sup> *MOX Plant Case*, (n. 35) at para. 82.

<sup>439</sup> Ibid. *Land Reclamation in and around the Straits of Johor Case*, (n 36) at para. 90.

significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.”

It can be seen from the above that consultation entails an attempt to balance the interests of all the relevant States, namely, the utilisation of natural resources by the planning State and the environmental integrity of the potentially affected States.<sup>440</sup> Therefore, it must be done in good faith and initiated at an early stage, arguably prior to the initiation of the project, and continued throughout the project.<sup>441</sup> According to the ILC, relevant States ‘must enter into consultations in good faith and must take into account each other’s legitimate interests.’ They ‘should consult each other with a view to arriving at an acceptable solution regarding the measures to be adopted to prevent significant transboundary harm, or at any event to minimise the risk thereof.’<sup>442</sup> However, there is no guarantee that consultation will always result in the potentially affected States’ authorisation or consent to the proposed activity.<sup>443</sup> However, not consulting potentially affected States on the proposed activity can be ‘strong evidence of the failure to protect other States from such harm.’<sup>444</sup>

### **(ii) Obligation to notify, exchange information and consult regarding MPLA**

Notification of potential harm is not only a customary obligation, but it also has been employed in multilateral environmental agreements,<sup>445</sup> especially in the LOSC, where Articles 198 and 206 require a State to notify potentially affected States when ‘the marine environment is in imminent danger of being damaged or has been damaged by pollution’. Exchange of information is also required by the LOSC in Article 200, in which States

---

<sup>440</sup> *Lac Lanoux* case in G. Handl, *International Environmental Law* (Regional Courses in International Law: Study Material Part X, Codification Division of the United Nations Office of Legal Affairs 2013), 75 “A State wishing to do that which will affect an international watercourse cannot decide whether another State’s interest will be affected; the other State is the sole judge of that and has the right to information on the proposals. *Consultations and negotiations between the two States must be genuine, must comply with the rules of good faith and must not be mere formalities.*” [emphasis added]; Draft Articles on Prevention of Transboundary Harm (n 271), Article 9 at 160 – 161.

<sup>441</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 177.

<sup>442</sup> Draft Articles on Prevention of Transboundary Harm (n 271) Article 9 at 160.

<sup>443</sup> *Lac Lanoux* case in Handl, *International Environmental Law*, (n 440) 75.

<sup>444</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 177.

<sup>445</sup> For example, the Espoo Convention, (n 405) Article 3; the Watercourse Convention, (n 262) Article 12; Draft Articles on Prevention of Transboundary Harm (n 271) Article 8 at 159 – 160.

are required to exchange information on the pollution of the marine environment, including that which relates to MPLA. Although implicit, the obligation to consult is arguably part of the general obligation to cooperate at an appropriate level to protect the marine environment.<sup>446</sup> In the context of protecting the marine environment from MPLA, apart from being an obligation under general international law as discussed above, it must be considered as a general obligation of States when dealing with MPLA. Article 207 of the LOSC seems to include the use of these obligations to require States to adopt ‘laws and regulations’ as well as ‘other measures’ to prevent, reduce, and control MPLA.<sup>447</sup> For this reason, the obligations to notify, exchange information and consult forms part of the relevant rules of international law and will thus also be considered for the interpretation of Article 207 of the LOSC.

### III. Conventional rules of international law – The LOSC

The potentially relevant rules of international law under Article 31 (3) (c) of the VCLT not only include the customary and/or general rules of international law, but also treaty rules. This means that potentially relevant international agreements shall be included when interpreting a treaty. As mentioned in the previous chapter, the inclusion of relevant international agreements in the term ‘relevant rules of international law’ is in line with the principle of systemic integration, which is based on the notion that States do not intend to act inconsistently with already established rules and principles of international law. The inclusion of relevant international agreements in the term ‘relevant rules of international law’ was confirmed by the Appellate Body of the WTO in the case of *United States: Import Prohibition of Certain Shrimp and Shrimp Products*.<sup>448</sup>

The LOSC is the relevant international agreement on the protection of the marine environment from MPLA and the general obligations related to the protection of the marine environment that apply to all sources of marine pollution are established in Part XII, Section I of the LOSC. Article 192 contains the general obligation that ‘States have

---

<sup>446</sup> The LOSC, (n 14) Article 196.

<sup>447</sup> Ibid, Article 207 (1) – (2).

<sup>448</sup> WTO, *United States: Import Prohibition of Certain Shrimp and Shrimp Products*, (n 51) at paras. 127 – 134. The LOSC and CITES were referred to when interpreting the term ‘exhaustible natural resources’ under Article XX (g) of the GATT.

the obligation to protect and preserve the marine environment' which is now recognised as part of customary international law,<sup>449</sup> and this general obligation is further substantiated by Articles 193 and 194. The former reaffirms the sovereign right to exploit natural resources and the duty to protect and preserve the marine environment at the same time. The latter obliges States to take all measures to prevent, reduce, and control marine pollution from any source, using the best practicable means at their disposal and in accordance with their capabilities. The duty not to cause transboundary harm in Article 194 of the LOSC, which is reflected in Principles 21 and 2 of the Stockholm and Rio Declarations respectively, has now been translated into the context of the law of the sea and extended to the area beyond national jurisdiction or control.<sup>450</sup>

In adopting measures to prevent, reduce, and control marine pollution (including MPLA), States shall not 'act so as not to transfer, directly or indirectly, damage or hazards from one area to another or transform one type of pollution into another.'<sup>451</sup> In taking such measures, States shall deal with all sources of marine pollution and minimise to the fullest extent possible the 'release of toxic, harmful or noxious substances, especially those which are persistent, from land-based sources.'<sup>452</sup> The measures taken in doing so shall not unjustifiably interfere 'with activities carried out by other States in exercise of their rights and in pursuance to their duties' under the LOSC.<sup>453</sup>

The LOSC also provides other general obligations that States are required to fulfil to protect and preserve the marine environment, some of which were discussed above when referring to the general rules of international law, such as the duty to cooperate,<sup>454</sup> to notify potential harm,<sup>455</sup> to exchange information<sup>456</sup> and the obligation to provide assistance and preferential treatment to developing States<sup>457</sup> and the duty to assess the potential effects of activities.<sup>458</sup> In addition to those discussed, it should be noted that the

---

<sup>449</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 387; Nordquist, Rosenne and Yankov, *United Nations Convention on the Law of the Sea 1982 A Commentary*, (n 169) 39 – 40.

<sup>450</sup> The LOSC, (n 14) Article 192 (2).

<sup>451</sup> *Ibid*, Article 195.

<sup>452</sup> *Ibid*, Article 194 (3) (a).

<sup>453</sup> *Ibid*, Article 194 (4).

<sup>454</sup> *Ibid*, Article 197.

<sup>455</sup> *Ibid*, Article 198.

<sup>456</sup> *Ibid*, Article 200.

<sup>457</sup> *Ibid*, Article 202 and 203.

<sup>458</sup> *Ibid*, Article 206.

LOSC requires States to monitor the risks and effects of pollution as a general obligation. This applies to all sources of marine pollution and is a continuous obligation,<sup>459</sup> however, States are provided with a level playing field to fulfil it, since they are required to ‘endeavour, as far as practicable’ to observe, measure, evaluate, and analyse pollution.<sup>460</sup> Furthermore, the LOSC requires, for some regions, that ‘States bordering an enclosed or semi-enclosed sea should cooperate with each other in the exercise of their rights and in the performance of their duties under this Convention.’ They shall ‘endeavour, directly or through an appropriate regional organisation to coordinate the management, conservation, exploration of the living resources of the sea’ and ‘the implementation of their rights and duties with respect to the protection and preservation of the marine environment.’<sup>461</sup> Not only do these provisions of the LOSC form the background of the interational legal system and the potentially relevant rules of international law for treaty interpretation, but they are considered to be part of the ‘context’ of the treaty within the meaning of Article 31 of the VCLT. Therefore, these provisions of the LOSC will be considered for the interpretation of Article 207 of the LOSC.

#### **IV. Conclusion**

The potentially relevant rules and principles of international law are discussed in this chapter and act as the background and context for the interpretation of Article 207 of the LOSC. They do not form part of the interpretation of Article 207 of the LOSC. However, they assist States to understand the context in which the interpretation of Article 207 of the LOSC will operate. These include the customary, general, as well as conventional rules of international law. In terms of the first two, the legal status and precise application of some principles are still subject to debate. These include sustainable development, the precautionary principle, and CBDR, all of which are fundamental to the protection of the marine environment from MPLA. Sustainable development is at the core of the way in which States further their own development and simultaneously try to prevent, reduce, and control the MPLA produced from their economic and developmental activities. The precautionary principle, which is arguably part of the prevention principle and due

---

<sup>459</sup> Nordquist, Rosenne and Yankov, *United Nations Convention on the Law of the Sea 1982 A Commentary*, (n 169) 111 – 112.

<sup>460</sup> *Ibid*, 115.

<sup>461</sup> The LOSC, (n 14) Article 123.

diligence, influences the way in which States deal with uncertainty that may cause significant transboundary harm as a result of MPLA, whereas CDBR brings States together to foster their cooperation and shared responsibility to protect the global commons and spaces, in this case the ocean, from MPLA. Other customary and general rules of international law are more established and, can be considered for the interpretation of a treaty without much argument. These are the prevention principle (and due diligence), cooperation, an obligation to conduct an EIA and the obligations to notify, exchange information and consult potentially affected States regarding the potential harm. In addition to their relevance as customary or general rules of international law, they exist in, or are referred to, in the LOSC for the protection of the marine environment, as discussed above.

The conventional rules of international law identified as being relevant for interpreting Article 207 of the LOSC are the general obligations provided in the LOSC. Most of the general provisions, which are provided in Part XII Section 1, reaffirm the obligations in customary international law, while others fill gaps in that law. The responsibility not to cause significant transboundary harm is reaffirmed in the context of the marine environment in Articles 193 and 194 of the LOSC, while the obligation to monitor the risks and effects of pollution, provided in Article 204 of the LOSC, fills a gap in general international law. In addition, States bordering an enclosed or semi-enclosed sea should cooperate in relation to the management, conservation, exploration of the living resources of the sea and the protection and preservation of the marine environment as required by Article 123 of the LOSC. Not only can these provisions of the LOSC be considered as relevant rules of international law, but they also form the context of a treaty international lawyers have to consider when interpreting it.

Having discussed the potentially relevant the rules of international law that are the background and context for treaty interpretation, the interpretation will proceed in the next chapter with an investigation of the ordinary meanings of the terms stipulated in Article 207 of the LOSC. This will be conducted by bearing in mind the legal framework established in this chapter and with the aim of ascertaining if the ordinary meaning can provide a greater understanding of the obligation to prevent, reduce, and control MPLA under the LOSC.

## Chapter IV: Ordinary Meaning, Context, and Objects and Purposes of Article 207 of the LOSC

### I. Introduction

The relevant rules of international law discussed in the previous chapter act as the background for the interpretation of Article 207 of the LOSC. They fall within the scope of rules that can be relied upon and be taken into account together with the context of a treaty as discussed in Article 31 (3) (c) of the VCLT. The operation of treaty interpretation is initiated in this chapter with an analysis of the terms in Article 207 of the LOSC in accordance with Article 31 of the VCLT. Literature related to the protection of the marine environment from MPLA is scarce. In addition, any attempt to interpret Article 207 of the LOSC has not been found in the literature except the general comments of the provision. Even less can be seen for the discussion on the regional aspect of this provision.<sup>462</sup> For this reason, this chapter attempts to clarify and achieve a greater understanding Article 207 of the LOSC especially its regional dimension. It does so by examining the ordinary meanings of the terms in this provision using the rules of treaty interpretation, as specified in Article 31 of the VCLT, as an analytical tool.<sup>463</sup> Article 31 of the VCLT applies as a conventional source of law to LOSC Parties who are also party to the VCLT and, through customary international law, to those who are not a party to the VCLT.<sup>464</sup>

It is important to note that Article 207 of the LOSC is not confined to regional cooperation but that it can be applied more generally – both individually or collectively by States – at the national and global levels to prevent, reduce, and control MPLA. For this reason, to understand the regional aspect of the obligation under Article 207 of the

---

<sup>462</sup> Yoshifumi Tanaka, 'The Practice of Shared Responsibility in relation to Land-based Marine Pollution' SHARES Research Paper Series 100 <[www.sharesproject.nl](http://www.sharesproject.nl)> accessed 10 March 2018; Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 451 – 454; Sands and Peel, *Principles of international environmental law*, (n 26) 372 – 377; VanderZwaag and Powers, 'The Protection of the Marine Environment from Land-based Pollution and Activities: Gauging the Tides of Global and Regional Governance', (n 17); Tanaka, 'Regulation of Land-Based Marine Pollution in International Law: A Comparative Analysis Between Global and Regional Legal Frameworks', (n 15); Mensah, 'The International Legal Regime for the Protection and Preservation of the Marine Environment from Land-based Sources of Pollution', (n 15); Boyle, 'Land-based Sources of Marine Pollution', (n 16); Boyle, 'Marine Pollution under the Law of the Sea Convention', (n 15).

<sup>463</sup> See, Chapter II.

<sup>464</sup> Ibid.

LOSC, it is essential to examine a general interpretation of the provision. This then will provide the foundation for the interpretation of its regional aspect. Therefore, this is the starting point of this chapter. In so doing, this chapter looks at the ordinary meanings of the terms of Article 207 of the LOSC with the aim to achieve a greater understanding of the provision. It tries to read each paragraph, clarify the ambiguous terms identified in each paragraph, and then reads the paragraphs as a whole before interpreting the entire provision. The argument put forward in this chapter is that some terms of Article 207 of the LOSC can be clarified by their ordinary meanings and enable the interpretation to yield an appropriate result. However, the ordinary meanings of some other terms are unable to clarify the ambiguities surrounding the provision and this require further examination on the subsequent practice of State concerning the protection and preservation of the marine environment from MPLA in enabling the sound interpretation of Article 207 of the LOSC. In furthering the discussion in this chapter and for the ease of following the discussion and the interpretation, Article 207 of the LOSC is restated hereunder. It reads:

#### Article 207

##### Pollution from land-based sources

1. States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources, including rivers, estuaries, pipelines and outfall structures, taking into account internationally agreed rules, standards and recommended practices and procedures.
2. States shall take other measures as may be necessary to prevent, reduce and control such pollution.
3. States shall endeavour to harmonise their policies in this connection at the appropriate regional level.
4. States, acting especially through competent international organizations or diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources, taking into account characteristic regional features, the economic capacity of developing States and their need for economic development.

Such rules, standards and recommended practices and procedures shall be re-examined from time to time as necessary.

5. Laws, regulations, measures, rules, standards and recommended practices and procedures referred to in paragraphs 1, 2 and 4 shall include those designed to minimise, to the fullest extent possible, the release of toxic, harmful or noxious substances, especially those which are persistent, into the marine environment.

## **II. Preliminary interpretation of Article 207 of the LOSC – identifying challenges**

As illustrated in the introductory chapter, the international law and regulations related to MPLA are somewhat rudimentary compared to those that deal with other sources of marine pollution, such as dumping<sup>465</sup> or vessel-sourced pollution.<sup>466</sup> Article 207 of the LOSC has long been subject to criticism, and only general comments can be found in the literature.<sup>467</sup> The provision is criticised for its lack of specific content for States to implement and fulfil their obligation<sup>468</sup> and for failing to provide any ‘detailed environmental standards’.<sup>469</sup> This makes it very difficult for States to handle this source of pollution. Besides, nothing much can be offered regarding the interpretation of this provision.

---

<sup>465</sup> Marine pollution from dumping is internationally regulated by the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter amended by the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter. For more information, see, <<http://www.imo.org/en/OurWork/Environment/LCLP/Pages/default.aspx>> accessed 21 May 2017.

<sup>466</sup> Vessel-sourced pollution is regulated by several international agreements adopted under the auspice of the International Maritime Organisation. The main international agreement is the International Convention for the Prevention of Pollution from Ships. For more information see, <<http://www.imo.org/en/OurWork/Environment/PollutionPrevention/Pages/Default.aspx>> accessed 21 May 2017.

<sup>467</sup> Tanaka, 'Regulation of Land-Based Marine Pollution in International Law: A Comparative Analysis Between Global and Regional Legal Frameworks', (n 15); Boyle, 'Marine Pollution under the Law of the Sea Convention', (n 15) 347; Mensah, 'The International Legal Regime for the Protection and Preservation of the Marine Environment from Land-based Sources of Pollution', (n 15) 297 – 324.

<sup>468</sup> Boyle, 'Land-based Sources of Marine Pollution', (n 16) 20.

<sup>469</sup> VanderZwaag and Powers, 'The Protection of the Marine Environment from Land-based Pollution and Activities: Gauging the Tides of Global and Regional Governance', (n 17) 423.

If one tries to read Article 207 of the LOSC, the preliminary interpretation of this provision can be that States shall ‘prevent, reduce and control’ MPLA reaching the marine environment ‘through rivers, estuaries, pipelines and outfall structures’ by way of the adoption of laws and regulations to address the pollution. In so doing, States have to ‘take into account internationally agreed rules, standards, and recommended practices and procedures’ relating to the protection of the marine environment from MPLA.<sup>470</sup> In addition to the adoption of laws and regulations, States may also employ ‘other measures’ to achieve such a purpose.<sup>471</sup> This suggests that States have to do so at the national level. However, there are international and regional dimensions of the provision as well. That is that States are required ‘to endeavour to harmonise their policies’ regarding prevention, reduction, and control at the regional level.<sup>472</sup> Also, they are required to endeavour to ‘establish global and regional rules, standards, recommended practices and procedures to prevent, reduce, and control’ MPLA. That must be done through competent international organisations and diplomatic conference and ‘characteristic regional features, the economic capacity of developing States and their need for economic development’ must be taken into account. The adopted global and regional rules, standards, recommended practices and procedures have to be ‘re-examined from time to time.’<sup>473</sup> Lastly, Article 207 of the LOSC recognises that not all sources of MPLA can be eliminated entirely. As a result, those laws, regulations, and measures must be designed to ‘minimise, to the fullest extent possible, those toxic, harmful or noxious substances into the marine environment.’<sup>474</sup>

Although this literal and preliminary reading of Article 207 of the LOSC gives us some ideas as to its meaning and objective, several challenges remain unresolved as to how States should act in respect of MPLA. One of the challenges is whether the obligation to adopt laws and regulations to prevent, reduce, and control MPLA should be interpreted as a separate obligation or a collective one. Furthermore, ambiguities embedded in several terms remain unclarified. This includes the terms ‘taking into account internationally agreed rules, standards, and recommended practices and procedures’, ‘other measures’, ‘shall endeavour to’, ‘competent international organisations and

---

<sup>470</sup> LOSC, (n 14) Article 207 (1).

<sup>471</sup> *Ibid*, (n 14) Article 207 (2).

<sup>472</sup> *Ibid*, (n 14) Article 207 (3).

<sup>473</sup> *Ibid*, (n 14) Article 207 (4).

<sup>474</sup> *Ibid*, (n 14) Article 207 (5).

diplomatic conferences’, ‘taking into account characteristic regional features, the economic capacity of developing States and their need for economic development’, and ‘to the fullest extent possible’. To achieve the fuller interpretation, these terms need to be clarified, and the provision needs to be interpreted in accordance with the rule of treaty interpretation. However, prior to the interpretation of Article 207 of the LOSC, attention should be paid to the meaning of the term ‘pollution of the marine environment’ in order to keep in mind how MPLA can be included within the meaning of the pollution of the marine environment provided by the LOSC and also how Article 207 should be interpreted. This will be discussed in the next section.

### **III. Preliminary consideration of the term ‘pollution of the marine environment’**

To interpret Article 207 of the LOSC, it is essential to understand the extent of the meaning of the term ‘pollution of the marine environment’. The term would allow us to determine what does and what does not count as pollution of the marine environment. The LOSC defines the ‘pollution of the marine environment’ as follows;

‘the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.’<sup>475</sup>

Based on this definition, the LOSC is not clear on the point of time at which the introduction by man of substances or energy into the marine environment can be considered as the ‘pollution of the marine environment’. In the case of MPLA, the questions that arise are (i) whether there is any threshold for the introduction of substances and energy to be deemed marine pollution and; (ii) whether the LOSC merely deals with pollution that has already entered the ocean (existing pollution) or also deals

---

<sup>475</sup> The LOSC, (n 14) Article 1 (4).

with pollution that will occur in the future (future pollution). Hence, what is covered by the temporal aspect of the pollution of the marine environment needs to be clarified.

Regarding the threshold of the ‘pollution of the marine environment’, the LOSC provides that the introduction of substances or energy which ‘*results or likely to result in such deleterious effects* as harm to living resources and marine life...’ would be considered as the pollution of the marine environment. The ordinary meaning of the term ‘deleterious’ means harmful.<sup>476</sup> Reading this as a whole would be that the introduction of substances or energy into the marine environment which results or likely to result in *such harmful* effects as harm will be considered as pollution to the marine environment. From this meaning, it suggests that the LOSC sets a very basic threshold as to what can be treated as pollution to the marine environment – an introduction of substances or energy at the point which such introduction results or likely to result in the harmful effect. The fact that the LOSC provides only a very basic and general threshold is understandable because it is a framework Convention. Firstly, a fixed threshold would become easily dated based on the rapid development of the science and technology that deals with pollution. Besides, the LOSC deals with several sources of pollution and, by their nature, those sources have different thresholds of harm. As such, it may not be the best place to determine the relevant thresholds for any specific source of the pollution of the marine environment. However, one needs to accept that, without determining the threshold of each source, it entails the lack of specificity on how this basic threshold applies to different sources of marine pollution. Secondly, as will be discussed later in this chapter, the LOSC employs a system of ‘rules of reference’ whereby it mandates States to determine this issue by acting collectively or through competent international organisations or diplomatic conference. For example, what can be regarded as vessel-sourced pollution is established by the IMO and can be regularly updated.<sup>477</sup>

As for the second question regarding the scope of the pollution of the marine environment, the ordinary meaning of the term suggests that ‘pollution of the marine environment’ includes both existing and future pollution. Future pollution is included by

---

<sup>476</sup> Cambridge Dictionary, see. <<https://dictionary.cambridge.org/dictionary/english/deleterious>> accessed 31 January 2018

<sup>477</sup> See, Section IV, i (ii) below.

the phrase ‘...is likely to result in such deleterious effects as harm...’ The word ‘future’, as an adjective, means ‘happening or existing in the future.’<sup>478</sup> When the term ‘future’ acts as an adjective for ‘pollution’, this lends support to reading that it refers to pollution that will happen or exist in the future. In other words, it encompasses (i) a currently-known effect of existing pollution that will happen in the future; (ii) unknown effects of existing pollution; and (iii) new pollution to the environment (both effect and type). For existing pollution, the term ‘existing’ is used to refer to ‘something that exists now.’<sup>479</sup> The meaning suggests that it relates to something that is apparent at present, not in the past or the future. As such, this points to pollution that has already appeared and continues to deteriorate the marine environment. This is existing pollution and its ongoing effect on the marine environment. For this reason, the interpretation of Article 207 of the LOSC should take account of the meaning of the pollution of the marine environment in the context of MPLA. This is because MPLA, as a source of marine pollution, in effect, includes both existing and future pollution encompassed by the meaning discussed above. In addition, as will be seen later below, future and existing pollution can be addressed by laws and regulations adopting to prevent, reduce, and control MPLA. This is simply because these terms target both future and existing pollution by their ordinary meanings and encompass measures to deal with it.

Therefore, it can be said that, although there is a very basic threshold for the ‘pollution of the marine environment’, what we know from its ordinary meaning is that the term includes both existing and future pollution. The obligation to adopt laws and regulations to prevent, reduce and control MPLA addresses different aspects of the pollution of the marine environment. As shown below, prevention deals with future pollution, reduction addresses existing pollution, while control deals with both aspects.

#### IV. Interpretation of Article 207 of the LOSC

Having preliminarily read Article 207 of the LOSC and the term ‘pollution of the marine environment’, the section discusses and analyses ordinary meanings of the terms of

<sup>478</sup> Cambridge Dictionary, for the term ‘future’, see. <<http://dictionary.cambridge.org/dictionary/british/future>> accessed 17 April 2015.

<sup>479</sup> Ibid, for the term ‘existing’, see. <<http://dictionary.cambridge.org/dictionary/british/existing?q=existing>> accessed 17 April 2015.

Article 207 of the LOSC. It does so by trying to give the ordinary meaning of each paragraph, identifies ambiguous terms, and clarifies them according to their ordinary meanings. Subsequently, it tries to read the paragraphs and the provision as a whole in their context and the light of object and purpose. Each paragraph of Article 207 of the LOSC will hence be discussed in turn.

**i. Article 207 of the LOSC – Paragraph 1**

**(i) Ordinary meaning**

From the literal reading of Article 207 of the LOSC, what is clear is the duty of a State to adopt ‘laws and regulations’ at the national level. From the ordinary meaning, two points need to be substantiated – firstly do States have only the duty at the national level to adopt laws and regulations to deal with MPLA? Secondly, to what extent does it mean ‘to adopt the laws and regulations to prevent, reduce, and control’ MPLA? This will be discussed in turn.

Firstly, for the first question, the preliminary reading of the provision may suggest that States only requires adopting ‘laws and regulations to prevent, reduce, and control’ MPLA at the national level by ‘taking into account internationally agreed rules, standards, and recommended practices and procedures’. However, if the first paragraph is taken into account together with its context which is the remaining provision especially the third and fourth paragraphs, it can be seen that States have duties at the global and regional levels as well. States have duties to endeavour to harmonise their policies at the regional level to deal with MPLA and also shall cooperate in adopting global and regional rules, standards, and recommended practices and procedures to deal with MPLA. In addition, reading the paragraph with the wider context such as Article 197 of the LOSC, it can be said that the obligation of States to protect and preserve the marine environment from MPLA encompasses not only national but also international and regional dimensions. This will be further discussed below through the discussion of the remaining provision.

For the second question, the provision demonstrates that the goal of adoption of such laws and regulations must be to ‘prevent, reduce, and control’ MPLA. In so doing, the

LOSC obliges States to ‘taking into account internationally agreed rules, standards, and recommended practices and procedures’.<sup>480</sup> Having considered the ordinary meanings of the term ‘prevent, reduce, and control’, ‘prevent’ means ‘to stop something from happening or someone from doing something.’<sup>481</sup> The word ‘reduce’ means ‘to make something smaller in size, amount, degree, importance etc.’<sup>482</sup> and the word ‘control’ means ‘to order, limit, or rule something or someone's actions or behaviour.’<sup>483</sup> From the meanings, the term ‘prevent’ suggests an action to stop the future occurrence of something, whereas the terms ‘reduce’ and ‘control’, noting their difference, point to an action dealing with something that has already happened and continues to occur, but needs to be made smaller, limited or regulated. Also, control also applies to future pollution in the sense that it limits the future pollution to be created or emitted not to exceed the specified level. Therefore, the preliminary reading of these terms suggests that laws and regulations adopted to deal with MPLA must yield the result that conforms with these terms. In so doing, the adoption of laws and regulations to prevent, reduce, and control MPLA can be done by legislating primary or secondary regulations with the use of various legal techniques and procedures and are underpinned by some rules and principles of international law discussed in the previous chapter. These legal techniques and procedures can be used to achieve the prevention, reduction and control of MPLA depending on the design and use of them. Noting that the measures outlined below are not exhaustive and not exclusively limited to implement any specific obligation, these are typical legal techniques and procedures used to prevent, reduce, and control pollution and therefore protect the environment. They can be categorised into two groups, that is, (1) substantive and (2) procedural legal techniques and measures. They can be discussed hereunder.

---

<sup>480</sup> The term ‘taking into account internationally agreed rules, standards, and recommended practices and procedures’ will be further discussed below.

<sup>481</sup> Cambridge Dictionary, for the term ‘prevent’, see. <<https://dictionary.cambridge.org/dictionary/english/prevent>> accessed 12 April 2015.

<sup>482</sup> Cambridge Dictionary, for the term ‘reduce’, see. <<http://dictionary.cambridge.org/dictionary/british/reduce>> accessed 12 April 2015.

<sup>483</sup> Cambridge Dictionary, for the term ‘control’ see. <<http://dictionary.cambridge.org/dictionary/british/control>> accessed 20 April 2015.

### a. Substantive legal techniques and measures

For substantive legal techniques and measures that can be used to prevent, reduce, and control MPLA, there are at least six legal techniques that can be used as part of the laws and regulations to prevent, reduce, and control MPLA depending on the purpose, design, use of such techniques. In addition, some rules and principles of international law discussed in the earlier chapter such as prevention and precaution can be guiding principles when the said laws and regulations are designed and developed. These are (i) pollution emission standard; (ii) process standard; (iii) product standard; (iv) environmental quality standard; (v) remedial and restorative measure; and (vi) precautionary measure.

*(i) Pollution emission standard.* It is ‘the standard under which conformity is measured by reference to what is emitted, rather than its effect on the receiving environment.’<sup>484</sup> Pollution emission standard can be designed to give preventive, reduction, or control effects depending on the need of the regulator. For example, to give preventive effect, pollution emission standard can be in the form of the prohibition or ban of certain chemical substances. This can be seen, for example, from the ban on Chlorofluorocarbon (CFCs) by the Montreal Protocol which gives an effect of preventing future pollution caused by such substance.<sup>485</sup> Such ban is underpinned by the prevention principle in the sense that it obliges States not to cause pollution both within and beyond their jurisdiction. Alternatively, to give reductive effect, the standard can be designed to reduce pollution to the smaller size. For example, in the law of the sea context, this includes Regulation D – 2 under an Annex of the International Convention for the Control and Management of Ships’ Ballast Water and Sediments (BWM Convention).<sup>486</sup> The regulation specifies the amount of viable organism that vessels can be emitted to the marine environment in the process of ballast water management. Under this regulation, ships conducting ballast water management are required to discharge less than 10 viable organisms per cubic metre greater than or equal to 50 micrometres in a minimum dimension and less than 10 viable organisms per millilitre or less than 50 micrometres in

---

<sup>484</sup> Ibid, 241.

<sup>485</sup> Ibid, (n 222), Article 2(a)

<sup>486</sup> (Adopted 13 February 2004; entered into force 8 September 2017) (2004) IMO Doc. BWM/CONF/36.

a minimum dimension and greater than or equal to 10 micrometres in a minimum dimension.<sup>487</sup> It can be seen from this that the regulation establishes a new standard for emissions, which has the effect of reducing the harmful effect of pollution caused by the discharge of ballast water.

**(ii) Process standard**, also known as ‘technical standard’. It is standards, are ‘imposed on a process, either by stipulating precisely the process that must be carried out, or by setting performance requirements that the process must reach.’<sup>488</sup> Examples of process standards include Best Available Techniques (BAT) or Best Environmental Practice (BEP). It is important to note that there is no precise definition of BAT or BEP. These concepts are not included in the LOSC because it predates them. However, there have been attempts to define BAT and BEP at the international level; for example, BAT was defined at the Minamata Convention as:

‘those techniques that are the most effective to prevent and, where that is not practicable, to reduce emissions and releases of mercury to air, water and land and the impact of such emissions and releases on the environment as a whole, taking into account economic and technical considerations for a given Party or a given facility within the territory of that Party.’<sup>489</sup>

BEP was also defined as ‘the application of the most appropriate combination of environmental control measures and strategies.’<sup>490</sup> Other regimes that use BAT and BEP and define them include the Helsinki Convention and the OSPAR Convention.<sup>491</sup> In addition to BAT and BEP, other kinds of process standards can be seen in the POPs

---

<sup>487</sup> *Ibid.* For the precise details of the emission standard, see Annex, Section D, Regulation D – 2.

<sup>488</sup> Stuart Bell, Donald McGillivray and Ole W Pedersen, *Environmental Law* (8th edn edn, OUP 2013), 242.

<sup>489</sup> (n 74) at Article 2 (b).

<sup>490</sup> *Ibid.*, Article 2 (c).

<sup>491</sup> Helsinki Convention, (n 300) Article 3 (3) and Annex II. Under this Convention, BAT means ‘the latest stage of development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of a particular measure for limiting discharges.’ BEP is defined as ‘the application of the most appropriate combination of measures’; OSPAR Convention, (n 318) Appendix I. See also, Elizabeth A Kirk and Harriet M Silfverberg, ‘Harmonisation in the Baltic Sea Region’ (2006) 21 *International Journal of Marine and Coastal Law* 235.

Convention, in which Article 3 (1) (b), together with Annex B, also restricts the production of DDT and its use in each State Party.<sup>492</sup>

**(iii) Product standard.** It is the standard that controls the ‘characteristics of an item that is being produced.’<sup>493</sup> An example of a measure that tries to control the characteristics of the product is the EU Commission Regulation No. 696/2014 (24 June 2014), which amends Regulation (EC) No. 1881/2006 and sets out the maximum levels of erucic acid in vegetable oils and fats and foods containing vegetable oils and fats for human consumption.<sup>494</sup> The presence of erucic acid in the products results from the agricultural production.<sup>495</sup> By minimising the maximum level of its presence, this can potentially reduce its usage in agricultural production and its leak or emission to the environment including marine environment. Meanwhile, in the water sector, the EU Council Directive 98/83/EC (3 November 1998) on the quality of water intended for human consumption specifies the criteria for drinking water, for example, it must be free from micro-organisms, parasites, and any substances that constitute a threat to human health.<sup>496</sup>

**(iv) Environmental quality standard.** This is a standard that ‘concentrates on a particular target’, especially environmental quality.<sup>497</sup> Examples of this measure include the EU Parliament and Council Directive 2006/7/EC (15 February 2006) concerning the management of bathing water quality and repealing Directive 76/160/EEC, which set the parameters for the quality of bathing water.<sup>498</sup> This kind of standard can also be seen in the wider environmental context, such as air quality.

**(v) Remedial and restorative measure.** This measure assists States to control the environmental status of the marine environment. A remedial and restorative measure differs from a pollution emission standard in that it addresses the state of the environment by trying to recover or restore the damaged environment into a sound status. For example, Minamata Convention requires its State Parties to develop a strategy for ‘identifying and

---

<sup>492</sup> POPs Convention, (n 290) Article 3 (1) (b).

<sup>493</sup> Bell, McGillivray and Pedersen, *Environmental Law*, (n 488) 242.

<sup>494</sup> OJ L 184/1 (25 June 2014).

<sup>495</sup> Ibid, Recital (2).

<sup>496</sup> OJ L 330/32 (5 December 1998).

<sup>497</sup> Bell, McGillivray and Pedersen, *Environmental Law*, (n 488) 240.

<sup>498</sup> OJ L 64/46 (4 March 2006), Annex I.

assessing sites contaminated by mercury or mercury compounds.’ In addition, the COP to the Minamata Convention should adopt guidance on the management of contaminated sites, which includes methods and approaches on-site identification and characterisation, public engagement, the risk to health and the environment.<sup>499</sup>

In addition, at the regional level, the OSPAR Convention also utilises a remedial and restorative measure. As part of its general obligation to prevent and eliminate pollution, State Parties ‘shall take the necessary measures to protect the maritime area against the adverse effects of human activities to safeguard human health and to conserve marine ecosystems and, when practicable, *restore marine areas which have been adversely affected*.’<sup>500</sup> In implementing this, Annex V requires State Parties to establish a programme or measure to restore the maritime areas that are adversely affected by pollution.<sup>501</sup> In addition, a regional action plan encompassing a marine litter clean-up measure is contained in Article 3 of the Convention to implement the obligation to tackle marine litter and eliminate MPLA.<sup>502</sup> The purposes of the Plan are ‘to prevent and reduce marine litter pollution in the North-East Atlantic and to remove litter from the marine environment where practical and feasible.’ The remedial/restorative measure can also be found in the EU legal system. The Marine Strategy Framework Directive also provides this kind of measure. Article 5 (2) (b) (i) requires the Member States to ensure that a measure to achieve the objectives of this Directive is taken at regional or sub-regional levels. This includes a programme of measures designed to achieve and/or maintain a good environmental status.<sup>503</sup>

**(vi) Precautionary measure.** As its name suggests, this measure is underpinned by the highly debated precautionary principle.<sup>504</sup> Although its legal status is still debatable, this underlying principle influences the way in which States deal with the protection of the

<sup>499</sup> (n 74) Minamata Convention at Article 12.

<sup>500</sup> (n 318) at Article 2 (1) (a). Emphasis added.

<sup>501</sup> Ibid, Annex V at Article 1 – 3.

<sup>502</sup> OSPAR, ‘OSPAR Commission Annual Report 2013/2014’ (2014) <[http://www.ospar.org/documents/dbase/publications/p00608/p00608\\_annualreport2014%20single%20pages\\_online.pdf](http://www.ospar.org/documents/dbase/publications/p00608/p00608_annualreport2014%20single%20pages_online.pdf)> accessed 26 February 2015, 12 – 13.

<sup>503</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive), OJ L 164/19 (25 June 2008).

<sup>504</sup> For the discussion on the precautionary principle, see Chapter III, Section II, iii.

marine environment.<sup>505</sup> Based on the principle, the precautionary measure to protect the environment should be taken when there are threats of serious or irreversible damage, whether or not scientific proof has been *fully* established, and the action cannot be postponed based on scientific uncertainty. A good example of the precautionary measure is the change in the dumping regime from ‘permitted unless prohibited’ to ‘prohibited unless permitted’ in the 1992 London Dumping Convention. This reflects the fact that the precautionary principle underpins the dumping regime, and this is how States try to prevent future and also unknown effects from the dumping of waste.<sup>506</sup> Thus, the precautionary measure can be adopted and influenced by the precautionary principle, although the circumstances in which it is obligatory are unclear as yet. However, as mentioned in the earlier chapter, an analysis of the legal status and its binding force is not within the scope of this study.

#### **b. Procedural legal techniques and measures**

For procedural legal techniques and measures, noting that they are not exhaustive, there are at least three procedural legal techniques and measures can support the laws and regulations to prevent, reduce, and control MPLA. These are (i) notification, information exchange and consultation, (ii) an environmental impact assessment (EIA), and (iii) monitoring, assessment, and surveillance of MPLA. These legal techniques and measures are underpinned by several rules and principles discussed in the earlier chapter including the prevention principle, cooperation, and the obligation to conduct an EIA.<sup>507</sup> States can, in fact, just adopt those substantive legal techniques and measures above to deal with the pollution. However, to make them effective in practice, these procedural legal techniques and measures are needed to help to render such effectiveness. They are discussed below.

---

<sup>505</sup> *Pulp Mills on the River Uruguay Case*, (n 34); European Communities — Measures Concerning Meat and Meat Products (Hormones), (n 293); *Southern Bluefin Tuna Cases*, (n 293); *MOX Plant Case*, (n 35); *Land Reclamation in and around the Straits of Johor Case*, (n 36); See also, Boisson de Chazournes, 'Precaution in International Law: Reflection on its Composite Nature', (n 293) 21 – 34; Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 160.

<sup>506</sup> See, Redgwell, 'From Permission to Prohibition: the 1982 Convention on the Law of the Sea and Protection of the Marine Environment', (n 302); Kirk, 'The 1996 Protocol to the London Dumping Convention and the Brent Spar', (n 302).

<sup>507</sup> See, Chapter III, Section II, ii, vi, and vii.

**(i) Notification, information exchange and consultation.** For notification, it requires that the planning State shall notify the potentially affected State of its planned activities and the potential effects they may cause and ‘provide information on one or more matters on an *ad hoc* basis to another State, especially in relation to scientific and technical information’.<sup>508</sup> In the context of the law of the sea, Articles 198 and 206 of the LOSC, as general provisions, require that notification should be performed when there is imminent danger of the pollution damaging or having damaged the affected States. However, it is still unclear what threshold of harm the term ‘imminent danger of the pollution’ entails. At least, this can be a guideline for the performance of the notification in the context of protecting the marine environment from MPLA. Looking at this measure in the wider international law context, it forms an essential part of the management of international relations, the principle of good-neighbourliness, and prevention.<sup>509</sup> In addition, according to international jurisprudence, the notification of harm is required at an early stage in the planning process - when the relevant authority considers the application to approve a development project - as well as after the project is in operation.<sup>510</sup>

For an exchange of information, under the LOSC, Article 200 requires States to cooperate in exchanging information and data on the pollution of the marine environment. The ITLOS, in the *MOX Plant* case, ruled that the exchange of information is part of the duty to cooperate and is fundamental to the principle of prevention. Exchanging information about the risks or harmful effects of activities will help to ‘devise ways to deal with them.’<sup>511</sup> From both the LOSC and the law of the sea jurisprudence, an exchange of information enables the relevant States to assess the risk and harm from their perspective and to provide a basis for further consultation and negotiation in adopting preventive measures, and ultimately achieving a meaningful solution to the prevention of pollution.<sup>512</sup>

---

<sup>508</sup> Sands and Peel, *Principles of international environmental law*, (n 26) 626.

<sup>509</sup> See, Chapter III, Section II, viii. See also, *Corfu Channel Case*, (n 251) at 22. . This measure has been widely used as a tool to support measures to prevent pollution in international instruments. Transboundary Harm, (n 271) Article 8.

<sup>510</sup> *Pulp Mill on the River Uruguay Case*, (n 34) at para. 105. See also, *Gabčíkovo-Nagymaros Project Case*, (n 33) at para. 140.

<sup>511</sup> *MOX Plant Case*, (n 35) at para. 82.

<sup>512</sup> See, Chapter III, Section II, viii.

For this reason, based on the jurisprudence of the ICJ in the *Pulp Mills on the River Uruguay* case, the failure to notify and exchange information by the State proposing the harmful activity will result in a breach of the obligation to notify and exchange information. This is because notifying States of the relevant information ‘enables the notified party to participate in the process of ensuring that the assessment is complete so that it can then consider the plan and its effects with a full knowledge of the facts.’<sup>513</sup> This enables the notified State to have grounds on which to enter consultation with the planning States and, hence, may lead to the harm being prevented, reduced, and controlled. Consequently, both notification and exchange of information can be the procedural legal techniques adopted by States as part of the laws and regulations to prevent, reduce, and control MPLA.

*For a consultation*, once the States involved have notified/been notified and information has been exchanged, a consultation will be initiated between them. This measure is underpinned by the duty to cooperate, which is a fundamental principle in international law and is recognised by international judicial institutions.<sup>514</sup> Though not obviously recognised by the LOSC, consultation can be encompassed by Article 196 LOSC which requires States to cooperate at the global or regional level and consult each other to protect the marine environment.<sup>515</sup> It requires the planning State to consult the potentially affected States about the potentially significant environmental harm at an early stage and in good faith. Consultation is continuous in nature. It arguably starts before the project’s initiation and continues when it commences.<sup>516</sup> This provides consultation with a role in reducing and controlling MPLA, as well as preventing it. The consultation aims to balance the interests of all relevant States, namely, the utilisation of natural resources of the planning State and the environmental integrity of the potentially-affected States.<sup>517</sup>

---

<sup>513</sup> *Pulp Mills on the River Uruguay Case* (n 34) at para. 119.

<sup>514</sup> See, Chapter III, Section II, viii; *MOX Plant Case*, (n 35) at para. 82; *Land Reclamation in and around the Straits of Johor Case*, (n 36) at para. 90.

<sup>515</sup> See also, Plakokefalos, 'Prevention Obligations in International Environmental Law', (n 417) 22.

<sup>516</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 177.

<sup>517</sup> *Lac Lanoux case* in Handl, *International Environmental Law*, (n 440) 75 “A State wishing to do that which will affect an international watercourse cannot decide whether another State’s interest will be affected; the other State is the sole judge of that and has the right to information on the proposals. *Consultations and negotiations between the two States must be genuine, must comply with the rules of good faith and must not be mere formalities.*” [emphasis added]; Draft Articles on Prevention of Transboundary Harm, (n 271) Article 9 at 160 – 161.

As stated by the ILC, the relevant States ‘must enter into consultations in good faith and must take into account each other’s legitimate interests.’ They ‘should consult each other to arriving at an acceptable solution regarding the measures to be adopted to prevent significant transboundary harm, or at any event, to minimise the risk thereof.’<sup>518</sup> However, while consultation does not guarantee the authorisation or consent of the potentially affected States to the proposed activity,<sup>519</sup> not consulting them can be ‘strong evidence of the failure to protect other States from such harm.’<sup>520</sup>

**(ii) Environmental impact assessment (EIA).** Not only an EIA is internationally recognised as an obligation of general international law in the *Pulp Mills on the River Uruguay* case that a State has to conduct,<sup>521</sup> but it also helps to prevent and reduce potential harm or threats to the environment.<sup>522</sup> This measure has featured in international environmental law for the past few decades and States have been encouraged to conduct an EIA to avoid significant harm to the environment.<sup>523</sup> The LOSC also recognises the use of an EIA in Article 206, as follows;

“When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, *they shall*, as far as practicable, *assess the potential effects of such activities* on the marine environment and shall communicate reports of the results of such assessments in the manner provided in Article 205.” [Emphasis added]

---

<sup>518</sup> Ibid.

<sup>519</sup> *Lac Lanoux* case in Handl, *International Environmental Law*, (n 440) 75.

<sup>520</sup> Birnie, Boyle and Redgwell, *International Law and the Environment*, (n 26) 177.

<sup>521</sup> *Pulp Mills on the River Uruguay Case*, (n 34) at para. 204; *Advisory Opinion on Responsibility and obligations of States with respect to activities in the Area*, (n 272) paras. 148 – 149; see also, Plakokefalos, 'Prevention Obligations in International Environmental Law', (n 417) 14.

<sup>522</sup> For more discussion on an EIA, see. Chapter III, Section II, vii.

<sup>523</sup> Agenda 21, (n 29) Ch. 17; Rio Declaration, (n 254) Principle 17; Stockholm Declaration, (n 210) Principles 15, 18. It is also argued that an EIA can be traced back to Principles 14 and 15 of Stockholm Declaration. See, Soljan, 'The General Obligation to Prevent Transboundary Harm and Its Relation to Four Key Environmental Principles', (n 403) 222.

Under the LOSC, an EIA is part of the general obligations for the protection and preservation of the marine environment.<sup>524</sup> Since it aims to evaluate the potentially harmful impact on the marine environment, States are required to conduct an EIA in the early stages of the planned activity.<sup>525</sup> This is to ‘enable states to determine the extent and the nature of risk involved in an activity and consequently the type of preventive measures it should take.’<sup>526</sup> In this sense, an EIA is part of the prevention principle and due diligence obligation.<sup>527</sup> Despite being recognised as part of the general international law, the content of an EIA is undetermined.<sup>528</sup> Some lawyers doubt the reasoning of the Court in allowing the planning State to determine the content of the EIA, since it may set the requirements in its favour and render the prevention of pollution and protection of the environment ineffective.<sup>529</sup> However, there are justifications for the ICJ not to determine the precise content of an EIA at the international level. As discussed in the earlier chapter, an EIA will be ‘a product of the unique regulatory and political conditions within each State’ and, as a result, the ICJ leaves it at the discretion of States to determine the content of an EIA.<sup>530</sup> To prescribe too narrow or specific a content for an EIA may require a considerable change within national legal systems and could complicate the integration of those requirements into national law.<sup>531</sup> Furthermore, the content of an EIA can become quickly outdated due to the development of science and technology related to protection from pollution.<sup>532</sup>

However, for MPLA, Article 207 of the LOSC does not specify a standard or threshold at which the obligation to conduct an EIA should be triggered. Principally, Article 207 should be interpreted by considering its context, for example, the general provisions of Part XII of the LOSC.<sup>533</sup> In this case, reading Article 207 together with Article 206 of the LOSC arguably suggests that an EIA should be conducted to protect the marine

---

<sup>524</sup> The LOSC, (n 14) Article 206; Sands and Peel, *Principles of international environmental law*, (n 26) 607 – 609; Nordquist, Rosenne and Yankov, *United Nations Convention on the Law of the Sea 1982 A Commentary*, (n 169) 122.

<sup>525</sup> Plakokefalos, 'Prevention Obligations in International Environmental Law', (n 417) 11.

<sup>526</sup> Draft Articles on Prevention of Transboundary Harm, (n 271) at 157.

<sup>527</sup> See, Chapter III, Section II, ii and vii.

<sup>528</sup> *Pulp Mills on the River Uruguay Case*, (n 34) at para. 205

<sup>529</sup> McIntyre, 'The Preceduralisation and Growing Maturity of International Water Law', (n 417) 495 – 496.

<sup>530</sup> Craik, 'Principle 17: Environmental Impact Assessment', (n 401) 460.

<sup>531</sup> *Ibid.*

<sup>532</sup> See, Chapter III, Section II, vii.

<sup>533</sup> The VCLT, (n 25) Article 31.

environment when there is ‘a reasonable ground for believing that planned activities ... may cause substantial pollution of, or significant and harmful damage to, the marine environment’. Unfortunately, the standard or threshold for conducting an EIA remains elusive, since no international organisation has been entrusted with the power to establish such a standard. Despite such ambiguity, in *the Matter of the South China Sea Arbitration* case, the Annex VII Tribunal ruled that States must also communicate the report of the EIA to competent international organisation which will subsequently make them available to all States.<sup>534</sup> However, as a requirement of an obligation to prevent the pollution of the marine environment *per se*, it can be concluded that the obligation to conduct an EIA is also one to which States must adhere, even when dealing with the prevention of MPLA under Article 207 of the LOSC.

**(iii) Monitoring, surveillance, and assessment.** These measures can be employed to give effects laws and regulations adopted to prevent, reduce, and control MPLA. The purpose of monitoring, assessment and surveillance can vary based on the need of each environmental issue.<sup>535</sup> In the context of protecting the marine environment, it is important to note that the LOSC provides no official definition of these terms, although they are widely used in different contexts of the convention. For example, ‘monitoring’ is used in several provisions of the LOSC that deal with protecting the marine environment.<sup>536</sup> The ordinary meaning of ‘monitor’ is ‘to watch and check a situation carefully for a period of time in order to discover something about it.’ The word ‘monitoring’ is used consistently in the context of the protection of the marine environment under the LOSC as being to ‘observe, measure, evaluate, and analyse, by recognised scientific methods the risks or effects of pollutions of the marine environment.’<sup>537</sup> As for the word ‘surveillance’, it can only be found in one provision, and it is interestingly employed as part of the word ‘monitoring’. ‘Surveillance’ means ‘the careful watching of a person or place, especially by the police or army, because of a

---

<sup>534</sup> *The Matter of South China Sea Arbitration* case, (n 422) paras. 988 – 991.

<sup>535</sup> See, Sands and Peel, *Principles of international environmental law*, (n 26) 644 – 645.

<sup>536</sup> The LOSC, (n 14) Articles 165 (2) (h), 202, and 204.

<sup>537</sup> *Ibid*, Article 204. This wording is also adopted, with a nuance, by another provision of the LOSC. Article 165 (2) (h) provides that ‘The Commission shall .... (h) make recommendations to the Council regarding the establishment of a *monitoring programme to observe, measure, evaluate and analyse, by recognized scientific methods, on a regular basis, the risks or effects of pollution of the marine environment resulting from activities in the Area...*’ [Emphasis added].

crime that has happened or is expected.<sup>538</sup> Although the ordinary meaning of this term appears to have no relevance to the environment, surveillance is employed in the LOSC as the observation of ‘the effects of any activities which they [States] permit or in which they engage in order to determine whether these activities are likely to pollute the marine environment.’<sup>539</sup> The ordinary meanings of these words lead to at least two possible interpretations. Firstly, ‘monitoring’ and ‘surveillance’ refers to the observation and measurement of the risks or effects of polluting the marine environment using surveillance as a monitoring measure, or they can mean the observation and measurement of the effects of the measures adopted to deal with the pollution of the marine environment. Secondly, the terms encompass both functions.

Regarding an assessment of MPLA, the requirement to conduct an [environmental impact] assessment is recognised as part of the general international law in several cases by the ICJ<sup>540</sup> and also as a general obligation under the LOSC.<sup>541</sup> The word ‘assess’ means ‘to judge or decide the amount, value, quality, or importance of something’.<sup>542</sup> As for ‘assessment’, it ordinarily means ‘the act of judging or deciding the amount, value, quality, or importance of something, or the judgment or decision that is made’ respectively.<sup>543</sup> These terms are employed in several provisions in the context of protecting the marine environment, especially in regulating an activity that has the potential to cause transboundary harm to the marine environment.<sup>544</sup> They denote an appreciation of both the current effects<sup>545</sup> and the potential implication<sup>546</sup> of an activity

---

<sup>538</sup> Cambridge Dictionary, for the term ‘monitor’, see. <<http://dictionary.cambridge.org/dictionary/english/monitor>>; For the term ‘surveillance’, see. <<http://dictionary.cambridge.org/dictionary/english/surveillance>> accessed 17 February 2016.

<sup>539</sup> The LOSC, (n 14) Article 204 (2).

<sup>540</sup> *The Pulp Mills on River Uruguay Case*, (n 34) at paras. 203 – 219; *Certain Activities carried out by Nicaragua in the Border Area Case*, (n 272) at paras. 101 – 105; *Construction of a Road in Costa Rica along the San Juan River Case*, (n 272) at paras. 146 – 162.

<sup>541</sup> The LOSC, (n 14) Article 206.

<sup>542</sup> Cambridge Dictionary, for the term ‘assess’, see. <<http://dictionary.cambridge.org/dictionary/english/assess>> accessed 17 February 2016.

<sup>543</sup> Ibid.

<sup>544</sup> For examples, see the LOSC, (n 14) Articles 165 (2) (d), (f), 200, 202 (c), 206, 249.

<sup>545</sup> Ibid, Article 200. In order to obtain knowledge regarding the state of the marine environment, the LOSC obliges States to cooperate, directly or through competent international organisations, to promote studies, undertake scientific research and exchange information about the pollution of the marine environment. This is to acquire knowledge for ‘the assessment of the nature and extent of pollution, exposure to it, and its pathways, risks and remedies.’

<sup>546</sup> Ibid, Article 165 (d) and (f). The LOSC specifies the capacity of the Legal and Technical Commission of the International Sea Bed Authority, *inter alia*, to ‘prepare assessments of the environmental implications of activities in the Area’ and to ‘formulate and submit to the Council the rules, regulations,

or pollution of the marine environment and are also involved at different stages of marine environmental governance, such as the formation, selection, evaluation, or adjustment of rules and regulations.<sup>547</sup> This reading is in line with the ILC, which views that, in the context of preventing transboundary harm caused by hazardous activities, an assessment ‘enables a State to determine the extent and nature of the risk involved in an activity and consequently the type of preventive measures it should take’.<sup>548</sup> In academia, Holder describes an [environment] assessment as ‘a process for identifying the likely consequences for the biological, geological, and physical environment and human health and welfare of implementing particular activities, policy, and plans, particularly arising from the participation of those likely to be affected, and for conveying this information to those responsible for sanctioning the proposal at a stage when it can materially affect their decision or their ongoing regulation.’<sup>549</sup> Therefore, the word ‘assessment’ is taken in this chapter to mean a process used by a State to determine the condition of the marine environment in terms of the effects of existing pollution and the implication from ongoing or proposed activities in order to formulate, implement, or adjust the rules and standards adopted to protect the marine environment. When considering the possible ordinary meaning of these three words, the ‘monitoring’, ‘assessment’, and ‘surveillance’ of MPLA can be applied in two situations, in which monitoring and surveillance are part of the assessment. However, the two situations are distinguished by the time the environmental protection measure is adopted. The monitoring, surveillance, and

---

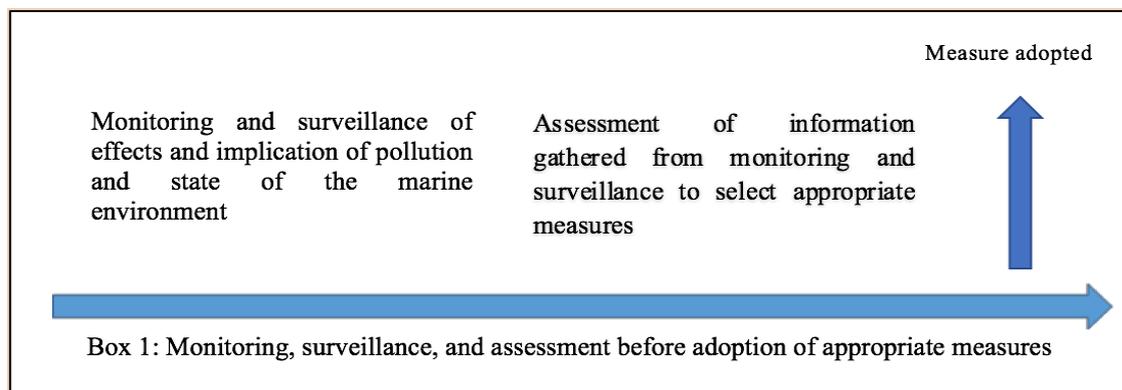
and procedures ... taking into account all relevant factors including *assessments of the environmental implications* of activities in the Area.’ [Emphasis added] In addition, Article 206 entitled ‘assessment of potential effects of activities’ obliges States to ‘assess the potential effects of such activities’ when they have reasonable grounds to believe that activities planned under their jurisdiction or control may cause substantial pollution or significant and harmful changes to the marine environment.

<sup>547</sup> To protect the marine environment in the Area, Article 165 (f) requires the Legal and Technical Commission to take account of ‘the assessment of the environmental implication of the activities’ in the Area as one of the relevant factors when it formulates rules, regulations, and procedures for such activities. To protect the marine environment generally, an assessment of the potential impact of activities (Article 206) and the state of the marine environment (Article 200) through scientific research and studies help to formulate and shape agreed rules and standards, which are adopted and may be adopted by States to protect the marine environment. In the context of MPLA, the GPA requires an assessment to help States to establish the priorities and related measures to manage and protect the marine environment from MPLA. See GPA para 30.

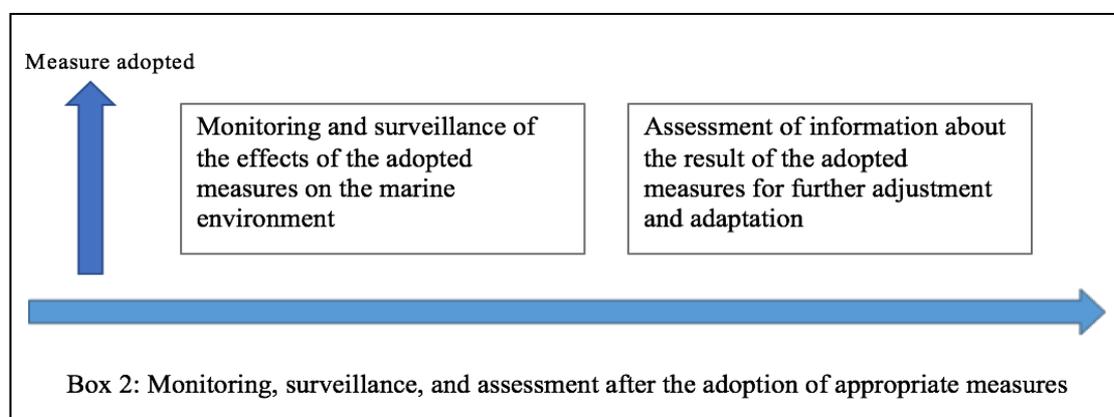
<sup>548</sup> Draft Article on Prevention of Transboundary Harm, (n 271) 157.

<sup>549</sup> See, Jane Holder, *Environmental Assessment* (OUP 2004), 33 – 34. [Environment] assessment is described as ‘a process for identifying the likely consequences for the biological, geological, and physical environment and human health and welfare of implementing particular activities, policy, and plans, particularly arising from the participation of those likely to be affected, and for conveying this information to those responsible for sanctioning the proposal at a stage when it can materially affect their decision, or their ongoing regulation.’

assessment are either conducted (i) before or (ii) after the adoption of the environmental protection measure. In these situations, they are used for different purposes.



Box 1 illustrates a situation in which the monitoring, surveillance, and assessment are conducted before adopting environmental protection measures. Monitoring and surveillance are used at this stage to observe and gather information about the current effect, and potential impact pollution caused by land-based activities may have on the marine environment. The information from the monitoring and surveillance is then fed into the assessment where it is evaluated for the purpose of designing and taking action to deal with the problem.



Box 2 illustrates the stage following the adoption of an environmental protection measure. At this stage, monitoring and surveillance are not only used to observe the effects of the pollution but also the effects the adopted measure may have on the marine environment. This information will inform the assessment process to evaluate the effectiveness of the adopted measure and make any necessary adjustments. Although it would be difficult to precisely separate these three measures from each other in reality, an attempt is made in this section to separate monitoring and surveillance from the process of assessment in order to analyse the subsequent practice of States with the aim

of clarifying the regional aspect of the content of the obligation under Article 207 of the LOSC. Further analysis of the subsequent practice of States related monitoring, assessment, and surveillance of MPLA will be further addressed in the following chapters.

From the above situations, when monitoring, assessment, and surveillance is used as part of the obligation to adopt laws and regulations to prevent MPLA, the measure can be part of an EIA conducted by States for the purpose of preventing any possible environmental threats or harm.<sup>550</sup> Also, when this measure is used as part of the reduction measure, it is intended to identify the sources of pollution and the state of the environment in which other measures can be adopted to respond to such environmental situations, whereas monitoring, assessment, and surveillance, as control measures, are implemented after the sources of the pollution and the state of the environment have been identified. This is to oversee compliance and ensure that the pollution does not exceed the prescribed standard. As mentioned earlier, each State Party is obliged to ‘keep under surveillance the effects of any activities which they permit or in which they engage in order to determine whether these activities are likely to pollute the marine environment.’<sup>551</sup> This measure can also be found in other international agreements that implement Part XII of the LOSC. For example, the London Dumping Convention requires State Parties to ‘keep records of the nature and quantities of all matter permitted to be dumped and the location, time and method of dumping’ and ‘monitor individually, or in collaboration with other Parties and competent international organisations, the condition of the seas for the purposes of this Convention.’<sup>552</sup>

From the earlier discussion, both substantive and procedural legal techniques and measures illustrated above can be employed as part of the laws and regulations to prevent, reduce, and control MPLA. The substantive ones can be customised to suit the purpose of the laws and regulations whether it is to prevent, reduce, or control MPLA, while the procedural ones support and enhance the effectiveness of the former. However, ambiguities are left unclarified. These include (i) how should the obligation to adopt laws and regulations to prevent, reduce, and control MPLA be interpreted. Put it another way,

---

<sup>550</sup> See Section III, i, (i) b above.

<sup>551</sup> The LOSC, (n 14) Article 204 (2).

<sup>552</sup> (n 267) at Article VI (c) – (d).

should States adopt laws and regulations to exclusively prevent MPLA from those adopted to reduce and control the said pollution or should the laws and regulations adopted collectively give combined effects of prevention, reduction and control MPLA?

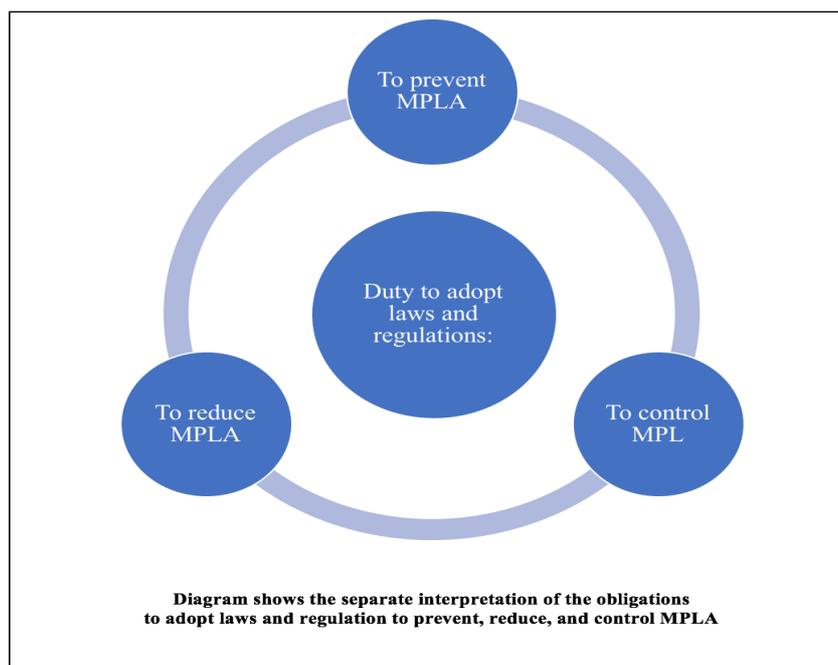
(ii) To what extent does the term ‘taking into account internationally agreed rules, standards, and recommended practices and procedures’ means? This will be discussed below.

**(ii) Ambiguous term**

**a. Prevent, reduce, and control – separate or single-combined interpretation**

In relation to the question of how should the obligation to adopt laws and regulations to prevent, reduce, and control MPLA be interpreted, there are two possible interpretations of the obligation to adopt laws and regulations to prevent, reduce, and control MPLA. These are (i) separate interpretation and (ii) single-combined interpretation. This will be discussed in turn.

*(i) Separate interpretation*, for this reading, the first paragraph of Article 207 of the LOSC can be interpreted to have three separate subsidiary obligations. These are obligations to adopt laws and regulations to (i) prevent, (ii) reduce, and (iii) control MPLA. This can be seen from the diagram below.

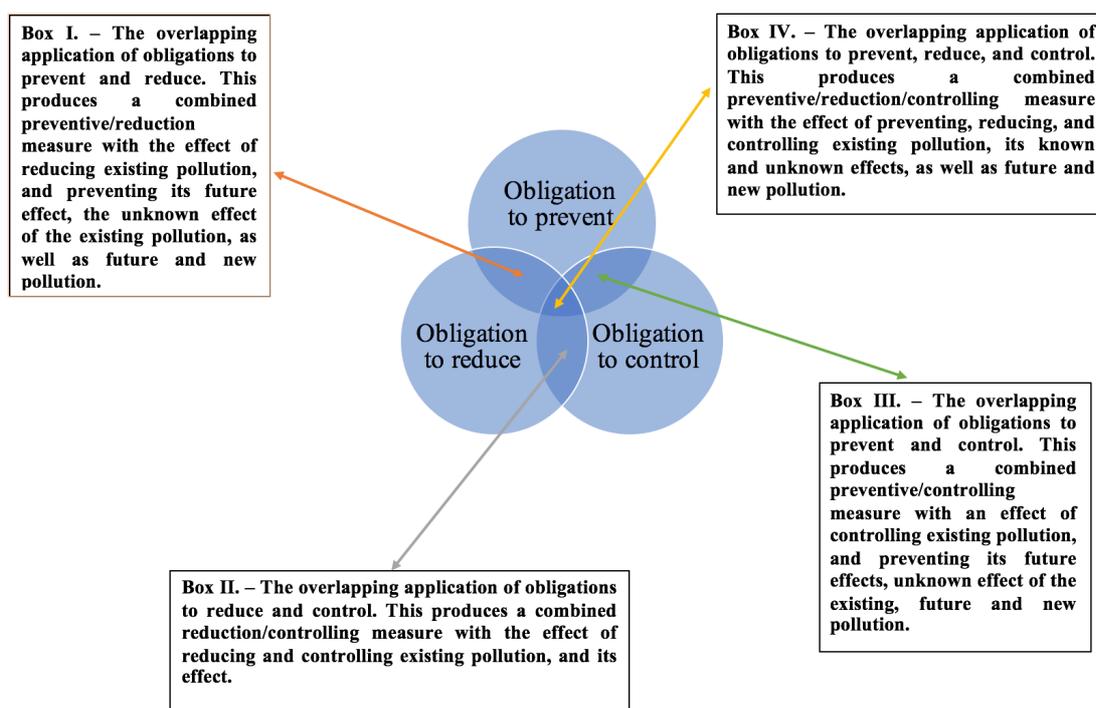


According to the diagram, the separate interpretation means that States shall adopt laws and regulations that achieve the purpose of prevention, reduction, and control MPLA separately from each other. The laws and regulations will be exclusively for preventing, reducing, and control MPLA as a separate obligation. In so doing, States may employ the implementing legal techniques and measures outlined above as part of the laws and regulations adopted for such purpose.

(ii) *Single-combined interpretation*, alternatively, the obligation to adopt laws and regulations to prevent, reduce, and control MPLA can be interpreted as a single-combined obligation. This means that although they are different, there can be an overlap between the obligation to adopt laws and regulations to prevent, reduce, and control MPLA. As such, the single-combined interpretation produces a combined effect and influences the design of laws and regulations adopted under Article 207, depending on the overlapping obligations. For example, it can result in laws and regulations having both a preventive and reducing effect; preventive and controlling effect; reduction and controlling effect; or preventive, reduction, and controlling effect. In addition, as the diagram shows, the different pairs of overlapping obligations deal with MPLA in different ways. This will be illustrated by explaining (a) the inter-relationship between the obligations to prevent and to reduce (Box I.); (b) the inter-relationship between the obligations to reduce and to control (Box. II); (c) the inter-relationship between the

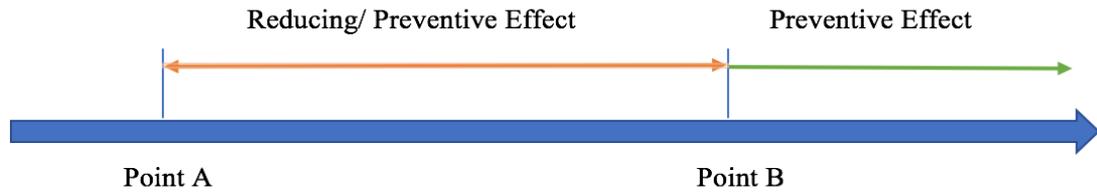
obligations to prevent and to control (Box. III) and; (d) the inter-relationship between the three obligations (Box. IV).

**Diagram showing inter-relationship between the obligations to adopt law and regulations to prevent, reduce, and control MPLA**



(a) Inter-relationship between the obligations to prevent and to reduce (Diagram i)

The obligations to prevent and to reduce pollution can overlap in some cases and, as a result, they can be mutually fulfilled by adopting the same measure. Since they target the existing pollution, although with a different focus, the overlap produces a measure that has the effect of reducing existing pollution and its current effect on the marine environment, while it also tries to prevent the future effect of existing pollution, its unknown effects, and new pollution.



**Diagram (i) describes the overlapping effect of the obligations to prevent and to reduce**

Point A in the diagram below is the point at which the measure is adopted to address existing pollution. This measure is adopted to reduce the existing pollution and its current effect. This is the application of the obligation to adopt laws and regulations to reduce pollution. In addition, while the obligation to reduce is in operation, the measure also aims to prevent the future and unknown effect of existing pollution, as well as preventing new pollution. This part involves the obligation to adopt laws and regulations to prevent pollution since it primarily addresses future pollution. Once the level of pollution reaches the standard set by the measure (Point B), the reducing effect ceases to operate because there is no more need to reduce pollution to meet the environmental standards set by relevant institutions, such as those by the IMO concerning vessel-sourced pollution or the dumping of hazardous waste. However, the preventive effect of the measure continues to operate, since the future effect of existing pollution and new pollution still needs to be prevented. In addition, since the preventive effect of the measure tries to prevent the unknown effect of existing pollution and new pollution, a counter-argument may be how can the prevention of the unknown effect of existing pollution be possible when it is ‘unknown’ and/or ‘new.’ The answer to this is that the obligation to adopt laws and regulations to prevent MPLA can be both obligations of result and of conduct.<sup>553</sup> It is an obligation of result when it deals with known pollution by trying to prevent it from rising above the standard, while it is an obligation of conduct when it addresses the unknown effect of existing pollution by the implementation of relevant measures to prevent any harm caused by polluting activities, such as environmental impact assessments, precautionary measures.<sup>554</sup> This part of the obligation to adopt laws and regulations to prevent pollution should be informed by other epistemic communities,

<sup>553</sup> For more on a category of obligation, see James Crawford, *State Responsibility: The General Part* (CUP 2013), 220 – 226; Constantin Economides, 'Content of the Obligation: Obligations of Means and Obligations of Result' in James Crawford and others (eds), *The Law of International Responsibility* (OUP 2010), Ch. 26.

<sup>554</sup> More details of preventive measures, see the above section.

such as the scientific community, who can supply the relevant knowledge that is inevitably needed for the implementation of such regulations.

(b) Inter-relationship between the obligations to reduce and to control (Diagram ii)

The obligations to adopt laws and regulations to reduce and control pollution target pollution at the same point. They both attempt to address existing pollution and its current effect on the marine environment. When they overlap, the measure adopted for the implementation tends to both reduce and control, thereby both obligations are simultaneously mutually supported. Based on the diagram below, a combination of reduction and control is firstly adopted in an attempt to reduce existing pollution and its effect on the marine environment. When the level of pollution and its effects meet the specified standard (Point B), the reducing effect will transform into control, thereby ensuring that the pollution and its effect is kept within the allowable standard. From Point B, the obligation to control will play its role in protecting and preserving the marine environment from both existing and future pollution.

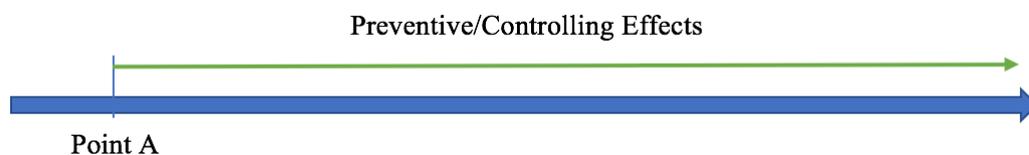


**Diagram (ii) describes an overlapping effect of the obligations to reduce and to control**

(c) Inter-relationship between the obligations to prevent and to control (Diagram iii)

It is interesting that the overlap between the obligations to adopt laws and regulations to prevent and control pollution encompasses a measure that simultaneously has preventive and controlling effects when it is in force and characteristically continues to ensure the good status of the marine environment. When the measure is introduced (Point A), its preventive effect counteracts the future effect of existing pollution. It also attempts to limit the unknown effect of existing pollution as well as new pollution. The controlling

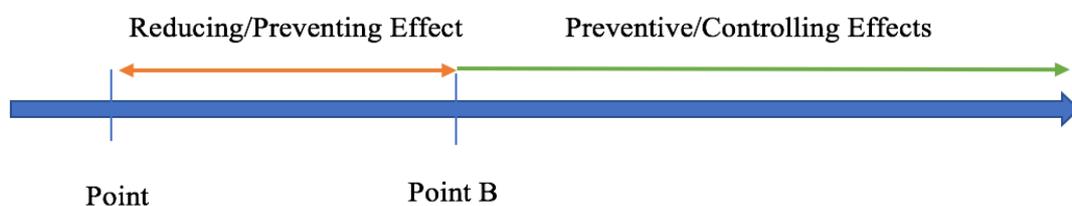
aspect of this measure deals with existing pollution and its ongoing impact with the aim of ensuring that they are both kept to an acceptable standard.



**Diagram (iii) describes an overlapping effect of the obligations to prevent and to control**

(d) Inter-relationship between the three obligations (Diagram iv)

The last combination of this analysis is the combination of the obligations to adopt laws and regulations to prevent, reduce, and control pollution. This overlap entails a measure that prevents the future effect of existing pollution, its unknown effect and new pollution and simultaneously reduces and controls the ongoing impact of existing pollution. Based on the diagram below, when this measure is adopted (Point A), its reducing part addresses the current effect of existing pollution, while its preventive part tackles the future and unknown effects. When the level of pollution has been reduced to the specified standard (Point B), the reducing measure ceases to operate, while the controlling measure continues to be applied, together with the ongoing prevention part of the obligation.



**Diagram (iv) describes the overlapping effect of the three obligations**

As analysed above, it can be seen that, although these obligations are different, they can play a mutually supportive or complimentary role to protect and preserve the environment. They can be implemented with each other or all together at the same time, targeting different stages of pollution. All the measures discussed in the earlier sections can equally be employed in these overlapping situations depending on the overlapping pairs. Having considered the ordinary meanings of the terms to prevent, reduce, and

control MPLA under Article 207 of the LOSC, it can be said that the terms open to at least two possible interpretation. These are the separate or single-combined interpretation of the obligations to prevent, reduce, and control MPLA under the first paragraph of this provision. Several measures can be adopted and be equally employed to implement these obligations due to their shared effects. However, it is unable to conclude which the interpretation is adopted by States and reflect the interpretation of this provision. That requires a further examination into the subsequent practice of States, and it will be done in the next chapter.

### **b. Internationally agreed rules, standards, and recommended practices and procedures**

For the term ‘taking into account internationally agreed rules, standards, and recommended practices and procedures’, two phrases need to be clarified that is (i) taking into account and (ii) internationally agreed rules, standards, and recommended practices and procedures. This will be discussed in turn.

For the term ‘taking into account’, the ordinary meaning of the term ‘to take into account’ means ‘to remember or consider something when judging a situation’.<sup>555</sup> The immediate context of the term is ‘internationally agreed rules, standards, and recommended practices and procedures’. For Article 207, it means that when adopting laws and regulations to prevent, reduce, and control MPLA, States shall have in mind those agreed rules, standards, recommended practices and procedures relating to MPLA. However, the qualifying term ‘taking into account’ does not bind States to give effects those internationally agreed rules, standards, and recommended practices and procedures as is the case for the protection of the marine environment from other sources of pollution such as dumping where the LOSC requires national laws and regulations to be ‘no less effective’ than the global rules and standards.<sup>556</sup> Nor does impose States additional obligation existed outside the LOSC regime unless the LOSC States Parties are party to those international binding instruments. However, the fact that States are merely required

---

<sup>555</sup> Ibid, for the term ‘take into account’, see. <<http://dictionary.cambridge.org/dictionary/english/take-sth-into-account?q=take+into+account>> accessed 6 August 2017.

<sup>556</sup> The LOSC, (n 14) Article 210 (6). See also, Nordquist, Rosenne and Yankov, *United Nations Convention on the Law of the Sea 1982 A Commentary*, (n 169) 132.

to take into account internationally agreed rules, standards, and recommended practices and procedures does not mean that States can neglect them. Failure to demonstrate that it has taken into account those agreed rules, standards, and recommended practices and procedures may result in States failing to fulfil their due diligence obligation required by general international law.

In relation to the term ‘internationally agreed rules, standards, and recommended practices and procedures’, the LOSC employs different terms for the so-called ‘rules of reference’ for different sources of marine pollution. For example, ‘internationally agreed rules, standards, and recommended practices and procedures’ are employed for MPLA and atmospheric pollution<sup>557</sup> whereas the term ‘generally accepted international rules and standards’ is used for vessel-sourced pollution.<sup>558</sup> The former has rarely been discussed, whereas the latter has been the subject of many debates and several lawyers have written about it.<sup>559</sup>

The term ‘internationally agreed rules, standards, and recommended practices and procedures’ have to be deconstructed. Starting with the ordinary meaning of each term, the word ‘rule’ means ‘an accepted principle or instruction that states the way things are or should be done, and tells you what you are allowed or not allowed to do.’<sup>560</sup> As such, a rule is binding upon those who are subject to it.<sup>561</sup> Standard means ‘a level of quality’ or ‘a moral rule that should be obeyed’ or ‘a pattern or model that is generally accepted’.<sup>562</sup> Its binding force is less obvious from its ordinary meaning, and it seems

<sup>557</sup> The LOSC, (n 14) Articles 207 (1), 212 (1).

<sup>558</sup> Ibid, Article 211 (2).

<sup>559</sup> Catherine Redgwell, 'The Never Ending Story: The Role of GAIRS in UNCLOS Implementation in the Offshore Energy Sector' in Rosemary Rayfuse (ed), *Research Handbook on International Marine Environmental Law* (Edward Elgar 2015), Ch. 6; James Harrison, *Making the Law of the Sea* (CUP 2011), 165 – 178; ILA Committee on Coastal State Jurisdiction relating to Marine Pollution, ‘Final Report on Coastal State Jurisdiction relating to Marine Pollution’ in International Law Association Report of the Sixty-Ninth Conference (London 2000) (International Law Association, London 2000), (Final Report), <<http://www.ila-hq.org/index.php/publications>> accessed 14 June 2017, at 35 – 50; W Van Reenen, 'Rules of Reference in the New Convention on the Law of the Sea, in Particular in Connection with the Pollution of the Sea by Oil from Tankers' (1981) 12 *Netherlands Yearbook of International Law* 3; Budislav Vukas, *Generally Accepted International Rules and Standards* (The Law of the Sea Institute, William S. Richardson School of Law, University of Hawaii 1989), 405 – 421.

<sup>560</sup> Cambridge Dictionary, for the term ‘rule’, see. <<http://dictionary.cambridge.org/dictionary/english/rule>> accessed 14 June 2017.

<sup>561</sup> Boyle, 'Marine Pollution under the Law of the Sea Convention', (n 15) 356 – 357.

<sup>562</sup> Cambridge Dictionary, for the term ‘standard’, see. <<http://dictionary.cambridge.org/dictionary/english/standard>> accessed 14 June 2017.

unlikely to be binding.<sup>563</sup> ‘Practice’ can mean ‘action rather than thought or ideas’, ‘something that is usually or regularly done, often as a habit, tradition, or custom’, ‘the act of doing something regularly or repeatedly to improve your skill at doing it’ or ‘a job or business that involves a lot of skill or training’. The ordinary meaning that does not seem to be absurd is ‘something that is usually or regularly done, often as a habit, tradition, or custom’.<sup>564</sup> As for ‘procedure’, this means ‘a set of actions that is the official or accepted way of doing something’. The terms ‘standard’ and ‘procedure’ are qualified by the word ‘recommended’, which means something ‘suggested by experts’.<sup>565</sup> Also, all these terms must be ‘internationally agreed’ and the combined ordinary meaning of the terms ‘internationally’<sup>566</sup> and ‘agreed’<sup>567</sup> means ‘accepted in many different countries’.

Reading the term in this way, ‘internationally agreed rules, standards, and recommended practices and procedures’ encompass any sources of international law, including international agreements and customary or general rules of international law. According to Van Reenen, the word ‘rule’ relates to rules of positive international law, including treaties, customary law, and other binding-decisions of international organisations.<sup>568</sup> This reading also corresponds to the rule of treaty interpretation under Article 31 of the VCLT, which requires the ‘relevant rules of international law’ to be considered in the interpretation.<sup>569</sup> However, Two observation needs to be made here. Firstly, the remaining ambiguity is the threshold of the term ‘internationally agreed’. Put differently, how many States are required for a rule, standard, or recommended practice and procedure to be considered as ‘internationally accepted’? This question cannot be answered by merely reading the ordinary meanings of these terms.

---

<sup>563</sup> Boyle, ‘Marine Pollution under the Law of the Sea Convention’, (n 15) 357.

<sup>564</sup> Cambridge Dictionary, for the term ‘practice’, see. <<http://dictionary.cambridge.org/dictionary/english/practice>> accessed 6 August 2017.

<sup>565</sup> Ibid, for the term ‘recommended’, see. <http://dictionary.cambridge.org/dictionary/english/recommended>.

<sup>566</sup> Ibid, for the term ‘internationally’, see. <http://dictionary.cambridge.org/dictionary/english/internationally>.

<sup>567</sup> Ibid, for the term ‘agreed’, see. <http://dictionary.cambridge.org/dictionary/english/agreed>.

<sup>568</sup> Van Reenen, ‘Rules of Reference in the New Convention on the Law of the Sea, in Particular in Connection with the Pollution of the Sea by Oil from Tankers’, (n 559) 8.

<sup>569</sup> See, Chapter III.

Secondly, as mentioned earlier, internationally agreed rules, standards, and recommended practices and procedures do not put any additional obligation upon the LOSC States, as they merely require to take into account such rules, standards, and recommended practices and procedures. This means that the rules, standards, and recommended practices and procedures mentioned in Article 207 of the LOSC do not become part of the interpretation as is the case for the pollution by dumping or vessel source pollution where Articles 210 and 211 require the LOSC States to give effects the generally accepted international rules and standards dealing with the pollution. Instead, the internationally agreed rules, standards, and recommended practices and procedures relating to MPLA co-exist in the broader context of the international practice dealing with MPLA.

As will be shown in the next chapter, States have already identified several international agreements that directly relate to protecting the marine environment from MPLA. These include the Basel, CBD, PIC, POPs and potentially, the Minamata Conventions.<sup>570</sup> Apart from binding instruments, the internationally agreed rules, standards, and recommended practices and procedures also include those standards, practices and/or procedures contained in the non-binding instruments. In the context of MPLA, although non-binding, the GPA was adopted and recognised as the standards, recommended practices and procedures for States.<sup>571</sup> In this case, it can be considered as part of the term discussed here, and it will be discussed in detail in the next chapter.

### **(iii) Reading the paragraph as a whole**

Having clarified the ambiguous terms above, the first paragraph of Article 207 of the LOSC can be interpreted as instructing States to adopt laws and regulations to prevent, reduce, and control MPLA reaching the marine environment through rivers, estuaries, pipelines and outfall structures. Although the focus of the paragraph seems to be the action at national level, Article 207 of the LOSC has its regional and global dimensions as well, and this can be seen when reading the first paragraph together with the remaining provision especially the third and fourth paragraphs. In adopting laws and regulations for

---

<sup>570</sup> See, Chapter V, Section II.

<sup>571</sup> The GPA, (n 31) para 4 – 6. See also, UNGA Res 66/288 ‘The Future We Want’ (n 244) para 163.

such purpose, various legal techniques and measures – both substantive and procedural – can be employed by States as part of such laws and regulations and they can be tailored to fit the purposes of the laws and regulations whether it is to prevent, reduce, or control MPLA. These measures include, substantively, pollution emission standard; process standard; product standard; environmental quality standard; remedial and restorative measure; and precautionary measure. For procedural techniques and measures, they include notification, exchange of information and consultation; an EIA; monitoring, surveillance, and assessment. In addition, the provision requires States to take into account internationally agreed rules, standards, and recommended practices and procedures when adopting such laws and regulations. The ordinary meaning of the term ‘internationally agreed rules, standards, and recommended practices and procedures’ enables us to know that this term includes international agreements, customary international law, and general principles of international law. However, when it is qualified by the term ‘taking into account’, this means that States are not obliged to give effects international binding instruments external to the LOSC unless they are parties to those instruments. However, failure to demonstrate that it has taken into account those agreed rules, standards, and recommended practices and procedures may result in States failing to fulfil their due diligence obligation required by general international law.

In addition, the ordinary meaning of the first paragraph of Article 207 of the LOSC enables us to point to two possible interpretation of the obligation to adopt laws and regulations to prevent, reduce, and control MPLA. These are (i) separate interpretation and (ii) single-combined interpretation of the obligation to adopt laws and regulations to prevent, reduce, and control MPLA. At this stage, the mere reading of the ordinary meaning of the term does not provide the conclusive result on how this provision should be read. This requires further examination into the subsequent practice of States regarding the protection of the marine environment from MPLA to confirm the interpretation.

**ii. Article 207 of the LOSC – Paragraph 2**

**(i) Ordinary meaning**

Having read the second paragraph of Article 207 of the LOSC, ordinary meaning of this paragraph directs States to adopt ‘other measures’ to prevent, reduce, and control MPLA if States consider those ‘other measures’ necessary for such purpose. However, it is unclear as to what the term ‘other measures’ encompasses. Therefore, the closer analysis will be conducted to clarify the term ‘other measures’ concerning the prevention, reduction, and control MPLA.

**(ii) Ambiguous term – other measures**

The term ‘other measures’ consists of two words – ‘other’ and ‘measures’. Taking into account the ordinary meanings of both words, the word ‘other’ acts as a determiner meaning ‘as well as the thing or person that has already mentioned’. The word ‘measure’ means ‘a way of achieving something, or a method for dealing with a situation’. Acting as a determiner for the word ‘measures’, it means any way or method as well as those that have already mentioned. Having looked at the context of the term ‘other measures’, it has to be those ways or methods to prevent, reduce, and control MPLA additional to those already mentioned. Reading the provision together with the preceding and the following paragraphs encompasses the measures in addition to the laws and regulations adopted for such purpose.

The possible measures in addition to the laws and regulations adopted to prevent, reduce, and control MPLA can be those non-legal measures such as policy, economic, financial, scientific and/or technological measures. Some of which will be shown as part of the implementing measures of Article 207 of the LOSC at the regional level in the next chapter.<sup>572</sup> In the wider context of protecting the marine environment, measures such as technological and educational measures have been set as part of the implementation of the obligation. Articles 202 – 203 of the LOSC provide these measures

---

<sup>572</sup> See, Chapter V, Section III, iv.

in the context of preferential treatment for developing States. Another example can be seen from Article IX of the 1972 London Dumping Convention,<sup>573</sup> in which it is stipulated that Parties shall promote and support (i) the training of scientific and technical personnel; (ii) the necessary equipment and facilities for research and monitoring; and (iii) the disposal and treatment of waste and other measures to prevent or mitigate pollution caused by dumping, when it is requested by other Parties, by collaborating with the IMO and other international bodies. The same utilisation of other non-legal measures can also be seen in Article 13 of the 1996 Protocol to the Convention on the Prevention of the Marine Pollution by Dumping of Wastes and Other Matters 1972 (London Dumping Protocol),<sup>574</sup> as well as in the context of vessel-sourced pollution, where the 1973 International Convention on the Prevention of Pollution from Ships (as amended 1978) (MARPOL 73/78) also provides for the same measures.<sup>575</sup> It is important to note that the above examples are not exclusive. Other measures have been utilised by the international community to address other kinds of environmental problems,<sup>576</sup> and they may also work well with MPLA. This will be discussed in the next chapter, which is based on the subsequent practices used by States at the global level to protect the marine environment from MPLA.

### (iii) Reading the paragraph as a whole

For the prevention, reduce, and control of MPLA, the second paragraph of Article 207 of the LOSC suggests that not only laws and regulations, but also other non-legal measures that can be adopted to prevent, reduce, and control MPLA if States see the necessity of such measures to protect and preserve the marine environment. These measures can be in forms of economic, financial, scientific and/or technological measures. However, the mere ordinary meaning of the term cannot provide concrete

---

<sup>573</sup> (n 267) at Article IX.

<sup>574</sup> (Adopted 7 November 1996; entered into force 24 March 2006), (14 November 1996) IMO Doc. LC/SM 1/6.

<sup>575</sup> (Adopted 2 November 1973; entered into force 2 February 1983) 1340 UNTS 184, Article 17; The 1973 Convention did not enter into force until the adoption of the 1978 Protocol. The Protocol absorbed the 1973 Convention and is generally referred as MARPOL 73/78. For more information, see. <[http://www.imo.org/en/about/conventions/listofconventions/pages/international-convention-for-the-prevention-of-pollution-from-ships-\(marpol\).aspx](http://www.imo.org/en/about/conventions/listofconventions/pages/international-convention-for-the-prevention-of-pollution-from-ships-(marpol).aspx)> accessed 4 August 2017.

<sup>576</sup> Various measures have been employed, for example, under UNFCCC regime. See, UNFCCC, 'Education and Outreach' <[http://unfccc.int/cooperation\\_and\\_support/education\\_and\\_outreach/items/2529.php](http://unfccc.int/cooperation_and_support/education_and_outreach/items/2529.php)> (accessed 15 May 2015).

examples of such measures in dealing with MPLA. This requires an examination into the subsequent practice of States to illustrate the relevant measures in this context. As will be shown in the next chapter, some of these non-legal measures have been utilised by States as part of the implementation of the obligation to protect and preserve the marine environment from MPLA under Article 207 of the LOSC.

### **iii. Article 207 of the LOSC – Paragraph 3**

#### **(i) Ordinary meaning**

The ordinary meaning of the third paragraph of Article 207 of the LOSC suggests that the regional policy harmonisation is required to achieve the prevention, reduction, and control of MPLA. Reading this with the preceding paragraphs can arguably mean that the policy harmonisation is ‘other measures’ to deal with MPLA and is the regional aspect of the obligation to protect and preserve the marine environment from MPLA under this provision. However, the duty to harmonise the policy is qualified by the term ‘shall endeavour to harmonise’ which mystifies the binding force and normativity of this paragraph of Article 207 of the LOSC. As such, the term ‘shall endeavour to harmonise’ needs to be clarified to enable the interpretation of this provision.

#### **(ii) Ambiguous term – shall endeavour to harmonise**

Taking into account the ordinary meaning, the term ‘endeavour to’ means ‘to try to do something.’<sup>577</sup> What States are obliged to do is to try to ‘harmonise’ their policies in connection with prevention, reduction, and control MPLA. In this case, ‘harmonise’ ordinarily means ‘to be suitable together, or to make different people, plans, situations, etc. suitable for each other’.<sup>578</sup> This means that States are required to try to make their policies regarding prevention, reduction, and control MPLA at the regional level suitable for each other. However, the term ‘endeavour to’ does not oblige States to achieve the

---

<sup>577</sup> Cambridge Dictionary, for the term ‘endeavour’, see. <<http://dictionary.cambridge.org/dictionary/english/endeavour>> accessed 20 June 2016.

<sup>578</sup> Cambridge Dictionary, for the term ‘harmonise’, see. <<https://dictionary.cambridge.org/dictionary/english/harmonize?q=harmonise>> accessed 24 February 2018.

successful harmonisation in the case where States cannot agree so. Inevitably, this term weakens the binding force of the obligation and make it more difficult to enforce.

**(iii) Reading the paragraph as a whole**

Reading this paragraph as a whole, the formulation ‘States shall endeavour to’ harmonise their policies in this connection at the appropriate regional level means that States are required to discuss and try to make their policies for the protection of the marine environment from MPLA at the regional level suitable and consistent between each other. However, the weaker qualifying term ‘endeavour to’ does not oblige States to achieve the successful harmonisation at the regional level. Reading the paragraph according to its ordinary meaning suggests a ‘hard obligation with soft normativity’. The ‘hard obligation’ is that States are required to discuss the policy harmonisation, while the ‘soft normativity’ is that there is no guarantee that the harmonisation will be successful. Again, only the ordinary meaning of the term, ‘endeavour to’ does not reveal the appropriate interpretation of Article 207 (3) of the LOSC, and this requires a further examination of subsequent practices of States related to protecting the marine environment from MPLA.

**iv. Article 207 of the LOSC – Paragraph 4**

**(i) Ordinary meaning**

Having read the fourth paragraph of Article 207 of the LOSC, it suggests the cooperation by States at the appropriate global and/or regional levels to adopt ‘agreed rules, standards, and recommended practices and procedures’ to prevent, reduce, and control MPLA. Several steps are also determined in this process. Firstly, the adoption of such agreed rules, standards, and recommended practices and procedures has to be done through ‘competent international organisations or diplomatic conference’. Both terms need further clarification to see if the ordinary meanings of the terms enable identification of such international organisations or diplomatic conference. Secondly, in adopting such agreed rules, standards, and recommended practices and procedure, the provision requires States to take into account ‘characteristic regional features, the economic capacity of developing States and their need for economic development’. This

term also needs to be analysed to enable to interpret Article 207 of the LOSC correctly. Thirdly, once the agreed rules, standards, and recommended practices and procedures are adopted, re-examination is required ‘from time to time’ and ‘as may be necessary’. The clarification to the ambiguous terms will be discussed in turn.

**(ii) Ambiguous terms**

**a. Competent international organisations and diplomatic conference**

For the term ‘competent international organisations or diplomatic conference’, this term is ambiguous in at least two aspects. Firstly, who are the competent international organisations and how many of them deal with MPLA? Secondly, what is meant by ‘diplomatic conference’?

Regarding the first question, the provision uses the plural form, which suggests that there is more than one competent international organisation working in the area of MPLA. According to the Draft Articles on the Responsibility of International Organisations;

“An international organisation” is ‘an organisation established by a treaty or other instrument governed by international law and possessing its own international legal personality. International organisations may include as members, in addition to States, other entities.’<sup>579</sup>

Based on this meaning, competent international organisations are those that are established by international law and possess their legal personality. However, it is important to note that not every international organisation can adopt global and regional rules, standards and recommended practices and procedures relating to MPLA. It must be the ‘competent’ international organisations. The term ‘competent’ means ‘able to do something well’.<sup>580</sup> This means that such international organisations must not only have

---

<sup>579</sup> ILC, ‘Draft Articles on the Responsibility of International Organisations, with Commentaries’ (Draft Articles on the Responsibility of International Organisations), Yearbook of the International Law Commission, 2011, Vol. II, Part Two, Article 2 (a) at 6 – 12.

<sup>580</sup> <<https://dictionary.cambridge.org/dictionary/english/competent>> accessed 2 February 2018.

the expertise in dealing with MPLA but also be entrusted by States to protect the marine environment, especially from MPLA. For example, the United Nations Environmental Programme (now called UN Environment), established under the auspices of the United Nations (UN), is one example of a competent international organisation that has the mandate to deal with MPLA, for example, (i) to promote international co-operation in the field of the environment and to recommend, as appropriate, policies to this end;<sup>581</sup> (ii) to provide general policy guidance for the direction and coordination of environmental programmes within the United Nations system;<sup>582</sup> (iii) to continually review the world's environmental situation in order to ensure that emerging environmental problems of wide international significance are appropriately and adequately considered by Governments;<sup>583</sup> and (iv) to continually review the impact of national and international environmental policies and measures on developing countries, as well as the problem of additional costs that may be incurred by developing countries in the implementation of environmental programmes and projects, and to ensure that such programmes and projects are compatible with the development plans and priorities of those countries.<sup>584</sup> The work of UN Environment also includes developing international and national environmental instruments, including those in the area of protecting the marine environment.<sup>585</sup> This means that the UN Environment can at least be counted as one of the competent international organisations under Article 207 (4) of the LOSC. However, it is debatable which international organisations are entrusted with the same powers as the UN Environment when this provision is implemented at the regional level since Article 207 is silent on this issue. The ordinary meanings of the terms provided here give only the characteristics of the potential international and/or regional organisations that can perform these tasks. The identification of the relevant international and/or regional organisations is further revealed by the subsequent practice of States concerning Article 207 of the LOSC.

Regarding the number of competent international organisations dealing with MPLA, the plural form of the term 'competent international organisations' is intentional and logical

---

<sup>581</sup> UNGA Resolution 2997 (XXVII) (1972).

<sup>582</sup> *Ibid.*

<sup>583</sup> *Ibid.*

<sup>584</sup> *Ibid.*

<sup>585</sup> For more information, see. UN Environment, <<http://unep.org/about/>> accessed 15 May 2015.

and responds to the fact that more than one single organisation is involved in this issue based on the complex nature of pollution.<sup>586</sup> This is because, by its nature, MPLA emerges from both point and diffuse sources; in fact, MPLA is dealt with largely by type rather than source. As a result, the regulation of MPLA may be adopted by several relevant international institutions to cover as many, if not all, aspects of MPLA as they can. Moreover, the state of the art of international law suggests that multilateral environmental agreements contain autonomous institutional arrangements that have played an influential role in establishing international environmental standards. The COP or MOP to multilateral environmental agreements is an example of this.<sup>587</sup> It will be shown in the next chapter, in which the subsequent practices of States related to protecting the marine environment from MPLA are discussed, that there are several international organisations, arrangements, or forums that are entrusted with dealing with different MPLA contaminants both from point and diffused sources. Whether or not these institutions actively respond to the MPLA problem is another issue, but at this stage, only the ordinary meaning of the term cannot point to a definitive list of competent international organisations that are dealing with MPLA. Therefore, further consideration of the subsequent practice of LOSC Parties is required for the interpretation or application of Article 207 in order to determine which international organisations are competent to deal with this matter.

The second question concerns the meaning of the term ‘diplomatic conference’. Considering the fact that this conference must be a forum where global and regional rules, standards, and recommended practice and procedures are to be adopted, it must be a place where the States’ representatives can debate, negotiate and exchange their views, as well as agree to adopt such rules, standards, and recommended practices and procedures in the name of their government. Nordquist, Rosenne, and Yankov rightly observe that this diplomatic conference ‘must be a plenipotentiary conference of the representatives of States (and not a conference composed exclusively of the representatives of international organisations or of independent experts), regardless the

---

<sup>586</sup> Nordquist, Rosenne and Yankov, *United Nations Convention on the Law of the Sea 1982 A Commentary*, (n 169) 133.

<sup>587</sup> For more information about the autonomous institutional arrangement, see. Robin R Churchill and Geir Ulfstein, 'Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A Little-Noticed Phenomenon in International Law' (2000) 94 *American Journal of International Law* 623.

type of instrument it adopts.’<sup>588</sup> Therefore, it can be concluded that a diplomatic conference to adopt global and regional rules, standards, and recommended practices and procedures must be a plenipotentiary conference of the representatives of States. As will be shown in the next chapter, the subsequent practice of the LOSC Parties related to the interpretation and application of Article 207 points to some possible conferences within the meaning of ‘diplomatic conference’ under this article. Of particular significance is the Intergovernmental Conference to adopt a Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (Washington Conference), in which the Washington Declaration and the GPA were adopted.<sup>589</sup>

**b. Taking into account characteristic regional features, the economic capacity of developing States and their need for economic development**

For the term ‘taking into account characteristic regional features, the economic capacity of developing countries, and their need for economic development’, so far, there is no official meaning for this term or a thorough analysis of the meaning in the literature. According to Article 207, the establishment of global and regional rules, standards, recommended practices and procedures shall take into account characteristic regional features, the economic capacity of developing States, and their need for economic development. To ‘take something into account’ means ‘to remember or consider something when judging a situation’.<sup>590</sup> The subsequent terms are ‘characteristic regional features’, ‘economic capacity of developing countries’ and ‘their need for economic development’. The first impression from the need to take into account these factors suggests that this requirement is based on the notion of CBDR,<sup>591</sup> allowing the flexible implementation of this provision when considering these factors.

---

<sup>588</sup> Nordquist, Rosenne and Yankov, *United Nations Convention on the Law of the Sea 1982 A Commentary*, (n 169) 133.

<sup>589</sup> This conference was held in Washington, D.C., the U.S.A from 23 October - 3 November 1995 and more than 108 governments participated. For more information, see <http://unep.org/gpa/About/about.asp> <accessed 7 June 2016>. For Washington Declaration, see. (n 30); For the GPA, see. (n 31).

<sup>590</sup> Ibid, for the term ‘take into account’, see. <<http://dictionary.cambridge.org/dictionary/english/take-sth-into-account?q=take+into+account>> accessed 6 August 2017.

<sup>591</sup> See, Chapter III. Section II, iv.

The first factor is ‘characteristic regional features’. The term ‘characteristic’ means ‘a typical or noticeable quality of someone or something’ or ‘typical of a person or thing’.<sup>592</sup> The term ‘regional’ means ‘relating to or characteristic of a region’<sup>593</sup> and the term ‘feature’ means ‘a typical quality or an important part of something’ or ‘a part of a building or of an area of land’ or ‘one of the parts of someone's face that you notice when you look at them’.<sup>594</sup> The combination of these three words not only encompasses the geographical features of a particular region but other typical or notable qualities that represent an important part of it. On this basis, the ordinary meaning of the terms allows environmental and pollution problems that are exceptional to a particular region to be considered as ‘characteristic regional features’; for example, geographical and climatological particularities that have been acknowledged as contributing to or accelerating pollution. This is the case in the Baltic Sea, where its ‘exceptional hydrographic and ecological characteristics and the sensitivity of its living resources to change’ are recognised in the Helsinki Convention as one of the reasons for regional cooperation.<sup>595</sup> The distinctive features of the Baltic Sea include its shallowness and the shape of the sea floor that makes it difficult for the water to circulate causing a pollution sink. Under the Black Sea programme, based on the special concern of the pollution problem, development or land-use activities that contribute to MPLA and those that enter the Black Sea through the Danube River are expressly acknowledged as the causes of the deterioration of the Black Sea environment. These were among the reasons for the adoption of the 1992 Convention on the Protection of the Black Sea Against Pollution.<sup>596</sup>

The other term is ‘the economic capacity of developing countries and their need for economic development’. Before considering the meaning of ‘economic capacity’ and ‘the need for economic development’, the developing countries referred to in this provision need to be identified. There is no precise meaning of the term ‘developing countries’, but a developing country is classified by its basic economic conditions. The

---

<sup>592</sup> Cambridge Dictionary, for the term ‘characteristic’, see. <<http://dictionary.cambridge.org/dictionary/english/characteristic>> accessed 6 August 2017.

<sup>593</sup> Ibid, for the term ‘regional’, see. <<http://dictionary.cambridge.org/dictionary/english/regional>> accessed 6 August 2017.

<sup>594</sup> Ibid, for the term ‘feature’, see. <<http://dictionary.cambridge.org/dictionary/english/feature>> accessed 6 August 2017.

<sup>595</sup> Helsinki Convention, (n 300) preambular provision.

<sup>596</sup> The 1992 Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention), (adopted 21 April 1992; entered into force 15 January 1994) 1764 UNTS 3, preambular provision.

developing countries used in this provision can be drawn from a list based on the classification of UN World Economic Situation and Prospects, which takes note of the discrepancies in the classification by other institutions, such as the World Bank.<sup>597</sup>

As for ‘economic capacity’, economic means ‘relating to trade, industry, and money’,<sup>598</sup> while ‘capacity’ means ‘the total amount that can be contained or produced, or (especially of a person or organisation) the ability to do a particular thing’.<sup>599</sup> Therefore, a combination of the two words means the ability to produce a particular thing out of trade, industry, and money. The ‘need for economic development’ refers to a State’s growth in terms of trade, industry, and money to provide its citizens with a satisfactory life. Based on the context of this term, the requirement to take into account the need and capacity of developing countries is encompassed by two relevant provisions in the LOSC, namely, Articles 194 and 203. Article 194 requires States to ‘take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and *in accordance with their capabilities*, and they shall endeavour to harmonise their policies in this connection.’<sup>600</sup> Article 203 specifically obliges international organisations to grant developing countries preference ‘for the purposes of prevention, reduction and control of pollution of the marine environment or minimisation of its effects’.<sup>601</sup>

As mentioned earlier, these terms are underpinned by the CBDR principle, which enables developing states to be granted differential, and perhaps preferential, treatment in fulfilling globally agreed rules and standards, as well as their obligation under this provision. In the wider context of protecting the environment, there are various possible ways to take into account the developing States’ capacity and need for economic development that have been utilised in other international environmental governance and

---

<sup>597</sup> See, United Nations, *World Economic Situation and Prospects 2017* (2017), 151 – 159.

<sup>598</sup> Cambridge Dictionary, for the term ‘economic’, see. <<http://dictionary.cambridge.org/dictionary/english/economic>> accessed 6 August 2017.

<sup>599</sup> Ibid, for the term ‘capacity’, see. <<http://dictionary.cambridge.org/dictionary/english/capacity>> accessed 6 August 2017.

<sup>600</sup> Emphasis added.

<sup>601</sup> The LOSC, (n 14) Article 203.

protection, such as transboundary air pollution and climate change regimes.<sup>602</sup> A good example is an entitlement of developing States that are party to the Montreal Protocol to the Vienna Convention to a period of grace for phasing out ozone-depleting substances.<sup>603</sup> An example in the protection of the marine environment regime can be found in the London Dumping Protocol, where ‘subject to the availability of adequate resources’, the IMO may ‘assist developing countries and those in transition to market economies, which have declared their intention to become Contracting Parties to this Protocol, to examine the means necessary to achieve full implementation.’<sup>604</sup>

### (iii) Reading the paragraph as a whole

Reading this paragraph as a whole, the fourth paragraph of Article 207 requires States to try to establish global and regional rules, standards, and recommended practices and procedures through competent international organisations or diplomatic conference. The obligation to endeavour to establish such rules, standards, and recommended practices and procedures is not one of result. It merely requires States to work together toward such purpose. However, it does not guarantee nor require the successful adoption. Besides, the international organisations and diplomatic conference which such global and regional rules, standards, and recommended practices and procedures are to be adopted must be ones that are competent to deal with MPLA and are entrusted by States for such purpose. For diplomatic conference, it must be a plenipotentiary conference of the representatives of States.

Furthermore, in establishing the global and regional rules, standards, and recommended practices and procedures, States must take into account ‘characteristic regional features, the economic capacity of developing countries, and their need for economic development’. This means that they must consider the geographical features of a particular region, but other typical or notable qualities that represent an important part of it. This allows for the consideration of environmental and pollution problems exceptional to a particular region to be considered as ‘characteristic regional features’. The ability to

---

<sup>602</sup> For more information about preferential treatment for developing countries. See, Rajamani, *Differential Treatment in International Environmental Law*, (n 337); Nordquist, Rosenne and Yankov, *United Nations Convention on the Law of the Sea 1982 A Commentary*, (n 169) 105 – 107.

<sup>603</sup> (n 222) at Article 5.

<sup>604</sup> *Ibid*, Article 13 (2) (3).

produce a particular thing out of trade, industry, and money as ‘economic capacity’ and a State’s growth in terms of trade, industry, and money as the ‘need for economic development’ must be borne in mind when establishing such rules, standards, and recommended practices and procedures. It is important to note that the economic capacity and the need for economic development must be of the developing States. Which States are qualified as ‘developing’ can be drawn from the classification of UN World Economic Situation and Prospects.<sup>605</sup>

However, what has been or can be utilised within the MPLA regime cannot easily be explained by the mere ordinary meaning of the terms of Article 207 of the LOSC. Therefore, further analysis of how States materialise the requirement to take into account characteristic regional features, the economic capacity and need for economic development of developing states, will be made in the next chapter.<sup>606</sup>

**v. Article 207 of the LOSC – Paragraph 5**

**(i) Ordinary meaning**

According to the fifth paragraph of Article 207, it requires that ‘laws, regulations, measures, rules, standards and recommended practices and procedures referred to in paragraphs 1, 2 and 4 must include those designed to minimize, to the fullest extent possible, the release of toxic, harmful or noxious substances, especially those which are persistent, into the marine environment.’ This means that both legal and non-legal measures adopted must include within their ambit ‘harmful or noxious substances’ with the special focus on the persistent substances as the target of reduction. In addition, the reduction of those substances must be done ‘to the fullest extent possible’. However, it is not clear how the term ‘the fullest extent possible’ influence the design of all the measures mentioned in the preceding paragraph. This term merits further clarification for the purpose of interpreting Article 207 of the LOSC, and it is discussed below.

---

<sup>605</sup> See, Nations, *World Economic Situation and Prospects 2017*, (n 597) 151 – 159.

<sup>606</sup> See, Chapter V, Section III, iv.

**(ii) Ambiguous term – to the fullest extent possible**

The term ‘the fullest extent possible’ comprises of three words – fullest, extent, and possible. The ordinary meaning of the word ‘fullest’ means ‘greatest possible’.<sup>607</sup> The word ‘extent’ means ‘the degree to which something happens or is likely to happen’, while the word ‘possible’ means ‘able to be done or achieved, or able to exist’ or ‘that might or might not happen’.<sup>608</sup> Reading these three words together, it encompasses something that can happen or can be achieved at the greatest possible. This meaning of the term ‘to the fullest extent possible’ signals two possible scenarios. The first one is something that happens or can be achieved totally, and another which it might not happen but are dealt with or happen only to the greatest possible degree.

**(iii) Reading the paragraph as a whole**

Looking at the ordinary meaning of the term ‘the fullest extent possible’ in context, the immediate context is ‘laws, regulations, measures, rules, standards, and recommended practices and procedures’ and ‘to minimise ... the release of toxic, harmful or noxious substances, especially those which are persistent, into the marine environment’. The paragraph means that when dealing with toxic, harmful or noxious substance released into the marine environment, both legal and non-legal measures adopted to prevent, reduce, and control MPLA must try to reduce these substances in its entirety or, if not possible, must reduce the greatest possible amount of the substances. The way in which the paragraph is phrase supports the reality that, for some MPLA source-categories, eliminating such substances entirely is extremely difficult, if not impossible. As a result, the provision gives some flexibility in designing and devising measures to deal with MPLA in an appropriate situation. As will be shown in the next chapter, the measures dealing different MPLA source-categories are developed at the different levels depending on circumstances.

---

<sup>607</sup> For the term ‘fullest’, see Cambridge Dictionary. <<https://dictionary.cambridge.org/dictionary/english/full?q=fullest+>> accessed 2 February 2018.

<sup>608</sup> Ibid. For the term ‘possible’, see. <<https://dictionary.cambridge.org/dictionary/english/possible>> accessed 2 February 2018.

**vi. Reading the provision as a whole in its context and the light of object and purpose**

Having clarified the ambiguous terms and read each paragraph, now Article 207 can be read as a whole in its context and the light of object and purpose. Taking into account the ordinary meanings of the terms in Article 207 of the LOSC, the provision requires States to take measures to prevent, reduce, and control MPLA. In so doing, in the case where States adopt laws and regulations for such purpose, they must take into account internationally agreed rules, standards, and recommended practices and procedures relating to the protection of the marine environment from MPLA. There is a range of legal techniques and measures – both substantive and procedural – which can be used as part of the laws and regulations to prevent, reduce, and control MPLA. In addition, if necessary, States can also employ other non-legal measures to achieve such purpose. These non-legal measures can be policy, economic, financial, scientific and/or technological ones.

From the discussion above, three immediate observations can be made from the reading. Firstly, the ordinary meaning of the term in Article 207 is inconclusive on how the obligation to adopt laws and regulations to prevent, reduce, and control MPLA should be interpreted – whether as three separate obligations or a single-combined one. Secondly, while it is possible to acknowledge that the term ‘internationally agreed rules, standards, and recommended practices and procedures’ include international agreement, customary international law, and general principles of international law, it does not clarify which international agreements and other rules and principles of international law are included within this term. That requires further examination of the subsequent practices of States relating to the prevention, reduction, and control of MPLA. Thirdly, when adopting laws and regulations to deal with MPLA, States are merely required to ‘take into account’ internationally agreed rules, standards, and recommended practices and procedures. Looking at the wider context, this differs from other sources of marine pollution such as dumping or vessel-sourced pollution where the LOSC requires the adopted laws and regulations ‘shall be no less effective than the global rules and standards’ or ‘shall at least have the same effect as the generally accepted international rules and standards’.<sup>609</sup> Having to take into account internationally agreed rules,

---

<sup>609</sup> LOSC, (n 14) Articles 210 (6), 211 (2).

standards, and recommended practices and procedures, States do not oblige to give effects them. Though they are relevant to MPLA, these agreed rules, standards, and recommended practices and procedures exist outside the LOSC regime and cannot impose additional obligation upon the LOSC States Parties unless they are parties to those international binding instruments. However, failure to demonstrate that it has taken into account those agreed rules, standards, and recommended practices and procedures may result in States failing to fulfil their due diligence obligation required by general international law.

In addition, the obligation to protect and preserve the marine environment from MPLA under Article 207 of the LOSC contains more than the national aspect. Reading the first, third, and fourth paragraphs together, the provision requires the prevention, reduction and control of MPLA at both the global and regional levels. This is supported by the wider context when taking into account Article 197 of the LOSC which requires States to cooperate at both global and regional levels to protect and preserve the marine environment. At the regional level, it requires States to try to make their policies relating to MPLA suitable and consistent with each other, although any successful harmonisation may not happen.<sup>610</sup> In addition, for both the global and regional levels, States are obliged to act through competent international organisations or diplomatic conference in an attempt to establish global and regional rules, standards, and recommended practices and procedures for prevention, reduction and control of MPLA.<sup>611</sup> The ordinary meaning of the term allows us to know that international organisations must be ones that have the expertise to deal with MPLA and are entrusted by States to deal with the issue. Also, a diplomatic conference must be a plenipotentiary conference of the representatives of States where they have an authority to adopt rules, standards, and recommended practices and procedures. However, the ordinary meaning of the term cannot identify, apart from the UN Environment, which international organisations or diplomatic conference are competent. That requires further elaboration by the subsequent practice of States which will be addressed in the next chapter. For the establishment of the global and regional rules, standards, and recommended practices and procedures, States must take into account not only the geographical features of a particular region but other typical or

---

<sup>610</sup> Ibid, Article 207 (3).

<sup>611</sup> Ibid, Article 207 (4).

notable qualities that represent an important part of it including environmental and pollution problems. Also, they must consider economic capacity and the need for economic development of the developing States.

Article 207 of the LOSC recognises the situation where it is not possible for certain MPLA source-categories to be eliminated entirely. As such, it gives some flexibility for the laws, regulations, measures, rules, standards, and recommended practices and procedures to be designed to reduce the greatest possible amount of toxic, noxious, and persistent substances released into the marine environment if they cannot be entirely removed. In fact, this suggests the different design, levels and degrees of the measures adopted to deal with MPLA and this different development of measures dealing with different MPLA source-categories can be seen in the next chapter.

## **V. Conclusion**

From the above discussion, it can be said that the consideration of the ordinary meaning of the terms under Article 207 of LOSC allows us to understand better the obligation to protect and preserve the marine environment from MPLA. From the ordinary meaning of the term, it is possible to point out that this obligation has the national, regional, and global aspects, although the mere consideration of the ordinary meaning of the term still falls short of concluding how the obligation should be interpreted – whether as a separate or a single-combined obligation. In addition, States are required to adopt laws and regulations as well as other measures to prevent, reduce, and control MPLA taking into account internationally agreed rules, standards, and recommended practice and procedures. Although it is possible to observe that they include both binding and non-binding instruments, customary international law, and general principles of international law relating to the protection of the marine environment from MPLA, it requires further examination of subsequent practice of States which binding and non-binding instruments are the agreed rules, standards, and recommended practice and procedures under Article 207 of the LOSC. That will be dealt with in the next chapter.

Reading the provision as a whole also allows us to observe also other dimensions of Article 207 of the LOSC. At the regional level, States are obliged to endeavour to

harmonise their policies relating to prevention, reduction and control MPLA. Also, they are required to try to 'establish global and regional rules, standards, and recommended practices and procedures to prevent, reduce and control' MPLA. However, they are not required to achieve the policy harmonisation nor the establishment of the global and regional rules, standards, and recommended practices and procedures. For the adoption of global and regional rules, standards, and recommended practices and procedures, States shall do so through competent international organisations and diplomatic conference. Besides, characteristic regional features, the economic capacity of developing States and their need for economic development must also be taken into account in establishing such rules, standards, and recommended practices and procedures. Although the ordinary meaning enables the understanding that international organisations must be ones that have the expertise in dealing MPLA and are entrusted by States to do so, it is not possible to single out, apart from the UN Environment, which are those competent international organisations and diplomatic conference within the meaning of Article 207 (4). That requires further examination into the subsequent practice of States on the issue.

Although the ordinary meaning of the term in Article 207 of the LOSC allows us to observe the clearer substance of the obligation to protect and preserve the marine environment from MPLA, further examination is needed to see how this provision is interpreted by States in practice. The subsequent practice of States at the global level will be analysed to further clarify the ambiguities that cannot be elucidated by the ordinary meaning. These include the further clarifications to the terms 'internationally agreed rules, standards, and recommended practices and procedures', 'competent international organisation'. Also, the analysis of the subsequent practice of States at the global level will assist the interpretation of Article 207 of the LOSC to see if the obligation under this provision is understood as a separate or single-combined obligation and how the substance of the regional aspect of the obligation has been developed. This will be discussed in the next chapter.

## **Chapter V: Subsequent Practice of States at the Global Level related to the Protection of the Marine Environment from MPLA under Article 207 of the LOSC**

### **I. Introduction**

The previous chapter discussed the ordinary meaning of the terms under Article 207 of the LOSC in their context and the light of their object and purpose. The examination of the ordinary meaning of the terms was performed in accordance with Article 31 of the VCLT. The interpretation of some terms under Article 207 of the LOSC according to their ordinary meanings yields a sound interpretation. For example, the ordinary meaning of Article 207 (1) allows us to understand that the provision contains not only the national, but also regional, and global aspects. In addition, it enables us to understand that ‘internationally agreed rules, standards, and recommended practices and procedures’ taken into account by States when adopting the laws and regulations adopted to protect and preserve the marine environment from MPLA include both binding and non-binding instruments, customary international law, and general principles of international law. It also includes, *inter alia*, ‘other measures’,<sup>612</sup> ‘competent international organisations and diplomatic conference’.<sup>613</sup> However, the ordinary meaning left ambiguities, and did not clarify how some terms should be interpreted. For example, it is not clear how Article 207 (1) of the LOSC should be interpreted – whether as a separate or single-combined obligation. In addition, it is not clear which international instruments – binding and non-binding can be counted as ‘internationally agreed rules, standards, and recommended practices and procedures’. This chapter starts from the ambiguities left in the earlier chapter. It tries to clarify which instruments – binding or non-binding – are recognised as ‘internationally agreed rules, standards and recommended practices and procedures’ and which international organisations and diplomatic conference are considered ‘competent’ under Article 207 of the LOSC. Also, this chapter tries to clarify the ambiguity over the interpretation of the obligation to adopt laws and regulations to prevent, reduce, and control MPLA at the regional level under Article 207 (1) of the LOSC. The unresolved question is whether the obligations to adopt laws and regulations

---

<sup>612</sup> Ibid, Article 207 (2).

<sup>613</sup> Ibid, Article 207 (4).

to prevent, reduce, and control MPLA at the regional level should be interpreted separately or as a single-combined obligation.

Having examined the subsequent practice of States at the global level, this chapter demonstrates that States have interpreted the obligation under Article 207 (1) of the LOSC as a single-combined obligation. The analysis of the subsequent practice of States shows that this single-combined obligation to adopt laws and regulations prevent, reduce, and control MPLA at the regional level consists of four components. The four components base on principally on the GPA and the practices of States through the IGR process. This is because States recognised the GPA and IGR process as the principal document and forum dealing with the prevention, reduction, and control MPLA respectively. Some of these components encompass those implementing measures discussed in the earlier chapter. These four components are (i) the adoption of a regional plan or programme of action (RPA); (ii) the monitoring, assessment, and surveillance of MPLA; (iii) the notification, consultation, and exchange of information related to MPLA; and (iv) other forms of cooperation.

In elaborating the arguments, the chapter starts with the identification of the internationally agreed rules, standards, and recommended practices and procedures related to the protection of the marine environment from MPLA. In this part, it confirms the interpretation in the earlier chapter that these agreed rules, standards, and recommended practices and procedures include both binding and non-binding instruments. The subsequent practice of States allows us to identify which international instruments are considered 'internationally agreed rules, standards and recommended practices and procedures' within the meaning of Article 207 (1) of the LOSC. Also, as a result of such identification, it can identify the relevant diplomatic conferences that States cooperate to adopt such rules and standards within the meaning of Article 207 (4). They all are discussed below. Subsequently, it illustrates that the analysis of the subsequent practice of States points out the single-combined interpretation of the obligation to prevent, reduce, and control MPLA at the regional level with four components. This is because States do not differentiate these obligations when it comes to their implementation. In addition, the recommended measures dealing with MPLA are not specifically designed to implement any particular obligation. Instead, the recommended measure can be used to implement all the obligation. This collectively shows the single-

combined interpretation of this obligation at the regional level. Finally, it concludes that although it is possible to interpret the obligation to prevent, reduce, and control MPLA at the regional level as a single-combined obligation with four components, the development of each component varies. Beside, whether, or not, States have in fact followed such interpretation requires further examination on the subsequent practice of States at the regional level. All are discussed below.

## **II. Identification of internationally agreed rules, standards, and recommended practices and procedures**

Before examining the subsequent practice of States for interpreting Article 207 of the LOSC at the global level, it is important to identify the ‘internationally agreed rules, standards, and recommended practices and procedures’ States are required to consider under this provision. Knowing which instruments are recognised as such will help to inform the way the treaty is interpreted and arguably facilitate a better understanding of the interpretation outcome. Based on the subsequent practice of States at the global level, several international instruments, both binding and non-binding, are recognised as being directly related to protecting the marine environment from MPLA and hence, to the prevention, reduction and control of MPLA under Article 207 of the LOSC. As illustrated below, the recognition of these instruments can be seen in the Intergovernmental Review Meetings of the GPA showing that States have acknowledged these instruments as relevant to the protection and preservation of the marine environment from MPLA.

At this stage, two observations need to be made. Firstly, it is important to note that the internationally agreed rules, standards, and recommended practices and procedures identified in this section do not put any additional obligation upon the LOSC States Parties unless they are also parties to those rules, standards etc. This is because Article 207 (1) of the LOSC merely requires States to ‘take into account’ internationally agreed rules, standards, and recommended practices and procedures. States are not required to give effect to them as is the case in other provisions of the LOSC such as Articles 210 and 211 dealing with pollution by dumping and vessel-source pollution respectively.<sup>614</sup>

---

<sup>614</sup> See, Chapter IV, Section IV, i (ii).

The fact that the internationally agreed rules, standards, and recommended practices and procedures do not automatically put additional obligations to the LOSC Member States suggests that they are not treated as part of the interpretation of Article 207 of the LOSC as such. Instead, they co-exist in the broader context of international law relating to marine environment protection. These rules, standards, and recommended practices and procedures bridge the LOSC through the requirements to take into account internationally agreed rules, standards and recommended practices and procedures under Article 207 of the LOSC.

Secondly, although States are obliged to merely take into account internationally agreed rules, standards and recommended practices and procedures in accordance with Article 207 (1) of the LOSC, adherence to these instruments suggests that States has fulfilled the obligation required by Article 207 of the LOSC and that the due diligence obligation has been exercised. What tells us from the above observation is that although the obligation to take into account internationally agreed rules, standards, and recommended practices and procedures does not require the LOSC States to give effect them, it can indirectly create a burden of proof on a State deviating from them whether or not the due diligence obligation has been exercised. Of course, it is still less onerous compared to other provisions such as those dealing with pollution by dumping and vessel-source pollution requiring States to give effect generally accepted international standards.<sup>615</sup> However, this, to a certain extent, strengthens the normativity and the way in which States implement their obligation under Article 207 of the LOSC by ensuring the internationally agreed rules, standards, and recommended practices and procedures are taken seriously into account for the purpose of prevention, reduction and control of MPLA. The identified internationally agreed rules, standards, and recommended practices and procedures can be categorised into two groups – binding and non-binding – as discussed below.

#### **i. Non-binding instruments**

At least four international instruments can be observed from the subsequent practice of States at the global level, and although these are non-binding, they are recognised by

---

<sup>615</sup> The LOSC, (n 14) Articles 210 – 211.

States as being relevant to protecting the marine environment from MPLA. Therefore, they all need to be considered as part of the internationally agreed rules, standards, and recommended practices and procedures when interpreting Article 207 of the LOSC. Each of them is discussed below.

**(i) The Montreal Guidelines for the protection of the marine environment against pollution from land-based sources ('Montreal Guidelines')**

The Montreal Guidelines was adopted by the Governing Council of the UNEP on the 24<sup>th</sup> May 1985.<sup>616</sup> These guidelines were intended to assist Governments to develop 'appropriate bilateral, regional, and multilateral agreements and national legislation for the protection of the marine environment against pollution from land-based sources.'<sup>617</sup> They were developed and prepared on 'the basis of common elements and principles drawn from relevant existing agreements and experience gained through their implementation.'<sup>618</sup> Of particular significance are Part XII of the LOSC, the Paris Convention for the Prevention of Marine Pollution from Land-based Sources, the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area, and the Athens Protocol for the Protection of the Mediterranean Sea against Pollution From Land-based Sources.<sup>619</sup> The Montreal Guidelines consist of 19 guidelines and 3 annexes that provide a check-list for developing cooperation between States or national legislation related to the protection of the marine environment from MPLA. Although they were not directly adopted by States in a diplomatic conference, they were recognised as being relevant to protecting the marine environment from MPLA on various occasions, especially in the United Nations Conference on Environment and Development (Rio Conference)<sup>620</sup> and its outcome document, Agenda 21, which is discussed below. Therefore, this analysis will take account of the Montreal Guidelines where they are relevant to the discussion in this chapter.

---

<sup>616</sup> Ibid, (n 9). For a more detailed analysis of the Montreal Guidelines, see. Qing-Nan, *Land-based Marine Pollution*, (n 18).

<sup>617</sup> Ibid, Montreal Guidelines, introduction.

<sup>618</sup> Ibid.

<sup>619</sup> Ibid.

<sup>620</sup> The Rio Conference was held in Rio de Janeiro, Brazil and 176 States participated in it. For more information about the Rio Conference, see (n 193).

## (ii) Agenda 21

Agenda 21 was one of the outcome documents from the Rio Conference in 1992, together with the Rio Declaration, Statement of Forest Principles, UNFCCC, and CBD. Agenda 21 reflected ‘a global consensus and political commitment at the highest level on development and environment cooperation.’<sup>621</sup> It provided programmes of action that were illustrated in terms of ‘the basis for action, objectives, activities, and means of implementation.’<sup>622</sup> The protection of the marine environment was specified in Chapter 17 of this document. Although it was not designed to specifically deal with MPLA, Agenda 21 recognised that MPLA causes 70 percent of marine pollution<sup>623</sup> and it provided recommendations to deal with it. It recognised the role of the Montreal Guidelines in providing guidance for States to deal with MPLA at the regional level.<sup>624</sup> In addition, it recommended various actions to be taken to deal with MPLA as a prioritised source-category, especially sewage and wastewater.<sup>625</sup> It further recommended ‘an intergovernmental meeting on the protection of the marine environment from land-based activities’,<sup>626</sup> which resulted in a conference that led to the adoption of the Washington Declaration and the GPA. The latter is the only global instrument specifically adopted for the prevention, reduction, and control of MPLA. Therefore, Agenda 21 will also be examined, where relevant, in order to understand the obligation to prevent, reduce, and control MPLA at the regional level under Article 207 of the LOSC.

## (iii) The Washington Declaration and the GPA

The Conference on the Protection of the Marine Environment from Land-based Activities (Washington Conference) was held from the 23<sup>rd</sup> October to the 3<sup>rd</sup> November 1995. More than 108 government representatives, the European Commission, and other international and regional organisations participated in this conference, which resulted in the adoption of the Washington Declaration and the GPA.

---

<sup>621</sup> Agenda 21, (n 29) para. 1.3.

<sup>622</sup> *Ibid*, para. 1.6.

<sup>623</sup> *Ibid*, para. 17.18.

<sup>624</sup> *Ibid*, para. 17.24.

<sup>625</sup> *Ibid*, para. 17.27 – 17.29.

<sup>626</sup> *Ibid*, para. 17.26.

The Washington Declaration was a political announcement by States and international institutions, which reflected their commitment to deal with the problem of MPLA and protect the marine environment from it. It recognised the interdependence of ‘human populations and the coastal and marine environment’, as well as the significant threat to the integrity of the coastal and marine ecosystem created by land activities.<sup>627</sup> States further recognised the need for the integrated management of coastal areas as a way of ‘coordinating programmes aimed at preventing marine degradation from land-based activities with economic and social development programmes.’<sup>628</sup> The Washington Declaration also noted the different capacities of States to handle MPLA in terms of their economic, social and environmental conditions and level of development, which may result in prioritising the problem of MPLA differently in different regions.<sup>629</sup> Of particular importance was the recognition of the need to cooperate ‘on a regional basis to coordinate efforts for maximum efficiency and to facilitate action at the national level’,<sup>630</sup> which led to the adoption or strengthening of cooperative agreements.

The political commitment contained in the Washington Declaration was realised through the recommendations provided in the GPA, which, although non-binding, is arguably the most important international instrument to deal with MPLA. The GPA contains the most comprehensive recommendations on how States should prevent, reduce, and control MPLA at national, regional and international levels. It is divided into five sections dealing with actions at different levels including recommended approaches by sources category. In addition, the implementation of the GPA is subject to a five-yearly Intergovernmental Review Meeting on the Implementation of the GPA (IGR process). It was recently recognised by States at the UN Ocean Conference to be a well-established framework based on the LOSC where States work together to tackle MPLA.<sup>631</sup> The IGR process inevitably is a series of diplomatic conferences where States discuss the implementation of the GPA and, in effect, the prevention, reduction, and control MPLA. As discussed in the previous chapter, the IGR process can be considered as the diplomatic conference that States cooperate to adopt globally and regionally agreed rules and

---

<sup>627</sup> Washington Declaration, (n 30) preamble.

<sup>628</sup> *Ibid.*

<sup>629</sup> *Ibid.*

<sup>630</sup> *Ibid.*, para. 7.

<sup>631</sup> UN Ocean Conference Concept Paper Partnership Dialogue 1, (n 10) 6.

standards for preventing, reducing, and control MPLA. As shown below, the subsequent practice of States confirms that this process enables States to identify the internationally agreed rules, standards, and recommended practices and procedures they are required to consider, which are related to the prevention, reduction, and control of MPLA under Article 207 of the LOSC. Therefore, the Washington Declaration, and especially the GPA, are the international instruments analysed in this chapter.

## **ii. Binding instruments**

Apart from non-binding instruments, States have identified several international agreements during the IGR process as being directly related to the implementation of the GPA. In effect, these can be considered as internationally agreed rules, standards, and recommended practices and procedures under Article 207 of the LOSC. These international agreements can be categorised into three groups by MPLA source-categories; (i) POPs and heavy metals; (ii) radioactive substances; and (iii) physical alterations and destruction of habitats (PADH). In addition, by identifying these relevant agreements, it can be said that the COPs of these agreements can be recognised as the diplomatic conferences within the meaning of Article 207 (4) of the LOSC, the forum which States cooperate to adopt globally and regionally agreed rules and standards concerning MPLA. The details of these agreements are discussed below.

### **(i) International agreements that deal with POPs and heavy metals**

The first international agreement was the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention),<sup>632</sup> which was recognised by States during the second IGR in 2006 as being related to the prevention, reduction, and control of certain POPs and heavy metals.<sup>633</sup> The Basel Convention regulates the transboundary movement of hazardous wastes determined under this Convention with the aim to ‘protect, by strict control, human

---

<sup>632</sup> (adopted 22 March 1989; entered into force 5 May 1992) 1673 UNTS 57.

<sup>633</sup> UNEP, ‘Report of the Second session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities’ (The 2<sup>nd</sup> IGR Report), (23 October 2006) UNEP/GPA/IGR.2/7, para 69.

health and the environment against the adverse effects which may result from the generation and management of hazardous wastes and other wastes.’<sup>634</sup>

The other two international agreements recognised by States for the same purpose are the POPs Convention<sup>635</sup> and the Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (PIC Convention).<sup>636</sup> The GPA itself has already recognised the adoption of the POPs and PIC Conventions as part of additional areas that require international cooperation to combat MPLA.<sup>637</sup> This was further reaffirmed at the first IGR where both Conventions were recognised by States as ‘legally binding agreements on land-based sources of pollution’<sup>638</sup> and considered to be a ‘positive development for’ and an ‘important step toward implementing the actions’ of the GPA.<sup>639</sup> The POPs Convention was specifically adopted to protect human health and the environment from exposure to POPs which can have a severe impact on human health, such as cancer or damage to the nervous system;<sup>640</sup> meanwhile, the PIC Convention regulates the international trade of regulated substances, mainly pesticides, principally through a prior-informed consent procedure. The aim of the PIC Convention was ‘to promote shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm and to contribute to their environmentally sound use by facilitating information exchange about their characteristics, by providing for a national decision-making process on their import and export and by disseminating these decisions to Parties.’<sup>641</sup> For these reasons, the

---

<sup>634</sup> Basel Convention, (n 632) preamble. For more detailed discussion on Basel Convention, See Katharina Kummer, *International Management of Hazardous Wastes: The Basel Convention and Related Legal Rules* (OUP 1995).

<sup>635</sup> *Ibid.*, (n 290).

<sup>636</sup> (Adopted 10 September 1998; entered into force 24 February 2004) 2244 UNTS 337.

<sup>637</sup> The GPA, (n 31) paras. 87 – 90.

<sup>638</sup> UNEP, ‘Report of the First session of the Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities’ (The 1<sup>st</sup> IGR Report), (22 December 2001) UNEP/GPA/IGR.1/9, para. 17.

<sup>639</sup> UNEP, ‘Review of Accomplishments in the Implementation of the Global Programme of Action, 1995 – 2001’ (1995 – 2001 GPA Implementation Review Report), (12 September 2001) UNEP/GPA/IGR.1/2, para. 38.

<sup>640</sup> For more information, see. POPs Convention website, <<http://chm.pops.int/TheConvention/Overview/tabid/3351/Default.aspx>> accessed 18 May 2017.

<sup>641</sup> For an overview of these two Conventions, see Ulrich Beyerlin and Thilo Marauhn, *International Environmental Law* (Hart Publishing 2011), Ch. 15; David A Wirth, ‘Hazardous Substances and Activities’ in Daniel Bodansky, Jutta Brunnée and Ellen Hey (eds), *The Oxford Handbook of International Environmental Law* (OUP 2007), Ch.17.

recognition by States in the IGR process allows these conventions to be considered when interpreting Article 207 of the LOSC.

**(ii) International agreements that deal with radioactive substances**

The international regulation of radioactive substances falls within the mandate of the International Atomic Energy Agency (IAEA). The two international agreements that regulate radioactive substances are the 1994 Convention on Nuclear Safety (Nuclear Safety Convention)<sup>642</sup> and the 1997 Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management (Joint Convention).<sup>643</sup> These IAEA agreements were recognised by the GPA when it called upon States to support the IAEA in order to ‘provide an internationally accepted basis for safe and environmentally sound management and disposal of radioactive wastes.’<sup>644</sup>

The aim of the Nuclear Safety Convention is to establish and maintain ‘effective defences in nuclear installations against radiological hazards in order to protect individuals, society and the environment from harmful effects of ionizing radiation from such installations.’<sup>645</sup> It also aims to prevent accidents that cause a severe impact from radioactive exposure.<sup>646</sup> To achieve these objectives, the Nuclear Safety Convention regulates nuclear installations, which are defined as ‘any land-based civil nuclear power plant under its jurisdiction including such storage, handling and treatment facilities for radioactive materials as are on the same site and are directly related to the operation of the nuclear power plant.’<sup>647</sup>

The aim of the Joint Convention is to ‘achieve and maintain a high level of safety worldwide in spent fuel and radioactive waste management’ and to ensure that ‘during all stages of spent fuel and radioactive waste management there are effective defences against potential hazards so that individuals, society and the environment are protected

---

<sup>642</sup> (Adopted 17 June 1994; entered into force 24 October 1996) 1963 UNTS 293.

<sup>643</sup> (Adopted 5 September 1997; entered into force 18 June 2001) 2153 UNTS 303.

<sup>644</sup> The GPA, (n 31), para. 113 (a).

<sup>645</sup> Nuclear Safety Convention, (n 642) Article 1.

<sup>646</sup> *Ibid.*

<sup>647</sup> *Ibid.*, Article 2.

from the harmful effects of ionizing radiation.’<sup>648</sup> The Joint Convention applies to ‘the safety of spent fuel management when the spent fuel results from the operation of civilian nuclear reactors.’<sup>649</sup> It also applies to ‘the safety of radioactive waste management when the radioactive waste results from civilian applications.’ However, it does not apply to ‘spent fuel held at reprocessing facilities as part of a reprocessing activity’ unless the Contracting Party declares reprocessing to be part of spent fuel management nor does it apply to ‘waste that contains only naturally occurring radioactive materials and that does not originate from the nuclear fuel cycle, unless it constitutes a disused sealed source or is declared as radioactive waste for the purposes of this Convention by the Contracting Party.’<sup>650</sup>

However, it should be noted that these IAEA agreements regulate industrial-scale radioactive substances as opposed to the small-scale radioactive materials used in the healthcare sector. The GPA only calls upon States to support the work under the auspices of IAEA at the international level ‘in order to provide an internationally accepted basis for the safe and environmentally sound management and disposal of radioactive wastes.’<sup>651</sup> Although the loopholes for the regulation of the usage of other smaller-scale radioactive substances in the context of MPLA remain unsettled and require further clarification by States, the aforementioned conventions will be regarded as the internationally agreed rules and standards for radioactive substances when interpreting Article 207 of the LOSC.

### **(iii) International agreement that deals with the physical alteration and destruction of habitats (PADH)**

The international agreement that deals with PADH is the CBD,<sup>652</sup> which States expressly recognised from the cooperation of the GPA Coordination Office and the CBD Secretariat in the year 2000. The interdependence of the two regimes was recognised during the first IGR. A Memorandum of Cooperation (MOC) was signed between the

---

<sup>648</sup> Joint Convention, (n 643) Article 1.

<sup>649</sup> Ibid, Article 3.

<sup>650</sup> Ibid.

<sup>651</sup> The GPA, (n 31) para. 113 (a).

<sup>652</sup> (n 74).

GPA Coordinating Office and the CBD Secretariat,<sup>653</sup> with the objective to ‘ensure harmonised implementation, at the global, regional and national levels, of the CBD and the GPA, in particular to facilitate the implementation of programmes dealing with the conservation and sustainable use of coastal and marine biodiversity and with measures to prevent and reduce physical alterations and destruction of habitats from land-based activities.’<sup>654</sup> The main outcome of this MOC was a strategic action plan to address the physical alteration and destruction of habitats.<sup>655</sup>

The goals of the CBD are ‘the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources’,<sup>656</sup> and the measures adopted to achieve these goals would include those that prevent PADH, such as the use of protected areas, including marine protected areas (MPA)<sup>657</sup> and the use of Integrated Marine and Coastal Zone Management (IMCZM) developed under the CBD regime and recognised as mutually supporting the implementation of the GPA and the CBD.<sup>658</sup> For this reason, the CBD will be considered as the internationally agreed rules, standards, and recommended practices and procedures when interpreting Article 207 of the LOSC.

### **III. Single-combined interpretation of the obligation to prevent, reduce, and control MPLA at the regional level**

Having identified the internationally agreed rules, standards, recommended practices and procedures that States are required to consider under Article 207 (1) of the LOSC, this section illustrates the way in which States have implemented Article 207 of the LOSC. Concerning the regional aspect of this provision, the analysis of the subsequent practice of States at the global level shows that States has interpreted the obligation to prevent, reduce, and control MPLA under Article 207 of the LOSC as a single combined

---

<sup>653</sup> Memorandum of Cooperation between the Secretariat of the CBD and the Global Programme of Action for the Protection of the Marine Environment from Land based Activities on harmonized implementation of the CBD and the GPA (CBD/GPA Memorandum), (2000) <<https://www.cbd.int/doc/agreements/agmt-gpa-2000-09-20-moc-web-en.pdf>> accessed 9 May 2016.

<sup>654</sup> *Ibid*, article 1.

<sup>655</sup> The 1<sup>st</sup> IGR Report, (n 638) para. 67.

<sup>656</sup> CBD, (n 74) Article 1.

<sup>657</sup> *Ibid*, Article 8 (a).

<sup>658</sup> CBD, ‘Report of the Second Conference of the Parties to the Convention on Biological Diversity’ (2<sup>nd</sup> COP Report of CBD), (30 November 1995) UNEP/CBD/COP/2/19, Annex II at Decision II/10.

obligation. The reason is that the subsequent practice of States showed no differentiation of the three obligations when States agreed on how to implement and adopt the measures based on Article 207 of the LOSC. This interpretation based on the reading of the whole provision with particular attention on the first, third, and fourth paragraphs. Moreover, as the subsequent practices of States shown, the regional aspect of the obligation to prevent, reduce, and control MPLA under Article 207 of the LOSC consists of four components. They are adopted to implement this provision and are in line with the relevant rules and principles of international law relating to the protection of the marine environment discussed in the earlier chapter.<sup>659</sup> These are (i) the adoption of a regional plan or programme of action (RPA); (ii) monitoring, assessment, and surveillance of MPLA; (iii) notification, consultation, and exchange of information regarding MPLA; and (iv) other cooperation. These four components are drawn from the examination of the relevant international instruments considered to be ‘internationally agreed rules, standards, and recommended practices and procedures.’ They were identified in the above section with an emphasis on the GPA. This is because States have recognised the GPA as a principal international instrument, though non-binding, dealing with the protection of the marine environment from MPLA. The single-combined interpretation will be pointed out below together with the elaboration of each component. These are discussed below.

#### **i. Adoption of a Regional Plan/Programme of Action (RPA)**

The first component of the regional aspect of the obligation to prevent, reduce, and control MPLA that can be seen from the GPA is the adoption of an RPA to protect the marine environment from MPLA at the regional level. The recommended RPA comprises both institutional and substantive aspects and is based on the concept of IMCZM. This is a variable concept, the meaning of which has not yet been specifically defined and the divergence still exists in the literature,<sup>660</sup> despite attempts to do so by

---

<sup>659</sup> See, Chapter III, Sections II and III.

<sup>660</sup> Apart from IMCZM, there are several terminologies used to refer to this concept. For example, *Integrated Coastal Zone Management*, see Mark F Forst, 'The Convergence between Integrated Coastal Zone Management and the Ecosystem Approach' (2009) 52 *Ocean & Coastal Management* 294; Chua Thia-Eng, 'Essential Elements of Integrated Coastal Zone Management' (1993) 21 *Ocean & Coastal Management* 81; Richard Kenchington and David Crawford, 'On the Meaning of Integration in Coastal Zone Management' (1993) 21 *Ocean & Coastal Management* 109; *Integrated Ocean Management*, see.

international institutions. For example, the Food and Agricultural Organisation (FAO) defines it as follows;

‘[a]n approach to managing a defined coastal area that understands the coast as a complex and dynamic system that encompasses many interactions between people and ecosystems, and must be managed as an integrated whole. It is an ongoing process of formulating, implementing and refining a comprehensive and holistic vision of how humans should interact in an ecologically sustainable manner with the coastal environment.’<sup>661</sup>

In its technical paper series, the Secretariat of the CBD defines this concept as follows;

‘a participatory process for decision making to prevent, control, or mitigate adverse impacts from human activities in the marine and coastal environment, and to contribute to the restoration of degraded coastal areas.’<sup>662</sup>

Another definition offered by the OECD is that IMCZM consists of the following;

---

Karen N Scott, 'Integrated Oceans Management: A New Frontier in Marine Environmental Protection' in Donald R Rothwell and others (eds), *The Oxford Handbook of The Law of the Sea* (OUP 2015), Ch. 21; *Integrated Coastal Management*, see Dahl, 'Land-based Pollution and Integrated Coastal Management', (n 39); FAO, 'Integrated coastal management law: establishing and strengthening national legal frameworks for integrated coastal management', (2006) FAO Legislative Study No. 93; *Integrated Marine and Coastal Area Management*, see. AIDEnvironment, National Institute for Coastal and Marine Management/Rijksinstituut voor Kust en Zee (RIKZ), Coastal Zone Management Centre, the Netherlands, 'Integrated Marine and Coastal Area Management (IMCAM) approaches for implementing the Convention on Biological Diversity', (2004) CBD Technical Series No. 14; or *Ecosystem Approach*, see Elizabeth A Kirk, 'The Ecosystem Approach and the Search for An Objective and Content for the Concept of Holistic Ocean Governance' (2015) 46 *Ocean Development & International Law* 33; 1<sup>st</sup> Joint Ministerial Meeting of the Helsinki and OSPAR Commission (JMM), 'Statement on the Ecosystem Approach to the Management of Human Activities "Toward an Ecosystem Approach to the Management of Human Activities"' (2003) <[https://www.ospar.org/site/assets/files/1232/jmm\\_annex05\\_ecosystem\\_approach\\_statement.pdf](https://www.ospar.org/site/assets/files/1232/jmm_annex05_ecosystem_approach_statement.pdf)> accessed 12 May 2017.

<sup>661</sup> Ibid, FAO, 'Integrated coastal management law: establishing and strengthening national legal frameworks for integrated coastal management', at 3.

<sup>662</sup> Ibid, AIDEnvironment, National Institute for Coastal and Marine Management/Rijksinstituut voor Kust en Zee (RIKZ), Coastal Zone Management Centre, the Netherlands, 'Integrated Marine and Coastal Area Management (IMCAM) approaches for implementing the Convention on Biological Diversity', (n 660) iii.

‘...management of the coastal zone as a whole in relation to local, regional, national, and international government goals. It imposes a particular focus on the interaction between the various activities that occur in the coastal zone and between coastal zone activities and activities in other regions.’<sup>663</sup>

Despite the unsettled definition and terminological differences, the core principle of IMCZM is that of management that recognises the interrelationship between the terrestrial and coastal environment. It takes account of the interaction between the two environments in order to reconcile the conflicting interests between stakeholders in the decision-making process for the use and protection of the coastal and marine environment. It is argued that ICZM consists of five common core elements ‘which constitute principles and concepts in their own right’.<sup>664</sup> These are (i) ecosystem-based management; (ii) the precautionary approach; (iii) EIA; (iv) spatial planning; and (v) institutional coordination to manage multi-sectorial activities and to develop an overarching oceans policy.<sup>665</sup> As discussed earlier, elements such as the precautionary approach, EIA, and arguably institutional coordination (as a form of cooperation) have already been recognised as part of the relevant rules and principles related to protecting the marine environment.<sup>666</sup> The application of IMCZM differs in diverse regions based on their focus. For instance, Scott observes that it is referred to as integrated coastal zone management in the Mediterranean where the focus is on the relationship between the coastal and marine environment.<sup>667</sup> However, it is referred to as marine spatial planning in the North European seas where the emphasis is on ‘the need to manage multiple activities offshore, such as renewable energy generation and oil and gas exploitation.’<sup>668</sup>

---

<sup>663</sup> OECD, ‘Report on Coastal Zone Management: Integrated Policies and Draft Recommendation of the Council on Integrated Coastal Zone Management’, (1991) at 37 cited in Hassan, *Protecting the Marine Environment from Land-based Sources of Pollution*, (n 19) 52.

<sup>664</sup> Scott, ‘Integrated Oceans Management: A New Frontier in Marine Environmental Protection’, (n 660) 467.

<sup>665</sup> Ibid.

<sup>666</sup> See Chapter III, Section II above.

<sup>667</sup> Scott, ‘Integrated Oceans Management: A New Frontier in Marine Environmental Protection’, (n 660) 466.

<sup>668</sup> Ibid.

In the case of IMCZM and MPLA, the subsequent practice of States shows that IMCZM places the fundamental emphasis on the interaction between the coastal and marine environment. Although not expressly mentioned, the Montreal Guidelines recognise the need to cooperate to adopt internationally agreed rules, criteria, standards and recommended practices and procedures taking into account ‘local ecological, geographical and physical characteristics, the economic capacity of States and their need for sustainable development and environmental protection, and the assimilative capacity of the marine environment’.<sup>669</sup> This requirement arguably reflects the need to put different terrestrial and coastal factors and characteristics on the management scale to protect the marine environment from MPLA. In addition, it is in line with the emphasis placed on the coastal and marine interface, which was agreed by States in Agenda 21 in relation to IMCZM for the management of MPLA.<sup>670</sup>

The IMCZM has become more obvious under the GPA where the concept is fundamental to the adoption of RPA. Not only is this reflected in the recommendations offered by the GPA, but also through the subsequent practice of States in the IGR process. This can be seen in the Montreal,<sup>671</sup> Beijing,<sup>672</sup> and Manila<sup>673</sup> declarations adopted at the end of each IGR which recognised the importance of IMCZM in protecting the marine environment from MPLA. During the IGR process, States have chosen the IMCZM version offered by the CBD for the implementation of the GPA. This can be seen from a Memorandum of Cooperation between the Coordinating Office of the GPA and the Secretariat of the CBD (CBD/GPA Memorandum).<sup>674</sup> Central to this MOC is the integration of elements of the Jakarta Mandate into the prevention of PADH under the GPA.<sup>675</sup> The Jakarta Mandate calls for, *inter alia*, the use of IMCZM as an environmental management tool

---

<sup>669</sup> Montreal Guideline, (n 9) 5.

<sup>670</sup> Agenda 21, (n 29) paras. 17.3 – 17.5

<sup>671</sup> The 1<sup>st</sup> IGR Report, (n 638) Annex I at para 6. IMCZM was recognised in the first IGR as an opportunity to further develop the implementation of the GPA at both the national and regional levels. It was also an opportunity to improve coastal and ocean governance, for example, by incorporating the GPA into the work programmes or action plans of related international agreements, as well as fostering cooperation between river-basin and coastal and marine environment regimes. See, The 1995 – 2001 GPA Implementation Review Report, (n 639) para. 26; UNEP, ‘Improving the Implementation of the Global Programme of the Action for the Protection of the Marine Environment from Land-based Activities through Improved Coastal and Ocean Governance’, UNEP/GPA/IGR.1/7 (4 September 2001), paras 19 and 26 (a) – (b).

<sup>672</sup> The 2<sup>nd</sup> IGR Report, (n 633) Annex V at para. 2.

<sup>673</sup> The 3<sup>rd</sup> IGR Report, (n 367) Annex.

<sup>674</sup> *Ibid*, CBD/GPA Memorandum, (n 653).

<sup>675</sup> *Ibid*, Annex at 2.

to achieve the simultaneous protection of biodiversity and the marine environment.<sup>676</sup> IMCZM was endorsed by this decision and recognised as being mutually supportive of the implementation of the GPA and the CBD.<sup>677</sup> From the above development and the subsequent practice of States through the IGR process, it is clear that IMCZM is fundamental to the protection of the marine environment from MPLA at the regional level and hence underpins the adoption of an RPA.

Apart from the above discussion, the subsequent practice of States also shows that there is no differentiation of the obligations to prevent, reduce, and control MPLA at the regional level. This can be seen from the content of the RPA recommended by the GPA. The recommended RPA consists of institutional and substantive aspects. From the subsequent practice of States, it shows that they treat these obligations as a single-combined obligation. This can be seen in both aspects of the recommended RPA below.

From an institutional perspective, regional cooperation on MPLA means that States will not manage the marine environment merely by considering their maritime jurisdiction or control. The adoption of an RPA based on IMCZM means that the RPA should be developed by taking account of and based on national action strategies and programmes<sup>678</sup> and it should be ensured that the national integrated planning and management approach is the basis for decision-making processes at the regional level.<sup>679</sup> A collaboration should be established between all stakeholders in the region to ensure that MPLA is managed in an integrated manner. Here, the interaction between the terrestrial and marine environment is recognised based on the recognition of relevant stakeholders, which include, inter alia, ‘regional economic groups, other relevant international organisations, development banks, and regional rivers authorities/commissions’.<sup>680</sup> In addition, particular attention is paid to the interaction between the coastal and marine environment and river system and drainage basin. The effective functioning of the regional programmes of action concerning MPLA must link land-locked and riverine States ‘whose river systems and drainage basin are linked to a

---

<sup>676</sup> The 2<sup>nd</sup> COP Report of CBD, (n 658) Annex II at Decision II/10.

<sup>677</sup> *Ibid.*

<sup>678</sup> The GPA, (n 31) para. 32 (b).

<sup>679</sup> *Ibid.*, para. 33 (e).

<sup>680</sup> *Ibid.*, para. 32 (d).

particular marine environment of the region.<sup>681</sup> The GPA does not spell out which measures are to be taken to implement any particular obligation. Instead, it recommends the direction on how the RPA should be established leaving a level of playing field to States to tailor the RPA according to their regional needs. The possible measures taken for this purpose are, *inter alia*, monitoring, assessment, and surveillance of MPLA and notification, consultation, and information exchange.<sup>682</sup> As shown in the previous chapter, all these measures can be employed to implement all the three obligations.<sup>683</sup>

As for the substance of the RPA, the key recommendation by the GPA is that it should be designed for the ‘harmonisation of environmental and control standards for emissions and discharges of pollutants, and agreement on data-quality assurance standards, data validation, comparative analysis, reference methods’<sup>684</sup> Other tools, such as the designation of MPAs, may be adopted to achieve regional cooperation to protect the marine environment. In doing so, the GPA recommends further details of how the RPA could deal with specific MPLA source-categories. However, the way in which the GPA recommends measures does not differentiate which measure is for implementing the obligation to prevent, reduce, or control MPLA. It seems to recommend the measures collectively for all the obligations. In this case, the GPA separates MPLA source-categories into two groups and it only provides general recommendations for the first group; however it does not specifically determine what measures should be taken to deal with these source-categories. The other group is the one for which specific detailed measures are recommended for the RPA to deal with source-categories. These two groups are elaborated in turn below.

The first group concerns MPLA source-categories, such as sewage, radioactive substances, heavy metals, marine litter and sediment mobilisation. The GPA provides general recommendations for the adoption of an RPA, but it does not determine what programmes, actions, and measures should be taken. For example, in the case of sewage and sediment mobilisation, while the GPA recommends that States should either promote and implement ‘regional cooperation or the establishment and implementation of

---

<sup>681</sup> Ibid, para. 34.

<sup>682</sup> See the following sections below.

<sup>683</sup> See, Chapter IV, Section IV i, (i), b.

<sup>684</sup> The GPA, (n 31) para. 33 (a).

programmes and priority measures’,<sup>685</sup> it does not determine the nature of those programmes and priority measures. In the case of heavy metals, the GPA generally encourages the adoption of existing regional arrangements ‘to develop or continue to develop, and implement programmes and measures and/or eliminate emissions and discharges’.<sup>686</sup> Again, no guidance is offered by the GPA on the programmes and measures that should be adopted to achieve this purpose. Also, there is no recommendation for implementing any particular obligation – be it the obligation to prevent, reduce, or control MPLA. In addition, it is silent on how programmes and measures for source-categories such as radioactive substances and marine litter should be applied.<sup>687</sup>

The other group consists of POPs, oil (hydrocarbons), nutrients, and PADH. Here, the GPA recommends that concrete plans, programmes, strategies, and/or measures should be adopted within the region as part of the RPA. However, the details of these plans, programmes, strategies, and/or measures vary according to the MPLA source-categories. For POPs, States are advised to adopt clear ‘targets and timetables for the reduction and/or elimination of POPs released through their substitution, and on BAT, BEP, and integrated pollution prevention and control (IPPC).’<sup>688</sup> As mentioned in the previous chapter, there is no agreed definition of BAT and BEP and the GPA does not define them either. The only clue is that, under the GPA, BAT includes socio-economic factors.<sup>689</sup> No explanation of what it means and the extent of IPPC is provided, although it is understood to be based on the notion that ‘pollution problems should be addressed in an integrated manner that takes account of all three environmental media—air, water and land—in contrast to more traditional responses which only focus on one medium at a time.’<sup>690</sup> Again, the GPA does not indicate which obligation is implemented by BAT, BEP, and/or IPPC, although these measures hint that they can implement all of them.

---

<sup>685</sup> Ibid, paras. 98, 138.

<sup>686</sup> Ibid, para. 119.

<sup>687</sup> Ibid, paras. 112, 147.

<sup>688</sup> Ibid, para. 105 (a), (i).

<sup>689</sup> Ibid, para. 26 (a) (i), a.

<sup>690</sup> Neil Emmott and Nigel Haigh, 'Integrated Pollution Prevention and Control: UK and EC Approaches and Possible Next Steps' (1996) 8 *Journal of Environmental Law* 301. See also, OECD, ‘Guidance on Integrated Pollution Prevention and Control’ (1991) *Environmental Monograph*, <[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=OCDE/GD\(91\)86&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=OCDE/GD(91)86&docLanguage=En)> accessed 12 May 2017.

As for oil (hydrocarbons), regional emergency plans and measures for the accidental release of oils and the development of the regional capacity for such purposes are recommended.<sup>691</sup> In terms of nutrients, the GPA recommends the adoption of ‘strategies for reducing eutrophication’ in affected and potentially affected areas, whereas ‘regional programmes of action, and protocol on important species and habitats’ are recommended to protect the marine environment from PADH.<sup>692</sup> The measures adopted to tackle eutrophication can be those that produce the combined effects as discussed in the previous chapter.<sup>693</sup> Other recommended measures may be adopted to manage MPLA, although they only apply to specific MPLA source-categories. These include the establishment of reception facilities for the recycling and disposal of oily waste,<sup>694</sup> and a ‘regional system for marine and coastal protected areas’ as a solution for PADH.<sup>695</sup>

To this end, what can be concluded at this point is that the subsequent practice of States especially the GPA and its IGR process shows that the adoption of RPA is one of the components of the regional aspect of the obligation to prevent, reduce, and control MPLA under Article 207 of the LOSC. The recommended RPA is underpinned by the IMCZM concept. Despite being a variable concept, States have chosen the IMCZM offered by the CBD for the implementation of the GPA. In addition, what States have agreed on the regional cooperation as reflected in the GPA concerning MPLA shows that they treat the obligation to prevent, reduce, and control MPLA as a single combined obligation. As shown in the recommended RPA, there is no differentiation when it comes to the implementation of these obligations. However, it is not possible to conclude definitively, from the subsequent practice of States through IGR process, how the RPA is employed in practice by States. More details have to be gathered from an analysis of the RPA of the RSPs to determine, firstly, whether or not States follow the CBD version of IMCZM and, secondly, the obligations to prevent, reduce, and control MPLA are treated as a single combined obligation. Unfortunately, this is beyond the scope of this research due to space and time constraints.

---

<sup>691</sup> The GPA, (n 31) para. 125 (e).

<sup>692</sup> *Ibid*, para. 153 (b).

<sup>693</sup> See, Chapter IV, Section IV, i (i).

<sup>694</sup> The GPA, (n 31) para. 125 (e).

<sup>695</sup> *Ibid*, para. 153 (a).

## ii. Monitoring, assessment, and surveillance of MPLA

Another component of the regional aspect of the obligation to prevent, reduce, and control MPLA is monitoring, assessment, and surveillance of MPLA. As discussed in the previous chapter, monitoring, assessment, and surveillance of MPLA is not spelled out clearly in Article 207 of the LOSC. In addition, the LOSC provides no official definition of these words, although they are widely used in different contexts of the convention.<sup>696</sup> However, the measure can be employed to implement the obligation under Article 207 of the LOSC through the reading of the ordinary meanings of the terms and the context of the provision. As mentioned earlier, in this research, monitoring, assessment, and surveillance are treated together by which ‘assessment’ is taken as a process used by a State to determine the condition of the marine environment in terms of the effects of existing pollution and the implication from ongoing or proposed activities in order to formulate, implement, or adjust the rules and standards adopted to protect the marine environment. Monitoring and surveillance are measures taken in the assessment process to obtain the relevant information.<sup>697</sup> This section further examines if the subsequent practice of States at the global level through the IGR process confirm such interpretation. As shown below, the monitoring, assessment of MPLA is recommended to implement all the obligations to prevent, reduce, and control MPLA at the regional level as it is not specifically designed for any particular obligation. In addition, it is also observed that, based on the subsequent practice of States, the GPA does not recommend the monitoring and assessment of every MPLA source-category. It only recommends the establishment of a monitoring and assessment programme for POPs, radioactive substances, heavy metals, oil (hydrocarbons), and nutrients at the regional level. The programme to monitor MPLA should yield two common pieces of information; (i) the impact of MPLA on human health and the environment, and (ii) the sources and releases of MPLA. As for a programme to assess MPLA, the subsequent practice of States reveals two commonalities; (i) an effectiveness assessment, and (ii) an assessment of the effect and impact of MPLA on human health and the environment. In terms of the surveillance of MPLA, this is not recommended by the GPA for any source-category, nor does the subsequent practice of States at the global level clarify how this measure can be used to

---

<sup>696</sup> See, Chapter IV, Section IV, I (i) (b).

<sup>697</sup> Ibid.

deal with MPLA at the regional level. The monitoring, assessment, and surveillance of MPLA are discussed in turn below.

### **(i) Monitoring of MPLA**

The monitoring of MPLA is one of the measures that help to fulfil the objectives of regional cooperation. Since the GPA requires MPLA to be identified and assessed, monitoring can achieve this purpose by facilitating the collection of necessary information, including the nature and severity of the problem, contaminants, the physical alteration and destruction of habitats in the related areas, and the sources of degradation.<sup>698</sup> The information gathered through the monitoring of MPLA can be beneficial to the design and adoption of the measure implementing the obligations to prevent, reduce, and control MPLA. However, the GPA does not recommend the monitoring of every MPLA source-category. It recommends a programme at the regional level to monitor five source-categories, namely, POPs, radioactive substances, heavy metals, oil (hydrocarbons), and nutrients. This monitoring programme should be developed based on regionally or internationally-agreed quality control and quality assurance procedures.<sup>699</sup> The objects of the monitoring programme should include the levels, inputs, and effects of these source-categories of MPLA in the marine environment.<sup>700</sup> The monitoring of maritime areas that are affected by, or likely to be affected by nutrients is particularly recommended.<sup>701</sup> However, the GPA does not recommend any measure to monitor sewage, marine litter, sediment mobilisation, or PADH.

Of the five source-categories for which the GPA recommends a monitoring programme, only POPs, heavy metals, and radioactive substances currently have international agreements and are identified by States as being directly relevant to the implementation of the GPA and Article 207 of the LOSC. The monitoring requirements under these international agreements will be included in the attempt to understand how Article 207 should be interpreted regarding these source-categories. In terms of the monitoring

---

<sup>698</sup> The GPA, (n 31) Ch.2

<sup>699</sup> Ibid, paras. 105 (ii), 112(a), 119 (b), 125 (b), and 131.

<sup>700</sup> Ibid.

<sup>701</sup> Ibid.

measure of these source-categories, several pieces of information need to be monitored and different agreements need different pieces of information to a certain extent. However, two pieces of information are commonly required from a monitoring programme; (i) the impact of MPLA on human health and the environment, and (ii) the sources and releases of MPLA. Monitoring these two pieces of information, which are required to identify the nature and severity of the problem of MPLA, corresponds to the methodology recommended by the GPA,<sup>702</sup> and they are described in turn below.

Firstly, international agreements commonly require information about the impact of MPLA on human health and the environment, since this has been identified as being relevant to the prevention, reduction, and control of MPLA. In terms of POPs and heavy metals, the POPs and Basel Conventions require States to cooperate in monitoring the impact of POPs and heavy metals on human health and the environment subject to their regulation.<sup>703</sup> With a specific focus on mercury, the Minamata Convention also obliges States to cooperate to monitor the impact of mercury and its compounds on human health and the environment and to adopt a mutual monitoring methodology.<sup>704</sup> As for radioactive substances, the Nuclear Safety and Joint Convention requires them to be monitored based on monitoring the radiation exposure level, which is to be maintained below the nationally-prescribed limit to ensure the safety of human health.<sup>705</sup> In the context of the radioactive substances, the monitoring of the radiation exposure level enables States to reduce, control the existing radiation to the determined level and in effect prevent such radiation to go above the specified limit. As such, monitoring of the radiation exposure level facilitates the implementation and fulfilment of all the obligations.

It is also essential to acquire information related to the sources and releases of MPLA, and in the case of POPs and heavy metals, the POPs Convention requires the monitoring of sources and releases of POPs and how they are transported and transformed in the environment.<sup>706</sup> However, the monitoring of sources and releases of POPs and heavy

---

<sup>702</sup> Ibid, para. 21.

<sup>703</sup> POPs Convention, (n 290) Article 11 (1) (d); Basel Convention, (n 632) Article 10 (b).

<sup>704</sup> Minamata Convention, (n 74) Article 19 (c), (b).

<sup>705</sup> Nuclear Safety Convention, (n 642) Article 15; Joint Convention, (n 643) Article 24.

<sup>706</sup> POPs Convention, (n 290) Article 11 (a), and (c).

metals under the Basel Convention is somewhat obscure, since the need to monitor the sources and releases of hazardous substances is unclear. The Convention only refers to monitoring ‘the effects of the management of hazardous wastes on human health and the environment.’<sup>707</sup> However, States must have information on sources and releases at hand so that they can monitor the effects of the management of hazardous waste. This arguably implies that the Basel Convention may be read to include the monitoring of sources and releases of MPLA subject to its regulation. As for mercury, the Minamata Convention also requires the sources and releases to be monitored by establishing ‘inventories of use, consumption, and anthropogenic emissions to air and releases to water and land of mercury and mercury compounds.’<sup>708</sup> This will have the effect of identifying the pathways of mercury and its compounds and enable States to know their sources and releases into the environment. In terms of radioactive substances, the Nuclear Safety Convention and Joint Convention already identifies sources and releases to the environment, since their scope of application is confined to nuclear, spent fuel, and radioactive wastes management facilities.<sup>709</sup> Releases to the environment are monitored by protecting workers and the public from radiation exposure at a reasonably achievable and lowest radiation exposure level that does not exceed the nationally prescribed limit.<sup>710</sup>

As for oil (hydrocarbons), and nutrients, although the GPA recommends the development of a monitoring programme based on regionally or internationally-agreed quality control and quality assurance, there are currently no such rules, standards, recommended practices and procedures to deal with these MPLA source-categories. In addition, the subsequent practice of States through the IGR process does not point to any international instruments related to oil (hydrocarbons) and nutrients that could be a basis for regional cooperation on MPLA.

In terms of the group for which the GPA does not recommended any monitoring measure, namely, sewage, marine litter, the mobilisation of sediment, and PADH, the subsequent practice of States at the global level does not reveal how States should act to prevent,

---

<sup>707</sup> Basel Convention, (n 632) Article 10 (2) (b).

<sup>708</sup> Minamata Convention, (n 74) Article 19 (a).

<sup>709</sup> Nuclear Safety Convention, (n 642) Article 3; Joint Convention, (n 643) Article 3.

<sup>710</sup> Ibid, Nuclear Safety Convention, Article 15; Joint Convention, Article 24.

reduce, and control MPLA from these source-categories. The IGR process does not contain any agreement on how States should deal with this problem at the regional level. Several documents related to sewage were produced through IGRs, including a Strategic Plan for Municipal Wastewater,<sup>711</sup> Guidelines on Municipal Wastewater Treatment,<sup>712</sup> and ‘Good Practices for Regulating Wastewater Treatment: Legislation, Policies and Standards.’<sup>713</sup> Although the monitoring measure forms a key part of these documents, they mainly focus on sewage and wastewater management at local and national levels.<sup>714</sup> In the case of marine litter, concerns were brought to international attention at the UN General Assembly in 2005 and one of the challenges identified was the lack of information, data, and understanding of the nature and effect of marine litter on the marine environment.<sup>715</sup> However, there was no subsequent practice from IGRs to suggest how a monitoring programme should be conducted at the regional level. The Honolulu Strategy: A Global Framework for the Prevention and Management of Marine Debris (Honolulu Strategy) is recognised by States as being relevant to combating marine litter through their own programme of action or plan.<sup>716</sup> This document focuses on how action should be taken at the national level. As for sediment mobilisation, and PADH, the subsequent practice of States reveal no obvious development of monitoring measures.

### (ii) Assessment of MPLA

The assessment of MPLA lies at heart of regional cooperation for the protection of the marine environment under Article 207 of the LOSC. Similar to the monitoring

---

<sup>711</sup> UNEP, ‘The Global Programme of Action’s Strategic Action Plan for Municipal Wastewater’ (Municipal Wastewater SAP), (26 August 2001) UNEP/GPA/IGR.1/4, paras. 7 (a), 8.

<sup>712</sup> UNEP/WHO/HABITAT/WSSCC, ‘Guidelines on Municipal Wastewater Management’ (Municipal Wastewater Guidelines), (2004) UNEP/GPA Coordination Office, The Hague, The Netherlands.

<sup>713</sup> UNEP, Good Practices for Regulating Wastewater Treatment: Legislation, Policies and Standards, (2015) <<http://unep.org/gpa/documents/publications/GoodPracticesforRegulatingWastewater.pdf>> accessed 10 February 2016.

<sup>714</sup> Municipal Wastewater Guidelines, (n 712) 21 – 22.

<sup>715</sup> UNGA Resolution 60/30 (LX) (29 November 2005), paras. 65 – 70.

<sup>716</sup> UNEP/NOAA, ‘The Honolulu Strategy; A Global Framework for Prevention and Management of Marine Debris’ (Honolulu Strategy), (2012) <<http://unep.org/gpa/documents/publications/HonoluluStrategy.pdf>> accessed 12 February 2016, 11 – 12; The Strategy was acknowledged in the 3<sup>rd</sup> IGR as relevant to the implementation of the GPA in the case of marine litter. See, UNEP, The 3<sup>rd</sup> IGR Report, (n 367), Annex. One recital of the Manila Declaration reads ‘...Recognising that litter does not belong to the sea and therefore emphasising the relevance of the Honolulu Commitment endorsed at the 5th International Marine Debris Conference, and the Honolulu Strategy,...

programme, the GPA does not recommend an assessment of every MPLA source-category, but only those in the monitoring programme, namely, POPs, heavy metals, radioactive substances, oil (hydrocarbons), and nutrients. In preparing the assessment programme, the GPA requires the development of harmonised assessment criteria ‘based on regionally and internationally agreed on quality control and quality assurance procedures’<sup>717</sup> and the assessment of the ‘levels, inputs and effect’,<sup>718</sup> as well as maritime areas that are affected or likely to be affected by the pollution.<sup>719</sup> Also similar to the monitoring of MPLA, the GPA does not recommended any assessment measure for sewage, marine litter, sediment mobilisation, and PADH. An establishment of the assessment criteria and assessing the required information allow States to design, adapt, or adjust the measures to implement the obligations to prevent, reduce, and control MPLA depending on the circumstances they face at the regional level. The obligations to prevent, reduce and control MPLA are therefore treated and implemented collectively through the employment of the assessment of MPLA.

In terms of the source-categories for which the GPA recommends the assessment programme, the subsequent practice of States at the global level reveal that the assessment of MPLA has two common features. The first is the objective of an assessment programme, which is to prevent, reduce and control MPLA. An assessment programme is employed to inform States, governments, or relevant decision-makers of the purpose of adopting, selecting new and/or adjusting existing measures to deal with the prevention, reduction, and control of MPLA. Arguably, it can be called an ‘effectiveness assessment’ of the measures adopted to combat MPLA. The second common feature concerns the object of the assessment programme. The subsequent practice of States shows that the impact on human health and the environment is the object of the assessment of MPLA. These common features are illustrated in turn below.

In the case of POPs, heavy metals, and radioactive substances, where internationally agreed rules, standards, and recommended practices and procedures have already been identified, the objective of establishing an assessment programme is to inform the

---

<sup>717</sup> The GPA, (n 31) paras. 105 (a) (ii), 118 (c), 125 (b)

<sup>718</sup> Ibid, paras. 112 (b) – (c), 119 (b),

<sup>719</sup> Ibid, para. 131 (b).

adoption or adjustment of measures that deal with POPs, heavy metals and radioactive substances. Based on the POPs Convention, the aim of assessing releases from intentional and unintentional production and use is to enable States to take the necessary measures to prevent and reduce the production, use, or release of POPs substances.<sup>720</sup> Where POPs are released based on unintentional production and use, the POPs Convention requires existing laws and policies related to the management of such release to be assessed in order to prepare and implement an action plan to reduce the release of POPs.<sup>721</sup> In the case of mercury, the Minamata Convention requires States to conduct an assessment of the impact of mercury and its compounds on human health and the environment based on an aim to ‘protect the human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds.’<sup>722</sup> The result of the assessment will inform relevant States to adopt or adjust the measures they use to deal with the emission and release of mercury. An assessment programme is also found in the PIC procedure that regulates the transboundary movements of POPs and heavy metals. The exporting State has to assess if the POPs and heavy metals subject to such transboundary movement will be managed and disposed of in an environmentally-sound way based on the documents.<sup>723</sup> The result of this assessment then informs the decision-making process of the exporting State’s national authority in deciding whether or not to grant permission for the transboundary movement. For radioactive substances, Nuclear Safety and Joint Conventions provide for safety assessments and the on-site verification of nuclear installations,<sup>724</sup> spent fuel,<sup>725</sup> and radioactive waste<sup>726</sup> management facilities to be conducted at relevant stages in order to decide if such installations or facilities should be constructed or continue to operate.

In terms of the object of the assessment programme, the subsequent practice of States at the global level shows that this relates to the impact of MPLA on human health and the environment. The POPs Convention requires an assessment of the adverse impact of

---

<sup>720</sup> POPs Convention, (n 290) Articles 3 (3) and 5 (1), (a).

<sup>721</sup> POPs Convention, (n 290) Article 5 (1), (a), (ii).

<sup>722</sup> Minamata Convention, (n 74) Articles 1 and 19 (1), (e).

<sup>723</sup> Basel Convention, (n 632) Article 4 (10); POPs Convention, (n 290) Article 3 (2), (b), (1); Minamata Convention, (n 74) Article 3 (6) (a) – (b).

<sup>724</sup> Nuclear Safety Convention, (n 642) Articles 14, 17 – 19.

<sup>725</sup> Joint Convention, (n 643) Article 6, 8 – 9.

<sup>726</sup> *Ibid*, Article 12 – 16.

POPs and heavy metals on human health and the environment.<sup>727</sup> One of the objectives of the Minamata Convention is to protect human health from emissions or releases of mercury; therefore, it requires an assessment of the impact of mercury and its compounds on human health and the environment to ensure that this objective is fulfilled.<sup>728</sup> In addition, in the PIC procedure, adverse impacts on the environment are also assessed by the exporting State in the case of transboundary movements of hazardous waste, including POPs and heavy metals, and the exporting State can only be granted permission for such movement when it has ensured that the hazardous waste will be managed and disposed of in an environmentally-sound manner.<sup>729</sup> For radioactive substances, a safety assessment, verification, and radiation exposure protection are employed to ensure that the public and the environment are safe from the operation of nuclear installations, spent fuel, and radioactive waste management facilities.<sup>730</sup>

As for oil (hydrocarbons) and nutrients, although the GPA recommends an assessment programme based on regionally and internationally-agreed quality control and quality assurance procedures, the subsequent practices of States at the global level, and especially through the IGR process, does not reveal any development of how assessment programmes should be conducted at the regional level.

In terms of the MPLA source-categories for which the GPA does not recommend an assessment programme,<sup>731</sup> no commonality can be deduced from the subsequent practice of States at the global level especially through the IGR process. Although certain source-categories have been somewhat developed, the assessment of MPLA is still inconclusive. For example, the Guidelines on Municipal Wastewater were adopted to combat the issue of sewage. This document contains an assessment programme to enable governments to identify their problems, challenges, stakeholders and financial capacity, and thus, adopt the appropriate measures or adjust existing laws, policies, and measures to better manage

---

<sup>727</sup> POPs Convention, (n 290) Article 3 (3), 11 (1) (d), and Annex C.

<sup>728</sup> Minamata Convention, (n 74) Articles 1 and 19 (1), (c).

<sup>729</sup> Basel Convention, (n 632) Article 4 (10); POPs Convention, (n 290) Article 3 (2), (b), (1); Minamata Convention, (n 74) Article 3 (6) (a) – (b).

<sup>730</sup> Nuclear Safety Convention, (n 642) Articles 14, 15, 19; Joint Convention, (n 643) Articles 4, 8 – 9, 11, 15 – 16.

<sup>731</sup> These are sewage, marine litter, sediment mobilisation, and PADH.

sewage and wastewater.<sup>732</sup> However, the guidelines address both local and national levels. The same holds true for marine litter,<sup>733</sup> where the documents adopted focus on the national level although they have the same objective. As for sediment mobilisation, and PADH, how the assessment of MPLA should be conducted at the regional level to deal with these source-categories has not been discussed.

Apart from the two common features identified above, an assessment programme is subject to other substantive considerations. For example, in the case of POPs, the POPs Convention requires States to assess, *inter alia*, its (i) presence, levels and trends related to humans and the environment; (ii) environmental transport, fate and transformation; and (iii) socio-economic and cultural impacts,<sup>734</sup> or in the case of mercury, information on the commerce and trade in mercury, mercury compounds and mercury-added products.<sup>735</sup> However, the subsequent practice of States does not reveal these considerations being used consistently in relation to the assessment of each MPLA source-category. Therefore, it can be observed from the discussion above that the effectiveness assessment and the impact on human health and the environment are the two common substantive considerations in the assessment measure for MPLA through the subsequent practice of States in the relevant forums.

### **(iii) Surveillance of MPLA**

It is important to note that, although the LOSC treats surveillance as part of the monitoring of pollution, there is nothing in the subsequent practice of States that relates to the surveillance of MPLA. The GPA does not recommend any measure equal to surveillance based on its ordinary meaning, and the subsequent practice does not reveal any adoption of a surveillance measure. Therefore, what surveillance should look like to protect the marine environment from MPLA remains unclear.

---

<sup>732</sup> Municipal Wastewater Guidelines, (n 712) 22 – 25.

<sup>733</sup> Honolulu Strategy, (n 716); UNEP/IOC, ‘Guidelines on Survey and Monitoring of Marine Litter’, (2009) UNEP Regional Seas Reports and Studies, No. 186; IOC Technical Series No. 83, <<http://unep.org/gpa/Documents/Publications/MarineLitterSurveyandMonitoringGuidelines.pdf>> accessed 16 February 2016, 21, 37, 49, 61. The assessment of marine litter is intended for ‘developing and evaluating the effectiveness of management, control, enforcement and/or mitigation strategies in particular integration with solid waste management.’

<sup>734</sup> POPs Convention, (n 290) Article 11.

<sup>735</sup> Minamata Convention, (n 74) Article 19 (f).

### iii. Notification, consultation, and exchange of information regarding MPLA

The third component under the obligation to prevent, reduce, and control MPLA at the regional level consists of three elements, namely, notification, consultation, and the exchange of information regarding MPLA. Similar to the above discussion, these measures are not specifically determined to implement any particular measures. Instead, the obligations to prevent, reduce, and control MPLA utilise these measures for their implementation. Notification consultation and exchange of information regarding MPLA enable relevant States to cooperate in preventing future MPLA pollution. They can also assist States in addressing the imminent danger resulting from the MPLA which in this sense is trying to reduce or control the existing MPLA pollution. Considering that there is no clear differentiation of the obligations to prevent, reduce, and control MPLA and the way these measures are employed, it can be seen that these measures are treated as a single combined obligation and all benefit from the use of the measures. These are discussed in turn below.

#### (i) Notification of MPLA

In terms of the notification of MPLA, it should be firstly noted that Article 207 of the LOSC does not clearly mention this as part of the obligation to prevent, reduce, and control MPLA. Instead, customary international law requires the notification of harm resulting from pollution and is also encompassed by the ordinary meaning of the terms in Articles 207 and 198 of the LOSC. Based on the customary international law, a State is required to notify the potentially affected States of the *significant* harm arising from its territory that is causing or is likely to cause harm to their environment or the areas beyond national jurisdiction.<sup>736</sup> State Parties to the LOSC are generally obliged to immediately notify other States if the marine environment is in *imminent danger* of being damaged or has been damaged by pollution, including MPLA.<sup>737</sup>

---

<sup>736</sup> See Chapter III, Section II, viii.

<sup>737</sup> The LOSC, (n 14) Article 198.

The duty to notify the potentially affected States of harm caused by MPLA was reaffirmed in the Montreal Guidelines under Guideline 15, in which it is stipulated that States must notify potentially affected States, as well as competent international organisations, with timely information of releases from land-based sources in its territory that are likely to pollute the marine environment. However, under the GPA, notification of MPLA at the regional level is not expressly recommended; instead, it is inferred by the need to ensure ‘close collaboration between national and regional focal points, regional economic groupings, and other relevant regional and international organisations, regional river authorities/commission, in the development and implementation of regional programmes of action.’<sup>738</sup> Another underlying reason for the notification of harm is the ‘cooperation between and among regional organisations and conventions to promote the exchange of information, experience, and expertise.’<sup>739</sup>

In terms of the subsequent practice of States related to the notification of MPLA, at the global level, how States agree to implement the notification of MPLA at the regional level remains unclear. In addition, the IGR process does not reveal any agreement as to how and under what circumstances the notification of MPLA should be made. On this point, it should be noted that, although there is still no clarification of how and under what circumstances the notification of MPLA should be made, States are still bound by both customary international law and the general obligation under Article 198 of the LOSC to notify potentially affected States of harm caused by MPLA that would damage their marine environment.

At this stage, it is safe to conclude that the requirement of notification of MPLA has not been clarified by the subsequent practice of States at the global level, especially through the IGR process. However, States are still bound by customary international law and the general obligation under Part XII of the LOSC to notify potentially affected States of harm caused by MPLA that may affect the latter should the former be aware of such harm.<sup>740</sup>

---

<sup>738</sup> The GPA, (n 74) para. 32 (d).

<sup>739</sup> Ibid, para. 32 (e).

<sup>740</sup> See, Chapter III.

## (ii) Consultation regarding MPLA

Similar to the notification of MPLA, which was discussed in the previous section, the basis of consultation regarding MPLA is not clearly defined in Article 207 of the LOSC. The basis of consultation regarding MPLA can be derived from reading Articles 207 and 197 of the LOSC together. At the global level, the subsequent practice of States does not explicitly require a consultation regarding MPLA. Although the GPA does not obviously recommend the use of consultation regarding MPLA for regional cooperation, it can arguably be implied from the need to ensure ‘close collaboration between the national and regional focal points, regional economic groupings, and other relevant regional and international organisations, ..., regional river authorities and commissions in the development and implementation of regional programmes of action.’<sup>741</sup> Another underlying reason for consultation is the ‘cooperation between and among regional organisations/conventions to promote the exchange of information, experience, and expertise.’<sup>742</sup>

Although a consultation regarding MPLA can be implied and adopted as part of the regional cooperation recommended by the GPA, the subsequent practice of States at the global level, especially through the IGR process, does not determine the subject matter of a consultation among States at the regional level. The closest matters for consultation regarding MPLA may be the adoption of arrangements such as the Global Partnership on Nutrients Management (GPNM)<sup>743</sup> and the Global Partnership on Marine Litter (GPML).<sup>744</sup> These are multi-stakeholder platforms that enable all stakeholders, ranging from governments, international organisations, private sector and non-governmental organisations to epistemic communities such as scientists to come together in the same forum to address growing problems of either the over-enrichment of nutrients or marine litter. Although the role of these forums and their involvement at the regional level is still unclear, they can be places to further develop the content of a consultation related to

---

<sup>741</sup> The GPA, (n 31) para. 32 (d).

<sup>742</sup> *Ibid*, para 32 (e).

<sup>743</sup> The GPNM was launched in 2009 at the 17<sup>th</sup> Session of the United Nations Commission on Sustainable Development. See, UNEP, ‘Progress in implementing the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities at the national, regional, and international levels over the period 2007 – 2011’ (2007 – 2011 Progress Review Report) (9 November 2011) UNEP/GPA/IGR.3/2, paras 29-30.

<sup>744</sup> The GPML was launched at the United Nations Conference on Sustainable Development (Rio+20) in 2012 and was further endorsed at the 3<sup>rd</sup> IGR. See, The 3<sup>rd</sup> IGR Report, (n 367) Annex, at para. 5 (b).

MPLA. However, the conduct and subject matter of such a consultation at the regional level remain ambiguous.

### **(iii) Exchange of information regarding MPLA**

As discussed in the earlier chapters, the exchange of information regarding MPLA is not clearly specified in Article 207 of the LOSC but it is encompassed in an interpretation of Article 207 and the general provisions in Part XII of the LOSC, which is confirmed by the subsequent practice of States.<sup>745</sup> The GPA requires information to be exchanged through the establishment or strengthening of ‘regional information networks and linkages for communicating with clearing-houses and other sources of information’.<sup>746</sup> For that reason, an MPLA Clearing House Mechanism (CHM) should be established and States are recommended to participate in it. Although it is established at the international level, the CHM is designed to support both ‘national and regional action’ to address the impact of MPLA; therefore, it is integral to the prevention, reduction, and control of MPLA at the regional level.<sup>747</sup>

According to the GPA, the CHM is ‘a referral system through which decision makers at national and regional levels are provided with access to current sources of information, practical experience and scientific and technical expertise relevant to developing and implementing strategies to deal with the impacts of land-based activities.’<sup>748</sup> It provides decision-makers with ‘rapid and direct contact with the organisations, institutions, firms and/or individuals most able to provide relevant advice and assistance’ and is designed to respond to requests from governments on a timely basis.<sup>749</sup> The CHM consists of ‘(a) a data directory, with components organised by source-category, cross-referenced to economic sectors, containing data on current sources of information, practical experience and technical expertise; (b) information-delivery mechanisms to allow decision-makers to have ready access to the data directory and obtain direct contact with the sources of information, practical experience and technical expertise identified therein (including the

---

<sup>745</sup> See Chapter IV, Section IV, i (i), a. and; Chapter III, Section II, vii.

<sup>746</sup> The GPA, (n 31) para. 32 (c).

<sup>747</sup> *Ibid*, paras. 40 (a), 41.

<sup>748</sup> *Ibid*, para. 42.

<sup>749</sup> *Ibid*.

organisations, institutions, firms and/or individuals most able to provide relevant advice and assistance); (c) infrastructure - the institution.<sup>750</sup>

The GPA recommends operating the CHM by inputting information from States and this information differs according to the MPLA source-categories and the different levels of the actions to be taken. These can be categorised into two groups. The first is international actions related to the CHM, while the second is regional actions. Both categories are relevant to the exchange of information regarding the prevention, reduction, and control of MPLA at the regional level. This is simply because establishing the CHM at both levels will facilitate an inter-regional exchange of information. As for international actions related to the CHM, it can be observed that, apart from radioactive substances, the GPA requires States to participate in the CHM for the exchange of information regarding technologies, sound practices and experience of the management of MPLA,<sup>751</sup> including BAT, BEP, and IPPC.<sup>752</sup> In terms of the regional actions related to the CHM, it can be said that the GPA does not require States to exchange all categories of information at this level; instead, it only requires specific information about some source categories to be fed into the CHM, namely, (i) sewage; (ii) sediment mobilisation; (iii) marine litter; and (iv) POPs. The information of these source categories that needs to be put into the CHM concerns the management and handling of them, such as technical information regarding the handling, use and sound disposal of POPs,<sup>753</sup> technical information related to the environmentally-sound treatment of sewage,<sup>754</sup> ‘technology and techniques and experience regarding sedimentation/siltation’,<sup>755</sup> and ‘waste management, recycling and reuse, and cleaner production’ in relation to marine litter.<sup>756</sup>

The establishment of the CHM was endorsed by the UNGA, and relevant international organisations were selected based on their capability and expertise in relation to each MPLA source-category as lead agencies responsible for ensuring the effective development of the CHM. The World Health Organisation (WHO) was selected for

---

<sup>750</sup> Ibid.

<sup>751</sup> Ibid, paras. 139, 148 (a), 154.

<sup>752</sup> Ibid, paras .99, 120 (b), 126 (b), 132 (a). For the discussions on BAT and BEP, see Chapter IV, Section IV, i, (i) a. For the discussion on IPPC, see Section III, (i) above.

<sup>753</sup> The GPA, (n 31) para 105 (a) (iii).

<sup>754</sup> Ibid, para. 98.

<sup>755</sup> Ibid, para. 138.

<sup>756</sup> Ibid, para. 147.

sewage and the Inter-organisation Programme for the Sound Management of Chemicals (IOMC), the International Programme on Chemical Safety (IPCS) and the Intergovernmental Forum on Chemical Safety (IFCS) were selected for POPs. Meanwhile, the UNEP and the IOMC were selected for heavy metals and the IAEA is responsible for radioactive substances. The Food and Agriculture Organisation of the United Nations (FAO) deals with nutrients and sediment mobilisation, while the International Maritime Organisation (IMO) is accountable for oil (hydrocarbons) and marine litter. Finally, the UNEP is responsible for PADH.<sup>757</sup> The appointment of these lead agencies was reaffirmed by States in the first IGR.<sup>758</sup>

It should be noted that while the GPA recommends the establishment of the CHM as part of the cooperation at the international level, it does not recommend for the establishment of the regional CHM. Also, there is no obligation under the LOSC to do so. Nevertheless, as mentioned earlier, the creation of this mechanism at the international level would inevitably benefit and facilitate the inter-regional exchange of information through the participation of States in the CHM. Unfortunately, at present, the CHM has not been adequately developed due to limited funding and is currently substituted by the UNEP/GPA website.<sup>759</sup>

#### **iv. Other forms of cooperation related to MPLA**

Other forms of cooperation discussed here consist of two elements; (i) a capacity-building programme, and (ii) financial arrangements and support in the context of MPLA. They are supported by the CBDR discussed in Chapter III. Other forms of cooperation are included in the interpretation as part of ‘other measures’ necessary to prevent, reduce, and control MPLA under Article 207 (2) and the need to consider characteristic regional features, the economic capacity of developing States, and their need for economic development, as specified in Articles 203 and 207 (4) of the LOSC.<sup>760</sup> These two elements are discussed in turn below.

---

<sup>757</sup> *Ibid*, para. 9.

<sup>758</sup> UNEP, ‘The Clearing-House Mechanism of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities’ (2 October 2001) UNEP/GPA/IGR.1/INF/9, para. 4.

<sup>759</sup> *Ibid*, at para 7.

<sup>760</sup> See, Chapter IV, Section IV, ii and iv.

**(i) Capacity-building programmes to combat MPLA at the regional level**

A capacity-building programme is another form of cooperation recommended by the GPA. It should be initiated by mechanisms and cooperative actions to mobilise the experience and expertise related to preventing and reducing MPLA.<sup>761</sup> In addition to the CHM discussed earlier, States should ensure the achievement of a successful capacity-building programme by establishing links among all stakeholders, including States, international and regional organisations,<sup>762</sup> UN specialist agencies,<sup>763</sup> private sector firms, and non-governmental organisations.<sup>764</sup>

However, based on a review of the subsequent practice of States at the global level and through the IGR process, there is no evidence of agreement on the way a capacity-building programme to combat MPLA at the regional level should be built or the duty of States to construct such a programme at the regional level. The subsequent practice of States through the IGR process illustrates that the UN Environment is entrusted to construct a capacity-building programme for the prevention, reduction, and control of MPLA at the regional level through the UNEP/GPA Coordination Office. This programme can be divided into two categories at the regional level, namely, direct and indirect capacity-building.

The first category is direct capacity-building, which entails constructing a capacity-building programme at the regional level to provide technical support and enhance the development of the national programmes of action in States in which it is needed.<sup>765</sup> The UNEP/GPA Coordination Office, in partnership with RSP secretariats, has produced a programme to achieve this task and also to strengthen, *inter alia*, the capabilities of

---

<sup>761</sup> The GPA, (n 31) para. 40 (a).

<sup>762</sup> *Ibid*, para. 41 (a)

<sup>763</sup> *Ibid*, para. 41 (i)

<sup>764</sup> *Ibid*, para. 41 (b)

<sup>765</sup> UNEP, 'Progress in implementing the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities at the international, regional and national levels in the period 2002 – 2006' (2002 – 2006 Progress Review Report), (9 August 2006) UNEP/GPA/IGR.2/2, para. 13.

regional authorities to implement the GPA.<sup>766</sup> The partnership between the UNEP/GPA Coordination office and the RSP secretariats has helped to ‘multiply its efforts and also provides additional opportunities to the regional seas conventions and action plans to integrate national concerns into the regional policy context to generate countries’ interest in participating, endorsing, and implementing regional action plans, protocols, and other instrument.’<sup>767</sup> In this way, it can be said that a capacity-building programme enables each RSP to consider its characteristic regional features, as well as its need for economic development, when implementing an RPA. This can effectively respond to the problem of MPLA in the respective regions. As at 2006, the establishment of this partnership had proved to be successful in the implementation of the GPA in at least five regions, namely, the Southeast Pacific, the Wider Caribbean, the Caspian Sea, the South Pacific, and South Asia.<sup>768</sup>

A concrete example of the construction of a capacity-building programme at the regional level by the UNEP/GPA Coordinating Office can be seen from the support for addressing priority source-categories, such as wastewater and PADH. This programme was based on the provision of technical assistance in shaping and redefining the implementation of regional and national programmes in response to these issues. A series of regional stakeholder consultations and workshops was organised in various regions, including South Asia, Eastern Africa, Latin America, and the Wider Caribbean during 2002 – 2003. This included the development of agreements to harmonise environmental legislative frameworks, the initiation of protocols for land-based sources and activities, and the development of regional environmental impact assessments, etc.<sup>769</sup> The capacity-building programme has been and continues to be high on the agenda of the UNEP/GPA Coordination Office. From the 2<sup>nd</sup> IGR, the capacity-building focus shifted to building and reinforcing ‘regional capacities for coastal and marine management and facilitating interregional coordination,’<sup>770</sup> which entailed the provision of support to IMCZM-related

---

<sup>766</sup> UNEP, ‘The Proposed 2002 – 2006 Work Programme of the Global Programme of Action Coordination Office and Partner Organisations with Indicative Costs’ (2002 – 2006 Proposed Work Programme), (12 September 2001) UNEP/GPA/IGR.1/6, para. 39 (c), (ii).

<sup>767</sup> *Ibid.*

<sup>768</sup> *Ibid.*

<sup>769</sup> *Ibid.*, at para 25.

<sup>770</sup> UNEP, ‘The Proposed 2007 – 2011 programme of work of the United Nations Environment Programme Global Programme of Action Coordination Office’ (2007 – 2011 Proposed Work Programme), (1 August 2006) UNEP/GPA/IGR.2/4, para 23.

activities, such as those on freshwater and coastal zone linkages in integrated regional development plans and the development of large marine ecosystem projects supported by Global Environmental Facilities (GEF) that are related to the implementation of the GPA and RSP conventions.<sup>771</sup>

In terms of indirect capacity-building programmes, the UNEP/GPA Coordination office has coordinated with relevant stakeholders to create forums or dialogue that further enhance the cooperation and implementation of the GPA at the regional level. This has led to the establishment of several partnerships to deal with specific MPLA source-categories. The GPNM is a good example of this, and although these partnerships are designed to work at the global level, they provide ‘an area in which countries and other stakeholders can establish more cooperative relationships in international and regional forums and agencies that deal with nutrients.’<sup>772</sup> This kind of partnership has also been developed for marine litter (GPML) and wastewater (GW<sup>2</sup>I).<sup>773</sup> In the latter case, States endorsed the further development of GW<sup>2</sup>I into a form of global partnership through the 3<sup>rd</sup> IGR in order to ‘share among stakeholders information, lessons learned and best practices for wastewater management.’<sup>774</sup>

Although the UNEP/GPA Coordination Office had provided a capacity-building programme to combat MPLA at the regional level, it was still insufficient to tackle the problem of MPLA. The lack of capacity was highlighted in the 3<sup>rd</sup> IGR as still being a ‘major challenge’ that prevented the successful implementation of the GPA by developing countries.<sup>775</sup> The problem of MPLA could not be easily tackled at the regional level without the clarification of the rights and duties of States in an MPLA capacity-building programme, despite the crucial role played by the UNEP/GPA Coordination Office. Unfortunately, the current practice at the global level, especially through the IGR process, does not contribute to the clarification of the rights and duties of States regarding an MPLA capacity-building programme at the regional level.

---

<sup>771</sup> Ibid, para 46.

<sup>772</sup> The 2007 – 2011 Progress Review Report, (n 743) paras. 29 – 30.

<sup>773</sup> The GPML has already been established and, as endorsed by the Manila Declaration of the 3<sup>rd</sup> IGR, it will address the way in which States should address the marine litter problem.

<sup>774</sup> The 3<sup>rd</sup> IGR Report, (n 367) Annex at para. 5 (c).

<sup>775</sup> Ibid, para 42.

## **(ii) Financial arrangements and support**

Financial arrangements and support constitute another aspect of the cooperation to combat MPLA at the regional level. This is preferential treatment provided to developing countries by means of Article 203 of the LOSC, which is recognised in the context of the prevention, reduction and control of MPLA. However, the subsequent practice of States at the global level and through the IGR process illustrates that the duty to provide financial arrangements and support to combat MPLA at the regional level lies with the national budget of each State, regardless of its economic status. At the international level, no financial arrangements and support have been established to prevent, reduce and control MPLA at the regional level, and GEF provides the only financial support for regional cooperation in this respect; however, it only supports regional cooperation to combat MPLA to the extent that the activities fall within its policies and operational strategies.

In terms of the GPA, while it recognises that both regional and national action programmes ‘are of primary international importance’, the development and implementation of those programmes should be financed by States’ domestic financial mechanism.<sup>776</sup> However, this differs from the preferential treatment obligation in Article 203 of the LOSC, which entitles developing States to financial support from relevant international organisations. Relying on a domestic financial mechanism will make it more difficult to obtain international financial support, since the latter will no longer be the priority source of funding and this will devalue the need to cooperate to combat MPLA at the regional level. In addition, there is no recommendation related to the role played by developed countries with regard to financial arrangements and support at the regional level. Making the issue of financial arrangements and support a domestic concern tends to neglect the CBDR and undermine the solidarity and unity of States to protect the environment.<sup>777</sup>

In addition, the subsequent practice of States through the IGR process does not indicate the development of the duty of States with regard to financial arrangements and support

---

<sup>776</sup> The GPA, (n 31) paras. 50 – 51.

<sup>777</sup> For the discussion on CBDR, see Chapter III, Section II, iv.

at the regional level. Instead, States have agreed through the GPA that GEF should be the source of financial support to developing and economy-in-transition States.<sup>778</sup> However, relying principally on GEF is problematic because firstly, it has no formal obligation to support the implementation of the GPA at the regional level. This is simply because, unlike the UNFCCC and the CBD, the GPA is a non-binding instrument with no formal link to GEF.<sup>779</sup> Therefore, activities under the GPA can only be supported by GEF to the extent that they fall within the policies or operational strategies that enable the funding. This means that regional cooperation on MPLA will only receive GEF support if it falls within the GEF working areas. In addition, it can also be observed that ‘regional projects involving two or more countries are often further complicated by the increased financial, legal and political risks associated with such projects.’<sup>780</sup>

Therefore, RSPs and States need to ensure that their activities are within the working areas of international financial institutions, especially GEF,<sup>781</sup> and to overcome this obstacle, the UNEP/GPA Coordination office published a report entitled ‘Financing the implementation of regional seas conventions and action plans: A guide for national action’ in 2006 with the aim of assisting RSPs and States to secure funding for their activities. This report highlighted the opportunities and threats related to the work and secretariats of RSPs, as well as proposing a wide range of financial institutions that could possibly support both regional and national projects and providing advice related to how to secure such funding.<sup>782</sup> In terms of GEF, it could enhance an operational strategy to accommodate GPA-related activities. Three operational programmes were established under the International Waters operational strategy, namely, water-based, integrated land and water multiple focal areas, and contaminant-based.<sup>783</sup> In fact, the latter programme ‘responds and internalises’ the GPA into a GEF operational strategy.<sup>784</sup>

---

<sup>778</sup> The GPA, (n 31) para. 69 – 71. For more information above GEF, see. <<https://www.thegef.org/about/funding>> accessed 18 July 2017.

<sup>779</sup> UNEP, ‘Building Partnerships and Financing the Implementation of the Global Programme of Actions for the Protection of the Marine Environment from Land-based Activities’, (4 September 2001) UNEP/GPA/IGR.1/8, para. 9.

<sup>780</sup> Ibid, para. 14.

<sup>781</sup> Ibid, para. 9.

<sup>782</sup> UNEP, ‘Financing the implementation of regional seas conventions and action plans: A guide for national action’, (2006) (UNEP Regional Seas Reports and Studies No. 180. UNEP).

<sup>783</sup> For more information, see. GEF Website <<http://www.thegef.org/topics/international-waters>> accessed 16 September 2016.

<sup>784</sup> UNEP, ‘Guidance on the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities for 2007–2011: Global Programme of Action

Apart from GEF, the IGR process does not reveal an agreement among States as to the new source of financial support or their duty on this issue at the regional level, despite the GPA's call for new or innovative financial arrangements and support.<sup>785</sup> States have not discussed, negotiated, or agreed how to enhance the financial arrangements and support for the regional cooperation on MPLA. This aspect of the obligation to prevent, reduce, and control MPLA at the regional level will remain ambiguous pending the further development of this issue.

#### **IV. Conclusion**

As discussed above, this chapter has further identified the internationally agreed rules, standards, recommended practices and procedures relating to the protection of the marine environment from MPLA. The recognition by States of these international instruments confirms the interpretation by the ordinary meaning of the terms that they can include both binding and non-binding instruments. For the non-binding instrument, Montreal Guidelines, Agenda 21, Washington Declaration and the GPA are recognised as part of the internationally agreed rules, standards, and recommended practices and procedures, so do the international binding instruments, that is, Basel, CBD, PIC, POP Conventions. They exist as part of the broader international practice related to the prevention, reduction, and control MPLA bridging with the LOSC through the requirement to take into account internationally agreed rules, standards, and recommended practices and procedures under Article 207 (1) of the LOSC. With its relevance to the protection of the marine environment from MPLA, in this case, heavy metals – mercury and its compounds, Minamata Mercury Convention is foreseen to be recognised as part of the internationally agreed rules, standards and recommended practices and procedures in the near future. The identification of these instruments allows for the identification of relevant diplomatic conferences that States participate and cooperate to adopt globally and regionally agreed rules and standards concerning MPLA. This includes the IGR process and the COPs of the conventions mentioned above. At this stage, it yields the conclusive result that the term ‘internationally agreed rules, standards, and recommended

---

contribution to the internationally agreed goals and targets for the sustainable development of oceans, coasts and islands’, (21 July 2006) UNEP/GPA/IGR.2/3, para. 93.

<sup>785</sup> The GPA, (n 31) paras. 51 – 52.

practices and procedures include both binding and non-binding instruments and they are those mentioned above.

This chapter also further examined the subsequent practice of States at the global level through the IGR process with the aim to clarify the interpretation of the obligation to prevent, reduce, and control MPLA at the regional level. From the above discussion, for the regional cooperation, the obligation to prevent, reduce, and control MPLA has been treated as the single combined obligation as there is no differentiation between them when it comes to the implementation. As shown by the international instruments above especially the GPA, the recommended measures are employed to implement the obligation to prevent, reduce, and control MPLA collectively. Also, four components have been identified as the substance of the regional cooperation to prevent, reduce, and control MPLA based on the examination of the GPA, relevant conventions, and the IGR process. This includes (i) the adoption of the RPA; (ii) monitoring, assessment, and surveillance of MPLA; (iii) notification, consultation, and exchange of information regarding MPLA; and (iv) other cooperation. They are the procedural obligations and the regional aspects of Article 207 of the LOSC. These components confirm and partly employ the possible implementing measures encompassed by the ordinary meaning of the terms discussed in the earlier chapter and States have agreed that these measures are the substantive part of the regional cooperation to prevent, reduce, and control MPLA.

However, the development of the content of each component varies, depending on how much the subsequent practice of States reveals. Although it is possible to determine the four components of the regional aspect of the obligation, how States should implement these requirements at the regional level remains inconclusive. The subsequent practice at the global level is insufficient to draw any conclusion; thus, a further examination of the subsequent practice of States at the regional level is required to clarify the remaining ambiguities. This will be discussed in the next chapter that deals with the subsequent practice of States at the regional level in relation to the prevention, reduction and control of MPLA.

## **Chapter VI: Subsequent Practice of States at the Regional Level concerning the Monitoring, Assessment, and Surveillance of MPLA**

### **I. Introduction**

It is suggested from the analysis of the subsequent practice of States at the global level especially through the IGR process in the previous chapter that the obligation to adopt laws and regulations to prevent, reduce, and control MPLA at the regional level has been collectively interpreted as a single combined obligation. In addition, four key components constitute a substantive part of the obligation under Article 207 of the LOSC. However, there is a need to determine how these components are implemented at the regional level.

Therefore, this chapter begins with the findings from the previous chapter, but instead of the global level, the focus is placed on regional cooperation to protect the marine environment from MPLA, especially RSPs. The subsequent practice of States is then further examined in relation to the prevention, reduction, and control of MPLA through these RSPs. However, it should be noted at the very beginning of this chapter that the subsequent practice of States at the regional level will not be analysed in relation to all the components identified in the earlier chapter. Instead, the focus will be on an examination of the subsequent practice of States at the regional level in terms of the monitoring, assessment and surveillance of MPLA. The reasons for restricting and focusing on the regional practice related to procedural issues associated with the management of MPLA as opposed to substantive obligations to prevent, reduce, and control MPLA are threefold. Firstly, the examination of the subsequent practice of States at the global level led to the conclusion that Article 207 required States to take certain procedural steps at the regional level. This chapter takes on these findings and focuses specifically on what is required of States at the regional level. In this chapter, a specific aspect of the procedural obligations, that is, monitoring, assessment, and surveillance of MPLA will be examined in more details through the analysis of the subsequent practice of States at the regional level. It is important to note that this does not create any additional obligation on Article 207 of LOSC, but it is an elaboration on the procedural aspect of Article 207 identified in the earlier chapter.

Secondly, the time and space constraints of this thesis make it impossible to cover all four components identified in the chapter V. Therefore, a decision has to be made as to what particular route of the interpretation will be chosen. In this research, it was decided to focus on the monitoring, assessment and surveillance of MPLA. This is because they are fundamental to protecting the marine environment from MPLA. The GPA clarifies this by acknowledging that these measures are part of the methodology to deal with MPLA. They constitute the first step to inform States' decision-making process with relevant information, that is, the state of the marine environment and other information required to deal with MPLA.

Thirdly, not all the substantive aspects have been developed under the LOSC regime, but they may be developed under different MEAs which is not, in this context, automatically added any further obligation to the LOSC parties. Therefore, it focuses on the procedural aspects of Article 207 of the LOSC which is fundamental to the regional cooperation to deal with MPLA.

The aim of this chapter is to understand the regional aspect of Article 207 of the LOSC with regard to monitoring, assessing and surveying MPLA. This will be achieved by a further examination of the subsequent practice of States at the regional level, especially based on RSPs. The examination of the subsequent practice of States follows the requirement of Article 31 of the VCLT in order to ensure a complete process of treaty interpretation by means of an analysis of the RSPs Conventions, MPLA Protocols, and Action Plans to determine the commonality with respect to the monitoring, assessment, and surveillance of MPLA. Eighteen RSPs are currently recognised by the UN Environment as dealing with the protection of the marine environment at the regional level.<sup>786</sup> In so doing, this chapter does not compare various RSPs Protocol relating to MPLA with the global obligations, nor does it compare with the regional conventions. The reason for this is that, as mentioned earlier, the discussion in this chapter follows the outcome of the previous chapter and takes one identified component to elaborate further in more details. It is done so to complete the process of the interpretation of Article 207

---

<sup>786</sup> The eighteen RSPs are Antarctic, Arctic, Baltic, Black Sea, Caspian, Eastern Africa, East Asian Seas (EAS), Mediterranean, North-East Atlantic, North-East Pacific, Northwest Pacific, Pacific, Red Sea and Gulf of Aden (PERSGA), ROPME, South Asian Seas (SAS), South-East Pacific, Western Africa, Wider Caribbean Sea Programmes. For more information about the eighteen RSPs, see UN Environment Regional Seas Programme <<http://www.unep.org/regionalseas/>> accessed 21 May 2017.

of the LOSC. As a result, it looks instead into the RSPs Convention, Protocols, and Action Plans for commonalities of practice relating to monitoring, assessment, and surveillance of MPLA to elucidate and complete the operation of Article 207 interpretation.

It is proposed in this chapter that the subsequent practice of States through RSPs illustrates three aspects of monitoring and assessing MPLA at the regional level, namely, institutional, procedural, and substantive. These three aspects of the monitoring and assessment of MPLA are drawn from the commonalities identified by the review of the monitoring and assessment requirements under the RSPs Conventions, MPLA Protocols, and Action Plans. However, the degree of consistency and level of development of these measures are different. Institutionally, the monitoring and assessment of MPLA share the same arrangement in performing the tasks. In terms of the procedural aspect of MPLA, an emerging practice to prioritise MPLA source-categories and adopt common methodologies and procedures for monitoring it can be observed from RSPs. As for assessment, States should cooperate to develop guidelines for an EIA for projects and activities that may cause significant harm to the marine environment, and develop common procedures and methods to measure MPLA. For the substantive aspect, MPLA is monitored at the regional level in order to obtain two sets of information, namely, data on the state of the marine environment and data about MPLA, whereas the aim of an assessment of MPLA is to acquire three sets of information. Apart from the data on the state of the marine environment and the level of MPLA, a further assessment is made of the effectiveness of the measures taken to deal with MPLA. With respect to this substantive aspect, there are different degrees of practice on how States are required to monitor and assess this information. In contrast to the two abovementioned requirements, the subsequent practice of States through RSPs reveals nothing conclusive in terms of the surveillance of MPLA, since a surveillance programme has not yet been adopted at the regional level. In elaborating this proposition, the monitoring, assessment and surveillance of MPLA are addressed in turn following each aspect of the requirements identified above before finally concluding the chapter.

## II. Monitoring of MPLA

The monitoring of MPLA at the regional level can be examined from institutional, procedural and substantive aspects, which are discussed in turn below.

### i. Institutional aspect of the monitoring requirement

In terms of the institutional aspect of the monitoring requirement, the subsequent practice of States through RSPs illustrates that a regional monitoring programme is required to prevent, reduce, and control MPLA in each region. This requirement is common for RSPs that operate on either binding or non-binding instruments. However, the subsequent practice of States in RSPs is divided based on two kinds of monitoring programmes; (i) a regional network of national research centres and institutions that operate coordinated national monitoring programmes; and (ii) complementary or joint programmes for monitoring pollution.

#### (i) Regional network of national research centres and institutions that operate coordinated national monitoring programmes

The establishment of a regional network of national research centres and institutions to coordinate national monitoring programmes is common to the RSP instruments adopted in the 1980s.<sup>787</sup> States are commonly required to cooperate to develop and coordinate their national research and monitoring programmes for all types of pollution, including MPLA, and to establish a ‘regional network of such programmes to ensure compatible results’ in cooperation with competent regional or international organisations.<sup>788</sup> Based

---

<sup>787</sup> Except for the Baltic, Mediterranean, North-East Atlantic, and South-East Pacific Seas programmes.

<sup>788</sup> The 1987 Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution (Kuwait Convention), (adopted 24 April 1978; entered into force 1 July 1979) 1140 UNTS 133, Article 10 (b); The 1981 Convention for Co-operation in the Protection and development of the Marine and Coastal Development of the West and Central African Region (Abidjan Convention), (Adopted 23 March 1981; entered into force 5 August 1984) 20 ILM 746, Article 14 (2); The 1982 Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (Jeddah Convention), (Adopted 14 February 1982; entered into force 10 August 1985) 9 Environmental Policy and Law 56 (1982), Article 10 (2); The 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention), (Adopted 24 March 1983; entered into force 11 October 1986) 1506 UNTS 157, Article 13 (2); The 1985 Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi Convention), (Adopted 21 June 1985; entered into force 30 May 1996), Article 14 (2); The 2010

on this arrangement, particularly in the case of MPLA, States are required to establish compatible or comparable ‘national monitoring programmes’ to participate in this regional network.<sup>789</sup> As discussed later, this requires States to adopt comparable or common procedures and methods to monitor MPLA.

### (ii) Complementary or joint programmes for monitoring pollution

Other RSPs have adopted complementary or joint monitoring programmes for all types of pollution in their sea areas. In this case, States are required to establish or ‘endeavour to establish’<sup>790</sup> a complementary or joint programme to monitor pollution, either directly or in collaboration with competent regional or international organisations.<sup>791</sup> This

---

Amended Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean (Amended Nairobi Convention), (Adopted 31 March 2010; not yet in force), <<http://web.unep.org/nairobiconvention/who-we-are/structure/legal-and-policy-instruments>> accessed 7 August 2017, Article 15; The 1983 Action Plan for the Protection and Development of the Marine and Coastal areas of the East Asian Region (1983 EAS Action Plan), (1983) UNEP Regional Sea Reports and Studies No. 24, paras. 14, 20; and the 1994 Action Plan for the Protection and Sustainable Development of the Marine and Coastal Areas of the East Asian Region (1994 EAS Action Plan), <[http://www.cobsea.org/documents/action\\_plan/ActionPlan1994.pdf](http://www.cobsea.org/documents/action_plan/ActionPlan1994.pdf)> accessed 8 August 2017, paras. 7 – 8.

<sup>789</sup> The 1990 Protocol to Kuwait Convention for the Protection of the Marine Environment Against Pollution from Land-based Sources (MPLA Protocol to Kuwait Convention), (Adopted 21 February 1990; entered into force 2 February 1993) 2399 UNTS 3, Article 7 (2); The 2012 Additional Protocol to the Abidjan Convention Concerning Cooperation in the Protection and Development of Marine and Coastal Environment from Land-Based Sources and Activities in the Western, Central and Southern African Region (MPLA Protocol to Abidjan Convention), (Adopted 22 June 2012; not yet in force), <<http://abidjanconvention.org/media/documents/protocols/LBSA%20Protocol-Adopted.pdf>> accessed 7 August 2017, Article 14 (2); The 2005 Protocol Concerning the Protection of the Environment from Land-Based Activities in in the Red Sea and Gulf of Aden (MPLA Protocol to Jeddah Convention), (Adopted 25 September 2005; not yet in force) <[http://www.persga.org/Documents/Doc\\_62\\_20090211124355.pdf](http://www.persga.org/Documents/Doc_62_20090211124355.pdf)> accessed 7 August 2017, Article 12; The 1999 Protocol to Cartagena Convention Concerning Pollution from Land-based Activities (MPLA Protocol to Cartagena Convention) (Adopted 6 October 1999; entered into force 13 August 2010), <<http://cep.unep.org/cartagena-convention/lbs-protocol/protocol-concerning-pollution-from-land-based-sources-and-activities>> accessed 7 August 2017, Article 6; The 2010 Protocol for the Protection of the Marine and Coastal Environment of the West Indian Ocean from Land-based Sources and Activities (MPLA Protocol to Amended Nairobi Convention) (Adopted 31 March 2010; not yet in force), <<http://www.unep.org/nairobiconvention/protocol-protection-marine-and-coastal-environment-western-indian-ocean-land-based-sources-and>> accessed 7 August 2017, Article 12.

<sup>790</sup> Barcelona Convention, (n 308) Article 10 (1); 1995 Barcelona Convention, (n 308) Article 12.

<sup>791</sup> For the RSPs with binding instruments, see. The 2002 Convention for Cooperation in the Protection and Sustainable Development of the Marine and Coastal Environment of the North-East Pacific (Antigua Convention), (Adopted 18 February 2002; not yet in force) <<http://drustage.unep.org/regionalseas/north-east-pacific/#>> accessed 7 August 2017, Article 9; The 1976 Barcelona Convention, (n 308) Article 10 (1); The 1995 Barcelona Convention, (n 308) Article 12; The Bucharest Convention, (n 596) Article 15; The Helsinki Convention, (n 300) Article 24 (3); The 1981 Convention for the Protection of the Marine Environment and Coastal Zones of the South-East Pacific (Lima Convention) (Adopted 12 November 1981; entered into force 19 May 1986) in Kenneth R. Simmonds, *New Directions in the Law of the Sea* (Looseleaf) Doc. J. 18 (Oceana Publications, 1984), Article 7 (1); The 1986 Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (Noumea Convention), (Adopted

arrangement is also required to monitor MPLA at the regional level.<sup>792</sup> It is interesting to note that, apart from the Baltic and South-East Pacific Seas programmes, this arrangement has been employed by RSP instruments adopted from 1990. It can also be observed that some RSPs assign the regional body a more active role in a complementary or joint monitoring programme. For example, this regional monitoring programme shall be established through the Black Sea Commission,<sup>793</sup> whereas the OSPAR Commission plays a more active role in the regional monitoring programme of the North-East Atlantic programme.<sup>794</sup> Similar to the first arrangement, States agree to designate national authorities to operate monitoring programmes in the respective sea areas under their jurisdiction.<sup>795</sup>

From the discussed above, seventeen of the eighteen RSPs require an establishment of the regional monitoring programme.<sup>796</sup> This situation is different in the Antarctic programme, although MPLA is dealt with in a different context under the Environmental

---

24 November 1986; entered into force 22 August 1990) [1990] ATS 30, Article 17 (1). For RSPs with non-binding instruments, see. The 2009 Regional Programme of Action for the Protection of the Arctic Environment from Land-based Activities (Arctic RPA on MPLA), <<https://pame.is/index.php/projects/arctic-marine-shipping/older-projects/rpa-reports>> accessed 7 August 2017, para. 7.2 and Arctic Monitoring and Assessment Programme, <<http://www.amap.no/about/the-amap-programme/monitoring-and-assessment/>> accessed 7 August 2017; Action Plan for the Protection and Management of the Marine and Coastal Environment of the South Asian Seas Region (SAS Action Plan) (1995) <<http://www.unep.org/regionalseas/south-asian-seas#>> accessed 7 August 2017, para. 9.3 and Annex IV at para. 4; The 1994 Action Plan for the Protection, Management, and Development of the Marine and Coastal Environment of the Northwest Pacific Region (Northwest Pacific Action Plan), <<http://cearac.nowpap.org/nowpap/text.html>> accessed 7 August 2017, para. 13 (i).

<sup>792</sup> MPLA Protocol to Barcelona Convention, (n 310) Article 8; The 2009 Protocol on the Protection of the Marine Environment of the Black Sea From Land Based Sources and Activities (2009 MPLA Protocol to Bucharest Convention), (Adopted 17 April 2009; not yet in force) <<http://www.blacksea-commission.org/convention-protocols.asp>>, Article 11; The 1983 Protocol for the Protection of the South East Pacific Against Pollution from Land- Based Sources (MPLA Protocol to Lima Convention) (Adopted 22 July 1983; entered into force 23 September 1986) <<http://www.cpps-int.org/index.php/principal>> accessed 7 August 2017, Article 7; The 2012 Protocol for the Protection of the Caspian Sea against Pollution from Land-based Sources and Activities (MPLA Protocol to Tehran Convention) (Adopted 12 December 2012; not yet in force) <[http://www.tehranconvention.org/IMG/pdf/Protocol\\_on\\_Pollution\\_from\\_Land\\_Based\\_Sources\\_and\\_Activities.pdf](http://www.tehranconvention.org/IMG/pdf/Protocol_on_Pollution_from_Land_Based_Sources_and_Activities.pdf)> accessed 7 August 2017, Article 13 (2);

<sup>793</sup> Bucharest convention, (n 596) Article 15 (1).

<sup>794</sup> OSPAR Convention, (n 318) Article 6 and Annex IV at Articles 2 (a), and 3.

<sup>795</sup> Ibid, Article 6 and Annex IV at Article 2 (a); 1995 Barcelona Convention, (n 308) Article 12 (2); Bucharest Convention, (n 596) Article 15 (7); Lima Convention, (n 791) Article 7 (2).

<sup>796</sup> Arctic, Baltic, Black Sea, Caspian, Eastern Africa, EAS, Mediterranean, North-East Atlantic, North-East Pacific, Northwest Pacific, Pacific, PERSGA, ROPME, SAS, South-East Pacific, Western Africa, and Wider Caribbean Sea programmes.

Protocol to the Antarctic Treaty.<sup>797</sup> Under the said Protocol, it regulates land-based waste disposal arising from scientific and tourism activities in the area. This includes such as radioactive materials, electronic batteries, both solid and liquid fuel, and wastes containing harmful levels of heavy metals, etc.<sup>798</sup> Despite the fact that the regulation of MPLA exists and that the Committee for Environment Protection ‘may review waste management plans and reports thereon and may offer comments, including suggestions for minimising impacts and modifications and improvement to the plans, for the consideration of the Parties’,<sup>799</sup> no monitoring requirement can be seen under this programme that is comparable to those found in other regimes.. Given some nuances in the form of the monitoring programmes of RSPs, the establishment of a regional monitoring programme is common to all regions. Therefore, it can be said that the establishment of the regional monitoring programme forms part of the requirement to monitor MPLA at the regional level. In addition, as discussed below, a regional monitoring programme performs the function of an assessment for the protection of the marine environment from MPLA at the regional level. In addition, the subsequent practice of States through RSPs illustrates that they agree with the procedural and substantive aspects of the monitoring requirement, which are discussed in turn below.

## **ii. Procedural aspect of the monitoring requirement**

In addition to the establishment of a regional monitoring programme, the subsequent practice of States through RSPs illustrates that they agree to further procedural issues concerning the programme. These are (i) the prioritisation of MPLA source-categories; and (ii) the adoption of common methodologies and procedures for monitoring MPLA.

### **(i) Prioritisation of MPLA source-categories**

In terms of monitoring MPLA, the subsequent practice of States shows that they prioritise MPLA source-categories or substances for the regional monitoring programme. This

---

<sup>797</sup> The 1959 Antarctic Treaty (Antarctic Treaty), (adopted 1 December 1959; entered into force 23 June 1961) 402 UNTS 71; The Environmental Protocol to Antarctic Treaty (Environmental Protocol to Antarctic Treaty) (adopted 4 October 1991; entered into force 14 January 1998) 30 ILM 1455 (1991).

<sup>798</sup> *Ibid*, Environmental Protocol to Antarctic Treaty, Article 2.

<sup>799</sup> *Ibid*, Article 9.

firstly ensures the consistency of monitoring MPLA by the States participating in the regional monitoring programme. The practice of States shows that the prioritisation of MPLA source-categories or substances was made in RSPs with binding and non-binding instruments and this prioritisation related to both monitoring and assessment purposes.<sup>800</sup> At the level of MPLA Protocol, the prioritisation of MPLA source-categories or substances is generally determined by listing activities and/or substances in the annex of the Protocol.<sup>801</sup> There are many reasons for this prioritisation. Firstly, RSPs prioritise MPLA substances and activities that require urgent action; for example, sewage and activities related to the treatment of sewage and wastewater are generally prioritised across RSPs because they all are affected by the same problem. However, this does not mean that they need to prioritise the same substances or activities, although some identical prioritisation can be seen. Secondly, those substances or activities highlighted by the GPA are prioritised in recognition of the need to implement the GPA, especially in the case of RSPs such as the Mediterranean and PERSGA programmes.<sup>802</sup> Thirdly, some substances or activities are listed as a precaution although the RSPs are not affected by them. This can be seen from the PERSGA programme.<sup>803</sup>

It can be observed from the analysis of the subsequent practice that the prioritisation of MPLA source-categories may not be an obligation as such because the activities listed across regions are listed for different reasons, which leads to a lack of consistency. Therefore, it is not sufficiently clear to conclude that they are obligations. However, prioritisation can be perceived to be part of the way in which States effectively fulfil their obligation to prevent, reduce, and control MPLA at the regional level more generally through RSPs. The act of prioritising MPLA source-categories reflects the fact that States consider the characteristic features of their respective regions when adopting their regionally-agreed rules and standards. The prioritisation of MPLA source-categories

---

<sup>800</sup> See the next section for an assessment of MPLA.

<sup>801</sup> MPLA Protocol to Barcelona Convention, (n 310) Article 8 (a), Annex A; 2009 MPLA Protocol to Bucharest Convention, (n 792) Article 11 (3), (b) and Annex I; The Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land Based Source (1992 Protocol to Bucharest Convention) (Adopted 21 April 1992; entered into force 15 January 1994) 1764 UNTS 18, Article 5, Annex I and II; MPLA Protocol to Jeddah Convention, (n 789) Annex I; MPLA Protocol to Tehran Convention, (n 792) Article 13 and Annex I. For the RSP with no MPLA Protocol, see. 1992 Helsinki Convention, (n 300) Annex III.

<sup>802</sup> *Ibid*, MPLA Protocol to Barcelona Convention at Annex A; MPLA Protocol to Jeddah Convention, Annex I.

<sup>803</sup> *Ibid*, MPLA Protocol to Jeddah Convention.

responds neatly to the requirement under Article 207 (4) of the LOSC and is within the ordinary meaning of the term ‘characteristic regional features.’

At the more general level, if prioritisation is not provided in the MPLA Protocol, it will be stipulated in the Action Plan within the framework of the RSP Conventions.<sup>804</sup> For example, 2002 Plan of Action for the Protection and Sustainable Development of the Marine and Coastal Areas of the North-East Pacific (North-East Pacific Action Plan) prioritised the monitoring of oil pollution, domestic waste, agricultural waste, and sediment movement,<sup>805</sup> whereas the OSPAR Commission proposed specific strategies to prioritise substances or activities in the North-East Atlantic programme; for example, strategies to deal with eutrophication (caused by nutrients), hazardous and radioactive substances, all of which related to the regional monitoring and assessment programme of these substances.<sup>806</sup>

MPLA source-categories or substances are prioritised in the Action Plan of RSPs that operate with non-binding instruments.<sup>807</sup> For example, oil pollution and non-oil pollutants such as metals, organics, nutrients, and sediments were prioritised in the East Asian Seas programme and subjected to a coordinated regional monitoring programme.<sup>808</sup> This can also be found in the South Asian Seas programme where ‘untreated sewage and industrial effluent, solid waste and agricultural activities are

---

<sup>804</sup> The 1982 Action Plan for the Conservation of the Marine Environment and Coastal Areas in the Red Sea and Gulf of Aden (PERSGA Action Plan), <[http://www.persga.org/Documents/Doc\\_62\\_20090211114435.pdf](http://www.persga.org/Documents/Doc_62_20090211114435.pdf)> accessed 7 August 2017, para. 12.3 – 12.4 (a); The 1978 Action Plan for the Protection and Development of the Marine Environment and the Coastal Areas of Bahrain, Iran, Iraq, Kuwait, Oman Qatar, Saudi Arabia, and the United Arab Emirates (ROPME Action Plan) <<http://www.ropme.org/Uploads/Events/EBM/11-KAP.pdf>> accessed 7 August 2017, para. 13.2 – 13.3; The 1981 Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region (Western African Action Plan) (1983) UNEP Regional Seas Reports and Studies No. 27, para. 13.3 – 13.6; The 1981 Action Plan for the Caribbean Programme (Wider Caribbean Action Plan) (1983) UNEP Regional Seas Reports and Studies No. 26, at paras. 16 – 17, 19, 27 – 28, 34 – 36, and 38 – 40.

<sup>805</sup> See, <[http://wedocs.unep.org/bitstream/handle/20.500.11822/11137/nep\\_action\\_plan\\_en.pdf?sequence=1&isAllowed=y](http://wedocs.unep.org/bitstream/handle/20.500.11822/11137/nep_action_plan_en.pdf?sequence=1&isAllowed=y)> accessed 7 August 2017, At paras 21 (a) – (b), (d) – (f).

<sup>806</sup> OSPAR, ‘2010 – 2020 North-East Atlantic Environment Strategy’ (North-East Atlantic Environmental Strategy) <[https://www.ospar.org/site/assets/files/1200/ospar\\_strategy.pdf](https://www.ospar.org/site/assets/files/1200/ospar_strategy.pdf)> accessed 7 August 2017, paras. 12 – 14, 15 – 18, and 22 – 23.

<sup>807</sup> Arctic RPA on MPLA, (n 791) para. 5.

<sup>808</sup> 1983 EAS Action Plan, (n 788) paras 14.2 – 14.3.

identified as some of the most significant causes of pollution of coastal waters’ and the development of a regional monitoring programme was agreed to address this issue.<sup>809</sup>

Therefore, in relation to the regional monitoring programme, the prioritisation of MPLA source-categories or substances is another common practice among RSPs and States are required to jointly prioritise them; however, it should be noted that it is not necessary for the prioritised substances and activities to be identical. The prioritisation can be regionalised based on their MPLA problems. Having determined the prioritised MPLA source-categories or substances, another common agreement evidenced through the practice of States in RSPs is the agreement to adopt common methodologies or procedures for monitoring MPLA at the regional level. This is discussed below.

### **(ii) Adoption of common methodologies and procedures for monitoring MPLA**

One of the objectives of establishing a regional monitoring programme is to ensure that the results among State parties are compatible and comparable. To achieve this objective, States must agree to adopt common methodologies and/or procedures for monitoring MPLA at the regional level. The agreement to adopt common methodologies and/or procedures is common to RSPs with both binding and non-binding instruments.

The requirement of the adoption of common methodologies and/or procedures in RSPs with binding instruments can be seen in two places. Firstly, since it is generally required for all sources of pollution, the adoption of common methodologies and/or procedures is normally clarified in RSP Conventions.<sup>810</sup> For example, in the Caspian Sea programme, the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Tehran Convention) requires States to ‘agree upon a list and parameters of pollutants’ discharged into the Caspian Sea for the purpose of monitoring pollution and

---

<sup>809</sup> 1995 SAS Action Plan, (n 791) Annex IV at paras. 2, and 4 (b).

<sup>810</sup> Barcelona Convention, (n 308) Article 12 (3); Helsinki Convention, (n 300) Article 24 (2)–(3); Jeddah Convention, (n 788) Article 12 (3); OSPAR Convention, (n 318) Annex IV at Article 2; The 2003 Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Tehran Convention) (Adopted 4 November 2003; entered into force 12 August 2006) <<http://www.tehranconvention.org/spip.php?article4>> accessed 7 August 2017, Articles 18 (1), 19 (2) and (4).

‘to endeavour to harmonise rules for setting up and operation of the monitoring programmes, measurement systems, analytical techniques, data processing and evaluation procedures for data quality.’<sup>811</sup>

Secondly, if the adoption of common methodologies and/or procedures is not specified at the Convention level, it can be found in RSP Action Plans when States agree, *inter alia*, to adopt the ‘application of methods, including intercalibration ... that will provide comparable data on the pollution of coastal waters, rivers, and estuaries’<sup>812</sup>, ‘common methods and techniques, including intercalibration and analytical quality control in laboratories, for determination of the levels and distribution of petroleum hydrocarbons on beaches, in organisms and in sediments’<sup>813</sup> or ‘uniform techniques and methods to identify agricultural pollutants of common regional interest (persistent organic compounds, nutrients - agricultural fertilizers)’.<sup>814</sup>

The same kind of agreement can also be found in the Action Plans of RSPs with non-binding instruments. For instance, the ‘standardisation of analytical techniques for measuring pollutant concentration and of techniques used to measure the effect of the pollutants on human health, fishery resources and marine and coastal ecosystems’ was required in the 1983 Action Plan of the East Asian Seas programme.<sup>815</sup> The same agreement to standardise these techniques was reaffirmed in its 1994 revised Action Plan as part of the quality assurance for monitoring pollution.<sup>816</sup> However, this agreement was less clear in other South Asian Seas and Northwest Pacific Sea programmes.

It can be seen from the above discussion that ten of the eighteen RSPs have agreed for the need to adopt common methodologies and procedures to monitor MPLA, and these

---

<sup>811</sup> Ibid, Tehran Convention, Article 19 (2) and (4).

<sup>812</sup> The 2007 HELCOM Baltic Sea Action Plan (Baltic Sea Action Plan), <[http://www.helcom.fi/Documents/Baltic%20sea%20action%20plan/BSAP\\_Final.pdf](http://www.helcom.fi/Documents/Baltic%20sea%20action%20plan/BSAP_Final.pdf)> accessed 7 August 2017, at 29; The 1985 Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Eastern African Action Plan), (1985) UNEP Regional Seas Reports and Studies No. 61, para. 8 (b); The 1981 Action Plan for the Protection of the Marine Environment and Coastal Areas of the South-East Pacific (South-East Pacific Action Plan), (1983) UNEP Regional Seas Reports and Studies No. 20, paras. 15.2 – 15.4; Western African Action Plan, (n 804) para. 13.1

<sup>813</sup> North-East Pacific Action Plan, (n 805) para. 21 (a) (i).

<sup>814</sup> Ibid, para. 21 (e) (i).

<sup>815</sup> 1983 EAS Action Plan, (n 788) para. 17.1.

<sup>816</sup> 1994 EAS Revised Action Plan, (n 788) paras. 15.1 – 15.3.

methodologies and procedures address specific MPLA source-categories and substances in many regions.<sup>817</sup> More than half of all RSPs have adopted this requirement, and it is arguable that this practice through RSPs have become essential for the effective regional cooperation to address MPLA. Having discussed the common methodologies and procedures for monitoring MPLA at the regional level, the substantive aspect of the monitoring requirement is addressed in the next section by considering the kind of information to be included in regional monitoring programmes.

### **iii. Substantive aspect of the monitoring requirement**

Based on the subsequent practice of States through RSPs, it seems to be commonly agreed that certain information should be included in a monitoring programme at the regional level; (i) the state of the marine environment; and (ii) MPLA information, which are discussed in turn below.

#### **(i) State of the marine environment**

The subsequent practice through RSPs shows that States agree to monitor the environmental conditions regarding the state of the marine environment in their regions. Of eighteen RSPs, thirteen RSPs require the monitoring of the state of the marine environment or the same kind of information.<sup>818</sup> However, there are significant variations in the terminologies used, although every term requires almost the same kind of information. The most general and widest term is ‘the state of the marine environment.’<sup>819</sup> It is important to note that there is no official definition of this term provided by the LOSC nor the RSPs instruments. To clarify the meaning of the ‘state of

---

<sup>817</sup> Baltic, Caspian, East Asian, Eastern Africa, Mediterranean, North-East Atlantic, North-East Pacific, PERSGA, South-East Pacific, and Western African Seas programmes.

<sup>818</sup> Arctic, Black Sea, Caspian, East Asian, Eastern African, North-East Atlantic, North-East Pacific, Northwest Pacific, Pacific, PERSGA, ROPME, SAS, and Wider Caribbean Seas Programmes.

<sup>819</sup> The term is used in the Eastern African, Black Sea, Caspian Sea, Pacific Sea and South Asian Seas programmes. See Eastern African programme, MPLA Protocol to Amended Nairobi Convention, (n 789) Annex III at para. 1. (d); For Black Sea programme, see. 2009 MPLA Protocol to the Bucharest Convention, (n 792) Article 11 (c); For Caspian Sea programme, see. MPLA Protocol to the Tehran Convention, (n 792) Article 13 (c); For Pacific programme, see. Pacific Regional Environmental Programme Strategic Plan 2011 – 2015 (Pacific Environmental Strategic Plan) <[http://www.sprep.org/attachments/000921\\_SPREPStrategicPlan2011\\_2015.pdf](http://www.sprep.org/attachments/000921_SPREPStrategicPlan2011_2015.pdf)> accessed 22 November 216, at EMG 4.1 and; For South Asian Seas Programme, see. SAS Action Plan, (n 791) para. 9.2 – 9.3.

the marine environment’ and other relevant terms in this discussion, it is necessary to revert to the rule of treaty interpretation. This starts from the consideration of the ordinary meaning of the term, context, and objects and purpose of the treaty. The ordinary meaning of the term ‘marine environment’ is the condition or way of being of areas that are usually covered by or containing sea water, including seas and oceans, river estuaries, and coasts and beaches, at a particular time. It includes the condition of waters and land (coastal areas; seafloor) on which people and marine creatures depend.<sup>820</sup> The specialist meaning of the term ‘marine environment’ is ‘the areas of the world usually covered by or containing sea water, including seas and oceans, river estuaries, and coasts and beaches.’<sup>821</sup> Although the extent of the marine environment is not specified, it is defined by the scope of the application of RSP Protocols or Conventions as the marine environment of the RSP areas.

In the context of the law of the sea, as mentioned earlier, the LOSC does not provide a definition of the term ‘state of the marine environment’. However, the use of this term can be traced back to the term ‘Health of the Ocean’, which was used in reports by GESAMP which contained ‘critical reviews and a scientific evaluation of the influence of pollutants on the marine environment’.<sup>822</sup> It was later changed to ‘state of the marine environment’.<sup>823</sup> The focus of these reports was the pollution of the marine environment, which is in line with the use of the term ‘state of the marine environment’ in the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-economic Aspects (Regular Process) which also focuses on the pollution of the marine environment.<sup>824</sup> Therefore, it can be said that the term ‘state of the marine environment’ suggests the observation of pollution that is affecting the marine

---

<sup>820</sup> For the ordinary meaning of the term ‘state’, see. <<http://dictionary.cambridge.org/dictionary/english/state>> accessed 19 May 2017; For the ordinary meaning of the term ‘environment’, see. <<http://dictionary.cambridge.org/dictionary/english/environment>> accessed 19 May 2017.

<sup>821</sup> Peter H Collin, *Dictionary of Environment & Ecology* (5 edn, Bloomsbury 2004).

<sup>822</sup> GESAMP, ‘Health of the Oceans’, GESAMP Reports and Studies No. 15 (1982), <<http://www.gesamp.org/publications/publicationdisplaypages/rs15>> accessed 19 May 2017, preface and 3 – 4.

<sup>823</sup> GESAMP, ‘The State of the Marine Environment’, GESAMP Reports and Studies No. 39 (1990), <[http://www.gesamp.org/data/gesamp/files/media/Publications/Reports\\_and\\_studies\\_39/gallery\\_1283/object\\_1296\\_large.pdf](http://www.gesamp.org/data/gesamp/files/media/Publications/Reports_and_studies_39/gallery_1283/object_1296_large.pdf)> accessed 19 May 2017.

<sup>824</sup> UNGA, ‘Report of the Secretary General on Ocean and Law of the Sea’ (2003) UNGA Doc A/58/423, paras. 6 – 7; For more information on the Regular Process, see <[http://www.un.org/depts/los/global\\_reporting/WOA\\_RegProcess.htm](http://www.un.org/depts/los/global_reporting/WOA_RegProcess.htm)> accessed 19 May 2017.

environment. As such, it involves an examination of the condition or way of being of the areas usually covered by, or containing, sea water, including seas and oceans, river estuaries, and coasts and beaches at a particular time. This includes the condition of the waters and land (coastal areas; seafloor) on which people and marine creatures depend. In addition, this reading is in line with the meaning of the term ‘monitor’ provided by the instruments of the Wider Caribbean and North-East Pacific programmes where ‘monitoring’ is defined as ‘the periodic measurement of environmental quality indicators’.<sup>825</sup>

There are several terms used in RSPs’ instruments that relate to the same trend of information as the state of marine environment. For example, ROPME and PERSGPA programmes adopt the term ‘data on the natural conditions of the Protocol Area as regards its physical, biological and chemical characteristics’.<sup>826</sup> Although no meaning of this term is provided in the RSPs’ instruments, the ordinary meaning encompasses information about the state or situation of the Protocol Area as found in nature, including information related to notable or typical natural processes of living things, substances and chemicals in the Protocol Area.<sup>827</sup> In addition to the above discussion, in the cases of the Black Sea and Caspian Seas programmes, they also adopt an almost identical term, namely, ‘information and data on the condition of the marine environmental and coastal areas concerning its physical, biological, and chemical characteristics’.<sup>828</sup> Similar to the aforementioned terms, these regimes provide no definition, but the ordinary meaning of

---

<sup>825</sup> MPLA Protocol to the Cartagena Convention, (n 789) Article 1 (f); Antigua Convention, (n 791) Article 2 (h).

<sup>826</sup> For ROPME Sea programme, see. MPLA Protocol to Kuwait Convention, (n 789) Article 7 (1) (a). Almost identical term can be seen in the neighbouring RSP, PERSGA programme. See, MPLA Protocol to Jeddah Convention, (n 789) Article 12 (3), (a).

<sup>827</sup> For the ordinary meaning of the term ‘data’, see <<http://dictionary.cambridge.org/dictionary/english/data>> accessed 19 May 2017; For the ordinary meaning of the term ‘natural’, see <<http://dictionary.cambridge.org/dictionary/english/natural>> accessed 19 May 2017; For the ordinary meaning of the term ‘condition’, see <<http://dictionary.cambridge.org/dictionary/english/condition>> accessed 19 May 2017; For the ordinary meaning of the term ‘physical’, see <<http://dictionary.cambridge.org/dictionary/english/physical>> accessed 19 May 2017; For the ordinary meaning of the term ‘biological’, see <<http://dictionary.cambridge.org/dictionary/english/biological>> accessed 19 May 2017; For the ordinary meaning of the term ‘chemical’, see <<http://dictionary.cambridge.org/dictionary/english/chemical>> accessed 19 May 2017; For the ordinary meaning of the term ‘characteristic’, see <<http://dictionary.cambridge.org/dictionary/english/characteristic>> accessed 19 May 2017.

<sup>828</sup> For the Black Sea programme, 2009 MPLA Protocol to Bucharest Convention, (n 792) Article 11 (1) (a), (c). An almost identical term is adopted by the Caspian Sea programme. See the MPLA Protocol to Tehran Convention, (n 792) Article 13 (a).

the term can be read as including information and data on the state or situation of an area of land that is affected in various ways by its closeness to the sea, together with areas of sea that are affected by being close to human activities on and from the land. This information includes the notable or typical quality of the natural processes of living things, substances and chemicals.<sup>829</sup> Other terms pointing to the same kind of information include ‘the quality of the marine environment and each of its compartments, that is, water, sediments, and biota’,<sup>830</sup> ‘patterns and trends in the environmental quality of the Convention area’,<sup>831</sup> or ‘quality of the marine and coastal environment’.<sup>832</sup> The terms in the RSPs with non-binding instruments include ‘quality of the marine environment and the coastal areas and factors affecting its quality and the projection of future trends’,<sup>833</sup> ‘status of the ecosystem’,<sup>834</sup> or ‘environmental quality’.<sup>835</sup> It should be noted as well that although it is unable to draw any comparable terms from in the other five RSPs,<sup>836</sup> they do not undermine this observation with contradictory evidence.

To this end, it can be said that similar information is required through the monitoring programme at the regional level and that is the environmental condition of the state of the marine environment. Although the terms are used differently in different regions, thirteen of the eighteen RSPs agree to monitor the same kind of information. This arguably reflects the pattern of the subsequent practice at the regional level in term of the substantive aspect of the monitoring requirement. The analysis of the meanings of these terms suggests that they require the same kind of information as the term ‘state of the marine environment’.

---

<sup>829</sup> For the technical meaning of the term ‘coastal area’, see Collin, *Dictionary of Environment & Ecology*, (n 821).

<sup>830</sup> OSPAR Convention, (n 318) Annex IV, Article 1.

<sup>831</sup> Cartagena Convention, (n 788) Article VI (1) (a).

<sup>832</sup> North-East Pacific Action Plan, (n 805) III, para. 15 (a).

<sup>833</sup> 1983 EAS Action Plan, (n 788) para. 11.

<sup>834</sup> 1994 EAS Action Plan, (n 788) para. 7.

<sup>835</sup> Northwest Pacific Action Plan, (n 791) para 12. The Arctic Programme uses the term the status of ‘Arctic region with respect to pollution and climate change issues’. See, Arctic Monitoring and Assessment Programme website, <<http://www.amap.no/about/organisational-structure>> accessed 7 August 2017.

<sup>836</sup> The Antarctic, Baltic, Mediterranean, South-East Pacific and Western African Seas programmes.

## (ii) MPLA information

The subsequent practice of States through RSPs shows that two kinds of MPLA information need to be monitored at the regional level; (i) the substances and inputs of MPLA, and (ii) the level of MPLA.

The first kind of information consists of the substances and inputs of MPLA. At the Protocol level, this kind of information is common to most RSPs. The focus is on the priority substances and/or activities listed in the RSPs' Protocol, although the monitoring programme gathers the same information of non-priority substances and/or activities. These RSPs are the Black Sea, Caspian, Eastern African, PERSGA, ROPME, and Western African Seas programmes, the Protocols of which clearly specify that information regarding substances, inputs, or inputs of priority substances and/or activities should be monitored,<sup>837</sup> including the 'distribution of sources and activities and the quantities and qualities of such substances and activities introduced into the marine and coastal environment'.<sup>838</sup> However, the Protocols of some RSPs do not require the monitoring of substances and inputs of MPLA. For example, despite listing the priority substances or activities, the MPLA Protocol to the Barcelona Convention does not require information on the input of priority substances. It merely requires information on the levels of pollution along the Mediterranean coastline in relation to the priority activities and categories of substances listed in Annex I of the Protocol.<sup>839</sup> The South-East Pacific and the Wider Caribbean Seas programmes are another two programmes with no priority list of substances or activities. The former generally requires the monitoring of the 'nature and extent' of MPLA pollution, whereas the latter requires the monitoring of 'patterns and trends in the environmental quality of the Convention area'.<sup>840</sup> The MPLA Protocols to these two RSPs do not provide the meaning of these terms. Therefore, the rule of treaty interpretation provided in Article 31 of the VCLT

---

<sup>837</sup> 2009 MPLA Protocol to Bucharest Convention, (n 792) Article 11; MPLA Protocol to Tehran Convention, (n 792) Article 13 (b); MPLA Protocol to Amended Nairobi Convention, (n 789) Annex III (b), (c); MPLA Protocol to Jeddah Convention, (n 789) Article 12; MPLA Protocol to Kuwait Convention, (n 789) Article 7; MPLA Protocol to Abidjan Convention, (n 789) Article 14

<sup>838</sup> *Ibid.*, 2009 MPLA Protocol to Bucharest Convention and; MPLA Protocol to Terhan Convention.

<sup>839</sup> MPLA Protocol to Barcelona Convention, (n 310) Article 8.

<sup>840</sup> MPLA Protocol to Lima Convention, (n 792) Article 8; MPLA Protocol to Cartagena Convention, (n 789) Article 6.

requires the consideration of these terms by their ordinary meanings. In terms of the words ‘nature’, ‘extent’, ‘patterns’, and ‘trend’, the ordinary meanings of ‘nature’<sup>841</sup> and ‘extent’<sup>842</sup> allow for the inclusion of substances and inputs as part of the ‘nature and extent of MPLA’. Therefore, it can be said that the South-East Pacific programme also requires the monitoring of substances and inputs of MPLA. However, it is unlikely that the substances and inputs of MPLA can be implied from the words ‘patterns’<sup>843</sup> and ‘trends’<sup>844</sup> of MPLA because they relate more to the development or change of MPLA. Hence, it is unlikely that the monitoring of substances and input of MPLA is required by the Protocol for the Wider Caribbean Sea programme.

At the Convention level, the RSPs that have no specific MPLA Protocol are the Baltic Sea and Northeast Atlantic programmes. Under the Baltic Sea programme, the Helsinki Convention requires States to monitor the ‘nature and extent of pollution’ at the regional level,<sup>845</sup> whereas, under the Northeast Atlantic programme, the OSPAR Convention requires information on ‘activities or natural and anthropogenic inputs which may affect the quality of the marine environment’ and ‘the effects of such activities and inputs.’<sup>846</sup> The use of the terms by both the Helsinki and OSPAR Conventions, hence, includes substances and inputs of MPLA.

In terms of the RSPs that operate with Action Plans, the Arctic programme monitors the sources and inputs of MPLA through the identification of pollution hotspots.<sup>847</sup> However, other RSPs, namely, the East Asian, South Asian Seas and Northwest Pacific programmes, although they clearly specify priority MPLA source-categories or substances, the requirement to monitor the substances and inputs of MPLA is not as

---

<sup>841</sup> The term ‘nature’ means the type or main characteristic of something. The word ‘nature’ has at least three meanings. See, Cambridge Dictionary <<http://dictionary.cambridge.org/dictionary/english/nature>> accessed 7 August 2017.

<sup>842</sup> The term ‘extent’ means the area or length; amount of something. See, Cambridge Dictionary, <<http://dictionary.cambridge.org/dictionary/english/extent>> accessed 7 August 2017.

<sup>843</sup> The term ‘pattern’ means a particular way in which something is done, is organised, or happens. The word ‘pattern’ has at least five meanings. See, Cambridge Dictionary <<http://dictionary.cambridge.org/dictionary/english/pattern>> accessed 7 August 2017.

<sup>844</sup> The term ‘trend’ means a general development or change in a situation or the way people are behaving. See, Cambridge Dictionary, <<http://dictionary.cambridge.org/dictionary/english/trend>> accessed 7 August 2017.

<sup>845</sup> 1992 Helsinki Convention, (n 300) Article 24 (2).

<sup>846</sup> (n 318) at Annex IV at Article 1.

<sup>847</sup> Arctic RPA on MPLA, (n 791) para. 7 and Appendix 2.

clearly delineated as in the RSPs with the MPLA Protocol. The terms employed are more general, and as such, they may include substances and input of the mentioned MPLA source-categories. For example, the Action Plan of the East Asian programme requires ‘oil pollution’ and ‘non-oil pollutants, especially metals, organics, nutrients, and sediment, and their environmental impacts’ to be monitored,<sup>848</sup> whereas the Action Plan of the South Asian Seas programme requires a ‘regional programme for monitoring marine pollution in the coastal waters’.<sup>849</sup> A more ambiguous term is used in the Action Plan of the Northeast Pacific programme, since it merely requires a regional monitoring programme to assess the condition of the regional marine environment.<sup>850</sup>

From the above-discussion, it can be said that ten of the eighteen RSPs requires the monitoring of MPLA substances and input. Six of which expressly requires information regarding MPLA substances and inputs<sup>851</sup>, whereas the other four RSPs only imply such requirement.<sup>852</sup> Although this information seems in line with the subsequent practice of States at the global level which requires States to cooperate at the regional level to monitor source and releases of MPLA,<sup>853</sup> the subsequent practice of States through the RSPs has not been consistent to draw any conclusion on the substantive part of this monitoring requirement. Taking into account the number of the RSPs requiring this information and the terminological differences, it is conceded that, though important to the management of MPLA, there is no consistency of States practice to add substances and input of MPLA into the substantive aspect of the regional monitoring programme.

The second MPLA information that is the level of MPLA. Similar to the above discussion, the focus is on the level of MPLA pollution of the priority substances and/or activities, although information of the unlisted MPLA substances and/or activities is also required. Of the eighteen RSPs, there are ten RSPs that require information on the level of MPLA pollution. These include the Arctic, Black Sea, Caspian Sea, Eastern African,

---

<sup>848</sup> 1983 EAS Action Plan, (n 788) paras. 14, 14.3.1 – 14.3.3.

<sup>849</sup> SAS Action Plan, (n 791) paras. 9, 9.3, 9.5, and Annex IV at para 4 (a).

<sup>850</sup> Northwest Pacific Action Plan, (n 791) paras. 15 – 16.

<sup>851</sup> Black Sea, Caspian, Eastern African, PERSGA, ROPME, Western African Seas programmes.

<sup>852</sup> Arctic, Baltic, North-East Atlantic, and South-East Pacific Seas programmes.

<sup>853</sup> See, Chapter V, Section III, ii (i).

Mediterranean, PERSGA, ROPME, and Western African Seas programmes.<sup>854</sup> Again, the South-East Pacific and Wider Caribbean Seas programmes do not require the level of MPLA pollution to be monitored. As mentioned above, the former generally requires the monitoring of the ‘nature and extent’ of MPLA pollution, while the latter requires the ‘patterns and trends in the environmental quality of the Convention area’ to be monitored.<sup>855</sup> Taking account of the ordinary meaning of the term, the word ‘level’ of MPLA encompasses the ‘amount or number’ of MPLA.<sup>856</sup> Therefore, unlike the substances and inputs of MPLA, the level of MPLA pollution can arguably be implied from the term ‘extent’, since its ordinary meaning includes the amount of something which, in this case, is MPLA pollution. In addition, the level of pollution can be perceived from the development or change of the MPLA during the course of the monitoring. This reading is permissible based on the ordinary meanings of the words ‘pattern’ and ‘trend’. For this reason, the Protocols of the South-East Pacific and the Wider Caribbean Sea programmes include the monitoring of the level of MPLA pollution, although it is not clearly specified.

From above, just over half of all RSPs requires the monitoring of the level of MPLA. Therefore, it is not possible to conclude that the substantive aspect of the monitoring requirement includes the level of MPLA. This requires further consistent practice and clarity. However, the fact that ten RSPs require such information demonstrates an emerging pattern of the subsequent States practice and points to what should be substantively monitored at the regional level about MPLA. For this reason, it can be concluded that the level of MPLA will be one of the substantive parameters required to be monitored at the regional level if the subsequent practice of States through the RSPs develop in this direction.

---

<sup>854</sup> Arctic RPA on MPLA, (n 791) para. 7.2 and see, Arctic Monitoring and Assessment Programme website <<http://www.amap.no/about/the-amap-programme/monitoring-and-assessment>> accessed 7 August 2017; 2009 MPLA Protocol to Bucharest Convention, (n 792) Article 11 and; 1992 MPLA Protocol to Bucharest Convention, (n 801) Article 5; MPLA Protocol to Tehran Convention, (n 792) Article 13 (b); MPLA Protocol to Amended Nairobi Convention, (n 789) Annex III (b), (c); MPLA Protocol to Barcelona Convention, (n 310) Article 8; MPLA Protocol to Jeddah Convention, (n 789) Article 12; MPLA Protocol to Kuwait Convention, (n 789) Article 7; MPLA Protocol to Abidjan Convention, (n 789) Article 14.

<sup>855</sup> MPLA Protocol to Lima Convention, (n 792) Article 8; MPLA Protocol to Cartagena Convention, (n 789) Article 6.

<sup>856</sup> The word ‘level’, as a noun, has at least five meanings. See, Cambridge Dictionary <<http://dictionary.cambridge.org/dictionary/english/level>> accessed 7 August 2017.

### III. Assessment of MPLA

When the regional monitoring programme has been established, the above information will be gathered and fed into the assessment process, which forms part of the obligation to prevent, reduce, and control MPLA at the regional level. In terms of the assessment of MPLA at the regional level, it can be examined in three aspects similar to the monitoring of MPLA; (i) institutional, (ii) procedural, and (iii) substantive, which are discussed in turn below.

#### i. Institutional aspect of the required assessment

In terms of the institutional aspect, the question is which organisation is responsible for the assessment of MPLA at the regional level. The subsequent practice of States through RSPs shows that this is another function of the regional monitoring programme, as evidenced in almost all RSPs. Firstly, in the case of RSPs with binding instruments, at the MPLA Protocol level, all nine that specifically have an MPLA protocol combine the assessment with the regional monitoring programme.<sup>857</sup> For example, under the ROMPE programme, the regional monitoring network is empowered to ‘assess systematically the levels of pollution within their internal and territorial waters in particular with regard to the substances that may have a potentially significant impact on the marine environment.’<sup>858</sup> In the Black Sea programme, it is within the responsibility of the regional joint monitoring programme to ‘evaluate and analyse risks and effects of pollution of the marine environment of the Black Sea.’<sup>859</sup> More generally, at the Convention level, some RSPs clearly state in their Conventions that the task of

---

<sup>857</sup> 2009 MPLA Protocol to Bucharest Convention, (n 792) Article 11; MPLA Protocol to Tehran Convention, (n 792) Article 13; MPLA Protocol to Nairobi Convention, (n 789) Article 12 and Annex III; MPLA Protocol to Barcelona Convention, (n 310) Article 8; MPLA Protocol to Jeddah Convention, (n 789) Article 12; MPLA Protocol to Kuwait Convention, (n 789) Article 7; MPLA Protocol to Lima Convention, (n 792) Article 8; MPLA Protocol to Abidjan Convention, (n 789) Article 14; MPLA Protocol to Cartagena Convention, (n 789) Article 6.

<sup>858</sup> Ibid, MPLA Protocol to Kuwait Convention, Article 7.

<sup>859</sup> Bucharest Convention, (n 596) Article 15 (4); 2009 MPLA Protocol to Bucharest Convention, (n 792) Article 11.

assessment rests with the regional monitoring programme. Examples include the Baltic,<sup>860</sup> Black Sea,<sup>861</sup> Caspian,<sup>862</sup> and Northeast Atlantic Seas programmes.<sup>863</sup>

In terms of RSPs that operate with non-binding instruments, the assessment of MPLA rests with the regional monitoring programme. Under the East Asian Seas programme, the regional coordinated environmental assessment programme is responsible for both monitoring and assessing MPLA.<sup>864</sup> Assessment and monitoring are stated as Objective 1 of the 1994 Action Plan of the Northwest Pacific Sea programme and it also has a Special Monitoring & Coastal Environmental Assessment Regional Activity Centre, which is responsible for monitoring and assessing pollution and the environment.<sup>865</sup> This is also the case in the Arctic and South Asian Seas programme, in which the coordinated regional marine pollution monitoring programme also assesses the pollution in its areas of governance.<sup>866</sup>

It seems logical from the above observation that a regional assessment should be conducted by the regional monitoring programme. Seventeen of the eighteen RSPs rests the assessment of the MPLA with regional monitoring programme.<sup>867</sup> The fact that this institution has all the environmental data to hand, including the state of the marine environment and information about MPLA, will help to ensure the effectiveness and consistency of the whole process. However, similar to the monitoring requirement, the consistency of the assessment is not only ensured by the comparable information derived from the monitoring programme, but also by using the same substances, activities, consistent procedures and methodologies for the assessment. Indeed, the subsequent practice of States through RSPs reveals a common agreement to adopt the same procedures and methodologies for assessing MPLA at the regional level. This is discussed below with an examination of the procedural aspect of the required assessment.

---

<sup>860</sup> 1992 Helsinki Convention, (n 300) Article 24 (2) – (3).

<sup>861</sup> Bucharest Convention, (n 596) Article 15 (4).

<sup>862</sup> Tehran Convention, (n 810) Article 19 (3).

<sup>863</sup> OSPAR Convention, (n 318) Article 6 and Annex IV at Articles 2 – 3.

<sup>864</sup> 1983 EAS Action Plan, (n 788) para. 14; 1994 EAS Action Plan, (n 788) para. 7 – 8.

<sup>865</sup> For more information about CEARAC, see <<http://cearac.nowpap.org/about/index.html>> accessed 28 November 2016.

<sup>866</sup> Arctic RPA on MPLA, (n 791) para. 7 and see also, Arctic Monitoring and Assessment Programme, <<http://www.amap.no/about/the-amap-programme/monitoring-and-assessment>> accessed 7 August 2017; SAS Action Plan, (n 791) para. 9.3; For South Asian Seas programme, see. (n 791) para. 9.3 and Annex IV at para. 4.

<sup>867</sup> This cannot be seen in the Antarctic programme.

## **ii. Procedural aspect of the required assessment**

The procedural aspect of the required assessment is similar to the monitoring requirement discussed above in that States agree to assess the aforementioned prioritised substances and adopt common procedures and methodologies for the assessment. In terms of the common procedures and methodologies, they agree to adopt certain technical guidelines related to the EIA for major projects or development activities that have the potential to cause significant transboundary harm to the marine environment of RSPs. These elements are discussed below.

### **(i) Adoption of EIA guidelines for projects or activities that have the potential to cause significant harm to the marine environment of RSPs' areas**

The performance of an environmental assessment or an EIA appears to have been agreed by all States across the regions, since almost all RSPs have at least one related provision in the Convention or MPLA Protocol, or a section in the Action Plan. However, the subsequent practice of States shows that the EIA they have agreed only applies to a specific circumstance and it only involves major or development projects that have the potential to cause substantial harm to the marine environment of RSPs' areas. A procedural requirement has been established by the subsequent practice of the States, which relates to an EIA through an RSP. This is the duty to cooperate in establishing technical and other guidelines concerning the EIA of major or development land-based projects. However, the meanings of major or development land-based projects and their difference are not defined in the RSPs instruments. Arguably, they will be further determined by States in the course of the EIA guidelines' preparation.

In terms of the duty to cooperate in establishing technical and other guidelines concerning an EIA for major or development projects, it can be observed from the MPLA Protocol level of RSPs that operate with binding instruments that States are required to cooperate in the development of technical and other guidelines related to the assessment

of the environmental impact of major or development projects.<sup>868</sup> The evolution of this duty can be seen through the development of the newer MPLA protocol. Initially, States merely agreed that an EIA was necessary if there was the potential of significant harm to the marine environment of the Convention or Protocol areas and this should be stipulated in the MPLA Protocol. This was the case in the early Protocols, such as the ROPME programme.<sup>869</sup> However, in the newer Protocols, State Parties are now required to address potential transboundary harmful impacts on the Protocol areas by developing and adopting regional guidelines for assessing the environmental (including transboundary) impact on the Protocol areas. This is the case in the Black Sea, Caspian Sea, Eastern and Western Africa Seas programmes.<sup>870</sup> It is interesting to note that in the *Pulp Mills on the River Uruguay* case,<sup>871</sup> the ICJ did not determine the content of an EIA leaving for States to do so at the national level. In the case of the protection of the marine environment from MPLA at the regional level, however, the fact that States in their RSPs have agreed for the adoption of an EIA guidelines for the major and development projects further substantiate the content of an EIA in the case of significant transboundary harm. As such, it further clarifies the obligation under general international law to conduct an EIA as well.

At the Convention level, some RSPs Conventions provide a general provision that ‘technical and other guidelines’ should be developed to ‘assist the planning of the development projects in such a way as to minimise their harmful impact on the marine environment.’<sup>872</sup> However, this requirement is somewhat different under the Helsinki Convention. Under Article 7, it does not oblige States Parties to the Convention to cooperate and develop the guidelines for an EIA. Instead, it requires States Parties to

---

<sup>868</sup> 2009 MPLA Protocol to Bucharest Convention, (n 792) Article 12 (1); MPLA Protocol to Tehran Convention, (n 792) Article 12 (1); MPLA Protocol to Nairobi Convention, (n 789) Article 13 (3); MPLA Protocol to Jeddah Convention, (n 789) Article 13 (2); MPLA Protocol to Kuwait Convention, (n 789) Article 8 (2); MPLA Protocol to Abidjan Convention, (n 789) Article 15 (1); MPLA Protocol to Cartagena Convention, (n 789) Article 7 (1).

<sup>869</sup> Ibid, MPLA Protocol to Kuwait Convention, Article 8 (2);

<sup>870</sup> 2009 MPLA Protocol to Bucharest Convention, (n 792) Article 12 (1); MPLA Protocol to Tehran Convention, (n 792) Article 12 (1); MPLA Protocol to Nairobi Convention, (n 789) Article 13 (3); MPLA Protocol to Abidjan Convention, (n 789) Article 15 (1).

<sup>871</sup> See, Chapter III, Section II, vii.

<sup>872</sup> Kuwait Convention, (n 788) Article 11 (c). The same kind of provision can also be seen in other RSPs. See Bucharest Convention, (n 596) Article 15 (2) and (5); Tehran Convention, (n 810) Article 17 (3); Nairobi Convention, (n 788) Article 14 (1); Antigua Convention, (n 791) Article 10 (b) – (c); Noumea Convention, (n 791) Article 16 (1); Jeddah Convention, (n 788) Article 11 (3); Lima Convention, (n 791) Article 10; Abidjan Convention, (n 788) Article 13 (1); Cartagena Convention, (n 788) Article 12 (1).

inform the Commission and potential affected States Parties of its duty to conduct an EIA required by international law or supra-national regulation applicable to the Contracting Party of origin. In this situation, they are required to consult and cooperate among the interested parties to jointly take ‘appropriate measures in order to prevent and eliminate pollution including cumulative deleterious effects.’<sup>873</sup> Furthermore, another different situation can be seen from the Antarctic programme. The EIA procedure was established by the Environmental Protocol to the Antarctic Treaty.<sup>874</sup> The Guidelines for Environmental Impact Assessment in Antarctica was also developed by the Committee on Environmental Protection established by the Protocol.<sup>875</sup> Under this Protocol, it is interesting to note that, though not specifically addressed MPLA, it requires an EIA to be conducted for certain activities such as scientific research programmes and tourism which can create MPLA to the governing area of the Antarctic programme.<sup>876</sup>

Also, the elements of an EIA have been mentioned in Action Plans of RSPs that operate by non-binding instruments, including the East Asia Sea<sup>877</sup> and South Asian Seas programmes,<sup>878</sup> although the reference to EIAs is more ambiguous in the Northwest Pacific Sea programmes Action Plan.<sup>879</sup> The elements of an EIA cannot be seen in relation to the protection of the marine environment from MPLA in the Arctic programme.

From the discussion above, fifteen of the eighteen RSPs contain the requirement concerning an EIA. Most of the RSPs require States to cooperate and develop the EIA guidelines for projects and activities that are likely to cause significant harm to the marine environment. However, of these fifteen RSPs, two RSPs – Baltic and Antarctic programmes – contain somewhat different requirements. The fact that fifteen RSPs contain the EIA requirement illustrates the significant subsequent practice of States for the conduct of EIA although two of them pose different requirements. In addition, it

---

<sup>873</sup> Helsinki Convention, (n 300) Article 7.

<sup>874</sup> Environmental Protocol to the Antarctic Treaty, (n 797) Article 8 and Annex I.

<sup>875</sup> See the Committee for Environmental Protection website, <[http://www.ats.aq/documents/recatt/Att605\\_e.pdf](http://www.ats.aq/documents/recatt/Att605_e.pdf)> accessed 7 August 2017.

<sup>876</sup> Environmental Protocol to Antarctic Treaty, (n 797) Article 8 and Annex I.

<sup>877</sup> 1983 EAS Action Plan, (n 788) para. 17.

<sup>878</sup> SAS Action Plan, (n 791) para. 9.3.

<sup>879</sup> Environmental assessment is mentioned in the Action Plan, but the reference to an EIA is more ambiguous. See Northwest Pacific Action Plan, (n 791) paras. 15 – 16.

should be noted that, despite ambiguity of the term major or developmental land-based projects and the divergence of the requirement on an EIA, States are generally obliged by international law to undertake an EIA for activities that cause, or are likely to cause, significant transboundary harm to other States' environment or areas beyond their national jurisdiction.<sup>880</sup> Therefore, it can be concluded that the adoption of EIA guidelines for projects and activities that are likely to cause significant harm to the marine environment is part of the MPLA assessment requirement at the regional level.

### **(ii) Adoption of common procedures and methods to assess MPLA**

As with monitoring, several RSPs seem to recognise the need to ensure comparable assessment programmes and have established common procedures and methodologies for an assessment to this end. Similar to the monitoring requirement, ten of the eighteen RSPs require an adoption of common procedures and methods to assess MPLA.<sup>881</sup> The need to adopt common procedures and methods can be seen in the RSPs with binding instruments. This is clearly specified in Conventions<sup>882</sup> such as those discussed above in the Caspian Sea programme that require State parties 'to endeavour to harmonise rules for ... measurement systems, analytical techniques, data processing and evaluation procedures for data quality.'<sup>883</sup> If it is not stipulated clearly in the Conventions or Protocols of the RSPs, the same requirement can also be found in the Action Plan of RSPs requiring States, for example, to adopt 'common methods and techniques, including intercalibration and analytical quality control in laboratories, for determination of the levels and distribution of petroleum hydrocarbons on beaches, in organisms and in sediments'.<sup>884</sup>

---

<sup>880</sup> See, Chapter III, Section II, vii.

<sup>881</sup> Baltic, Caspian, Eastern African, East Asian, Mediterranean, North-East Atlantic, North-East Pacific, PERSGA, South-East Pacific, and Western African Seas programmes.

<sup>882</sup> 1992 Helsinki Convention, (n 300) Article 24 (2) – (3); Tehran Convention, (n 810) Articles 18 (1), 19 (2) and (4); Barcelona Convention, (n 308) Article 12 (3); OSPAR Convention, (n 318) Annex IV at Article 2; Jeddah Convention, (n 788) Article 12 (3).

<sup>883</sup> *Ibid*, Tehran Convention, Article 19 (2) and (4).

<sup>884</sup> North-East Pacific Action Plan, (n 805) para. 21 (a) (i). See also, Baltic Sea Action Plan, (n 812) 29; Eastern African Action Plan, (812) para. 8 (b); South-East Pacific Action Plan, (n 812) paras. 13, 15.2 – 15.4; Western African Action Plan, (n 804) para. 13.1.

In the case of RSPs with non-binding instruments, the 1983 Action Plan under the East Asian Seas programme, requires, *inter alia*, the ‘standardisation of analytical techniques for measuring pollutant concentration and of techniques used to measure the effect of the pollutants on human health, fishery resources and marine and coastal ecosystem.’<sup>885</sup> Such an agreement to standardise these techniques was reaffirmed in its 1994 Revised Action Plan as part of the quality assurance for monitoring pollution.<sup>886</sup> However, such an agreement is less clear in the Arctic, Northwest Pacific, and South Asian Seas programmes. From the discussion, the fact that ten of the eighteen RSPs require the adoption of the common assessment procedures and methods points to its significance for an effective cooperation at the regional level to deal with MPLA. With further development through the RSPs, the adoption of the common assessment procedures and methods will be integral to the assessment of MPLA at the regional level.

### **iii. Substantive aspect of the required assessment**

The substantive aspect of the required assessment relates to the objective of an assessment conducted under RSPs. The assessment considers information from the regional monitoring programmes, which means that it analyses such information. However, the objective of the assessment is somewhat different from that of the monitoring programme. The monitoring programme gathers the above information to feed into the assessment process, while the objective of the assessment is to inform States’ governments or the decision-makers of environmental pollution so that they can adopt the appropriate measures to prevent, reduce, and control MPLA, and more generally, protect and preserve the marine environment. From the subsequent practice of States through the RSPs, there seems to be a common agreement that certain information will be subject to the assessment process, namely, (i) the state of the marine environment; (ii) level of MPLA; and (iii) the effectiveness of the measures taken to deal with MPLA. These elements are discussed in turn below.

---

<sup>885</sup> (n 788) at para 17.1.

<sup>886</sup> 1994 EAS Action Plan, (n 788) para. 15.1 – 15.3.

### (i) State of the marine environment

Similar to the earlier section concerning the substantive aspect of the monitoring requirement, the state of the marine environment needs to be assessed. The reason the state of the marine environment is not mentioned as part of the required assessment is that it would duplicate what is required to be done by monitoring. Noting the terminological differences, thirteen of the eighteen RSPs agree to assess this information for the purpose prevention, reduction, and control of MPLA.<sup>887</sup> It should be noted that there are five RSPs that require the regional monitoring programme to assess this information by expressly using the term ‘the state of the marine environment’. These are Black Sea, Caspian, Eastern Africa, Pacific, and South Asian Seas programmes.<sup>888</sup> Other RSPs uses various terms to refer to the same set of information. As analysed earlier, the terms ‘state of the marine environment’ and other terms mentioned above requires the assessment of the environmental condition of the state of the marine environment. This includes the information on the condition or way of being of the areas usually covered by, or containing, sea water, including seas and oceans, river estuaries, and coasts and beaches at a particular time. The condition includes the condition of waters and land (coastal areas; seafloor) on which people and marine creatures depend.<sup>889</sup> From the thirteen RSPs above, this arguably reflects the pattern of the subsequent practice at the regional level having the state of the marine environment as part of the substantive aspect of the assessment requirement.

### (ii) Level of MPLA

At the Protocol level, most RSPs require an assessment of the levels of pollution in the case of MPLA. Twelve of the eighteen RSPs require an assessment of the level of MPLA.<sup>890</sup> An assessment of the level of MPLA is found in the MPLA Protocols of the

---

<sup>887</sup> Arctic, Black Sea, Caspian, Eastern Africa, East Asian, North-East Atlantic, North-East Pacific, Northwest Pacific, Pacific, PERSGA, ROPME, South Asian, and Wider Caribbean Seas programmes.

<sup>888</sup> 2009 MPLA Protocol to Bucharest Convention, (n 792) Article 11 (1) (c); MPLA Protocol to Tehran Convention, (n 792) Article 13 (1) (c); MPLA Protocol to Nairobi Convention, (n 789) Article 12 and Annex III at (d); Pacific Environmental Strategic Plan, (n 819) EMG 4.1; and SAS Action Plan, (n 791) para. 9.2 – 9.3.

<sup>889</sup> See Section II, iii, (i) above.

<sup>890</sup> Arctic, Baltic, Black Sea, Caspian, Eastern African, East Asian, Mediterranean, North-East Atlantic, ROPME, South-East Pacific, Western African, and Wider Caribbean Seas programmes.

Black Sea, Caspian, Eastern African, Mediterranean, ROPME, Western African Seas programmes.<sup>891</sup> There are three RSPs that do not require such an assessment, namely, the South-East Pacific, Wider Caribbean Sea, and PERSGA programmes. As discussed in an earlier section, the assessment of the level of MPLA can be drawn from the term ‘nature and extent of pollution’ used in the 1983 Protocol to the Lima Convention of the South-East Pacific programme. The same can also be said for the Wider Caribbean Sea programme from the term ‘patterns and trends of pollution’ used in the MPLA Protocol to Cartagena Convention.<sup>892</sup> However, such reading cannot be drawn from the PERSGA programme, since its MPLA Protocol makes no mention of an assessment of MPLA.

At the Convention level, the Baltic Sea and North-East Atlantic programmes also assess the level of MPLA in their regions.<sup>893</sup> However, it should be noted that the Conventions of some RSPs do not mention assessing the level of pollution, including MPLA. This includes Pacific, and the North-East Pacific programmes. As for RSPs that operate with Action Plans, as discussed earlier, the programmes that require the level of MPLA to be monitored is the East Asian and the Arctic programme;<sup>894</sup> however, the appearance of this information is not clear in the South Asian Seas and Northwest Pacific programmes. It is important to note that terms such as ‘nature’, ‘extent of pollution’, ‘pathways’, ‘exposure’, ‘risks and/or remedies’ are not used consistently in RSPs.<sup>895</sup> At this stage, it can be observed that twelve of the eighteen RSPs provides an emerging practice at the regional level regarding the monitoring of the level of MPLA. However, it is not easy to say if the level of MPLA forms part of the substantive aspects or *vice versa*. Given such ambiguity, it should be noted that States in every RSP that are party to the LOSC are still bound to assess such terms since Article 200 of the LOSC requires such information to be assessed.

---

<sup>891</sup> 2009 MPLA Protocol to Bucharest Convention, (n 792) Article 11 (d); 1992 MPLA Protocol to Bucharest Convention, (n 801) Article 5; MPLA Protocol to Tehran Convention, (n 792) Article 13 (d); MPLA Protocol to Amended Nairobi Convention, (n 789) Article 12, and Annex III at (c); MPLA Protocol to Barcelona Convention, (n 310) Article 8 (a); MPLA Protocol to Kuwait Convention, (n 789) Article 7 (1) (c); MPLA Protocol to Abidjan Convention, (n 789) Article 14 (2).

<sup>892</sup> See Section II, iii (ii).

<sup>893</sup> 1992 Helsinki Convention, (n 300) Article 24 (2); OSPAR Convention, (n 318) Article 6 and Annex IV.

<sup>894</sup> 1983 EAS Action Plan, (n 788) paras. 14.2 – 14.4; 1994 EAS Action Plan, (n 788) para. 7; Arctic RPA on MPLA, (n 791) para. 7 and see also, Arctic Monitoring and Assessment Programme, <<http://www.amap.no/about/the-amap-programme/monitoring-and-assessment>> accessed 7 August 2017.

<sup>895</sup> 1992 Helsinki Convention, (n 300) Article 24 (2); Bucharest Convention, (n 596) Article 15.

### (iii) Effectiveness of the measures taken to deal with MPLA

The information required in addition to that discussed above in this section and in the monitoring requirement relates to the effectiveness of the measures taken to deal with MPLA. Ten of the eighteen RSPs have such a requirement and eight of which can be seen in the RSPs with MPLA Protocols. These include an assessment of the effectiveness of the Action Plan, programmes, and measures implemented under the Protocol to ‘meet the environmental objectives’,<sup>896</sup> ‘to reduce the pollution of the marine environment’,<sup>897</sup> and ‘eliminate to the fullest extent pollution of the marine environment’,<sup>898</sup> and other similar requirements.<sup>899</sup> Despite containing an MPLA Protocol, the Caspian Sea programme requires an assessment of the effectiveness of the measures taken to deal with marine pollution more generally at the Convention level, covering all types of pollution, including MPLA.<sup>900</sup> The effectiveness assessment can arguably be found in the Arctic programmes where its RPA requires the result of the monitoring and assessment of MPLA be taken into account for the adjustment of the identification of priorities and regional actions.<sup>901</sup> However, the same cannot be seen in the Action Plans of the other RSPs that operate with non-binding instruments, such as the South Asian, East Asian, or Northwest Pacific Seas programmes.

The assessment of the effectiveness of measures taken to deal with MPLA is indeed in line with what the GPA requires States to consider when establishing regional cooperation to deal with MPLA. An effectiveness assessment is consistent with the methodology of the GPA, being one of the elements in its Chapter 2.<sup>902</sup> In addition, the existence of an assessment of the effectiveness of the measures taken to deal with MPLA shows that RSPs are underpinned by adaptive management,<sup>903</sup> which based on an

---

<sup>896</sup> MPLA Protocol to Kuwait Convention, (n 789) Article 7 (1) (d).

<sup>897</sup> MPLA Protocol to Lima Convention, (n 792) Article 2 (c)

<sup>898</sup> MPLA Protocol to Barcelona Convention, (n 310) Article 8 (b)

<sup>899</sup> 2009 MPLA Protocol to Bucharest Convention, (n 792) Article 11 (1) (e); MPLA Protocol to Nairobi Convention, (n 789) Annex III (e) – (g); MPLA Protocol to Jeddah, (n 789) Article 13 (2); MPLA Protocol to Abidjan Convention, (n 789) Article 14 (2); MPLA Protocol to Cartagena Convention, (n 789) Article 6 (b). MPLA Protocol to Lima Convention assess ‘the effects of the measure taken’. See, (n 792) Article 8 (c).

<sup>900</sup> Tehran Convention, (n 810) Article 19 (3).

<sup>901</sup> Arctic Council RPA on MPLA, (n 791) para. 7.2.

<sup>902</sup> The GPA, (n 31) paras. 27 and 32 (b).

<sup>903</sup> For more information about adaptive management, see CS Holling, *Adaptive Environmental Assessment and Management* (John Wiley & Son 1978); Carl Walters, *Adaptive Management of Renewable Resources*

understanding that ecosystems, in this case the marine ecosystem, are in ‘flux’.<sup>904</sup> As such, the perception of the marine environment is that it is complex, dynamic, and constantly changing;<sup>905</sup> as a result, this assessment reflects the reality by considering environmental uncertainties through the process of monitoring and assessing MPLA. Both tasks reveal evolving environmental information that changes the understanding of the marine environment and this, in effect, enables States to adapt, adjust their environmental measures, or even abolish the unsuccessful measures and adopt new ones based on new scientific and environmental changes. Some literature on the adaptive management and ocean governance of RSPs can be seen in some regions such as the Baltic.<sup>906</sup> This seems to coincide well with the way the protection of the marine environment at the regional level has evolved since the 1970s.

It can be concluded from the above discussion that the subsequent practice of States through RSPs different degrees of consistency regarding the substantive aspect of the assessment requirement. An assessment of MPLA at the regional level arguably includes the assessment of the state of the marine environment given the terminological differences existed in the RSPs instruments. It also includes assessing the level of MPLA and the effectiveness of the measures taken to deal with MPLA. Not only it is reflected through the practices through RSPs, but the former is also required by Article 200 of the LOSC as well.

---

(Macmillan Publishing Company 1986); Bradley C Karkkainen, 'Adaptive Ecosystem Management and Regulatory Penalty Defaults: Toward a Bounded Pragmatism' (2002 - 2003) 87 *Minnesota Law Review* 943; JB Ruhl, 'Taking Adaptive Management Seriously: A Case Study of the Endangered Species Act' (2004) 52 *University of Kansas Law Review* 1249.

<sup>904</sup> Ibid, Ruhl, 'Taking Adaptive Management Seriously: A Case Study of the Endangered Species Act', 1259 – 1260.

<sup>905</sup> Karkkainen, 'Adaptive Ecosystem Management and Regulatory Penalty Defaults: Toward a Bounded Pragmatism', (n 903) 945 – 948.

<sup>906</sup> For adaptive management in the Baltic Sea programme, see. Björn Hassler, Magnus Boström and Sam Grönholm, 'Towards an Ecosystem Approach to Management in Regional Marine Governance? The Baltic Sea Context' (2013) 15 *Journal of Environmental Policy & Planning* 225; Minna Pyhälä, 'HELCOM Baltic Sea Action Plan: An Ecosystem Approach to the Management of Human Activities' in Marcus Reckermann and others (eds), *Climate Impacts on the Baltic Sea: From Science to Policy* (Springer 2012), 45 – 6. See also, Baltic Sea Action Plan, (n 812) 4, 9.

#### IV. Surveillance of MPLA

In terms of the surveillance requirement, as discussed in an earlier chapter, the ordinary meaning of the term ‘surveillance’ suggests the notion of policing wrongdoers.<sup>907</sup> In the context of the protection of the marine environment, the LOSC provides that surveillance should be employed to observe ‘the effect of any activities which they [States] permit or in which they engage in order to determine whether these activities are likely to pollute the marine environment.’<sup>908</sup> However, according to the subsequent practice of States in relation to the protection, reduction, and control of MPLA at the regional level, especially through RSPs, there has been no common agreement that a surveillance should be performed at the regional level. In other words, unlike monitoring and assessment requirements, there is no agreement to adopt a regional surveillance programme. What is evident from the subsequent practice of States through RSPs is that an element of surveillance is required to be adopted by States in some RSPs in the form of an inspection system by national authorities. However, since this inspection system is part of the obligation at the national level, it can be concluded that the subsequent practice of States through RSPs does not reveal any element related to the surveillance of MPLA at the regional level. There is insufficient information to clarify the substance of the obligation to prevent, reduce, and control MPLA under Article 207 of the LOSC.

#### V. Conclusion

Based on the above discussion, the subsequent practice of States at the regional level, especially through RSPs, shows how States have conducted the monitoring, assessment, and surveillance of MPLA at the regional level. Although it does not reveal any consistency or concrete evidence of the surveillance of MPLA, it provides good evidence of a common understanding of what the terms the monitoring and assessment of MPLA require.

---

<sup>907</sup> See Chapter V, Section III, ii. The ordinary meaning of the term ‘surveillance’ means ‘the careful watching of a person or place, especially by the police or army, because of a crime that has happened or is expected.’ See, Cambridge Dictionary <<http://dictionary.cambridge.org/dictionary/english/surveillance>> accessed 17 February 2016.

<sup>908</sup> The LOSC, (n 14) Article 204 (2).

From the analysis of the RSPs instruments, the monitoring of MPLA at the regional can be seen in three aspects – institutional, procedural, and substantive – and the subsequent practice of States through RSPs reveals different degrees of consistency. Institutionally, an MPLA monitoring programme at the regional level is required to be established. It can be undertaken in one of two different ways based on States' regional agreement. It can be in the form of (i) a regional network of national research centres and institutions, or (ii) a complementary or joint programme for monitoring pollution. They are supported by the work of the national authorities of the States in monitoring MPLA. Procedurally, the subsequent practice of States reveals two procedural commonalities at the regional level. These are (i) prioritisation of the MPLA source-categories and (ii) an adoption of common methodologies and procedures for monitoring MPLA. The former cannot be treated as part of the procedural aspect of the monitoring of MPLA mainly due to inconsistencies regarding the listing of the substances and activities priorities and reasons for the prioritisation. There are various reasons for prioritising one MPLA source-category over others. It may be that States in particular RSPs are affected by the same pollution, or they have prioritised it as a precautionary measure. Another reason may be that States are responding to the call of the GPA and prioritising those MPLA source-categories that have been identified by the GPA as global concerns, such as sewage and POPs. For the adoption of common methodologies and procedures for monitoring MPLA, although it is not possible to conclude that this requirement forms part of the procedural aspect of the monitoring of MPLA, the subsequent practice of States through RSPs shows an emerging practice of doing so. It can also be observed that the adoption of common monitoring methodologies and procedures is essential to ensure an effective regional cooperation to tackle MPLA. Regarding the substantive aspect of the monitoring requirement, two sets of information can be observed from the subsequent practice of States through RSPs. They are (i) the state of the marine environment, and (ii) MPLA information. Despite different terminologies, thirteen of the eighteen RSPs requires the monitoring of the state of the marine environment showing the consistent practice regarding the monitoring of MPLA at the regional level. This allows us to include the monitoring of the state of the marine environment as the substantive part of the monitoring requirement. In terms of MPLA information, the analysis of the subsequent practice of States shows that, for the time being, it is unable to include information on (i) substances and inputs of MPLA, and (ii) the level of MPLA as part of the substantive

aspect of the monitoring requirement although they are essential to the management of MPLA at the regional level.

As for the assessment of MPLA at the regional level, three aspects of this requirement can be observed through the subsequent practice of States through RSPs. Regarding the institutional aspect, the assessment of MPLA at the regional level shares the same institution as the monitoring programme. Procedurally, States are required to cooperate and adopt two sets of guidelines for assessment purposes. The first one concerns an EIA. Fourteen of the eighteen RSPs contains a requirement relating to an EIA. Under these RSPs, States are mainly required to cooperate and adopt the EIA guidelines for projects and activities that may cause significant harm to the marine environment of the RSPs' areas. Another set of guidelines concerns common procedures and methods of the assessment of MPLA. This is to ensure the compatible result of the assessment process among the State parties of RSPs. Ten of the eighteen RSPs requires the adoption of this set of guidelines. With the number of the RSPs having this requirement, it is not able to draw any conclusion if the adoption of the common assessment procedures and methods are part of the procedural aspect of the assessment requirement. Substantively, the assessment of MPLA analyses three sets of information to inform the decision-making process for the adoption of relevant measures to deal with MPLA. These include information on (i) the state of the marine environment; (ii) levels of MPLA; and (iii) the effectiveness of the measures taken to deal with MPLA. However, unfortunately, nothing can be observed from the subsequent practice of States regarding the surveillance of MPLA, even though it is part of the obligation to monitor pollution under the LOSC.

Although the ambiguity surrounding the surveillance of MPLA needs to be further clarified, it has been shown in this chapter that the obligation to prevent, reduce, and control MPLA at the regional level under Article 207 of the LOSC is not without substance, as criticised in the literature. At least, the interpretation of this provision, together with an examination of the subsequent practice of States in the earlier chapter, has identified four components of the obligation to be fulfilled by States. In addition and as shown in this chapter, States can meet their obligations with regard to the requirements to monitor and assess MPLA at the regional level. Hopefully, this has helped to clarify the ambiguities of Article 207 of the LOSC, inform States of the implementation and

fulfilment of their obligations, and ultimately serve to better protect and preserve the marine environment from MPLA.

## **Chapter VII: Conclusions**

### **I. Introduction**

The purpose of this research was to better understand and clarify the content of the obligation to prevent, reduce and control MPLA at the regional level under Article 207 of the LOSC by applying the rule of treaty interpretation stipulated in Articles 31 and 32 of the VCLT as an analytical framework. Three subsidiary questions were answered in order to achieve this purpose; (i) what do the ordinary meanings of the terms of Article 207 of the LOSC reveal in relation to the obligation in Article 207 of the LOSC at the regional level?; (ii) what does the subsequent practice of States at the global level reveal in relation to the obligation of Article 207 of the LOSC at the regional level?; and (iii) what does the subsequent practice of States through RSPs reveal concerning monitoring, assessment, and surveillance of Article 207 of the LOSC at the regional level?

This chapter contains the conclusion of this thesis, answers to the research questions, and the contribution it makes to the international law of the sea scholarship. It is divided into three sections, beginning with the methodological complexity of the application of the rule of treaty interpretation as the legal method of the research. The outcomes of the interpretation of Article 207 of the LOSC is then illustrated by pointing to the single combined interpretation of the obligation to prevent, reduce, and control MPLA at the regional level and it is further demonstrated that this single combined obligation has four key components as substance of the obligation. The ambiguity of several terms of Article 207 of the LOSC are clarified and the content of the monitoring, assessment, and surveillance requirements of MPLA at the regional level are summarised. These are presented by way of answering the three research questions above respectively. Lastly, unfinished business related to Article 207 of the LOSC, which was not addressed in this thesis, is discussed.

### **II. Methodological complexity of the rule of treaty interpretation**

The rule of treaty interpretation set out in Articles 31 and 32 of the VCLT is employed as the legal method in this thesis to answer the abovementioned research questions with the aim of clarifying the content related to the regional aspects of the obligation to

prevent, reduce, and control MPLA under Article 207 of the LOSC. All the components required for the operation of treaty interpretation, ranging from the consideration, in good faith, of the ordinary meaning of the terms, context, object and purpose of the treaty are outlined in Chapter II. In addition, the rule of treaty interpretation requires the interpreter to take into account together with the context, the subsequent agreement, subsequent practice, and relevant rules of international law required by Article 31 (3) of the VCLT. Although it is widely accepted that Article 31 of the VCLT and these elements do not represent ‘a legal hierarchy of norms for the interpretation of treaties,’<sup>909</sup> two practical complications were acknowledged in this thesis; (i) the sequence of ingredients to be thrown into the crucible of treaty interpretation, and (ii) the differences between subsequent agreement and subsequent practice as set out in Article 31 (3) (a) and (b) of the VCLT.<sup>910</sup>

#### **i. Sequence of ingredients to be thrown into the crucible of treaty interpretation**

The first complication concerns the sequence of the ingredients to be thrown into the crucible of treaty interpretation. During this research, the question that arose was whether the operation of treaty interpretation should start by following the order in Article 31 of the VCLT or with the setting up of the background and context in which the interpretation operates. Unfortunately, the literature relating to the law of treaties, although it explains and comments on Article 31 of the VCLT, provides no guidance as to how to apply this provision in practice. Nothing can be found either from the jurisprudence of the relevant international judicial institutions.

The approach taken by this thesis was to begin by determining the potentially relevant rules of the international law applicable to protecting the marine environment from MPLA. These rules and principles of international law act as the background and context of the operation of the treaty interpretation. There were two reasons for taking this approach. Firstly, the operation of treaty interpretation is performed by an international lawyer, whose legal conscience is predicated on the international legal system. Although

---

<sup>909</sup> Draft Articles on the Law of Treaties with Commentaries, (n 44) 219 – 220; See also Aust, *Modern Treaty Law and Practice*, (n 42) 208.

<sup>910</sup> See, Chapter II, Section III.

it is not usually and expressly mentioned, the task of interpreting a treaty is not performed in a legal vacuum, but against the background of the international legal system with the aim of achieving a coherent and systemic integration of the treaty concerned into the international legal system. For this reason, it was necessary to firstly illustrate the potentially relevant rules of international law in order to act the background in which this interpretation would be made. Secondly, it was assumed that States rely on the customary international law or general principles of law for answers to questions about which the treaty is ambiguous and cannot provide a clear legal solution, and on the conclusion of the interpretation, they ‘do not intend to act inconsistently with generally recognised principles of international law.’<sup>911</sup> As a result, it is important for the interpreter to know the background and context of the interpretation and which potentially relevant rules of international law are relevant to guide the interpretation. This ensures that the interpretation will be a systemic fit to the international legal order and not result in a conflict of norms.

The approach taken by this research is not entirely novel. The distinctive part of this approach is that, instead of following the sequence set out in Article 31 of the VCLT, it starts from illustrating the background and setting up the context for the operation of the treaty interpretation. This allows the interpreter to have in mind through the interpretation what are the potentially relevant rules and principles of international law relating to the interpretation. Having set out the background and context for the interpretation, this approach, then, reverts to the first paragraph of Article 31 of the VCLT and its subsequent paragraphs to perform the task of treaty interpretation.

For these reasons, the potentially relevant rules of international law, which are believed to relate to protecting the marine environment from MPLA and are binding upon State Parties to the LOSC, are presented in Chapter III of this thesis. It is important to note that there is no definitive list of rules and principles of international law related to the protection of the marine environment. The rules and principles presented here are based on them being accepted by academia, practitioners, and international judicial institutions as relevant or influential to the way practitioners argue and judicial institutions entertain their cases. These include sustainable development, the prevention principle, the

---

<sup>911</sup> Fragmentation of International Law Conclusion, (n 119) paras. 17 – 19.

precautionary principle, the principle of common but differentiated responsibilities (CBDR), the polluter pays principle, obligation to cooperate, environmental impact assessment, and the obligations to notify, exchange information, and consult.<sup>912</sup> Apart from those customary rules and general principles, the general provisions of Part XII of the LOSC are also the relevant rules of international law in this context. These include the obligation among States bordering enclosed or semi-enclosed seas to cooperate on the matter relating to the protection of the marine environment,<sup>913</sup> the general obligation to protect and preserve the marine environment,<sup>914</sup> the obligations to prevent, reduce, and control marine pollution,<sup>915</sup> the obligation not to transfer damage or hazards or transform one type of pollution into another,<sup>916</sup> the obligation to cooperate at global and regional levels,<sup>917</sup> as well as those concerning technical assistance and monitoring and environmental assessments.<sup>918</sup>

**ii. Differences between subsequent agreement and subsequent practice as set out in Article 31 (3) (a) and (b) of the VCLT**

One of the issues faced in this thesis was that, although Article 31 of the VCLT represents a logical consequence of how the rule of treaty interpretation should be applied,<sup>919</sup> it provides no guidance on how to differentiate subsequent agreement from subsequent practice, as set out in Article 31 (3) (a) – (b). This makes it extremely difficult when interpreters take account of relevant documents like the Montreal Guidelines, Agenda 21, the GPA, or those adopted during the IGR, and need to classify them under these categories, and the ILC's Special Rapporteur acknowledges the fact that this distinction is not always clear-cut.<sup>920</sup> Unfortunately, no literature provides an answer or guidance on how to distinguish these in practice.

---

<sup>912</sup> See, Chapter III, Section II.

<sup>913</sup> The LOSC, (n 14) Article 123.

<sup>914</sup> *Ibid*, Article 192.

<sup>915</sup> *Ibid*, Articles 193 – 194.

<sup>916</sup> *Ibid*, Article 195.

<sup>917</sup> *Ibid*, Articles 197 – 200.

<sup>918</sup> *Ibid*, Articles 202 – 206.

<sup>919</sup> Draft Articles on the Law of Treaties with Commentaries, (n 44) 219 – 220.

<sup>920</sup> ILC, 'Report of the International Law Commission on the Works of its 65<sup>th</sup> session', (n 184) 32 at (7).

As mentioned in Chapter II, since the subsequent agreement under Article 31 (3) (a) has to be between all the parties to the treaty, it was very difficult to treat the documents analysed in this thesis as belonging to this category. Although the ILC's Special Rapporteur notes that the distinction does not mean 'to denote a difference concerning their possible legal effect',<sup>921</sup> the jurisprudence of the ICJ appears to rank the subsequent agreement over the subsequent practice of States.<sup>922</sup> The approach taken in this thesis is to treat the documents analysed in this research as belonging to subsequent practice in the application of the treaty, thereby establishing the agreement of the parties regarding its interpretation under Article 31 (3) (b) of the VCLT, since subsequent practice is subject to a less onerous test for the categorisation. The implication from this is that it might theoretically demote the significance of some documents from being qualified as 'subsequent agreement' within the meaning of Article 31 (3) (1) of the VCLT. However, as noted by the ILC Special Rapporteur, the distinction is not intended to denote the different legal effect. Hence, treating the documents this way allows for the wider evidence to be analysed, while the result of the interpretation can still be maintained.

Ultimately, when it is argued that all the analysed documents do not fall within Article 31 (3) (a) – (b) of the VCLT, which means that they cannot be treated as subsequent agreements or practice within the meaning of this provision, they are treated as part of the supplementary means of interpretation under Article 32 of the VCLT in this thesis.

### III. Outcomes of the interpretation of Article 207 of the LOSC

The state of the art in international law related to protecting the marine environment from MPLA is frustratingly limited. Article 207 of the LOSC has long been criticised as lacking in content and failing to provide substantive environmental standards for States to implement and fulfil the duty under this provision.<sup>923</sup> This research responds to that criticism by filling the gap in the literature and formulating the substance of Article 207 of the LOSC through the lens of treaty interpretation. In order to clarify the ambiguities, the entire provision was taken into account to provide the basis for further examination

---

<sup>921</sup> Special Rapporteur Georg Nolte 1<sup>st</sup> Report, (n 160) 29 at para. 70.

<sup>922</sup> *Kasikili/Sedudu (Namibia/Botswana) Case*, (n 54) para. 63; See also Fox, 'Article 31 (3) (a) and (b) of the Vienna Convention and the *Kasikili/Sedudu Island Case*', (n 95) 64.

<sup>923</sup> See Chapters I and III.

of the regional aspect of the obligation under Article 207 of the LOSC. Then, it specifically focused on the procedural aspects at the regional level of the provision and the particular attention was paid on monitoring, assessment, and surveillance of MPLA. The findings of this research are that several terms of Article 207 of the LOSC can be clarified by the ordinary meaning, whereas it is not possible to clarify some terms by the mere ordinary meaning. The remaining ambiguities surrounding the provision have to be further clarified by the examination of the subsequent practice of States at the global and regional levels. The outcomes of the interpretation are summarised below and they are presented according to the research questions.

**i. What do the ordinary meanings of the terms of Article 207 of the LOSC reveal in relation to the obligation in Article 207 of the LOSC at the regional level?**

Having examined the ordinary meanings of the terms of Article 207 of the LOSC in its context and in the light of the object and purpose of the Convention, it can be concluded that there are some parts of the provision that the interpretation according to the ordinary meanings can yield conclusive results. However, some parts remain unsettled and need further examination into the subsequent practice of States at both the global and regional levels. This will be discussed in turn.

**(i) Parts of the provision that the ordinary meanings of the terms yield conclusive interpretation**

The ordinary meaning of Article 207 of the LOSC enables us to better understand the obligation to protect and preserve the marine environment. The ordinary meaning of the provision points out that Article 207 has not only national, but also regional and global aspects as well.<sup>924</sup> In addition, to implement the obligation to adopt laws and regulations to prevent, reduce, and control MPLA, States can employ several substantive and procedural legal techniques and measures to achieve the prevention, reduce, and control MPLA. This includes, *inter alia*, (iii) product standard; (iv) environmental quality standard; (v) remedial and restorative measure; and (vi) precautionary measure, (vii)

---

<sup>924</sup> See, Chapter IV, Section IV, i.

notification, information exchange and consultation, (vii) an environmental impact assessment (EIA), and (viii) monitoring, assessment, and surveillance of MPLA. In addition, States are required to take into account ‘internationally agreed rules, standards, and recommended practices and procedures’ relating to the protection of the marine environment from MPLA. The ordinary meaning of the terms encompasses both binding and non-binding instruments, customary international law, and general principles of international law relating to the protection of the marine environment.<sup>925</sup> As shown in Chapter V, States have recognised the Basel, CBD, PIC, and POPs Conventions as the multilateral environmental agreements directly related to protecting the marine environment from MPLA. The recognition of these international agreements enables this research to foresee and consider the Minamata Convention as one of the relevant international agreements in the context of MPLA.<sup>926</sup> However, these instruments do not put any additional obligation on the LOSC States Parties, unless the LOSC States are parties to them. This is because Article 207 requires States to merely ‘take into account’ these internationally agreed rules, standards, and recommended practices and procedures. States can deviate from these instruments when dealing with MPLA. These international instruments coexist with the LOSC and are part of the broader international practice related to the protection of the marine environment from MPLA. However, adherence to these instruments can demonstrate that States have exercised due diligence when adopting laws and regulations to prevent, reduce, and control MPLA.

In addition to the obligation to adopt laws and regulations to prevent, reduce, and control MPLA, States may employ other non-legal measures to achieve the same purpose such as policy, economic, financial, scientific and/or technological measures.<sup>927</sup> Some of which are discussed as part of the implementing measures of Article 207 of the LOSC.<sup>928</sup> The ordinary meaning of Article 207 of the LOSC also clarifies that States has a duty to try to harmonise their policies regarding the protection of the marine environment from MPLA, however they are not required to achieve the successful harmonisation.<sup>929</sup> The same holds true for the duty to establish the global and regional rules and standards

---

<sup>925</sup> See, Chapter IV, Section IV, i (ii).

<sup>926</sup> See, Chapter V, Section II.

<sup>927</sup> See, Chapter IV, Section IV, ii.

<sup>928</sup> See, Chapter V, Section III, iv.

<sup>929</sup> See, Chapter IV, Section IV, iii

relating to the prevention, reduction, and control of MPLA where States merely required to attempt to establish such rules and standard and they do not oblige to achieve the establishment of such rules and standards.<sup>930</sup> For the establishment of the global and regional rules and standards under Article 207 (4) of the LOSC, the ordinary meanings of the terms can clarify the term ‘taking into account the characteristics regional features, the economic capacity of developing countries and their need for economic development’. According to the ordinary meanings, the term ‘characteristic regional features’ is a typical or notable quality that represents an important part of a particular region. ‘Economic capacity’ is related to trade, industry, and money, while the ‘need for economic development’ refers to growth in terms of trade, industry, and money to provide citizens with a satisfactory life.<sup>931</sup> The term is based on the notion of common but differentiated responsibilities.<sup>932</sup> It enables developing states to have differential and perhaps preferential treatment in fulfilling those globally-agreed rules and standards as well as their obligation under this provision. As discussed in Chapter IV, the list of developing States can be drawn from the classification of the UN World Economic Situation and Prospects.<sup>933</sup>

Moreover, the ordinary meaning of Article 207 (4) allows us to understand that there can be more than one competent international organisations dealing with MPLA. In this case, they must be ones that have the expertise in dealing MPLA and are entrusted by States to do so. As discussed in Chapter IV and V, apart from the UNEP Environment, the COP and/or MOP of the above-mentioned multilateral environmental agreements can be recognised as competent international organisations, and alternatively diplomatic conferences where globally-agreed rules and standards are adopted.<sup>934</sup> For the diplomatic conference, the one that led to the adoption of the GPA and its intergovernmental review meeting for the implementation process of the GPA are also considered to be ‘competent’ diplomatic conferences in this context.<sup>935</sup>

---

<sup>930</sup> See, Chapter IV, Section IV, iv.

<sup>931</sup> See, Chapter IV, Section IV, iv.

<sup>932</sup> See Chapter III, Section II, iv.

<sup>933</sup> See Chapter IV, Section IV, iv.

<sup>934</sup> See Chapters IV, Section IV, iv and V, Section II.

<sup>935</sup> See, Chapter IV, Section IV, iv.

Finally, it can be understood from the ordinary meaning of Article 207 (5) of the LOSC that not all MPLA can be totally eliminated.<sup>936</sup> The provision means that when dealing with toxic, harmful or noxious substance released into the marine environment, both legal and non-legal measures adopted to prevent, reduce, and control MPLA must try to reduce these substances in its entirety or, if not possible, must reduce the greatest possible amount of the substances.<sup>937</sup> As discussed in Chapter V, the measures dealing different MPLA source-categories are developed at the different levels depending on circumstances and they are not designed to totally all MPLA source-categories.<sup>938</sup>

**(ii) Parts of the provision that the ordinary meanings of the terms do not yield conclusive result**

There are parts of Article 207 of the LOSC that the ordinary meanings of the terms cannot yield a conclusive interpretation and requires further examination of the subsequent practice of States relating to the protection of the marine environment from MPLA. The remaining ambiguities can be summarised below.

Although we know that Article 207 of the LOSC has more than the national dimension, it is ambiguous how the obligation to adopt laws and regulations to prevent, reduce, and control MPLA should be interpreted. From the ordinary meaning, no conclusive result can be drawn as there are at least two possible interpretations. These are (i) a separate interpretation, and (ii) a single-combined interpretation of Article 207 (1) of the LOSC.<sup>939</sup> The separate interpretation means the Article 207 (1) of the LOSC contain the obligation to adopt laws and regulations to prevent, the obligation to adopt laws and regulations to reduce, and the obligation to adopt laws and regulations to control MPLA and they are read and implemented in isolation from each other.<sup>940</sup> As for the single-combined interpretation of Article 207 of the LOSC, this means that Article 207 of the LOSC is read as a single obligation to adopt laws and regulations to prevent, reduce, and control MPLA. The analysis of the ordinary meanings of the terms ‘prevent’, ‘reduce’,

---

<sup>936</sup> See, Chapter IV, Section IV, v.

<sup>937</sup> Ibid.

<sup>938</sup> See, Chapter V, Section III.

<sup>939</sup> See, Chapter IV.

<sup>940</sup> See, Chapter IV, Section IV, i (ii).

and ‘control’ show that they can overlap with one another, produce a combined effect, and influence the design of the laws and regulations adopted under Article 207. For example, it can result in laws, regulations, and/or measures having a preventive and reducing effect; a preventive and controlling effect; a reducing and controlling effect; or a preventive, reducing and controlling effect.<sup>941</sup>

As summarised above, although the ordinary meanings of the terms of Article 207 of the LOSC can clarify some ambiguities surrounding the provision, it does not clarify how the obligation to adopt laws and regulations to prevent, reduce, and control MPLA should be implemented. In the situation where more than one possible interpretation and the ordinary meaning of the treaty’s terms does not yield any conclusive result, the rule of treaty interpretation instructs a further examination on the subsequent practice of States (i) to enable the interpreter to choose an appropriate interpretation; and (ii) to see how this obligation is implemented in practice at the regional level. These can be seen in the summaries of the answers to the other two research questions below.

**ii. What does the subsequent practice of States at the global level reveal in relation to the obligation of Article 207 of the LOSC?**

As discussed above, the analysis of Article 207 (1) of the LOSC demonstrates two possible interpretations regarding the obligation to adopt laws and regulations to prevent, reduce, and control MPLA. In answering this question, the thesis picks up from that outcome and further investigates the subsequent practice at the global level. It is intended to see what the subsequent practice of States at the global level reveal as to the obligation to prevent, reduce, and control MPLA at the regional level. This is examined in Chapter V of the thesis and the outcome is summarised below.

There are two main observations can be made from the examination of the subsequent practice of States at the global level relating to the prevention, reduction, and control MPLA. The first observation is that States have interpreted and treated the obligation to adopt laws and regulations to prevent, reduce, and control MPLA under Article 207 (1) of the LOSC as a single-combined obligation. This can be seen from the GPA where the

---

<sup>941</sup> See Chapter IV, Section IV, i (ii).

measures agreed and adopted by States to deal with MPLA can implement these obligations complementarily. In addition, no express differentiation can be found on which measure is adopted with the intention to implement a particular obligation. This enables one to conclude that Article 207 (1) of the LOSC has been interpreted collectively as a single combined obligation.<sup>942</sup>

Another observation that can be drawn from the subsequent practice of States at the global level concerns the regional aspects of this obligation. When it comes to the obligation to prevent, reduce, and control MPLA at the regional level, the subsequent practice of States at the global level shows that four key components form part of the regional cooperation to prevent, reduce, and control MPLA. These are (i) the adoption of the RPA; (ii) monitoring, assessment, and surveillance of MPLA; (iii) notification, consultation, and exchange of information regarding MPLA; and (iv) other cooperation.<sup>943</sup> However, it should be acknowledged that the subsequent practice of States at the global level reveals different levels of development in relation to each element of this regional cooperation and each element is summarised below.

*The adoption of the RPA*, this element is obvious in the recommendation provided by the GPA.<sup>944</sup> Under the GPA, each RPA should have both substantive and institutional components and be underpinned by the IMCZM concept. States should follow the IMCZM version developed by the CBD. RPAs act as a framework for dealing with MPLA and harmonising the environmental standards of States in each region. In preparing the RPA, it is recommended that two MPLA source-categories are managed separately. The GPA recommends the adoption of the RPA without any detailed measures, whereas, for the second group, it recommends adopting the RPA with detailed measures and forms of implementation.<sup>945</sup> As for the second group, the GPA provides some content of the RPA, such as the adoption of targets and timetables for the elimination of MPLA, the use of BAT, BEP, and integrated pollution prevention and control, as well as other physical measures.<sup>946</sup>

---

<sup>942</sup> See, Chapter V.

<sup>943</sup> See, Chapter V, Section III, i – iv.

<sup>944</sup> Chapter V, Section III, i

<sup>945</sup> *Ibid.* This source-category group includes sewage, radioactive substances, heavy metals, marine litter and sediment mobilization.

<sup>946</sup> *Ibid.* This source-category group includes POPs, oil (hydrocarbons), nutrients, and PADH

*Monitoring, assessment, and surveillance of MPLA*, the GPA recommends this set of measures as part of the methodology and of the objective of regional cooperation concerning MPLA. They should be conducted to obtain the information on (i) the nature and the severity of the problem, (ii) contaminants, (iii) the physical alteration and destruction of habitats in the concerned areas, and (iv) the sources of degradation.<sup>947</sup> For monitoring of MPLA, however, the GPA does not recommend monitoring all specific source-categories; therefore, it can be categorised into two groups, the first of which includes POPs, heavy metals, radioactive substances, oil (hydrocarbon), and nutrients for which the GPA recommends the adoption of a monitoring measure based on internationally or regionally-agreed quality control and quality assurance procedures. The GPA does not recommend any monitoring measure for the other group of MPLA source-categories, namely, sewage, marine litter, sediment mobilisation, and PADH.<sup>948</sup> In relation to an assessment of MPLA, the same categories for monitoring MPLA can be drawn on here, since the GPA only recommends an assessment measure for the same group for which it recommends a monitoring measure. For surveillance of MPLA, although the LOSC treats surveillance as part of the monitoring of pollution, nothing could be seen from the subsequent practice of States at the global level in relation to the surveillance of MPLA. The GPA does not recommend the use of surveillance either. Nothing conclusive can be drawn for the surveillance of MPLA.<sup>949</sup>

*Notification, consultation, and exchange of information regarding MPLA*, this set of measures is not clearly spelled out in Article 207 of the LOSC, but is permitted through the ordinary meaning of this provision together with Article 198 of the LOSC. The subsequent practice of States at the global level showed that how and under what circumstances notification should be implemented at the regional level is inconclusive.<sup>950</sup> The GPA does not expressly recommend notification or consultation as part of the regional cooperation, but they can be implied from the cooperation among stakeholders.<sup>951</sup> The content of these measures remain inconclusive.

---

<sup>947</sup> See The GPA, (n 31) Ch. 2

<sup>948</sup> See Chapter V, Section III, ii (i).

<sup>949</sup> See Chapter V, Section III, ii (iii).

<sup>950</sup> See Chapter V, Section III, iii (i).

<sup>951</sup> See Chapter V, Section III, iii (i) – (ii).

For the exchange of information about MPLA, similar to the preceding measures, it is not clearly specified in Article 207 of the LOSC, but it is encompassed when interpreting Article 207 together with the general provisions in Part XII of the LOSC. The subsequent practice of States confirmed this interpretation. The GPA requires information to be exchanged by means of the participation of States in CHM.<sup>952</sup> The CHM is ‘a referral system through which decision makers at the national and regional level are provided with access to current sources of information, practical experience and scientific and technical expertise relevant to developing and implementing strategies to deal with the impacts of land-based activities.’<sup>953</sup> It is established at the international level since it involves various international organisations and institutions dealing with different MPLA source-categories. In addition, being establishing at the international level, the CHM facilitates the inter-regional cooperation on the exchange of MPLA information. At the present, it is unfortunate that the CHM has not been properly developed due to the limited funding and is now currently substituted by the UNEP/GPA website.<sup>954</sup>

*Other cooperation*, it consists of two elements, namely, (i) a capacity-building programme and (ii) financial arrangements and support in the context of MPLA. These are supported by the concept of CBDR, as discussed in Chapter III, and the need to take account of characteristic regional features, the economic capacity of developing States and their need for economic development, as specified in Articles 203 and 207 (4) of the LOSC.

For the capacity-building programme, the subsequent practice of States at the global level especially the GPA shows that the allocation of technical assistance, as well as the utilisation of special agencies are recommended. The way in which a capacity-building programme should be conducted at the regional level is through mechanisms and cooperative action to mobilise experience and expertise in relation to the prevention and reduction of MPLA.<sup>955</sup> However, it was not clear from the subsequent practice of States how capacity-building programmes at the regional level have been built. Instead, the process of IGR showed that states entrust the UN Environment via the UNEP/GPA

---

<sup>952</sup> See Chapter V. Section III, iii (iii).

<sup>953</sup> The GPA, (n 31) para. 42.

<sup>954</sup> See Chapter V. Section III, iii (iii).

<sup>955</sup> The GPA, (n 31) para. 41.

Coordination Office to support States in relation to a capacity-building programme for the prevention, reduction, and control of MPLA at the regional level.<sup>956</sup>

For financial arrangements and support, although the allocation of financial assistance is the preferential entitlement provided to developing countries by Article 203 and recognised by Article 207 of the LOSC, the subsequent practice of States at the global level showed no utilisation of this entitlement. On the contrary, the GPA suggests that financial arrangements and support for both national and regional cooperation should come from national public and private sectors.<sup>957</sup> The GPA does not require developed countries to provide financial arrangements or support to developing or least-developed countries. The GEF remains the primary source of funding for the implementation of the GPA at the regional level.

In summary, the analysis of the subsequent practice of States at the global level showed that Article 207 of the LOSC is interpreted as a single combined obligation to protect the marine environment at the regional level. Four elements can be observed as the substance of the regional cooperation to prevent, reduce, and control MPLA and they differ as to their degree of development by States. These are namely, (i) the adoption of an RPA; (ii) the monitoring, surveillance, and assessment of MPLA; (iii) notification, consultation, and exchange of information about MPLA; and (iv) other cooperation.

**iii. What does the subsequent practice of States through RSPs reveal concerning monitoring, assessment, and surveillance of MPLA at the regional level?**

This question was answered in Chapter VI of the thesis. From the earlier question, the examination of the subsequent practice of States at the global level led to the outcome that Article 207 of the LOSC required States to take certain procedural steps at the regional level. This thesis picked up from that finding and decided to focus on the regional procedural aspect of Article 207 of the LOSC which is monitoring, assessment, and surveillance of MPLA. The reasons for this twofold. Firstly, the analysis of the subsequent practice of States at the global level brought this research to the consideration

---

<sup>956</sup> See Chapter V. Section II, iv (i).

<sup>957</sup> See Chapter V. Section II, iv (ii).

of the GPA. The GPA in turn led to the focus on the procedural regional aspect of the obligation. This is because the GPA sets monitoring, assessment, and surveillance of MPLA as an integral part of the GPA regional cooperation and are fundamental to the management of MPLA. They form the first step that informs the decision-making process and enables States to take further action to combat MPLA. As a result, monitoring, assessment, and surveillance of MPLA becomes the focus of this chapter and they were examined through the subsequent practice of States at the regional level. It is important to note that this does not create any additional obligation on Article 207 of LOSC, but it is an elaboration on the procedural aspect of Article 207 identified in the earlier chapter. Secondly, it is unfortunate that, due to the space and time constraints of this research, it was not possible to analyse the subsequent practice at the regional level for all the components identified above. This led to a choice to investigate the subsequent practices of States at the regional level for the monitoring, assessment, and surveillance of MPLA.

The key finding of this chapter was that the subsequent practice of States through RSPs revealed some common agreements regarding the monitoring and assessment of MPLA. However, no commonality was observed in relation to the surveillance of MPLA. In terms of the monitoring and assessment of MPLA, the subsequent practice of States revealed several aspects of how the monitoring and assessment of MPLA should be conducted. This illustrated the institutional, procedural and substantive aspects of these requirements and showed that they are indeed in line with what has been agreed by States in the GPA. These three aspects of the requirements were drawn from the commonalities existed in the RSPs instruments – Conventions, MPLA Protocols, and Action Plans. The details are summarised below.

*For the monitoring of MPLA*,<sup>958</sup> institutionally, seventeen of the eighteen RSPs contains this requirements in their governing instruments.<sup>959</sup> An MPLA monitoring programme at the regional level is required to be established and can be undertaken in one of two different ways based on States' regional agreement. It can be in the form of (i) a regional network of national research centres and institutions, or (ii) a complementary or joint programme for monitoring pollution. This widespread recognition of the need to have

---

<sup>958</sup> See Chapter VI, Section II.

<sup>959</sup> Ibid, Section II (i).

the monitoring programme allows the conclusion that the establishment of the MPLA monitoring programme is part of the monitoring requirement at the regional level.

Procedurally, the subsequent practice of States reveals two procedural commonalities at the regional level.<sup>960</sup> These are (i) prioritisation of the MPLA source-categories and (ii) an adoption of common methodologies and procedures for monitoring MPLA. For the former, thirteen of the eighteen RSPs require the prioritisation. However, it cannot be treated as part of the procedural aspect of the monitoring of MPLA mainly due to inconsistencies regarding the substances and/or activities prioritised and the reasons for the prioritisation, although prioritisation of MPLA source-categories is beneficial to the effective regional cooperation. For the adoption of common methodologies and procedures for monitoring MPLA, ten of the eighteen RSPs require this adoption. Although it is not possible to conclude that the requirement forms part of the procedural aspect of the monitoring of MPLA, the subsequent practice of States through RSPs shows an emerging practice of doing so. It can also be observed that the adoption of common monitoring methodologies and procedures is essential to ensure an effective regional cooperation to tackle MPLA.

Substantively,<sup>961</sup> it requires two sets of information to be monitored. These are (i) the state of the marine environment; and (ii) MPLA information. For the former, despite the different terminologies used to refer to the state of the marine environment, thirteen of the eighteen RSPs require this information to be monitored. The fact that thirteen RSPs require this is arguably sufficient to conclude that the monitoring of the state of the marine environment is the substantive part of the monitoring requirement at the regional level. In addition, the other five RSPs do not undermine this observation as they contain no directly contradictory evidence. In relation to MPLA information, two sets of information are essential to the monitoring of MPLA, that is, (i) substances and inputs of MPLA, and (ii) the level of MPLA. However, the subsequent practice of States through RSPs does not support the conclusion that the two sets of information are part of the substantive aspect of the monitoring requirement. Despite their importance to the management of MPLA at the regional level, only ten of the eighteen RSPs require the

---

<sup>960</sup> Ibid, Section II (ii).

<sup>961</sup> Ibid, Section II (iii).

monitoring of the information. Only six RSPs with the MPLA Protocols require expressly the monitoring of substances and inputs of MPLA and seven RSPs with MPLA Protocols require the monitoring of MPLA level. Therefore, it is not possible for this research to include these sets of information into the substantive aspect of the monitoring requirement.

*For the assessment of MPLA*,<sup>962</sup> the subsequent practice of States through the RSPs shows that, institutionally, the assessment of MPLA at the regional level shares the same institution as the monitoring programme. This can be observed from the exact same seventeen RSPs requiring the establishment of the monitoring programme.<sup>963</sup>

Procedurally,<sup>964</sup> States are required to cooperate and adopt two sets of guidelines for assessment purposes – (i) EIA guidelines for projects and activities that may cause significant harm to the marine environment and (ii) common procedures and methods of the assessment of MPLA. For the former, fourteen of the eighteen RSPs contains a requirement relating to an EIA. States are mainly required to cooperate and adopt the EIA guidelines for projects and activities that may cause significant harm to the marine environment of the RSPs' areas. It should be noted two distinct requirements come from the Baltic and Antarctic programmes though they both concern an EIA. At this stage, fourteen of the eighteen RSPs with this requirement are sufficient to include the adoption of EIA guidelines for projects and activities likely to cause significant harm to the marine environment as part of the procedural aspect of the assessment of MPLA. For the adoption of common procedures and methods of the assessment of MPLA, ten of the eighteen RSPs require the adoption of this set of guidelines. With the number of the RSPs having this requirement, it is not possible to draw any conclusion as to whether the adoption of the common assessment procedures and methods are part of the procedural aspect of the assessment requirement.

Substantively,<sup>965</sup> the assessment of MPLA analyses three sets of information to inform the decision-making process for the adoption of relevant measures to deal with MPLA.

---

<sup>962</sup> See Chapter VI, Section III.

<sup>963</sup> Ibid, Section III, (i).

<sup>964</sup> Ibid, Section III, (ii).

<sup>965</sup> Ibid, Section III, (iii).

These include information on (i) the state of the marine environment; (ii) levels of MPLA; and (iii) the effectiveness of the measures taken to deal with MPLA. The same conclusion as the monitoring requirement can be drawn for the assessment of the state of the marine environment. Regarding the level of MPLA, twelve of the eighteen RSPs require the conduct of this assessment. This provides an emerging practice at the regional level regarding the assessment of the level of MPLA, however it is not easy to say if the level of MPLA forms part of the substantive aspects or *vice versa*. Given such ambiguity, it should be noted that States in every RSP that are party to the LOSC are still bound to assess such information, since Article 200 of the LOSC requires such assessment. Lastly the effectiveness assessment, ten of the eighteen RSPs require the measures dealing with MPLA to be assessed. Just over half of the eighteen RSPs make it very difficult to determine whether, or not, this assessment forms part of the substance of the assessment of MPLA. Further States practice is required to develop this aspect of the assessment of MPLA at the regional level.

*For the surveillance of MPLA.* the subsequent practice of States at the regional level is insufficient to draw out any commonality. So far, States have not discussed how this measure should be implemented, although this requirement is mentioned in Article 204 of the LOSC.

In conclusion, the subsequent practice of States through RSPs shows the different degrees of practice in relation to the monitoring, assessment, and surveillance of MPLA. For monitoring and assessment, it can be said that the establishment of the regional MPLA monitoring and assessment programme is required as part of the obligation to prevent, reduce and control MPLA at the regional level. However, divergent practice on the procedural aspect of the monitoring requirement cannot yield any conclusive result, although prioritisation of MPLA source-categories and the adoption of common monitoring methodologies and procedures are essential to the effective management of MPLA. For the procedural aspect of the MPLA assessment, the adoption of EIA guidelines is required as part of the regional cooperation on this matter. However, such conclusion cannot be drawn for the adoption of common procedures and methods for assessing MPLA. Substantively, the monitoring and assessment of the state of the marine environment is arguably required as part of the substantive aspect of Article 207 of the LOSC. However, the same conclusion cannot be reached for the monitoring and

assessment of substances, input, level of MPLA as well as the effectiveness assessment of the measures taken to deal with MPLA.

#### **IV. Unfinished business in relation to Article 207 of the LOSC**

There is some unfinished business related to the interpretation of Article 207 of the LOSC that should be noted. This entails (i) a further analysis of the subsequent practice of States at the regional level for the other three elements; and (ii) an unexplored relationship between Article 207 of the LOSC and those relevant international agreements.

Firstly, although the four components of the regional cooperation were able to be identified in this thesis, the limited space and time made it impossible to address other aspects of the obligation to prevent, reduce, and control MPLA at the regional level, i.e. the adoption of a plan or programme of action, and the notification, consultation, exchange of information and other cooperation at the regional level. To complete the interpretation of the regional aspect of Article 207 of the LOSC, further investigation of the subsequent practice of States at the regional level is required to draw out the substance of these components. This is left for a subsequent research project.

Secondly, for the first time in this thesis, it has been possible to identify the ‘internationally agreed rules, standards, and recommended practices and procedures’ under Article 207 of the LOSC. This involved certain multilateral environmental agreements, including the CBD, Basel, PIC, POPs and Minamata Convention.<sup>966</sup> The relationship between those multilateral environmental agreements and the LOSC, however, remains unexplored in this thesis and has not been examined in the literature. Although the LOSC already provides some clues about its relationship with other international agreements and this can be found in Article 311, further study is needed to address how and to what extent these agreements can influence the way in which States implement and fulfil their obligations under the LOSC. An in-depth analysis is required for this purpose in order to clarify this relationship and particularly to clarify the legal effect of the term ‘taking into account’ internationally agreed rules, standards, and

---

<sup>966</sup> See Chapter IV, Section IV, i (ii) and Chapter V, Section II, i – ii.

recommended practices and procedures. Unfortunately, this was not within the remit of this thesis and so it too is left for a further research project.

## BIBLIOGRAPHY

### Book and Articles

Association IL, *First Report of the ILA Study Group on Due Diligence in International Law*, 2014)

Aust A, *Modern Treaty Law and Practice* (3rd edn, CUP 2013)

Barnes DK, 'Remote Islands Reveal Rapid Rise of Southern Hemisphere Sea Debris' (2005) 5 *Scientific World Journal* 915

Bell S, McGillivray D and Pedersen OW, *Environmental Law* (8th edn edn, OUP 2013)

Berman F, 'Treaty "Interpretation" in a Judicial Context' (2004) 29 *Yale Journal of International Law*

Beyerlin U, 'Different Types of Norms in International Environmental Law: Policies, Rules, and Principles' in Bodansky D and others (eds), *Oxford Handbook of International Environmental Law* (Oxford Handbook of International Environmental Law, OUP 2007)

Beyerlin U and Marauhn T, *International Environmental Law* (Hart Publishing 2011)

Birnie P, Boyle AE and Redgwell C, *International Law and the Environment* (3rd edn, OUP 2009)

Bodansky D, 'Deconstructing the Precautionary Principle' in Caron DD and Scheiber HN (eds), *Bringing New Law to Ocean Waters* (Bringing New Law to Ocean Waters, Brill 2004)

Boisson de Chazournes L, 'Precaution in International Law: Reflection on its Composite Nature' in Ndiaye TM and Wolfrum R (eds), *Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas A Mensah* (Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas A Mensah, Martinus Nijhoff 2007)

Boyle AE, 'Marine Pollution under the Law of the Sea Convention' (1985) 79 *American Journal of International Law* 347

Boyle AE, 'Land-based Sources of Marine Pollution' (1992) 16 *Marine Policy*

Boyle AE, 'Some Reflection on the Relationship of Treaties and Soft Law' (1999) 48 *International & Comparative Law Quarterly*

Brunnée J, 'International Environmental Law and Community Interests: Procedural Aspects' in Benvenisti E and Nolte G (eds), *Community Obligations in International Law* (Community Obligations in International Law, 2017 (Forthcoming))

- Cameron J and Abouchar J, 'The Status of the Precautionary Principle in International Law' in Freestone D and Hey E (eds), *The Precautionary Principle and International Law: The Challenge of Implementation* (The Precautionary Principle and International Law: The Challenge of Implementation, Kluwer International 1996)
- Churchill RR and Ulfstein G, 'Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A Little-Noticed Phenomenon in International Law' (2000) 94 *American Journal of International Law*
- Collin PH, *Dictionary of Environment & Ecology* (5 edn, Bloomsbury 2004)
- Craik N, *The International Law of Environmental Impact Assessment* (Cambridge Studies in International and Comparative Law, CUP 2008)
- Craik N, 'Principle 17: Environmental Impact Assessment' in Viñuales JE (ed) *Rio Declaration on Environment and Development: A Commentary* (Rio Declaration on Environment and Development: A Commentary, OUP 2015)
- Crawford J, 'A Consensualist Interpretation of Article 31(3) of the Vienna Convention on the Law of Treaties' in Nolte G (ed) *Treaties and Subsequent Practices* (Treaties and Subsequent Practices, OUP 2013)
- Crawford J, *State Responsibility: The General Part* (CUP 2013)
- Crawford J, *Brownlie's Principles of Public International Law* (8th edn, OUP 2012)
- Crema L, 'Subsequent Agreements and Subsequent Practice within and outside the Vienna Convention' in Nolte G (ed) *Treaties and Subsequent Practices* (Treaties and Subsequent Practices, OUP 2013)
- Cullet P, 'Common but Differentiated Responsibilities' in Fitzmaurice M and others (eds), *Research Handbook on International Environmental Law* (Research Handbook on International Environmental Law, Edward Elgar 2010)
- Cullet P, 'Principle 7 Common but Differentiated Responsibilities' in Viñuales JE (ed) *The Rio Declaration on Environment and Development: A Commentary* (The Rio Declaration on Environment and Development: A Commentary, OUP 2015)
- Dahl AL, 'Land-based Pollution and Integrated Coastal Management' (1993) 17 *Marine Policy* 561
- De Sadeleer N, *Environmental Principles: From Political Slogans to Legal Rules* (OUP 2002)
- De Sadeleer N, 'The Polluter-Pays Principle in EU Law - Bold Case Law and Poor Harmonisation' in Backer IL and others (eds), *Pro Natura: festschrift to Hans Christian Bugge* (Pro Natura: festschrift to Hans Christian Bugge, Universitetsforl 2012)

- Duvic-Paoli L-A and Viñuales JE, 'Principle 2 *Prevention*' in Viñuales JE (ed) *The Rio Declaration on Environment and Development: A Commentary* (The Rio Declaration on Environment and Development: A Commentary, OUP 2015)
- Economides C, 'Content of the Obligation: Obligations of Means and Obligations of Result' in Crawford J and others (eds), *The Law of International Responsibility* (The Law of International Responsibility, OUP 2010)
- Emmott N and Haigh N, 'Integrated Pollution Prevention and Control: UK and EC Approaches and Possible Next Steps' (1996) 8 *Journal of Environmental Law*
- Forst MF, 'The Convergence between Integrated Coastal Zone Management and the Ecosystem Approach' (2009) 52 *Ocean & Coastal Management* 294
- Fox H, 'Article 31 (3) (a) and (b) of the Vienna Convention and the *Kasikili/Sedudu Island Case*' in Merkouris P and others (eds), *Treaty Interpretation and the Vienna Convention on the Law of Treaties: 30 Years On* (Treaty Interpretation and the Vienna Convention on the Law of Treaties: 30 Years On, Martinus Nijhoff 2010)
- Francioni F, 'Equity in International Law' (2013) *Max Planck Encyclopedia of Public International Law*
- Freestone D, 'Caution or Precaution: "A Rose by Any Other Name..."' (2000) 10 *Yearbook of International Environmental Law* 25
- Freestone D and Hey E, 'Origin and Development of the Precautionary Principle' in Freestone D and Hey E (eds), *The Precautionary Principle and International Law: The Challenge of Implementation* (The Precautionary Principle and International Law: The Challenge of Implementation, Kluwer International 1996)
- French D, 'Developing States and International Environmental Law: The Importance of Differentiated Responsibilities' (2000) 49 *International and Comparative Law Quarterly*
- French D, 'Treaty Interpretation And The Incorporation Of Extraneous Legal Rules' (2006) 55 *International & Comparative Law Quarterly* 281
- Gaines SE, 'The Polluter-Pays Principle: From Economic Equity to Environmental Ethos' (1991) 26 *Texas International Law Journal*
- Gardiner R, 'Treaties and Treaty Materials: Role, Relevance and Accessibility' (1997) 46 *International & Comparative Law Quarterly* 643
- Gardiner R, *Treaty Interpretation* (OUP 2008)
- Gardiner R, 'The Vienna Convention Rules on Treaty Interpretation' in Hollis DB (ed) *The Oxford Guide to Treaties* (The Oxford Guide to Treaties, OUP 2014)

- Gavouneli M, 'Protection Standards for the Marine Environment: Updating Part XII of the Law of the Sea Convention?' <<https://ssrn.com/abstract=3073263>>
- GESAMP, *Protecting the oceans from land-based activities - Land-based sources and activities affecting the quality and uses of the marine, coastal and associated freshwater environment* (GESAMP Studies & Reports, 2001)
- GESAMP, *Pollution in the Open Oceans: A Review of Assessments and Related Studies* (Reports and Studies GESAMP No 79, 2009)
- Handl G, *International Environmental Law* (Regional Courses in International Law: Study Material Part X, Codification Division of the United Nations Office of Legal Affairs 2013)
- Harrison J, *Making the Law of the Sea* (CUP 2011)
- Hassan D, *Protecting the Marine Environment from Land-based Sources of Pollution* (Ashgate 2006)
- Hassler B, Boström M and Grönholm S, 'Towards an Ecosystem Approach to Management in Regional Marine Governance? The Baltic Sea Context' (2013) 15 *Journal of Environmental Policy & Planning*
- Hey E, 'Common but Differentiated Responsibilities' (2011) *Max Planck Encyclopedia of Public International Law*
- Hey E, *Advanced Introduction to International Environmental Law* (Edward Elgar 2016)
- Higgins R, 'A Babel of Judicial Voices? Ruminations from the Bench' (2006) 55 *International & Comparative Law Quarterly* 791
- Higgins R, 'Some Observation on the Inter-Temporal Rule in International Law' *Themes and Theories* (Themes and Theories, OUP 2009)
- Holder J, *Environmental Assessment* (OUP 2004)
- Holling C, *Adaptive Environmental Assessment and Management* (John Wiley & Son 1978)
- Howell EA and others, 'On North Pacific Circulation and Associated Marine Debris Concentration' (2012) 65 *Marine Pollution Bulletin*
- Karkkainen BC, 'Adaptive Ecosystem Management and Regulatory Penalty Defaults: Toward a Bounded Pragmatism' (2002 - 2003) 87 *Minnesota Law Review*
- Kayano M, 'The Significance of Procedural Obligations in International Environmental Law: Sovereignty and International Co-operation' (2011) 54 *Japaneses Yearbook of International Law*

- Kenchington R and Crawford D, 'On the Meaning of Integration in Coastal Zone Management' (1993) 21 *Ocean & Coastal Management* 109
- Kirk EA, 'The 1996 Protocol to the London Dumping Convention and the Brent Spar' (1997) 46 *International & Comparative Law Quarterly* 957
- Kirk EA, 'Marine Governance, Adaptation, and Legitimacy' (2011) 22 *Yearbook of International Environmental Law*
- Kirk EA, 'The Ecosystem Approach and the Search for An Objective and Content for the Concept of Holistic Ocean Governance' (2015) 46 *Ocean Development & International Law* 33
- Kirk EA and Silfverberg HM, 'Harmonisation in the Baltic Sea Region' (2006) 21 *International Journal of Marine and Coastal Law* 235
- Kravchenko S, Chowdhury TM and Hossain Bhuiyan J, 'Principles of International Environmental Law' in Alam S and others (eds), *Routledge Handbook of International Environmental Law* (Routledge Handbook of International Environmental Law, Routledge 2014)
- Kummer K, *International Management of Hazardous Wastes: The Basel Convention and Related Legal Rules* (OUP 1995)
- Larson ET, 'Why Environmental Liability Regimes in the United States, the European Community, and Japan Have Grown Synonymous With the Polluter Pays Principle' (2005) 38 *Vanderbilt Journal of Transnational Law*
- Lavers JL and Bond AL, 'Exceptional and Rapid Accumulation of Anthropogenic Debris on One of the World's Most Remote and Pristine Islands' (2017) May Proceeding of the National Academy of Science of the United States of America
- Linderfalk U, 'Who Are 'The Parties'? Article 31, Paragraph 3(C) of The 1969 Vienna Convention and the 'Principle of Systemic Integration' Revisited' (2008) 55 *Netherlands International Law Review* 343
- Linderfalk U, *On the Interpretation of Treaties: The Modern International Law as Expressed in the 1969 Vienna Convention on the Law of Treaties* (Springer 2009)
- Lindhout PE and Van den Broek B, 'The Polluter Pay Principle: Guidelines for Cost Recovery and Burden Sharing in the Case Law of the European Court of Justice' (2014) 10 *Utrecht Law Review*
- Low V, 'The Role of Equity in International Law' (1988) 12 *Australian Yearbook of International Law*

- Lowe V, 'Sustainable Development and Unsustainable Arguments' in Boyle AE and Freestone D (eds), *International Law and Sustainable Development* (International Law and Sustainable Development, OUP 1999)
- Maggio G, 'Inter/intra-generational Equity: Current Applications under International Law for Promoting the Sustainable Development of Natural Resources' (1997) 4 Buffalo Environmental Law Journal
- McGrady B, 'Fragmentation of International Law or "Systemic Integration" of Treaty Regimes: EC - Biotech Products and the Proper Interpretation of Article 31(3)(c) of the Vienna Convention on the Law of Treaties' (2008) 42 Journal of World Trade Law
- McIntyre O, 'The Preceduralisation and Growing Maturity of International Water Law' (2010) 22 Journal of Environmental Law 475
- McIntyre O and Mosedale T, 'The Precautionary Principle as a Norm of Customary International Law' (1997) 9 Journal of Environmental Law 221
- McLachlan C, 'The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention' (2005) 54 International & Comparative Law Quarterly 279
- Mensah T, 'The International Legal Regime for the Protection and Preservation of the Marine Environment from Land-based Sources of Pollution' in Boyle AE and Freestone D (eds), *International Law and Sustainable Development* (International Law and Sustainable Development, OUP 1999)
- Merkouris P, 'Article 31(3)(c) of the VCLT and the Principle of Systemic Integration' (University of London 2010)
- Moore CJ, 'Trash Revisited' Natural History Magazine <<http://www.naturalhistorymag.com/features/172720/trash-revisited>> accessed 5 July 2014
- Nash JR, 'Too Much Market? Conflict Between Tradable Pollution Allowances and the "Polluter Pays" Principle' (2000) 24 Harvard Environmental Law Review
- Nations U, *World Economic Situation and Prospects 2017* (2017)
- Nollkaemper A, 'Law of the Sea: Marine Pollution from Land-based sources: Towards a global approach' (1992) 24 Marine Pollution Bulletin
- Nordquist M, Rosenne S and Yankov A, *United Nations Convention on the Law of the Sea 1982 A Commentary*, vol IV (Martinus Nijhoff Publishers 1991)
- Okowa PN, *State Responsibility for Transboundary Air Pollution in International Law* (OUP 2000)

- Oxman BH, 'The South China Sea Arbitration Award' (2017) 24 *The University of Miami International and Comparative Law Review*
- Palmeter D and C MP, 'The WTO Legal System: Sources of Law' (1998) 92 *American Journal of International Law* 398
- Paradell-Trius L, 'Principle of International Environmental Law: an Overview' (2000) 9 *Review of European Community & International Environmental Law*
- Pearson CS, 'Testing the System: GATT + PPP = ?' (1994) 27 *Cornell International Law Journal* 553
- Plakokefalos I, 'Prevention Obligations in International Environmental Law' (2012) 23 *Yearbook of International Environmental Law* 3
- Pyhälä M, 'HELCOM Baltic Sea Action Plan: An Ecosystem Approach to the Management of Human Activities' in Reckermann M and others (eds), *Climate Impacts on the Baltic Sea: From Science to Policy* (Climate Impacts on the Baltic Sea: From Science to Policy, Springer 2012)
- Qing-Nan M, *Land-based Marine Pollution* (Graham & Trotman / Martinus Nijhoff 1987)
- Rajamani L, *Differential Treatment in International Environmental Law* (OUP 2006)
- Redgwell C, 'From Permission to Prohibition: the 1982 Convention on the Law of the Sea and Protection of the Marine Environment' in Freestone D and others (eds), *The Law of the Sea; Progress and Prospects* (The Law of the Sea; Progress and Prospects, OUP 2006)
- Redgwell C, 'The Never Ending Story: The Role of GAIRS in UNCLOS Implementation in the Offshore Energy Sector' in Rayfuse R (ed) *Research Handbook on International Marine Environmental Law* (Research Handbook on International Marine Environmental Law, Edward Elgar 2015)
- Rieu-Clarke A, *International Law and Sustainable Development Lessons from the Law of International Watercourses* (IWA Publishing 2005)
- Rios LM and others, 'Quantitation of Persistent Organic Pollutants adsorbed on Plastic Debris from the North Pacific Gyres's "Eastern Garbage Patch"' (2010) 12 *Journal of Environmental Monitoring*
- Ruhl J, 'Taking Adaptive Management Seriously: A Case Study of the Endangered Species Act' (2004) 52 *University of Kansas Law Review*
- Sadeleer N, *Environmental Principles: From Political Slogans to Legal Rules* (OUP 2002)

- Sage-Fuller B, *The Precautionary Principle in Marine Environmental Law* (Routledge 2013)
- Sand PH, 'Principle 27: Cooperation in a Spirit of Global Partnership' in Viñuales JE (ed) *The Rio Declaration on Environment and Development: A Commentary* (The Rio Declaration on Environment and Development: A Commentary, OUP 2015)
- Sands P, 'International Law in the Field of Sustainable Development' (1994) 65 *British Yearbook of International Law*
- Sands P, 'Sustainable Development: Treaty, Custom, and the Cross-Fertilization of International Law' in Boyle AE and Freestone D (eds), *International Law and Sustainable Development* (International Law and Sustainable Development, OUP 1999)
- Sands P, 'Treaty, Custom, and Time: Interpretation/Application?' in Merkouris P, Elias, O.A., and Fitzmaurice, M. (ed) *Treaty Interpretation and the Vienna Convention on the Law of Treaties: 30 Years On* (Treaty Interpretation and the Vienna Convention on the Law of Treaties: 30 Years On, Martinus Nijhoff 2010)
- Sands P and Peel J, *Principles of international environmental law* (CUP 2012)
- Sbolci L, 'Supplementary Means of Interpretation' in Cannizzaro E (ed) *The Law of Treaties Beyond the Vienna Convention* (The Law of Treaties Beyond the Vienna Convention, OUP 2011)
- Schrijver N, *Sovereignty over Natural Resources* (CUP 1997)
- Schrijver N, 'Fifty Years Permanent Sovereignty over Natural Resources' in Bungenberg M and Hobe S (eds), *Permanent Sovereignty over Natural Resources* (Permanent Sovereignty over Natural Resources, Springer 2015)
- Scott KN, 'Integrated Oceans Management: A New Frontier in Marine Environmental Protection' in Rothwell DR and others (eds), *The Oxford Handbook of The Law of the Sea* (The Oxford Handbook of The Law of the Sea, OUP 2015)
- Soljan L, 'The General Obligation to Prevent Transboundary Harm and Its Relation to Four Key Environmental Principles' (1998) 3 *Austrian Review of International and European Law* 209
- Sorel J-M and Eveno VB, '1969 Vienna Convention: Article 31 General Rule of Interpretation' in Corten O and Klein P (eds), *The Vienna Convention on the Law of Treaties: A Commentary*, vol I (The Vienna Convention on the Law of Treaties: A Commentary, OUP 2011)

- Stephens T, 'The Collateral Damage from China's 'Great Wall of Sand' - Environmental Dimensions of the South China Sea Case' (2017) 34 *Australian Yearbook of International Law*
- Stevenson JR and Oxman BH, 'The Preparations for the Law of the Sea Conference' 68 *The American Journal of International Law* 1
- Stevenson JR and Oxman BH, 'The Preparations for the Law of the Sea Conference' (1974) 68 *American Journal of International Law*
- Stone CD, 'Common but Differentiated Responsibilities in International Law' (2004) 98 *American Journal of International Law*
- Tanaka Y, 'Regulation of Land-Based Marine Pollution in International Law: A Comparative Analysis Between Global and Regional Legal Frameworks' (2006) 66 *Heidelberg Journal of International Law*
- Tanaka Y, 'Principles of International Marine Environmental Law' in Rayfuse R (ed) *Research Handbook on International Marine Environmental Law* (Research Handbook on International Marine Environmental Law, Edward Elgar 2015)
- Tanaka Y, 'The Practice of Shared Responsibility in relation to Land-based Marine Pollution' SHARES Research Paper Series 100 <[www.sharesproject.nl](http://www.sharesproject.nl)>
- Thia-Eng C, 'Essential Elements of Integrated Coastal Zone Management' (1993) 21 *Ocean & Coastal Management* 81
- Trouwborst A, *Precautionary Rights and Duties of States* (Martinus Nijhoff Publishers 2006)
- Trouwborst A, 'The Precautionary Principle in General International Law: Combating the Babylonian Confusion' (2007) 16 *Review of European Community & International Environmental Law*
- Vallarta JL, 'Protection and Preservation of the Marine Environment and Marine Scientific Research at the Third United Nations Conference on the Law of the Sea The Law of the Sea - Where Now' (1983) 46 *Law & Contemporary Problems* 147
- Vallarta JL, 'Protection and Preservation of the Marine Environment and Marine Scientific Research at the Third United Nations Conference on the Law of the Sea The Law of the Sea - Where Now' (1983) 46 *Law & Contemp Probs* 147
- Van Dyke JM, 'The Evolution and International Acceptance of the Precautionary Principle' in Caron DD and Scheiber HN (eds), *Bringing New Law to Ocean Waters* (Bringing New Law to Ocean Waters, Martinus Nijhoff 2004)

- Van Dyke JM and Broder SP, 'International Agreements and Customary International Principles Providing Guidance for National and Regional Ocean Policies ' in Cicin-Sain B and others (eds), *Routledge Handbook of National and Regional Ocean Policies* (Routledge Handbook of National and Regional Ocean Policies, Routledge 2015)
- Van Reenen W, 'Rules of Reference in the New Convention on the Law of the Sea, in Particular in Connection with the Pollution of the Sea by Oil from Tankers' (1981) 12 *Netherlands Yearbook of International Law*
- VanderZwaag D and Powers A, 'The Protection of the Marine Environment from Land-based Pollution and Activities: Gauging the Tides of Global and Regional Governance' (2008) 23 *International Journal of Marine and Coastal Law* 423
- Villiger ME, *Commentary on the 1969 Vienna Convention on the Law of Treaties* (Martinus Nijhoff 2009)
- Villiger ME, 'The 1969 Vienna Convention on the Law of Treaties - 40 Years After' *Recueil des Cours de l'Académie de Droit International*, vol 344 (Recueil des Cours de l'Académie de Droit International, Martinus Nijhoff 2010)
- Voigt C, *Sustainable Development as a Principle of International Law* (Martinus Nijhoff Publishers 2009)
- Vukas B, *Generally Accepted International Rules and Standards* (The Law of the Sea Institute, William S. Richardson School of Law, University of Hawaii 1989)
- Walters C, *Adaptive Management of Renewable Resources* (Macmillan Publishing Company 1986)
- Weiss EB, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity* (Transnational Publishers 1989)
- Weiss EB, 'Environmental Equity: The Imperative for the Twenty-First Century' in Lang W (ed) *Sustainable Development and International Law* (Sustainable Development and International Law, Graham & Trotman/Martinus Nijhoff 1995)
- Wirth DA, 'Hazardous Substances and Activities' in Bodansky D and others (eds), *The Oxford Handbook of International Environmental Law* (The Oxford Handbook of International Environmental Law, OUP 2007)
- Wolfrum R, 'International Law of Cooperation' (2010) *Max Planck Encyclopedia of Public International Law*

## Websites

Arctic Monitoring and Assessment Programme, <<http://www.amap.no/about/the-amap-programme/monitoring-and-assessment>> accessed 7 August 2017

BBC, 'Remote island has 'world's worst' plastic rubbish density' <<http://www.bbc.co.uk/news/world-australia-39931042>> accessed 7 August 2017

Committee for Environmental Protection website, <[http://www.ats.aq/documents/recatt/Att605\\_e.pdf](http://www.ats.aq/documents/recatt/Att605_e.pdf)> accessed 7 August 2017

GEF Website <<http://www.thegef.org/topics/international-waters>> accessed 16 September 2016

GESAMP, 'The State of the Marine Environment', GESAMP Reports and Studies No. 39 (1990), <[http://www.gesamp.org/data/gesamp/files/media/Publications/Reports\\_and\\_studies\\_39/gallery\\_1283/object\\_1296\\_large.pdf](http://www.gesamp.org/data/gesamp/files/media/Publications/Reports_and_studies_39/gallery_1283/object_1296_large.pdf)> accessed 19 May 2017

GESAMP, 'Health of the Oceans', GESAMP Reports and Studies No. 15 (1982), <<http://www.gesamp.org/publications/publicationdisplaypages/rs15>> accessed 19 May 2017

OECD, 'Guidance on Integrated Pollution Prevention and Control' (1991) *Environmental Monograph*, <[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=OCDE/GD\(91\)86&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=OCDE/GD(91)86&docLanguage=En)> accessed 12 May 2017.

POPs Convention website, <<http://chm.pops.int/TheConvention/Overview/tabid/3351/Default.aspx>> accessed 18 May 2017

UNEP, Good Practices for Regulating Wastewater Treatment: Legislation, Policies and Standards, (2015) <<http://unep.org/gpa/documents/publications/GoodPracticesforRegulatingWastewater.pdf>> accessed 10 February 2016.

Memorandum of Cooperation between the Secretariat of the CBD and the Global Programme of Action for the Protection of the Marine Environment from Land based Activities on harmonized implementation of the CBD and the GPA (CBD/GPA Memorandum), (2000) <<https://www.cbd.int/doc/agreements/agmt-gpa-2000-09-20-moc-web-en.pdf>> accessed 9 May 2016

New Zealand's Request for Examination of the Situation (*Application instituting Proceedings*) (9 May 1973) <<http://www.icj-cij.org/en/case/97/institution-proceedings>> accessed 6 August 2017

UNEP/IOC, 'Guidelines on Survey and Monitoring of Marine Litter', (2009) UNEP Regional Seas Reports and Studies, No. 186; IOC Technical Series No. 83, <<http://unep.org/gpa/Documents/Publications/MarineLitterSurveyandMonitoringGuidelines.pdf>> accessed 16 February 2016

UNEP/NOAA, 'The Honolulu Strategy; A Global Framework for Prevention and Management of Marine Debris' (Honolulu Strategy), (2012) <<http://unep.org/gpa/documents/publications/HonoluluStrategy.pdf>> accessed 12 February 2016

UNFCCC, 'Education and Outreach' <[http://unfccc.int/cooperation\\_and\\_support/education\\_and\\_outreach/items/2529.php](http://unfccc.int/cooperation_and_support/education_and_outreach/items/2529.php)> (accessed 15 May 2015)

UN Environment, 'Regional Seas Programme' <<http://www.unep.org/regionalseas/>>

UN Environment, 'Global Programme of Action for the Protection of the Marine Environment from Land-based Activities' <<http://www.unep.org/gpa/>>