

Coastal State's Consent to Conduct Marine Scientific Research in the Exclusive Economic Zone and Continental Shelf: a Procedural Condition or a Discretionary Power?

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ABSTRACT

The UN Convention on the Law of the Sea (UNCLOS) subjects the conduct of marine scientific research (MSR) in the exclusive economic zone (EEZ) and over the continental shelf of the coastal State to a consent-based mechanism which is regulated under Part XIII of the Convention. On the one hand, the coastal State enjoys the right to authorize MSR in such maritime areas; while on the other hand, there is a requirement under Article 246(3), “in normal circumstances”, to grant its consent to researching States and institutions. However, the question arises ‘how can the intimate nature of coastal State’s consent – i.e. its discretionary character - and the obligation to grant it “in normal circumstances” be reconciled in practice?’ This article will analyze and discuss the nature and scope of coastal State’s consent in Article 246 UNCLOS to determine whether the right to authorize MSR in the EEZ and over the continental shelf accounts to a mere procedural condition or rather to a real discretionary power.

Keywords: marine scientific research; consent; Article 246; normal circumstances; UNCLOS.

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1. Introduction

Ever since humankind took its first steps on Earth, the allure of discovery started sparkling in its eyes like a bright and seductive flame. The attraction to the unknown is a rule carved in our genetic code which allows us to escape from the golden cage of deceptive calmness that only a consolidated truth can ultimately provide. In a world largely covered in water, where more is known about the Moon's surface than of the abyssal floor, marine science contributes to enhancing global knowledge of marine spaces and their complex biological mosaic, while also “helping to understand, predict and respond to natural events and promoting the sustainable development of the oceans and seas.”¹

The United Nations Convention on the Law of the Sea (UNCLOS)² devotes its whole Part XIII to marine scientific research (MSR). The study of the marine environment is also recognized by the preambular provisions of the Convention to be a constitutive component of the “legal order for the seas and oceans” that the same legal instrument aims to establish. UNCLOS subjects the conduct of research operations in areas within national jurisdiction of States to a consent-based mechanism, which is qualified by the legal regime of the specific maritime zone where MSR is carried out. In maritime areas where the sovereignty of the coastal State extends, namely in the internal waters, territorial sea and archipelagic waters,³ no MSR activity may be conducted without the prior and express consent of the coastal State concerned. While for MSR in the exclusive economic zone (EEZ) and over the legal continental shelf a different mechanism applies. Whereby researching States and international organizations intend to undertake MSR either in the EEZ or on the continental shelf of another country they shall ask for the coastal State's consent.⁴ The coastal State is required “in normal circumstances” to grant its consent for pure research operations, and to establish national rules and procedures not to delay or deny the granting of such consent unreasonably.⁵ But who determines when the normalcy of circumstances exists? The coastal State? The researching State? The international community? UNCLOS is silent about it.

If we postulate that the normalcy of circumstances under which the consent should be granted does not depend on the coastal State's discretion, then the decision of the coastal State to deny that consent would result into an international law violation. On the contrary, if the coastal State has the power to determine when “normal circumstances” to grant its consent exist in practice,

1 United Nations General Assembly, *Oceans and the Law of the Sea, resolution adopted by the General Assembly on 10 December 2019*, GA Res 74/19, 74th sess. Agenda item 74(a), A/Res/74/19 (10 December 2019). See also <https://undocs.org/en/A/RES/74/19> (accessed 6 June 2020).

2 United Nations Convention on the Law of the Sea (Montego Bay, 10 December 1982, in force, 16 November 1994) 1833 UNTS 397 (UNCLOS).

3 UNCLOS, Articles 2(1) and 49(1).

4 UNCLOS, Article 246(2).

5 UNCLOS, Article 246(3).

then the role played by researching States and institutions in the consent-making process would arguably be as marginal as it is in maritime areas over which the sovereignty of the coastal State extends (i.e., internal waters, territorial sea and archipelagic waters).

This article aims to shed some light on the functioning of the consent's mechanism to conduct MSR in the EEZ and on the continental shelf (Article 246 UNCLOS) to answer a conclusive and fundamental question: is the coastal State's consent to conduct MSR in the EEZ and over the continental shelf a mere procedural requirement or does it rather account to a real discretionary power? Answering this question is important to determine to what extent a coastal State would be allowed, under international law, to deny or suspend its consent for MSR activities in the EEZ and over the continental shelf. No similar examination of the nature and scope of the coastal State's consent under Article 246 UNCLOS has ever been conducted before; thus, the present examination may also serve as an introductory tool for more elaborate discussions. This paper will develop in three main sections which aim at describing, analyzing and critically discussing the topic. These sections are themselves based on three relevant sub-questions: *what* is the definition of MSR under UNCLOS? (Section 2); *how* is MSR in the EEZ and over the continental shelf regulated? (Section 3); and *who* decides when MSR in such maritime zones may be undertaken? (Section 4). Finally, Section 5 will provide some concluding remarks.

2. Definition of Marine Scientific Research

Despite the significant number of provisions that UNCLOS devotes to MSR, no definition of this term is included in the text of the Convention.⁶ Part III of the Informal Composite Negotiating Text (ICNT)⁷ of the Third UN Conference on the Law of the Sea (1973-1982) initially provided for a definition of MSR, namely “any study or related experimental work designed to increase mankind’s knowledge of the marine environment.” However, participants at the Conference eventually decided not to include any specific definition of MSR in the final text of the Convention, as they believed that “the provisions in Part XIII adequately gave meaning to the concept.”⁸

It is true, indeed, that several UNCLOS provisions do contribute to

6 M Gavouneli, *Functional Jurisdiction in the Law of the Sea* (Martinus Nijhoff Publishers, Leiden/Boston, 2007) 149; DR Rothwell, AG Oude Elferink, KN Scott and T Stephens (2017), *The Oxford Handbook of the Law of the Sea* (Oxford University Press, Oxford, 2017) 561; and Y Tanaka, *The International Law of the Sea* (1st ed., Cambridge University Press, Cambridge, 2012) 336.

7 L Caflisch and J Piccard, ‘The Legal Regime of Marine Scientific Research and the Third United Nations Conference on the Law of the Sea’ (1977) *Ocean Development and International Law* 4, 848-901, at pp. 848-9.

8 DR Rothwell, AG Oude Elferink, KN Scott and T Stephens (n 6) 562.

circumscribing the legal and notional scope of MSR,⁹ and to identify principles, parameters and criteria which research activities need to possess to be qualified as MSR under the Convention. They can be summarized as follows:

First of all, scientific research is to be “marine,” which arguably excludes any scientific operation which is not undertaken at sea (e.g., astronomical sensing or land-based observations).¹⁰

Second, MSR shall be conducted “exclusively for peaceful purposes,” with “appropriate scientific methods and means,”¹¹ and in a lawful and environmental-wise manner.¹²

Third, data collected by means of MSR projects shall be publicly disseminated and internationally available.¹³

Finally, MSR shall contribute “to increase scientific knowledge of the marine environment for the benefit of all mankind.”¹⁴

For a matter of convenience, scientific projects which meet all the aforementioned criteria are generally referred to as ‘pure’ (or fundamental) research in order to distinguish them from ‘applied’ (or resources-related) research, consisting in the collection of information in support of exploration or exploitation activities, drilling and similar operations in the continental shelf, or the construction and operation of artificial islands, installations or structures.¹⁵ Both pure and applied researches fall within the MSR umbrella under the Convention, although terms and conditions established by UNCLOS to conduct applied research are normally stricter than those in place for pure research activities. The distinction between these two MSR categories is, therefore, critical to determine the applicable legal regime under UNCLOS.

The same Convention is, nonetheless, silent about when international scientific value should be recognized to marine research operations. The International Court of Justice (ICJ) in the *Whaling in the Antarctic* case observed how, “programmes for purposes of scientific research should foster scientific knowledge.”¹⁶ The Court also noted how the discretion of a State to set out the

9 E.g., Articles 238, 239, 240, 244, 246 and 249 UNCLOS.

10 Furthermore, it is worth mentioning here that both in the Informal Single Negotiating Texts (ISNT) and in the Revised Single Negotiating Texts (RSNT) of the Third United Nations Conference on the Law of the Sea (UNCLOS III), the jurisdiction of States in the EEZ covered the “scientific research”, without any explicit reference to the ‘marine’ nature of such a research. Indeed, the term “marine scientific research” was included for the first time in Article 56 of the Informal Composite Negotiating Text (ICNT), during the Sixth Session of the Conference. This suggests that the intention of participants at UNCLOS III was, eventually, to limit the scope of coastal State’s jurisdiction under article 56(1)(b)(ii) only to “marine” scientific research, and not to all marine operations. See also, M. Nordquist, SN Nandam, J Kraska, *United Nations Convention on the Law of the Sea of 1982: A Commentary (Volume II)*, Brill/Nijhoff, Leiden, 1989) 536-9; Y Tanaka (n 6) 336-7; and DR Rothwell and T Stephens, *The International Law of the Sea* (Hart Publishing, Oxford and Portland, Oregon, 2010) 321.

11 Although, doubts still exist on the meaning of “appropriate scientific methods” at Article 240(b) UNCLOS. See also H Woker, B Schartmüller, K Ola Dølven, K Blix, ‘The law of the sea and current practices of marine scientific research in the Arctic’, Elsevier, *Marine Policy* 115 (2020) 103850, 1-9, at pp. 6-7.

12 UNCLOS, Article 240.

13 UNCLOS, articles 244(1) and 249(1)(e).

14 UNCLOS, article 246(3).

15 UNCLOS 246(5). See also, RR Churchill and AV Lowe, *The Law of the Sea* (Manchester University Press, Manchester, 1991) 293; and Y Tanaka (n 6) 337.

16 *Whaling in the Antarctic* (Australia and New Zealand (intervening) v. Japan), Judgment, Merits, ICJ GL No 148, ICGJ 471 (ICJ 2014), 31st March 2014, International Court of Justice (ICJ), para 58, p. 252.

conditions for the granting of scientific permits should not allow the same State to determine what scientific research means in practice.¹⁷ In this respect, Judge Owada pointed out that, “[w]hat is ‘scientific research’ is a question on which qualified scientists often have a divergence of opinion and are not able to come to a consensus view.”¹⁸

In fact, the classification of research activities as either pure or applied research is often compounded by the cross-sectoral nature of such research operations. But how - using the words of Judge Owada - can this ‘divergence of opinion’ be reconciled in practice?

One way of doing that would be by determining what the definition of MSR “does not” encompass, rather than what it does. Following this approach, at least four categories of research activities should be put under a magnifying glass: historical and archaeological research operations, the exploration of marine natural resources, surveys, and bioprospecting. These activities are briefly discussed below.

As for historical and archaeological research, the 2001 UNESCO Convention on Underwater Cultural Heritage (UCH) is the most important multilateral legal instrument in place to govern UCH activities. Article 10 of the 2001 UCH Convention recognizes how,

“[a] State Party in whose exclusive economic zone or on whose continental shelf underwater cultural heritage is located has the right to prohibit or authorize any activity directed at such heritage to prevent interference with its sovereign rights or jurisdiction as provided for by international law including the United Nations Convention on the Law of the Sea.”¹⁹

The “sovereign rights or jurisdiction” referred to at Article 10 of the UCH Convention are those provided for by Article 56 UNCLOS, the list of which also includes MSR.²⁰ Whereas Article 10 indicates that research activities directed at UCH cannot encroach on EEZ and continental shelf’s rights and jurisdiction, it follows that such research activities are different from MSR under UNCLOS. The reason behind this notional separation is that historical and archaeological research operations do not contribute to increasing scientific knowledge of the marine environment, as they aim to collect scientific information on the underwater cultural surrounding.²¹ For example, the International Tribunal for

17 *Ibid.*, para 61, p. 253.

18 *Ibid.*, Diss. Op. Owada, para 25, p. 310.

19 Article 10: “(1) No authorization shall be granted for an activity directed at underwater cultural heritage located in the exclusive economic zone or on the continental shelf except in conformity with the provisions of this Article; (2) A State Party in whose exclusive economic zone or on whose continental shelf underwater cultural heritage is located has the right to prohibit or authorize any activity directed at such heritage to prevent interference with its sovereign rights or jurisdiction as provided for by international law including the United Nations Convention on the Law of the Sea...” United Nations Convention on the Protection of the Underwater Cultural Heritage (Paris, 2 November 2001, in force 2 January 2009) 1833 UNTS 397.

20 UNCLOS, Articles 56(1)(b)(ii) and 246(1).

21 DR Rothwell, AG Oude Elferink, KN Scott and T. Stephens (n 6) 571; S Dromgoole, ‘Revisiting the Relationship between Marine Scientific Research and the Underwater Cultural Heritage’ (2010) 25(1)

the Law of the Sea (ITLOS), in the *M/V Louisa* case, did not consider the collection of archaeological objects by the Vincentian vessel as falling within the scope of the MSR permit issued by Spain.²²

Neither the exploration of marine natural resources constitutes MSR under UNCLOS. The collection of scientific information to be used for lucrative, and normally private purposes with regard to fisheries or offshore mining activities is covered, in the EEZ and continental shelf, by the exclusive sovereign rights of the coastal State.²³ Almost 25 years before the adoption of UNCLOS, in 1958, Article 5(1) of the Convention on the Continental Shelf already indicated how the exploration of the continental shelf should not result in any interference with, *inter alia*, “fundamental oceanographic or other scientific research carried out with the intention of open publication.”²⁴ Similarly, Article 246(5)(a) UNCLOS refers to MSR projects of direct significance for the “exploration of natural resources”, thus substantiating a separation between MSR and ‘exploration’ under UNCLOS.²⁵

More debatable is the classification of bioprospecting and surveying activities as MSR. Bioprospecting generally consists in the recovering of living organisms from the marine environment “as part of a ‘pure’ research program to be the subject of commercial development.”²⁶ This twofold nature of bioprospecting makes its classification as MSR rather controversial. Nonetheless, it is reasonable to believe that in so far as bioprospecting is conducted in the EEZ or over the continental shelf, it constitutes applied research that is regulated under Article 246(5) UNCLOS.²⁷ While with regard to surveying activities, the Convention refers to “surveys” together with MSR in Articles 19(2)(j), 21(1)(g) and 40; although, surveying activities are not even mentioned in Part XIII UNCLOS. It is debatable, therefore, whether or not such activities fall under the consent-based regime established at Article 246 UNCLOS, especially when they are conducted for military purposes or when research results are not made internationally available.²⁸

International Journal of Marine and Coastal Law (IJMCL), 33-61, at pp. 44-54; and S Dromgoole, *Underwater Cultural Heritage and International Law* (Cambridge University Press, Cambridge, 2013) 271.

22 The *M/V Louisa* case (Saint Vincent and the Grenadines v. Spain), Judgment, Merits, ITLOS Case No 18, ICGJ 450 (ITLOS 2013), 28th May 2013, International Tribunal for the Law of the Sea (ITLOS), para 117, p. 38. See also *Diss. Op. Lucky*, para 101, p. 177: “[t]he evidence provided is that the ‘Gemini III’ was a workboat carrying equipment that was more consistent with a search for artefacts than with seismic research only.”

23 UNCLOS, Articles 56(1) and 77(1) and (4).

24 Article 5 (1): “The exploration of the continental shelf and the exploitation of its natural resources must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea, nor result in any interference with fundamental oceanographic or other scientific research carried out with the intention of open publication.” United Nations Convention on the Continental Shelf (Geneva, 29 April 1958, in force 10 June 1964) 499 UNTS 311.

25 Y Tanaka (n 6) 337.

26 DR Rothwell, AG Oude Elferink, KN Scott and T Stephens (n 6) 568; and M Gavouneli (n 6) 149.

27 R Wolfum, N Matz, ‘The Interplay of the United Nations Convention on the Law of the Sea and the Convention on Biological Diversity’ (2000) J.A. Frowein and R. Wolfum (eds.), *Max Planck Yearbook of United Nations Law*, 445-480, at pp. 457-8.

28 Furthermore, already in the 1956 Articles of the International Law Commission concerning the Law of the Sea, surveys and marine scientific research were mentioned in different provisions, namely draft-article 18 (hydrographic surveys) and draft-article 27 (marine scientific research). See also Y Tanaka (n 6) 338; DR Rothwell, AG Oude Elferink, KN Scott and T Stephens (n 6) 570; DR Rothwell and T Stephens (n 10) 275-6;

So, *what* does the term MSR encompass? UNCLOS does not offer any specific answer to this question; however, the Convention provides some guidance on what MSR in the EEZ and over the continental shelf should (not) include. Pure and applied researches certainly fall within the regime of MSR under the Convention, while historical and archaeological research and exploration do not. More difficult is the qualification of bioprospecting and surveying operations, for which a case-by-case examination would be necessary. That being said, it is reasonable to believe that as long as research operations are conducted (i) at sea; (ii) for peaceful purposes; (iii) with scientific means; (iv) to increase scientific knowledge of the marine environment; and (v) their results are public and internationally available, such operations would fall under the umbrella of the MSR regime established by UNCLOS.

3. Marine Scientific Research in the Exclusive Economic Zone and Continental Shelf

Once that the meaning of MSR has been clarified, it is important to provide a more in-depth examination of the body of rules governing scientific operations in the EEZ and over the continental shelf. Without a clear understanding of *how* the relevant UNCLOS provisions work, indeed, it would not be possible to conduct a critical examination of the way such provisions are interpreted and applied.

Two preliminary remarks are herein necessary:

Firstly, both the EEZ and the continental shelf are maritime zones within national jurisdiction, although they are not covered by the sovereignty of the coastal State.²⁹ This means that the exercise of rights and jurisdiction in those maritime areas shall be conducted by the coastal State within the limits of what is allowed by UNCLOS and other rules of international law. Notably, coastal State's rights and jurisdiction in the EEZ and continental shelf are non-inclusive, and therefore they need to be interpreted in a more restrictive way, providing any restrictive interpretation does not have the practical effect of depriving such rights and jurisdiction of their functional nature.³⁰

T Daniel, 'Marine Scientific Research Under UNCLOS: a Vital Global Resource?' (2006) IHR Vol. 7 No. 2 (new series) August 2006, *International Hydrographic Review*, 6-17, at p. 8; G Andreone, *The Future of the Law of the Sea – Bridging Gaps Between National, Individual and Common Interests*, (Springer, Cham, 2017) 99; Council for Security Cooperation in the Asia Pacific (CSCAP), *The Practice of the Law of the Sea in the Asia Pacific*, CSCAP Memorandum No. 6, December 2002, 3-4; B H Oxman, 'The Regime of Warships under the United Nations Convention on the Law of the Sea' (1984) 24 Va. J. Int'l. L. 809, *University of Miami Law School*, 809-863, at pp. 845-7.

29 According to Articles 2(1) and 49(1) UNCLOS, the sovereignty of the coastal State extends beyond its land territory and internal waters, and in case of archipelagic State the archipelagic waters, to the territorial sea.

30 The SS *'Wimbledon'* (United Kingdom and ors v. Germany), Judgment, (1923) PCIJ Series A no 1, ICGJ 235

Secondly, although the EEZ and the continental shelf are regulated by different regimes,³¹ the body of rules governing MSR in those maritime zones is virtually identical. For example, Article 246 UNCLOS does not draw any distinction between research projects which are conducted in the EEZ, and those which are undertaken over the continental shelf³² - with the only exception of MSR operations conducted beyond the limits of the legal continental shelf (200M).³³ This does not mean that “the concept of the exclusive economic zone and the concept of the continental shelf are merely two sides of the same coin;”³⁴ but, at least with respect to MSR, the conclusions drawn for the EEZ also extend to the continental shelf, and *vice versa*.

This being so, in the EEZ and over the continental shelf coastal States enjoy jurisdiction to authorize, regulate and conduct MSR. Accordingly, Article 56(1)(b)(ii) of UNCLOS indicates that the coastal State has jurisdiction with regard to MSR “as provided for in the relevant provisions of [the] Convention.” No corresponding stipulation exists in Part VI of UNCLOS with regard to the continental shelf. Nonetheless, Article 56(3) UNCLOS specifies how the rights set out in Article 56 – including, therefore, those concerning MSR – apply to the seabed and subsoil of the EEZ in so far as they are exercised in accordance with the provisions of UNCLOS governing the continental shelf. Further, the formulation ‘relevant provisions’ at Article 56(1)(b)(ii) UNCLOS would apply Article 246, which regulates MSR not only in the EEZ but also over the continental shelf, by reference.

In this regard, paragraph 1 of Article 246 UNCLOS reads as follows,

“[c]oastal States, in the exercise of their jurisdiction, have the right to regulate, authorize and conduct marine scientific research in their exclusive economic zone and on their continental shelf in accordance with the relevant provisions of this Convention.”

The same article goes on by indicating that marine scientific research in the EEZ and over the continental shelf can only be conducted by other States or competent international organizations³⁵ with the consent of the coastal State.³⁶ This consent can be express or implied,³⁷ and “in normal circumstances” the

(PCIJ 1923), 17th August 1923, League of Nations (historical) [LoN]; Permanent Court of International Justice (historical) [PCIJ], para 69.

31 UNCLOS Part V (Exclusive Economic Zone), and UNCLOS Part VI (Continental Shelf). See also *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal* (Bangladesh v. Myanmar), Judgment, Merits, ITLOS Case No 16, ICGJ 448 (ITLOS 2012), 14th March 2012, International Tribunal for the Law of the Sea, para 361, p. 108.

32 See also, *Barbados v. Trinidad and Tobago* arbitration, Final Award, (2006) 45 ILC 839, ICGJ 371 (PCA 2006), 11th April 2006, Permanent Court of Arbitration (PCA), para 182, p. 56.

33 UNCLOS, Article 246(6).

34 M Nordquist, SN Nandam, J Kraska, *United Nations Convention on the Law of the Sea of 1982: A Commentary; Volume IV* (Brill/Nijhoff, Leiden, 1989) 246.17(a), at p. 517.

35 The Convention does not indicate the “competent international organisations” entitled to conduct marine scientific research in the EEZ and continental shelf of the coastal State. Examples of such organisations are the International Council for the Exploration of the Sea; the Intergovernmental Oceanographic Commission; and the International Hydrographic Organisation. See also Y. Tanaka (n 6) 339.

36 UNCLOS, Article 246(2).

37 UNCLOS, Article 252.

coastal State would be required to grant it,³⁸ even when no diplomatic relations between the researching State and the coastal State exist.³⁹ The coastal State is also required to “establish rules and procedures ensuring that such consent will not be delayed or denied unreasonably.”⁴⁰ This obligation entails the coastal State’s duty to set out a domestic institutional framework to receive and process MSR requests made by researching States or competent international organizations, in accordance with the relevant provisions of Part XIII UNCLOS, including the communication of additional information of importance to the researching State or the establishment of certain technical conditions for the conduct of MSR.⁴¹

Whereas the Convention does not expressly indicate what constitutes a “normal circumstance” for the consent’s purposes, the *travaux préparatoires* of the Convention suggest that the normalcy of circumstances “be considered in light of the specific context in which MSR project is carried out, rather than by reference to some rigid criteria.”⁴² In this regard, the UN Division for Ocean Affairs and the Law of the Sea (DOALOS) noted how examples of abnormal circumstances would be “a situation of imminent danger of armed conflict” or “a jurisdictional dispute over the area for which the request has being made.”⁴³

In addition, an examination *a contrario* of Article 246(3) UNCLOS suggests that research activities that are not concordant with UNCLOS and other rules of international law; which are conducted for non-peaceful purposes; or which are carried out for a purpose other than that of increasing scientific knowledge of the marine environment, could not benefit of the more favourable consent-based regime established under the Convention, as the coastal State would be allowed, in those circumstances, to deny its consent.

Besides, the coastal State may always withhold its consent if the research project:

- “(a) is of direct significance for the exploration and exploitation of natural resources, whether living or non-living;
- (b) involves drilling into the continental shelf, the use of explosives or the introduction of harmful substances into the marine environment;
- (c) involves the construction, operation or use of artificial islands, installations and structures referred to in articles 60 and 80;

38 UNCLOS, Article 246(3).

39 UNCLOS, Article 246(4).

40 UNCLOS, Article 246(3).

41 UNCLOS, Article 249. See also, United Nations Division for Ocean Affairs and the Law of the Sea (2010), *op.cit.*, p. 42.

42 A Proelss, *United Nations Convention on the Law of the Sea: A Commentary*, Hush/Nishimoto, Marine Scientific Research in the EEZ and on the Continental Shelf (C.H. Beck – Hart – Nomos, München – Oxford – Baden-Baden, 2017) 1659.

43 United Nations Division for Ocean Affairs and the Law of the Sea (2010), *Marine Scientific Research – A revised Guide to the Implementation of the Relevant Provisions of the United Nations Convention on the Law of the Sea*, United Nations Publication, Sale No. E.10.V.12, New York, p. 41.

(d) contains information communicated pursuant to article 248 regarding the nature and objectives of the project which is inaccurate or if the researching State or competent international organization has outstanding obligations to the coastal State from a prior research project.”⁴⁴

The activities listed above constitute applied research that is connected with the exclusive rights and jurisdiction recognised to the coastal State by UNCLOS, including the exploration of natural resources (whether in the EEZ and over the continental shelf),⁴⁵ drilling or tunneling in the continental shelf,⁴⁶ and the construction or operation of artificial islands, installations and other structures.⁴⁷ As it was pointed out in Section 2, such activities are not excluded from the definition of MSR under the Convention. Nevertheless, they are subject to a different consent-based regime, which does not require the coastal State to grant its consent in “normal circumstances.”

Researching States and competent international organizations which intend to conduct MSR in the EEZ or over the continental shelf shall communicate to the coastal State, normally through diplomatic channels,⁴⁸ relevant information concerning the scientific project, including: nature and objectives of the project, geographical areas covered by it, and expected date of commencement and ending of research operations.⁴⁹ If the coastal State is not satisfied with the information communicated by the researching State, or if such information is wrong or incomplete, the coastal State would be allowed under certain conditions to deny or suspend its consent.⁵⁰ *In arguendo*, the communication of wrongful or incomplete information would also constitute an ‘abnormal’ circumstance for which consent by the coastal State might be denied.⁵¹

No disputes arising with regard to the exercise of coastal State’s powers to deny or suspend its consent can be subject to the compulsory procedure entailing binding decisions under Part XV, Section 2 UNCLOS, as such disputes are exempted by Article 297(2)(a) of the Convention.⁵² Whenever the researching State considers that the coastal State has exercised its right to authorize and regulate MSR in the EEZ and continental shelf in a way not consistent with the Convention, the only means that it would have to settle any

44 UNCLOS, Article 246(5).

45 UNCLOS, Articles 56(1)(a) and 77(1) and (4).

46 UNCLOS, Articles 81 and 85.

47 UNCLOS, Articles 60 and 80.

48 UNCLOS, Article 250; see also, United Nations Division for Ocean Affairs and the Law of the Sea (2010), *op.cit.*, p. 39.

49 UNCLOS, Article 248.

50 UNCLOS, Articles 246(5), 252 and 253.

51 UNCLOS, Articles 256(5)(d) and 248. See also, United Nations Division for Ocean Affairs and the Law of the Sea (n 43) 11.

52 UNCLOS, Article 297(2)(a): “Disputes concerning the interpretation or application of the provisions of this Convention with regard to marine scientific research shall be settled in accordance with section 2, except that the coastal State shall not be obliged to accept the submission to such settlement of any dispute arising out of: (i) the exercise by the coastal State of a right or discretion in accordance with article 246; or (ii) a decision by the coastal State to order suspension or cessation of a research project in accordance with article 253.”

related dispute with the coastal State concerned would be submitting that dispute to conciliation Annex V, section 2.⁵³

Finally, save in specifically designated exploitation/exploration areas, the consent of the coastal State is not required with regard to research operations conducted by researching States or international organizations over the extended continental shelf (beyond 200M) of the coastal State.⁵⁴

4. Coastal State's Consent to Conduct Marine Scientific Research: A Procedural Condition or a Discretionary Power?

Provided that researching States and institutions are required to ask for the coastal State's consent before undertaking pure research activities in the EEZ and over the continental shelf, and that the coastal State, on its side, is required to grant "in normal circumstances" such consent, *who* decides when MSR may be undertaken in such maritime zones?

A line needs to be drawn, once again, between pure research and applied research, as only the former category of MSR operations might raise some doubts on the unreserved discretionary nature of the coastal State's consent. This is because, as it was discussed in Section 3, for applied research in the EEZ and over the continental shelf, the Convention recognizes the right of the coastal State to withhold or suspend the consent virtually at any time.⁵⁵ While for pure research activities the same State would be required to grant its consent "in normal circumstances."⁵⁶

4.1 Sovereign-centric vs liberal approach

Now, if we assume that the coastal State has the full and exclusive authority to determine when the circumstances to conduct MSR in the EEZ or over the continental shelf are "normal", then the role played by researching States and institutions in the consent-making process would arguably be as marginal as it is in maritime areas over which the sovereignty of the coastal State extends (i.e., internal waters, territorial sea and archipelagic waters). Indeed, the power of the coastal State to determine when the normalcy of circumstances exists in practice,

53 UNCLOS, Article 297(2)(b).

54 UNCLOS, Article 246(6).

55 UNCLOS, Article 246(5).

56 UNCLOS, Article 246(3).

together with the disputes settlement's limitation at Article 297(2) UNCLOS would subject the undertaking of most of the MSR projects in the EEZ and over the continental shelf to the tantrum of the coastal State.

While if we postulate that researching States and organizations may determine when the circumstances to conduct MSR are “normal,” then the consent's request would be downgraded to a mere procedural condition, as the normalcy of circumstances under which the consent should be granted by the coastal State could be presumed in the majority of cases;⁵⁷ with the consequence that researching States and institutions may invoke the infringement of Article 246(3) UNCLOS most of the times that the consent for pure research is denied. Borrowing the words used by Judge Bedjaoui in the *Gabčikovo/Nagymaros* case, “[i]t is as if a State were free to purchase weapons or have them manufactured, but were not permitted to use them if attacked.”⁵⁸

The former assumption can be referred to as a *sovereign-centric* interpretation of Article 246 UNCLOS. In other words, the EEZ and continental shelf are jurisdictional areas, where the sovereign authority of the coastal State extends, and where, consequently, for matters expressly regulated by UNCLOS, including MSR, priority should be given to the interests of the coastal State. The latter assumption, on the contrary, follows a *liberal* interpretation of the same UNCLOS provision that emanates from the limited authority of the coastal State in the EEZ and continental shelf, and on the need to adequately reflect the different legal regime established by UNCLOS for such maritime areas. The *sovereign-centric* interpretation should be preferred for the reasons indicated in Sections 4.1.1 to 4.1.4 below.

4.1.1 Functional nature of consent

The element of discretion is an important component of the coastal State's consent. Without discretion the consent would lose its functional character, with the consequence that the ‘right’ (Article 246(2)) and the ‘obligation’ (Article 246(3)) of the coastal State to grant such consent would act like “two mathematical negatives that make a positive, cancel each other out and leave the objective question of the legitimacy.”⁵⁹ Soons observed how any exception to the general rule mandating access to the EEZ and continental shelf for MSR operations should be interpreted restrictively.⁶⁰ However, as the Permanent Court

57 RR Churchill and AV Lowe, *The Law of the Sea* (Manchester University Press, Manchester, 1991) 292-4; G Andreone (n 28) 92-3; DR Rothwell and T Stephens (n 10) 327-8; DR Rothwell, AG Oude Elferink, KN Scott and T Stephens (n 6) 567-8; T Daniel (n 28) 8-10; and M Pavliha, NA Martinez Gutierrez, ‘Marine Scientific Research and the 1982 United Nations Convention on the Law of the Sea’ (2010) 16 *Ocean and Coastal L.J.* (2010), Vol. 16, Number 1, Article 4, *Ocean and Coastal Law Journal* (OCLJ), 115-133, at pp. 121-2.

58 *Gabčikovo-Nagymaros Project* (Ungary v. Slovakia), Judgment, Merits, ICJ GL No 92, [1997] ICJ Rep 7, 25th September 1997, International Court of Justice (ICJ); Sep.Op. Bedjaoui, para 48, p. 133.

59 *Barcelona Traction, Light and Power Company, Limited* (Belgium v. Spain), Judgment, Merits, Second Phase, ICJ GL No. 50, [1970] ICJ Rep 3, (1970) 9 ILM 227, ICGJ 152 (ICJ 1970), 5th February 1970, International Court of Justice (ICJ); Sep.Op. Fitzmaurice, para 46, pp. 92-93.

60 TL McDorman, AJ Bolla, DM Johnston, J Duff, *International Ocean law – Materials and Commentaries*, (Carolina Academic Press, Durham, 2005) 386-7.

of International Justice (PCIJ) in the *S.S. Wimbledon* case noted, the restrictive interpretation of a right is to be rejected if such interpretation results in the destruction of what the same right was originally meant to grant.⁶¹ Hence, considering that Article 246(2) UNCLOS expressly indicates that MSR operations – whether pure or applied - in the EEZ and continental shelf can only be conducted with the consent of the coastal State, the act of reducing the granting of such consent to a mere procedural condition would deprive Article 246(2) of its primary purpose, namely the granting of permission.⁶² On the contrary, a *sovereign-centric* interpretation would not affect the primary purpose of the coastal State’s obligation to grant its consent “in normal circumstances” at Article 246(3), as the condition of the normalcy of circumstances under which the consent should be granted already entails a certain degree of constraint. Indeed, the purpose of Article 246(3) is to ensure that under certain circumstances, and not under “any” circumstances, the consent will be granted.

4.1.2 Jurisdiction and discretion

The coastal State enjoys under Articles 56(1)(b)(ii) and 246(1) the exclusive jurisdiction to authorize and regulate MSR in its EEZ and over its continental shelf. Judge Ndiaye in the *Virginia G* case observed how, “[j]urisdiction means that the coastal State has discretion to regulate the activities within its competence, subject to compliance with the Convention.”⁶³ Such ‘discretion’ is, therefore, a margin of appreciation substantiated by the capacity of the coastal State to select the most favorable option within an array of multiple and different choices. In other words, the discretion to decide the way to behave axiomatically excludes the obligation to act in a predetermined way. This is also the reason why during discussions held at the Third United Nations Conference on the Law of the Sea, States participating at the Conference opted for the exclusion of marine scientific research from the list of rights of other States in the EEZ at Article 58(1) UNCLOS.⁶⁴

4.1.3 Normalcy of circumstances

In the absence of any objective criterion to determine the normalcy of circumstances under which coastal State’s consent should be granted, whether or not the circumstances are “normal” is subject to the interpretation of the coastal

61 The *SS ‘Wimbledon’* (United Kingdom and ors v. Germany), Judgment, (1923) PCIJ Series A no 1, ICGJ 235 (PCIJ 1923), 17th August 1923, League of Nations (historical) [LoN]; Permanent Court of International Justice (historical) [PCIJ], para 34.

62 For example, in the ILC Commentary (p. 157) to Article 6 of the Draft Articles on Prevention of Transboundary Harms from Hazardous Activities (2001), the Commission noted how “[t]he word ‘authorization’ means granting permission by governmental authorities to conduct an activity covered by these articles. States are free to choose the form of such authorization.”

63 *M/V ‘Virginia G’ case* (Panama v. Guinea-Bissau), Merits, Judgment, ICGJ 452, ITLOS Case No. 19, 14th April 2014, International Tribunal for the Law of the Sea (ITLOS); *Diss.Op.* Ndiaye, para 178, p. 306.

64 M Nordquist, SN Nandam, J Kraska, *United Nations Convention on the Law of the Sea of 1982: A Commentary, Volume II* (Brill/Nijhoff, Leiden, 1989) 58.10(a), at pp. 563-4.

State.⁶⁵ In this regard, Caflisch and Piccard noted how “the vagueness of the expression ‘in normal circumstances’ contained in [Article 246(3) UNCLOS] virtually robs that provision of any normative value. It is indeed difficult to imagine a situation in which the coastal State would not be in a position to assert that the circumstances surrounding a research project are ‘abnormal’ in some way.”⁶⁶ The right to determine when circumstances are ‘abnormal’ rests, therefore, in the hands of the coastal State. This right is not absolute. It shall be exercised in good faith, in accordance with other rules of international law and shall not be abused by the coastal State.⁶⁷ Nonetheless, the same right endows the coastal State with a discretionary power which operates in respect of all scientific activities to be conducted in the EEZ and over the continental shelf.

4.1.4 Reasonableness of the denial

A *sovereign-centric* interpretation of Article 246 would also be supported by the language of Article 246(8) UNCLOS, which indicates how all marine research activities regulated under the other paragraphs of the same provision – therefore, including pure research activities - “shall not unjustifiably interfere with activities undertaken by coastal States in the exercise of their sovereign rights and jurisdiction provided for [by UNCLOS].” The latter provision is to be read in conjunction with Article 246(3) of the Convention that requires coastal States not to deny their consent “unreasonably,” thus tacitly admitting the denial of such consent when “reasonable” circumstances exist. For example, Article 246(5)(b) UNCLOS provides the right of the coastal State to deny its consent in respect of scientific projects consisting in “the introduction of harmful substances into the marine environment.” This means that damages or significant disturbances (e.g., noise pollution) caused to marine life and ecosystems by invasive scientific practices not consisting in any “introduction of harmful substances in the marine environment” would fall outside the scope of Article 246(5)(b). Yet, such scientific practices would constitute an act of “pollution of the marine environment,” as described at Article 1(1)(4) UNCLOS, which extends its legal scope to the introduction of “energy” - and not only “substances” - into the marine environment.⁶⁸ So, in consideration of the coastal State’s jurisdiction to protect and preserve the marine environment in its EEZ and continental shelf,⁶⁹ and in accordance with Article 246(8) UNCLOS preserving

65 M. Nordquist, S.N. Nandam, J. Kraska, *United Nations Convention on the Law of the Sea of 1982: A Commentary, Volume IV* (Brill/Nijhoff, Leiden, 1989) 246.17(c), at p. 518.

66 L Caflisch and J Piccard (n 7) 876-7.

67 UNCLOS, Article 300.

68 *Southern Bluefin Tuna* case (New Zealand v. Japan; Australia v. Japan), Order, Provisional Measures, ITLOS Case No 3, (1999) 38 ILM 1624, ICGJ 337 (ITLOS 1999), ITLOS reports 1999, 27th August 1999, International Tribunal for the Law of the Sea (ITLOS), para 70, p. 295; *Chagos Marine Protected Area Arbitration* (Mauritius v. United Kingdom), Final Award, ICGJ 486 (PCA 2015), p. 211, para 538; and *South China Sea Arbitration*, Philippines v China, Award, PCA Case No 2013-19, ICGJ 495 (PCA 2016), 12th July 2016, para. 945, pp. 376.

69 UNCLOS, Article 56(1)(b)(iii).

such jurisdiction from any unjustifiable interference, the coastal State would have the right to deny its consent anytime that an MSR project is likely to cause harm to the marine environment of the EEZ and continental shelf, even if the language of Article 246(5)(b) only refers to “the introduction of harmful substances into the marine environment.”⁷⁰ The range of pure research activities for which a “reasonable” denial of the consent would be allowed under UNCLOS is, therefore, broader than what the language of the same Convention, and in particular of Article 246, may suggest.

4.2 Answering the main legal question

In conclusion, in light of what was discussed above, is the coastal State’s consent a mere procedural condition to conduct MSR in the EEZ and continental shelf, or does it account to a real discretionary power?

In line with a *sovereign-centric* interpretation of Article 246 UNCLOS, the coastal State’s consent to conduct MSR in the EEZ and continental shelf constitutes a real discretionary power. Not only the coastal State may deny its consent in the cases expressly provided for by the Convention, as observed in Section 3; but the same State would also be allowed to deny its consent whenever it believes that an unjustifiable interference with its rights and jurisdiction or an abnormal circumstance exist. *Who* decides when such interference or circumstance exist in practice? No one but the coastal State, which on its side is required to adopt rules and procedures not to delay or deny its consent unreasonably;⁷¹ and to exercise its right to authorize MSR in the EEZ and continental shelf “in a manner which would not constitute an abuse of right.”⁷² Yet is the coastal State that decides when the circumstances to grant its consent are “normal,” as the contrary would destroy the primary function of the right to grant that consent. A function that is shielded by the wording of Article 297(2)(a)(i) UNCLOS, excluding the compulsory procedure entailing binding decisions at Part XV, section 2 UNCLOS for disputes concerning “the exercise by the coastal State of a right or discretion in accordance with article 246.”

Does it mean that the role of researching States and institutions in the EEZ and continental shelf is as marginal as the one played by them in respect of MSR, *inter alia*, in the territorial sea? Negative; as the mechanism of “implied consent” at Article 252 UNCLOS, and the obligation of the coastal State to adopt national rules and procedures not to deny or delay the consent ‘unreasonably’, do contribute, in a very specific way, to establishing a research-friendly system for researching States and institutions. These more favorable conditions, on the

70 It is noteworthy that article 196(1) UNCLOS requires States to take measures to, *inter alia*, prevent pollution of the marine environment resulting from the use of technologies under their jurisdiction or control, which would arguably include also the use of technologies for scientific purposes.

71 UNCLOS, Article 246(3).

72 UNCLOS, Article 300.

contrary, do not apply in maritime areas over which the sovereignty of the coastal State extends.

5. Concluding remarks

The legal regime established under UNCLOS to govern marine science is one of the most important achievements of the Third United Nations Conference on the Law of the Sea. No definition of MSR is included in the text of the Convention, nonetheless Part XIII of UNCLOS provides rules to regulate scientific operations in the territorial sea, EEZ, continental shelf (within and beyond 200M), on the high seas and in the Area. Other relevant provisions are also included within the text of the Convention in respect of straits used for international navigation, archipelagic waters, protection and preservation of the marine environment, transfer of scientific technology and settlement of disputes. This complex network of rules and provisions constitutes the MSR legal regime under UNCLOS, which this article examined only in small part. The main objective of this article was to analyse and discuss the nature and scope of coastal State's consent in respect of MSR activities in the EEZ and continental shelf to determine whether the coastal State's consent to conduct MSR in such areas accounts for a mere procedural condition or rather to a real discretionary power. For that purpose, this article circumscribed the scope of MSR under the Convention; contextualised the consent-based regime for MSR activities in the EEZ and continental shelf, as established under Article 246 UNCLOS; and eventually discussed, in critical terms, the nature of the coastal State's consent in paragraph 3 of the same UNCLOS provision by explaining why a *sovereign-centric* interpretation of Article 246 should be preferred.

This article concluded that the coastal State enjoys a discretionary power to grant MSR, including pure research, in its EEZ and over its continental shelf that is only marginally limited by Article 246(3). This is based on at least four reasons: the functional nature of consent; the discretionary character of the coastal State jurisdiction to authorise MSR; the vagueness of the wording of Article 246(3); and the coastal State's authority to reasonably deny its consent. Indeed, missing any objective mechanism and criterion to determine the normalcy of circumstances under which coastal State's consent should be granted, whether or not the circumstances are "normal" is left to the interpretation of the coastal State. A discretionary power which is protected by the disputes settlement's limitation at Article 297(2).

This conclusion may be unpleasant to many, especially to those who support a way more transparent and open manner in conducting research operations at sea, as a *sovereign-centric* interpretation of Article 246, in practice,

concentrates into the hands of the coastal State all the power to authorize MSR in the EEZ and continental shelf. However, this is the only way to preserve the *animus* of the consent's regime established under UNCLOS. The opposite would see the coastal State walking tiptoe on the thin ice of international law, where a wrong step – a consent's denial – would expose a coastal State to its international responsibility for the violation of Article 246(3). This was not the intention of the participants at the Third United Nations Conference on the Law of the Sea which, on the one hand, expressly excluded MSR from Article 58(1) UNCLOS; and, on the other hand, included in the text of the Convention Article 297(2)(a)(i) to preserve “the exercise by the coastal State of a right or discretion in accordance with article 246.”

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