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Michelle Mei Ling LIM

Singapore Management University, michellel@smu.edu.sg

Nengye LIU

Singapore Management University, nengyeliu@smu.edu.sg

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Condominium Arrangements as a Legal Mechanism for the Conservation of the South China Sea Large Marine Ecosystem

Michelle Lim

University of Adelaide, Australia

michelle.lim@adelaide.edu.au

Nengye Liu

University of Adelaide, Australia

nengye.liu@adelaide.edu.au

Abstract

The South China Sea Large Marine Ecosystem is one of the world's richest marine biodiversity areas. The sea area is however the site of increasing tensions between its ten coastal States, six of which have competing claims in the South China Sea. The expanding populations and economies of the coastal States have also resulted in the growing depletion of the Sea's rich marine resources. Coordinated approaches are needed to protect the unique biodiversity and natural resources of the South China Sea at the appropriate ecological scale. The continuation of sovereignty disputes are detrimental to all coastal states as well as international economic interests of non-claimant states which arise as a result of the Sea's status as a globally important trade route. This paper urges coastal states to adopt a far-sighted outlook which ensures long-term sustainable ecosystems, livelihoods and economies of the region. To do this, a shift in approach which emphasises collaborative management of marine ecosystems is required instead of a scramble for sovereignty to exclusively exploit living and non-living resources. This paper therefore explores how the shared governance arrangement of a condominium could facilitate the exercise of sovereignty for the shared benefit of all coastal States. The paper argues that the condominium approach would enable State parties to put aside thorny sovereignty disputes in favour of collaboration to protect the area's important and unique biodiversity.

* The authors offer sincere and genuine thanks to the two anonymous reviewers. We were privileged to receive detailed and informed comments which were delivered in a highly constructive manner.

Keywords

Large Marine Ecosystem – South China Sea – Condominium

I Introduction

Large Marine Ecosystems (LME) represent broad and ecologically distinct areas of the ocean over which ecosystem-based management can be applied at a rational scale. They are defined as large regions of ocean space (200000km² or more) that are “characterised by distinct bathymetry,¹ hydrography,² productivity³ and trophically dependent populations.”^{4,5} The LME approach emerged out of recognition that the sustainability of marine resources requires the implementation of a holistic and ecologically based strategy for the management of coastal ecosystems.⁶ The LME approach thus emphasises the importance of management at geographical scales appropriate to major marine biophysical processes.⁷

The South China Sea LME is one of the world's richest marine biodiversity areas. It is the central ecosystem of the most diverse and extensive shallow-water marine region in the world.⁸ The sea area contains abundant and diverse

1 Bathymetry refers to sea floor topography or in other words the variation in depth of the sea floor.

2 This refers to the physical features of the ocean such as tides, currents, waves and features of the seabed and shore.

3 The remains and waste products (organic matter) produced by phytoplankton. See Daniel Sigman and Mathis Hain, ‘The Biological Productivity of the Ocean’ (2012) 3(6) *Nature Education* 1, at 1 available at http://www.mathis-hain.net/resources/Sigman_and_Hain_2012_NatureEdu.pdf.

4 Populations of different species and their relationships within a food web or food webs.

5 Kenneth Sherman, ‘Sustainability, Biomass Yield and Health of Coastal Ecosystems: an Ecological Perspective’ (1994) 12 *Marine Ecology* 277–301, at 280.

6 Sherman (1994), *supra* note 5, at 277.

7 Robin Mahon, Lucia Fanning, Patrick McConney, Richard Pollnac Governance Characteristics of Large Marine Ecosystems (2010) 31 *Marine Policy* 919–927, at 919. Hugh Thirlway, ‘The Sources of International Law’, in Malcolm Evans (ed), *International Law* (Oxford University Press, 2003), 117–144, at 143.

8 David Rosenberg, ‘Fisheries Management in the South China Sea’, in Sam Bateman & Ralf Emmers (eds.) *Security and International Politics in the South China Sea: Towards a Cooperative Management Regime* (Routledge, 2009), 61, at 62.

marine resources⁹ which include rich fishing grounds.¹⁰ There is also speculation, and the belief by some countries, that the area is an important source of minerals and oil and gas.¹¹

The South China Sea is, however, the site of increasing tensions between some of its coastal States.¹² Attempts to secure jurisdiction over the Sea's resources has resulted in competing territorial claims between six of the 10 coastal States of the South China Sea.¹³ At the same time the South China Sea LME is subject to serious and increasing threats to its biodiversity and ecological integrity. Environmental destruction stems from the expanding populations and economies of coastal States. At the same time, illegal, unreported and unregulated (IUU) fishing has resulted in growing depletion of the Sea's rich living resources. Oil and gas exploration and exploitation activities and climatic change also pose imminent threats.¹⁴

It is particularly concerning that the disputed areas within the South China Sea overlap with much of the South China Sea LME.¹⁵ Further, most of the

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- 9 Sherry Heileman, 'VIII South China Sea Large Marine Ecosystem' in Kenneth Sherman and Gotthilf Hempel (eds), *The Large Marine Ecosystem Report: A Perspective on Changing Conditions in LMEs of the World's Regional Seas* (UNEP Regional Seas Reports and Studies No 182, 2008), 297–308, at 306.
- 10 *The South China Sea Arbitration (The Republic of the Philippines v The People's Republic of China)*, PCA Case No 2013-19, Judgment 12 July 2016, at para 3.
- 11 *Ibid*; Heileman, *supra* note 9, at 306. However, as will be discussed later in this article, the optimism around the extent of hydrocarbons in the South China Sea is often ill-founded. See Nick Owen & Clive Schofield, 'Disputed South China Sea Hydrocarbons in Perspective' (2012) 36 *Marine Policy* 809–822, at 809.
- 12 Malaysia, Singapore, the Philippines, Brunei, Vietnam, Indonesia, Cambodia, Thailand, Brunei Darussalam and China (mainland China and the Republic of China (Taiwan)).
- 13 China (including Taiwan), Brunei Darussalam, Malaysia, Vietnam, Philippines and Indonesia each have unresolved claims in the South China Sea. Nguyen Hong Thao and Ramses Amer, 'A New Legal Arrangement for the South China Sea?' (2009) 40 *Ocean Development and International Law* 333, at 334–335.
- 14 Robin Warner, 'Stemming the Black Tide: Cooperation on Oil Pollution Preparedness and Response in the South China Sea and East Asian Seas' (2015) 18(2) *Journal of International Wildlife Law and Policy* 184–197, at 185; Louise Teh, Allison Witter, William Cheung, U Rashid Sumaila, Yin Xueying, 'What is at Stake? Status and Threats to South China Sea Marine Fisheries' (2017) *Ambio* (published online 23 September 2015 <http://link.springer.com/article/10.1007%2F13280-016-0819-0>), at 5.
- 15 The South China Sea LME extends to the coasts Vietnam, China, Taiwan, the Philippines, Malaysia, Indonesia, Singapore and Brunei. Transboundary Water Assessment Programme, *LME 36 – South China Sea* (2015) available at http://onesharedocean.org/public_store/lmes_factsheets/factsheet_36_South_China_Sea.pdf at 1. It is separated from the Gulf of Thailand to the West, by a shallow sill. See Shunji Sugiyama, Derek Staples

marine areas under protection in the LME occur outside disputed areas.¹⁶ Not only has the tension over territorial claims impeded cooperation in the South China Sea, it has also led to some States engaging in dredging and island building to enhance their claims to the sea territory of the region thus jeopardising the important ecological features of the area.¹⁷

The South China Sea has importance beyond the region as it is an internationally significant trade route. The sea area comprises of some of the most important sea lanes in the world (e.g. the Strait of Malacca) and has two of the world's busiest ports: Singapore and Hong Kong.¹⁸ Coastal States and important economies such as Japan, South Korea and Australia rely heavily on the South China Sea to transport goods within the Asian region and beyond. The significant increase in international trade expected in the next decade will exacerbate the risk of oil spills.¹⁹ This underscores the importance of coordinated responses across coastal States.

The ecological threats in the South China Sea are such that cooperation and immediate action are needed to protect the unique biodiversity and natural resources of the South China Sea LME to ensure the long-term sustainability of the region's ecosystems, livelihoods and economies. To this end, others have proposed a range of approaches in the South China Sea which would enable the coordination of activities without having to resolve sovereignty disputes. These include proposals on issues ranging from the regulation of vessel-source

& Simon Funge-Smith, *Status and Potential of Fisheries and Aquaculture in Asia and the Pacific* (Asia-Pacific Fishery Commission RAP Publication 2004/25 Food and Agriculture Organization of the United Nations Regional Office for Asia and the Pacific, 2004) available at <http://www.fao.org/docrep/007/ad514e/ad514e06.htm>. Beyond the territorial sea of the coastal States of the South China Sea LME, most of the rest of the LME occurs within disputed areas and includes the Paracel and Spratly islands.

16 Aldo Chircop, 'Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Directions for Marine Conservation' (2010) 41(4) *Ocean Development and International Law* 334–356, at 349.

17 See South China Sea Arbitration, *supra* note 10, at paras 825–853; Robert Smith, 'Maritime Delimitation in the South China Sea: Potentiality and Challenges' (2010) 41 *Ocean Development and International Law* 214–236, at 226; Lowell Bautista, 'Thinking Outside the Box: The South China Sea Issue and the United Nations Convention on the Law of the Sea (Options, Limitations and Prospects)' (2007) 81(4) *Philippine Law Journal* 699–731 at 716; ABC News, *South China Sea: Vietnam Expanding Runway on Spratly Island, US Think Tank Says*, 28 November 2016 available at <http://www.abc.net.au/news/2016-11-18/vietnam-expanding-south-china-sea-runway/8037248>.

18 Heileman, *supra* note 9, at 304.

19 Heileman, *supra* note 9, at 304.

pollution,²⁰ networks of Marine Protected Areas,²¹ and a Marine Peace Park over the Spratly Islands.²² This article builds on this work. However, rather than considering mechanisms for working around or freezing claims in disputed areas the article proposes instead the joint exercise of sovereignty by China (and Taiwan), Malaysia, Vietnam, the Philippines, Brunei in the form of a condominium²³ over the disputed area of the South China Sea.

Therefore, the aim of this article is not to analyse the merits or otherwise of the competing claims in the region. Rather the article highlights that the continuation of sovereignty disputes are detrimental to all coastal States as well as to international economic interests of non-claimant States which arise as a result of the Sea's status as a globally important trade route. This article therefore urges coastal States to adopt a far-sighted outlook which prioritises the sustainability of the region. To do this, a shift in approach which emphasises collaborative management of marine ecosystems is required instead of a scramble for sovereignty to exclusively exploit living and non-living resources. The article argues that sovereignty does not provide a shield against cooperation in the Sea. It explores the condominium as the legal mechanism which would facilitate the joint exercise of sovereignty and collaborative environmental governance in the South China Sea. The article argues that the condominium approach would enable State parties to put aside thorny sovereignty disputes in favour of collaboration to protect the area's important and unique biodiversity. It recognises the necessity of integrated management of the indivisible South China Sea LME and therefore recommends the condominium

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- 20 Nengye Liu, 'Prevention of Vessel-Source Pollution in the South China Sea: What Role Can China Play?' (2012) 15 *Asia Pacific Journal of Environmental Law* 147–166.
- 21 Nguyen Chu Hoi & Vu Hai Dang, 'Building a Regional Network and Management Regime of Marine Protected Areas in the South China Sea for Sustainable Development' (2015) 18(2) *Journal of Wildlife Law & Policy* 128–138.
- 22 John McManus, Kwang-Tsao Shao & Szu-Yin Lin, 'Toward Establishing a Spratly Islands International Marine Peace Park: Ecological Importance and Supportive Collaborative Activities with an Emphasis of the Role of Taiwan' (2010) 41 *Ocean Development and International Law* 270–280.
- 23 As will be discussed in Section IV below, in international law, a condominium refers to the joint exercise of sovereignty by two or more States over a territory. See Lassa Oppenheim, *International Law: a Treatise* 453, 220 (Peace 1905). Joel Samuels, 'Condominium Arrangements in International Practice: Reviving an Abandoned Concept of Boundary Dispute Resolution' (2007–8) 29 *Michigan Journal of International Law* 727–776, at 728; Francois Venter, 'Transfrontier Protection of the Natural Environment, Globalization and State Sovereignty', in Louis Kotzé & Thilo Marauhn (eds.) *Transboundary Governance of Biodiversity* (Brill Nijhoff, 2014), 65–89, at 73.

which would enable “an amalgam of sovereignties presiding indivisibly over joint property”²⁴ in the South China Sea.

The first section of the article identifies the underlying political context and competing claims over the disputed area of the South China Sea. The next section highlights the ecological importance of the South China Sea LME, the threats to this globally significant biodiversity and the legal obligations of South China Sea States to engage in individual and cooperative conservation measures in the Sea. The third section addresses issues of sovereignty and illustrates how condominium arrangements could enable the exercise of sovereignty for the benefit of the peoples of the South China Sea. The final section considers how collaborative governance approaches would play out in practice. It examines the political challenges and implications of the joint exercise of sovereignty and proposes institutional frameworks for the joint administration of a South China Sea condominium.

II Disputed Sea Areas and the Political Context

The complicated claims in the South China Sea have been described as ‘bilateral, trilateral and multilateral’.²⁵ States with overlapping claims in the sea area include Brunei, Malaysia, Indonesia, Vietnam, the Philippines, the People’s Republic of China (PRC) and the Republic of China (Taiwan). Many of these States claim an Exclusive Economic Zone (EEZ) of 200 nautical miles from their coasts or from islands which they occupy.²⁶ Other claims are based on arguments founded on the prolongation of the continental shelf, with further claims to sovereignty over islands and other features founded on principles of discovery, effective occupation²⁷ and other historic rights in the sea area.²⁸

24 This articulation of the condominium concept is drawn from Christopher R. Rossi (2015) *Jura Novit Curia? Condominium in the Gulf of Fonseca and the “Local Illusion” of a Pluri-State Bay*, 37(3) *Houston Journal of International Law* 793–840.

25 Nguyen Hong Thao and Ramses Amer, ‘A New Legal Arrangement for the South China Sea?’ (2009) 40 *Ocean Development and International Law* 333, at 335. See also Figure 1 (below).

26 *United Nations Convention on the Law of the Sea*, adopted 10 December 1982, 1833 UNTS 3 (entered into force 16 November 1994) (UNCLOS), Art 57.

27 See for further detail Bautista, *supra* note 17, at 713.

28 As will be discussed below, China stakes claim to a large section of the South China Sea within an area called the ‘9-dash line’. The international law principles upon which these

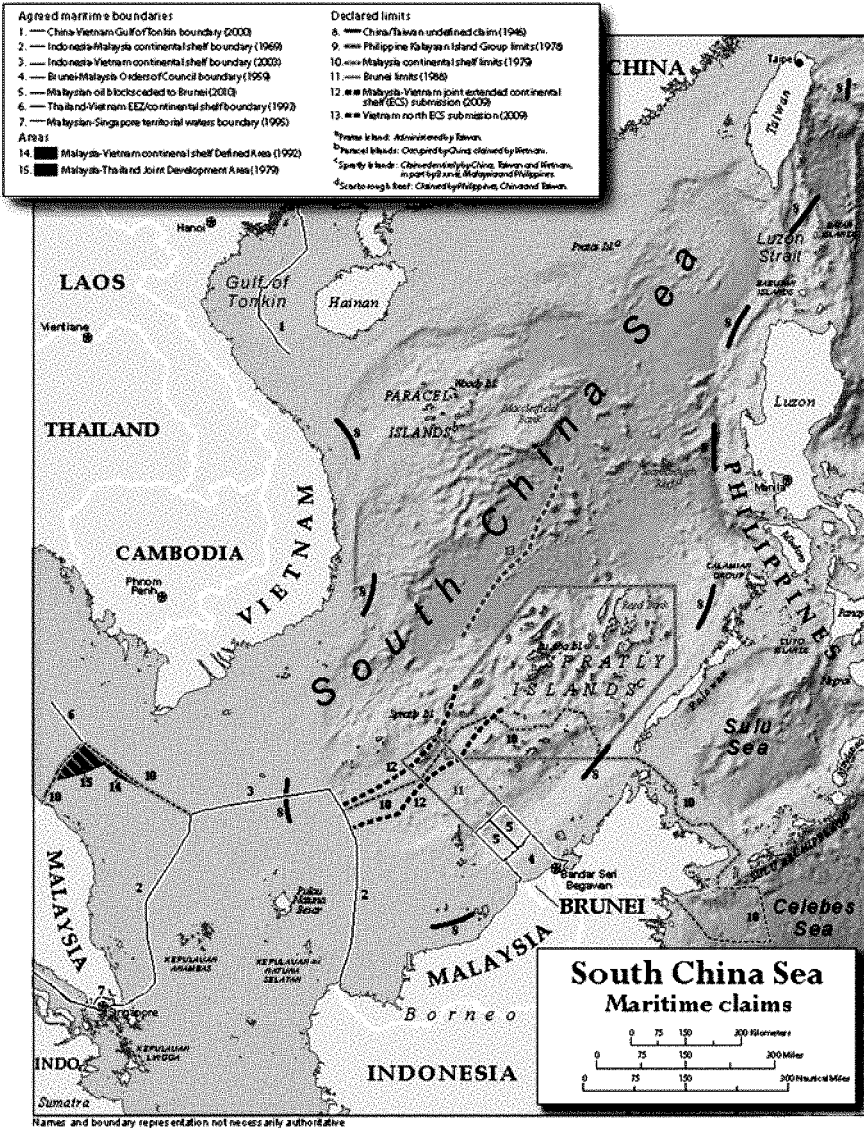


FIGURE 1 Maritime Claims and Agreements in the South China Sea, us State Department, 2013

Claims to EEZs, if realised, would provide sovereign rights to exploration and exploitation of natural resources and jurisdiction to conduct scientific research and environmental protection activities.²⁹ Meanwhile, successful

claims are made are however ambiguous. See Zou Keyuan, 'China's U-Shaped Line in the South China Sea Revisited' (2012) 43(1) *Ocean Development and International Law* 18–34, at 28.

29 UNCLOS, supra note 26, Art 56, 61.

claims to islands would further extend these exclusive sovereign rights as islands are capable of generating a territorial sea as well as its own EEZ of 200 nautical miles.³⁰ As the distance between coastlines of the semi-enclosed sea often do not exceed 400 nautical miles, this results in many overlapping claims over EEZs. Many States also have claims based on the promulgation of the continental shelf which if realised would provide rights over the seabed and subsoil.³¹ These claims under the UNCLOS are further complicated by the PRC's extensive claims to historic rights in the South China Sea known as the '9-dash' or 'U-dash' line due to the shape of the claimed area and the 9 'dashes' which make up the 'U'. Islands and archipelagos in the South China Sea are also occupied and claimed by a range of States and occur within the '9-dash' line.

This section sets out the location and extent of each State's claim in the South China Sea. It is over this disputed section of the South China Sea that a South China Sea Condominium is subsequently proposed. The section also examines conflicts which have occurred over the sea area to suggest how a condominium could provide a way to avoid ongoing and future skirmishes. Finally the interests of non-coastal States are discussed to suggest that a condominium arrangement could help ensure that the South China Sea is managed based on regional, as opposed to foreign priorities.

1 *Competing Claims*

(a) China's '9-dash line'

China's claims in the South China Sea are the most extensive of all claimant States. China's claims consist of a 'U-shaped' area which extends from China's coastline. The 'U' is made up of a series of 9 'dashes' (see Fig. 1) which extend from China's coast to James Shoal (3° 58' N, 112° 17' E).³² In recent times China has issued multiple official documents which reiterate a claim of 'indisputable sovereignty' over the South China Sea Islands (the Spratly, Paracel and Pratas Islands and Macclesfield Bank) and their adjacent waters.³³ These claims are

30 UNCLOS, supra note 26, Art 121.

31 UNCLOS, supra note 26, Art 77.

32 Zhiguo Gao, Bing Bing Jia 'The Nine-Dash Line in the South China Sea: History, Status, and Implications' (2013) 107 (1) *American Journal of International Law* 98, at 102.

33 Note Verbale from the Permanent Mission of the People's Republic of China to the United Nations to the Secretary-General of the United Nations, No. CML/8/2011 (14 April 2011) (Annex 201); Ministry of Foreign Affairs, People's Republic of China, Foreign Ministry Spokesperson Hong Lei's Remarks on Vietnam's Statement on the Chinese Government's Position Article on Rejecting the Jurisdiction of the Arbitral Tribunal Established at the Request of the Philippines for the South China Sea; Ministry of Foreign Affairs, People's Republic of China, Statement of the Ministry of Foreign Affairs of the People's Republic of

based on the principle of discovery founded on records which date as far back as the Qin Dynasty (200 B.C.).³⁴

Ambiguity however surrounds the nature of the 9-dash line with the PRC offering no reasonable explanation of the line based on international law.³⁵ Inconsistencies also arise with respect to the placement of the 9 dashes on official maps published in 1948 and 2009 respectively. While the 'dashes' occur in roughly the same position, each dash is noticeably closer to the coastline of other South China Sea States in the 2009 map. One of the dashes is also slightly longer on the 2009 map.³⁶

The PRC also has not consistently defended the waters and islands enclosed by the '9-dash line'. Further, most of the marine features in the Spratlys have been occupied by countries other than Taiwan or the PRC. At the same time, other coastal States of the South China Sea have enacted laws extending their maritime claims in the South China Sea with little objection from China.³⁷

(b) The Republic of China (Taiwan)

The Republic of China is now, predominantly, embodied in the area known as Taiwan. Taiwan, as the present day ROC therefore pursues the same claims in the South China Sea as the PRC based on principles of discovery and occupation over the area of the '9-dash line'. Taiwan has control over Pratas Island and has declared the Island a National Park. It has also controlled Itu

China on the Award on Jurisdiction and Admissibility of the South China Sea Arbitration by the Arbitral Tribunal Established at the Request of the Republic of the Philippines (30 October 2015) (Annex 649). Position Article of the Government of the People's Republic of China on the Matter of Jurisdiction in the South China Sea Arbitration Initiated by the Republic of the Philippines, P.R.C Ministry of Foreign Affairs, 7 December 2014 (China's Position Article). Arbitration (12 December 2014) (Annex 621).

34 See Jianming Shen, 'International Law Rules and Historical Evidences Supporting China's Title to the South China Sea Islands', (1997–1998) 21 *Hasting International and Comparative Law Review* 1; Chang Teh-Kuang, 'China's Claim of Sovereignty Over Spratly and Parcel Islands: Historical Legal Perspective' (1991) 23 *Case Western Reserve Journal of International Law* 399.

35 Zou, *supra* note 28, at 28.

36 See Kevin Baumert and Brian Melchior, *Limits in the Sea – China, Maritime Claims in the South China Sea*, No.143 Office of Ocean and Polar Affairs, Bureau of Oceans and International Environmental and Scientific Affairs, (US Department of State, 2014) available at: <https://www.State.gov/documents/organization/234936.pdf>.

37 Zou, *supra* note 28, at 20, 25.

Aba, the largest island in the Spratly Archipelago, since 1956.³⁸ Under the “One China” policy of the PRC, the PRC views Taiwan merely as one of its provinces. The PRC does not therefore see the Pratas Islands as being a disputed area.³⁹ Ambiguity surrounding Taiwan’s status in international law severely weakens its bargaining position.⁴⁰ It also further complicates the resolution of claims in the South China Sea as the extent to which Taiwan can exercise sovereignty as a State actor is unclear and any process which treats Taiwan as a State actor in attempts to resolve territorial claims would undoubtedly irk China.

(c) Vietnam

Vietnam claims an EEZ and the natural prolongation of the continental shelf. She also claims all of the Paracel and Spratly Archipelagos.⁴¹ Vietnam also has physical control over 23 Spratly Islands.⁴²

The Vietnamese claim is based on historical evidence and the right of succession to colonial French claims over the area stemming from 1933. France has however insisted that it never ceded sovereignty over the Spratlys to Vietnam.⁴³

(d) The Philippines

The Philippines claims, as its EEZ and continental shelf, the waters, seabed and subsoil of the South China Sea that are within 200 nautical miles of the Philippine coast.⁴⁴ China has however, on multiple occasions, objected to and prevented petroleum exploration by the Philippines in the South China Sea in areas within 200 nautical miles of the Philippines’ baselines.⁴⁵

The Philippines also claims sovereignty over a significant part of the Spratlys. The Filipino claim in the Spratlys is based on the principle of discovery by a Filipino national in 1947. The Philippines occupies 8 islands in the Spratlys which it refers to as the Kalayaan Island Group (KIG).⁴⁶ The KIG was made part

38 Cheng – Yi Lin, ‘China’s South China Sea Policy’ (1997) *Asian Survey* 37(4) 323–325, at 339.

39 Zou, *supra* note 28, at 19.

40 As she is unable to negotiate bilaterally. See Bautista, *supra* note 17, at 716.

41 Nguyen & Amer, *supra* note 13, at 335.

42 Baustista, *supra* note 17, at 714–5.

43 See Bautista, *supra* note 17, at 714 for further details on Vietnam’s claims based on succession from the French.

44 South China Sea Arbitration, *supra* note 10, at para 683.

45 *Ibid*, at para 651.

46 Nguyen & Amer, *supra* note 13, at 335; Bautista, *supra* note 17, at 715.

of the Filipino province of Palawan in 1972 as a result of a Presidential Decree of President Ferdinand Marcos.⁴⁷

(e) Malaysia

Peninsular Malaysia and Malaysian Borneo result in EEZs and prolongation of the continental shelf being claimed by that country in both the south-west and south-east of the South China Sea.⁴⁸ Malaysia is the only claimant in the South China Sea that has produced an official map of its continental shelf claim. Malaysia has, however, yet to publish an associated law or decree since producing the map in 1979 following a 1978 visit by Malaysian troops to some of the southern South China Sea islands.⁴⁹ Malaysia nevertheless claims and occupies three 'islands'⁵⁰ in the South of the Spratlys based on principles of geographic proximity to its continental shelf.⁵¹ Following a subsequent visit to the southern Spratlys in 1983 Malaysia has maintained a garrison on the largest of the islands (Swallow Reef).⁵² Malaysia has also developed Swallow Reef into a diving resort.⁵³ Significant land reclamation activities have been undertaken to enable construction of the resort and navy base.

(f) Brunei Darussalam

Brunei also claims an EEZ and the natural prolongation of its continental shelf in the southern section of the South China Sea.⁵⁴ Brunei therefore claims Louisa Reef and Rifleman Bank in the southern Spratlys due to the geographical proximity of its continental shelf and EEZ.⁵⁵ Brunei's claims to an EEZ overlapped with similar claims by Malaysia which also extend from the limits of the continental shelf which extend from the Bornean coastline.⁵⁶ In 2009,

47 Presidential Decree 1956, *The Republic of the Philippines* (11 June 1978) Bautista, supra note 17, at 715.

48 Nguyen & Amer, supra note 13, at 334. See also Figure 1 (above).

49 Smith, supra note 17, at 226.

50 The authors note that if the highly restricted interpretation of 'island' and in particular Article 121(3) adopted by the South China Sea Arbitration were applied here the maritime features claimed by Malaysia would not be considered islands. South China Sea Arbitration, supra note 10, at paras 475–553; 643.

51 UNCLOS, supra note 26, Art 76.

52 Smith, supra note 17, at 226; Bautista, supra note 17, at 716.

53 Bautista, supra note 17, at 716.

54 Nguyen & Amer, supra note 13, at 334.

55 Ibid; Bautista, supra note 17, at 716.

56 US EIA 2013, available at http://www.eia.gov/beta/international/analysis_includes/regions_of_interest/South_China_Sea/images/maritime_claims_map.png.

Malaysia and Brunei engaged in an exchange of letters which agreed the final delimitation of maritime boundaries between the two States and a Commercial Agreement Area (CAA) on oil and gas.⁵⁷ The letters are not however publically available. The exact coordinates of each area are therefore unclear. Further discussions have since taken place between the two States in relation to the joint enjoyment of any benefits from oil extraction with details to be determined at the commercial production stage.⁵⁸ Despite the resolution with Malaysia, Brunei's claims still overlap with those claimed by the Philippines as the limits of the KIG and extend into China's claims under the '9-dash line'.

(g) Indonesia

Indonesia claims an Exclusive Economic Zone and continental shelf extending into the South China Sea to the north of the Anambas Islands and to the north and east of the Natuna Islands.⁵⁹ The sovereignty over the islands themselves are not disputed. The EEZ generated by Natuna Island overlaps, however, with China's claims within the '9-dash line'.⁶⁰

2 *Conflict in the South China Sea and the South China Sea Arbitration*

The conflict in the South China Sea has been attributed to a range of factors. These include its geostrategic location; and as discussed above, territorial disputes and the competition over natural resources.⁶¹ The discovery of hydrocarbons off the coast of the Philippines in the 1970s and subsequent optimism over the extent of hydrocarbon resources in the South China Sea is thought to have been the spark which intensified territorial disputes in the sea area.⁶²

57 Sinchew, *Brunei Denies Limbang Story*, 19 March 2009 available at <http://www.mysinchew.com/node/22340?tid=14>.

58 Borneo Bulletin, *Brunei, Malaysia Discuss Oil and Gas Exploration in Overlapping Area*, 12 August 2015 available at <http://borneobulletin.com.bn/brunei-malaysia-discuss-oil-and-gas-exploration-in-overlapping-area/>.

59 Nguyen & Amer, *supra* note 13, at 334.

60 Karishma Vaswani, British Broadcasting Corporation, *The Sleepy Island Indonesia is Guarding from China*, 20 October 2014 available at: <http://www.bbc.com/news/world-asia-29655874>; Jewel Topsfield, Sydney Morning Herald, *Indonesian President's Visit to Natuna Islands Sends Waters Warning To China*, 24 June 2016, available at <http://www.smh.com.au/world/indonesian-presidents-visit-to-natuna-islands-sends-waters-warning-to-china-20160623-gpqe8h.html> retrieved 8 January 2017.

61 Nguyen & Amer, *supra* note 13, at 333.

62 Bautista, *supra* note 17, at 729–730.

In 1974, the Chinese Navy gained control of the Paracel Islands from Vietnam (then South Vietnam) following the Vietnam War. Then in 1978, President Ferdinand Marcos of the Philippines formally annexed the Kalayaan Island Group by virtue of Presidential Decree No. 1596,⁶³ which covers many features that are part of the Spratly Islands claimed by China. Moreover, both the Philippines and China lay claim to Scarborough Shoal.

Disputes over the Paracel and Spratly archipelagos and maritime areas have escalated in recent years.⁶⁴ A tense but bloodless stand-off between China and the Philippines over Scarborough Shoal, in 2012, led to China gaining de facto control over the feature.⁶⁵ Since Xi Jinping took office as China's President in 2012 the country has become more assertive in maritime affairs. This is reflected at the policy level in the 13th Five Year Plan (2016–2020) of the Chinese Government. The Plan States that China intends to build herself as a maritime power and actively participate in global ocean governance.⁶⁶ At the practical level, China has upgraded the administrative status of claimed island groups in the South China Sea and created Sansha City in 2012. Sansha City is set up to administer the Spratly Islands, the Paracel Islands and the Macclesfield Bank and is headquartered on Woody Island. Since 2014, China has been constructing features atop seven coral reefs in the disputed Spratly Islands of the South China Sea by dredging sand and coral from existing coral reefs.⁶⁷

Against the above mentioned backdrop, on January 2013, the Philippines initiated arbitration proceedings in the Permanent Court of Arbitration (PCA) against China pursuant to Article 286 and 287 of the UNCLOS and in accordance with Article 1 of Annex VII of the UNCLOS. The Arbitral Tribunal's final Award was issued on 12 July 2016. China continues to argue that the Arbitral Tribunal has no jurisdiction over this arbitration, unilaterally initiated by the

63 *Declaring Certain Area Part of the Philippine Territory and Providing for their Governance and Administration* Presidential Decree No 1596 of 1978, available at <http://www.gov.ph/1978/06/11/presidential-decree-no-1596-s-1978/>.

64 For further details on the recent escalations of tensions see Jeffrey McGee, Brendan Gogarty and Danielle Smith, 'Associational Balance of Power and the Possibilities of International Law in the South China Sea', (2017) 2(1) *Asia Pacific Journal of Ocean Law and Policy* 88, at 98.

65 Lowy Institute for International Policy, *South China Sea: Conflicting Claims and Tensions*, available at <http://www.lowyinstitute.org/issues/south-china-sea>.

66 中华人民共和国国民经济和社会发展第十三个五年规划纲要 [The 13th Five Year Plan for Economic and Social Development of P.R. China] <http://www.gov.cn/xinwen/2016-03/17/content_5054992.htm>.

67 Ashley Roach, *China's Shifting Sands in the Spratlys*, (2015) 19 *ASIL Insights* 15.

Philippines.⁶⁸ As a result, China did not participate in nor accept the outcome of this arbitration⁶⁹ and the intractable nature of disputed areas in the South China Sea continues.

3 *Foreign Interests in the South China Sea*

The sea routes of the South China Sea link the Pacific and Indian Oceans. Over half of the world's merchant fleet (by tonnage) passes through the sea area. Further, much of the fuel from the Middle East and Africa is transported through the sea area to Japan, China and South Korea. Freedom of navigation for merchant shipping and naval vessels is therefore of particular importance to countries such as the United States, India and Australia as any conflict in the sea area will adversely affect the interests of countries in the Asia-Pacific region.⁷⁰ The importance of the South China Sea as a trade route and its significance in regional and global politics therefore means that the area has become not only a regional flashpoint but a global one too.

Foreign powers are also seeking to play a role in the region including with regard to relations between coastal States. The United States for example has carried out three navigations in the South China Sea under the framework of the Freedom of Navigation Program (FONOP) of the US Department of Defence and State Department.⁷¹ On 27 October 2015, the *USS Lassen* of US Navy navigated within 12 nautical miles of the Chinese controlled Subi Reef. This operation raised a strong reaction from China.⁷² Japan has also sent its

68 Position Article of the Government of the People's Republic of China on the Matter of Jurisdiction in the South China Sea Arbitration Initiated by the Republic of the Philippines, PRC Ministry of Foreign Affairs, 7 December 2014 (China's Position Article).

69 Ibid.

70 Nguyen & Amer, *supra* note 13, at 334.

71 Fact Sheet, U.S. Department of Defense Freedom of Navigation Program, March 2015 <[http://policy.defense.gov/Portals/11/Documents/gsa/cwmd/DoD%20FON%20Program%20-%20Fact%20Sheet%20\(March%202015\).pdf](http://policy.defense.gov/Portals/11/Documents/gsa/cwmd/DoD%20FON%20Program%20-%20Fact%20Sheet%20(March%202015).pdf)>. For further details on the extent of the US's FONOP operations see also, Edwin Bikundo, 'Artificial Islands, Artificial Highways and Pirates: An East African Perspective on the South China Sea Disputes', (2017) 2(1) *Asia Pacific Journal of Ocean Law and Policy* 140, 142–149. Cameron Moore, 'The Arbitral Award in the Matter of the South China Sea Between the Philippines and China – the Use of Force and Freedom of Navigation' (2017) 2(1) *Asia Pacific Journal of Ocean Law and Policy* 117, 118.

72 China Ministry of Foreign Affairs States that “美国拉森号军舰未经中国政府允许，非法进入中国南沙群岛有关岛礁邻近海域。中方有关部门依法对美方舰艇实施了监视、跟踪和警告。美方军舰有关行为威胁中国主权和安全利益，危及岛礁人员及设施安全，危害地区和平稳定。中方对此表示强烈不满和坚决反对” [USS Lassen's navigation in China's Nansha Islands and adjacent waters was not permitted by Chinese government

biggest naval vessel through the disputed area⁷³ and there have been calls for Australia to conduct similar ‘freedom of navigation’ activities in the South China Sea.⁷⁴

The authors recognise that non-claimant States have rights of innocent passage and navigation in the South China Sea.⁷⁵ However, as Moore points out, the passage and navigation of warships in territorial waters where sovereignty is contested is provocative and has the strong potential to aggravate disputes.⁷⁶ This not only underlines the complex nature of the South China Sea dispute beyond the region but also provides impetus for solidarity and cooperation between coastal States of the South China Sea to ensure that the future of the sea area is determined with regional interests in mind.

III The Imperative of Collaborative Governance in the South China Sea Large Marine Ecosystem

The LME approach is based on the ecological rationale that processes which influence the structure and function of biological communities need to be managed at an appropriate scale.⁷⁷ The approach recognises that the importance of holistic and ecologically based management for the sustainability of marine ecosystems. Requires the implementation of a holistic and ecologically based strategy for the management of coastal ecosystems.⁷⁸

and was illegal. The navigation threatens China’s sovereignty and security, as well as safety of people and infrastructure in the Subi Reef. It also damages peace and stability in the South China Sea. Following Chinese law, the USS Larsen was followed, monitored and warned by relevant government department of Chinese government. China has expressed its strong dissatisfaction and resolute opposition against this], see 外交部发言人陆慷就美国拉森号军舰进入中国南沙群岛有关岛礁邻近海域答记者问 [Ministry of Foreign Affairs Press Release on USS Larsen in China’s Nansha Islands adjacent waters] 27 October 2015 <http://www.mfa.gov.cn/web/fyrbt_673021/t1309393.shtml>.

73 David Wroe and Kirsty Needham, China weighs in as Julie Bishop backs Japanese right to sail through troubled South China Sea, 15 March 2017, *The Sydney Morning Herald*, available at: <http://www.smh.com.au/federal-politics/political-news/japanese-war-ship-through-the-south-china-sea-signals-regions-nervousness-about-donald-trump-20170314-guxu9l.html>

74 Moore, *supra* note 71, 118.

75 UNCLOS, *supra* note 26, Arts 17, 18, 19, 58.

76 Moore, *supra* note 71, 117–118.

77 Sherman (1994), *supra* note 5, at 280; Robert Ricklefs, ‘Community Diversity: Relative Roles of Local and Regional Processes,’ (1987) 166 *Science* 167–171.

78 Sherman (1994), *supra* note 5, at 277.

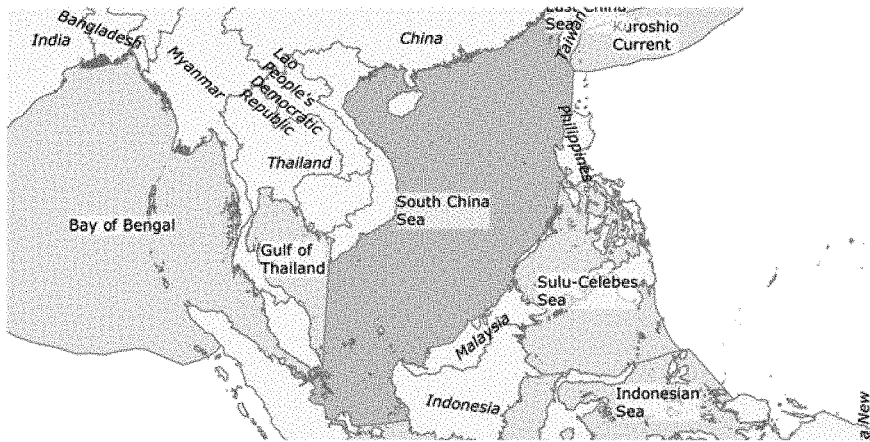


FIGURE 2 *The South China Sea Large Marine Ecosystem.*

Living marine resources are a key part of the structure and dynamics of LMEs. Almost all living marine resources are caught and processed in the form of fisheries products.⁷⁹ Focusing management at the regional scale of LMEs enables migrations of spawning and feeding fish (the keystone species of most large marine ecosystems) to be managed over the hundreds to thousands of kilometres within the particular physical and biological characteristics of the regional LME to which they have adapted (See Fig 2).⁸⁰

The LME approach highlights the need to not only focus on populations of species and ecosystems at large spatial scales but also to include socio-economic considerations in planning and implementation.⁸¹ The approach emphasises consideration of both naturally occurring environmental events as well as human-induced drivers of change in the system. As the approach is based on a firm scientific understanding of the key causes of variability within the system as well as socio-economic needs, the approach enables the implementation of management options from an ecosystems perspective.⁸² The LME approach has thus served as a rallying point for the scientific community to urge governments to cooperate for the conservation and use of transboundary resources.⁸³

79 Kenneth Sherman, 'The Large Marine Ecosystem Concept: Research and Management Strategy for Living Marine Resources' (1991) 1(4) *Ecological Applications* 349–360, at 349.

80 *Ibid.*, at 356.

81 Sherman (1994), *supra* note 5, at 278.

82 Sherman (1991), *supra* note 79, at 356.

83 Robin Mahon, Lucia Fanning, Patrick McConney, Richard Pollnac, 'Governance Characteristics of Large Marine Ecosystems' (2010) 31 *Marine Policy* 919–927, at 919.

The South China Sea LME is bounded by the coasts of Vietnam, China (and Taiwan), the Philippines, Malaysia, Indonesia, Brunei and Singapore (See Fig 2).⁸⁴ It is separated from the Gulf of Thailand to the West, by a shallow sill.⁸⁵ As highlighted above, the disputed area of the South China Sea sits at the core of the South China Sea LME (See Fig 1 above). Coastal countries face a range of transboundary issues such as marine pollution and the management of highly migratory fish stocks.⁸⁶ This section draws attention to the ecological and socio-economic importance of the South China Sea LME to emphasise the importance of transboundary collaboration in the sustainable management of the South China Sea LME. It also identifies the threats to the LME and points out that projections as to the extent of oil and gas resources in the South China Sea are likely overly optimistic. This therefore underlines the ecological, economic and social imperatives of ensuring the ecological integrity of the South China Sea LME and avoiding extractive industries and disputes over the sea region. Failing to do so would jeopardise the very foundation on which a sustainable future for the region needs to be built. The section ends by elaborating the legal obligations for coastal States to collaborate in order to protect the South China Sea LME.

1 *The Importance of Conserving Globally Important Biodiversity in the South China Sea*

(a) Environmental Significance

The South China Sea is one of the world's richest marine biodiversity areas and is endowed with abundant and diverse marine resources.⁸⁷ The Indo-West Pacific marine biogeographic province, which includes the South China Sea LME is well-recognized as a global centre of marine shallow-water, tropical biodiversity.⁸⁸ The LME contains 7.04% of the world's coral reefs and 0.93% of its seamounts.⁸⁹ The sea area is also home to over 3000 species of fish⁹⁰ and includes highly productive fisheries.⁹¹ The LME also has 45 of the 51 species

84 Transboundary Water Assessment Programme, *supra* note 15, at 1.

85 Sugiyama et al., *supra* note 15.

86 Nguyen & Amer, *supra* note 13, at 335.

87 Yann-Huei Song, 'A Marine Biodiversity Project in the South China Sea: Joint Efforts Made in the SCS Workshop Process' (2011) 26 *International Journal of Marine and Coastal Law* 121. See also McManus et al, *supra* note 22.

88 Heileman, *supra* note 9, at 297.

89 *Ibid.*

90 John Randall and Kevin Lim, 'A Checklist of Fishes of the South China Sea' (2000) 8 *The Raffles Bulletin of Zoology* 569–667.

91 South China Sea Arbitration, *supra* note 10, at para 823.

of mangrove known worldwide.⁹² Recent estimates also suggest that approximately 2 million ha of mangrove forest (12% of the world total) are located in the countries bordering the South China Sea LME.⁹³

The LME is estimated to host more than 8600 species of plants and animals including 1766 crustacean species, 102 non-fish vertebrates (including 37 species of marine mammals, 37 species of seabirds and 28 species reptiles), 7 of the 9 giant clam species, and 20 of the world's 50 seagrass species. The South China Sea also contains 571 coral species and 50 of the 70 known coral genera.⁹⁴

The extent of marine biodiversity in the South China Sea has likely been underestimated with research and conservation efforts to-date concentrated in the adjacent Coral Triangle – the supposed global centre of maximum marine biodiversity.⁹⁵ Recent studies suggest, however, that South China Sea biodiversity could rival that of the Coral Triangle. Huang et al. for example have recorded 571 species of coral in the South China Sea. By comparison, the Coral Triangle has 605 species.⁹⁶ Extraordinarily, the reef area of the South China Sea is only a sixth the size of the Coral Triangle, thus far surpassing the latter in terms of the density of species.⁹⁷ Furthermore, genetic and biophysical studies have constantly shown the South China Sea LME to be of critical importance as a source of larvae for the Coral Triangle region.⁹⁸

(b) Importance for Human Well-being

The ecological goods and services provided the mangroves surrounding the South China Sea LME and the reefs, seagrass and coastal swamps of the Sea

92 Marie Antionette Juino-Meñez, 'Biophysical and Genetic Connectivity Considerations in Marine Biodiversity Conservation and Management in the South China Sea' (2015) 18 *Journal of International Wildlife Law and Policy* 110–119, at 111.

93 Heileman, supra note 9, at 297.

94 For further details on the extent of South China Sea biodiversity see supra note 92.

95 Danwei Huang, Wilfredo Liucuanan, Bert Hoeksema, Chaolun Allen Chen, Put Ang, Hui Huang, David Lane, Si Tuan Vo, Zarinah Waheed, Yang Amri Affendi, Thamask Yeemin, Loke Ming Chou, 'Extraordinary Diversity of Reef Corals in the South China Sea' (2015) 45 *Marine Biodiversity*, 157–168.

96 John Veron, Lyndon DeVantier, Emre Turak, Alison Green, Stuart Kininmonth, Mary Stafford-Smith and Nate Peterson, 'Delineating the Coral Triangle' (2009) 11 *Galaxea: Journal of Coral Reef Studies* 91; John Veron, Lyndon DeVantier, Emre Turak, Alison Green, Stuart Kininmonth, Mary Stafford-Smith and Nate Peterson, 'The Coral Triangle', in: Dubinsky Z, Stambler N (eds) *Coral Reefs: An Ecosystem in Transition* (Springer, 2011) pp. 47–55.

97 Huang et al, supra note 95, at 5.

98 Juino-Meñez, supra note 92, at 117.

have been estimated to be in excess of US\$200 billion a year due to their combined contribution to food security, employment, tourism, pharmaceutical research and shoreline protection.⁹⁹ The LME also contributes to the livelihoods of millions of people in sectors such as trade, tourism, industry, fisheries and oil exploitation.¹⁰⁰

Marine fisheries are an important source of national revenue and are an essential part of regional food security. The 11–17 million tonnes of annual fisheries catch has a value of USD12–22 billion and creates close to 3 million jobs. Fishing is also a core economic activity for coastal communities of the South China Sea and is critical for employment and livelihoods.¹⁰¹

2 *Threats to the Biodiversity of the South China Sea*

The South China Sea region's great natural wealth is affected by a number of marine uses, expanding populations, and economic activity.¹⁰² The South China Sea LME has an overall cumulative human impact score¹⁰³ which is well above average.¹⁰⁴ Six species of marine turtles, all considered to be either 'Endangered' or 'Vulnerable' by the IUCN, the dugong and several other species of marine mammal included on IUCN's Red List of Threatened Animals occur in the South China Sea area¹⁰⁵ and the original area of mangroves has decreased by about 70% during the last 70 years.¹⁰⁶

There are likely to be dire societal and ecological consequences if fisheries management follows current trajectories.¹⁰⁷ The key threats to the LME are climate change, population growth, overfishing, pollution, habitat destruction,

99 Heileman, *supra* note 9, at 304.

100 Heileman, *supra* note 9, at 305.

101 Louise Teh, Allison Witter, William Cheung, U Rashid Sumaila, Yin Xueying, 'What is at Stake? Status and Threats to South China Sea Marine Fisheries' (2017) *Ambio* (published online 23 September 2015 <http://link.springer.com/article/10.1007%2Fs13280-016-0819-0>), at 1; Juino-Meñez, *supra* note 94, at 117.

102 Chircop, *supra* note 16.

103 The Cumulative Impact on Marine Ecosystems Indicator models the aggregate impact on marine biodiversity and ecosystems based on multiple human induced causes. Biodiversity Indicators Partnership, 'Cumulative Impact on Marine Ecosystems Indicator' (2015), available at <https://www.bipindicators.net/indicators/cumulative-human-impacts-on-marine-ecosystems>.

104 The South China Sea LME has a score of 4.42. The maximum score is 5.22. Transboundary Water Assessment Programme, *supra* note 15, at 9.

105 Heileman, *supra* note 9, at 304.

106 Heileman, *supra* note 9, at 304. For detailed reasons about the need for marine conservation in the SCS see Chircop, *supra* note 16, at 336–337.

107 Teh, *supra* note 101, at 13.

oil & gas exploration and exploitation. Dredging and island building in support of territorial claims have also caused serious harm to the LME. The ocean currents and life cycles of marine species within the LME create high levels of connectivity across the sea area.¹⁰⁸ As a result many of the threats to biodiversity are transboundary in both their cause and their impact. Each of these threats are considered in turn to further emphasise the importance of managing the LME as a whole.

(a) Climate Change

The South China Sea LME falls within the category most at risk of climate change as many of the threats to the region either stem from or will be exacerbated by climate change associated impacts.¹⁰⁹ This is consistent with the findings of the First Assessment of the Intergovernmental Panel on Climate Change (IPCC) which forecast that the South China Sea would likely experience significant climatic and ecological change which will have a significant detrimental impact on the regions coastal inhabitants, ecosystems and economies.¹¹⁰

Between 1957 and 2012, the LME warmed 0.8°C.¹¹¹ Further, El Niño conditions between 1998 and 1999 and 2007–2008 caused widespread coral bleaching and subsequent mortality in the Spratlys as a result of short-term temperature increases.¹¹² Given the importance of reef areas as habitat and sources of larvae, climate change is likely to have a highly detrimental impact not only on the reef systems of the LME but also subsequently on the wider LME.

Further, climate change is expected to make fisheries management more challenging due to the range shifts in commercially important fisheries resulting in greater diversity and fisheries potential in higher latitudes. This could result in food security and livelihood issues for countries located in more tropical zones. Shifts in species distributions could also lead to increased transboundary fisheries disputes.¹¹³ This provides a further reason for collaborative governance measures with the South China Sea LME.

108 South China Sea Arbitration, *supra* note 10, at para 825.

109 Transboundary Water Assessment Programme, *supra* note 15, at 9.

110 Intergovernmental Panel for Climate Change (IPCC), *First Assessment Report*, (Australian Government Publishing Services, Canberra, 1990) available at http://www.ipcc.ch/ipccreports/far/wg_II/ipcc_far_wg_II_full_report.pdf (retrieved 13 January 2017).

111 Transboundary Water Assessment Programme, *supra* note 15, at 3.

112 McManus et al, *supra* note 22, at 273.

113 Teh, *supra* note 101, at 5.

(b) Population Growth

The combined population of coastal States of the South China Sea reached almost 3 billion in 2015. This is expected to expand by a further 6% by 2045.¹¹⁴ These States are also some of the fastest growing developing economies of the world.¹¹⁵ As these economies industrialise this will increase anthropogenic pressures on the natural environment resulting in further food insecurity and biodiversity loss within the region.¹¹⁶ A large number of the South China Sea's coral reefs which are at the fringe of major land masses are threatened by coastal development and overexploitation.¹¹⁷ Many of the issues such as overfishing and pollution, discussed below, arise out of the pressure from large populations which live on the shores of the South China Sea.

(c) Overfishing

Excessive fishing is the primary threat to fisheries sustainability. Current consumption patterns and population growth rates indicate that the region will have to produce significantly more fish just to meet future domestic demand.¹¹⁸ Almost 40% of fish stocks in the South China Sea LME have, however, either collapsed or are overexploited.¹¹⁹ Catch per unit effort has declined significantly in most fisheries. This is a clear indication of severe exploitation. Further, there is widespread evidence of 'fishing down the food web'¹²⁰ in most countries of the South China Sea.¹²¹ The identified loss in fisheries productivity has also been identified by the South China Sea Transboundary Diagnostic Analysis as a major transboundary issue.¹²² Excessive bycatch is a severe problem and is partly the result of the lack of bycatch exclusion devices. Destructive fishing methods are also causing extensive habitat destruction and

114 United Nations, *World Population Prospects: The 2015 Revision, Key findings and Advance Tables* (United Nations Department of Economic and social Affairs/Population Division, 2015) available at http://esa.un.org/unpd/wpp/publications/files/key_findings_wpp_2015.pdf.

115 The World Bank, *GDP Growth (annual %)* (World Bank, 2015) available at <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>.

116 Teh et al, *supra* note 101, at 1.

117 Huang et al, *supra* note 95, at 158.

118 Heileman, *supra* note 9, at 303.

119 Transboundary Water Assessment Programme, *supra* note 15, at 5.

120 Fishing down the food web refers to capture of increasingly smaller species of fish once stocks of large predators have been depleted. See Daniel Pauly, Villy Christensen, Johanne Dalsgard, Rainer Froese & Francesco Torres Jr. 'Fishing Down Marine Food Webs' (1998) 279 *Science* 860–863.

121 Heileman, *supra* note 9, at 302, Teh, *supra* note 103, at 9.

122 Heileman, *supra* note 9, at 302.

fragmentation.¹²³ Effective management of fisheries within the LME is exacerbated by the significant data gaps that exist due in part to large numbers of IUU fisheries.¹²⁴

Changes to fish populations due to the over exploitation of fisheries will potentially reduce the resilience and function of the LME.¹²⁵ To add to this, invertebrates such as holothurians, molluscs and crustaceans are also heavily exploited and further transboundary impacts stem from the overexploitation of oceanic migratory species such as tuna, billfish, sharks and other pelagic species.¹²⁶ Cascading effects caused by the reduction in top level predators can also pose substantial challenges for fisheries management by causing an explosion in prey population and subsequently altering the socio-economic dynamics of the fisheries.¹²⁷

The socio-economic impacts which stem from fisheries overexploitation is already being observed in the LME. These impacts include reduced economic returns and loss of livelihood and employment as the result of fisheries collapse. The decline in fish consumption has also resulted in high levels of malnutrition.¹²⁸ Despite declining catches a large number of rural poor from South China Sea coastal States continue a long tradition of fishing due to a lack of alternative economic and employment opportunities. At the same time commercial and small-scale fisheries continue to increase often backed by perverse economic incentives such as fuel subsidies.¹²⁹ Declining fish stocks also encourage fishers to move further from the coastline thus increasing the transboundary nature of the sector.¹³⁰

(d) Pollution

Pollution is a significant issue in the South China Sea LME. The nitrogen load has been assessed as 'very high'¹³¹ and plastic debris falls in the highest category

123 Heileman, *supra* note 9, at 303.

124 Heileman, *supra* note 9, at 300; Teh, *supra* note 103, at 8.

125 Teh, *supra* note, 5.

126 Heileman, *supra* note 9, at 303.

127 Teh, *supra* note 101, at 9.

128 Heileman, *supra* note 9, at 305.

129 See Teh, *supra* note 101, at 5 for a detailed outline of the range of pressures on fisheries in the South China Sea.

130 David Green, 'Hypothetical Rewards, Resources in the South China Sea' Chapter 5 in *The Third Option for the South China Sea* (Springer, 2016), 61–66, at 63–64.

131 The South China Sea LME has a score of 4.42. The maximum score is 5.22. Transboundary Water Assessment Programme, *supra* note 15 at 9. Transboundary Water Assessment Programme, *supra* note 15, at 7.

for plastic concentration.¹³² The impacts of pollution include economic losses to mariculture and the shellfish industry as well as losses in recreational value and those associated with clean up and coastal restoration.¹³³

Key stressors to the South China Sea LME include commercial shipping and associated pollution. Every year, close to a third of global crude oil and half of global liquefied natural gas passes through the South China Sea.¹³⁴ Warner cites the *Montara* platform and *Deepwater Horizon* incidents to illustrate the extent of damage that oil spills can cause to surrounding waters, coastlines and industries dependent on the environmental integrity of these waters as well as the immense cost of clean up.¹³⁵ The expansion of trade and the exploration of oil and gas resources create further risks of oil spills and marine pollution in the sea area and subsequently highlights the importance of regional standards for ship hulls and transboundary enforcement measures to protect the transboundary LME.

(e) Habitat Destruction

Fringing reefs have been heavily exploited by subsistence fishers with roughly 70% of the coral reefs of the region heavily depleted. Adult fish are also scarce in some reefs in the region. Reef interdependence between oceanic shoals and highly exploited fringing reefs could also have transboundary consequences.¹³⁶ Land reclamation, pollution from shrimp farming, agricultural and coastal development and charcoal production has also resulted in widespread destruction of vulnerable coastal habitats.¹³⁷ This will exacerbate the impacts of climate change and result in substantial economic losses for the region.¹³⁸

(f) Territorial Disputes

Competing territorial claims and the escalation of disputes in the South China Sea have impeded cooperation on environmental and fisheries issues and

132 Ibid, 8. The abundance of floating plastic in this category is estimated to be on average 400 times higher than LME's with the lowest values.

133 Heileman, *supra* note 9, at 305.

134 Yoppy Tan, *The Growth in Energy Activities in the South China Sea – Are We Truly Prepared?* 2014 Proceedings of the International Oil Spill Conference at 2.

135 Robin Warner, 'Stemming the Black Tide: Cooperation on Oil Pollution Preparedness and Response in the South China Sea and East Asian Seas' (2015) 18(2) *Journal of International Wildlife Law and Policy* 184–197, at 185.

136 Heileman, *supra* note 9, at 303.

137 Teh et al, *supra* note 101, at 5.

138 Asian Development Bank, *The Economics of Climate Change in Southeast Asia: A Regional Review* (Mandaluyong City, The Philippines: Asian Development Bank, 2009) 48–53.

impacted marine habitats, fisheries resources and livelihoods.¹³⁹ Strategic concerns and vague possibilities of hydrocarbon deposits have led to coastal States stationing troops on many of the islands.¹⁴⁰ This includes environmentally destructive and socially and economically costly military outposts which often incorporate extensive land reclamation and island building activities to sustain these outposts.¹⁴¹

3 *Overly Optimistic Projections on Oil and Gas Potential in the South China Sea*

Optimism surrounding oil and gas reserves in the South China Sea is a key reason for the escalation of territorial claims in the sea area. Chinese government reports suggest oil and gas reserves comparable to the Persian Gulf.¹⁴² The United States Energy Information Administration suggests a more modest amount which would be on par with Brazil for oil reserves and Venezuela for gas.¹⁴³

Owen and Schofield point out that the enthusiasm around the extent of oil and gas reserves is often ill-founded and largely due to the misinterpretation of oil reporting terminology and the lack of reliable data. There is therefore the high probability that unfounded expectations have contributed to the perception that the South China Sea is rich in oil and gas and inflated the importance of these reserves in territorial disputes.¹⁴⁴ Similarly, Townsend-Gault has found little evidence that substantial, economically extractable oil actually exists in the South China Sea and thus emphasises the importance of protection of the natural resources of the Spratlys and the economically important fisheries and ecosystem of the entire South China Sea.¹⁴⁵

139 Teh, *supra* note 101, at 2, 11.

140 McManus, *supra* note 22, at 270 & 275.

141 McManus, *supra* note 22, at 270 & 275; for the extent of China's island building activities see South China Sea Arbitration, *supra* note 10, at paras 852–853; for Malaysia's military and tourism developments on Swallow Reef see: Smith, *supra* note 17, at 226; Bautista, *supra* note 17, at 716; recent news reports also suggest that Vietnam is also engaged in construction in the SCS in order to strengthen its claims in the sea area, 'South China Sea: Vietnam Expanding Runway on Spratly Island, US Think Tank Says' (28 November 2016, ABC News) <http://www.abc.net.au/news/2016-11-18/vietnam-expanding-south-china-sea-runway/8037248> (retrieved 3 January 2017).

142 Green, *supra* note 130, at 62.

143 *Ibid.*

144 Owen & Schofield, *supra* note 11, at 809.

145 Ian Townsend-Gault, 'Preventative Diplomacy and Proactivity in the South China Sea' (1998) 20 *Contemporary Southeast Asia* 171–190.

Offshore hydrocarbon activities pose high risks to the surrounding natural environment and biodiversity throughout and beyond the exploration and exploitation phases. Detrimental impacts stem from seismic surveys, oil drilling, oil based drilling muds and explosives, the accidental spillage and leakage of oil from offshore installations, the escape of oil from ruptured pipelines and the disposal of sewage and garbage from offshore installations.¹⁴⁶

The economic, environmental and social importance of maintaining the integrity of the South China Sea LME and the global significance of peace in the region underscore the importance of collaborative environmental governance of the LME. Chircop has argued that while territorial disputes in the region appear as obstacles to cooperation, the depressing environmental outlook should provide impetus for working around these dispute.¹⁴⁷ The likely inflated potential of oil and gas and the risks of exploration and exploitation further suggests that States should shift their thinking to securing the long term sustainability of the region.

4 *Legal Obligations to Cooperate for Marine Environmental Protection in the South China Sea*

The imperatives to cooperate for the conservation of the South China Sea are not only environmental but also legal. The UNCLOS includes general obligations to take measures individually and jointly to protect the marine environment.¹⁴⁸ States are obliged to cooperate to protect and preserve the marine environment and to take into account 'characteristic regional features.'¹⁴⁹ Almost all coastal States of the South China Sea are parties to UNCLOS.¹⁵⁰ They are therefore bound to engage in collaborative environmental action in the South China Sea area. Moreover, the South China Sea meets the Convention definition of a semi-enclosed sea.¹⁵¹ Art 123 of the UNCLOS provides that States

146 Chester Brown, 'International Environmental Law in the Regulation of Offshore Installations and Seabed Activities: The Case for a South Pacific Regional Protocol, (1998) 17 *Australian Mining & Petroleum Law Journal* 109, at 110; See Warner, *supra* note 135, at 185–186 for a detailed account of the extensive impacts of offshore oil extraction activities during and beyond their operational lifetimes.

147 Chircop, *supra* note 16, at 349.

148 UNCLOS Arts 192, 194.

149 UNCLOS Art 197.

150 Taiwan is not a party to UNCLOS as it is not a UN member state.

151 "enclosed or semi-enclosed sea" means a gulf, basin or sea surrounded by two or more States and connected to another sea or the ocean by a narrow outlet or consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States. UNCLOS Art 122.

adjacent to an enclosed or semi-enclosed sea have the obligation to cooperate in the coordination of management, conservation, exploration and exploitation of the living resources of the sea.¹⁵² States also have the duty to coordinate scientific research policies¹⁵³ as well as the protection and preservation of the marine environment.¹⁵⁴

Furthermore, Article 61 of the UNCLOS compels the coastal State to conserve living resources within its EEZ. This includes obligations to determine allowable catch of living resources within the EEZ¹⁵⁵ and ensure that these resources are not overexploited.¹⁵⁶ The coastal State is also obliged to maintain and restore harvested species at levels which can maintain maximum sustainable yield¹⁵⁷ and to share information with 'all States concerned' and with others fishing in the EEZ.¹⁵⁸ Article 63 further requires States with shared or associated fish stocks to agree coordination measures to ensure the conservation and development of such stocks. Coastal States shall cooperate with all other States and who fish for highly migratory species within its EEZ;¹⁵⁹ and to cooperate with other States and international organisations for the conservation of marine mammals in the EEZ.¹⁶⁰

Therefore, as States would be collaborating at the scale of the South China Sea LME, they would truly be operating within the object and purpose of the environmental protection and collaboration obligations of the UNCLOS. Further, conservation activities in their claimed EEZ to strengthen their territorial claims would be an important alternative to destructive land reclamation and militarised activities. Conservation within claimed EEZs as the demonstration of the exercise of sovereign rights could be a sustainable and constructive means by which to strengthen EEZ claims.

The section that follows argues that overly narrow conceptualisations of sovereignty are a further factor which has impeded cooperation within the South China Sea. The condominium is then offered as a legal mechanism for collaborative governance of the South China Sea LME.

152 UNCLOS Art 123 (a).

153 UNCLOS Art 123 (c).

154 UNCLOS Art 123 (b).

155 UNCLOS Art 61(1).

156 UNCLOS Art 61(2).

157 UNCLOS Art 61(3) & (4).

158 UNCLOS Art 61(5).

159 UNCLOS Art 64.

160 UNCLOS Art 65.

IV Dismantling the Myth of Sovereignty as a Barrier to Collaboration and Condominium Arrangements

States often argue against collaborative measures over land or sea contending that to do so would be an affront to their sovereign rights. The section that follows highlights that sovereignty, even by its strictest interpretation, is not absolute. Further, by the use of sovereign rights to achieve the continued benefit of ones peoples is an important exercise of sovereignty. Condominium arrangements are then presented as a legal mechanism which would give effect to joint sovereignty for collaborative governance which would facilitate effective management of the LME as a whole. The section ends by exploring the types of administrative arrangements that could be entered into for the joint governance of a condominium.

1 *Condominia*

In international law, a condominium refers to the joint exercise of sovereignty by two or more States over a territory.¹⁶¹ This is comparable to a tenancy in common between real persons. A tenancy in common grants an equal right to possession of the whole of the property but no exclusive rights of possession to any part. Similarly, a condominium recognises the shared, indivisible sovereignty and jurisdiction of more than one State.

The ability of States to use their territory for their own gain is widely held to be an inherent right of sovereign States.¹⁶² International instruments and United Nations General Assembly Resolutions have repeatedly declared that nations have permanent sovereignty over their natural wealth and resources. These instruments emphasize that the principle of sovereignty supports non-interference within the national jurisdiction of States.¹⁶³

161 Oppenheim, *supra* note 23; Samuels, *supra* note 23, at 728; Venter, *supra* note 23 at 73.

162 Krista Singleton-Cabbage, 'Note and Comment: International Legal Sources and Global Environmental Crises: The Inadequacy of Principles, Treaties and Custom' 2 *ILSA Journal of International and Comparative Law* 171.

163 *Convention on Biological Diversity*, adopted 4 June 1993, entered into force 29 December 1993, 1760 UNTS 142 (CBD) (entered into force); United Nations General Assembly (UNGA) 'Recommendations Concerning International Respect for the Right of Peoples and Nations to Self-Determination' UNGA Res 1314 (12 Dec 1958), GAOR 13th Session, UN Doc A/RES/ 1314; UNGA, 'Permanent Sovereignty Over Natural Resources' UNGA Res 1803 (14 December 1962) UN Doc A/RES/1194; UNGA 'Permanent Sovereignty Over Natural Resources of Developing Countries' UNGA Res (18 December 1972) GAOR, 27th Session UN Doc A/ 3016.

Condominia have therefore been framed as being peculiar and exceptional due to their perceived incompatibility with traditional conceptions of sovereignty as indivisible and absolute.¹⁶⁴ At the same time, the supposed primacy of sovereignty¹⁶⁵ has resulted in condominiums being either dismissed as archaic constructs unsuitable for modernity,¹⁶⁶ or at best temporary measures for use only in extreme cases.¹⁶⁷ Nevertheless, even in an era where sovereignty was perceived as paramount and absolute, former judge of the International Court of Justice, Hersch Lauterpacht noted that “there is nothing in legal theory or in the nature of sovereignty to render impossible a permanent and agreed division of sovereignty as suggested by the very nature of a condominium.”¹⁶⁸ Such comments were qualified however with the suggestion that a condominium may only be practicable where a spirit of cooperation already exists.¹⁶⁹

Sovereignty has, however, never been ‘absolute’.¹⁷⁰ Kohen contends that what is regularly termed a relinquishment of sovereignty is actually an exercise of it.¹⁷¹ He stresses further that the greater interdependency of State actors has led to a corresponding decline of issues that fall solely to the jurisdiction of individual States.¹⁷² Citing the *Wimbledon* case in support, Kohen argues that although the conclusion of a convention may restrict the way States exercise their sovereign rights this does not constitute an abandonment of State sovereignty by entering into an international agreement States are in fact exercising a component of their sovereign rights.¹⁷³ Kohen therefore makes the distinction between the transfer of sovereign powers and their relinquishment. He argues that an independent State that vests some of its powers within an integrated institution such as the European Union or an international organisation such

164 Rossi, *supra* note 24, at 799.

165 Samuels, *supra* note 23, at 730.

166 James Schneider, ‘Condominium’, in Rudolf Bernhardt (ed.) *Encyclopedia of Public International Law* (North-Holland Publishing Company, 1992) 732, at 734.

167 Schneider, *ibid*; Hersch Lauterpacht, ‘International Law: Being The Collected Articles Of Hersch Lauterpacht’, (E.Lauterpacht ed) 370 (Cambridge University Press, 1970).

168 Lauterpacht *ibid*.

169 *Ibid*. 371–372.

170 Marcelo Kohen, ‘Is the Notion of Sovereignty Obsolete?’ in Martin Pratt and Janet Allison-Brown (eds), *Borderlands Under Stress* (Kluwer Law International Ltd, 2000).

171 *Ibid*.

172 *Ibid.*, at 36.

173 *ss “Wimbledon” (France, UK, Italy, Japan v Federal Republic of Germany)*, (Judgment) PCIJ Rep Series A No 1.

as the United Nations always retains the option to withdraw and in doing so recover any powers it has delegated.¹⁷⁴

Samuels has argued that where States exercise sovereignty jointly, parties have fewer incentives to exacerbate tensions or otherwise attempt to redraw boundary lines. In contrast, it is difficult to secure enduring resolutions of boundary disputes where determinations are premised on the indivisibility of sovereignty. When sovereignty is viewed as absolute and indivisible at least one side must ultimately cede rights to territory it views as its own. Samuels therefore argues that condominium arrangements provide a possible solution for creating stability over intractable boundary disputes.¹⁷⁵

Broader understandings and applications of sovereignty over the last 50 years have led to growing recognition of the utility of condominiums as permanent mechanisms for shared management of transboundary resources.¹⁷⁶ Rossi and Samuels have also highlighted how condominium arrangements are gaining prominence due to their applicability to joint administration of global commons. This underlines their contemporary potential and significance.¹⁷⁷ Further, the European Union, comprised of many States that were creators of the Westphalian system, provides as a prime example of the increasing willingness of States to transfer sovereignty to a shared body. This is therefore encouraging for reconsidering condominiums as politically palatable options for the joint exercise of sovereignty over particular territory.¹⁷⁸ In the context of the South China Sea, condominium arrangements would also be within the spirit of cooperation set out in UNCLOS obligations.

Extending Kohen's arguments to collaborative management of the South China Sea as an integrated ecosystem, vesting biodiversity conservation responsibilities in a joint management body is a transfer of power not contrary to the principle of sovereignty. Rather the joint exercise of State sovereignty and the transference of certain components of State power enabling joint administration of the South China Sea by coastal States facilitates integrated management of the indivisible South China Sea LME. Therefore, rather than relinquishing sovereign powers States are exercising their sovereign right to enter into agreements for the benefit of their peoples. Condominia

174 Ibid.

175 Samuels, *supra* note 23, at 728, 774–5.

176 Samuels, *supra* note 23, at 728; Venter, *supra* note 23 at 73; Rossi, *supra* note 24, at 799; *Land, Island and Maritime Frontier Dispute* ('Gulf of Fonseca Case') (El Salvador v Honduras; Nicaragua, intervening) 1992 ICJ 351 (11 September 1992).

177 Rossi, *supra* note 24, at 800; Samuels, *supra* note 23, at 771.

178 Samuels, *supra* note 23, at 732.

arrangements are discussed below as providing the legal mechanisms which would enable common sovereignty over currently disputed areas of the South China Sea.

2 *Shared Administrative Institutional Arrangements and Condominia over Water*

The joint exercise of sovereignty requires decision-making bodies capable of exercising authority over the shared territory. Issues that need to be taken into account include issues of “citizenship, voting rights, executive, legislative, and judicial powers, economic and financial issues, public services, foreign affairs, defence, freedom of movement”.¹⁷⁹ State parties could agree on vesting ultimate authority in a condominium governor or an independent arbitral or judicial body.¹⁸⁰

A prominent example of administration of a land-based condominium is the New Hebrides (present-day Vanuatu) which was governed jointly by Britain and France as a colonial condominium for 74 years. Here, each colonial power had jurisdiction over its own nationals. The colonial powers jointly exercised authority over the indigenous population and provided essential government services with costs paid by local revenues and joint contributions. Both French and British languages and currencies were official and the territory ran a joint court.¹⁸¹

An alternative model is the unilateral administration by Prussia and Austria over Schleswig-Holstein. Here, each State administered a condominium territory while maintaining sovereignty over the whole condominium. This acted as a guarantee against either State breaching the spirit of the agreement for the joint exercise of sovereignty.¹⁸² The Schleswig-Holstein arrangement might be less useful for the South China Sea. This is because it could encourage coastal States to cling to existing claims where rights to administer particular territory used to consolidate claims to areas where they currently have physical control.

Of particular relevance to the discussion of this article is the relative ease of administering condominiumia over water. In contrast to land based condominiumia, shared sovereignty over sea areas are generally concerned with rights and access over natural resources.¹⁸³ Thus, such arrangements have fewer practical and administrative challenges.

179 Ibid, at 737.

180 Ibid, at 734.

181 Ibid, at 738.

182 Samuels, *supra* note 23, at 744.

183 Ibid, at 736.

The *Gulf of Fonseca*¹⁸⁴ case represents the seaward extension of a territorial concept and the judicial imposition of condominium arrangements.¹⁸⁵ Here, the International Court of Justice required Nicaragua, El Salvador and Honduras to share sovereignty over the Gulf of Fonseca and its valuable fish and mineral resources. While this decision demonstrates that condominiums could be used as a judicial remedy to protracted sovereignty disputes, the utility and appropriateness of judicially imposed condominium has been challenged. Rossi highlights that while El Salvador initiated implementation of the condominium concept over Fonseca waters, El Salvador was subsequently accused twice by Honduras of disregarding rights of joint sovereignty in the Gulf.¹⁸⁶ Similarly, in the context of the South China Sea it is difficult to see how a judicially imposed condominium would provide an effective resolution. This is particularly the case given China's reluctance to subject disputes to international judicial fora. Instead, a negotiated shared sovereignty and governance arrangement would be more desirable both from a perspective of political acceptability and the enduring nature of such arrangements.

V A Road Map to a Condominium in the South China Sea LME

The globally unique and important biodiversity of the South China Sea LME; the consequent economic and social importance of the living marine resources of the area; and the current and imminent threats to the LME illustrate that urgent collaborative governance is needed within the South China Sea LME. Further, the ill-founded optimism surrounding oil and gas resources as well as the environmentally destructive impacts of these activities provide a further rationale against escalating disputes over potentially illusory hydrocarbon resources. Having offered the condominium as a potential legal mechanism for the joint exercise of sovereignty for the sustainable management of the South China Sea LME, this section provides examples of collaboration to-date and signals of the intentions to collaborate which have emerged since the China-Philippines Arbitration to suggest reasons for optimism for taking the further step towards a condominium over the disputed area of the South China Sea. The section also suggests where the condominium would ideally be located and the administrative arrangements that would facilitate the joint exercise of sovereignty in the South China Sea LME.

184 *Land, Island and Maritime Frontier Dispute, El Salvador and Nicaragua (intervening) v Honduras*, Judgment, Merits [1992] ICJ Rep 351.

185 Rossi, *supra* note 24, at 795.

186 *Ibid.*, at 800, 835.

1 *Reasons for Optimism that South China Sea Coastal States Might Accept a Condominium Arrangement*

As discussed above, the establishment of a condominium in the South China Sea would need to be brought about by a treaty between all coastal States. The judicial imposition of a condominium is not only less likely to be successful, as the *Gulf of Fonseca* example illustrates, in the context of the South China Sea, it is unlikely that all relevant States would submit to the jurisdiction of a foreign adjudicatory body.

Previous collaboration provides reason for optimism that coastal States of the South China Sea might take the further step to agree to a condominium over the area. For example, in 2000, China and Vietnam concluded the Agreement on the Delimitation of the Territorial Seas, Exclusive Economic Zones, and Continental Shelves in the Gulf of Tonkin after decades of bilateral negotiation.¹⁸⁷ There, a single boundary line was used to delimit territorial seas, EEZs and continental shelves between China and Vietnam. This is the first maritime boundary China has ever agreed to share with her neighbouring countries.¹⁸⁸ Then in 2002, the governments of the Member States of the Association of Southeast Asian Nations (ASEAN) and the government of the People's Republic of China signed the non-binding Declaration on the Conduct of Parties in the South China Sea (DOC) in 2002.¹⁸⁹ The DOC provides that ASEAN and China are cognizant of the need to promote a peaceful, friendly and harmonious environment in the South China Sea for the enhancement of peace, stability, economic growth and prosperity in the region.¹⁹⁰ The DOC has yet to evolve into a binding multilateral agreement. At the time of its conclusion it did, nonetheless, serve as an important tool in defusing regional territorial tensions and the diplomatic and peaceful resolution of disputes.

More recently, in 2011, the Agreement on General Principles of Guidelines for Solving Chinese-Vietnamese Sea Problems was adopted. Article 5 of the agreement provides that China and Vietnam will promote cooperation on less

187 *Agreement between the People's Republic of China and the Socialist Republic of Viet Nam on the delimitation of the territorial seas, exclusive economic zones and continental shelves of the two countries in Beibu Gulf/Bac Bo Gulf*, opened for signature 25 December 2000, 2336 UNTS 179 (entered into force 30 June 2004).

188 Zou Keyuan, 'China and Maritime Boundary Delimitation: Past, Present and Future' in Ramses Amer and Zou Keyuan (eds), *Conflict Management and Dispute Settlement in East Asia* (Ashgate, 2011) 149, 156.

189 *Declaration on the Conduct of Parties in the South China Sea* <http://asean.org/?static_post=declaration-on-the-conduct-of-parties-in-the-south-china-sea-2>. See also Nguyen Hong Thao, 'The 2002 Declaration on the Conduct of Parties in the South China Sea: A Note' (2003) 34 *Ocean Development and International Law* 279–285.

190 *Ibid.*

sensitive issues such as marine environmental protection in the South China Sea.¹⁹¹ As environmental issues seem to be the ‘non-contentious’ issue around which States are willing to collaborate in the South China Sea this suggests that a condominium with the main purpose of conservation might come to fruition. Cooperation to date has, however, been either focused on the narrow issue of marine pollution¹⁹² or on avoiding the escalation of territorial disputes.¹⁹³ What is lacking is a single environmental legal regime which focuses on the whole of the South China Sea LME.¹⁹⁴ The South China Sea for example does not have a dedicated regional fisheries management organisation (RFMO) but rather falls within the Asia-Pacific Fishery Commission.¹⁹⁵

Nevertheless, there are signs that the tides are turning again to collaboration in the South China Sea. Despite the Philippines’ victory in the 2016 Arbitral Award the response from the Duterte government has been muted. Further, discussions between China and the Philippines following the award have emphasised the peaceful and negotiated resolution of disputes. In particular, a Joint Statement of the Philippines and China, issued on the occasion of Philippine President Rodrigo Duterte’s visit to Beijing soon after the Arbitral Award was handed down, echoed the statement released by ASEAN States.¹⁹⁶ The China-Philippines Joint Statement emphasised the importance of peace, stability, the freedom of navigation and over-flight as well as the resolution of territorial and jurisdictional disputes by peaceful means and friendly consultations.¹⁹⁷ China and the Philippines also pledged commitment to the DOC and to the early conclusion of a Code of Conduct in the South China Sea.¹⁹⁸

191 《关于指导解决中国和越南海上问题基本原则协议》 [*Agreement on General Principles of Guidelines for Solving China Vietnam Sea Problems*] 11 October 2011, art. 5.

192 *Partnerships in Environmental Management for the Seas of East Asia* (PEMSEA) Sustainable Development Strategy for the Seas of East Asia: Regional Implementation of the World Summit On Sustainable Development Requirements for the Coasts and Oceans 52 (2003), available at <http://www.pemsea.org/pdfdocuments/sds-sea/SDSSEA-Full.pdf>.

193 *Declaration on the Conduct of Parties in the South China Sea* <http://asean.org/?static_post=declaration-on-the-conduct-of-parties-in-the-south-china-sea-2>. See also Nguyen Hong Thao, ‘The 2002 Declaration on the Conduct of Parties in the South China Sea: A Note’ (2003) 34 *Ocean Development and International Law* 279–285.

194 Chircop, *supra* note 16, at 343.

195 Agreement for Establishment of the Asia-Pacific Fishery Commission (1996) available at ftp.fao.org/FI/DOCUMENT/apfic/apfic_convention.pdf (retrieved 31 December 2016) See Chircop, *supra* note 16, at 344 for further details.

196 *Joint Statement of the Philippines and China*, 20 October 2016, available at <http://www.philstar.com/headlines/2016/10/21/1635919/full-text-joint-statement-philippines-and-china>.

197 *Joint Statement of the Philippines and China*, 20 October 2016, para 40.

198 *Ibid.*, at para 41.

2 *Location of the South China Sea Condominium*

A condominium in the South China Sea is proposed over most of the disputed areas of the Sea as well as the 'doughnut'¹⁹⁹ area of the high-seas which are beyond EEZ claims of any coastal baseline. While recognising that the South China Sea LME extends to the coastlines of the disputants there is no suggestion that the condominium would include any territorial seas or any areas where no disputes exist. The condominium would therefore include most of the area within China's claimed 9-dash line but would exclude China's own territorial sea. Malaysia, Brunei, Vietnam, the Philippines, Indonesia, China and Taiwan would therefore jointly exercise sovereignty over the whole of this sea area with territorial seas generated by mainlands and main islands excluded. Sustainable use of marine living resources is proposed as the overarching objective within the condominium area. States would have uniform arrangements for fishing, conservation, shipping and other activities in the area. Oil and gas exploration and exploitation would only be allowed to the extent to which it can be guaranteed to not conflict with the overall objective. An administrative body in the form of South China Sea Council would administer this area.

3 *The South China Sea Council*

The South China Sea Council would include Malaysia, Brunei, Vietnam, the Philippines and China (PRC and Taiwan). The other South China Sea States (Thailand, Singapore, Cambodia and Indonesia) would have observer status. It is suggested that decisions would be made by majority vote as opposed to consensus. This would prevent single countries from being able to derail the process and would facilitate greater effectiveness in decision-making.

The unified condominium fund of the New Hebrides condominium provides a useful example of the financial arrangements that could also be adopted for the South China Sea condominium. There both States covered the costs of joint services and all tax revenues were contributed directly to the joint condominium fund.²⁰⁰

199 If none of the maritime features in the South China Sea are islands capable of generating their own EEZ this would result in a 'doughnut' or 'pocket' of high seas which would be beyond the EEZ of any State. See Clive Schofield, 'Increasingly Contested Waters? Conflicting Maritime Claims in the South China Sea', in Leszek Buszynski & Christopher Roberts (eds.) *The South China Sea and Australia's Regional Security Environment*, 8–12 (National Security College, 2013) available at <http://nsc.anu.edu.au/documents/occasional-5-brief-2.pdf>.

200 Samuels, *supra* note 23, at 738.

The South China Sea Council could also draw inspiration from the Arctic Council which is comprised of all coastal States of the Arctic Ocean. Established in 1996 as a forum for the protection of Arctic environment, the Arctic Council has emerged as the most important regional forum for Arctic cooperation. It consists of eight Arctic States (United States, Canada, Russia, Norway, Sweden, Denmark, Finland and Iceland) and indigenous groups as permanent participants. Moreover, major economies that are interested in the Arctic, such as Germany, United Kingdom, Singapore, China, India, Japan and the Republic of Korea are accepted as observers. Observers are able to participate in Arctic Council meetings without voting rights. The Arctic Council has a number of working groups, including for example Protection of Arctic Marine Environment (PAME), Conservation of Arctic Flora and Fauna (CAFF), Arctic Monitoring and Assessment Programme (AMAP) as well as and Emergency Prevention Preparedness and Response (EPPR). The working groups have been working continuously for almost 25 years.

The Arctic Council has sponsored numerous scientific studies that have been instrumental in alerting the world to the transboundary pollution and climate change challenges facing the Arctic.²⁰¹ Moreover, under the auspices of the Arctic Council, two international legally binding agreements have been concluded, namely the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic,²⁰² the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic.²⁰³ The Agreement on Enhancing Arctic Scientific Cooperation will likely be signed in the next ministerial meeting in May 2017.²⁰⁴ The Arctic Council example²⁰⁵ demonstrates how Arctic issues can be resolved taking into account regional priorities. This could similarly be important in the South China Sea to avoid the influence of foreign powers.

201 Timo Koivurova and David VanderZwaag, 'The Arctic Council at 10 Years: Retrospect and Prospects' (2007) 40 *University of British Columbia Law Review* 121.

202 *Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic*, concluded 12 May 2011, available at <https://oaarchive.arctic-council.org/handle/11374/531>.

203 *Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic*, concluded 15 May 2013, available at <https://oaarchive.arctic-council.org/handle/11374/529>.

204 Arctic Council, *Task Force on Scientific Cooperation meets in Ottawa*, 12 July 2016 available at <http://www.arctic-council.org/index.php/en/our-work2/8-news-and-events/408-sctf-ottawa-july-2016>.

205 For further discussions about the Arctic Council, see e.g., Timo Koivurova and Nengye Liu, 'Protection of the Arctic Marine Environment', in Daud Hassan and Saiful Karim (eds), *International Marine Environmental Law and Policy* (Routledge, 2017 (forthcoming)).

VII Conclusion

It is vital that the South China Sea LME *continues* to thrive to ensure the well-being of current and future citizens of South China Sea coastal States. Failing to come to an agreement on the rights of respective States in the South China Sea would be disastrous for the globally significant biodiversity of the region and by extension the food security of coastal State inhabitants. Given the importance of trade routes in the sea area, peace in the South China Sea is also essential for economies in the region. No State is able to unilaterally secure the sustainability of the region's living and non-living resources. In their scramble to consolidate their claims over the resources of the South China Sea coastal States create perverse outcomes by jeopardising the very reason for their claims. Integrated and coordinated planning is unachievable without the collaboration of a majority of States.

This article has demonstrated that sovereignty does not provide the shield against cooperation that some States claim. There is also no legal bar to the joint exercise of sovereignty in the form of a condominium. Coastal States of the South China Sea are therefore encouraged to consider how they can best exercise their sovereignty for the benefit of their peoples and for their irreplaceable environmental heritage. We put forward the South China Sea Condominium as an important legal and institutional framework for securing environmental sustainability as well as political and economic stability for the region while providing a mechanism which manages foreign influence to allow management of the South China Sea to be made based on the priorities of coastal States. Meanwhile, uniform shipping standards and integrated management of the South China Sea Large Marine Ecosystem would also be of benefit to international trade and shipping interests and to the protection of globally unique and important marine biodiversity.

In the aftermath of the Arbitral Award, recent developments suggest movement towards meaningful cooperation between South China Sea states. Should States agree to put aside disputes in exchange for the joint exercise of sovereignty in the South China Sea this could provide a global model of cooperation which could be applied to other LMES and collaborative governance of other transboundary ecosystems.