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CASE NOTE

The *South China Sea* arbitration: Environmental obligations under the Law of the Sea Convention

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This case note analyses the marine environmental protection issues that arose in the 2016 *South China Sea* arbitration. Given that the South China Sea includes highly productive fisheries and extensive coral reef ecosystems, the alleged breach of environmental obligations under the United Nations (UN) Convention on the Law of the Sea was important in this arbitration. The Arbitral Tribunal examined three obligations concerning marine environmental protection under the UN Convention on the Law of the Sea: the obligation of due diligence; the obligation to conduct an environmental impact assessment; and the obligation to cooperate. The Tribunal's arbitral award contributes to the clarification of the interpretation of relevant provisions concerning marine environmental protection under the Convention. Furthermore, a remarkable feature of the arbitration was that the Tribunal appointed experts to have an independent opinion with regard to environmental damages arising from China's activities in the South China Sea. The use of experts in the *South China Sea* arbitration is worth noting, since scientific evidence is of particular importance in the settlement of international environmental disputes.

1 | INTRODUCTION

On 22 January 2013, the Republic of the Philippines instituted arbitration proceedings against the People's Republic of China, in accordance with Articles 286 and 287 and Article 1 of Annex VII of the United Nations (UN) Convention on the Law of the Sea (LOSC).[1] The Arbitral Tribunal rendered its arbitral award on the merits on 12 July 2016.[2] Broadly speaking, the award on the merits dealt with four principal issues: (i) the source of maritime rights and entitlements in the South China Sea; (ii) the legal status of maritime features and their entitlements in the South China Sea; (iii) the lawfulness of China's actions in the South China Sea, including the alleged breaches of environmental obligations under the LOSC; and (iv) aggravation of the dispute during the arbitral proceedings.[3]

Among other things, the Arbitral Tribunal held that: 'China's claims to historic rights, or other sovereign rights or jurisdiction, with respect to the maritime areas of the South China Sea encompassed by the relevant part of the "nine-dash line" are contrary to the Convention.'[4] It further ruled that none of the high-tide features in the Spratly Islands is capable of sustaining human habitation or an economic life of their own and that the effect of Article 121(3) is that such features shall have no exclusive economic zone or continental shelf.[5] The decisions of the Tribunal regarding China's claim to marine spaces encompassed by the 'nine-dash line' and the legal status of maritime features in the South China Sea directly affect the spatial scope of the high seas and the Area, which is the common heritage of mankind. In this sense, one can argue that the *South China Sea* arbitral award concerns common interests of the international community as a whole.[6]

[1]United Nations Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 3 (LOSC). The Philippines ratified the Convention on 8 May 1984 and China ratified it on 7 June 1996.

[2]*South China Sea Arbitration (The Republic of the Philippines v People's Republic of China)* (Award) Arbitral Tribunal (2016) PCA Case No 2013–19 (*South China Sea*).

[3]ibid paras 7–10.

[4]ibid para 1203(B)(2).

[5]ibid para 1203(B)(7).

[6]D Tamada, 'In the Matter of an Arbitration before an Arbitral Tribunal Constituted under Annex VII to the 1982 United Nations Convention on the Law of the Sea between the Republic of Philippines and the People's Republic of China, Award on Jurisdiction and Admissibility (29 October 2015)' (in Japanese) (2016) 66 Kobe Law Journal 155.

Given that a healthy marine environment is the foundation for all life, arguably the alleged breach of environmental obligations under the LOSC also relates to a common interest of the international community. Indeed, the South China Sea includes highly productive fisheries and extensive coral reef ecosystems, which are among the most biodiverse in the world. In particular, the marine environment around Scarborough Shoal and the Spratly Islands has an extremely high level of biodiversity of species. Since the different ecosystems in the South China Sea are closely connected through ocean currents and the life cycles of marine species, the impact of any environmental harm occurring at Scarborough Shoal and in the Spratly Islands can affect the health and viability of ecosystems elsewhere in the South China Sea.[7] Hence it can be said that the *South China Sea* arbitral award also concerns a common interest of the international community with regard to marine environmental protection.

Against that background, this case note addresses the issues of marine environmental protection in the *South China Sea* arbitral award (merits).[8] Having outlined the Philippines' submissions, the case note examines the alleged breaches of the LOSC by China, focusing on the obligation of due diligence, environmental impact assessment and international cooperation. It then reviews the role of experts in the *South China Sea* arbitration, before offering conclusions.

2 | THE PHILIPPINES' SUBMISSIONS

In its submissions, the Philippines claimed that China had violated its LOSC obligations to protect and preserve the marine environment at a number of sites and that the occupation of and construction activities on Mischief Reef violated China's duties to protect and preserve the marine environment under the same Convention.[9] The argument in the Philippines' submissions consisted of two main components.[10]

The first component concerns China's harmful fishing practices and harvesting of endangered species. In this regard, the Philippines stressed that extracting giant clams is especially problematic because they are important elements of the coral reef structure and also because the method of harvesting them entails crushing surrounding corals.[11]

The second component relates to China's construction activities on seven reefs in the Spratly Islands. According to the Philippines, 'the loss of seven major reef features to land creation within 1.5 years will have a huge impact on the ecological integrity of not only the Spratly reefs but also of the South China Sea'.[12] Overall the Philippines alleged that China had breached Articles 123, 192, 194, 197, 205 and 206 of the Convention.[13] In support of the allegations, the Philippines filed two expert reports by reef ecologist Professor Kent Carpenter: the First and Second Carpenter Reports.[14] The Tribunal also sought an independent opinion on the environmental impact of China's construction activities, by appointing three experts on coral reef ecology pursuant to Article 24 of Rules of Procedure, who issued a joint report.[15] China refused to participate in the arbitral proceedings and did not directly clarify its position concerning the above issues. However, the Arbitral Tribunal considered that China's position can be discerned from contemporaneous official statements.[16]

3 | BREACH OF ENVIRONMENTAL OBLIGATIONS UNDER THE CONVENTION

After having established its jurisdiction to deal with the Philippines' submissions,[17] in its arbitral award on the merits, the Tribunal found that China breached Articles 192, 194(1), 194(5), 197, 123 and 206 of the LOSC.[18] In determining the breach of these provisions, the Tribunal examined three obligations: the obligation of due diligence; the obligation to conduct an environmental impact assessment; and the obligation to cooperate.

3.1 | Obligation of due diligence

Under Article 192 of the LOSC, 'States have the obligation to protect and preserve the marine environment'.[19] In the view of the Tribunal, the corpus of international law relating to the environment, which informs the content of the general obligation in Article 192, requires States to 'ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control'.[20] Specifically, the 'general obligation' under Article 192 extends both to 'protection' of the marine environment from *future* damage and 'preservation' in the sense of maintaining or improving its *present* condition. Article 192 thus entails the positive obligation to take active measures to protect and preserve the marine environment and the negative obligation not to degrade the marine environment at the same time.[21]

[7] *South China Sea* (n 2) paras 823–825.

[8] For an analysis of other aspects considered in the *South China Sea* arbitration, see, for instance, VP Cogliati-Banz, 'The South China Sea Arbitration (The Republic of the Philippines v. The People's Republic of China)' (2016) 31 International Journal of Maritime and Coastal Law 759; TL McDorman, 'The South China Sea Arbitration' (2016) 20 American Society of International Law Insights; Y Tanaka, 'Reflections on Historic Rights in the South China Sea Arbitration (Merits)' (2017) 32 International Journal of Maritime and Coastal Law 458; Y Tanaka, 'Reflections on the Interpretation and Application of Article 121(3) in the *South China Sea* Arbitration (Merits)' (2017) 48 Ocean Development and International Law (DOI: 10.1080/00908320.2017.1349529).

[9] *South China Sea* (n 2) para 112.

[10] ibid.

[11] Memorial of the Philippines, Volume I, 30 March 2014, para 6.57; *South China Sea* (n 2) para 897.

[12] *South China Sea* (n 2) para 901. See also Presentation by A Boyle, Merits Hearing Tr. (Day 3) 26 November 2015, 17.

[13] *South China Sea* (n 2) para 906.

[14] ibid paras 818–819.

[15] ibid para 821. The document is available at <https://pcacases.com/web/sendAttach/1809>.

[16] ibid para 912.

[17] ibid paras 925–938.

[18] ibid para 1203(12) and (13).

[19] LOSC (n 1) art 205.

[20] *South China Sea* (n 2) para 941.

[21] ibid.

Furthermore, according to the Tribunal, Article 192 must be read against the background of other applicable international law.[22] In this connection, the Tribunal made an explicit *renvoi* to the 1973 CITES.[23] The Arbitral Tribunal found that as CITES is 'the subject of nearly universal adherence', including by the Philippines and China, 'it forms part of the general corpus of international law that informs the content of Article 192 and 194(5) of the Convention'.[24] The 'general corpus of international law' can be interpreted to mean 'the corpus of international law relating to the environment', including multilateral environmental treaties. The Tribunal thus considers that the general obligation to 'protect and preserve the marine environment' in Article 192 includes a due diligence obligation to prevent the harvesting of species that are recognized internationally as being at risk of extinction and requiring international protection.[25]

It is of particular interest to note that the Tribunal read Article 192 in light of 'the corpus of international law relating to the environment' and 'other applicable international law'.[26] As complex webs of treaties are developing in the law of the sea and related branches of international law, including international environmental law, the coexistence of treaties necessitates a systemic outlook.[27] The Tribunal's systemic interpretation provides an insight into the interpretation of rules and obligations provided in environmental treaties.[28]

In the view of the Tribunal, there is no doubt that the harvesting of corals and giant clams from the waters surrounding Scarborough Shoal and features in the Spratly Islands have a harmful impact on the fragile marine environment. Accordingly, a failure to take measures to prevent these practices would constitute a breach of Articles 192 and 194(5) of the Convention.[29] In this regard, the Tribunal specified two components of the obligation of due diligence: (i) a duty to adopt rules and measures to prevent harmful acts; and (ii) a duty to maintain a level of vigilance in enforcing those rules and measures.[30] Yet the Tribunal provided no further clarification with regard to the 'level of vigilance' required. In this connection, the 2011 Advisory Opinion of the Seabed Disputes Chamber of the International Tribunal on the Law of the Sea (ITLOS) took the view that the standard of due diligence 'may vary over time and depends on the level of risk and on the activities involved'.[31] However, in the *South China Sea* arbitration, the Tribunal did not seem to differentiate the standard of due diligence according to the level of risk and the activities in question.[32]

According to the Tribunal, even though China enacted a Law of the Protection of Wildlife in 1989, '[t]here is no evidence in the record that would indicate that China has taken any steps to enforce those rules and measures against fishermen engaged in poaching of endangered species'.[33] Instead, China provided armed government vessels to protect the fishing boats. The Tribunal thus found that China had breached its obligations under Articles 192 and 194(5) of the LOSC to take necessary measures to protect and preserve the marine environment, with respect to the harvesting of endangered species from the fragile ecosystems at Scarborough Shoal and Second Thomas Shoal.[34]

Related to this, China's responsibility for environmental degradation caused by propeller chopping for giant clams across the Spratlys was also considered. The small propeller vessels involved in harvesting the giant clams were deemed to be within China's jurisdiction and control. Furthermore, the Tribunal established that China was fully aware of the practice and had actively tolerated it as a means to exploit the living resources of the reefs. Therefore, the Tribunal found that China had breached its obligation to protect and preserve the marine environment in respect of the harvesting of giant clams by the propeller chopping method.[35]

A further issue pertains to the legality of China's construction activities on seven reefs in the Spratly Islands. Since the end of 2013, China has created approximately 12.8 million square metres of land on top of the coral reefs. The artificial island-building programme is clearly part of an official Chinese policy and programme implemented by organs of the Chinese State.[36] The question of interest here concerns the impact of the construction activities on the marine environment. On the basis of expert reports, the Tribunal considered that undoubtedly China's artificial island-building activities on the seven reefs in the Spratly Islands have caused devastating and long-lasting damage to the marine environment. It accordingly found that, through its construction activities, China had breached its obligations under Articles 192, 194(1) and (5) of the LOSC.[37]

3.2 | Environmental impact assessment and monitoring

The next issue concerns the obligation to conduct an environmental impact assessment and monitoring. The obligation to carry out an

[22]ibid para 959.

[23]Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) (adopted 2 March 1973, entered into force 1 July 1975) 993 UNTS 243.

[24]*South China Sea* (n 2) para 956.

[25]ibid. See also para 959.

[26]ibid paras 941 and 959. See MM Mbengue, 'The South China Sea Arbitration: Innovations in Marine Environmental Fact-Finding and Due Diligence Obligations' (2016) 110 American Journal of International Law Unbound 286.

[27]See Separate Opinion of Judge Cançado Trindade in *Whaling in the Antarctic (Australia v Japan, New Zealand Intervening)* (Judgment) [2014] ICJ Rep 226 paras 25–26.

[28]Vienna Convention on the Law of Treaties (adopted 23 May 1969, entered into force 27 January 1980) 1155 UNTS 331 art 31(3)(c). Article 31(3)(c) formulates the principle of systemic integration. See further H van Asselt, *The Fragmentation of Global Climate Governance: Consequences and Management of Regime Interactions* (Edward Elgar 2014); R Wolfrum and N Matz, *Conflicts in International Environmental Law* (Springer 2003); P Merkouris, *Article 31 (3)(c) VCLT and the Principle of Systemic Integration: Normative Shadows in Plato's Cave* (Brill 2015). See also G Distefano and PC Mavroidis, 'L'Interprétation Systémique: Le Liant de l'Ordre International' in O Guillod and C Müller (eds), *Mélanges en l'honneur de Pierre Wessner* (Helbing & Lichtenhan 2011) 743.

[29]*South China Sea* (n 2) para 960.

[30]ibid para 961.

[31]*Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* (Request for Advisory Opinion submitted to the Seabed Disputes Chamber) [2011] ITLOS Reports 10 para 242(3).

[32]See also Mbengue (n 26) 286.

[33]*South China Sea* (n 2) para 964.

[34]ibid. See also paras 992–993.

[35]ibid paras 965–966.

[36]ibid para 976.

[37]ibid para 983.

environmental impact assessment was affirmed by the International Court of Justice (ICJ) in the *Pulp Mills* case. In the words of the Court:

> *[I]t 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.*[38]

Furthermore, in its 2011 advisory opinion, the ITLOS Seabed Disputes Chamber stressed that the obligation to conduct an environmental impact assessment is a general obligation under customary international law.[39]

As environmental conditions may change with time, there is a need to continue monitoring the ongoing environmental risks and impacts after a project has begun. Accordingly, environmental impact assessment must be complemented by a monitoring system. This point was confirmed by the ICJ in the *Pulp Mills* case:

> *The Court also considers that an environmental impact assessment must be conducted prior to the implementation of a project. Moreover, once operations have started and, where necessary, throughout the life of the project, continuous monitoring of its effects on the environment shall be undertaken.*[40]

In the particular context of marine environmental protection, obligations to conduct an environmental impact assessment and monitoring are provided in LOSC Articles 204, 205 and 206. Article 204(1) requires States to endeavour, as far as practicable to observe, measure, evaluate and analyse the risks or effects of pollution of the marine environment. Article 205 places an obligation upon States to publish reports of the results obtained pursuant to Article 204 to the competent international organizations, which should make them available to all States. Furthermore, Article 206 makes clear that:

> *When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205.*[41]

This provision seeks to ensure that planned activities with potentially damaging effects may be effectively controlled and that other States are kept informed of their potential risks.[42]

The *South China Sea* arbitration raised the question of whether China fulfilled its obligations to conduct an environmental impact assessment under the Convention. China has repeatedly asserted that it has undertaken thorough environmental studies in this connection. The Tribunal, however, could not find 'any report that would resemble an environmental impact assessment that meets the requirements of Article 206 of the Convention, or indeed under China's own Environmental Impact Assessment Law of 2002'.[43] The Tribunal thus concluded that it could not make a definitive finding that China had prepared an environmental impact assessment, nor could it definitely establish that it had failed to do so.[44]

According to the Tribunal, however, such a finding was not necessary in order to find a breach of Article 206. What is more important is the obligation to communicate. Article 206 obliges States to communicate reports of the results of assessments on the potential effects of planned activities on the marine environment, when they have 'reasonable grounds for believing that planned activities under their jurisdiction or control may cause significant and harmful changes to the marine environment'. In the view of the Tribunal, the obligation to communicate reports of the results of the assessment is 'absolute'.[45] Since China could not reasonably have believed that the construction may not cause 'significant and harmful changes to the marine environment',[46] it was under an obligation to communicate the result of the assessment[47] to 'competent international organizations, which should make them available to all States'.[48] While the Tribunal asked China for a copy of any environmental impact assessment it had prepared, China failed to provide one. Nor did it deliver such assessment to any other international body. Accordingly, the Tribunal concluded that China had not fulfilled its duties under Article 206 of the LOSC.[49] Three issues arise with regard to the Tribunal's finding on this matter.

The first issue pertains to the interlinkage between the obligations to carry out an environmental impact assessment and that to communicate. The ICJ, in the *Costa Rica v Nicaragua/Nicaragua v Costa Rica* case, linked these obligations, by stating that:

> *If the environmental impact assessment 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*

[38] *Pulp Mills on the River Uruguay (Argentina v Uruguay)* (Judgment) [2010] ICJ Rep 14 para 204 (*Pulp Mills*).
[39] ITLOS Advisory Opinion (n 31) para 145.
[40] *Pulp Mills* (n 38) para 205.
[41] LOSC (n 1) art 206.
[42] *South China Sea* (n 2) para 948.
[43] ibid para 989.
[44] ibid para 991.
[45] ibid para 948.
[46] ibid para 988.
[47] ibid.
[48] LOSC (n 1) art 205.
[49] *South China Sea* (n 2) para 991.

> *State, where that is necessary to determine the appropriate measures to prevent or mitigate that risk.*[50]

The Court's formulation could be read in a way to suggest that only when an environmental impact assessment confirms that there is a risk of significant transboundary harm, the State causing the risk must notify potentially affected State(s).[51] However, it seems that the obligation to communicate under Article 206 is not limited to the situation where a risk of significant transboundary harm was confirmed by the environmental impact assessment. In this sense, as the Tribunal stated, the obligation to communicate reports of the results of the assessment under Article 206 can be thought to be absolute.

The second issue concerns the quality of environmental impact assessments. Article 206 of the LOSC contains no guidance concerning the specific contents of an environmental impact assessment. In practice, a dispute may arise with regard to the quality of an environmental impact assessment and monitoring.[52] In the 2001 *MOX Plant* case, for instance, Ireland claimed that the United Kingdom had failed to cooperate with Ireland in the protection of the marine environment of the Irish Sea, *inter alia*, by refusing to carry out a proper assessment of the impacts on the marine environment.[53] In the *Pulp Mills* case, the parties disagreed with regard to the scope and content of the environmental impact assessment that Uruguay should have carried out, even though the parties agreed on the necessity of conducting an environmental impact assessment.[54] On this issue, the ICJ took the view that:

> *[I]t is for each State to determine in its domestic legislation or in the authorisation process for the project, the specific content of the environmental impact assessment required in each case, having regard to the nature and magnitude of the proposed development and its likely adverse impact on the environment as well as to the need to exercise due diligence in conducting such an assessment.*[55]

The *dictum* of the Court appears to suggest that determination of the content of the environmental impact assessment should be made in light of the specific circumstances of each case.[56] In this connection, Judge ad hoc Dugard stated: '[T]here are certain matters inherent in the nature of an environmental impact assessment that must be considered if it is to qualify as an environmental impact assessment and to satisfy the obligation of due diligence in the preparation of an environmental impact assessment.'[57] According to Judge ad hoc Dugard, such matters include: the assessment of the risk involved in an activity to the possible harm to which the risk could lead, an evaluation of the possible transboundary harmful impact of the activity, and an assessment of the effects of the activity not only on persons and property, but also on the environment of other States.[58] In the *South China Sea* arbitration, the Tribunal reviewed China's own legislative standards and ruled that the statements and reports published by the Chinese authorities were 'far less comprehensive' than environmental impact assessments reviewed by other international courts and tribunals.[59] In so stating, the Tribunal stressed 'comprehensiveness' as an important characteristic of environmental impact assessment.[60] Yet, the Tribunal offered scant explanation of its understanding of 'comprehensiveness'.[61]

The third issue pertains to the conditions for triggering an environmental impact assessment. Under Article 206, the obligation to conduct an environmental impact assessment is limited to the situation where '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'.[62] However, this provision does not specify what these 'reasonable grounds' may be. Nor did the Tribunal clarify the standard for determining the existence of reasonable grounds. In the *Costa Rica v Nicaragua/Nicaragua v Costa Rica* case, the ICJ specified that, in the first instance, a State is obliged to ascertain whether there is a risk of significant transboundary harm that would trigger the duty to conduct an environmental impact assessment (preliminary assessment). Only if such a risk exists, the State is further required to carry out an environmental impact assessment.[63] In this regard, the ICJ ruled that a preliminary assessment must be carried out 'on the basis of an objective evaluation of all the relevant circumstances'.[64] Yet, the evidential standard for determining 'significant' transboundary harm remains less clear and is a matter of subjective appreciation. As a consequence, there is no guarantee that the obligation to conduct an environmental impact assessment is appropriately triggered by the State causing the risk.

[50] *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica v Nicaragua) Construction of a Road in Costa Rica along the San Juan River (Nicaragua v Costa Rica)* (Judgment) [2015] ICJ Rep para 104.

[51] Y Tanaka, *'Costa Rica v. Nicaragua and Nicaragua v. Costa Rica* (ICJ 2015): Some Reflections on the Obligation to Conduct an Environmental Impact Assessment' (2017) 26 Review of European, Comparative and International Environmental Law 95. There appears to be some scope to consider whether the obligation to notify is triggered only when an environmental impact assessment finds a risk of significant transboundary environmental harm. In this regard, see Separate Opinion of Judge Donoghue in *Costa Rica v Nicaragua/Nicaragua v Costa Rica* (n 50) paras 21–24.

[52] P Birnie, A Boyle and C Redgwell, *International Law and the Environment*, 3rd edn (Oxford University Press 2009) 170. For a detailed analysis of inter-State disputes concerning environmental impact assessment, see N Craik, *The International Law of Environmental Impact Assessment: Process, Substance and Integration* (Cambridge University Press 2008) 111–120.

[53] *MOX Plant case (Ireland v United Kingdom)* (Provisional Measures) ITLOS Case No 10 [2001] para 26.

[54] *Pulp Mills* (n 38) para 203.

[55] ibid para 205.

[56] Separate Opinion of Judge Donoghue (n 51) para 15. See also J Harrison, 'Significant International Environmental Law Cases: 2015–16' (2016) 28 Journal of Environmental Law 537.

[57] Separate Opinion of Judge ad hoc Dugard in *Costa Rica v Nicaragua/Nicaragua v Costa Rica* (n 50) para 18.

[58] ibid. This view relied on the International Law Commission, 'Commentary on Article 7 of its Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities' (2001) 2 Yearbook of International Law Commission, Part Two, 158–159, paras 6–8.

[59] *South China Sea* (n 2) para 990.

[60] Mbengue (n 26) 287.

[61] ibid.

[62] LOSC (n 1) art 206.

[63] *Costa Rica v Nicaragua/Nicaragua v Costa Rica* (n 50) para 153.

[64] ibid.

3.3 | International cooperation

As the ITLOS stressed in the *MOX Plant* case, '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'.[65] The obligation to cooperate is explicitly embodied in Articles 197 and 123 of the Convention. Under Article 197, States are required to cooperate on a global or regional basis, 'directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features'.[66] Article 123 provides an obligation to cooperate between States bordering enclosed or semi-enclosed seas. More specifically, Article 123 requires States to endeavour to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment. As the South China Sea is regarded as a semi-enclosed sea, Article 123 is crucial. In this regard, the Tribunal held that it had no convincing evidence of China attempting to cooperate or coordinate with the other States bordering the South China Sea. Taken together with its lack of communication[67] of an environmental impact assessment, the Tribunal concluded that China had breached both Articles 123 and 206 of the Convention.[68]

3.4 | Use of experts

Scientific evidence is a key element in the settlement of international environmental disputes. Yet an international court or tribunal as a judicial organ may encounter considerable challenges with regard to the evaluation of often competing scientific data in judicial proceedings. In this regard, the use of experts merits discussion. Article 24(1) of the Rules of Procedure of the *South China Sea* arbitration specifies:

> *After seeking the views of the Parties, the Arbitral Tribunal may appoint one or more independent experts. That expert may be called upon to report on specific issues and in the manner to be determined by the Arbitral Tribunal. A copy of the expert's terms of reference, established by the Arbitral Tribunal, shall be communicated to the Parties.*[69]

Article 24(2) further requires that '[a]ny expert shall, in principle before accepting appointment, submit to the Arbitral Tribunal and to the Parties a description of his or her qualifications and a statement of his or her impartiality and independence'.[70] Article 24 provides a procedure to secure independence and impartiality of the expert appointed by the Tribunal. Under the same provision, a party may object to the expert's qualifications, impartiality or independence only if the objection is for reasons of which the party becomes aware after the appointment has been made.

Article 24(3) of the Rules of Procedure places an obligation upon the parties to 'give the expert any relevant information or produce for his or her inspection any relevant documents or goods that he or she may require of them'.[71] Under the same provision, the parties are also obliged to 'afford the expert all reasonable facilities in the event that the expert's terms of reference contemplate a visit to the localities to which the case relates'.[72] The comparatively detailed rules embodied in Article 24 go well beyond the simple rule provided in Article 50 of the Statute of the ICJ.[73]

Expert reports significantly affected the decision of the Tribunal in the *South China Sea* arbitration. In examining adverse effects of harvesting giant clams, for instance, the independent experts' report provided important evidence for the Arbitral Tribunal.[74] The Tribunal also relied on the independent experts' report when examining the impacts of China's construction activities on the coral reefs.[75] The active use of experts in the *South China Sea* arbitration contrasts with the practice of the ICJ.[76] Even though Article 50 of the ICJ Statute allows the Court to seek expert opinions, it is rare for it to use this power.[77] In the *Whaling in the Antarctic* case, for instance, both Japan and Australia called experts at the hearings. However, the Court did not appoint its own expert.[78] In the *Costa Rica v Nicaragua*/*Nicaragua v Costa Rica* cases, the Court ascertained competing scientific evidence on its own, without appointing a scientific expert. Similarly, the ICJ, in the *Pulp Mills* case, did not appoint any experts under Article 50 of the Court's Statute. In this case, the Court declared:

> *[I]t is the responsibility of the Court, after having given careful consideration to all the evidence placed before it*

[65] *MOX Plant* (n 53) para 82.

[66] LOSC (n 1) art 197.

[67] *South China Sea* (n 2) para 986.

[68] ibid para 993.

[69] Article 24 was inspired by Article 29 of the 2013 UNCITRAL Arbitration Rules; see Mbengue (n 26) 287.

[70] ibid art 24(2).

[71] ibid art 24(3).

[72] ibid.

[73] Statute of the International Court of Justice (adopted 26 June 1945, entered into force 24 October 1945) 33 UNTS 993 art 50 stipulates that '[t]he Court may, at any time, entrust any individual, body, bureau, commission, or other organization that it may select, with the task of carrying out an enquiry or giving an expert opinion'. Unlike Article 24 of the Rules of Procedure of the *South China Sea* arbitration, this provision contains no procedure to secure the impartiality and independence of experts.

[74] *South China Sea* (n 2) paras 957–958.

[75] ibid paras 978–983.

[76] See also Mbengue (n 26) 287–289.

[77] In the *Corfu Channel* case, the Court appointed experts since it was necessary to obtain an expert opinion with regard to certain points contested between the parties. *Corfu Channel (United Kingdom of Great Britain and Northern Ireland v Albania)* (Judgment) [1948] ICJ Rep 124. In the *Gulf of Maine* case, the ICJ, upon a joint request of the parties appointed an expert using its powers under Article 50 of the Statute. *Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)* (Appointment of Expert) [1984] ICJ Rep 165. Recently, it appointed experts in a case concerning maritime delimitation. *Maritime Delimitation in the Caribbean Sea and the Pacific Ocean* (*Costa Rica v Nicaragua*) not yet reported.

[78] Some argue that as one option, the ICJ should have appointed experts under Article 50 of the ICJ Statute to advise whether the Japanese whaling programme can be regarded as a programme conducted for 'the purposes of scientific research'. D Peat, 'The Use of Court-Appointed Experts by the International Court of Justice' (2014) 84 British Yearbook of International Law 287. See also M Fitzmaurice, *Whaling and International Law* (Cambridge University Press 2015) 103.

> *by the Parties, to determine which facts must be considered relevant, to assess their probative value, and to draw conclusions from them as appropriate.*[79]

However, whether the Court as a judicial body is well placed to tackle complex scientific issues is a question of considerable interest. In this regard, in the *Pulp Mills* case, Judges Al-Khasawneh and Simma gave their misgivings, stating: 'The Court on its own is not in a position adequately to assess and weigh complex scientific evidence of the type presented by the Parties.'[80] According to the learned judges:

> *The adjudication of disputes in which the assessment of scientific questions by experts is indispensable, as is the case here, requires an interweaving of legal process with knowledge and expertise that can only be drawn from experts properly trained to evaluate the increasingly complex nature of the facts put before the Court.*[81]

Judges Al-Khasawneh and Simma also indicated the existence of internal '*experts fantômes*' or 'invisible experts'. The use of 'invisible experts', however, means that the parties before the Court have no chance to comment upon expert opinions. Hence the use of such experts, particularly in fact-intensive cases, creates problems associated with the absence of transparency, openness and procedural fairness.[82] As the *South China Sea* arbitration demonstrated, the appointment of independent experts by the judicial body is an alternative well worth considering.

4 | CONCLUSIONS

This case note examined four environmental issues in the *South China Sea* arbitration: the obligation of due diligence; the obligation to conduct an environmental impact assessment; the obligation to cooperate; and the use of experts. The above consideration can be summarized in three points.

First, it is significant that the Tribunal recognized application of the due diligence obligation to the protection of rare or fragile ecosystems and the habitat of endangered species. In this regard, the Tribunal's systemic approach to treaty interpretation merits particular note. It is also noteworthy that the Tribunal specified two components of the obligation of due diligence: (i) a duty to adopt rules and measures to prevent harmful acts; and (ii) a duty to maintain a level of vigilance in enforcing those rules and measures.

Second, the Tribunal found a breach of obligations under Article 206 concerning environmental impact assessment because of a lack of communication. Given that it may be hard to determine whether a State properly carried out an environmental impact assessment, the Tribunal's approach to focus on the non-fulfilment of a procedural requirement, that is, communication, is noteworthy.

Third, the Rules of Procedure of the *South China Sea* arbitration provided a process to secure the independence and impartiality of experts appointed by the Tribunal. This procedural innovation can be expected to contribute to enhancing the transparency of the Tribunal's decisions on scientific evidence.[83] Overall the *South China Sea* arbitration provides useful insights into the interpretation and application of relevant provisions of the LOSC with regard to marine environmental protection.

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[79] *Pulp Mills* (n 38) para 168.

[80] Joint Dissenting Opinion of Judges Al-Khasawneh and Simma in *Pulp Mills* (n 38) para 4.

[81] ibid para 3. See also AM Weisburd, *Failings of the International Court of Justice* (Oxford University Press 2016) 232.

[82] Joint Dissenting Opinion of Judges Al-Khasawneh and Simma (n 80) para 14. See also B Simma, 'The International Court of Justice and Scientific Expertise' (2012) 106 Proceedings of the Annual Meeting of American Society of International Law 231.

[83] Mbengue (n 26) 288.