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Environmental Atrocities in the South China Sea: The Science Behind Conservation Recourse

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ABSTRACT

Extensive damage to reefs and exploitation of threatened species of the South China Sea raise questions regarding national obligations under international treaties. An historic test of these obligations under the United Nations Convention on the Law of the Sea (UNCLOS) was presented by the Philippine government before the Permanent Court of Arbitration at the International Court of Justice at the Peace Palace in Den Hague in November 2015. High resolution satellite imagery and on-site photographs, videos, and eye witness accounts provide ample evidence of unparalleled direct environmental damage to highly productive and biodiverse coral reefs of the South China Sea. Experts witness testimony indicated that this damage is a result of extensive island building on reef flats and sedimentation from dredging activities. Scientific evidence also indicates that this damage to coral reefs is likely to influence reef productivity throughout the region, including in adjacent Exclusive Economic Zones. Additional evidence of unrestrained exploitation targeting giant clams, corals, and reef fishes was presented that are indicative of irresponsible fishing practices and pose additional threats to endangered species. The decision of the Tribunal of the Permanent Court of Arbitration was handed down in July 2016 that upheld the claims of the Philippines government and has far-reaching policy implications for environmental actions in international waters. An evaluation of the ruling of the tribunal shows that nearly all points presented under UNCLOS were merited, with the possible exception of claims of connectivity of reefs of the South China Seas with adjacent Exclusive Economic Zones. Further research is needed to provide evidence for this claim.

Keywords:
United Nations Convention on the Law of the Sea, Permanent Court of Arbitration, giant clams, coral reefs, population connectivity

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INTRODUCTION

The ongoing dispute between the People's Republic of China (PRC) and the Republic of the Philippines (RP) in the South China Sea centers primarily on territorial issues (Carpio 2017) but environmental concerns also figured prominently in arbitration. The RP alleged in a Testimonial and subsequent amendments that the PRC was not in accordance with their UNCLOS treaty obligations about the environment and this was considered by a Tribunal of five judges of the Permanent Court of Arbitration. Specifically, the testimonial alleged that threatened and endangered species were being extracted from the South China Sea by PRC fisherman under the protection of the PRC government. In addition, the PRC was harming the fragile coral reef marine ecosystems by destructive fishing methods and island building activities.

The Permanent Court of Arbitration housed at the Peace Palace in Den Hague, Netherlands determined that it held jurisdiction in this dispute under the United Nations Convention on the Law of the Sea (UNCLOS) and convened to hear arguments in November 2015 (PCA 2016). The complete signed award document from these proceedings is 479 pages in length, of which 78 pages are dedicated to arbitration mostly under Part XII of UNCLOS (1982), "Protection and Preservation of the Marine Environment." This included Article 192, three items under Article 194 and Article 206 quoted here in full from the UNCLOS (1982) document:

"Article 192
General Obligation
"States have the obligation to protect and preserve the marine environment.

"Article 194
"Measures to prevent, reduce and control pollution of the marine environment

"1. States shall 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 harmonize their policies in this connection.

"2. States shall take all measures necessary to ensure that activities under their 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.

"5. The measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.

"Article 197
"Cooperation on a global or regional basis

"States shall cooperate on a global basis and, as appropriate, on a 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.

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"Article 206
"Assessment of potential effects of activities

"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."

Article 123 which is entitled "Cooperation of States bordering enclosed or semi-enclosed seas" is also considered in the award. However, it is essentially a duplication of Article 206 given that the South China Sea is a semi-enclosed sea.

CONSERVATION RECOURSE

The conservation recourse available to the RP for environmental arbitration was to present all evidence to the Tribunal, scientific and otherwise, to demonstrate that the PRC was in contravention of their treaty obligations under Articles 123, 192, 194(1,2,5) and 206. Evidence was presented to the Tribunal in the form of reports by experts solicited either by legal team of the RP or the Tribunal itself (PCA 2016). There were three reports relating to environmental issues submitted to the Tribunal by the RP legal team. The first report, referred to as the "First Carpenter Report" was included in the original Testimonial submitted to the Tribunal dated March 2014. A "Second Carpenter Report" dated November 2015 was in response to new evidence of extensive PRC island building activities that came to light after the first report was published. A "Third Carpenter Report" was solicited by the Tribunal and presented by the RP legal team and dealt with evidence of clam extraction activities that came to light after the Tribunal hearing in November 2015. In addition, Professor Kent Carpenter gave two in person testimonials regarding available evidence as an Expert Witness for environmental issues during the Hearings held by the Permanent Court of Justice in the Peace Palace in Den Hague, Netherlands in November 2015. Other evidence quoted include the "Ferse Report" which was solicited by the Tribunal as an independent report to corroborate the "Carpenter reports" and the "McManus Report" which dealt primarily with giant clam extraction activities that came to light after November 2015 Tribunal hearing.

The underlying questions here with regard to the actions of the PRC in the South China Sea are:

1) Were necessary measures taken to protect and preserve the marine environment by preventing, reducing, and controlling pollution in accordance with the sovereign policies of the PRC as per Articles 192 and 194(1)? In addition, did they cooperate with other States to assess and communicate the potential effects of their activities in the South China Sea as per Articles 123 and 206?
2) Were threatened or endangered species protected and preserved as per Article 194(5)?
3) Are coral reefs fragile ecosystems and were these protected and preserved as per Article 194(5).
4) Were all necessary measures taken to ensure that activities are conducted so as not to cause damage by pollution to other States and their environment as per Article 194(2).

The evidence for question one above hinges on demonstrating that an environmental impact statement was produced and communicated prior to the extensive island building activities that occurred in 2015. The Tribunal and the legal team of the RP searched all available public records and solicited information from the government of the

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PRC that would demonstrate that an appropriate environmental assessment was done. There was insufficient or inadequate evidence found to substantiate that the PRC had completed an environmental impact statement (PCA 2016).

The evidence for the second question rested initially in the "First Carpenter Report" (PCA 2016) which evaluated extensive RP reports and photographic evidence. This clearly showed that threatened and endangered turtles, giant clams, and corals were being harvested by PRC-flagged fishermen and that these activities sometimes took place under the direct protection of PRC military vessels. The conclusion that the species that could be identified using the photographic evidence were threatened and endangered species came from the International Union for Conservation of Nature (IUCN) Red List of Threatened Species (IUCN 2014) and Convention on International Trade in Endangered Species of Wild Fauna and Flora. Interestingly, this may have been the first time that the species evaluated as threatened under IUCN Red List Criteria was used as legal evidence under an international arbitration case. Subsequent evidence for extensive extraction of threatened giant clams came from the "McManus Report" and the "Third Carpenter Report."

Evidence that coral reefs are fragile ecosystems and that these were not protected and preserved by the PRC came mostly from the "Second Carpenter Report" and the testimony of Carpenter during the Tribunal hearings (PCA 2016). The damage to reefs was caused primarily by PRC island building activities and extensive destructive giant clam extraction methods carried out by PRC-flagged fishermen. This was corroborated by the "Ferse Report." Additional evidence of giant clam extraction methods was presented by the "McManus Report."

Evidence that the PRC caused damage to other States by their actions was argued in the "First Carpenter Report," the "Second Carpenter Report" and the Carpenter testimony during the hearings (PCA 2016). This evidence rested primarily on the idea that extensive destruction of reef habitat would reduce larval replenishment of reefs in the nearby coastal waters of the RP. This was based on generalized ocean current and larval dispersal models available for the South China Sea (Treml et al. 2015) and similar evidence available for a species of coral found in the South China Sea (Dorman et al. 2015).

CONCLUSIONS OF THE TRIBUNAL UNDER PART XII OF UNCLOS

After careful consideration of all available evidence and extensive arguments put forth in the award document (PCA 2016), the Tribunal made two primary conclusions. These were:

1) "Based on the considerations outlined above, the Tribunal finds that China has, through its toleration and protection of, and failure to prevent Chinese fishing vessels engaging in harmful harvesting activities of endangered species at Scarborough Shoal, Second Thomas Shoal, and other features in the Spratly Islands, breached Articles 192 and 194(5) of the Convention.

2) "The Tribunal further finds that China has, through its island-building activities at Cuarteron Reef, Fiery Cross Reef, Gaven Reef (North), Johnson Reef, Hughes Reef, Subi Reef, and Mischief Reef, breached Articles 192, 194(1), 194(5), 197, 123, and 206 of the Convention."

DISCUSSION

The Tribunal upheld nearly all the arguments of the RP about the environment (PCA 2016). The photographic evidence provided ample justification for claims that threatened and endangered species were extracted by PRC-flagged fishermen, sometimes under the protection of PRC military vessels. Although evidence was presented to show that cyanide and dynamite were being used by PRC flagged vessels and that this constituted irresponsible fishing practices, the tribunal found that there was insufficient evidence to show that this was an ongoing threat to fragile coral reef

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ecosystems, because available evidence was several years old. However, the tribunal did upheld claims, based on evidence presented, that coral reefs were fragile ecosystems that warranted preservation and protection, and these were obligations that held regardless of who held sovereignty over the affected reefs. In addition, aerial imagery and other evidence clearly showed the PRC vessels were engaged in reef destruction by island building activities and extensive destructive giant clam extraction methods. Furthermore, it concluded from lack of evidence to the contrary, that the PRC failed to meet its obligation to produce and communicate an environmental impact statement prior to island building activities and that it failed to coordinate its actions with other concerned States in the region.

The Tribunal did not uphold RP claims that the PRC failed to prevent pollution from spreading to other states (PCA 2016). The Tribunal pointedly asserted that the type of destructive activities constituted a form of pollution and reiterated the claim by the RP that this could spread to the waters of other nearby sovereign waters. However, they did not discuss the modeling evidence presented that showed the potential for connectivity of reefs in the middle of the South China Sea with reefs close to Philippine archipelagic features (Treml et al. 2015; Dorman et al. 2015). Apparently, this was not considered strong enough evidence and additional data is required to make this point definitively. A population genetic study demonstrating connectivity of coral reef populations in the South China Sea would provide direct evidence.

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