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JOINT DEVELOPMENT IN ASIA: LESSONS FOR SUSTAINABLE PEACE IN THE SOUTH CHINA SEA

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JOINT DEVELOPMENT IN ASIA: LESSONS FOR SUSTAINABLE PEACE IN THE SOUTH CHINA SEA

By Tara Davenport

I. INTRODUCTION

The South China Sea has long been regarded as a source of conflict in Asia. Underlying this conflict is the dispute between China, Vietnam, Philippines, Malaysia, Brunei and Chinese Taipei (the Claimants) over the features in the South China Sea known as the Spratly Islands. Exacerbating the dispute is the perception that there are a vast amount of resources in the waters off the Spratlys. It is one of the world's most valuable fisheries of shrimp and tuna and it is believed that there are extensive oil and gas reserves in the seabed surrounding the Spratlys, although such estimates are not proven. However, the dispute has become about more than economic resources and the Spratlys have evolved into potent symbols of national pride, posing considerable obstacles to a peaceful resolution. Tensions continue to simmer in the region and threaten to disrupt peace and security in Asia, particularly with each Claimant taking steps to preserve its sovereignty over the features and its sovereign rights over the adjacent waters.

Most agree that the Spratlys dispute will not be settled in the foreseeable future. Joint development of the hydrocarbon resources has been suggested as a viable solution pending the resolution of the dispute, although most government officials and academics acknowledge that there are significant challenges in the Claimants agreeing on joint development.

The purpose of this paper is to examine other joint development arrangements in Asia, and to determine if there are any valuable lessons for joint development in the South China Sea. The Paper ultimately hopes to demonstrate that joint development of hydrocarbon resources on a "without prejudice" basis will go a long way to alleviate the tension in the South China Sea and is hence, one of the few viable options available to the Claimants. Part II of the Paper will examine the dispute over the Spratlys, why it is unlikely to be resolved and its effect on sustainable peace in Asia. Part III will give an overview of joint development and briefly examine its technical and legal rationale. Part IV will look at the joint development arrangements in Asia and Part V will examine the lessons learned from these joint development arrangements and their applicability to the Spratlys. Part VI concludes that the Claimants have every incentive to agree on joint development arrangements and despite the obstacles they may confront, they should concerted and serious effort to negotiate such agreements, taking into account the lessons learned from other joint development arrangements in Asia.

II. THE DISPUTE OVER THE SPRATLY ISLANDS IN THE SOUTH CHINA SEA

The Spratly Islands consist of about 100 or so islets, coral reefs and sea mounts scattered over an area of nearly 410, 000 square kilometers of the central South China Sea.[1] There are three interrelated aspects to the dispute, although not all of them have crystallized as yet. These are sovereignty disputes over the features, access to resources in waters adjacent to these features and delimitation of overlapping maritime claims.

[1] See CIA World Factbook at https://www.cia.gov/library/publications/the-world-factbook/geos/pg.html

1. ***Sovereignty Disputes***

Sovereignty over islands is governed by rules and principles of customary international law on acquisition of territory. The Claimants either claim sovereignty over all or some of the features. While a detailed evaluation of claims is not necessary for purposes of the paper, a brief summary of the positions of the various claimants is necessary to understand the complexity of the dispute.[2]

China and Taiwan claim sovereignty over all the features in the Spratly Island Group based on discovery, historical title, and the exercise of effective control through occupation. To date, China reportedly occupies 7 features[3] and Taiwan 1 feature.[4]

Vietnam claims sovereignty over all the features based on discovery, historic title, succession of title from France, the former colonial power in Indo-China, and the exercise of effective control through occupation. Vietnam to date reportedly occupies 21 features.[5]

The Philippines claim sovereignty over a group of islands which are part of the Spratly Islands known as the *Kalayaan Island Group* (KIG) which consists of 53 features (excluding Spratly Island itself). The Philippines' claim is based on discovery by one of its nationals in 1956, and the exercise of effective control through occupation. It presently occupies 8 features in the KIG.[6]

Malaysia claims sovereignty over 11 features in the Spratly Islands.[7] Its claim is based on the fact that its features are found on its extended continental shelf[8] and on exercise of effective control through occupation. It presently occupies 8 features.[9]

Brunei's claim prior to 2009 is not entirely clear. It claims two features in the Spratly Archipelago, namely Louisa Reef (claimed by Malaysia) and Riflemen Bank. It is not clear whether it is claiming sovereignty over the two features or simply portions of the nearby sea as its EEZ or continental shelf.[10] Unlike the other claimants, it does not occupy any feature.

The Claimants are unlikely to refer their disputes to an international court or tribunal for a variety of reasons. First, because their respective claims under international law are relatively

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[2] For a more comprehensive discussion of the basis of the sovereignty claims by the various Claimants, see Mark Valencia, Jon M. Van Dyke, Noel A Ludwig, *Sharing the Resources of the South China Sea,* (Netherlands: Kluwer Law International, 2000); Stein Tonnesson, "Why are the disputes in the South China Sea so intractable? A Historical Approach," 30 (3) Asian Journal of Social Sciences 570
[3] See Global Security Website available at http://www.globalsecurity.org/military/world/war/spratly-claims.htm
[4] See Global Security Website available at http://www.globalsecurity.org/military/world/war/spratly-claims.htm
[5] See Global Security.org available at http://www.globalsecurity.org/military/world/war/spratly-claims.htm
[6] See Global Security.org available at http://www.globalsecurity.org/military/world/war/spratly-claims.htm
[7] See Valencia et al, *supra* note 2 at 36.
[8] Asri SALLEH, Che Hamdan Che Mogn RAZIL and Kamaruzan JUSOFF, "Malaysia's Policy towards its 1963 – 2008 territorial disputes" (2009) 1 (5) Journal of Law and Conflict Resolution 107 at 112 available at http://www.academicjournals.org/jlcr/PDF/Pdf2009/Oct/Salleh%20et%20al.pdf
[9] See Salleh et al, *ibid,* at 113.
[10] See Valencia et al, *supra* note 2 at 38 which notes that at a 1992 ASEAN Meeting, the Brunei Foreign Minister said Brunei claims only the sea area.

weak and make it difficult to predict the outcome of any court case and second, because the perception of these features as symbols of sovereignty means that national electorates are unlikely to accept any decision to refer the sovereignty claim to international adjudication.

2. ***Dispute over access to resources***

The majority of the features are remote, small and barren and are not hospitable environments for populations. The sovereignty claims are not motivated by a belief in the intrinsic value of the features themselves but rather by the maritime zones the features could potentially generate.

Under the 1982 United Nations Convention on the Law of the Sea (UNCLOS), a coastal State can claim territorial sea up to 12 nm, an exclusive economic zone (EEZ) up to 200 nm and a continental shelf up to 200 nm or if the outer edge of its continental margin extends beyond 200 nm,[11] it can claim what is known as an extended continental shelf.[12] A feature which is a "naturally formed area of land, surrounded by water, which is above water at high tide" qualifies as an island under Article 121 (1) of UNCLOS and can also claim all these maritime zones (i.e. territorial seas, EEZ and continental shelves). A feature which cannot sustain human habitation or an economic life of its own is considered a rock and is only entitled to a 12 nm territorial sea.[13]

The question of whether any of the features in the Spratly Islands is an island or a rock has important consequences for the control of resources in the South China Sea. UNCLOS gives coastal States *sovereignty* over resources in the waters and seabed of the territorial sea and "*sovereign rights*" over the natural living and non-living resources in its EEZ[14] and on the continental shelf.[15] Indeed, a coastal state's right to explore and exploit its continental shelf is both inherent and exclusive and if a coastal State has not exercised these rights, no other State may do this without the express consent of that coastal State.[16] Accordingly, Claimants which have sovereignty over these features, provided they are considered islands under UNCLOS, could potentially have control of the fisheries resources within EEZs claimed from the features as well as oil and gas reserves found on the continental shelf claimed from the features.

Most commentators agree that the majority of the features in the Spratly Islands cannot be considered islands under UNCLOS and are more accurately classified as "submerged features or low-tide elevations."[17] Only 48 of the features apparently rise above high tide to "form uniformly small, and in most cases tiny, islands or rocks."[18] As a result, it has been noted that these features

[11] The outer limit of the continental margin is to be determined in accordance with the formula set out in Article 76 (4), UNCLOS.
[12] Under Article 76 (5) of UNCLOS, a coastal State can claim an extended continental shelf up to 350 nautical miles from the baseline from which the territorial sea is measured or 100 nm from the 2,500 metre isobaths.
[13] Article 121 (3), UNCLOS.
[14] Article 56 (1), UNCLOS.
[15] Article 77, UNCLOS.
[16] Article 77 (3), UNCLOS.
[17] Clive Schofield, "Dangerous Ground: A Geopolitical Overview of the South China Sea" in Sam Bateman and Ralf Emmers (eds.), *Security and International Politics in the South China Sea* (UK: Routledge, 2009) at 13
[18] Schofield, *ibid*, at 9.

should not be able to generate extended maritime jurisdiction.[19] This has not prevented Claimants from artificially fortifying the islands and building infrastructure such as airstrips and garrisons on these features, actions which purportedly strengthen their sovereignty claims[20] and the argument that these features are islands under UNCLOS capable of sustaining human habitation and economic life.

None of the Claimants have made clear which features they consider as islands or rocks and/or whether they are claiming an EEZ or continental shelf from these features. Interestingly, the joint continental shelf submission[21] made by Vietnam and Malaysia on 6 May 2009 to the Commission on the Limits of the Continental Shelf (CLCS) in the southern part of the South China Sea claims an EEZ and an extended continental shelf from its main coast and not from any of the features of the Spratly Islands.[22] This can be interpreted to mean that for now, they are treating the features in the Spratlys as rocks and not islands, although there is nothing to prevent them from claiming a 200 nm continental shelf and EEZ from the islands at a later date.

3. ***Disputes relating to maritime delimitation over overlapping claims***

The third aspect of the dispute relates to maritime delimitation over overlapping claims. Even if sovereignty over the features and the corresponding maritime zones are resolved, there are bound to be overlapping maritime claims, not only between maritime zones measured from the features but also between maritime zones measured from the mainland of some Claimants and those measured from the features.

UNCLOS provides that delimitation of overlapping maritime claims should be effected by agreement, on the basis of international law, as referred to in Article 38 of the Statute of the ICJ in order to achieve an equitable solution, failing which parties should use dispute settlement procedures in UNCLOS.[23] However, it is very unlikely that agreement on final maritime delimitation will take place in the near future,[24] given that sovereignty over the features has to be determined first. China has also excluded the compulsory binding procedures in UNCLOS for any dispute on boundary delimitation.[25]

4. ***The effect of the Spratly Islands dispute on sustainable peace in Asia***

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[19] Schofield, *ibid,* at 13.

[20] The Claimants have appeared to ignore the concept of "critical date" in international law on acquisition of territory which provides that any acts occurring after the sovereignty dispute has crystallized will not be considered by international courts.

[21] Under Article 4 of Annex II to UNCLOS, a coastal State intending to establish the outer limits to its continental shelf beyond 200 nautical miles is obligated to submit particulars of such limits to the CLCS along with supporting scientific and technical data.

[22] See Robert Beckman and Tara Davenport, "CLCS Submissions and Claims in the South China Sea" Presented at the Second International Workshop on the South China Sea: Cooperation for Regional Security and Development, 10 -12 Nov 2010, Ho Chi Minh City, Vietnam available at http://cil.nus.edu.sg/wp/wp-content/uploads/2009/09/Beckman-Davenport-CLCS-HCMC-10-12Nov2010-1.pdf

[23] Article 74 (1) and 83 (1), UNCLOS.

[24] Robert W. Smith, "Maritime Delimitation in the South China Sea: Potentiality and Challenges," 41 Ocean Development and International Law 214 (2010) at 227

[25] Article 298, UNCLOS.

Over the past thirty years, the dispute over the Spratlys has flared up periodically. Fueling the dispute is the perception that the waters and seabed surrounding the Spratlys are rich with both fisheries and hydrocarbon resources. The South China Sea is a rich fishing ground with "capture fisheries accounting for 10 % of the world's landed catch."[26] There is also the belief that there are untapped seabed hydrocarbons although there is great disparity in the estimates of hydrocarbon resource potential in the Spratlys.[27] While the US Energy Information Administration states that proven oil reserves are estimated to be in the region of 7 billion barrels, the Chinese have estimated that the resource potential could be as high as 105 – 213 billion barrels of potential oil resources.[28]

Other geopolitical considerations which play a role in escalating tensions is the fact that the Spratlys are also considered of strategic importance. They are situated near a critical route between the Indian Ocean and East Asia in which more than 25 % of the world's trade passes through and 70 % of Japan's energy needs and 65 % of China's.[29] Ensuring freedom of navigation and maritime security has accordingly been a concern for both the Claimants and non-Claimant user States.[30] Equally as important is the fact that the features have now become potent symbols of nationalism and it may be difficult for Claimants to negotiate any compromise that runs the risk of appearing to surrender sovereignty over the features.

The 2002 ASEAN-China Declaration on the Conduct of Parties in the South China Sea, which obliged Parties to exercise self-restraint in the conduct of activities, helped to reduce tension, at least in the years immediately following 2002. However, in the past two years, certain incidents have threatened to undermine the veneer of stability ostensibly achieved by the 2002 Declaration. The 2009 continental shelf submissions by Malaysia and Vietnam prompted both China and Philippines to reassert its sovereignty over the Spratlys and China's reliance of its controversial u-shaped line map sparked an onslaught of criticism and claims that China was claiming the whole of the South China Sea as its historic waters. In July 2010, at the ASEAN Regional Forum, US Secretary of State Hilary Clinton stated that the resolution of territorial disputes in the South China Sea was a matter of America's national interest. This reportedly prompted China to state that the South China Sea was one of its "core interests" akin to Taiwan, although it is not clear whether this comment can be considered the official view of the Chinese government. Also increasing tension was the unilateral exploration by certain Claimants in purportedly disputed areas in the Spratlys. The most recent incident happened as recently as March 2011 where Chinese patrol boats reportedly ordered oil exploration vessels licensed by the Philippines to leave an area near the Reed Bank Basin, claimed by the Philippines.[31] Unilateral exploration and/or awarding of concessions to foreign oil companies has always

[26] Schofield in Bateman and Emmers (eds), *supra* note 17 at 17
[27] *Ibid,* at 15
[28] *Ibid.*
[29] Clive Schofield and Ian Storey, "The South China Sea Dispute: Increasing Stakes and Rising Tensions" November 2009, The Jamestown Foundation, at 3
[30] Schofield in Bateman and Emmers (eds), *supra* note 17 at 18
[31] Aurea Calica, "Noy mulls ASEAN joint gas exploration in Spratlys" The Philippines Star, 8 March 2011, available at http://www.philstar.com/Article.aspx?articleId=664115&publicationSubCategoryId=63

frequently occurred in the South China Sea but in the past couple of months, these reports have been much more frequent[32]

From the above, it is clear that the Spratlys dispute is unlikely to be solved in a final and decisive manner in the near or long-term future. Yet, the dispute continues to be a thorn in ASEAN-China relations, threatens to destabilize peace and security in Asia[33] and could even trigger military conflict.[34] Accordingly, a solution needs to be found which enables the Claimants' positions to be maintained while at the same time, promoting their respective interests and easing tension. The joint development of hydrocarbon resources has been put forth as one such solution to the Spratlys dispute.[35]

III. OVERVIEW OF JOINT DEVELOPMENT

1. *Definition of joint development*

The concept of joint development of hydrocarbon resources appears to have emerged in the 1950s.[36] However, despite considerable state practice since then, there is no common or uniform definition of joint development of hydrocarbon resources.[37] It is usually used as a "generic term"[38] and extends from *unitization* of a single resource straddling an international boundary to joint development of a shared resource where boundary delimitation is shelved because it is not feasible or possible at the time. The crux of the issue between writers on joint development appears to be whether it covers both unitization and joint development or only covers intergovernmental joint development to the exclusion of unitization.[39]

The most comprehensive and inclusive definition of joint development is said to be given by Ranier Lagoni as Rapporteur to the Exclusive Economic Zone Committee of the International Law Association:[40]

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[32] See "China aims to more than triple its oil and gas production in the South China Sea in the next 10 years" China SignPost, 3 April 2011, available at http://www.chinasignpost.com/2011/04/china-aims-to-more-than-triple-its-oil-gas-production-in-the-south-china-sea-over-the-next-10-years/

[33] See generally Schofield and Storey, *supra* note 29 at 5

[34] Zou Keyuan "Joint Development in the South China Sea: A New Approach" 21 (1) International Journal of Marine and Coastal Law 83 (2006) at 86

[35] *Ibid* at 95

[36] Hazel Fox, Paul McDade, Derek Rankin Reid, Anastasia Strati, Peter Huey, *Joint development of Offshore Oil and Gas: A Model Agreement for States with Explanatory Commentary,* (Great Britain: British Institute of International and Comparative Law, 1989) at 54

[37] Thomas Mensah, "Joint Development Zones as an Alternative Dispute Settlement Approach in Maritime Boundary Delimitation" in Ranier Lagoni and Daniel Vignes (eds), *Maritime Delimitation* (Martinus Nijhoff Publishers, The Netherlands, 2006) 143 – 153 at 146.

[38] Fox et al, *supra* note 36 at 43

[39] Gao Zhiguo, "Legal Aspects of Joint Development in International Law," in M. Kusuma-Atmadja, TA Mensah, BH Oxman (eds.), *Sustainable Development and Preservation of the Oceans: The Challenges of UNCLOS and Agenda 21* (Honolulu, Law of the Sea Institute, 1997), 629 at 633.

[40] Chidinma Bernadine Okafor, "Joint Development: An Alternative Legal Approach to Oil and Gas Exploitation in the Nigeria-Cameroon Maritime Boundary Dispute?" 21 (4) International Journal of Marine and Coastal Law 489 (2006) at 495

> The co-operation between states 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.

For purposes of this article, we will be looking at co-operative agreements or arrangements between States for the exploration and exploitation of hydrocarbon fields *within a disputed sea-bed area of overlapping continental shelf or exclusive economic zone claims where no boundary has been agreed,* as this is the most relevant to the Spratly Islands dispute.

2. ***Technical basis for joint development***

One of the major reasons for joint development is the need to preserve the unity of a common deposit. As noted by Ranier Lagoni, "these deposits are characterized by a complicated "equilibrium of rock pressure, gas pressure and underlying water pressure" so that extracting natural gas or petroleum at one point unavoidably changes conditions in the whole deposit.[41]" The problem of unilateral exploitation is "the risk of prejudicial or wasteful exploitation by one of the States concerned."[42] The goal of joint development is therefore to "preserve the unity of such a deposit in these circumstances, while respecting the inherent, sovereign rights of the interested states."[43]

3. ***Legal Basis for Joint Development***

UNCLOS

The legal basis for joint development is said to be found in UNCLOS, to which all Claimants (except for Taiwan) are a party to. Article 83 (3) of UNCLOS provides that if delimitation of the continental shelf cannot be effected by agreement:

> [T]he States concerned, in a spirit of understanding and cooperation, shall make every effort to enter into provisional arrangements of a practical nature and during the transitional period, not to jeopardize or hamper the reaching of final agreement. Such agreement shall be without prejudice to the final delimitation.

Joint development of hydrocarbon resources is considered one of the types of "provisional arrangements" States can enter into. It is clear that there are two aspects to this obligation. First, States concerned shall make every effort to enter into provisional arrangements of a practical nature. Second, States, in good faith, shall make every effort not to jeopardize or hamper the reaching of the final delimitation agreement. Each aspect will be discussed in turn.

The obligation to make every effort to enter into provisional arrangements is designed to "promote interim regimes and practical measures that could pave the way for provisional utilization of disputed areas pending delimitation" and "constitutes an implicit acknowledgement of the importance of avoiding the suspension of economic development in a disputed maritime

[41] Ranier Lagoni, "Oil and Gas Deposits Across National Frontiers," 73 American Journal of International Law 215 (1979) at 217

[42] *North Sea Continental Shelf Sea Case* [1969] ICJ Rep 51 at para 97

[43] David Ong, "Joint Development of Common Offshore Oil and Gas Deposits: "Mere" State Practice or Customary International Law?" 93 (4) American Journal of International Law 771 (1999) at 778

area."[44] The obligation applies to all cases where a final agreement on the delimitation of the continental shelf is pending between States with opposite or adjacent coasts including those "where the delimitation depends upon *the prior settlement of a territorial dispute* concerning islands or similar issues (*emphasis added*)."[45]

The obligation to make every effort to enter into provisional arrangements of a practical nature has been interpreted as *an obligation to negotiate in good faith to reach a provisional agreement*. It has been summarized by Ranier Lagoni, based on judicial precedents such as the North Sea Continental Shelf Cases:

> The States concerned are obliged to "enter into negotiations with a view to arriving at an agreement" to establish provisional arrangements of a practical nature and…"not merely to go through a formal process of negotiation." The negotiations are to be "meaningful, which will not be the case when either [state] insists upon its own position without contemplating any modification of it." However, the obligation to negotiate does not imply an obligation to reach agreement…[46]

The term "shall make every endeavour" indicates that this "requirement is not merely a non-binding recommendation or encouragement, but a mandatory rule whose breach would represent a violation of international law.[47]"

In the 2007 Award in the Arbitration between Guyana and Suriname by an arbitral tribunal constituted under Annex VII of UNCLOS, it was found that both Parties had breached their obligation to negotiate provisional arrangements on joint exploitation of resources pending maritime delimitation of its territorial sea, EEZ and continental shelf boundary. This stemmed from an incident in 2000 where an oil rig and drill ship engaged in seismic testing on behalf of CGX Resources under a Guyanese concession was ordered to leave the disputed area by two Surinamese vessels. The Tribunal found that when Suriname became aware of Guyana's exploratory efforts in disputed waters, "instead of attempting to engage it in a dialogue which may have lead to a satisfactory solution for both Parties, Suriname resorted to self-help in threatening the CGX rig in violation of [UNLCOS]."[48] Similarly, Guyana had also violated its obligation under Article 83 (3) as it should have in a spirit of co-operation informed Suriname of its exploratory plans including giving Suriname official and detailed notice of the planned activities, offering to share the results of the exploration and giving Suriname an opportunity to observe the activities and offering to share all the financial benefits received from the exploratory activities.[49]

With regards to the second obligation whereby States are also legally obliged not to jeopardize or hamper the reaching of a final agreement on delimitation, it has been described as an obligation of mutual restraint. International courts and tribunals have found that "any activity which represents an irreparable prejudice to the final delimitation agreement"[50] is a breach of this

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[44] Guyana/Suriname (UN Law of the Sea Annex VII Arb.Trib. Sept. 17, 2007) at http://www.pca-cpa.org at para 460
[45] Ranier Lagoni, "Interim Measures Pending Maritime Delimitation Agreements" 78 American Journal of International Law 345 (1984) at 354
[46] *Ibid* at 356.
[47] *Ibid* at 354.
[48] Guyana/Suriname, *supra* note 44 at para 476
[49] Guyana/Suriname, *supra* note 44 at para 478
[50] Lagoni (1984), *supra* note 45 at 366

obligation and that "a distinction is to be made between activities of the kind that lead to a permanent physical change, such as exploitation of oil and gas reserves, and those that do not, such as seismic exploration."[51]

In the Guyana/Suriname Arbitration, it was stated that allowing exploratory drilling in disputed waters which could result in a physical change to the marine environment and engender a "perceived change to the status quo"[52] was a breach of this obligation. This was in contrast to *seismic testing* in disputed waters. Interestingly, it was also found that Suriname's actions in using the threat of force in getting CGX's vessel to leave was not only a breach of its obligation not to jeopardize the final agreement but also a breach of its obligation not to use force under UNCLOS, the UN Charter and general international law.

International Judicial Decisions

International courts and tribunals have also recognized the importance of joint development agreements,[53] although they have of course not gone as far to say that States have an obligation to enter into them. For example, in the *North Sea Continental Shelf Cases,* the ICJ held that joint exploration agreements were "particularly appropriate when it is a question of preserving the unity of a deposit" in areas of overlapping but equally overlapping claims"[54] The separate opinion of Judge Jessup also noted that "even if it is not yet considered to reveal an emerging rule of international law, the principle of co-operation may at least be regarded as an elaboration of factors to be taken into account in the negotiations now to be undertaken by the parties."[55] In the dissenting opinion of Judge *ad hoc* Evensen in the 1982 continental shelf delimitation case between *Tunisia and Libya,* he proposed a system of joint exploration of petroleum resources based on his view that joint development represented an alternative equitable solution to the maritime boundary dispute which was eventually adopted by the parties.[56] In the *Eritrea/Yemen* arbitration, the arbitral tribunal stated that the parties should give every consideration to the shared or joint or unitized exploitation of any such resources.[57]

As Ong has noted, "pronouncements like this serve to 'aid the identification of rules created by States' for such a relatively new legal concept as joint development and thus contribute to establishing the general principles of law recognized by civilized nations."[58]

Customary International Law

Generally, customary international law consists of state practice, which must be both constant and uniform and common to a significant number of States, particularly whose interests are

[51] Guyana/Suriname, *supra* note 44 at 467
[52] *Ibid* at 480
[53] *Ibid* at 463
[54] *North Sea Continental Shelf Cases*, *supra* note 42 at para 99.
[55] *Ibid* at 83
[56] Ong (1999), *supra* note 43 at 787
[57] Eritrea/Yemen II, 119 I.L.R p 417 (1999), *The Eritrea-Yemen Arbitration Awards of 1998 and 1999* online http://www.pca-cpa.org
[58] Ong (1999), *supra* note 43 at 785

affected, and there must be *opinio juris* in that States must recognize that this practice constitutes law binding on them.[59]

There has been considerable doctrinal debate on whether joint development has crystallized into a rule of customary international law i.e. whether it is a legally binding obligation on States to enter into joint development agreements pending maritime delimitation.[60] It appears clear that there is no obligation to enter into a joint development agreement pending maritime delimitation under customary international law, due to a lack of constant and uniform state practice as well as the absence of *opinio juris*.[61] However, both proponents and opponents of a customary law obligation agree that, there is, at the very minimum, a customary law obligation not to unilaterally exploit hydrocarbon resources in areas of overlapping claims and to enter into good faith negotiations to arrive at such an agreement.[62]

IV. STATE PRACTICE IN ASIA ON JOINT DEVELOPMENT

While there is arguably no such thing as a "model" joint development agreement given the unique circumstances of each joint development arrangement,[63] there are several reasons for examining the joint development arrangements in Asia (JDAs).

First, the majority of the Claimants with the exception of Taiwan and Philippines have entered into one type of joint development arrangement or another, either with each other or other Asian States, an indication that, at the very least, these Claimants are amenable to the idea of joint development. Second, it has been recognized that States should look at the practice of other States in the region to see what influenced them in entering the joint development arrangement[64] in the hope that valuable lessons can be learned. The paper will examine JDAs in the Gulf of Thailand, the East China Sea and the Timor Sea.

1. The Gulf of Thailand

The Gulf of Thailand is a semi-enclosed arm of the South China Sea enclosed by Cambodia, Malaysia, Thailand and Vietnam, all of which have at least one overlapping maritime claim with another littoral State.[65] The presence of oil and gas in the Gulf of Thailand has prompted all

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[59] See Martin Dixon, *Textbook on International Law,* 6th Ed. (Oxford University Press: United States, 2007) at 30 - 37
[60] For a summary of the two opposing schools of thought, see Okafor, *supra* note 40 at 506 – 509.
[61] Ian Townsend-Gault and William Stormont, "Offshore Petroleum Joint Development Arrangements: Functional Instrument? Compromise? Obligation?" in Gerald Blake, William Hildesley, Martin Pratt, Rebecca Ridley and Clive Schofield (eds), *The Peaceful Management of Transboundary Resources* (Great Britain, Graham & Trotman Ltd and Kluwer Publishers Group, 1995) at 53.
[62] Okafor, *supra* note 40 at 515.
[63] Indeed, Fox et al noted that none of the joint development arrangements in its seminal study "seems capable of commanding universal acceptance due to differing political and economic systems, traditions of conflict and degrees of national sensitivity:" See Fox et al, *supra* note 36 at 115.
[64] Okafor, *supra* note 40 at 515
[65] Clive Schofield, "Unlocking the Seabed Resources of the Gulf of Thailand" 29 (2) Contemporary Southeast Asia 286 (2007) at 286.

littoral States to claim both exclusive economic zones and continental shelf claims.[66] However, the size of the Gulf means that no coastal State can claim a full 200 nm EEZ, which has lead to extensive overlapping claims.

There are two existing joint development arrangements in the Gulf of Thailand (Malaysia-Thailand JDA 1979/1990 and Malaysia-Vietnam JDA1992) and two 'in principle' agreements to joint develop hydrocarbon resources (Cambodia-Vietnam JDA 1982 and Cambodia-Thailand JDA 2001).

Malaysia-Thailand 1979/1990

In 1979, the *Memorandum of Understanding between Malaysia and Thailand on the Establishment of a Joint Authority for the Exploitation of the Resources of the Sea-Bed in a Defined Area* of the continental shelf of the two countries was concluded. It was implemented in the *Agreement between the Government of Malaysia and the Government of the Kingdom of Thailand and other matters relating to the establishment of the Malaysia-Thailand Joint Authority* in 1990 (both agreements will be referred to collectively as "Malaysia-Thailand JDA 1979/1990").

The dispute that led to the JDA was overlapping continental shelf claims of Malaysia and Thailand caused by conflicting means of continental shelf boundary delimitation. While Thailand and Malaysia were able to agree on a continental shelf boundary in the southwestern part of the Gulf of Thailand up to 29 nm offshore in 1972,[67] negotiations stalled because of a disagreement over the use of Ko Losin, a feature located approximately 39 nm offshore, and 1.5 m above water at high tide with a light beacon on it.[68] Thailand insisted that Ko Losin was treated as a base point in measuring the continental shelf boundary at the expense of Malaysia whereas Malaysia insisted that Ko Losin should not be used as a base point to extend Thailand's continental shelf.[69] The factors that led to the conclusion of the JDA was the belief that there was natural gas potential in the area of overlapping claims[70] and the unilateral award of exploration concessions, both of which further exacerbated tensions between the countries but also served as an impetus for the need for joint development. [71]

In 1979, the MOU which was signed was "basically an expression of intent and [did] not provide a detailed petroleum exploitation framework for the [Joint Development Area] with sufficient

[66] From June 1971 to May 1973, Cambodia, the former South Vietnam and Thailand made unilateral claims to continental shelf areas that overlap in central Gulf Of Thailand. In 1979, Malaysia also issued a map claiming a continental shelf which overlapped with these claims: See Daniel J Dzurek, "Maritime Agreements and Oil Exploration in the Gulf of Thailand," in Gerald Blake, Martin Pratt, Clive Schofield and Janet Allison Brown, (eds) *Boundaries and Energy: Problems and Prospects* (Kluwer Law International, United Kingdom: 1998) at 117

[67] David M. Ong, "The 1979 and 1990 Malaysia- Thailand Joint Development Agreements: A Model for International Legal Co-operation in Common Offshore Petroleum Deposits?" 14 (2) International Journal of Marine and Coastal Law 207 (1999) at 223

[68] Schofield (2007), *supra* note 65 at 290

[69] It should be borne in mind that negotiations of UNCLOS were going on at this point in time and the exact effect of islands in generating maritime zones or their effect in maritime delimitation was not clear.

[70] Ong (1999), *supra* note 67 at 225.

[71] *Ibid*.

information to enable prospective licensees to enter into operations there."[72] It was clear that a further agreement was required.[73] From 1979 to 1990, negotiations continued and in 1990, the two governments finally signed an agreement "on the Constitution and other matters relating to the establishment of the Malaysia-Thailand Joint Authority (MTJA)."

It took eleven years, until 1990, to sign the agreement establishing the MTJA. The reasons for the delay are instructive. First, was the lack of political will arguably attributable to the fact that the prime ministers who had signed the MOU were no longer in power and the fact that disputes over fishing rights unrelated to continental shelf delimitation had a detrimental effect on bilateral relations.[74]

Second, there were considerable issues relating to the nature and extent of the "Joint Authority" established by the 1979 MOU. The Joint Authority was to "assume all rights and responsibilities on behalf of both Parties for the exploration and exploitation of the non-living natural resources of the sea-bed and subsoil in the overlapping area and also for the development, control and administration of the joint development area."[75] However, it was recognized that this would require "a common legal system, alteration in domestic legislation and a degree of harmonization" and ultimately a "new and special set of laws applying in the (Joint Development) Area", which gave the Joint Authority the powers of a licensor.[76]

There were fundamental differences between licensing systems in Malaysia and Thailand[77] which made hampered the establishment of a Joint Authority. In Malaysia, a national oil company, PETRONAS, had been established, and had been delegated to it "unequivocal rights for all petroleum activities and powers of licensing."[78] PETRONAS adopted a production-sharing system[79] which "required the use of detailed contract documents that covered methods and control of operations and management."[80] Production-sharing had never been used in Thailand which instead adopted royalty-tax concession system. [81] Malaysia wanted to adopt the

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[72] Fox et al, *supra* note 36 at 147. It has been observed that even though the 1979 MOU had all the characteristics one might expect of a binding bilateral treaty, the nomenclature used to describe it i.e. memorandum of understanding rather than an agreement "is instructive and indicates less than whole-hearted commitment to the agreement on the part of the governments concerned:" See Schofield (2007), *supra* note 65 at 292.

[73] Clive Schofield, "Blurring the Lines? Maritime Joint Development and the Cooperative Management of Ocean Resources," *Issues in Legal Scholarship: Volume 8 (1)(Frontier Issues in Ocean Law: Marine Resources, Maritime Boundaries and the Law of the Sea), Article 3* (2009) at 16.

[74] Schofield (2007), *supra* note 65 at 293.

[75] Article III (2) of the 1979 MOU.

[76] Fox et al, *supra* note 36 at 136.

[77] Fox et al, *ibid,* at 135; Ong (1999), *supra* note 67 at 230.

[78] Datuk Harun Ariffin, "The Malaysian Development of Joint Development" 10 (3/4) Energy 533 (1985) at 534-535

[79] Production-sharing systems are "essentially based on the concept of the owner of the resources (the state) engaging a third party (an oil company in the case of hydrocarbons) as contractors. The proceeds of the contractor's work or activity (i.e. the production) are shared between the state and the contractor on the basis of a previously agreed formula after the subtraction of costs."See Zhiguo Gao, *International Petroleum Contracts: Current Trends and New Directions* (Graham & Trotman /Kluwer Academic: UK, 1994) at 71

[80] Ariffin, *supra* note 78 at 535

[81] Fox et al, *supra* note 36 at 137. A royalty tax concession system has been described as "an agreement from a state to permit a foreign company to develop its oil reserves on an exclusive basis in a defined area during the duration of

production-sharing system for the JDA which would mean that licensing powers need not be retained by governments and could be delegated to the Joint Authority. Thailand, on the other hand, had "rarely established authorities outside direct ministerial control"[82] and was consequently cautious about giving such extensive powers to the Joint Authority[83]. At the same time, Malaysia was reluctant to establish a whole new legal system for the JDA where the Joint Authority would become a "government within a government."[84] Accordingly negotiating the extent of licensing powers to be delegated to the Joint Authority was a protracted and detailed process.[85]

Third, another point of contention between parties was the status of pre-existing rights. Article III (2) of the 1979 MOU provided that "the assumption of such rights and responsibilities by the Joint Authority shall in no way affect or curtail the validity of concessions or licenses hitherto issued or agreements hitherto made by either party."[86] Thailand had granted exploration permit licenses to Texas Pacific who was later not allowed to commence drilling due to ongoing negotiations between Thailand and Malaysia,[87] and the acceptance by Thailand of the production-sharing system advocated by Malaysia. Texas Pacific had objected to a proposed arrangement whereby their interests would be converted or "grandfathered" into a share of a joint venture with Petronas, which was favoured by Malaysia. Arguably, and as argued by the oil companies, this was contrary to Article III (2) of the 1979 MOU.[88] This problem was resolved in 1994 when the pre-existing concessions were incorporated into separate joint operating agreements between Petronas (for Malaysia) and PTT for Thailand which had taken over the Texas Pacific Concession.[89]

The key provisions of the 1979/1990 Malaysia-Thailand JDA will now be discussed.

Joint Development Zone (JDZ): The area is defined through a list of geographic coordinates "describing a wedge-shaped pentagon that encompasses an area of 2,110 square nautical miles, which covers their overlapping claims.[90] The duration of the JDA is 50 years from when the MOU comes in to force.

Boundary Delimitation: The Agreement expressly provides that both parties shall continue to resolve the problem of delimitation of the boundary of the continental in the Gulf of Thailand by negotiations or other peaceful means as agreed by both Parties.[91] It further provides that if both Parties arrive at a satisfactory solution to delimitation of the continental shelf, the Joint Authority

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the agreement. The terms of the concession ordinarily include a variety of auxiliary rights to the oil company and provision for royalty payment to the host country:" See Gao (1994), *supra* note 79 at 13.

[82] Fox et al, *supra* note 36 at 147.

[83] Ong (1999), *supra* note 67 at 230.

[84] *Ibid.*

[85] Ariffin (1985), *supra* note 78 at 535

[86] Article III (2), 1979 MOU.

[87] Fox et al, *supra* note 36 at 138.

[88] *Ibid.*

[89] Ong (1999), *supra* note 67 at 232.

[90] Schofield (2007), *supra* note 65 at 291.

[91] Article II, 1979 MOU.

shall be wound up and its liabilities/assets splits equitably between the parties.[92] If no boundary delimitation is achieved after 50 years, the joint arrangement shall continue indefinitely.[93]

Management of Resources: The Joint Authority "shall assume all rights and responsibilities on behalf of both Parties for the exploration and exploitation of the non-living resources of the sea-bed and subsoil in the overlapping area and also for the development, control and administration of the joint development area.[94]

The Joint Authority shall have a juristic personality as provided for in the respective legislation of each country.[95] It consists of 2 co-chairmen, one each to be appointed by the respective Governments and an equal number of members to be appointed by each Government[96]. It shall control all exploration and exploitation of non-living natural resources in the JDZ and shall be responsible for the formulation of policies[97] including the right to permit operations and to conclude transactions or contracts for or relating to the exploration and exploitation of the non-living natural resources in the JDZ subject to the approval of the governments.

Any contract awarded to any person for the exploration and exploitation of petroleum in the JDZ shall be a production-sharing contract.[98] The contract is valid for a period of 35 years but shall not exceed the validity of the Agreement.[99]

The sharing of revenue from gross production of petroleum is set out as follows:

- The Contractor pays 10 % of the gross production of petroleum to the Joint Authority as royalty, 5 % to each government
- All costs of petroleum production is borne by the contractor and 50 % of gross production of petroleum shall be applied by the contractor for the purpose of recovery of costs for petroleum operations;
- The remaining percentage of gross production of petroleum (after royalty and costs payments) shall be divided equally between the Joint Authority and the contractor.

Any disputes arising out of the contract shall be referred to arbitration, with each party appointing one arbitrator and both parties choosing the 3rd arbitrator.

Sharing of Costs: All costs incurred and benefits derived by the Joint Authority from activities carried out in the JDZ shall be equally borne and shared by the Governments.[100]

Jurisdiction: Rights conferred or exercised by the national authority of either party in matters of fishing, navigation, hydrographic and oceanographic surveys, the prevention and control of

[92] Article VI, 1979 MOU.
[93] Article VI, 1979 MOU.
[94] Article III (2), 1979 MOU.
[95] Article 1, 1990 Agreement.
[96] Article 3, 1990 Agreement.
[97] Article 7 (1), 1990 Agreement.
[98] Article 8 (1), 1990 Agreement.
[99] Article 8 (2) (a), 1990 Agreement.
[100] Article 9, 1990 Agreement.

marine pollution and other similar matters (including all powers of enforcement in relation thereto) shall extend to the JDZ and such rights shall be recognized and respected by the Joint Authority. Both parties also agreed to have a combined and coordinated security arrangement in the joint development area.

The Parties have also decided to divide criminal jurisdiction in the Area along an arbitrary line.[101] Such a line shall not in any way be construed as indicating the boundary line of the continental shelf between the two countries in the JDZ and prejudice the sovereign rights of either Party in the JDZ.[102]

Applicable Law: As regards applicable law, "the parties have refused to create a new third set of laws which a quasi-governmental agency would apply in the JDZ, while, in other offshore areas pertaining to each State, their own laws would apply."[103]

Dispute Settlement: Disputes are to be settled peacefully by consultation or negotiations between the Governments and if there is no settlement reached within three months, either government may refer the matter to the Prime Minister of Malaysia and the Prime Minister of Thailand who shall jointly decide the mode of settlement of the dispute.

Third Party Interests: The seaward part of the Malaysia-Thailand Joint Development Zone is also subject to a claim by Vietnam and covers approximately 256 nautical miles. In 1997, the Thailand-Vietnam maritime boundary agreement stated that Thailand, Vietnam together with Malaysia, "shall enter into negotiations…in order to settle the tripartite overlapping continental shelf claim area.[104] Apparently in 1999, Vietnam, Thailand and Malaysia agreed in principle on joint development for a small overlapping area[105] although there have been no reports of progress. A potential issue may be Vietnam's insistence for a three-way split in revenue from exploitation in the zone despite their claim overlapping with a small area of the Malaysia-Thailand Joint Development Zone.

Exploration and Exploitation Activities: The 1979/1990 Malaysia-Thailand JDA can be said to be a success in that both parties have undertaken oil exploration and exploitation without any major issues. Since 1994, then there have been a total of 63 exploration wells drilled and 114 development wells drilled.

However, there were difficulties in bringing the extracted gas from the JDA onshore a Thai-Malaysian Pipeline project which included the construction of a gas-separation plant as well as offshore pipelines. The latter was reported to have roused considerable protest due to environmental pollution concerns and potential social and cultural impacts, particularly in Songkla in southern Thailand.[106] Despite these problems, construction on the pipeline started in mid-2003 and was completed in 2006 – 2007, although some re-routing was necessary to

[101] Fox et al, *supra* note 36 at 144 and Article V, 1979 MOU.
[102] Article V, 1979 MOU.
[103] Fox et al, *supra* note 36 at 145
[104] Schofield (2009), *supra* note 73 at 16 - 17
[105] Nguyen Hong Thao, "Joint Development in the Gulf of Thailand," IBRU Boundary and Security Bulletin Autumn 1992 at 79
[106] Schofield (2007), *supra* note 65 at 293

alleviate protests[107]. In 2007, the gas separation plant was also operational although that project had also been delayed.

Malaysia-Vietnam 1992

In 1992, after two years of negotiation, both countries signed a *Memorandum of Understanding between Malaysia and the Socialist Republic of Vietnam for the Exploration and Exploitation of Petroleum in a Defined Area of the Continental Shelf involving the Two Countries*[108] (Malaysia-Vietnam JDA 1992)

The issue that prompted the need for joint development was again conflicting means of boundary delimitation. Malaysia and Vietnam have overlapping continental shelf claims off the Northeast coast of West Malaysia and the southwest coast of Vietnam caused by the differing use of island base points. In 1971, South Vietnam claimed its continental shelf by drawing a median line between the coastal islands of Malaysia and Vietnam.[109] In Malaysia's (infamous) 1979 Map, it claimed the continental shelf giving full weight to its island basepoints but discounted the Vietnamese island of Hon Da as a legitimate basepoint.[110]

There have been several factors which apparently provided impetus to both parties reaching an agreement on joint development. First, Malaysia had commenced hydrocarbon exploration activities from the 1980s onwards and signed three petroleum enterprises with foreign enterprises.[111] In 1991, one of these enterprises announced that there were gas reserves in the overlapping area. Vietnam protested and sent a note to the Malaysian MFA that the "friendly and cooperative spirit between the two countries did not allow any country to unilaterally grant to a third party the right to explore for and exploit petroleum in the overlapping area."[112] Both countries expressed a willingness to negotiate and pending such negotiations, all exploration and exploitation activities carried out by Petronas were suspended.[113]

Second, the cooperation agreement came at a time of increased tension to the Spratly Islands where Malaysia, Vietnam and China were aggressively asserting their claims, thus reaching an accord between two of these contesting States in an area outside of the Spratlys was important.[114] Third, Vietnam was beginning the process of entry into ASEAN which occurred in 1995 and cooperation with Malaysia, a key ASEAN State was also said to be critical.[115]

The key features of the Malaysia-Vietnam JDA are set out below.

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[107] See http://www.hydrocarbons-technology.com/projects/thaimalaysia/
[108] Signed on 5 June 1992.
[109] Nguyen, *supra* note 105 at 83.
[110] *Ibid.*
[111] *Ibid* at 81.
[112] *Ibid.*
[113] *Ibid.*
[114] Jonathan Charney and Lewis Alexander, *International Maritime Boundaries, Volume III,* (Martinus Nijhoff Publishers: Netherlands, 1998) at 2336
[115] *Ibid.*

Joint Development Zone: The agreement establishes a long narrow "Defined Area," representing its overlapping claims, in the Southeastern part of the Gulf of Thailand for the exploration and exploitation of seabed petroleum deposits.[116] The Agreement entered into force on 4 June 1993 with the duration of the agreement set at 40 years.

Boundary Delimitation: Under the MOU, Malaysia and Vietnam expressly agreed to explore and exploit petroleum in the Defined Area *pending the delimitation of the boundary lines*.[117] Further, the MOU does not prejudice the position and claims of either party in relation to and over the defined area.[118]

Management of Resources: Both Vietnam and Malaysia have agreed to mutually cooperate in the exploration and exploitation of petroleum in the area. Unlike the Malaysia-Thailand JDA, there is no complex institutional framework required for exploration and exploitation activities. Instead, they both agree to nominate their national oil companies PETRONAS and PETROVIETNAM to undertake exploration and exploitation of petroleum in the defined area.[119] PETRONAS and PETROVIETNAM must enter into a commercial arrangement for the exploration and exploitation of petroleum which is subject to the approval of both governments.[120]

On 25 August 1993, both companies concluded a commercial arrangement which included the establishment of a Coordination Committee, appointed by the national petroleum companies, to provide policy guidelines for the management of petroleum operations in the Defined Area, operating on the principle of unanimous vote. The Coordination Committee consists of eight members (4 members each from PETROVIETNAM and PETRONAS) with equal voting rights.[121] Chairmanship of the Committee will alternate between the two companies every two years[122]

Sharing of Costs: All costs incurred and benefits derived from the exploration and exploitation of petroleum in the defined area shall be borne and shared equally by both parties.[123] However, PETRONAS undertakes all PSC operations in the Defined Area under the Coordination Committee and remits to PETROVIETNAM its equal share of net revenue free of any taxes, levies or duties.[124]

Pre-Existing Rights: Article 3 (c) provides that "both parties agree, taking into account the significant expenditures already incurred in the Defined area, that every effort shall be made to ensure continued early exploration of petroleum in the Defined Area." This is of course, in recognition of the concessions Malaysia had previously awarded in the JDA. For pre-existing production sharing contracts, the two parties have agreed that those contractors will continue to

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[116] Article 1, 1992 MOU.
[117] Article 2 (1), 1992 MOU.
[118] Article 4 (a), 1992 MOU.
[119] Article 3, 1992 MOU.
[120] Article 3 (b), 1992 MOU.
[121] Nguyen, *supra* note 105 at 82
[122] *Ibid*.
[123] Article 2 (3), 1992 MOU.
[124] Nguyen, *supra* note 105 at 82.

carry out operations in the Defined Area which "represents a Vietnamese compromise for technical and economic reasons and for the purpose of speeding up the optimum exploration and exploitation of petroleum in the arrangement area."[125] However, the existing contractors must update both parties of the progress of petroleum activities and any amendments, changes and supplements to the PSCs are subject to the prior agreement of both parties.[126]

Applicable law: The MOU contains no express provision for applicable law in the Defined Area. However, by virtue of the fact that PETRONAS carries out all joint development operations, the applicable law for petroleum operations is the Petroleum Law of Malaysia.[127] Vietnam apparently agreed to this arrangement to avoid interfering with existing contractors in the Defined Area and because it lacked an adequate petroleum law at that time.[128]

Navigation and Fishing Rights: The Malaysia-Vietnam MOU does not deal with navigation and third party rights, perhaps because the zone is smaller than the Malaysian-Thailand zone and hence, it is less affected by fishing questions.[129]

Dispute Settlement: The MOU provides that any dispute arising out of the implementation of the provisions of this MOU shall be settled peacefully by consultation or negotiation between the parties.[130]

Exploration and Exploitation Activities: Four years after the conclusion of the commercial arrangement, petroleum was extracted and hence "can be viewed as a great success and vindication of the Malaysian-Vietnamese model of joint development in the Gulf."[131]

Cambodia-Vietnam 1982

In 1982, Cambodia and Vietnam signed an *Agreement on Historic Waters of Vietnam and Kampuchea,* which includes a provision for joint development. While there is no detailed joint development agreement, the agreement to jointly develop resources is significant as it involved Cambodia officially giving up sovereignty to one of the islands, Phu Quoc Island.

The dispute between Vietnam and Cambodia was between overlapping continental shelf claims as well as a sovereignty dispute over certain islands. Both Cambodia and Vietnam issued their continental shelf claims in the 1970s. They had both issued straight baselines and within their straight baselines, Cambodia and Vietnam had disputed 8,600 sq km of internal waters which extended some 100 km from their mainland.[132] One of the contentious issues between the parties was sovereignty over Phu Quoc Island, Koh Ses Island and Koh Thmei Islands and the seaward Islands of Puolo Wai and the Tho Chu Archipelago.[133] The continental shelf claims of both

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[125] *Ibid*.
[126] *Ibid*.
[127] *Ibid* at 83.
[128] *Ibid.*
[129] *Ibid.*
[130] Article 6, 1992 MOU.
[131] Nguyen, *supra* note 105 at 83.
[132] Dzurek, *supra* note 66 at 124.
[133] Charney and Alexander, *supra* note 114 at 2357.

Cambodia and South Vietnam in the 1970s were based on full sovereignty over all of these islands, which created overlapping continental shelf claims.[134] Linked to this issue of sovereignty was the use of the 1939 "Brevie Line" (named after the French Governor-General of Indo-China) which was used as an administrative and police jurisdiction line between Vietnam and Cambodia, which put Phu Quoc on the Vietnam side of the line and put the island of Koh Ses and Koh Thmei on the Cambodian side of the Brevie Line. In their continental shelf claims, both Cambodia and Vietnam rejected the use of the Brevie Line for their maritime boundary and for a divider between islands.[135]

The 1982 Agreement defines a specified zone which encompasses an area of 400 square nautical miles and are jointly claimed as historic waters.[136] The agreement did not include maritime delimitation but envisages future negotiations on this issue.[137]

Article 3 provides that pending settlement of the maritime boundary between the parties:

- Patrolling and surveillance in these territorial waters will be jointly conducted by both sides;
- Local populations will continue to conduct their fishing operations and the catch of other sea products in this zone according to the habits that have existed so far;
- Exploitation of natural resources will be decided by common agreement.

To date, it is not certain if any such joint exploitation has taken place or the extent of negotiations on this issue, and government upheaval in Cambodia has led to the non-implementation of many of the cooperative aspects of the agreement.[138] There was a recent announcement which indicated that joint surveys would commence for seabed resources.[139]

While Cambodia and Vietnam's joint claim to historic waters may be legally untenable under customary international law and UNCLOS,[140] it is notable because it resolved the sovereignty dispute over Phu Quoc Island by providing that the disputed "Brevie Line" drawn in 1939 as the dividing line for the islands in the zone.[141]

Cambodia-Thailand 2001

In 2001, Cambodia and Thailand concluded a *Memorandum of Understanding on the Area of Overlapping Maritime Claims to the Continental Shelf*, which included agreement to jointly develop resources.

[134] *Ibid* at 2358.
[135] *Ibid.*
[136] Article 1, Historic Waters Agreement.
[137] Article 2, Historic Waters Agreement.
[138] Charney and Alexander, *supra* note 114 at 2361
[139] Schofield (2007), *supra* note 65 at 294
[140] For a more detailed discussion on this, see Schofield (2007), *supra* note 65 at 294 – 295 and Charney and Alexander, *supra* note 114 at 2361.
[141] Schofield (2007), *supra* note 65 at 295.

The dispute between Cambodia and Thailand is again conflicting continental shelf delimitation principles in the continental shelf claims claimed by Cambodia and Thailand in 1972 and 1973 respectively.[142] The overlapping claim is the largest disputed area in the Gulf of Thailand[143] and covers an area of approximately 7500 square nautical miles of maritime space.[144]

The Cambodian claim is based on the 1907 Franco-Siamese land boundary protocol which specified that the boundary between French Indo-China and Siam leaves the sea at the point opposite the highest point of Koh Kut Island.[145] It gives full weight to its small offshore islands while entirely discounting Thai features Ko Kra and Ko Losin[146] and discounts the Thai coast in the northeastern gulf. Cambodia's claim has been criticized as "a profoundly flawed interpretation" of the 1907 Protocol which is concerned with a land boundary and does not refer to the division of maritime zones.[147] Thailand measured its continental shelf based on equidistance but also ignored Cambodia's straight baselines and all island basepoints offshore including its own features Ko Kra and Ko Losin.[148]

In the early 1990s, maritime boundary negotiations between Thailand and Cambodia began and it was reported that while Thailand was pushing delimitation of maritime boundaries, Cambodia has been focusing on a joint development solution to be applied to their areas of overlapping claims.[149]

There were several factors pushing the conclusion of the 2001 MOU. First, continuous clashes between the Thai Navy and the Cambodian marine police over fishing in the area of overlapping claims had heightened tension in the area.[150] Second, potential oil and gas reserves were discovered in the overlapping areas.[151] Cambodia had begun awarding concessions to oil companies in the area from 1997 onwards, however, exploration was apparently conditional upon a satisfactory resolution by Cambodia and Thailand on their overlapping claims to the area.[152]

The MOU divided the overlapping area into two areas, along the 11 degree north parallel.[153] In Area I, north of the boundary, parties agreed to attempt through further negotiations, to define the maritime boundary whereas south of the boundary, there would be further negotiations for joint development of this area.[154] There was no way that Thailand would have accepted joint development in the north of the overlapping area which would risk legitimizing Cambodia's arguably dubious claim in that area, so the division of the area was a practical way to address this

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[142] Schofield (2007), *supra* note 67 at 301.
[143] Dzurek, *supra* note 66 at 122.
[144] Schofield (2007), *supra* note 67 at 301.
[145] Dzurek, *supra* note 66 at 122 .
[146] Schofield (2007), *supra* note 67 at 301.
[147] *Ibid.*
[148] *Ibid* at 302
[149] *Ibid.*
[150] Captain Somjade Kongrawd, "Thailand and Cambodia Maritime Disputes" available at http://www.navy.mi.th/judge/Files/Thailand%20Cambodia.pdf at 3
[151] Dzurek, *supra* note 66 at 124.
[152] Kongrawd, *supra* note 150 at 3.
[153] Schofield (2007) *supra* note 67 at 302.
[154] *Ibid.*

issue.[155] The negotiation towards delimitation and joint development are to be considered "simultaneously" and represent "an indivisible package."[156]

Negotiations had been ongoing since 2001 with little progress although both sides have clearly expressed their willingness to reach a conclusion as soon as possible.[157] The issue had centered on two petroleum blocks where clarification of the disputed sea border was sought.[158] However, negotiations received a serious set back at the end of 2009 when the Thai Government reportedly unilaterally revoked the MOU on the basis that it was negotiated by former Prime Minister Thaksin who Cambodia had apparently appointed as its economic adviser.[159] The situation now is likely to be even less conducive with the recent conflict over the Temple of Preah Vihear.

2. ***The East China Sea***

The East China Sea is of great interest to China, Japan and South Korea because of "its proven or suspected hydrocarbon resources, its fishery resources and its seafloor deposits of metals."[160] The estimates of proven and suspected hydrocarbon resources vary significantly and although are supposedly not very high by international standards, remain critical to energy pressed Japan and China.[161] Development of its oil potential has been hampered by various island sovereignty disputes and conflicting continental shelf delimitation.[162] There is presently one joint development arrangement (Japan-South Korea 1974) and one 'in principle' agreement to jointly develop resources.

Japan-South Korea 1974

Japan and South Korea concluded two maritime agreements on 30 January 1974, the first of which concerns continental shelf boundary agreement in the Korean Strait which was not particularly controversial[163] and the second of which created a Joint Development Zone.[164]

There were a variety of factors that prompted the joint development arrangement. First, there was the 1968 survey which reported that there was a "high probability" that there were vast oil reserves in the continental shelf between Taiwan and Japan and under the Yellow Sea.[165]

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[155] *Ibid* at 303
[156] Schofield (2009), *supra* note 73 at 23.
[157] Jon Fernquest, "Thai-Cambodian oil talks stall," 29 August 2008, Bangkok Post
[158] *Ibid*
[159] Boonsong Kositchoetethana, "Tearing up MoU on JDA is so wrong," Bangkok Post, 20 November 2009
[160] Reinhard Drifte, "Territorial Conflicts in the East China Sea- From Missed Opportunities to Negotiation Stalemate," presented at the Conference on Dokto, Yeungnam Universitym Dauegy 13 – 14 May 2009 available at http:///www.japanfocus.org/-Reinhard-Drifte/3156
[161] *Ibid.*
[162] Mark Valencia, "Context, Claims, Issues and Possible Solutions" 31 (1) Asian Perspective 127 (2007) at 128
[163] Choon-Ho Park, "The Sino-Japanese-Korean Sea Resources Controversy and the Hypothesis of a 200 mile Economic Zone," 16 Harvard International Law Journal 27 (1975) at 42
[164] *Agreement Concerning Joint Development of the Southern Part of the Continental Shelf adjacent to the two countries, signed in Seoul on 30 January 1974*
[165] In 1966, reports of potential oil deposits in Northeast Asia coupled with developments in technology in oil extraction led to the formation of the committee on Coordination of Joint Prospecting for Mineral Resources in Asian Offshore Areas (CCOP) formed under the United Nations Economic Commission for Asia and the Far East

Second, Japan, Taiwan and South Korea, all of which had experienced a "debilitating shortage of oil"[166] coupled with ever expanding national demand for oil in the 1960s, rushed to make unilateral claims over the continental shelf, in order to maximize their claims to the purportedly oil rich sea bed in the Yellow Sea and East China Sea.[167] By September 1970, 17 seabed zones were established by these coastal States with their unilateral claims overlapping to such an extent that only four of the seventeen zones were uncontested.[168] Oil exploration and exploitation contracts had also been awarded to Western oil interests for many of the zones.[169]

Third, the unilateral claims measured using different methods of continental shelf boundary delimitation meant that Japan, Korea and Taiwan had overlapping maritime claims.[170]Between Korea and Japan, Japan's unilateral claims indicated that they were delimiting their continental shelf boundaries by applying the median line between Korea and Japan but using the islets of Danjo Gunto and Tori Shima as base points in determining the median line. In contrast, Korea argued that the islets could not be used as base points and based on the natural prolongation principle, the presence of the Okinawa Trough between Korea and Japan constitutes "special circumstances" under which the median-line delimitation principle cannot be applied as it interrupted the "natural prolongation" of Japan's land territory[171].

The delimitation issues were complicated by the issue of sovereignty over ownership of eight uninhabited features situated west of Okinawa and northeast of Taiwan and called Senkaku in Japanese and Diaoyutai in Chinese.[172] In 1970, after the unilateral claims were made, a dispute erupted between Japan and Taiwan over ownership of the Senkaku Islands. China also joined the fray and objected to the claim of ownership by Japan over the Senkaku Islands and also claimed sovereign rights over the continental shelf of the Yellow Sea and the East China Sea.[173] All exploration activities except by those of non-US oil company, Royal Dutch Shell ceased in the middle of 1971. Taiwan, due to the objections of China, dropped out of future negotiations on joint development.

(ECAFE): See Choon-Ho Park, "Oil Under Troubled Waters: The Northeast Asia Sea-Bed Controversy," 14 Harvard International Law Journal 212 (1973) at 212

[166] Choon-Ho Park, "Joint Development of Mineral Resources in Disputed Waters: The Case of Japan and South Korea in the East China Sea," 6 (11) Energy, 1135 (1981) at 1135

[167] *Ibid*

[168] The four uncontested zones were uncontested largely due to their marginal location: See Choon-Ho Park (1973), *supra* note 165 at 226

[169] For example, Gulf Oil had signed contracts with Japan, Korea and Taiwan whereas Texaco and Shell had only signed contracts with Japan and Korea. "The fact that foreign oil companies have sought to protect their interests by signing concession agreements with, or investing in the oil industry of all or both coastal states claiming sovereignty over a given area of the sea-bed: See Choon-Ho Park (1973), *supra* note 165 at 226.

[170] Choon-Ho Park (1973), *ibid* at 212.

[171] *Ibid* at 241.

[172] Choon-Ho Park (1981), *supra* note 166 at 1137.

[173] Choon-Ho Park (1973), *supra* note 165 at 230 - 234. US, due to the politics of the time, were reportedly very conscious of China's protests with the former advising American oil firms not to explore for oil in areas under dispute. Japan also apparently, consistent with US Policy, ceased all exploration activities to the consternation of Korea and Taiwan.

Japan and South Korea continued, spurred on by the oil crisis of 1973[174] concluded the joint development arrangement in 1974. Korea ratified the agreement in 1974 but Japan only ratified it in 1978 after it had made changes to its oil exploration laws.[175]

The key provisions of the South Korea-Japan JDA are set out below.

Joint Development Zone: The Zone consists of the overlap of 24, 092 square nautical miles enclosed by the outer limits of each party's claims to the continental shelf (with Korea measuring its CS boundary through natural prolongation and Japan measuring through the median line). It accommodated both countries delimitation arguments.[176]

The Zone was initially divided into nine subzones although was reduced to six after surveys were carried out indicating limited hydrocarbon resources.[177] The method used in establishing the sub-zones has been described as "technically imprecise and therefore likely to lead to potential disputes in the future."[178]

Boundary Delimitation: The issue of boundary delimitation was shelved:

> "Nothing in this Agreement shall be regarded as determining the question of sovereign rights over all or any portion of the Joint Development Zone or as prejudicing the positions of the respective parties with respect to the delimitation of the continental shelf."[179]

This "shelving" of their respective claims lasts the duration of the Agreement i.e. 50 years. If the parties agree to terminate the Agreement before its expiration on the ground that natural resources are no longer economically exploitable, this shelving will come to an end. The Agreement has no provision that parties undertake to continue negotiations for boundary delimitation.[180]

Management of Resources: Each State appoints one or more concessionaires in each subzone[181] who have rights of exploration and exploitation[182]. If a Party authorizes more than one concessionaire with respect to one subzone, all shall such concessionaires shall have an undivided interest.[183]

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[174] The 1973 oil crisis was caused by the embargo on oil supply imposed by the Organization of Arab Petroleum Exporting Countries in response to the US to supply Israeli military during the 1973 Arab-Israeli war

[175] Japan's 1950 mining law only covered land-based exploitation and had several provisions which made it difficult to apply to the exploration and exploitation for the development of oil in the sea. Its Ad Hoc Law on sea bed mining came into force in 1977. For a more detailed discussion, see Masahiro Miyoshi, "The Japan-South Korea Agreement on Joint Development of the Continental Shelf" 10 (3/4) Energy 545 (1985)

[176] Gao Jianjun, "A Note on the 2008 Cooperation Consensus Between China and Japan in the East China Sea" 40 (3) Ocean Development and International Law 291 (2009) at 293

[177] Schofield (2009), *supra* note 73.

[178] Fox et al, *supra* note 36 at 117.

[179] Article XVIII, Japan South Korea JDA 1974.

[180] Masahiro Miyoshi "The Joint Development if Offshore Gas and Gas in Relation to Maritime Boundary Delimitation" 2 (5) in *Maritime Briefing*, *International Boundaries Research Unit* (1999) edited by Clive Schofield.

[181] Article IV (1), Japan South Korea JDA 1974.

[182] Article X, Japan South Korea JDA 1974.

[183] Article IV (1), Japan South Korea JDA 1974.

Each party is entitled to one half of the proceeds recovered from each subzone and is also obligated to meet one half of the expenses for the recovery.[184]

The method of selection of concessionaires is left to individual States, although the States have an obligation to notify each other of selected concessionaires.

Concessionaires of both Parties are required to enter into an operating agreement to carry out joint exploration and exploitation in the JDZ[185]. Such joint operating agreements shall provide for details relating to the sharing of natural resources and expenses, designation of the operator, treatment of sole risk operations[186], adjustment of fisheries interests, and settlement of disputes.

The duration of the exploration right is 8 years from the date of entry into force from the operating agreement unless commercial discovery is made on which the exploration right explores. When commercial discovery of natural resources is made during the period of the exploration right, concessionaires of both Parties may apply to the respective Parties for the establishment of the exploitation right. When the Parties receive such application, they shall promptly hold consiltaions and shall without delay approve such application. The duration of the exploitation right shall be thirty years from the establishment of such right.

The parties established a Joint Commission[187] comprised of Foreign Office and Ministry of Trade and Industry officials from each State which meet twice a year under co-chairman.[188] The role of the Commission is as a "forum for enquiry and implementing cooperation"[189] It is a "consultative body rather than a powerful joint authority" and therefore the Joint Commission has set up a joint subcommittee of experts for practical discussion of technical matters.[190]

<u>Navigation and Fishing Interests:</u> One of the more difficult issues was accommodating fishing interests in areas of the JDZ where the Japanese traditionally fished. Article 5 (1) states that any operating agreement must provide for the accommodation of fishing interests. The parties agreed to give administrative guidance to their concessionaires so that in advance of operations they will endeavor to adjust fishing interests of nationals concerned.[191] This includes guidance to the operators not to carry out exploratory activities during the fishing season of January through May.[192]

The Japanese Ad Hoc mining law also provides for designated areas within the sub-zones of the JDZ where development of resources is limited in areas where fish are present.[193] Article 39 requires concessionaires under the joint operating agreements to pay compensation to

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[184] Article IX, Japan South Korea JDA 1974.
[185] Article V, Japan South Korea JDA 1974.
[186] The idea behind them is to allow one or members of a consortium who cannot get the required majority to agreement with them on drilling of certain weeks to undertake such drilling alone and at their sole risk.
[187] Article XXIV, Japan South Korea JDA 1974.
[188] Fox et al, *supra* note 36 at 117
[189] *Ibid.*
[190] Miyoshi (1999), *supra* note 180.
[191] Fox et al, *supra* note 36 at 121.
[192] Miyoshi (1985), *supra* note 175 at 549.
[193] Article 36, Japanese Ad Hoc Mining Law.

fishermen as a consequence of damage to fishing interests.[194] South Korea appears to have no equivalent law but reportedly collects a contribution from the concessionaire to compensate fishery interests.[195]

With regards to navigation rights, when exploration is carried out by surface vessels, the State that has authorized the concessionaires who are operators in the subzones must promptly inform the other government and mariners about exploration activities. States must also inform each other of exact locations of fixed installation and other details to ensure safe navigation.[196] The responsible government must also agree on measures to be taken to prevent collisions at sea[197] ensure that measures are taken to ensure that collisions do not occur.

<u>Applicable Law:</u> Under Article XIX:

> Except where otherwise provided in this Agreement, the laws and regulations of one Party shall apply with respect to matters relating to exploration or exploitation of natural resources in the subzones with respect to which that Party has authorized concessionaires designated and acting as operators.

Accordingly, Japanese law will apply in the sub-zone where a Japanese concessionaire works as the operator whereas Korean law will apply in a sub-zone where a Korean concessionaire works as the operator. However, the law will shift from Japanese to Korean depending on whose concessionaire is operating in the subzone,[198] thereby making operations subject to differing requirements in respect of health, safety, construction, control of pollution etc.[199]

When it comes to damage resulting from exploration or exploitation of natural resources in the JDZ has been sustained by nationals of either Party or other persons who are resident in the territory of either Party, actions for compensation for such damage may be brought by the nationals or persons in the court of one Party:

(a) In the territory of which such damage has occurred;
(b) In the territory of which such nationals or persons are resident
(c) The territory which has authorized the concessionaire designated and acting as the operator in the subzone where the incident causing such damage has occurred[200]

<u>Dispute Settlement:</u> If a dispute fails to be settled through diplomatic channels, it shall be referred to an arbitration board composed of three arbitrators, with each party appointing one arbitrator within a period of 30 days and the third arbitrator to be agreed upon by the Parties. If the parties fail to agree on an arbitrator, they shall request the President of the ICJ to appoint an arbitrator who shall not be a nationality of either Party.

[194] Fox et al, *supra* note 36 at 122.
[195] *Ibid.*
[196] Miyoshi (1985) *supra* note 175 at 549.
[197] Article XX, Japan South Korea JDA 1974.
[198] Miyoshi (1999), *supra* note 180 at 13.
[199] Fox et al, *supra* note 36 at 129
[200] Article XXI, Japan South Korea JDA 1974.

Third Party Interests: The Chinese Government objected to the joint development agreement on the basis that the "question of how to divide the continental shelf in the East China Sea should be decided by China and the other countries concerned through consultations" and the Japan-South Korea JD Agreement was "an infringement on China's sovereignty."[201]

China also protested strongly when exploratory work began. China also claims part of the JDZ and refuses to recognize its creation.[202] However, in 2008, both China and Japan reportedly shelved their plans to develop the Asunaro gas field as the site could potentially straddle the China-South Korea median line and stretch into the Japan-South Korean joint development area and they did not want to trigger a dispute with South Korea.[203]

Exploration and Exploitation Activities: To date, there have been no discoveries of commercially viable oil and gas reserves[204] so arguably, the workability of the JDA has not been tested yet. They had both launched drilling seven times in 3 districts of the JDZ between 1980 and 1986 but saw no results suggesting the presence of oil or gas.[205] In 2006, South Korea reportedly proposed that Japan and South Korea conduct a joint field assessment of oil and gas in the JDZ as preliminary surveys had raised the possibility of undersea geographical features that could contain oil and gas.[206]

China-Japan 2008

In June 2008, after three and a half years of negotiations, China and Japan reached a "Principled Consensus on the East China Sea Issue," which included provision for joint development in the East China Sea.

As mentioned above, the dispute between China and Japan in the East China Sea is a dispute over sovereignty over the Senkaku Islands (Diao-yu-tai in Chinese) and continental shelf delimitation. With regards to sovereignty over the Senkaku Islands, China's claims discovery and that Japan ceded the islands back to Japan after World War II.[207] Japan argues discovery and effective occupation since 1972.[208]

With regards to its continental shelf claim, Japan and China have used differing continental shelf delimitation methods. The East China Sea between Japan and China is less than 400 nautical miles. China claims the continental shelf up to the Okinawa Trough, which is a large concavity just before the Ryukyu Islands of Japan, is the natural prolongation of its mainland territory such that the Okinawa Trough constitutes the boundary between the two countries continental shelves. Japan, on the other hand, claims that the median line between the two countries should be the

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[201] Choon-Ho Park (1975), *supra* note 163 at 44.
[202] Schofield (2009), *supra* note 73 at 13.
[203] "Japan, China drop Asunaro gas field plan – fear of conflict with ROK seen behind move" The Daily Yomiui, 21 June 2008
[204] Schofield (2009), *supra* note 73 at 13.
[205] "Korea, Japan to resume exploration of continental shelf", 1 August 2002, Asia Pulse
[206] "South Korea to propose joint oil exploration with Japan," BBC, 26 May 2006
[207] Alexander M. Petersen, "Sino-Japanese Cooperation in the East China Sea: A Lasting Arrangement?" 42 Cornell International Law Journal 441 (2009) at 447
[208] *Ibid* at 450.

continental shelf boundary.[209] Interestingly, China has not claimed an EEZ from the Senkaku Islands, but Japan has given the islands full effect in the construction of its median line[210]

The dispute over Senkaku has made agreement on continental shelf delimitation more contentious. The Senkaku islands have been subject to increasing nationalistic rhetoric in both China and Japan.[211] However, in 2004, Japan and China embarked on negotiations on the development of oil and gas resources in the East China Sea pursuant to its "Consultations on the Issues of the East China Sea." A few factors appear to have played a part in pushing negotiations. First, was Chinese exploration of Chunxiao fields near the median line claimed by Japan. While the Chunxiao fields fell within the Chinese side of the boundary, Japan claimed that it was tapping into gas reserves which straddle the median line, a claim which was later substantiated.[212] Second, the increasing patrols by Chinese military forces in the area of territorial disputes, particularly in areas where there were oil rigs or oil fields,[213] made Japan realize that a solution needed to be found. Third, the improvement in general bilateral ties between the countries prompted by changes in Japanese leadership (namely the resignation of Junichiro Koizumi who was famously nationalistic) also moved negotiations along.[214]

The 2008 Consensus consists of three parts, first, cooperation between China and Japan in the East China Sea, second, the understanding between China and Japan on joint development of the East China Sea and third, the understanding on the participation of the Japanese in the development of the Chunxiao oil field.

Cooperation between China and Japan: The first part states that both countries have agreed to co-operate in order to change it into a "Sea of Peace, Cooperation and Friendship". The co-operation is without prejudice to the legal position of either party.

Joint Development in the East China Sea: With regards to joint development, the two sides agree to joint development, in area established by the China-Japan 1997 Fisheries Agreement. [215] During negotiations, China proposed joint development in the area surrounding Senkaku, but this was rejected by Japan.[216] The joint development zone is not based on areas of overlapping claims. It includes only part of the overlapping claim on the eastern side of the median line as well as an area that is not subject to overlapping claims in the western side of the median line.[217] The vast majority of the proposed zone is located on the Japanese side of the median line with only the northwestern corner of the joint area on the Chinese side of the line.[218] The Consensus does not spell out detailed provisions on joint development and merely states that the two sides

[209] Gao Jianjun, "A Note on the 2008 Cooperation Consensus Between China and Japan in the East China Sea" 40 (3) Ocean Development and International Law 291 (2009) at 292.
[210] Gao Jianjun "Joint Development in the East China Sea: Not an Easier Challenge than Delimitation" 23 International Journal of Marine and Coastal Law 39 (2008) at 62
[211] Petersen, *supra* note 207 at 442.
[212] Drifte, *supra* note 160.
[213] Drifte, *supra* note 160.
[214] Petersen, *supra* note 207 at 460.
[215] Gao Jianjun (2009), *supra* note 209 at 293
[216] *Ibid.*
[217] *Ibid.*
[218] Schofield (2009), *supra* note 73 at 24.

"through joint exploration, will select by mutual agreement areas for joint development" and that the "two sides have agreed to continue consultations for the early realization of joint development in other parts of the East China".[219]

The third aspect of the agreement provides that Chinese enterprises welcome the participation of Japanese in the existing oil and gas field in Chunxiao in accordance with the relevant laws of China governing co-operation with foreign enterprises in the exploration and exploitation of offshore petroleum resources. Agreement on this will be reached through an exchange of notes. However, this aspect of the Consensus has caused some controversy. Immediately after the announcement of the consensus, differing interpretations of the Consensus arose with Japan claiming that China and Japan were carrying out joint development of the Chunxiao field and China claiming all they had allowed was capital participation of the Chinese and that Japan had acknowledged China's sovereign rights over Chunxiao.[220]

Since then, there has been no joint development of the joint development area and China's continued development of another oil and gas field in Tianwaitian which is also near Japan's median line was also protested by the Japanese on the basis that China should have consulted with Japan.[221] Part of the stalemate may have been due again to a change in leadership in Japan to a Prime Minister with a nationalistic anti-China agenda in 2009. However, in May 2010, there were reports that both the Chinese Premier and Japanese Prime Minister Hatayoma agreed to launch negotiations implementing the consensus but with a new prime minister in Japan, whether this will happen remains to be seen.

3. ***The Timor Sea***

Australia-Indonesia

In 1989, Australia and Indonesia signed the *Treaty on the Timor Zone of Co-operation Timor Gap* covering an area in the resource rich Timor Sea.

The dispute leading to the joint development zone was one of differing means of continental shelf delimitation. Australia and Indonesia had negotiated a 1972 continental shelf boundary, which favoured Australia's natural prolongation arguments rather than Indonesia's equidistance or median line approach. Although Australia had wanted the Timor Trough, which was located substantially closer to Indonesia than Australia, to be the boundary, a compromise was eventually reached albeit one that still favoured the natural prolongation principle.

The 1972 boundary was not continuous and had a gap, i.e. the Timor Gap, which Australia had anticipated would be closed through negotiations with Portugal which was the colonial administration in East Timor. However, in 1975, Indonesia invaded and occupied East Timor and officially incorporated it as part of Indonesia. Australia accepted Indonesia's annexation and began to negotiate a boundary with Indonesia. However, Indonesia refused to use the 1972 boundary as the boundary between Australia and East Timor due to the increasing irrelevance of

[219] Gao Jianjun (2009), *supra* note 209 at 293.
[220] *Ibid* at 296.
[221] *Ibid.*

the natural prolongation method of continental shelf delimitation and its perceived unfairness to Indonesia.[222] Accordingly, joint development was agreed as a solution to this stalemate.

One of the major incentives for Australia in jointly developing the area was the discovery of exploitable hydrocarbons in an area called Kelp in the Timor Gap area coupled with the declining production in one of Australia's oil fields. The *Libya/Malta Judgment* in 1985 which undermined the use of natural prolongation in continental shelf delimitation also played a role.[223]

The Treaty is a complex document of 34 articles and 3 annexes and was "widely regarded as the most sophisticated and comprehensive maritime joint development zone in the world."[224] The key provisions are set out below.

Joint Development Zone: The Zone of Cooperation (ZOC) covers 60,000 square kilometers and is divided into 3 areas, A, B and C. The boundaries of the ZOC reflects the maximum possible extent of the countries' claims in that the northern extremity of the ZOC represents the maximum claim that Australia could make on the natural prolongation principle and the southern boundary of the zone represents the maximum claim by Indonesia based on the median line principle.[225] The Treaty was supposed to be in force of 40 years.

Boundary Delimitation: The Treaty contains a provision that it does not prejudice the position of either Australia or Indonesia with regards to continental shelf delimitation.

Jurisdiction: Jurisdiction in Area B is under Indonesia although it is required to account for 10 % of the petroleum tax revenue generated in the area. Jurisdiction in Area C is under Australia but it has agreed to account for 16 % of the tax revenue generated from petroleum.[226]Area A represents the area which is under the joint control of both Indonesia and Australia.

Applicable law in Area A: For criminal jurisdiction, Article 27 (1) provides that criminal jurisdiction is to e based on the nationality or permanent residency of either Australia or Indonesia. For nationals of third States, both Australia and Indonesia have jurisdiction subject to the caveat that a person shall not be subject to double jeopardy or double conviction,[227] with States consulting each other as to which is the most appropriate State to try a third State offender.[228] Assistance in evidence collection and law enforcement can be the subject of agreements between Australia and Indonesia.[229]

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[222] Clive Schofield, "Minding the Gap: The Australian-East Timor Treaty on Certain Maritime Arrangements in the Timor Sea (CMATS)" 22 International Journal of Marine and Coastal Law 189 (2007) at 190 – 198.
[223] Anthony Bergin, "The Australian-Indonesia Timor Gap Maritime Boundary Agreement" 5 (4) International Journal of Estuarine and Coastal Law 383 (1990) at 384.
[224] Schofield (2009), *supra* note 73 at 15.
[225] Stuart Kaye, "The Timor Gap Treaty: Creative Solutions and International Conflict" 16 Sydney Law Review 72 (1994) at 79
[226] *Ibid* at 80. He suggests that the reason for the disparity in the tax revenues is due to the fact that Indonesia had a stronger position on maritime delimitation.
[227] Article 27 (2) (a), Timor Gap Treaty.
[228] Article 27 (2) (b), Timor Gap Treaty.
[229] Article 27 (4) (a) and 27 (4) (b), Timor Gap Treaty.

Civil claims arising out of activities taking place in Area A may be brought in the courts of the contracting State whose nationals or permanent residents have suffered damage and the applicable law is the lex fori[230]

Management of Resources: Exploration and exploitation of resources is under the responsibility of two bodies, the Ministerial Council, whose role is essentially "supervisory and policy oriented," and the Joint Authority, which is responsible for the practical management of Area A.[231]

The Ministerial Council consists of equal representation of Australian and Indonesia officials and all decisions are arrived at by consensus. It has "overall responsibility for all matters relating to the exploration for and the exploitation of the petroleum resources in Area A of the Zone of Co-operation" including supervising the Joint Authority.

The Joint Authority's primary responsibility is to divide Area A into contract areas, enter into Production Sharing Contracts with oil producers and regulating oil exploration and production activities in Area A. The Ministerial Council appoints the 8 executive directors of the Authority and there is to be four from each State heading the Financial, Technical, Legal and Corporate Services. All decisions made by the Authority are by consensus, failing which the matter shall be referred to the Ministerial Council.

The Joint Authority enters into PSCs with oil companies, based on a model PSC in the Agreement in Annex C. Recovered petroleum is divided between the Joint Authority and the oil companies according to a detailed formula which allocates certain percentages depending on the years of production which has been described as cumbersome although relatively commercially viable.[232]As between the States, revenue is divided equally.

Dispute Resolution: Dispute resolution between States is by consultation and negotiation.

Exploration and Exploitation Activities: The Treaty had been successful in that "numerous production sharing contracts have been approved, oil wells have been drilled, seismic surveys have been conducted and several major oil discoveries made."[233]

There have been two challenges to the Treaty, first an attempt in 1994 by East Timor nationals in the Australian High Court to nullify the Treaty and the second, when Portugal in 1995 contested the Treaty's validity, neither of which were successful.[234] However, the Treaty is no longer in force, having been replaced by agreements concluded between Australia and East Timor.

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[230] Article 28, Timor Gap Treaty.
[231] Kaye, *supra* note 225 at 85.
[232] *Ibid* at 89.
[233] Lian A Mito, "The Timor Gap Treaty as a Model for Joint Development in the Spratly Islands" 13 American University International Law Review 727 (1997-1998) at 758.
[234] *Ibid* at 757.

Australia-East Timor 2002

Before East Timor became independent in 2002, the soon-to-be formed East Timor government and the UN Transitional Authority for East Timor stated that they would not be bound by the Timor Gap Treaty. However, as both Australia and East Timor wanted to ensure continuity for existing activities in the Timor Gap, a new treaty between Australia and East Timor, the Timor Sea Treaty (TST), was signed in May 2002.

Joint Development Zone: The TST established a Joint Petroleum Development Area (JPDA) which is the same as Area A in the 1989 Timor Gap Treaty.

Sharing of Revenue: The TST provides that East Timor would receive 90 % of revenue whereas Australia 10 % of Revenue (in contrast to the 50 % - 50% between Australia and Indonesia). However, the downstream benefits which will accrue to Australia are highly lucrative as the majority of the oil will be refined in Darwin.[235]

Boundary Delimitation: The TST provides that neither the provisions of the new arrangement, nor any of the acts undertaken during its duration, can be interpreted as prejudicing or affecting either parties' legal positions and rights to the sea-bed concerned.[236]

Jurisdiction: The TST provides for similar joint criminal jurisdiction that was provided for in the Timor Gap Treaty.

Management of resources: In contrast to the two-tiered structure contemplated in the Timor Gap Treaty, the TST contemplates the establishment of a three-tiered administrative structure comprising of a Designated Authority, Joint Commission and Ministerial Council,[237] although it "does not necessarily depart from the essential principle of joint-decision making at the highest institutional level."[238]

Australia and East Timor are equally represented on the Ministerial Council which is mandated to consider any matter relating to the operation of the arrangement that is referred to it by either East Timor, Australia[239] or their Joint Commission members.[240] In the event the Ministerial Council is unable to resolve a matter, either party may invoke the dispute resolution procedures in Appendix B.[241]The Ministerial Council is not authorized, however, to make decisions on the issue of the construction of pipelines from the JPDA to the territory of either State Party which is the sole responsibility.[242]

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[235] David Ong, "The New Timor Sea Arrangement 2001: Is Joint Development of Common Offshore Oil and Gas Deposits Mandated under International Law," 17 (1) International Journal of Marine and Coastal Law 79 (2002) at 95
[236] Article 2 (b), Timor Sea Treaty.
[237] Ong (2002), *supra* note 235 at 99
[238] *Ibid.*
[239] Article 6 (d) (i), Timor Sea Treaty.
[240] Article 6 (d) (ii), Timor Sea Treaty.
[241] Article 6 (c) (iii), Timor Sea Treaty.
[242] Article 8 (c), Timor Sea Treaty.

The Joint Commission consists of Australian and East Timor officials, although Timor can appoint one more Commissioner than Australia.[243] The Joint Commission shall establish policies and regulations relating to petroleum activities in the JPDA[244] and oversee the work of the Designated Authority.

The Designated Authority carries out the day-to-day regulation and management of petroleum activities. Due to the 90:10 allocation of upstream revenues, the Designated Authority is designated by the Joint Commission but after the first three years of the Arrangement, the Designated Authority shall revert to the East Timor Government Ministry responsible for petroleum activities.[245]

Dispute Settlement Procedures: The first duty is to settle all disputes as far as possible by consultation or negotiation, failing which, the dispute shall be submitted to an arbitral tribunal in accordance with the procedure in Annex B, which sets out comprehensive arbitration procedures.

2007 Treaty on Certain Maritime Arrangements in the Timor Sea (CMATS): Despite the TST, issues arose in relation to the Greater Sunrise field, which straddled the eastern outer limits of boundary of JPDA, and contained an estimated 8.4 trillion cubic feet of gas and 295 million barrels of condensate.[246] An Australian oil major, Woodside, held consortium rights to the field.

Pursuant to the TST, East Timor and Australia had signed a unitization agreement whereby on the basis that 20.1 % of Greater Sunrise lay within the JDPA with the remaining 79.9 % falling on Australia's purported side of the line. This meant that East Timor was set to benefit from only 18.1 % of the proceeds from Greater Sunrise according to the 90:10 split in revenue.[247]

East Timor argued that it was not bound by the area enclosed by the JPDA defined by the previous Timor Gap Treaty and claimed areas adjacent to the JPDA, which could be done by "defining lateral boundary lines perpendicular to the general direction of the coast of Timor Island, creating a corridor-type effect."[248] Australia disagreed with this "widening of the Gap" and insisted that the Timor Trough should remain the boundary between the parties. Australia was apparently concerned that agreeing to an equidistance line-based boundary with East Timor could affect its existing boundaries with Indonesia.[249] Another issue was the issue of whether the pipeline from the Sunrise Field would lead to Dili or Darwin and where the liquefied natural gas processing operations would take place.[250] East Timor subsequently chose not to present the Greater Sunrise unitization arrangement to its parliament in order to pressure Australia to be more flexible in its negotiations.[251]

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[243] Article 6 (c)(i), Timor Sea Treaty.
[244] Article 6 (c) (ii), Timor Sea Treaty.
[245] Article 6 (b) (iii), Timor Sea Treaty.
[246] Schofield (2007), *supra* note 222 at 197.
[247] Schofield (2009), *supra* note 73 at 21.
[248] Schofield (2007), *supra* note 222 at 200.
[249] Schofield (2007), *supra* note 222 at 201.
[250] Schofield (2007), *supra* note 222 at 203.
[251] Schofield (2007), *supra* note 222 at 201.

The resulting legal and political uncertainty led Woodside to shelve the Sunrise Project in early 2005. However, as both Parties had every incentive to see the Greater Sunrise Project succeed,[252] in 2006, the CMATS was signed and entered into force on 23 February 2007.

It allocated revenue from exploitation of the Sunrise Fields on a 50 -50 basis. Access to these revenues, however, is contingent on the commercial decision to develop Sunrise by Woodside which holds the relevant exploration licenses.[253] The duration of the agreement is 50 years, however, if either the development plan has not been approved within six years or production of petroleum from the Greater Sunrise area has not commenced within 10 years of the Treaty entering into force then either party may terminate the CMATS,[254] which in effect would be a termination of the Timor Sea Treaty.[255]

It is also pertinent to note that the CMATS contained extensive “without prejudice” clauses “designed to ensure that the jurisdictional claims of the parties and ultimately the question of maritime boundary delimitation in the Timor Sea remains unaffected by the accord.”[256] Further, both parties have agreed to shelve the Timor Sea dispute and maritime boundary delimitation negotiations for the duration of the CMATS[257] and neither can bring any legal proceedings that would raise directly or indirectly issues relevant to maritime boundaries or delimitation in the Timor Sea[258]

Recently, issues have resurfaced in negotiations between Woodside and the East Timor as the Timorese want a pipeline built from the field to the gas liquefaction plant near Dili, providing jobs and boosting the Timor economy whereas Woodside claims that piping the gas to Timor through a 3 km deep trench in the seabed makes the plan technically challenging and expensive. Timor is presently threatening to terminate the agreement in 2013.[259]

V. LESSONS FOR THE SOUTH CHINA SEA?

The joint development arrangements in Asia described above provide some valuable lessons for joint development in the South China Sea. These lessons will be divided into three categories; first, lessons on the **common factors** which motivated parties to enter into JDAs; second, lessons in **key provisions in JDAs** and their suitability to the joint development in the South China Sea and third, lessons on the **effect of the JDAs.**

Common Factors

1. Political Will of the State Parties

[252] Schofield (2007), *supra* note 222 at 204.
[253] Schofield (2007), *supra* note 222 at 207.
[254] Article 12.
[255] Schofield (2007), *supra* note 222 at 208.
[256] Schofield (2007), *supra* note 222 at 205.
[257] Article 4.
[258] Article 4 (1).
[259] Ian Lewis, “Greater Sunrise under Threat” Petroleum Economist, 21 March 2011

It is clear from the above discussion that the political will of the states parties is critical for both the successful conclusion and continuation of any joint development agreement.[260] Such political will must be sufficient "to withstand domestic upheavals such as change in government or internal strife between both states."[261] The importance of political will can be seen in both the Malaysia-Thailand joint development arrangement and the China-Japan Principled Consensus. The implementation of the 1979 MOU between Malaysia and Thailand was delayed significantly because of the change in governments of both countries and officials, particularly in Thailand whose officials were unwilling to be involved in a scheme which would not be favoured by successive governments.[262] Similarly, the nationalistic agenda of the Koizumi regime also delayed agreement on the 2008 Principled Consensus between Japan and China.

It is not clear whether the Claimants have political will to jointly develop the resources at present. The 2002 ASEAN-China Declaration does not expressly mention joint development as one of the cooperative arrangements parties should take but it would certainly be consistent with the spirit of the Declaration. China's position on joint development is reportedly favourable.[263] In 2005, the national oil companies of China, Vietnam and Philippines signed an unprecedented tripartite agreement on joint seismic activities in the South China Sea.[264] However, due to national opposition in the Philippines, the agreement never was implemented, which is perhaps illustrative of a lack of political will on the part of the Claimants, as the agreement was unable to withstand such domestic politics.

2. Knowledge of presence of hydrocarbon resources

Knowledge of the presence of hydrocarbon resources appears to be a double edged sword. While knowledge arguably causes States to make expansive claims and be reluctant to compromise,[265] it may also highlight the need for joint development as States are aware that they will not be able to unilaterally exploit the resources without consulting the other State. For example, it was Malaysia's discovery of gas reserves in its overlapping area with Vietnam which pushed parties to joint development. Similarly, the known presence of reserves in the Timor Sea also pushed both Australia and Indonesia and Australia and East Timor to jointly develop the resources. As mentioned above, exploration of the Spratly Area has been hindered by the overlapping claims which means there is considerable uncertainty over what the Claimants are fighting for.

3. The need for hydrocarbon resources

In all the joint development arrangements in Asia, it was undoubtedly the need for oil that created greater incentives to come to an agreement on joint development. For example, the oil crisis of 1973 was a strong motivating factor for the Japan-South Korea JDA. Similarly, Thailand was facing declining production in its Erawan fields when it concluded the JDA with Malaysia and Australia was facing a similar situation in Bass Strait.

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[260] Most writers have asserted this, see for example, Townsend-Gault (1999), *supra* note 61; Schofield (2009), *supra* note 73 and Okafor, *supra* note 40.
[261] Okafor, *supra* note 40 at 510.
[262] *Ibid* at 511.
[263] Zou (2006), *supra* note 34 at 102.
[264] *Ibid* at 104.
[265] Okafor, *supra* note 40 at 513.

In the South China Sea, all the Claimants have a pressing need for oil, coupled with rapidly rising oil costs, which has now exceeded US$100. China became a net importer of oil in 1993 and China's oil imports in 2010 will reach 50 % of consumption, rising to 60 % in 2020[266]. China is looking to diversify in order to avoid overdependence on one supplier or oil region such as the volatile Middle East which in 2005, supplied China with 45 % of its oil needs. Similarly, Vietnam is an emerging economy and faces the issue of demand outstripping supply. While Vietnam is 31st in the world in oil production, its output is steadily shrinking and its Bach Ho oil field is expected to close in 2020.[267]

4. Unilateral Activities by States in disputed areas

In most of the joint development agreements, while unilateral exploration or concessions in a disputed area arguably heightened tensions, it also served as an impetus to joint development. In both the Malaysia-Thailand JDA, the Malaysia-Vietnam JDA as well as the Japan-South Korea JDA, the unilateral award of concessions to foreign countries triggered negotiations on joint development.

5. Absence of Islands

Dispute over sovereignty over islands was only an issue in two of the joint development arrangements, namely the 1982 Cambodia-Vietnam Joint Historic Waters Agreement and the 2008 East China Sea Principled Consensus. Notably, both of these are "in principle" agreements to jointly develop.

The 1982 Cambodia-Vietnam Joint Historic Waters Agreement was notable because it resolved the sovereignty dispute over Phu Quoc Island by providing that the disputed "Brevie Line" drawn in 1939 as the dividing line for the islands in the zone, with Cambodia effectively giving up sovereignty over the dispute.[268] In contrast, in the 2008 Principled Consensus, Japan refused to even discuss the joint development of areas around Senkaku.

It is infinitely easier to jointly develop overlapping areas claimed from non-contested territory. The sovereignty disputes over the features in the Spratlys is a serious obstacle to joint development of the surrounding waters and Claimants will only agree to any joint development if their sovereignty claim is preserved.

6. Number of claimants

All of the JDAs have been concluded between two States, although in 1999, Vietnam, Thailand and Malaysia agreed in principle on joint development for a small overlapping area.[269] There are

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[266]Leszek Buszynski, Sazlan Iskandar, "Maritime Claims and Energy Cooperation in the South China Sea" 29 (1) Contemporary South East Asia, 1 April 2007
[267] Vietnam deals with energy crisis risk, Vietnam Business Forum, 5 October 2010http://www.vccinews.com/news_detail.asp?news_id=21742
[268] Schofield (2007), *supra* note 65 at 295.
[269] Nguyen, *supra* note 105 at 79.

5 Claimants to the Spratlys dispute (assuming China and Taiwan have one claim) although not all 5 of them claim the whole area. There will be some areas where there will be 4 Claimants and some areas where there will be 2 Claimants. It is infinitely much harder coming to an agreement when there are more than 2 Claimants and this is a significant obstacle in joint development in the Spratlys.

Suitable Provisions

The next category of lessons learned from state practice in Asia on joint development is to do with the *type* of provisions adopted. This paper does not intend to suggest a model agreement for the Spratlys, but instead, highlights the suitability of some of key provisions of the joint development agreements to the Spratly context.

1. Determining the joint development zone

Most of the JDAs in Asia determine the joint development zone by reference to the overlapping continental shelf claims. At present, this may be difficult in the Spratlys, simply because most of the Claimants[270] have not made clear their EEZ or continental shelf claims, whether they are claiming from the features or their mainland and the method of delimitation used.

An alternative to using overlapping claims as a means of defining the Zone would be to apply the joint development process to a specified field or deposit.[271] However, it has been observed that it is better to have a joint development zone covering the whole of the disputed area rather than a specified field or deposit. Indeed, the 2008 Principled Consensus between China and Japan which provides for continued consultations for joint development in other parts of the East China Sea has caused uncertainty on whether either side needs to consult and notify the other parties if conducting unilateral exploration/exploitation activities in other parts of the East China Sea. It is said that the "case-by case" consensus arrangement proposed under the consensus cannot sustain the easing of tensions.[272]

2. "In Principle Agreement" versus more detailed joint development arrangements

There are at least 3 "in principle" JDAs (Cambodia/Vietnam 1982, Cambodia/Thailand 2001and China/Japan 2008) in Asia, in that the details of the JDA have not been agreed upon yet although there is an agreement to jointly develop resources. Needless to say, it is of course creates more certainty if details of the JDA have been agreed upon and are set out in a written document but the importance of "in-principle" agreement for joint development should not be underestimated. It forms a starting-point for negotiations and has the potential to frame future conduct – parties will find it difficult to backtrack from joint development once they have committed to it in principle.

[270] As said before, Malaysia and Vietnam have made extended continental shelf claims but this does not preclude them from making 200 nm continental shelf claims at a later date.
[271] Fox et al, *supra* note 36 at 315.
[272] Gao, *supra* note 176 at 296.

3. <u>"Without Prejudice" clauses and boundary delimitation</u>

Most of the JDAs in Asia are entered into "without prejudice" to the claims and any maritime delimitation in the future. Some of them also state the parties will continue to negotiate boundaries and if final boundaries are negotiated, then the JDA will come to an end. This reflects the "interim nature" of the JDAs and may go some way to alleviate the concerns of Claimants in the Spratlys dispute that they are compromising their position in entering into JDAs.

4. <u>Management of Resources</u>

JDAs, which established complex institutional frameworks, take a long time to negotiate and implement, especially when both States had different petroleum laws and/or policies. For example, the MTJA set up by the Malaysia/Thailand JDA 1979/1990 took 11 years to establish largely due to the degree of harmonization required in several key areas because of the diversity in petroleum regulation between Malaysia and Thailand.[273] It may also be difficult for one State to accept the petroleum development system of another as Thailand did here.[274]

Another criticism of complex institutional frameworks managing joint development is the fact that they may lack flexibility and run the risk of unduly interfering with business operations. Joint development under the MTJA is still subject to the joint approval of both governments and may unduly hinder the smooth running of exploration and exploitation activities.[275]

This is in contrast to the Japan-South Korea JDA 1974 and the Malaysia-Vietnam JDA 1992, which took 4 and 2 years to negotiate respectively. In the former, concessionaires selected by each country undertake exploration/exploitation activities and the Joint Commission set up is only for consultation and technical inquiry. Similarly, for the Malaysia-Vietnam JDA 1992, the national oil companies undertake joint development activities and formed a Coordination Committee consisting of representatives from both companies to oversee development.

The advantages of such a system is that it avoids "grandiose structures" [276] and "appears to remove the necessity to harmonize the laws of two States with differing cultures and systems of thought."[277] It also preserves the authority of State licensing systems and does not necessitate great changes in domestic laws.

Claimants to the Spratlys dispute may find it more advantageous to allow their national oil companies to oversee the exploration/exploitation activities in any JDA concluded between them, given the potential number of claimants in an overlapping area, the diverse petroleum regulations in each of the Claimants and the difficulties in coming to an agreement on a supra-national authority to oversee such activities.

5. <u>Equal Sharing of Revenue</u>

[273] Fox et al, *supra* note 36 at 148.
[274] *Ibid.*
[275] Nguyen, *supra* note 105 at 83.
[276] Fox et al, *supra* note 36 at 132.
[277] Fox et al, *supra* note 36 at 128.

The majority of the JDAs provided for equal sharing of revenue between the parties with the exception of Australia-East Timor 2002 which provided for a 90:10 split in favour of East Timor. This could be because Australia perceived it had a worse claim than East Timor and wanted to give it every incentive to agree on joint development (it was of course also the belief that they would benefit from revenue from downstream activities). Similarly, share of revenue is also an issue in the potential joint development between Malaysia, Thailand and Vietnam with Malaysia arguing that as Vietnam's overlapping claim area is very small, they should not get equal revenue.

For Claimants which have considerably weaker claims to areas surrounding the Spratlys, or a smaller area of an overlapping claim, agreeing to reduce their share of revenue will ensure that they are still deriving some benefit from the joint development while giving other Claimants an incentive to allow them to participate.

6. Downstream activities

While none of the JDAs made provision for downstream activities, they proved to be issues after the JDA was adopted. For the Malaysia-Thailand JDA 1979/1990, the location of a gas plant and offshore pipelines caused difficulties due to its perceived effect on coastal communities. With the Australia-East Timor JDA 2002, the location of a pipeline and its potential to increase revenue for East Timor threatens to derail the agreement. In light of this, Claimants to the Spratlys dispute should have as much agreement as possible on downstream activities before entering into any JDA.

Effect of the JDAs

1. Economic Effect

It is clear that joint development makes it possible for developing States who lack capacity and expertise to obtain technical and other assistance for the efficient exploitation and management of resources.[278] For example, in the 1992 Malaysian-Vietnam JDA, Malaysia's national oil company PETRONAS carries out exploration and exploitation on behalf of PETROVIETNAM, Vietnam's national oil company as the latter lacks the necessary expertise. While most of the Spratlys is relatively shallow, there are areas in which deep sea drilling would be required[279]. Claimants who lack this expertise[280] would benefit from joint development with other Claimants who have the technical expertise.

Second, exploration and exploitation of hydrocarbon resources in offshore areas is a capital intensive venture which will most likely need the funds and expertise of private oil companies. Many oil companies may be reluctant to invest in a disputed area where political and/or military intervention is likely.[281] Joint development arrangements provide a secure

[278] Mensah, *supra* note 37 at 149.
[279] Leszek Buszynski, Sazlan Iskandar, *supra* note 266.
[280] *Ibid.*
[281] Fox et al, *supra* note 36 at 39

investment framework for these companies. In the South China Sea, when oil companies do take on exploration in contested areas (which are also far from clear), activity has either been stopped by naval intervention or has considerably exacerbated tensions in the region. The "key disincentive for the oil companies remains the political uncertainty over to whom the Spratlys and their associated waters belong."[282] Accordingly, a joint development arrangement where parties rights and obligations are clearly set out would be a considerable incentive for oil companies to invest in oil exploration and exploitation in disputed areas.

2. Effect on sustainable peace in the region

Perhaps the most important but under-discussed lesson learned from the JDAs is the effect on the relationship of the parties to the JDA.

Before the JDAs were adopted, the parties faced considerable tension in their relationships which spilled into other aspects of bilateral ties. For example, nationalistic rhetoric, increasing tension and military and/or naval clashes in the disputed area preceded the adoption of the Japan-South Korea JDA 1974 and the China-Japan Principled Consensus 2008. After the JDAs were adopted, tensions were significantly eased. It is said of that "despite the absence of commercial discoveries, the [Japan-South Korea JDA] performs a useful independent function in the removal of tension between the two States."[283] Similarly, the Principled Consensus has been described as highly significant because it had eased the tensions and contributed to peace and stability in the East China Sea which had been increasingly strained.[284] Further, JDAs make it easier for States to adopt other co-operative measures and generally improve relations.

VI. CONCLUSION

It is clear from the above discussion that the dispute between the Claimants, which potentially includes a dispute over maritime delimitation, is unlikely to be settled in a final and decisive manner in the near or long-term future. The Claimants, pending maritime delimitation, have an obligation to enter into negotiations in good faith to come to an agreement on provisional arrangements of a practical nature, which includes joint development arrangements. The Claimants are also obliged to exercise mutual restraint and not to take any action which could prejudice final delimitation, and this includes unilateral exploration activities such as exploratory drilling or exploitation activities. The Claimants are parties to at least one JDA in Asia, overcoming political and practical obstacles which demonstrates that it is possible where there is political will to do so. Moreover, state practice in Asia on JDAs shows that the Claimants have every incentive to enter into such arrangements, the most compelling of which is the effect on sustainable peace in the region.

[282] Schofield, *supra* note 73 at 17.
[283] Fox et al, *supra* note 36 at 117.
[284] Gao, *supra* note 176 at 296.