

International law and the protection of the giant clams in the South China Sea



PANEL ON THE MARINE ENVIRONMENT

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Youna Lyons, Denise Cheong, Neo Mei Lin, Wong Hiu Fung
National University of Singapore



National University of Singapore
(St John's Island National Marine Laboratory)

CIL

CENTRE FOR INTERNATIONAL LAW
National University of Singapore

Presentation Overview

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- III. Obligation to protect threatened and endangered species and their habitats**
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I. Background

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True giant clam, *Tridacna gigas*

- Largest giant clam species
- Geographical range used to be the Indo-Pacific (including SCS) to Indonesia, Marshall Islands and the Great Barrier Reef in Australia although now locally extinct in several areas
- Preferred habitats include sandy bottoms or coral rubble on shallow lagoons and coral reef flats



I. Background

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Harvested for its adductor muscle and shell; high-value marine products



Widespread and large-scale harvesting of giant clams in the SCS

I. Background

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Destructive impact on coral reefs due to method of harvesting fossil giant clam shells (propeller-chopping method)





II. Obligation to protect and preserve the marine environment

Overarching obligation that applies to all maritime zones

- **Protect and preserve the marine environment [Art 192]**
- **Coastal States have exclusive sovereign rights to exploit natural resources on continental shelf (including sedentary species) [Art 77]**
- **However, these sovereign rights have to be exercised in accordance with their duty to protect and preserve the marine environment [Art 193]**
- **Obligation to protect the marine environment applies to all maritime zones [UNCLOS and SCS Arbitration Award]**

III. Obligation to protect threatened and endangered species and their habitats

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Part of the overarching obligation to protect and preserve the marine environment

- Protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life [Art. 194(5)]
- Due diligence obligation to protect the marine environment under UNCLOS Article 192 read in the context of Article 194(5) entails obligation to take necessary measures to give effect to Article 194(5) by preventing:
 - the direct harvesting of species that are recognised internationally as being at risk of extinction; and
 - harm that would negatively impact the habitat of such species [SCS Arbitration Award]

III. Obligation to protect threatened and endangered species and their habitats

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Giant clams from the SCS are a threatened species

- Species included in CITES Appendices I and II qualify as ‘threatened and endangered species’ for purposes of Art 194(5) [SCS Arbitration Award]
- Giant clams are listed in CITES Appendix II
- Harm caused by exploitation difficult to reverse in view of following characteristics:
 - Slow-growing species with late reproductive maturity
 - Reproduction relies on synchronous spawning among mature neighboring clams where their removal increases nearest-neighbour clam distances, thereby limiting the chances of effective reproduction



III. Obligation to protect threatened and endangered species and their habitats

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Any extinction of giant clams in the SCS would be irreversible

Reinstatement *via* mariculture does not replace wild stocks

- Genetic diversity of giant clams in SCS highly likely to be different from other wild populations
- Critical consideration is how to maintain genetic diversity of existing wild stocks
- Previous studies have shown that hatchery-produced juveniles are limited in their genetic diversity as compared to wild populations, despite improved protocols
- Introducing large numbers of genetically un-diverse juveniles could overwhelm the gene pool of wild stocks, and result in the irreversible loss of genetic integrity of local *T. gigas* populations

III. Obligation to protect threatened and endangered species and their habitats

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Removal of giant clams using destructive gear threatens coral reefs systems in the SCS

- Harvesting using destructive gear has affected substantial portions of coral reef systems
- Removal of giant clams impacts coral reef systems given giant clams' role as effective ecosystems engineers (reef builders and providers of food and shelter to other reef species)



III. Obligation to protect threatened and endangered species and their habitats

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Destruction to coral reef systems affects recruitment of giant clams

- Clam larvae are planktonic and tend to settle on suitable reef habitats after approximately 9 days
- The clam larvae are capable of actively selecting their settlement sites by swimming and chemosensory ability
- They have been found to preferentially settle on functional coral reefs containing crustose coralline algae (CCA) or in the presence of giant clams
- The reduced coral reef functionality in SCS and the widespread harvesting of giant clams mean that larvae are less likely to settle and recruit successfully



III. Obligation to protect threatened and endangered species and their habitats

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CITES seeks to protect the giant clam by controlling international trade

- CITES seeks to protect threatened and endangered species by controlling international trade through a system of permits/certificates
- E.g. Introduction from the sea of any specimen requires the prior grant of a certificate from a Management Authority of the State of introduction which is subject to:
 - the introduction not being detrimental to the survival of the species involved; and
 - any living specimen being so handled as to minimise the risk of injury, damage to health or cruel treatment

IV. Obligation to adopt domestic measures

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Due diligence obligation includes the adoption of legislative and administrative measures

- Obligations to protect and preserve the marine environment and threatened/endangered species and their habitats apply to:
 - activities undertaken directly by States; and
 - activities undertaken by others within their jurisdiction and control for which States have responsibility to ensure compliance with obligations [SCS Arbitration Award]
- Obligation “to ensure” is one of due diligence and requires the adoption of domestic legislative and administrative measures [SCS Arbitration Award]
- Sanctions must be sufficient to deter violations and to deprive offenders of the benefits accruing from [the illegal] activities [2015 ITLOS Advisory Opinions on IUU fishing]

IV. Obligation to adopt domestic measures

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CITES also requires domestic measures to be adopted

- Implementing CITES requires that trade that does not comply with the requirements of CITES is (i) prohibited and penalised; (ii) illegally-traded specimens are confiscated; and (iii) the establishment of certain institutional mechanisms to facilitate CITES-regulated trade.
- Need for CITES-implementing legislation to meet these criteria
- Strong implementation of CITES also requires the prohibition/restriction of domestic trade in CITES-listed species by domestic legislation

IV. Obligation to adopt domestic measures

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Obligation of due diligence extends to enforcement of domestic measures

- Provide for enforcement mechanisms to monitor and secure compliance
 - Observe 'certain level of vigilance in their enforcement and exercise of administrative control [...] such as the monitoring of activities undertaken'
 - Upon receipt of reports of non-compliance, responsible State is under obligation to investigate; take any action necessary to remedy the situation; and inform reporting State of action taken
- [2010 ICJ decision in Pulp Mills; 2011 and 2015 ITLOS Advisory Opinions on seabed mining and IUU fishing]
- Where States have jurisdiction and control over the harvesting of giant clams, these additional steps must be taken in order to ensure their effective protection and preservation

V. Obligation to consult and cooperate

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Obligation to consult and cooperate in UNCLOS and case law

- States bordering enclosed or semi-enclosed seas have an obligation to cooperate with each other to manage, conserve, explore and exploit living resources [Art 123]
- States have duty to cooperate (on global or regional basis) to set rules, standards, practices and procedures for the protection and preservation of the marine environment, taking into account 'characteristic regional features' [Art 197]
- States also have an obligation to consult other States when activities conducted within their jurisdiction or under their control can have transboundary impacts on resources of other States [flows from Part XII of UNCLOS and applied in 2001 MOX Plant Case and 2003 Land Reclamation Case by ITLOS]

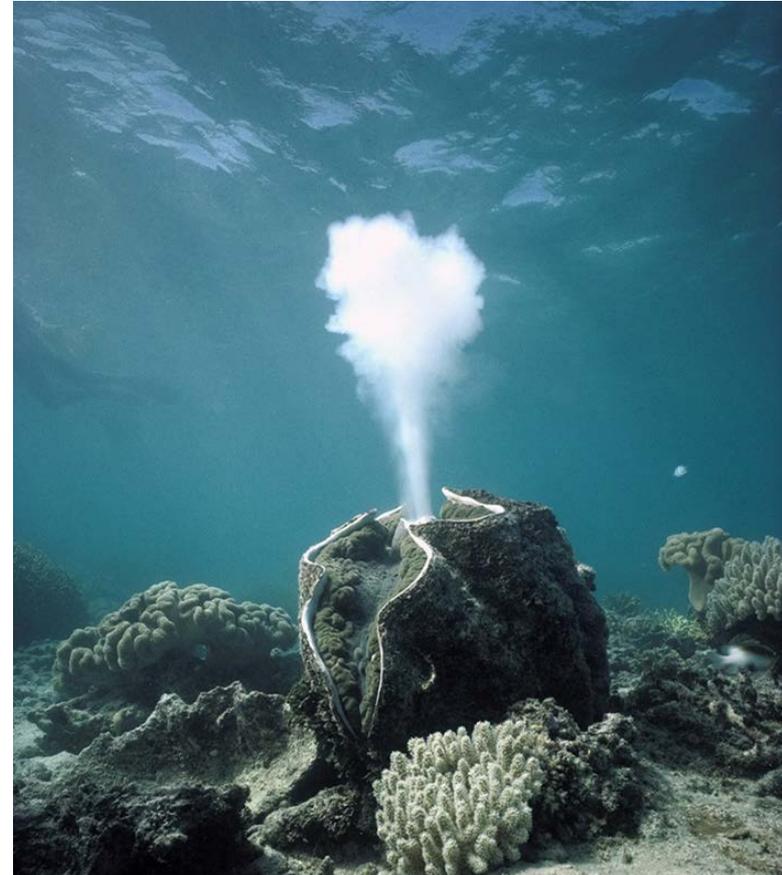
V. Obligation to consult and cooperate

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Importance of consultation and cooperation with respect to shared resources

Characteristics of giant clams make them a shared resource, which further justifies consultation and cooperation:

- Giant clam larvae are planktonic; removal of adult clams upstream may impact recruitment of giant clams downstream
- Effective management needs to be basin wide rather than localised



V. Obligation to consult and cooperate

3/5

To assess SCS-specific stock of *T. gigas*

- Loss of *T. gigas* in SCS is likely to lead to a total loss of their genetic diversity
- Obligation to consult and cooperate for the protection of the giant clams would require that neighboring States consult and cooperate with a view to taking the following measures:
 - Stock assessment in SCS that takes into account the best scientific evidence
 - Exchange of relevant information and data

V. Obligation to consult and cooperate

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To consider listing *T. gigas* in SCS in CITES Appendix 1

- Current CITES listing does not distinguish between the different species of giant clams; giant clams have not been subject of CITES periodic review in the last 10 years
- Consider listing *T. gigas* in the SCS in Appendix 1 as it appears to meet the CITES biological criteria for such a listing (Annex 1 to CITES COP Resolution 9.24 as amended)
- CITES calls for a precautionary approach in cases of uncertainty (Annex 4 to CITES COP Resolution 9.24 as amended)

V. Obligation to consult and cooperate

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To impose moratorium on harvesting giant clams in the SCS

While States conduct a SCS-specific stock assessment and a CITES Appendix-1 listing for *T. gigas* in the SCS is being considered, a moratorium should be imposed:

- Obligation of States bordering the SCS to consult and cooperate to protect and preserve the marine environment of the SCS
- Risk of irreversible loss of the *T. gigas* population in the SCS
- Application of precautionary approach

VI. Conclusion

- International law provides clear grounds to hold States and those whose activities are within their jurisdiction and control accountable
- States must adopt domestic measures and ensure enforcement to secure compliance
- Urgent need for SCS-specific stock assessment and to consider listing *T. gigas* in the SCS in CITES Appendix 1
- Moratorium on harvesting should be imposed in the interim

An underwater photograph showing a diver in the upper center, looking down at a vast, colorful coral reef that stretches across the bottom of the frame. The water is clear and blue.

Thank you

Courtesy of Prof. Marie Antonette J. Menez