

## Shared resources in the South China Sea and the management of transboundary environmental risks

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The South China Sea (SCS) is undoubtedly a regional and semi-enclosed seas where intense and sometime competing sea uses are often unsustainable and challenge the ability of this ocean basin to continue providing the benefits expected by the coastal States. The near-enclosed nature of the SCS and its narrow throughflows make it a very particular ocean basin where most living resources are shared resources and most pollution from ocean activities risks having transboundary impacts.

This paper focuses on two distinct processes that threaten ecosystems in the SCS. First, the unilateral or bilateral management of shared living resources instead of a regional management mechanism. Second, the lack of coordination mechanisms to help manage transboundary impact from activities such as pollution from offshore activities or from large scale dredging operations such as those that accompanied large scale island building in the Spratlys.

### 1. Shared resources and migratory species

#### *International law*

Most ASEAN States and all the largest States bordering the SCS have formally accepted to be bound by the 'Constitution for the Oceans' - the United Nations Convention on the Law of the Sea (UNCLOS)- and therefore by its provisions on the sustainable use of all living resources and the protection of the marine environment. This includes first, an obligation to determine the allowable catch of living resources whilst ensuring that it is not threatened by over-exploitation. This decision must be guided by best scientific evidence and account for fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global.<sup>1</sup>

The reference to subregional and regional standards is particularly relevant in the SCS where, given its semi-enclosure, bordering States also have an obligation to cooperate with each other to coordinate the management, conservation, exploration and exploitation of the living resources from this sea. The semi-enclosed nature and circulation pattern of the SCS basin further results in a large proportion of straddling and shared commercially exploited fish stocks (such as Spanish mackerels (tengirri), seabass, pomfrets and groupers). In such a situation, Article 63 of UNCLOS directs that bordering States seek to agree upon the measures necessary to coordinate and ensure the conservation and development of such stocks. States bordering the SCS also harvest migratory species (e.g. skipjack tuna) for which they

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<sup>1</sup> UNCLOS, Art. 61

have a similar obligation to seek to cooperate either directly or through appropriate international organizations with a view to ensuring conservation and promoting the objective of optimum utilization. In regions for which no appropriate international organization exists, States shall cooperate to establish such an organization and participate in its work.

However, there is no such Regional Fisheries Management Organization (RFMO) in the SCS. Migratory species that are managed under the West Pacific Fisheries Organization, when in the Pacific, fall out of its scope when in the SCS (e.g. skipjack tuna). Created in 1973, the Southeast Asian Fisheries Development Center focuses primarily on aquaculture and fisheries statistics.<sup>2</sup>

Despite the regional concerns for wild fish stocks in the SCS, only two SCS littoral States have so far become party to the 1995 United Nations Agreement on the Implementation of the Provisions of UNCLOS relating to the Conservation and Management of Fish Stocks and Highly Migratory Fish Stocks (the Fish Stocks Agreement): Philippines and Indonesia. Indonesia has also recently developed a stronger policy against Illegal, Unlawful and Unreported (IUU) fishing. Could this be the sign of a new paradigm developing for Southeast Asia's fisheries?

#### *Current situation in the SCS*

The SCS is a subsection of two wider Fishing Areas of the FAO<sup>3</sup> which make the isolation of SCS relevant fisheries statistics less straightforward. However, specialized publications<sup>4</sup> all point to the depletion of fisheries resources, many fish stocks being over-exploited and some being extinct. As is the case for most fisheries worldwide, the average size of fish caught is substantially smaller than 20 years ago, the number of fish caught per unit of effort is greater and fishermen are fishing down the food web (catching for instance more smaller fish species and crustaceans or shellfish rather than large carnivorous fish).

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<sup>2</sup> Its mission is to conduct research, develop technologies and disseminate information and train people in the farming of fishes, crustaceans, mollusks and seaweeds for food, livelihood, equity and sustainable development.

<sup>3</sup> Fishing Area 71 includes most of the SCS as well as the Sulu Sulawesi Sea, part of the Java Sea and the southern Pacific Ocean. Fishing Area 61 includes the northwestern part of the SCS, Taiwan Straits and northern Pacific Ocean.

<sup>4</sup> See for instance Pajuta Khemakorn, *Sustainable Management of Pelagic Fisheries in the South China Sea Region* (2006), United Nations-The Nippon Foundation Fellow (manuscript from the author), Thang Nguyen-Dang, *Fisheries Cooperation in the South China Sea and the (ir)relevance of the Sovereignty Question* (2010), AsianSIL Working Paper 2010/2014: <mailto:http://www.asiansil.org/publications/2010-14%2520-%2520Thang%2520Nguyen%2520Dang.pdf> or data presented by the Sea Around Us initiative at the University of British Columbia, especially A. Witter et al., *Taking Stock and Projecting the Future of South China Sea Fisheries* (2015), Working Paper #2015-99: [mailto:http://oceancanada.org/wp-content/uploads/2015/03/FCWP\\_2015\\_99\\_Witter.pdf](mailto:http://oceancanada.org/wp-content/uploads/2015/03/FCWP_2015_99_Witter.pdf)

## 2. Managing risk of transboundary pollution

### *International law*

UNCLOS provides for clear obligations on States to take all measures that are necessary to prevent, reduce and control pollution of the marine environment from any source.<sup>5</sup> With respect to transboundary pollution, UNCLOS also provides that States shall ensure that all measures necessary to ensure that activities under their jurisdiction or control are so conducted as to not 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.

These provisions in UNCLOS establishing a ‘responsibility to ensure’ have been interpreted by the International Tribunal on the Law of the Sea<sup>6</sup> as an obligation of ‘due diligence’, an obligation ‘of conduct’ (not ‘of result’), but an obligation to ‘deploy adequate means to exercise best possible efforts, to do the utmost to protect the marine environment against pollution. These due diligence obligations require a State to take measures within its legal system, including the adoption of laws and regulations as well as administrative measures to ensure that such laws and regulations are enforced. They also include the obligation to monitor (observe, measure, evaluate and analyse by recognized scientific methods) the risks or effects of pollution of the maritime environment and to publish reports of the results.’<sup>7</sup>

In the context of pollution from seabed mining, UNCLOS further requires States to establish global and regional rules, standards and recommended practices and procedures to prevent reduce and control pollution of the marine environment.

In Southeast Asia, States are well aware of the importance of the oceans resources to sustain their people and economic development and of the numerous environmental and human threats. However, they are reluctant to enter into binding agreements. Among the many declarations signed that reiterate the intention to States to improve the management of marine and coastal resources, the 2003 Putrajaya Declaration of Regional Cooperation for the Sustainable Development of the Seas of East Asia is one of the most detailed. It also formulates the Sustainable Development Strategy for the Seas of East Asia that includes the provision of a platform for cooperation at regional and subregional level.

### *Offshore activities*

It is estimated that there is a minimum of 1350 offshore installations for oil and gas activities in the SCS (including the Gulf of Thailand), Java Seas and Makassar straight. Indonesia has by far the largest number of offshore installations, followed by Malaysia, Thailand, Brunei and Vietnam. Risk of transboundary pollution from an

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<sup>5</sup> UNCLOS, Part XII, esp. Art. 194

<sup>6</sup> See the Advisory Opinion on Seabed Activities of ITLOS’ Seabed Disputes Chamber on Responsibilities and Obligations of States Sponsoring Persons and Entities with respect to Activities in the Area, 1 February 2011, ITLOS Rep 2011, 10.

<sup>7</sup> UNCLOS, Art. 204 to 206

incident arising in the Gulf of Thailand or in the SCS are self evident when considering nautical charts that show offshore installations and ocean circulation models.<sup>8</sup>

Satellite imagery shows visible signs of oil presence from vessels as well as (likely) offshore activities. Oil sheen can be seen as oil sludge behind large on-going vessels as well as along the coast including in mangrove areas. However there are still no regional mechanisms to monitor, attribute and respond to oil spills from such activities. Although current oil pollution may be primarily a by-product of on-going activities and therefore more an issue of compliance mechanism (of operational spills rather than one of contingency planning), it would be preferable not to wait for a large spill incident to put in place adequate oil spill response contingency plans.

Positive developments are noted with the Global Initiative launched by the International Maritime Organization jointly with IPIECA for Southeast Asia (GISEA) and the ASEAN Memorandum of Understanding on ASEAN Cooperation and Mechanism for Joint Oil Spill Preparedness and Response signed in December 2014. However, they are yet to be implemented.

#### *Large scale dredging on shallow features in the South China Sea*

The large scale dredging operations on shallow reef flats of coral reef platforms located atop seamounts in the Spratlys are yet another example of uncontrolled ocean activities in the SCS that carry likely substantial transboundary impact.

Likely transboundary impacts are both direct and indirect. The main direct impacts result from the destruction of the coral flat habitat and associated species and the sediment plume created by the dredging that threaten all organisms that rely on photosynthesis to survive (and as a result, also those that rely on the latter). There is little doubt that the dredging of shallow reef platforms located within the EEZ of a coastal States would have an impact on the surrounding marine life. Another indirect but potentially critical impact results from the likely connectivity between the isolated reef platforms in the SCS and the coastal coral reefs. This connectivity is based on scientific study and modeling of the propagation of coral larvae in the SCS. Although available research does not quantify this indirect impact, being the loss in larvae recruitment in coastal coral reef, the very large scale of dredging operations and percentage of damaged coral reefs seen on satellite imagery seem contrary to the duty of due diligence to protect the marine environment. Dredging States have not consulted potentially affected States nor published reports evidencing monitoring, assessment of impacts and remedial actions that would have been taken.

#### **Recommendations**

This paper provides examples of transboundary impacts (actual and potential) from different ocean activities. The common feature between these is the lack of

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<sup>8</sup> See Y. Lyons, *Transboundary pollution from offshore oil and gas activities in the Seas of Southeast Asia* (2013) in *Transboundary Environmental Governance, Inland, Coastal and Marine Perspectives*, R. Warner (eds).

consultation and coordination in the management of the resources. There is no specialized regional body, coordination mechanism or forum to monitor and address these effects other than through political channels. Just as track 2 discussions among scientists have continued to document marine biodiversity in the SCS, similar work could be continued to establish baseline and monitor impacts of ocean activities in the SCS. It would be a first step towards better compliance with the law of the sea and improvement in the sustainable management of the resources might hopefully follow.