

Potential Alternatives to the Disputes in the South China Sea: An Analysis

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Abstract: The purpose of this article is to analyze and propose potential alternatives to the stalemate of sovereignty disputes in the South China Sea. The background and status quo in the region suggest that sovereignty disputes are not likely to be settled in the foreseeable future. Although recommended by many diplomats and scholars, traditional dispute settlement mechanisms under international law, including diplomatic negotiation and third-party arbitration, will not likely work in the South China Sea, at least in the near future. Due to the probable difficulties in implementing either of the mechanisms, “joint development” of oil and gas reserves and “regional cooperation” on the marine environment and shared resources have been recommended as alternatives to circumvent these sovereignty disputes. Nevertheless, this article finds that joint development of oil and gas reserves is similarly unlikely to work in the near future because it suffers the same weakness as traditional mechanisms, in that any resolution may have sovereignty implications. On the other hand, cooperation has been recognized as a necessary and fundamental principle in international law and international relations. In addition, there are many legal commitments by bordering States/regions to cooperate on the commons under United Nations Convention on the Law of the Sea and many other international environmental conventions. Some cooperative activities related to the commons are regularly carried out on bilateral or multilateral bases in the region. Notwithstanding the lack of progress toward final settlement of sovereignty disputes, regional cooperation in the South China Sea may be a workable alternative for all States concerned in the near future. As always, the politi-

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cal will of all parties is paramount to the success of such an endeavor.

Key Words: South China Sea; Provisional arrangement; Joint development; Regional cooperation; Commons

I . Introduction

Conflicting sovereignty claims over the South China Sea have been made and disputed for decades. Six parties, including China Mainland, Vietnam, Malaysia, Brunei, the Philippines and China Taiwan, have asserted their sovereignty over all or part of the region. However, sovereignty disputes among these parties in the South China Sea have been in a political deadlock, and none “has made any concessions despite conflicts involving fishing vessels, maritime surveillance boats and oil exploration ships.”¹ In light of the recent conflict between China and the Philippines over Huang-yan Island in April and May of 2012,² the prospect of an effective resolution of these conflicting claims in the South China Sea is not very promising.

Since the South China Sea has been a flashpoint of sovereignty disputes for years, many diplomats have tried to resolve the disagreements in the region through various mechanisms. Likewise, scholars have provided many recommendations whereby resolutions might be achieved by different approaches. However, as of 2012 none of them has been successfully implemented, nor seems likely to work, at least in the near future. Therefore, solutions to work around the disputes must be sought elsewhere.

More importantly, the stalemate of sovereignty disputes in the South China Sea does not mean that claimants can take no actions. In particular, the United Nations Convention on the Law of the Sea (UNCLOS)³ stipulates that if maritime delimitation on concerned States’ exclusive economic zones (EEZs) and continental shelves cannot be reached, they “shall” enter into provisional arrangements.⁴ The bordering States/regions in the South China Sea, except China Taiwan, have all ratified UN-

¹ Edward Wong, China and Vietnam Agree to Talks on South China Sea Dispute, *New York Times*, at <http://www.nytimes.com/2011/06/27/world/asia/27vietnam.html?ref=vietnam>, 22 July 2012.

² Jane Perlez, Dispute between China and Philippines over Island Becomes More Heated, *New York Times*, at <http://www.nytimes.com/2012/05/11/world/asia/china-philippines-dispute-over-island-gets-more-heated.html>, 22 June 2012.

³ United Nations Convention on the Law of the Sea, 10 December 1982, 1833 *U. N. T. S.* 397.

⁴ UNCLOS, Articles 74(3) and 83(3).

CLOS. Thus, they “shall” have a legal obligation to comply with this requirement.

The purpose of this article is to analyze and propose potential alternatives to the stalemate of sovereignty disputes in the South China Sea. It begins with an introduction to the status quo of disputes in the region. In the next section follows a discussion of mechanisms and resolutions which have been proposed. Thirdly, this article examines the requirements of provisional arrangements stipulated in UNCLOS. Fourthly, it analyzes potential alternatives which would likely work in the South China Sea. Last, observations and recommendations are presented and discussed.

II . Background and Status Quo of the Disputes in the South China Sea

The South China Sea has long been labeled as “troubled waters.”⁵ It contains rich living and non-living resources, is important geostrategically given that it contains crucial Sea Lines of Communication (SLOC) connecting the Pacific Ocean and the Indian Ocean, and is populated by numerous tiny insular features, which can be generally classified into four groups: the Pratas Islands (Dong-sha Archipelagos in Chinese), the Maccelesfield Bank (Chong-sha Archipelagos in Chinese), the Parcel Islands (Shi-sha Archipelagos in Chinese), and the Spratly Islands (Nan-sha Archipelagos in Chinese).⁶

Sovereignty disputes in the South China Sea, which generally focus on the many insular features and on maritime boundary delimitations, make this region a potential “flashpoint” for conflict. Smith once mentioned that disputes involving islands fall under two major categories: (i) Disputes over the sovereignty of the island(s) itself; and (ii) Disputes over the effect the island(s) may have on the delimitation of adjacent maritime space.⁷ These two categories perfectly reflect the conflict in the South China Sea.

⁵ Nien-Tsu Alfred Hu, South China Sea: Troubled Waters or a Sea of Opportunity?, *Ocean Development & International Law*, Vol. 41, Issue 3, 2010, p. 203.

⁶ South China Sea Islands in 1988, at http://www.nansha.org.cn/maps/5/1988_nanghai.html, 14 October 2012.

⁷ Robert W. Smith and Bradford L. Thomas, Island Disputes and the Law of the Sea: An Examination of Sovereignty and Delimitation Disputes, *Maritime Briefing*, Vol. 2, No. 4, 1998, p. 1.

A. *Territorial Sovereignty Disputes*

All four groups of islands in the South China Sea are subject to sovereignty disputes, but to different degrees and involving different claimants. To a small extent, claims follow patterns of spacial distribution or “nearest neighbor,” though there are many exceptions. The centrally located Spratly Islands, for instance, are presently occupied without any noticeable pattern, which would make delimitations around these islands, if that is part of the final solution, even more challenging.⁸

China Taiwan and China Mainland both claim sovereignty over the Pratas Islands, which have been under effective control of China Taiwan since the 1950s. The Macclesfield Bank is also claimed by both China Taiwan and China Mainland. However, from the Chinese perspective, the Chong-Sha Archipelago includes not only the Macclesfield Bank but also the Scarborough Reef (or Huang-yan Island mentioned above). Thus from the Chinese perspective, the Philippines must be counted as a claimant as well because it also has lodged a territorial claim over the Reef.⁹ The territorial sovereignty over the Paracel Islands is disputed by China Taiwan, China Mainland and Vietnam. China Mainland has effectively controlled them since the Battle of the Paracel Islands between China Mainland and Vietnam in 1974. The Spratly Islands, in the central part of the South China Sea, are disputed among six bordering parties: China Mainland, Vietnam, Malaysia, Brunei, the Philippines and China Taiwan.

B. *Maritime Jurisdiction Disputes*

In addition to territorial sovereignty disputes, bordering States/regions also claim maritime jurisdiction over all or part of the South China Sea for various reasons. For instance, China Taiwan, China Mainland and Vietnam claim maritime jurisdiction over the entire South China Sea on historical grounds. The Philippines claim maritime jurisdiction over the Kalayaan region based on the “right of discovery” under international law. On the other hand, Malaysia and Brunei both claim maritime jurisdiction

⁸ Map of current occupation status of the Spratly Islands, at http://www.nansha.org.cn/maps/6/1996_nansha_occupants.jpg, 15 October 2012.

⁹ Zou Keyuan, The Chinese Traditional Maritime Boundary Line in the South China Sea and Its Legal Consequences for the Resolution of the Disputes over the Spratly Islands, *The International Journal of Marine and Coastal Law*, Vol. 14, No. 1, 1999, p. 30.

based on UNCLOS, particularly the principle of natural prolongation of continental shelf.¹⁰

The negotiation, adoption, and entry into force of UNCLOS and its ratification by all bordering States/regions (except China Taiwan) is the main driver to maritime jurisdiction disputes in the South China Sea. Before UNCLOS, coastal States rarely extended their jurisdiction more than three nautical miles (nm) offshore. As a result, overlaps of maritime jurisdiction were infrequent. However, UNCLOS not only extends the territorial sea up to 12 nm but also allows coastal States to claim an EEZ from 12 nm to 200 nm measured from their territorial baselines, and in some instance, to claim continental shelf of up to 350 nm. That development significantly increased the frequency and severity of one State's jurisdiction claim overlapping another's. This situation is especially prevalent in a semi-enclosed sea like the South China Sea due to its unique geographic features.

Abundant fishery resources and the possibility of huge oil and gas reserves increase the interest of bordering parties to expand their maritime jurisdictions. The emerging interest of the world's States in developing offshore food and energy resources to meet the demands of growing populations, particularly as their land-based resources cannot support increasing needs any longer, makes these jurisdictional disputes more urgent. Thus, Smith and Thomas observed that "it is fair to say that marine resource jurisdiction is at least an implicit issue in almost all island disputes, whether or not openly stated in the publicity surrounding those disputes, and regardless of when and over what issue the dispute originated."¹¹

C. Sovereignty Claims and Occupation Status in the South China Sea

Although the South China Sea is surrounded by eight bordering parties, not all of them are currently making any claims to the islands or waters therein. As previously mentioned, the claimants are China Taiwan, China Mainland, Vietnam, Malaysia, Brunei and the Philippines. Singapore and Indonesia do not claim sovereignty over any of the islands and/or waters within the South China Sea.

China Taiwan bases its territorial and maritime jurisdiction claim to the South China Sea on "historical discovery" and "occupation of the territory" since "time

¹⁰ Map of claimed maritime jurisdiction zones in the South China Sea, at http://www.eia.doe.gov/emeu/cabs/South_China_Sea/SouthChinaSeaTerritorialIssues.html, 15 October 2012.

¹¹ Robert W. Smith and Bradford L. Thomas, *Island Disputes and the Law of the Sea: An Examination of Sovereignty and Delimitation Disputes*, *Maritime Briefing*, Vol. 2, No. 4, 1998, p. 15.

immemorial.”¹² In 1946, the ROC Government was the first claimant to make its territorial claim over all insular features in the South China Sea. It also drew a discontinuous U-shaped line encompassing close to the coasts of other bordering States/regions, and asserted all waters within the U-shaped line as “historic waters” while it still ruled China Mainland. In 1947, it officially annexed the four groups of islands under the administrative jurisdiction of Kuangtung Province. Since then, this claim has remained unchanged. Currently, China Taiwan effectively controls the Pratas Islands and two of the Spratly Islands, including the biggest: Tai-ping Island.¹³

Since its establishment on China Mainland in 1949, P. R. China has assumed the ROC Government’s claim to the South China Sea with a revised, but similar, discontinuous U-shaped line. It eliminated 2 of the original 11 sections of the line in the Gulf of Tonkin due to the transfer of sovereignty of one island to North Vietnam in the 1950s.¹⁴ Except for this, China Mainland and China Taiwan have maintained the same claim in the South China Sea disputes for over half a century.¹⁵ China Mainland currently controls all the Paracel Islands and 11 of the Spratly Islands.¹⁶

Vietnam claims territorial sovereignty over the Paracel and Spratly Islands based on “historical discovery,” visits and administration “from time immemorial” as well.¹⁷ Cordner argues, however, that such historical claims should really be limited to the timeframe during and after French occupation.¹⁸ Recently, Vietnam also asserted that the extent of its continental shelf entitles Vietnam to occupy these islands.¹⁹ Although it lost possession over the Paracel Islands in 1974, today it controls over 30

¹² Alice D. Ba ed., *China and the Spratly Islands: Prospects for Joint Development*, Virginia: Department of Government and Foreign Affairs, University of Virginia, August 1993, p. 4.

¹³ The website of the Task Force for Marine Affairs, “Executive Yuan,” Taiwan, at <http://www.cmaa.nat.gov.tw/ch/NewsContent.aspx?NewsID=130&path=275>, 17 October 2012. (in Chinese)

¹⁴ Zou Keyuan, The Chinese Traditional Maritime Boundary Line in the South China Sea and Its Legal Consequences for the Resolution of the Disputes over the Spratly Islands, *The International Journal of Marine and Coastal Law*, Vol. 14, No. 1, 1999, pp. 34 ~ 35.

¹⁵ Nien-Tsu Alfred Hu, South China Sea: Troubled Waters or a Sea of Opportunity?, *Ocean Development & International Law*, Vol. 41, Issue 3, 2010, p. 207.

¹⁶ The website of the Task Force for Marine Affairs, “Executive Yuan,” Taiwan, at <http://www.cmaa.nat.gov.tw/ch/NewsContent.aspx?NewsID=130&path=275>, 17 October 2012. (in Chinese)

¹⁷ Mark J. Valencia, Jon M. Van Dyke and Noel A. Ludwig eds., *Sharing the Resources of the South China Sea*, The Hague: Kluwer Law International, 1997, p. 30.

¹⁸ Lee G. Cordner, The Spratly Islands Dispute and the Law of the Sea, *Ocean Development & International Law*, Vol. 25, Issue 1, 1994, p. 65.

¹⁹ Joshua P. Rowan, The U. S. –Japan Security Alliance, ASEAN, and the South China Sea Dispute, *Asian Survey*, Vol. 45, No. 3, 2005, pp. 424 ~ 425.

of the Spratly Islands, the greatest number among the claimants in this region.²⁰

Malaysia is one of the two claimants which do not base the territorial sovereignty and maritime jurisdiction on historic grounds. Rather, Malaysia asserts its sovereignty over 12 of the Spratly Islands, six of which have been physically occupied by Malaysia since 1978 in the southern part of the South China Sea. Its claim is based upon the “natural prolongation” of its continental shelf.²¹ It likewise claims jurisdiction over its continental shelf in this region based on the relevant provisions in UNCLOS.

Brunei claims two reefs —the Rifleman Bank and the Louisa Reef (the latter is also claimed by Malaysia)— and a rectangular maritime zone. Like Malaysia, Brunei bases its claims for the reefs on the prolongation on its continental shelf.²² In 1988, Brunei issued a map displaying a continental shelf claim extending beyond the Rifleman Bank, which appeared to be based upon a 350 nm continental shelf interpretation, or the extension based on the Louisa Reef.²³

The Philippines assert sovereignty over the Scarborough Reef and part of the Spratly Islands within the Kalayann Islands Group (KIG) based on the fact that these islets are adjacent or contiguous to the Philippine Islands (and so subject to the “proximity principle” in international law); that this region is vital to the country’s economic survival and security;²⁴ that these islets were *res nullius* or abandoned after Japan’s renunciation of all rights, title and claim to the South China Sea islands in the 1951 San Francisco Peace Treaty and thus “were equally open to economic exploitation and settlement by nationals or any members of the Allied Powers;”²⁵ and that recent Philippine occupation gives it title either through “discovery or prescriptive acquisition” or the extension of its continental shelf.²⁶ Currently, it controls 11 of the

²⁰ The website of the Task Force for Marine Affairs, “Executive Yuan,” Taiwan, at <http://www.cmaa.nat.gov.tw/ch/NewsContent.aspx?NewsID=130&path=275>, 17 October 2012. (in Chinese)

²¹ Joshua P. Rowan, The U. S. –Japan Security Alliance, ASEAN, and the South China Sea Dispute, *Asian Survey*, Vol. 45, No. 3, 2005, p. 420.

²² Mark J. Valencia, Jon M. Van Dyke and Noel A. Ludwig eds., *Sharing the Resources of the South China Sea*, The Hague: Kluwer Law International, 1997, p. 38.

²³ Lee G. Cordner, The Spratly Islands Dispute and the Law of the Sea, *Ocean Development & International Law*, Vol. 25, Issue 1, 1994, p. 68.

²⁴ Mark J. Valencia, Jon M. Van Dyke and Noel A. Ludwig eds., *Sharing the Resources of the South China Sea*, The Hague: Kluwer Law International, 1997, p. 33.

²⁵ Alice D. Ba ed., *China and the Spratly Islands: Prospects for Joint Development*, Virginia: Department of Government and Foreign Affairs, University of Virginia, August 1993, p. 5.

²⁶ Mark J. Valencia, Jon M. Van Dyke and Noel A. Ludwig eds., *Sharing the Resources of the South China Sea*, The Hague: Kluwer Law International, 1997, p. 33.

Spratly Islands.²⁷

D. Summary

From the preceding analysis, current sovereignty disputes in the South China Sea include territorial disputes over the insular features (particularly the Paracel and the Spratly Islands) and overlapping maritime jurisdiction claims. For the former, all claimants have physically occupied some of these insular features except for Brunei. For the latter, the parties concerned assert their maritime claims based on various legal and historical grounds, which further complicates the final settlement of these disputes. This, combined with the sheer number of claimants, suggests that sovereignty disputes in the region can be expected to continue and are not likely to be settled in the foreseeable future.

III. Proposed Mechanisms and Resolutions to the Disputes in the South China Sea

Since the South China Sea disputes have persisted for many decades, diplomats and scholars, both from the West and from States in the region, have tried to provide mechanisms and resolutions to settle regional differences. This section intends to provide a general overview of these mechanisms and recommended resolutions by reviewing related literature.

Diplomatic negotiation is the most common mechanism that States use to settle disputes under international law, and is particularly common in a bilateral mode.²⁸ Several scholars have suggested approaches based on this mechanism which could lead to final settlement of sovereignty disputes in the South China Sea. These approaches include the so-called “doughnut formula,”²⁹ whereby the insular features are ignored when delimiting maritime zones, and thus the center of the South China Sea remains “high seas.” Another suggested approach would give one claimant, be it P.

²⁷ The website of the Task Force for Marine Affairs, “Executive Yuan,” Taiwan, at <http://www.cmaa.nat.gov.tw/ch/NewsContent.aspx?NewsID=130&path=275>, 17 October 2012. (in Chinese)

²⁸ Robert W. Smith and Bradford L. Thomas, *Island Disputes and the Law of the Sea: An Examination of Sovereignty and Delimitation Disputes*, *Maritime Briefing*, Vol. 2, No. 4, 1998, p. 17.

²⁹ Hasjim Djalal, *Indonesia and the South China Sea Initiative*, *Ocean Development & International Law*, Vol. 32, Issue 2, 2001, pp. 97 ~ 103.

R. China or Vietnam, very limited sovereignty over all insular features in the South China Sea, with others having access for peaceful purposes, including resources development.³⁰ A third suggestion is that “ASEAN, given its interests in a peaceful maritime regime, declares an EEZ on behalf of the whole ASEAN member States in order to avoid inter-ASEAN disputes.”³¹

As mentioned in Section II, there is no evidence that parties in the region are willing to make any concessions or compromises to their sovereignty claims. In addition, these three approaches would not likely work if sovereignty claims over islands in the South China Sea could not be effectively addressed. As a consequence, none of these approaches have been accepted or implemented by bordering parties since being recommended. This implies that diplomatic negotiation is an unlikely mechanism through which to settle the disputes in the South China Sea, at least in the near future.

Third-party arbitration has been widely discussed as a potential mechanism through which to settle the disputes in the South China Sea as well. Possible courts or fora include the International Court of Justice (ICJ), International Tribunal of the Law of the Sea (ITLOS), and the United Nations Security Council.³² This mechanism is particularly favored by western States and many international organizations. More importantly, international courts and tribunals have evolved numerous and innovative ways to address the “trouble with islands” and achieve equitable resolutions, particularly in the context of maritime boundary delimitations.³³

However, it is highly questionable whether the claimant States in the South China Sea would be willing to bring their disputes before a court. This is because “Southeast Asia is known as a region with a tradition of non-adjudication,”³⁴ a proclivity attributed to “the uncertainty of the outcome besides the length and expense of

³⁰ Mark J. Valencia, Jon M. Van Dyke and Noel A. Ludwig eds., *Sharing the Resources of the South China Sea*, The Hague: Kluwer Law International, 1997, p. 133.

³¹ Alice D. Ba ed., *China and the Spratly Islands: Prospects for Joint Development*, Virginia: Department of Government and Foreign Affairs, University of Virginia, August 1993, p. 71.

³² R. Haller-Trost ed., *The Spratly Islands: A Study on the Limitations of International Law*, Occasional Paper, No. 14, Canterbury: Center of South-East Asian Studies, University of Kent at Canterbury, 1990, p. 3.

³³ Clive Schofield, *The Trouble with Islands: The Definition and Role of Islands and Rocks in Maritime Boundary Delimitation*, in Seoung-Yong Hong and Jon M. Van Dyke eds., *Maritime Boundary Disputes, Settlement Process, and the Law of the Sea*, Leiden/Boston: Martinus Nijhoff Publishers, 2009, p. 36.

³⁴ Nguyen Hong Thao and Ramses Amer, *A New Legal Arrangement for the South China Sea?*, *Ocean Development & International Law*, Vol. 40, Issue 4, 2009, p. 341.

the case involved”³⁵ and “the distrust of Western-dominated international law.”³⁶ There are some encouraging signs to indicate that third-party arbitration is gradually becoming an acceptable option to some bordering States/regions, such as the 1998 Indonesia and Malaysia Case³⁷ and the 2003 Malaysia and Singapore Case³⁸ of ICJ, along with the fact that the Philippines has expressed its willingness to submit its disputed claim (the Kalayaan area in the South China Sea) to ICJ or other similarly constituted body for adjudication.³⁹ Despite these examples, the use of third-party arbitration remains unlikely to be accepted by most parties in the South China Sea, particularly P. R. China, in the near future. This is because, as highlighted by Thao and Amer, “the Court has jurisdiction only to resolve legal disputes. However, a resolution of the disputes (...) involves and must satisfy political, economical and social concerns as well as legal concerns.”⁴⁰

In short, traditional dispute settlement mechanisms under international law, whether diplomatic negotiation or third-party arbitration, will not likely work in the South China Sea, at least in the near future. Therefore, solutions to work around the disputes must be sought elsewhere.

IV. Provisional Arrangements in UNCLOS

Despite being called “a constitution for the oceans,”⁴¹ UNCLOS does not contain resolutions in any of its articles to settle territorial sovereignty disputes (including islands). It does, however, provide relevant principles for coastal States to delimit

³⁵ R. Haller-Trost ed., *The Spratly Islands: A Study on the Limitations of International Law*, Occasional Paper, No. 14, Canterbury: Center of South-East Asian Studies, University of Kent at Canterbury, 1990, p. 81.

³⁶ Marius Gjetnes, *The Spratlys: Are They Rocks or Islands?*, *Ocean Development & International Law*, Vol. 32, Issue 2, 2001, p. 192.

³⁷ *Sovereignty over Pulau Ligitan and Pulau Sipadan (Indonesia/Malaysia)*, Application by the Philippines for Permission to Intervene, I. C. J Reports, 2001, p. 575, at <http://www.icj-cij.org/docket/files/102/7698.pdf>, 3 October 2012.

³⁸ *Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia/Singapore)*, I. C. J. Reports, 2008, p. 12, at <http://www.icj-cij.org/docket/files/130/14492.pdf>, 3 October 2012.

³⁹ R. Haller-Trost ed., *The Spratly Islands: A Study on the Limitations of International Law*, Occasional Paper, No. 14, Canterbury: Center of South-East Asian Studies, University of Kent at Canterbury, 1990, p. 78.

⁴⁰ Nguyen Hong Thao and Ramses Amer, *A New Legal Arrangement for the South China Sea?*, *Ocean Development & International Law*, Vol. 40, Issue 4, 2009, p. 342.

⁴¹ Tommy T. B. Koh, *A Constitution for the Oceans*, at http://www.un.org/Depts/los/convention_agreements/texts/koh_english.pdf, 3 October 2012.

their maritime boundaries with other adjacent or opposite States in Articles 15, 74 and 83 for territorial seas, EEZs and continental shelves, respectively. For instance, States should adopt the “median line” principle as their delimitation method in territorial seas⁴² in that all States have equal sovereignty, and such sovereignty extends to territorial seas. On the other hand, States should achieve an “equitable solution” on the basis of international law for the delimitation of the EEZ and continental shelf,⁴³ but no explicit methods or criteria are provided in these two articles or any other provisions. Therefore, delimitation of EEZs and continental shelves between States is more complicated and difficult than that in territorial seas. Such situations also imply that reaching a final delimitation in EEZs and continental shelves may be expected to take more time.

In order to avoid disadvantages due to pending agreements in both EEZs and continental shelves, UNCLOS stipulates a legal obligation to concerned States in Articles 74(3) and 83(3), both stating:

Pending agreement as provided for in paragraph 1, the States concerned, in a spirit of understanding and cooperation, shall make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement. Such arrangements shall be without prejudice to the final delimitation.

Nordquist *et al* considered that this paragraph combines two elements:

*the duty to make every effort to conclude provisional arrangements of a practical nature, and a prohibition against jeopardizing or hampering the reaching of the final agreement. The first element aims to promote the adoption of certain interim measures, and the second one seeks to limit the activities of the States concerned in the disputed area.*⁴⁴

Nevertheless, one question still arises from these articles as well as from Nordquist's explanation: on what subjects must States make provisional arrangements?

If delimitations of the EEZ and continental shelf between States cannot be reached, it is fair to say that the States concerned will not be able to fully exercise

⁴² UNCLOS, Article 74(1).

⁴³ UNCLOS, Articles 74(1) and 83(1).

⁴⁴ Myron H. Nordquist ed., *United Nations Convention on the Law of the Sea, 1982: A Commentary*, Dordrecht: Martinus Nijhoff, 1985, p. 815.

their rights and duties in the disputed areas because each will try to prevent the presence of the others in such areas. To understand what kinds of rights and duties coastal States have in their EEZs and continental shelves, it is necessary to review relevant provisions in the EEZ and continental shelf regimes under UNCLOS.

Part V of UNCLOS gives coastal States the following rights, jurisdiction and duties within their EEZs:

(a) *sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds;*

(b) *jurisdiction as provided for in the relevant provisions of this Convention with regard to:*

(i) *the establishment and use of artificial islands, installations and structures;*

(ii) *marine scientific research;*

(iii) *the protection and preservation of the marine environment;*

(c) *other rights and duties provided for in this Convention.*⁴⁵

Part VI of UNCLOS stipulates the rights of coastal States within the continental shelf as follows:

The coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources...

*The natural resources referred to in this Part consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil.*⁴⁶

In addition to sovereign rights, coastal States obtain jurisdiction over certain activities on the continental shelf as well, such as laying pipelines⁴⁷ and the exclusive right to

⁴⁵ UNCLOS, Article 56(1).

⁴⁶ UNCLOS, Article 77(1) and (4).

⁴⁷ UNCLOS, Article 79(3).

authorize and regulate drilling on the shelf for all purposes.⁴⁸

Based on these articles, coastal States enjoy two distinct rights within their EEZs and continental shelves: sovereign rights and jurisdiction. The former includes the right to marine natural resources, whether living or non-living, and to renewable energy; the latter covers activities relevant to artificial islands, installations and structures, marine scientific research, marine environment, laying pipelines, and drilling.

As mentioned above, States are highly constrained from fully exercising their national jurisdiction in disputed marine areas.⁴⁹ Thus, the exercise of these rights will be significantly affected in the disputed areas if the delimitation of the EEZ or continental shelf between States is pending. On the other hand, coastal States should enjoy only those rights provided by UNCLOS. In other words, they should enjoy no rights to address issues other than those provided for by UNCLOS. Thus, if provisional arrangements “shall” be made, the primary objective of these arrangements should be facilitating the exercise of the rights provided by UNCLOS in the disputed areas and on these rights only, unless other international conventions may apply in the disputed areas as well (e.g., IMO shipping-related conventions).

This legal obligation applies to all bordering States/regions in the South China Sea since they are all Contracting Parties to UNCLOS, except for China Taiwan. Hence, each of them “shall” make every effort to reach provisional arrangements on the subjects above in the disputed areas, which will be particularly impactful in the Spratly Islands and surrounding waters.

V. Potential Alternatives to the Disputes in the South China Sea

Due to the probable difficulties in implementing either of the mechanisms discussed in the preceding section, alternatives which circumvent these sovereignty disputes have been recommended by scholars and diplomats: “joint development” of oil and gas reserves, and “regional cooperation” on the marine environment and shared resources. These alternatives share an important feature: they prompt the parties concerned to cooperate with each other on these respective issues without addressing the current sovereignty disputes among the parties. This section introduces these two al-

⁴⁸ UNCLOS, Article 81.

⁴⁹ Aldo Chircop, Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Direction for Marine Conservation, *Ocean Development & International Law*, Vol. 41, Issue 4, 2010, p. 338.

ternatives and discusses their concepts, key elements, existing practice, derived associated approaches, and chance of being accepted by parties involved in the South China Sea in the near future.

A. Joint Development of Oil and Gas Reserves

The concept of joint development is of recent origin in international law, dating from approximately the extension of maritime jurisdiction by coastal States during the second half of the 1950s.⁵⁰ Considering that final agreement on maritime delimitation is not easy and may remain unsettled for years, exploitation and apportionment of shared natural resources, particularly oil and gas reserves, has become a troublesome problem because oil companies are unwilling to risk investing or entering exploration contracts in disputed areas. As a consequence, “joint development is one of the approaches adopted by States in dealing with the challenge of resource exploitation in an area subject to conflicting territorial claims, and its practice accelerated in 70s and 80s evidenced by the growing academic writings and State practice.”⁵¹

1. Concept and Definition of “Joint Development”

Despite decades of evolution, the concept of “joint development” has not been understood or used in a uniform way. Different definitions have been given by different scholars/experts, such as “a decision by one or more countries to pool any rights they may have over a given area and, to a greater or lesser degree, undertake some form of joint management for the purposes of exploring and exploiting offshore minerals;”⁵² “extending from the unitization of shared resources to the unilateral development of a shared resource beyond a stipulated boundary, and various gradations in between;”⁵³ “an intergovernmental arrangement of a provisional nature, designed for

⁵⁰ Thomas A. Mensah, Joint Development Zones as an Alternative Dispute Settlement Approach in Maritime Boundary Delimitation, in Rainer Lagoni and Daniel Vignes eds., *Maritime Delimitation*, Leiden: Nijhoff, 2006, p. 146.

⁵¹ Gao Zhiguo, Legal Aspects of Joint Development in International Law, in Mochtar Kusuma-Atmadja, Thomas A. Mensah and Bernard H. Oxman eds., *Sustainable Development and Preservation of the Oceans: The Challenges of the UNCLOS and Agenda 21*, Honolulu: Law of the Sea Institute, 1997, pp. 629 ~ 631.

⁵² Ian Townsend Gault, Joint Development of Offshore Mineral Resources-Progress and Prospects for the Future, *Natural Resources Forum*, Vol. 12, Issue 3, 1988, p. 275.

⁵³ Masahiro Miyoshi, The Basic Concept of Joint Development of Hydrocarbon Resources on the Continental Shelf: With Special Reference to the discussions at the East-West Centre workshops on the South-East Asian seas, *International Journal of Estuarine and Coastal Law*, Vol. 3, No. 1, 1988, pp. 5, 17.

the functional purposes of joint exploration for and/or the exploitation of the hydrocarbon resources of the sea-bed beyond the territorial sea;”⁵⁴ “cooperation between states based on agreement with regard to the exploration for and exploitation of certain deposits, fields or accumulations of non-living resources which either extend across a boundary or lie in an area of overlapping claims;”⁵⁵ and “an agreement between two states to develop so as to share jointly in agreed proportions by interstate cooperation and national measures the offshore oil and gas in a designated zone of the sea-bed and subsoil of the continental shelf to which both or either of the participating states are entitled in international law.”⁵⁶ Therefore, Gao concluded that “there is no commonly accepted definition for joint development because those are in accordance with the theoretical purpose of their study,”⁵⁷ and “joint development remains in the process of evolution, and the principle is still in a state of flux.”⁵⁸

2. Key Elements and Existing Practice

Several key elements of joint development can be concluded from these definitions: it must be focused on shared non-living resources, particularly oil and gas reserves; formatted as an intergovernmental arrangement; and based on the spirit of mutual cooperation. Djalal further considered that detailed elements in a joint development activity include:

The area for joint development or joint cooperation should involve the relevant parties;

The agreement to establish joint development or joint cooperation should be without prejudice to the respective territorial and jurisdictional claims;

⁵⁴ Masahiro Miyoshi, *The Joint Development of Offshore Oil and Gas in Relation to Maritime Boundary Delimitation*, *Maritime Briefing*, Vol. 2, No. 5, 1999, p. 3.

⁵⁵ David M. Ong, *The 1979 and 1990 Malaysia-Thailand Joint Development Agreements: A Model for International Legal Co-operation in Common Offshore Petroleum Deposits?*, *The International Journal of Marine and Coastal Law*, Vol. 14, No. 2, 1999, p. 207.

⁵⁶ Hazel Fox ed., *Joint Development of Offshore Oil and Gas: a model agreement for states for joint development with explanatory commentary*, London: British Institute of International and Comparative Law, 1989, p. 45.

⁵⁷ Gao Zhiguo, *Legal Aspects of Joint Development in International Law*, in Mochtar Kusuma-Atmadja, Thomas A. Mensah and Bernard H. Oxman eds., *Sustainable Development and Preservation of the Oceans: The Challenges of the UNCLOS and Agenda 21*, Honolulu: Law of the Sea Institute, 1997, p. 632.

⁵⁸ Gao Zhiguo, *Legal Aspects of Joint Development in International Law*, in Mochtar Kusuma-Atmadja, Thomas A. Mensah and Bernard H. Oxman eds., *Sustainable Development and Preservation of the Oceans: The Challenges of the UNCLOS and Agenda 21*, Honolulu: Law of the Sea Institute, 1997, p. 644.

The participants should be those which are directly interested parties and which are maintaining presence in the zone;

The subject should begin with the least controversial matters;

At a later stage, resources exploitation could be attempted; and

*A specific period, say 40 or 50 years.*⁵⁹

According to the research of Churchill *et al*, Ong and other literature, a chronological but non-exhaustive list of State practice on the concept of joint development is shown in Table 1.

Table 1 List of Existing State Practice on the Concept of Joint Development

Date Signed	Treaty/Agreement/Memorandum of Understanding
22 February 1958	Agreement Concerning the Delimitation of the Continental Shelf in the Persian Gulf Between the Shaykhdom of Bahrain and the Kingdom of Saudi Arabia
23 January 1960	Agreement Between the Government of the Czechoslovak Republic and the Austrian Federal Republic Concerning the Working of Common Deposits of Natural Gas and Petroleum
14 May 1962	Supplementary Agreement to the Treaty Between the Kingdom of Netherlands and the Federal Republic of Germany Concerning Arrangements for Co-operation in the Ems Estuary (Ems– Dollard Treaty 1960)
7 July 1965	Agreement Between the State of Kuwait and the Kingdom of Saudi Arabia Relating to Partition of the Neutral Zone
20 March 1969	Agreement on the Settlement of Maritime Boundary Lines and Sovereign Rights over Islands Between Qatar and Abu Dhabi
18 November 1971	Memorandum of Understanding Between Iran and Sharjah
29 January 1974	Supplement; Convention Between the Government of the French Republic and the Government of the Spanish State on the Delimitation of the Continental Shelf of the Two States in the Bay of Biscay
5 February 1974	Agreement Between Japan and the Republic of [South] Korea Concerning Joint Development of the Southern Part of the Continental Shelf Adjacent to the Two Countries
16 May 1974	Agreement Between Sudan and Saudi Arabia Relating to the Joint Exploitation of the Natural Resources of the Sea-Bed and Sub-Soil of the Red Sea in the Common Zone

⁵⁹ Hasjim Djalal, The Relevance of the Concept of Joint Development to Maritime Disputes in the South China Sea, *Indonesian Quarterly*, Vol. 27, No. 3, 1999, pp. 185 ~ 186.

(Continued from the previous page)

Date Signed	Treaty/Agreement/Memorandum of Understanding
10 May 1976	Agreement Between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of Norway Relating to the Exploitation of the Frigg Field Reservoir and the Transmission of Gas Therefrom to the United Kingdom
21 February 1979	Memorandum of Understanding between Malaysia and the Kingdom of Thailand on the Establishment of a Joint Authority for the Exploitation of the Resources in the Sea-Bed in a Defined Area of the Continental Shelf of the Two Countries in the Gulf of Thailand
22 October 1981	Agreement on the Continental Shelf Between Iceland and Norway
19 November 1988	Agreement for the Exploitation of (and Investment in) the Joint Area Between the Two Sectors of Yemen– the Yemen Arab Republic and the People’s Democratic Republic of Yemen
11 December 1989	Treaty Between Australia and the Republic of Indonesia on the Zone of Co-operation in an Area Between the Indonesian Province of East Timor and North Australia
30 May 1990	Agreement Between the Government of Malaysia and the Government of the Kingdom of Thailand on the Constitution and Other Matters Relating to the Establishment of the Malaysia-Thailand Joint Authority
5 June 1992	Memorandum of Understanding Between Malaysia and Vietnam for the Exploration and Exploitation of Petroleum in the Gulf of Thailand
12 November 1993	Maritime Delimitation Treaty Between Jamaica and the Republic of Colombia
14 October 1993	Management and Co-operation Agreement Between the Government of the Republic of Senegal and the Government of the Republic of Guinea-Bissau
27 September 1995	Joint Declaration of Argentina and the United Kingdom on Co-operation over Offshore Activities in the South West Atlantic
5 July 2001	Memorandum of Understanding of Timor Sea Arrangement

(Sources : David M. Ong, *The 1979 and 1990 Malaysia-Thailand Joint Development Agreements: A Model for International Legal Co-operation in Common Offshore Petroleum Deposits?*, *The International Journal of Marine and Coastal Law*, Vol. 14, No. 2, 1999, pp. 211 ~ 212; Robin R. Churchill et al, *New Directions in the Law of the Sea*, Vol. I ~ XI, New York: Oceana Publications, 1973 – 1981; Jonathan I. Charney and Lewis M. Alexander eds., *International Maritime Boundaries*, Vol. I, The Hague: Martinus Nijhoff Publishers, 1993; Robin R. Churchill, *Falkland Islands-Maritime Jurisdiction and Co-operative Arrangements with Argentina*, *International and Comparative Law Quarterly*, Vol. 46, 1997, pp. 463 ~ 477.)

Based on these State practices, Miyoshi concluded that there are three broad types of joint development schemes: (1) A joint development scheme devised with the maritime boundary delimited; (2) A program of joint development worked out for the purpose of utilizing hydrocarbon deposits which straddle the boundary line; and (3) A joint development scheme worked out with the issue of boundary delimitation shelved or kept unresolved (perhaps the most complicated type).⁶⁰

3. Joint Development as an Alternative in the South China Sea

Many scholars have recommended joint development of oil and gas reserves as an alternative to the sovereignty disputes in the South China Sea. For example, Djalal suggested that joint development “is a mechanism to achieve a provisional measure pending the solution of a maritime boundary dispute,”⁶¹ and “is useful and promising in South East Asia and in the South China Sea.”⁶² Ji also considered that “joint development of resources could be taken as a transitional measure towards the final settlement [of maritime delimitations].”⁶³ Zou concluded that joint development would provide “a good environment for their social and economic development;” is “an effective and rational use of South China Sea resources,” can “serve as a prerequisite to peacefully resolving the South China Sea disputes,” and can “enhance and expand regional cooperation in other areas.”⁶⁴

In addition, Gao mentioned that “joint development, as an interim measure, is certainly not the optimal solution to the problem of territorial dispute, but it might be in some cases the only alternative to no action or confrontation. In short, it is a politically feasible, practically useful and legally sound concept.”⁶⁵ Shibata and Onorato concluded that “joint development without previously agreed partition of a resource

⁶⁰ Masahiro Miyoshi, Is Joint Development Possible in the South China Sea?, in Mochtar Kusuma–Atmadja, Thomas A. Mensah and Bernard H. Oxman eds., *Sustainable Development and Preservation of the Oceans: The Challenges of the UNCLOS and Agenda 21*, Honolulu: Law of the Sea Institute, 1997, pp. 612 ~ 614.

⁶¹ Hasjim Djalal, The Relevance of the Concept of Joint Development to Maritime Disputes in the South China Sea, *Indonesian Quarterly*, Vol. 27, No. 3, 1999, p. 178.

⁶² Hasjim Djalal, The Relevance of the Concept of Joint Development to Maritime Disputes in the South China Sea, *Indonesian Quarterly*, Vol. 27, No. 3, 1999, p. 184.

⁶³ Ji Guoxing, Maritime Jurisdiction in the Three China Seas, *Policy Papers, Institute on Global Conflict and Cooperation, UC Berkeley*, October 1995, p. 8.

⁶⁴ Zou Keyuan, Joint Development in the South China Sea: A New Approach, *The International Journal of Marine and Coastal Law*, Vol. 21, No. 1, 2006, p. 98.

⁶⁵ Gao Zhiguo, Legal Aspects of Joint Development in International Law, in Mochtar Kusuma–Atmadja, Thomas A. Mensah and Bernard H. Oxman eds., *Sustainable Development and Preservation of the Oceans: The Challenges of the UNCLOS and Agenda 21*, Honolulu: Law of the Sea Institute, 1997, p. 644.

area between claimant States is both feasible and mutually advantageous to the States involved. Experience shows that the success of such a form of cooperation is itself conducive to the future settlement of conflicting territorial claims and to broader cooperation among the States involved.”⁶⁶ Valencia observed that “joint development is a useful concept which has applicability as pressure mounts to develop oil and mineral resources in areas of jurisdictional overlap.”⁶⁷ Smith commented that “the creation of joint development zones (JDZs) has provided a good mechanism for neighboring States to put aside contentious boundary issues and to get on with the activity of seeking and recovering offshore resources.”⁶⁸

Finally, the Timor Gap dispute differed from the Spratly Islands dispute in that no islands were involved, there had not been a history of armed conflict, and regional security was not an issue. Despite these differences, Mito recommended that “the Timor Gap Treaty could nonetheless serve as a workable model and source of ideas and principles for a solution to the Spratly Islands dispute.”⁶⁹ He also concluded that “scholars and commentators have proposed countless solutions and suggestions to resolve the impasse in the South China Sea. Joint development, however, is the most appealing and promising solution.”⁷⁰

Like diplomatic negotiation and third-party arbitration, however, no successful joint development cases have been concluded in the South China Sea yet. As a highly recommended alternative, why is the concept of joint development so difficult to apply in the region? Djalal provided possible reasons for failure of agreement efforts on joint development:

1. *It is difficult to know which areas are being claimed by certain countries, and therefore it is difficult to clearly define the disputed area;*
2. *The roles of islands, rocks and reefs in determining maritime zones;*

⁶⁶ Ibrahim F. I. Shibata and William T. Onorato, *The Joint Development of International Petroleum Resources in Undefined and disputed Area*, *ICSID Review*, Vol. 11, No. 2, 1996, p. 311.

⁶⁷ Mark J. Valencia, *Taming Troubled Waters: Joint Development of Oil and Mineral Resources in Overlapping Claim Areas*, *San Diego Law Review*, Vol. 23, 1986, p. 684.

⁶⁸ Robert W. Smith, *Joint (Development) Zones: A Review of Past Practice and thoughts on the Future*, in Mochtar Kusuma-Atmadja, Thomas A. Mensah and Bernard H. Oxman eds., *Sustainable development and preservation of the oceans: the challenges of the UNCLOS and Agenda 21*, Honolulu: Law of the Sea Institute, 1997, p. 645.

⁶⁹ Lian A. Mito, *The Timor Gap Treaty as a Model for Joint Development in the Spratly Islands*, *American University International Law Review*, Vol. 13, Issue 3, 1998, pp. 758 ~ 759.

⁷⁰ Lian A. Mito, *The Timor Gap Treaty as a Model for Joint Development in the Spratly Islands*, *American University International Law Review*, Vol. 13, Issue 3, 1998, p. 763.

3. *Many claimants do not seem to take the provisions of semi-enclosed seas in Articles 122 and 123 seriously, particularly the provision that stipulate cooperation in the SESs;*

4. *The concept of joint development at this moment seems to mean different things to different people. Joint development should not be attempted in an area which a claimant believes to be its own, and that the concept should only be used in an area claimed by others or for an area outside of its claims.*⁷¹

Another likely explanation is that the concept of joint development of oil and gas reserves requires that the States concerned first decide how to “fairly” allocate the benefits and costs of such development. However, the percentage of allocated benefits and costs for each State could additionally be interpreted to reflect the strength of that State’s sovereignty over the joint development area. Therefore, to determine such percentages means that States have to resolve effectively their sovereignty disputes on continental shelves first.

Based on the analysis above, it is reasonable to anticipate that joint development of oil and gas reserves will not likely work in the near future because it suffers the same weakness as traditional mechanisms: sovereignty disputes in the South China Sea must be resolved before meaningful actions can be taken.

B. Regional Cooperation on the Marine Environment and Shared Resources

The importance of regional cooperation to the study and practice of international ocean management is well established. Innumerable studies have focused on the regional level of every conceivable ocean resource and use, and the emergence of numerous regional arrangements and institutions addressing all aspects of ocean management has been well documented.⁷² As a result, regional cooperation has recently been recommended by some scholars as an alternative to circumvent the dispute stalemate in the South China Sea.

The basic concept of regional cooperation is similar to that of joint development, which is also based on the spirit of mutual cooperation among States, but the subjects

⁷¹ Hasjim Djalal, *The Relevance of the Concept of Joint Development to Maritime Disputes in the South China Sea*, *Indonesian Quarterly*, Vol. 27, No. 3, 1999, p. 186.

⁷² Phillip Saunders, *Maritime Regional Cooperation: Theory and Principles*, in Mark J. Valencia ed., *Maritime Regime Building: Lessons Learned and Their Relevance for Northeast Asia*, The Hague: Martinus Nijhoff Publishers, 2001, p. 1.

addressed by these two alternatives are different. Joint development primarily focuses on non-renewable oil and gas reserves within the continental shelves. In contrast, regional cooperation traditionally addresses the marine environment and shared resources, or “commons,” particularly renewable ones.

1. Definition of Commons

In general, “commons,” or “common-pool resources” (CPRs), are the elements of the environment (tangible resources or intangible assets) that are shared, used and enjoyed by a community.⁷³ Within the field of international environmental law, there are various definitions to “commons” delimiting and describing the scope and elements contained, thus the list of “commons” is both long and diverse. For example, Ostrom stated that “CPRs have traditionally included terrestrial and marine ecosystems that are simultaneously viewed as depletable and renewable. Characteristic of many resources is that use by one reduces the quantity or quality available to others, and that use by others adds negative attributes to a resource.”⁷⁴ Oakerson considered that commons can have a fixed location like a woodlot, can occur as a “fugitive” resource such as fish and wildlife, or may be indivisible over large areas such as oceans and the atmosphere.⁷⁵ In addition to the elements of the natural environment, commons can also refer to the cultural sphere, such as literature, information, software, sites of heritage, as well as products of civilization like irrigation systems or the World Wide Web.⁷⁶

For the purpose of this article, “commons” is defined as the marine environment and natural living resources (particularly fisheries resources) which are shared, used and enjoyed by all parties in the South China Sea. Non-living and non-renewable resources such as oil and gas reserves which are primarily addressed using joint development are not included as commons for this discussion, except as they relate to procedures to prevent, limit or mitigate potential environmental damage and respond to

⁷³ Ronald J. Oakerson, *Analyzing the Commons: A framework*, in Daniel W. Bromley ed., *Making the Commons Work: Theory, Practice, and Policy*, San Francisco: Institute for Contemporary Studies, 1992, p. 41.

⁷⁴ Elinor Ostrom, Joanna Burger, Christopher B. Field, Richard B. Norgaard and David Policansky, *Revisiting the Commons: Local Lessons, Global Challenges*, *Science*, Vol. 284, No. 5412, 1999, p. 279.

⁷⁵ Ronald J. Oakerson, *Analyzing the Commons: A framework*, in Daniel W. Bromley ed., *Making the Commons Work: Theory, Practice, and Policy*, San Francisco: Institute for Contemporary Studies, 1992, p. 41.

⁷⁶ Elinor Ostrom, Joanna Burger, Christopher B. Field, Richard B. Norgaard and David Policansky, *Revisiting the Commons: Local Lessons, Global Challenges*, *Science*, Vol. 284, No. 5412, 1999, p. 279.

environmental accidents.

The South China Sea not only is rich in fisheries resources but also contains important ecosystems. For instance, there are important areas of coral reefs, mangroves, extensive seagrass beds, and other critical habitats for many species in the region. However, such great natural wealth is now being adversely affected by increasing marine uses, human populations and economic activities, particularly human settlement in coastal areas. According to Chircop, 70 percent of the mangroves have been destroyed or damaged, and 20 percent to 50 percent of seagrass beds have been damaged. As elsewhere in the world, overfishing is a major cause of environmental degradation in this region, and many migratory species are affected by overexploitation, land-based activities, pollution and loss of habitats.⁷⁷ Many of these resources and habitats lie in disputed areas. Thus, to prevent these valuable living resources and habitats from further damage, protection and management of commons in the South China Sea must be addressed cooperatively among bordering States/regions as soon as possible.

2. Cooperation in International Law⁷⁸

Cooperation among States developed under the framework of international law after World War II. Since then, as global interconnectedness and international trade have increased, and awareness of international issues such as transboundary pollution has improved, States have become more willing to engage in cooperative activities. This is evidenced by the adoption of a large number of multilateral instruments and the establishment of numerous international organizations.

Requirements of cooperation can be found in many legally-binding conventions such as the Charter of the United Nations⁷⁹ and UNCLOS, as well as non-binding declarations such as the 1970 Declaration of Principles of International Law Concerning Friendly Relations and Co-operation Among States in Accordance with the Charter of

⁷⁷ Aldo Chircop, Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Direction for Marine Conservation, *Ocean Development & International Law*, Vol. 41, Issue 4, 2010, p. 336.

⁷⁸ This section is adopted from Shih-Ming Kao, Nathaniel Sifford Pearre and Jeremy Firestone, Regional Cooperation in the South China Sea: Analysis of Existing Practices and Prospects, *Ocean Development and International Law*, Vol. 43, No. 3, pp. 284 ~286.

⁷⁹ Charter of the United Nations, 24 October 1945, 1 *U. N. T. S.* XVI.

the United Nations⁸⁰ and the 1992 Rio Declaration on Environment and Development.⁸¹ In addition, international cooperation has been associated with formal or institutionalized patterns of cooperation in the field of international relations, particularly within the distinct subfield of international organizations. Inquiry has focused on formal institutional structures such as the United Nations and how international organizations can facilitate international cooperation.⁸² Based on these references, cooperation among States has been enshrined in these international legal instruments and the practices of international organizations, and has become a fundamental principle in both fields.

Cooperation can be enshrined in either “hard law” or “soft law.” With hard law, cooperation is established and regulated by a legally-binding instrument, usually entitled a Convention, Protocol or Agreement. States are bound to cooperate with other parties and comply with the regulations stipulated in the instrument. In contrast, with soft law, cooperation arises from a non-binding instrument, which relies on “international norms that are deliberately non-binding in character but still have legal relevance, located in the twilight between law and politics,”⁸³ usually entitled Declaration, Code of Conduct, or Plan of Action. Without compulsory requirements, States involved cooperate in a voluntary spirit and address the subjects called upon in the instrument based on their goodwill.

Advantages and disadvantages exist in both forms. Hard law provides a powerful framework, reduces transaction costs, strengthens the credibility of States’ commitments, expands their available political strategies, and resolves problems of incomplete contracting.⁸⁴ However, it also entails significant costs because reaching agreements among parties is difficult and slow. In contrast, criticisms of soft law include that it “might destabilize the whole international normative system and turn it into an

⁸⁰ U. N. General Assembly, Declaration of Principles of International Law Concerning Friendly Relations and Co-operation Among States in Accordance with the Charter of the United Nations, 24 October 1970, at www.unhcr.org/refworld/docid/3dda1f104.html, 4 October 2012.

⁸¹ Rio Declaration on Environment and Development, United Nations Conference on Environment and Development, 3 to 14 June 1992, at www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid=1163, 4 October 2012.

⁸² Shirley V. Scott, *The LOS Convention as a Constitutional Regime for the Oceans*, in Alex G. Oude Elferink ed., *Stability and Change in the Law of the Sea: The Role of the LOS Convention*, Leiden: Martinus Nijhoff Publishers, 2005, p. 10.

⁸³ Jon Birger Skjærseth, Olav Schram Stokke and Jørgen Wettestad, *Soft Law, Hard Law, and Effective Implementation of International Environmental Norms*, *Global Environmental Politics*, Vol. 6, No. 3, 2006, p. 104.

⁸⁴ Kenneth W. Abbott and Duncan Snidal, *Hard and Soft Law in International Governance*, *International Organization*, Vol. 54, 2000, p. 422.

instrument that can no longer serve its purpose”⁸⁵ and that it is only an interim step toward harder and therefore more satisfactory legalization.⁸⁶ Despite these criticisms, soft law is often deliberately favored by international actors because it offers many advantages that hard law does not. Soft law offers a more flexible and expedient way to address urgent issues, is easier to agree upon than hard law, and proposes a more effective way to address uncertainty and facilitate compromise, particularly “between actors with different interests and values, different time horizons and discount rates, and different degrees of power.”⁸⁷

As mentioned above, cooperation has been widely applied in ocean management, particularly on regional seas marine environmental protection and shared living resources, or “commons.” Although a global approach has been popular for ocean management due to the global scale of many challenges, the need for some degree of consistency of principle, and the transboundary nature of ocean issues (e.g., shipping, fish, and pollution), States found that “not all of these are functionally manageable at a global level.”⁸⁸ In addition, regional approaches contain a smaller number of States with more congruent interests and similar management concerns. As a consequence, a regional approach may have a better chance of achieving more specific objectives, with more strongly binding requirements, than could be reached within a larger group.⁸⁹ The United Nations Environmental Programme (UNEP) Regional Seas Programmes (RSPs) and Regional Fisheries Management Organizations (RFMOs) are good examples of the effectiveness of the regional approach.

As mentioned earlier in this article, the nature wealth of the South China Sea is now being adversely affected by human activities and natural climate change. Thus, cooperation among these States at regional level is urgent and necessary to prevent these valuable living resources and habitats from further damage.

⁸⁵ Kenneth W. Abbott and Duncan Snidal, Hard and Soft Law in International Governance, *International Organization*, Vol. 54, 2000, p. 422.

⁸⁶ Kenneth W. Abbott and Duncan Snidal, Hard and Soft Law in International Governance, *International Organization*, Vol. 54, 2000, pp. 422 ~ 423.

⁸⁷ Kenneth W. Abbott and Duncan Snidal, Hard and Soft Law in International Governance, *International Organization*, Vol. 54, 2000, p. 423.

⁸⁸ Phillip Saunders, Maritime Regional Cooperation: Theory and Principles, in Mark J. Valencia ed., *Maritime Regime Building: Lessons Learned and Their Relevance for Northeast Asia*, The Hague: Martinus Nijhoff Publishers, 2001, p. 5.

⁸⁹ Phillip Saunders, Maritime Regional Cooperation: Theory and Principles, in Mark J. Valencia ed., *Maritime Regime Building: Lessons Learned and Their Relevance for Northeast Asia*, The Hague: Martinus Nijhoff Publishers, 2001, p. 4.

3. Regional Cooperation as an Alternative in the South China Sea

Similar to joint development, regional cooperation is another measure adopted by States concerned to circumvent sovereignty disputes, such as in the Arctic and Antarctic regions.⁹⁰ Particularly, there is no lack of legal commitments for the bordering States/regions to cooperate with each other, especially on ocean-related issues such as marine environmental protection.⁹¹

Since UNCLOS has been recognized as a (constitutive) regime by the international community in ocean-related issues, the process of cooperation among States found within its articles should be applicable to all parties as well. First, the cooperation mechanism within an enclosed or semi-enclosed sea envisaged in Part IX should be applied in the South China Sea. Article 123 states that States bordering an enclosed or semi-enclosed sea “should cooperate with each other in the exercise of their rights and in the performance of their duties under this Convention” in the field of marine living resources, marine environment and marine scientific research. Meanwhile, Article 197 also stipulates that “States shall cooperate on a global basis and, as appropriate, on a regional basis ... for the protection and preservation of the marine environment ...”

In addition to UNCLOS, other international conventions create legally-binding environmental obligations for States who are parties. These conventions include, *inter alia*, the Convention on Biological Diversity (CBD),⁹² the Convention on Wetlands of International Importance Especially as Waterfowl Habitation (Ramsar Convention),⁹³ the Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention),⁹⁴ the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),⁹⁵ and the Convention on the

⁹⁰ Kao Shih-Ming ed., *Assessing Regional Cooperation among All Parties as an Alternative to Sovereignty Disputes in the South China Sea*, Newark: University of Delaware, 2011, pp. 216 ~ 285; Shih-Ming Kao, Nathaniel S. Pearre and Jeremy Firestone, Adoption of the Arctic Search and Rescue Agreement: A Shift of the Arctic Regime toward Hard Law Basis?, *Marine Policy*, Vol. 36, Issue 3, 2012, pp. 832 ~ 838.

⁹¹ Nien-Tsu Alfred Hu, South China Sea: Troubled Waters or a Sea of Opportunity?, *Ocean Development & International Law*, Vol. 41, Issue 3, 2010, p. 211.

⁹² Convention on Biological Diversity, 5 June 1992, 1760 *U. N. T. S.* 79.

⁹³ Convention on Wetlands of International Importance Especially as Waterfowl Habitation, 2 February 1971, 996 *U. N. T. S.* 245.

⁹⁴ Convention Concerning the Protection of the World Cultural and Natural Heritage, 16 November 1972, 1037 *U. N. T. S.* 151.

⁹⁵ Convention on International Trade in Endangered Species of Wild Fauna and Flora, 3 March 1973, 993 *U. N. T. S.* 243.

Conservation of Migratory Species of Wild Animals (CMS).⁹⁶ As of 2012, most bordering States/regions in the South China Sea are Contracting Parties to these conventions, meaning that they have legal obligations to observe and implement the regulations under them.⁹⁷

As evidenced in many regional conventions, the concept of regional cooperation and its application is not new. However, taking this concept as a means to circumvent sovereignty disputes in the South China Sea has only been proposed by scholars within the last decade. For example, Chircop emphasized that the coastal inhabitants, ecosystems, and economies in the South China Sea would experience significant harm due to climate and ecological change. He also concluded that no bordering State could effectively respond to this change alone even within its own undisputed jurisdiction.⁹⁸ Accordingly, he made suggestions as follows:

*The urgency of accelerating marine conservation in the SCS can hardly be overstated. The ecological and economic losses sustained to date are likely to worsen ... By cooperating through an ambitious MPA network program, the states will be acting in their own individual and collective long-term interests to adapt their climate change impacts from weakened marine and coastal ecosystem and protect their coastal communities ...*⁹⁹

MacManus *et al* observed that cooperative activities in the field of marine scientific research, environmental protection and defense are regularly carried out on bilateral or multilateral bases in the South China Sea. Thus, he proposed to establish a Marine Protected Area (MPA) in the South China Sea. This MPA, entitled “the Spratly Island Marine Peace Park,” would cover the Spratly Islands and its surrounding waters. The rationale for his proposal is that these areas host a great diversity of marine species, provide critical habitats for endangered species, and are important nursery grounds for marine larvae to restore fish stocks depleted by overfishing and

⁹⁶ Convention on the Conservation of Migratory Species of Wild Animals, 23 June 1979, 1651 *U. N. T. S.* 355.

⁹⁷ Aldo Chircop, Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Direction for Marine Conservation, *Ocean Development & International Law*, Vol. 41, Issue 4, 2010, pp. 337 ~ 343.

⁹⁸ Aldo Chircop, Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Direction for Marine Conservation, *Ocean Development & International Law*, Vol. 41, Issue 4, 2010, pp. 334 ~ 335.

⁹⁹ Aldo Chircop, Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Direction for Marine Conservation, *Ocean Development & International Law*, Vol. 41, Issue 4, 2010, p. 350.

the degradation of marine ecosystem in the region.¹⁰⁰

This proposition, however, encountered some challenges. Hu pointed out that although establishing an MPA within undisputed marine areas usually does not require the cooperation of other countries, establishing an MPA within disputed waters needs the political will and the policy input of all countries concerned. Thus, the process of reaching consensus among claimant States to make the entire Spratly area a marine park could be troublesome, particularly given the strategic military concerns and strong interests expressed by many States in oil and gas reserves within the area.¹⁰¹ Nevertheless, MacManus *et al* argued that there is little evidence for the existence of substantial and economically extractable oil in the region. Without profits from oil, any military efforts to defend oil claims could result in unacceptably high military maintenance cost for claimant States/regions. Therefore, “the feasibility of establishing a Marine Peace Park could thus be enhanced.”¹⁰²

4. Summary

Cooperation has been recognized as a necessary and fundamental principle in international law and international relations. Regional cooperation as an alternative to circumvent sovereignty disputes has been implemented in other regions for years, but has only recently been proposed as an alternative in the South China Sea. In addition, there already exist many legal commitments by bordering States/regions to cooperate on the commons under UNCLOS and many other international environmental conventions. As a matter of fact, some cooperative activities related to the commons are regularly carried out on bilateral or multilateral bases in the region. Notwithstanding the lack of progress toward final settlement of sovereignty disputes, regional cooperation on commons issues in the South China Sea may be a workable alternative for all States concerned in the near future.

¹⁰⁰ John W. McManus, Kwang-Tsao Shao and Szu-Yin Lin, Toward Establishing a Spratly Islands International Marine Peace Park; Ecological Importance and Supportive collaborative Activities with an Emphasis on the Role of Taiwan, *Ocean Development & International Law*, Vol. 41, Issue 3, 2010, pp. 272 ~ 274.

¹⁰¹ Nien-Tsu Alfred Hu, South China Sea: Troubled Waters or a Sea of Opportunity?, *Ocean Development & International Law*, Vol. 41, Issue 3, 2010, p. 209.

¹⁰² John W. McManus, Kwang-Tsao Shao and Szu-Yin Lin, Toward Establishing a Spratly Islands International Marine Peace Park; Ecological Importance and Supportive collaborative Activities with an Emphasis on the Role of Taiwan, *Ocean Development & International Law*, Vol. 41, Issue 3, 2010, pp. 272 ~ 274.

VI. Conclusion

Collectively the sovereignty disputes in the South China Sea give rise to one of the most intractable regional conflicts in the world. A review of the background and status quo in the South China Sea reveals that sovereignty disputes in the region are unlikely to be settled in the foreseeable future, because no claimant is likely to make any concessions or compromises regarding its claims.

Despite being recommended by scholars and diplomats for decades, traditional mechanisms of dispute settlement such as diplomatic negotiation and third-party arbitration will not likely work in the near future in the South China Sea. It is expected that the current stalemate will continue, but this does not mean that the States/regions involved should take no actions. Indeed under UNCLOS, all claimant States/regions are obligated to make every effort to enter into provisional arrangements related to natural resources and jurisdiction over certain activities while the delimitation of the EEZ or continental shelf is pending. The keyword for these efforts is “cooperation.”

Joint development of oil and gas reserves and regional cooperation on the commons are two alternatives suggested by scholars and diplomats to avoid the current dispute stalemate in the South China Sea, yet advance the environmental and economic interests of the region. In fact, both alternatives could be treated as provisional arrangements described in Article 74(3) and 83(3) of UNCLOS, because of their shared focus on natural resources. However, joint development of oil and gas reserves, like traditional mechanisms, has not yet been accepted or implemented in the South China Sea because it is subject to the same obstacle as traditional mechanisms.

Cooperation could be used to effectively solve cross-border commons issues, and thus may be expected to substantially ameliorate the degradation of the marine environment, restore the depleting living resources and important habitats, enhance marine scientific knowledge, improve the exchange of necessary information, assist capacity-building of all parties, etc. It is further anticipated that such cooperation could provide a channel of dialogue among parties concerned in the South China Sea to improve mutual trust and understanding, provide opportunity for States to experience working with one another, and promote stronger partnerships in this region, all of which might reasonably be expected to reduce political tension, foster a better political atmosphere, and eventually lead to more substantial discussions over the sovereignty disputes in the more distant future. In fact, some regional efforts related to marine scientific research and environmental protection have occurred or are currently

being undertaken on either a bilateral or multilateral basis in the region, notwithstanding the lack of progress toward final settlement of sovereignty disputes. These include the East Asia Seas (EAS) Regional Sea Programme (RSP) of the United Nations Environmental Programme (UNEP), the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), and the UNEP/Global Environment Facility (GEF) South China Sea Project.¹⁰³ Thus, regional cooperation, particularly on the commons, may be the only alternative that could work as a provisional arrangement in the South China Sea in the near future.

As always, the political will of all parties is paramount to the success of such an endeavor. If the parties in the South China Sea look beyond issues of sovereignty to the potential advantages of regional cooperation, particularly in commons issues where sovereignty disputes are not front and center and can be laid aside, there is a strong likelihood that they can muster the political will necessary to advance regional cooperation.

¹⁰³ The analysis of these regional efforts please see Shih-Ming Kao, Nathaniel Sifford Pearre and Jeremy Firestone, *Regional Cooperation in the South China Sea: Analysis of Existing Practices and Prospects*, *Ocean Development and International Law*, Vol. 43, No. 3, pp. 286 ~290.