Sharing Maritime Space:
Options for Cooperative Management in Areas of Overlapping Maritime Claims

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1. Introduction

Recent decades have seen coastal States advance broad claims to maritime jurisdiction offshore, notably through assertions of rights over the continental shelf as well as through the general acceptance by the international community of the concept of the exclusive economic zone (EEZ) out to a limit of 200 nautical miles. This substantial extension of maritime claims, coupled with the proximity of coastal States to one another, has resulted in a proliferation of overlapping claims areas. Additionally, where sovereignty over land territory with a coastal front is at issue the maritime spaces offshore this territory will also be subject to dispute.

In the absence of the delimitation of a maritime boundary between the States concerned, overlapping claims will persist. This is problematic in a number of ways. In particular, a lack of maritime jurisdictional clarity is anathema to proper oceans governance including the development and management of marine resources. With regard to seabed energy resources for instance, which could prove crucial to the well-being and political stability of the coastal States concerned, extensive areas of disputed waters forestall the development of these valuable resources. This is primarily because the international oil and gas industry require fiscal and legal certainty in order to commit the substantial investment necessary to undertake offshore exploration and development projects.

Analogously, with respect to marine living resources, the rational exploitation and preservation of important living resources, is undermined by jurisdictional uncertainty. Overlapping claims are, moreover, likely to lead to uncoordinated policies. This situation can result in destructive competition for, for instance, fisheries resources, leading to serious degradation of the marine environment, attendant threats to marine biodiversity and a point of friction in bilateral relations. With world fish stocks facing increasing pressure, and greater numbers of stocks being overfished or under stress, addressing unmanaged areas subject to competing maritime claims is of increasingly critical importance.

The existence of overlapping maritime claims and the disputes often associated with them therefore serve to undermine good oceans governance as well as friendly relations between neighbouring States and consequently also compromise maritime security. Disputed waters can lead to effectively unpolicied zones of overlapping claims allowing illegal activities at sea to flourish. More alarmingly, disputes over competing maritime claims can serve as a point of friction and tension between States with the potential for incidents and confrontation on the water to turn into outright conflict.

Where overlapping claims exist and the delimitation of a maritime boundary has proved impossible, certain States have opted to negotiate cooperative management mechanisms for the management of marine activities and exploitation of resources in offshore spaces on an interim basis until maritime boundary delimitation can be achieved. Such “provisional
arrangements of a practical nature” are often termed maritime joint development arrangements.

The objective of this report is to outline the key components of joint maritime zones and to highlight both the main advantages and some of the challenges associated with them. A brief survey of State practice with respect to maritime joint development zones is included as an Annex.

2. Key Aspects and Advantages of Joint Maritime Zone Arrangements

Legal basis

Against the backdrop of numerous and broad areas of overlapping maritime claims, alternatives to the delimitation of international boundaries in the shape of the adoption of cooperative mechanisms providing for shared rather than unilateral management of maritime space have proved to be increasingly attractive. The principle form of cooperative mechanism to emerge in the maritime context in recent years is maritime joint development zones.

Such joint maritime arrangements are consistent with the international law of the sea. Indeed, they are anticipated and encouraged under the United Nations Convention on the Law of the Sea (LOSC). Both Articles 74(3) and 83(3), dealing with the delimitation of the exclusive economic zone and continental shelf respectively, state that:

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

Arguably the delimitation provisions of the LOSC, including Articles 74(3) and 83(3), are reflective of customary international law. Entering into a joint development arrangement can also be considered to be a cooperative approach. This is in distinction to the potentially confrontational quest for a geographically precise and legally final and binding traditional boundary line – a process that often tends to be perceived as yielding a “winner” and “loser”, in contrast to the potential for a ‘win-win’ solution offered through maritime joint development. As a result cooperative mechanisms can work as a means of conflict prevention and, ideally, as a form of confidence building mechanism between States.

A means of overcoming deadlock

Fundamentally, when faced with a deadlock in, for example, maritime boundary negotiations, States have seen the merit in cooperative arrangements as an alternative. Maritime joint development thus allows intractable and contentious disputes to be circumvented in such a way that the pragmatic development or management of the resources, activities or environment in the area of overlapping claims can proceed without delay. This represents an option likely to be highly beneficial to all concerned and is one that is strongly practical in character.

Sovereign neutrality

A particularly attractive component of maritime joint development agreements in this context is that they commonly include robust ‘without prejudice’ clauses designed to safeguard existing claims. Such a ‘sovereignty neutral’ approach allows joint activities to proceed
without compromising existing jurisdictional claims. For example, Article 28 of the Japan-Korea treaty which creates a broad joint development zone signed in 1974 (in force 1978) states that:

Nothing in the 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.¹

Similarly, Article 4 dealing with the non-renunciation of claims in the Nigeria and Sao Tomé and Príncipe treaty establishing a joint zone between them of 2001:

4.1 Nothing contained in this Treaty shall be interpreted as a renunciation of any right or claim relating to the whole or any part of the Zone by either State Party or as recognition of the other State Party’s position with regard to any right or claim to the Zone or any part thereof.

4.2 No act or activities taking place as a consequence of this Treaty or its operation, and no law operating in the zone by virtue of this Treaty, may be relied on as a basis for asserting, supporting or denying the position of either State Party with regard to rights or claims over the Zone or any part thereof.²

A further example is provided by, Article 2 of the Treaty on Certain Maritime Arrangements in the Timor Sea (CMATS) signed in 2006 between Australia and Timor-Leste provides that:

1. Nothing contained in this Treaty shall be interpreted as:

   (a) prejudicing or affecting Timor-Leste’s or Australia’s legal position on, or legal rights relating to, the delimitation of their respective maritime boundaries;

   (b) a renunciation of any right or claim relating to the whole or any part of the Timor Sea; or

   (c) recognition or affirmation of any right or claim of the other Party to the whole or any part of the Timor Sea.

2. No act or activities taking place as a result of, and no law entering into force by virtue of, this Treaty or the operation thereof, may be relied upon as a basis for asserting, supporting, denying or furthering the legal position of either Party with respect to maritime boundary claims, jurisdiction or rights concerning the whole or any part of the Timor Sea.

Flexibility

A significant attraction of the joint development zone mechanisms is that they can be flexibly applied, in terms of area of application, administrative arrangements, scope of

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functions and duration. This is underscored by the diversity of State practice in the implementation of maritime joint development zones. Existing State practice can be regarded as diverse and this underscores flexibility of the joint development option. Joint development has been applied to a variety of jurisdictional zones, to both living and non-living resources, or, indeed non-resource-related activities and can also include reference to security issues. The parties to a joint development mechanism may also specify the duration of the arrangement and retain considerable flexibility both with respect to the regime that will govern activities within the specified joint zone as well as with regard to the precise geographic area that the joint regime will apply to.

Joint zones can be flexible spatially. That is, they can be defined both with and in lieu of the delimitation of maritime boundaries (see Annex below). If defined in conjunction with a maritime boundary they can straddle the boundary line evenly or unequally (e.g. Iceland-Norway and Denmark-UK joint zones, see Annex below). Alternatively, if defined without the delimitation of a maritime boundary, a joint zone can cover the entirety of the OCA or, alternatively be tailored to encompass a smaller area mutually agreed on by the parties. Additionally, joint zones may be spatially complex vertically, that is, they may be zone-specific and relate only to seabed (continental shelf) or water column rights or to both (i.e. EEZ rights) (e.g. Australia-Papua New Guinea joint zone, see Annex below).

State practice on maritime cooperative mechanisms is similarly diverse in terms of their powers, functions and administrative arrangements. Functionally, joint maritime zones can be resource specific such as those that are oriented towards the exploitation of seabed hydrocarbons or fisheries. Alternatively, joint activities of mutual interest such as marine scientific research may be undertaken. Joint zones can be similarly diverse administratively in that they can range from relatively complex institution-building endeavours to simpler arrangements where, for instance, the oil and gas industry operators are tasked with managing joint operations. Joint zones can be similarly flexible temporally. While such arrangements are interim in character, if dealing with seabed hydrocarbon resources, as the majority of them are, they tend to have a specified life-time measured in decades, potentially renewable, in order to provide stability and certainty to the oil and gas industry.

An allied consideration is that joint arrangements offer opportunities for cooperation in relation to managing the resources of the joint zone. As well as pooling their sovereignty regarding the area concerned, the parties will be in a position to cooperatively pool their management capabilities. This may be a particular advantage where such human and technical resources are scare in both States. Alternatively, where asymmetries in management capacity exist, shared, if uneven, management may be an option to the parties’ mutual benefit.

It can be observed that while the possible presence of valuable resources in the area to be delimited may act as an incentive for the parties to claim a particular offshore area, but this factor can also serve to make them cautious about dividing the area of overlapping claims for fear that the resources in question may eventually be discovered on the ‘wrong’ side of the line. This scenario may be especially the case for potential seabed hydrocarbon resources where uncertainty over the precise location of reserves can serve as a major deterrent to the delimitation of a boundary line. Entering into a joint development arrangement helps to defuse this concern as both parties are guaranteed at least a share of any resources found.
3. Potential Drawbacks

The counterpoint to the notable potential advantages of maritime joint development outlined above is the view that joint development should not be rushed into simply because the parties to a dispute over overlapping maritime claims have proved unable to resolve their differences. In particular, it can be observed that entering into a joint zone arrangement necessarily means that often strongly-held national jurisdictional claims are at least temporarily set aside. Despite the inclusion of without prejudice clauses which serve to protect the parties’ legal positions, entering into a joint arrangement is therefore inevitably a highly sensitive and potentially politically fraught step. Indeed, joint zones can be perceived as representing a direct challenge to a State’s claimed sovereignty and sovereign rights. Consequently such arrangements carry with them political risk as the governments that enter into them may be attacked by domestic opponents for, allegedly, compromising on national sovereignty claims. This is all the more so where valuable marine resources are at stake as access to these touches on States’ vital national interests and resource access or sharing is therefore often a particularly difficult issue to compromise on.

Political will is the crucial component in realising and, critically, sustaining maritime joint development. Indeed, this factor has been described as “the single most important ingredient” in this context although this also applies to achieving success in any negotiation or agreement.\(^3\) It should be recalled that the majority of maritime joint development agreements concluded to date relate to the exploration for and development of seabed hydrocarbon resources. As development of oil and gas resources commonly has a timetable measured in decades, it is clear that in order to be successful the joint development arrangement must be able to endure even where one or both of the governments that signed the agreement should change. The bilateral (or, indeed, multilateral) relationship must therefore be robust enough to allow for any joint management regime to flourish in the long-term.

It can also be argued that if joint zones are based on the limits of such overlapping claims areas, as tends to be the case, then this serves to encourage and reward extreme unilateral maritime claims and this can be regarded as problematic. For example, the scope of the joint development area (JDA) established by Malaysia and Thailand is at least partially based on questionable maritime claims. In the course of negotiations that eventually led to the Thai-Malaysia JDA Thailand insisted that the small islet of Ko Losin be accorded full weight whilst Malaysia insisted that it was a mere “rock” in keeping with LOSC, Article 121(3) and was therefore only entitled to a 12 nautical mile territorial sea. Given that Ko Losin is described in the British Admiralty’s Pilot for the area as being “1½ m (5 ft) high and steep-to all round” with a light-beacon sited on it,\(^4\) Thailand’s claims appear to be unreasonable. This is underscored by the fact that Thailand’s own unilateral 1973 continental shelf claim does not give K Losin full weighting and therefore cuts through the area that eventually became the joint zone rather than forming its eastern limit. Ultimately Malaysia opted to accept the apparently expanded extent of the overlapping claims area as the basis for the JDA, arguably

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rewarding Thailand for what it is hard to argue is anything other than an excessive maritime claim (see Figure 1).

![Figure 1: The Thai-Malaysian Joint Development Area](image)


Furthermore, the practical task of establishing and maintaining such potentially dauntingly complex arrangements that may be required in the administration of a particular joint zone arrangement should not be underestimated as this requires considerable political commitment from all parties and requires them to build an ongoing and increasingly close, cooperative bilateral relationship. The conclusion of joint development arrangements is therefore a highly political act and cannot be divorced from the overall political context between the States involved. As Stormont and Townsend-Gault have suggested, joint development should not be suggested lightly as:

> The conclusion of any joint development arrangement, in the absence of the appropriate level of consent between the parties, is merely redrafting the problem and possibly complicating it further.⁵

Joint development should therefore probably not be presented as a ‘last gasp’ solution as this may ultimately aggravate tensions between the parties rather than ameliorate them.

⁵ Stormont and Townsend-Gault, 1995, at p. 52.
4. Conclusions

Maritime joint development zones have significant potential to assist in the resolution, or at least management, of overlapping claims to maritime space. Such provisional arrangements of a practical nature are encouraged and are consistent with the international law of the sea. Critically, they offer a practical means to overcome intractable maritime disputes and facilitate the cooperative development and management of the ocean environment and its resources. Further, it can be suggested that cooperative mechanisms such as joint development zones are an increasingly popular way of addressing the negative consequences associated with undelimited areas of overlapping maritime claims. The Annex included in this report provides a brief overview of the primary features of 22 maritime joint development zones. Common elements to these joint arrangements are a formal legal agreement or treaty that serves to define a zone, the inclusion of robust without prejudice clauses designed to protect pre-existing national maritime claims and legal positions, specification of what resource or activity is subject to cooperation and/or sharing and definition of what legal and administrative or governance arrangements will apply within the joint zone.

The review of State practice included in the Annex below demonstrates the flexibility of the joint zones approach. Such zones can be broadly split between those defined in conjunction, and often as a catalyst for, the delimitation of a maritime boundary and those agreed in lieu of the delimitation of a maritime boundary. Maritime joint development zones have been defined in numerous different ways spatially. For example multiple sub-zones have been defined where one party takes the lead in some zones and the other party in the remainder (e.g. Japan and Korea) or with flanking zones where one party or the other is dominant but with a central zone where sharing is on an equal basis (e.g. Australia and Indonesia) or where the sharing is uneven either across the line (e.g. Iceland-Norway) or in percentage terms (e.g. Nigeria and Sao Tomé and Príncipe and Australia-Timor-Leste).

Functionally, such cooperative mechanisms have been predominantly resource-oriented with the majority of joint development zones have been focussed on continental shelf resources, that is, oil and gas. Other zones have related to fisheries (e.g. Norway and the UK) or have included a prohibition on oil and gas exploration and exploitation within the defined zone in order to safeguard traditional fishing activities and the marine environment (e.g. Australia and Papua New Guinea). Administratively, some joint zones agreements have led to reasonably elaborate administrative arrangements and institution building efforts (e.g. the creation of a Joint Authority as between Malaysia and Thailand). Other joint arrangements have been noticeable more streamlined, dispensing with potentially complex and costly management arrangements (e.g. Malaysia and Vietnam). Further, whilst universally temporary in character, the duration of joint development zones is also up to the parties though, given that the majority of these cooperative mechanisms concern oil and gas, they are typically designed to last decades.

Finally, it is abundantly apparent that joint developments represent a creative and attractive way to deal with the management of an area of overlapping maritime claims where maritime delimitation has not been achievable. That said, it is also clear that joint zones have attendant challenges, especially in relation to maintaining a cooperative relationship in the long term, and should not be entered into lightly.
Annex: Existing State Practice in Provisional Arrangements of a Practical Nature

Joint Development Agreements in Addition to a Boundary Line

A number of joint zones have been defined in conjunction with the delimitation of a maritime boundary between the parties concerned. In these circumstances, the joint zone may act as a catalyst for reaching agreement on the delimitation line, for example providing both parties with some rights in the maritime area of interest and therefore countering the potential drawback of defining a boundary line and subsequently discovering that the bulk, or all, of the resources in the area subject to overlapping maritime claims falls on the ‘other’ side of the line.

Bahrain–Saudi Arabia

Signed in January 1958, this agreement represents the first maritime joint development agreement worldwide. It stands apart from subsequent practice because the entirety of the ‘joint’ zone designated under the agreement lies on one side, in this case the Saudi Arabian side, of the 98.5 nautical mile boundary line also defined by the treaty (see Figure 2). The hexagonal zone designated under the agreement essentially encompasses the Fasht Abu-Sa‘fah oilfield which had previously been contested between the parties. The agreement provides that the exploitation of the oil resources in this area will be carried out in the way chosen by the King of Saudi Arabia “on the condition that he grants to the Kingdom of Bahrain one half of the net revenue accruing to the Government of Saudi Arabia and arising from this exploitation." It can be argued that the definition of the zone from which both parties gained equal access to the proceeds from seabed resource exploitation was crucial to their successfully reaching agreement on the course of the maritime boundary.

8 Ibid., Second Clause.
Argentina–Uruguay

The Rio de la Plata Treaty concluded between Argentina and Uruguay in 1973 provides not only for the delimitation of the parties’ boundary within the river and its estuary and their maritime boundary extending into the South Atlantic, but for the establishment of a “common fishing zone” and a joint Administrative Commission. The common fishing zone encompasses the area seaward of the parties’ 12 nautical miles territorial sea limits defined

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“by two arcs of circles with radii of 200 nautical miles whose centre points are, respectively, Punta del Este (Uruguay) and Punta del Cabo San Antonio (Argentina)” (see Figure 3).11

Figure 3: Baselines and Maritime Delimitation between Argentina and Uruguay
Source: Lines in the Sea12

The joint Administrative Commission is tasked with promoting joint scientific research relating to, particularly, “the evaluation, conservation, preservation and rational use of living resources and the prevention and elimination of pollution”, prescribing fishery standards and aiding navigation, for example through coordinating pilotage regulations, search and rescue plans and aids to navigation.13 Within the river, as defined by the headlands mentioned above, the treaty prohibits the dumping of hydrocarbons resulting from the washing of tanks and the pumping of bilge and ballast.14 Seabed resource development falls outside the purview of the joint Commission but there it is understood that each party has the right to exploit any resources discovered up to the established boundary line15 and that where deposits extend across the boundary line they “shall be exploited in such a way that the distribution of the amounts of the resource extracted from them is proportional to the amounts of that resource lying on each side of the line.”16

11 Ibid., Article 73.
13 Agreement between Argentina and Uruguay, Article 66.
14 Ibid., Article 78.
15 Ibid., Article 42.
16 Ibid., Article 43.
Australia–Papua New Guinea

Australia and Papua New Guinea (PNG) concluded a treaty dealing with sovereignty and maritime boundaries in the maritime areas between them, notably the Torres Strait, in 1978. The agreement is a complex one that took six years to negotiate and a further six years to ratify as a result of the novel implementing legislation required. The area to be delimited, and the Torres Strait in particular, is geographically complex and host to a profusion of islands. The agreement provided for recognition of each side’s sovereignty over particular islands and confirmed that most of the islands in the Torres Strait are under Australian sovereignty. Key elements in the agreement, which facilitated the comprehensive resolution of outstanding issues between the parties, included the establishment of a protected zone encompassing the Torres Strait, the enclaving of certain Australian islands, and the separation of the seabed and water column boundaries within that zone (see Figure 4).

Figure 4: Maritime Delimitation and Joint Arrangements in the Torres Strait
Source: Australian Government

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18 Charney and Alexander, 1993: 929.
19 Treaty between Australia and Papua New Guinea, Article 2. Australia did, however, recognise Papua New Guinea’s sovereignty over three uninhabited islands (Kawa, Mata Kawa and Kussa Islands) that it had previously regarded as Australian (Article 2(3)).
20 The agreement provides that the territorial seas of specific, listed, islands “shall not extend beyond three miles” from the relevant baselines and that, furthermore, the territorial seas in question “shall not be enlarged or reduced, even if there were to be any change in the configuration of the coastline or a different result from any further survey.” This had the consequence of creating 3nm breadth territorial sea enclaves around several Australian islands located in the northern part of the Torres Strait (Treaty between Australia and Papua New Guinea, Article 3).

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The objective of the protected zone was to safeguard traditional fishing activities and the free movement of traditional inhabitants, to regulate commercial fisheries and to protect the marine environment. The agreement included a moratorium on oil and gas exploration within the protected zone. A particularly innovative aspect of the agreement was the delimitation of separate continental shelf and fisheries boundaries within the joint zone. It was agreed to separate jurisdiction for the seabed and water column in order to take into consideration the existence of numerous Australian islands in the northern parts of the Torres Strait extremely near to the Papua New Guinean coast (the closest being only approximately 500m offshore).

Had a delimitation line been defined on the basis of equidistance the presence of these islands would have resulted in the vast majority of the Torres Strait being located on the Australian side of the line. Such an outcome was viewed as an inequitable one and instead a continental shelf boundary was defined centrally in the Strait, midway between the mainland coasts of both States, while a fisheries boundary, passing close to the PNG coast, was defined around the Australian islands in the northern part of the Torres Strait. Thus, in this area PNG seabed underlies Australian water column. The Torres Strait Treaty provided for the establishment of a joint advisory council was set up to promote cooperation, and also provides a for detailed regulatory regime which is designed to protect traditional rights while promoting cooperative development of commercial fisheries.

**Iceland–Norway (Jan Mayen Island)**

In 1980 Iceland and Norway reached agreement on a maritime boundary relating to the EEZ, to be based on 200 nautical mile arcs measured from basepoints on Iceland. The agreement referred the question of continental shelf delimitation to a Conciliation Commission. This body subsequently made recommendations that whilst the continental shelf boundary should coincide with the EEZ boundary, a joint zone should also be established and a further treaty between the parties was concluded in 1981 which gives effect to the recommendations of the Conciliation Commission.

The 45,470km² joint zone established under the 1981 agreement unevenly straddles the maritime boundary line with 61 per cent on the Norwegian side and 39 per cent on the Icelandic side. Each state is entitled to 25 per cent of revenues deriving from the exploitation of oil and gas on the other side of boundary (see Figure 5). Moreover, hydrocarbon fields straddling the joint zone and Icelandic waters are considered wholly Icelandic. The delimitation of the maritime boundary along 200 nautical mile arcs drawn from Iceland was designed to recognise Iceland’s “strong economic dependence on fisheries” as well as its greater size and population relative to Jan Mayen. The confirmation of the continental shelf

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22 Article 23 of the treaty, revenues are split 75:25 according to whose jurisdictional sector of the zone the fish are caught in.


25 See also, Charney and Alexander, 1993: 1755-1765.

boundary being coincident with the water column boundary and uneven distribution of the joint zone across the delimitation line, which also favoured Iceland, also took the disparity between Iceland and Jan Mayen into account. Additionally, Iceland’s lack of mineral resources was a factor in the recommendations of the Conciliation Commission.\footnote{Charney and Alexander, 1993: 1757.}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{continental_shelf_boundary_and_joint_zone.png}
\caption{Continental Shelf Boundary and Joint Zone between Iceland and Norway (Jan Mayen Island)}
\end{figure}

\textbf{Source: International Maritime Boundaries}\footnote{Ibid.: 1761.}

\textit{Denmark–United Kingdom}

In May 1999 Denmark and the United Kingdom concluded a maritime boundary agreement for the area between the Faroe Islands and Scotland.\footnote{Agreement between the Government of the Kingdom of Denmark together with the Home Government of the Faroe Islands on the one hand and the Government of the United Kingdom of Great Britain and Northern Ireland on the other hand relating to the Maritime Delimitation in the area between the Faroe Islands and the United Kingdom, 18 May 1999 (entered into force 21 July 1999) Treaty text available at \(<www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/DNK-GBR1999MD.PDF>\). See also Charney and Smith, \textit{International Maritime Boundaries}, (Dordrecht: Martinus Nijhoff, 2002): 2955-2977.} A maritime boundary extending for approximately 500nm was delimited.\footnote{Charney and Smith, 2002: 2956.} Although the continental shelf and fisheries zone boundaries are coincident for much of the agreed line, in the central part of the boundary, a continental shelf boundary was defined together with a “Special Area” was of joint fisheries jurisdiction was established. The Special Area covers an area of 2,337 square nautical miles or approximately 8,000 km² (Figure 6).\footnote{Ibid.} The Special Zone straddles the continental shelf boundary but does so in unequal manner, the majority of it being located on the UK side of
the seabed boundary line. This reflected the overwhelming dependence of the Faroe Islands economy on fisheries. Within the Special Zone each party has the right to continue to conduct fishery operations, including the issuing of licences and agreement was reached to “refrain from inspection and control of fishing vessels” operating in the joint zone under a licence issued by the other party and to refrain from any action that would “disregard or infringe” the fisheries jurisdiction of the other party or conduct of fisheries under licence by the other party. Both the Denmark and UK also undertook to take “all possible steps to prevent and eliminate pollution” resulting from their offshore activities and committed to a series of measures to ensure that fishing activities can continue unhindered by, for example, exploration activities related to seabed hydrocarbon resources. The two States also agreed to cooperate on measures to protect the marine environment.

Figure 6: Continental Shelf Boundary Delimitation between Denmark (Faroe Islands) and the United Kingdom
Source: International Maritime Boundaries

China–Vietnam
China and Vietnam concluded a maritime boundary agreement in the Gulf of Tonkin (Beibu Gulf to China and Bac Bo Gulf to Vietnam) in December 2000. Allied to the boundary

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32 Ibid.: 2959-2960.
33 Denmark-UK Agreement, Article 5.
34 Ibid., Article 6.
37 Agreement between the People’s Republic of China and the Socialist Republic of Viet Nam on the Delimitation of the Territorial Sea, the Exclusive Economic Zone and Continental Shelf in Beibu Bay/Gulf of Tonkin (25 December 2000) and Agreement between the People’s Republic of China and the Socialist Republic of Viet Nam on Fisheries Cooperation for the Gulf of Tonkin. For treaty text, see
treaty was an *Agreement on Fishery Cooperation in the Gulf of Tonkin* was concluded. As fisheries are a particularly important, and in the past contentious, issue in the Gulf of Tonkin, the joint fisheries agreement and joint arrangements to manage fisheries activities can be considered to be vital to reaching agreement on the delimitation of the maritime boundary line, a contention supported by the fact that the fisheries agreement was both signed and ratified on the same dates as the maritime boundary treaty.\(^{38}\) Through the fisheries cooperation agreement a joint Common Fishery Zone was defined which straddles the maritime delimitation line, 30.5 nautical miles on either side of the boundary, from the 20ºN parallel of latitude to the closing line of the Gulf (Figure 7).\(^{39}\)

The Common Fishery Zone therefore encompasses approximately 30,000km² (around 8,747 square nautical miles).\(^{40}\) In institutional terms, the agreement also provided for a powerful Joint Fisheries Committee with a view to determining critical issues such as fishing quotas and the number of vessels from each side to be licensed to fish in the joint zone as well as to promote long-term cooperation and management. Importantly, enforcement within this joint zone is conducted on the basis of coastal State authority, that is on the basis of which side of the defined boundary line the activity takes place, rather than on the basis of flag state control. Additionally, a transitional arrangement zone north of 20ºN was established where the parties aim to gradually reduce the number of fishing vessels operating. A buffer zone either side of the parties’ territorial sea boundary in the immediate vicinity of the terminus of the land boundary on the coast in the north of the Gulf was defined in order to minimise disputes involving for small fishing vessels that may have trespassed across the boundary line.\(^{41}\)

\(^{38}\) Colson and Smith, 2005: 3748

Figure 7: Maritime Boundary and Joint Zones between China and Vietnam

Source: *International Maritime Boundaries*[^42]

Joint Development Agreements in Lieu of a Boundary Agreement

Cambodia-Vietnam

Cambodia and Vietnam reached agreement in 1982 on the establishment of a joint area of “historic waters” in the Gulf of Thailand. The oblong-shaped joint zone extends seawards from the mainland coastlines of the two countries out to the vicinity of the Poulo Wei group of islands, which were specified as Cambodian, and the Tho Chu (Poulo Panjang) islands which according to the agreement were determined to be Vietnamese, as was the large island of Phu Quoc (see Figure 8).

Figure 8: Maritime Boundaries and Joint Zones in the Gulf of Thailand
Source: I.M.A. Arsana and C.H. Schofield

No maritime boundary was defined through the joint area, though it was stated that
negotiations on this issue would take place “at a suitable time.” The primary purpose of the
agreement appears to have been the resolution of the parties’ dispute over these islands,
sovereignty over which had previously been contested, as well as the integration of their
straight baseline systems which meet at “Point O”, whose precise location is unspecified, on
the south-western limit of the historic waters area. The agreement does, however, include
some maritime joint development provisions. Cambodia and Vietnam undertook to undertake
the exploitation of natural resources within the joint historic waters area on the basis of
“common agreement”, to allow fishermen to continue their activities in the joint zone
“according to the habits that have existed so far”, and to carry out joint surveillance and
patrols in the joint area.

Cambodia and Vietnam’s claim to the establishment of such a unique joint historic waters
area, and to joining their respective straight baseline systems at an apparently ‘floating’ point
out to sea, drew international protests, notably from Thailand and the United States.

**Japan–Korea**

Although Japan and the Republic of Korea were able to delimit a maritime boundary between
their respective territories in the southern part of the Sea of Japan (termed the East Sea to
Korea) and through the Korea Strait, their contending positions on the applicable principles
and methods of delimitation in respect of the southern part of their potential continental shelf
boundary extending into the East China Sea were significantly different and proved to be
irreconcilable. In particular, whilst Japan based its position on the equidistance or median line
approaches, Korea asserted that, on the basis of natural prolongation arguments, its continental
shelf extended beyond the median line (see Figure 9).

The Japan-Korea agreement of 1974 dealt with the broad area of overlapping claims to maritime
jurisdiction by establishing a maritime joint development zone designed to facilitate the
exploration for and exploitation of seabed oil and gas resources and covering an area of 29,092
square nautical miles. While the issue of boundary delimitation within the joint zone was
shelved, the agreement on joint development was achieved in conjunction with the partial
boundary agreement directly to the north mentioned above, which stretches for 263 nautical

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44 Agreement on Historic Waters of Vietnam and Kampuchea, Article 2.
46 Ibid.
49 Agreement between Japan and the Republic of Korea Concerning the Establishment of Boundary in the
Northern Part of the Continental Shelf Adjacent to the Two Countries, 30 January 1974 (entered into force 22
50 The parties dispute over sovereignty concerning the islands of Dok-do (to Korea) or Takeshima (to Japan)
also frustrated progress towards the delimitation of a maritime boundary further north.
51 Agreement between Japan and the Republic of Korea Concerning Joint Development of the Southern Part of
the Continental Shelf Adjacent to the Two Countries, 30 January 1974 (entered into force 22 June 1978). Treaty
text available at <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/ja-
kor1974south.tif>.
miles. The agreement, which entered into force in 1978 and was set to last for 50 years, originally called for the definition of nine sub-zones within the overall joint zone, although the number of sub-zones was reduced to six following surveys indicating that the likelihood of seabed hydrocarbons being present was limited. Within each sub-zone, concessionaires, authorised by the each of the parties, have an undivided interest and one operator is chosen from among the two concessionaires to conduct activities in a particular sub-zone. This ‘operator formula’ approach also has implications for the application of the parties respective laws and regulations in within the joint zone with Japanese law applying to a Japanese operator within a particular sub-zone and Korean law applying to a Korean operator a sub-zone that may be adjacent.

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The costs incurred by the parties in the exploration and exploitation phases are to be shared equally between the concessionaires of the two countries, as are the proceeds from the natural resources extracted in a sub-zone. The agreement establishing the joint development zone also includes an undertaking that the seabed resource exploration and exploitation activities are to be conducted in such a way that other legitimate activities within the joint zone, notably navigation and fishing, are not to be unduly affected. The parties also established a Joint Commission in order to facilitate liaison between the governments concerned, though they stopped short of setting up a more powerful joint authority.

To date, exploration activities have failed to result in the discovery of commercially viable oil and gas reserves. Had oil and gas been discovered, a potentially major additional complication and disincentive to development is the fact that China claims parts of the Japan-Korea joint zone and has refused to recognise its creation. China, just as is the case for Korea, also bases its continental shelf claims in the East China Sea on natural prolongation arguments and it is understood, consequently claims a significant portion of the Japan-Korea joint development area. This underscores the importance of taking into account the potential claims of third States.

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52 The agreement may be extended if no maritime boundary is delimited, although it can be terminated by either side with three years’ notice (Japan-Korea treaty, Article 31(2)).
53 Thus a joint venture or consortium is not allowed for the exploration or exploitation of any of the sub-zones. For details on licensing in the Japan-South Korea Agreement, see Miyoshi (1993).
54 Article 19 of the Japan-Korea treaty provides that: “the laws and regulations of one Party shall apply with respect to matters relating to exploration and exploitation of natural resources in the sub-zones with respect to which the Party has authorized concessionaires designated and acting as operators.”
55 Japan-Korea treaty, Article 27.
56 Ibid., Article 24.
57 Charney and Alexander, 1993: 1058.
Figure 9: Maritime Claims and Joint Development Zones in the East China Sea
Source: I.M.A. Arsana and C.H. Schofield
Saudi Arabia–Sudan

The joint zone defined between the Saudi Arabia and Sudan in 1974 stands apart from other maritime joint development zones as its area of application is not defined by a series of geographic coordinates joined by lines. Instead, the joint zone applies to that part of the central part of the Red Sea between the two countries respective coasts which is greater than 1,000 metres in depth (see Figure 10). The northern and southern limits of the joint zone have not, however, been defined. Although the agreement covers all natural resources, its primary objective was to allow for the joint exploration for and exploitation of the seabed mineral resources, notably metalliferous sediments rich in heavy metal such as copper, manganese, zinc, iron and silver, known to exist in the Red Sea deeps, especially off Sudan. Although a Saudi-Sudanese Red Sea Commission was established in 1975, it is understood that little exploration activity has in fact taken place and no commercial discoveries or developments have eventuated.

Figure 10: Common Zone between Saudi Arabia and Sudan
Source: International Boundaries Research Unit

58 Agreement Relating to the Joint Exploration of the Natural Resources of the Seabed and Subsoil of the Red Sea in the Common Zone, 16 May 1974.
59 Prescott and Schofield, 2005: 488.
61 See, Ibid.
Australia’s seabed boundaries with Indonesia in the Timor Sea of 1972 were negotiated prior to Indonesia’s 1975 occupation and subsequent annexation of East Timor, creating a discontinuity in the line which became commonly referred to as the ‘Timor Gap’. Following Indonesia’s invasion of East Timor and Canberra’s subsequent acceptance of Indonesian sovereignty over East Timor, boundary negotiations for the Timor Gap were initiated in order to join up the separate sections of their existing maritime boundary agreements to the east and west. However, international law had, in the intervening time, evolved, apparently weakening Australia’s ‘natural prolongation’ arguments concerning separate continental shelves. Additionally, the Indonesians strongly felt that they had been short-changed in the earlier boundary agreements.\(^62\) As a result no boundary agreement could be reached regarding the Timor Gap which was, instead, closed with a joint development zone – the Timor Gap Zone of Cooperation (see Figure 11).\(^63\)

![Figure 11: The Timor Gap Zone of Cooperation](image)

Source: Australian Government

The treaty itself was signed in December 1989 with additional detailed regulations being added in 1991, and was widely regarded as the most sophisticated and comprehensive maritime joint development zone in the world.\(^64\) Covering an area of 60,500km\(^2\) the Timor

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\(^62\) Indonesia was, in the words of former Indonesian Foreign Minister Mochtar, “taken to the cleaners” by Australia when these agreements were negotiated (quoted in Kaye, 2001: 54).


\(^64\) Indeed, the Timor Gap Treaty, which together with its annexed model production sharing agreement and Petroleum Mining Code runs to in excess of 100 pages.
Gap arrangement effectively plugs the Timor Gap and was divided into three sub-zones – a large central, ‘sovereignty neutral’, Zone A where revenues were to be shared on a 50:50 basis, and two smaller ‘national’ zones, Zone B to the south where sharing was on the ratio 90:10 in favour of Australia and a narrow Zone C, where the ratio was 90:10 in favour of Indonesia. The initial duration of the agreement was to be 40 years, to be followed by successive terms of 20 years. The Timor Gap Treaty is, however, no longer in force having been replaced by agreements concluded between Australia and East Timor (see below).

**Malaysia–Thailand**

Although Malaysia and Thailand were able to agree on the alignment of their territorial sea boundary without undue difficulty, they were only able to delimit their continental shelf boundary out to a point approximately 29nm offshore. Seaward of that point, a dispute over the validity of a small Thai island as a basepoint led to a roughly wedge-shaped overlap in continental shelf claims. A Memorandum of Understanding (MoU) was concluded between the two States in February 1979 that established broad principles for the joint development of “non-living-resources, in particular petroleum” in a joint development area (JDA) whose dimensions reflect the area of overlapping claims. In addition to specifying the geographical scope of the JDA and the overall purpose of the arrangement, the MoU established the principle of the equitable sharing of costs and proceeds from joint activities and provided for the peaceful resolution of any disputes arising. The duration of the agreement was set at 50 years, to be extended if no boundary agreement is reached within that period (see Figures 1 and 8).

A further agreement was required in order to deal with complex issues such as the detailed regulations to govern activities in the JDA and on the establishment of a Joint Authority. This agreement dealing with the practicalities of turning the MoU into practice was not signed until May 1990, over eleven years after the first MoU was signed. The 1990 agreement makes no changes to the fundamental elements of joint development laid out in the 1979 MoU, for example, in respect of the geographical scope of the area to be subject to joint development, the overall purpose of the arrangement, the principle of the equitable sharing of costs and proceeds from joint activities, or the peaceful resolution of any disputes. What the 1990 agreement does is add substance to the MoU’s framework by laying out detailed rules and regulations concerning key practical issues.

The long delay between the conclusion of the MoU and the agreement on implementing its terms has been ascribed to a number of factors. Salient among these were political factors

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which eroded commitment towards operationalising the joint arrangement. In particular was the fact that changes in the governments of both countries undermined the political will for joint development. Additionally, there were perceptions on the Thai side that their they should have a greater share of the resources in question because fields discovered were predominantly on the Thai side of a median line through the proposed joint zone.\(^69\)

Commitment to furthering the joint development arrangement was also undermined other unrelated issues that caused a downturn in bilateral relations, notably disputes over fisheries issues. Difficulties also emerged in relation to reconciling the parties’ differing approaches to managing offshore rights and commercial disputes arose, particularly in respect of previously-granted Thai concessions.\(^70\) Ultimately these difficulties were overcome and commercially viable oil and gas fields have been discovered within the JDA.\(^71\)

It should also be noted that an overlap exists between Vietnam’s claims and the most seaward part of the Thai-Malaysian JDA mentioned above. However, in the Thai-Vietnamese maritime boundary treaty of 7 August 1997 there exists a specific indication that the parties, together with Malaysia “shall enter into negotiations…in order to settle the tripartite overlapping continental shelf claim area.”\(^72\) At the time of writing a tripartite agreement arising from these negotiations had yet to emerge.\(^73\)

**Malaysia–Vietnam**

The agreement concluded by Malaysia and Vietnam in 1992 establishes a long, narrow “Defined Area” in the southeastern part of the Gulf of Thailand for the exploration for and exploitation of seabed petroleum deposits.\(^74\) The Defined Area corresponds to the two States’ overlapping claims to continental shelf and was prompted by oil discoveries made by Malaysian contractors within the disputed zone (see Figures 1 and 9). The joint zone corresponds to the two States’ overlapping claims to continental shelf and was prompted by oil discoveries made by Malaysian contractors within the disputed zone.\(^75\) The joint arrangement is set to last for 40 years, subject to reviews and extensions. The agreement offers a framework under which nominees of the two governments can enter into agreements for exploring and exploiting petroleum reserves once the area has been delimited. Costs and revenues are to be shared equally. The joint mechanism is therefore a relatively straightforward commercial arrangement whereby each country’s rights are managed by their respective national oil companies (Petronas of Malaysia and PetroVietnam of Vietnam).\(^76\) As

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76 The two governments do, however, retain a right of veto with regard to any agreements their national oil companies might reach. In practical terms, as Petronas had already issued production-sharing contracts for the
oil and gas discoveries have subsequently been made within the Defined Area the project may be deemed a success.\footnote{See, Schofield and Tan-Mullins, 2008: 111-112.}

**Colombia–Jamaica**

The 1993 *Maritime Delimitation Treaty between Colombia and Jamaica*\footnote{The treaty was signed on 12 November 1993 (entered into force 14 March 1994). Treaty text available at <www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/JAM-COL1993MD.PDF>. See also Charney and Alexander, 1998: 2179-2204.} established a “Joint Regime Area” (JRA) to the west of an agreed maritime boundary. The JRA was defined as being a “zone of joint management, control, exploration and exploitation of the living and non-living resources…pending the determination of the jurisdictional limits of each Party.” Within this area, however, two 12 nautical mile-radius areas around the Columbian Seranilla Bank and Bajo Nuevo Cays were excluded. The total area of the JRA is approximately 4,500 square nautical miles (Figure 12).\footnote{Charney and Alexander, 1998: 2181.}

Within the JRA the parties agreed that they could explore for and exploit the natural resources therein, whether living or non-living, establish and use artificial islands, installations and structures, conduct marine scientific research, and take action to protect and preserve the marine environment and conserve living resources.\footnote{Colombia–Jamaica Treaty, Article 3(2).} With regard to activities relating to the exploration and exploitation of non-living resources, as well as those in respect of marine scientific research and on the protection and preservation of the marine environment, however, the parties are to carry out activities “on a joint basis” reached through agreement between them.\footnote{Ibid., Article 3(3).} Colombia and Jamaica furthermore agreed that within the JRA each State would have jurisdiction over its own nationals and vessels flying its own flag and they agreed to adopt measures to ensure that the national and vessels of third States would comply with any regulations and measures the parties were to adopt.\footnote{Ibid., Article 3(5 and 6)} The parties also agreed to establish a Joint Commission to “elaborate the modalities for the implementation and carrying out of” activities within the JRA.\footnote{Ibid., Article 4.}
Argentina–United Kingdom

Despite the long-standing sovereignty dispute between Argentina and the United Kingdom (UK) over the Falkland Islands (Islas Malvinas to Argentina), South Georgia and the South Sandwich Islands, the parties have, following their 1982 conflict, sought to improve bilateral relations and this has yielded some maritime cooperative initiatives in the South Atlantic. On 2 November 1990 the two countries issued a Joint Statement on the Conservation of Fisheries, established a South Atlantic Fisheries Commission, and announced the cooperation of the two governments over the conservation of fish stocks between 45º and 60º south. Additionally, on 27 September 1995 Argentina and the UK issued a Joint Declaration on Cooperation over Offshore Activities in the South West Atlantic.

The Joint Declaration, “coordinated activities” in relation to a “sedimentary structure” in a defined to the southwest of the disputed islands within which the two governments would cooperate to encourage the exploration and production of hydrocarbons (see Figure 13). The area in question has an area of approximately 20,000km² (around 5,831 square nautical miles). Arguably, these two agreements demonstrate that territorial disputes do not necessarily preclude the possibility of effective utilisation and management of resources, as long as the cooperation is clearly without prejudice to claims to sovereignty. However, this may overstate the case somewhat because the bilateral relationship has deteriorated since the

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84 Charney and Alexander, 1993, at 2199.
86 Ibid.: 468-471.
conclusion of these joint arrangements and, while they still exist in principle, little active cooperation appears to be taking place.

Figure 13: The Argentina – UK Special Area
Source: International Boundaries Research Unit

Nigeria–São Tomé and Príncipe
Nigeria and São Tomé and Príncipe concluded a treaty in 2001 establishing a joint zone between them. The joint zone is the largest such arrangement established to date with an area of 34,540km² (around 10,070 square nautical miles) (see Figure 14). The objective of the joint arrangement is to exploit and share the natural resources of the joint zone, especially seabed hydrocarbons. Revenues to be derived from the exploitation of the resources within the joint zone are to be shared on the basis of 60 per cent to Nigeria and 40 per cent to São Tomé and Príncipe. One of the innovative aspects of the joint agreement is that it specifically addresses maritime security issues. The agreement establishes a Joint Ministerial Council and a Joint Authority (since renamed the Joint Development Authority or JDA). In addition to its primary function of managing activities in relation to the exploration for and

exploitation of the natural resources within the joint zone, the JDA is tasked with “controlling the movements into, within and out of the Zone of vessels, aircraft, structures, equipment and people”, the establishment of safety zones and restricted zones within the joint zone, regulating marine scientific research and preserving the marine environment within the joint zone. The Joint Authority is also to request action from the relevant authorities of the parties in relation to search and rescue operations in the joint zone, the prevention and remedying of pollution and the “deterrence and suppression of terrorist or other threats to vessels and structures engaged in development activities in the Zone. The Nigeria and Sao Tomé and Príncipe agreement also includes specific provisions relating to security and policing in the joint zone, according to which the parties are to “jointly conduct defence or police activities throughout the joint zone.”

![Map of Nigeria, Sao Tomé, and Príncipe Joint Zone](image)

**Figure 14: Nigeria and Sao Tomé and Príncipe Joint Zone**  
Source: *International Maritime Boundaries*

**Australia–Timor Leste (East Timor) in the Timor Sea**

Prior to achieving independence, the East Timorese government in waiting, together with the United Nations Transitional Authority for East Timor (UNTAET) had made it clear that East Timor would not be bound by any of the agreements related to East Timor’s territory entered into by Jakarta – including the Timor Gap joint development zone mentioned above. In order to safeguard ongoing seabed resource developments in the Timor Sea, a new agreement,

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93 Colson and Smith, 2005: 3648.

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Timor Sea Treaty (TST) was signed between Australia and East Timor on the day that East Timor became independent. The TST established a Joint Petroleum Development Area (JPDA), which coincides with the central part of the old Australia-Indonesia joint zone (Zone A). Whereas in the past revenues from Zone A had been shared between Australia and Indonesia on an equal basis, under the TST revenues from seabed resources exploited within the JPDA are split 90:10 in East Timor’s favour (see Figure 15).

Complications then arose, especially in relation to the Greater Sunrise complex of fields. Unitization agreements between Australia and East Timor were signed but East Timor opted to delay ratification. It became clear that according to the unitization agreements that 20.1 per cent of Greater Sunrise lies within the JPDA with the remaining 79.9 per cent falling on what Australia regards as its side of the line. Consequently, East Timor was set to benefit from only 18.1 per cent of the proceeds from Greater Sunrise (90 per cent share of the 20.1 per cent of the field falling within the JPDA). East Timor subsequently argued that it was not bound by the dimensions of the ‘Timor Gap’ defined by previous Australia-Indonesia boundary agreements and claimed areas adjacent to the JPDA. The delimitation negotiations that ensued proved complex and contentious.

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Eventually, however, Australia and East Timor were able to overcome the barriers to agreement and the Treaty on Certain Maritime Arrangements in the Timor Sea (CMATS) was signed in 2006. The treaty establishes a further interim resource sharing agreement whose area of application is coincident with the ‘Unit Area’ defined in the previously negotiated unitization agreement and therefore encompasses the Greater Sunrise complex of fields. The agreement provides for the equal sharing of revenues deriving from the upstream exploitation of petroleum resources within this zone. The CMATS is without prejudice to either side’s claims to maritime delimitation and includes stringent requirements for a moratorium on claims while the treaty is in force. The parties agreed to defer their claims to maritime jurisdiction and boundaries in the Timor Sea for up to 50 years. The treaty will, however, lapse if either a development plan for Greater Sunrise has not been approved.

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98 Consequently, rather than an 18.1 per cent share in Greater Sunrise as would have been the case under the earlier accords, East Timor stands to gain a full 50 per cent share in the revenues deriving from the development of those fields.

99 CMATS, Article 2.

100 The parties are restricted from the direct or indirect initiation of, or participation in, any proceedings relating to maritime boundary delimitation in the Timor Sea before ‘any court, tribunal or other dispute resolution mechanism’ or even raising such issues in ‘any international organisation’. CMATS, Article 4.

101 Or, ‘until the date five years after the exploitation’ of the area covered by the treaty ceases, ‘whichever occurs earlier’ CMATS, Article 12.
within six years or production has not started within 10 years from the agreement entering into force.\textsuperscript{102} CMATS also provides for East Timorese jurisdiction over the water column above the JPDA\textsuperscript{103} and serves to establish a bilateral joint Maritime Commission to ‘constitute a focal point for bilateral consultations with regard to maritime matters of interest to the Parties.’\textsuperscript{104}

It can, however, be observed that even after joint development arrangements have been agreed, problems can arise, for example over downstream rights and this occurred between negotiated between Australia and Timor-Leste in the Timor Sea. Although the laboriously negotiated joint arrangement itself is not at issue, the destination for the pipeline to deliver any resources extracted to shore, and thus the location of any processing of such resources, is, at the time of writing an unresolved point of contention. This dispute delayed and arguably placed in jeopardy development of the resources at stake, principally the Greater Sunrise gas fields.\textsuperscript{105}

Ultimately CMATS proved to be unsuccessful, partially because of downstream issues but also because it was tainted by allegations of spying on the part of Australia on the Timorese negotiating team in the drafting of the treaty. Timor-Leste has sought to resolve its disputes with Australia over the Timor Sea by initiating a compulsory conciliation process initiated under the dispute resolution provisions of the United Nations Convention on the Law of the Sea in 2016. As a result, it was announced on 31 August 2017 that a “Comprehensive Package Agreement” had been reached between Australia and Timor-Leste, encompassing not only the delimitation of a permanent maritime boundary but a Special Regime for the development of the Greater Sunrise complex of fields, providing a “pathway to the development of the resource.”\textsuperscript{106} A subsequent announcement of 15 October 2017 indicated that agreement had been reached on a “complete text of a draft treaty” based on the aforementioned Comprehensive Package Agreement. It remains to be seen whether downstream issues are included in these accords.\textsuperscript{107}

\textsuperscript{102} CMATS, Article 12.

\textsuperscript{103} CMATS, Article 8 refers to a line which is defined by means of a list of coordinates of latitude and longitude, referred to World Geodetic System 84 and joined by geodesic lines, contained in a treaty Annex. The line so defined is consistent with the southern boundary of the JPDA with Australia to exercise jurisdiction to the south and East Timor to the north.


Joint fishing zones in East Asia

Three joint fisheries agreements, which emerged following the ratification of LOSC, declaration of EEZs by China, Japan and the Republic of Korea and resulting overlapping maritime claims, may be considered together. The agreements in question are: the China-Japan agreement of 11 November 1997 relating to part of the East China Sea; the Japan-Korea agreement of January 2000 in respect of parts of both the East China Sea and Sea of Japan (East Sea to Korea); and, the China-Korea of 30 June 2001 dealing with parts of the Yellow Sea (see Figure 16).108

These joint agreements are of a provisional nature and are without prejudice to final maritime boundary delimitation. These joint arrangements have drawbacks, notably that they provide for enforcement on a flag State basis with minimal joint enforcement envisaged and include no provisions for enforcement against third parties (such as, for example, Taiwan which is a significant fishing entity in the waters concerned). Furthermore, they encompass only part of the picture and substantial “current fishing patterns” zones where fishing is uncoordinated and unregulated. Nonetheless, they represent a positive step towards cooperative, joint solutions to shared problems and a potentially useful application of maritime joint development concepts to living resources.109
Cambodia – Thailand

On 18 June 2001, Cambodia and Thailand signed a Memorandum of Understanding regarding the Area of their Overlapping Claims to the Continental Shelf in the Gulf of Thailand.\footnote{Colson and Smith, 2005: 3743–3744.} The area covered by the MoU appears to coincide with the parties’ large
overlapping claims area – an area believed to be highly prospective with respect to seabed hydrocarbon resources.\textsuperscript{111} Cambodia and Thailand have been engaged in negotiations over this area of overlap since the early 1990s without realising an agreement. Indeed, the MoU signed in 2001 has been aptly described as merely “an agreement-to-agree.”\textsuperscript{112} It does, however, mark potentially significant progress as it separates delimitation of a lateral maritime boundary in the vicinity of the terminus of the land boundary on the coast in the north, from joint development of the area of overlapping claims towards the centre of the Gulf, south of the 11° north parallel of latitude. The negotiations towards delimitation and joint development are to be conducted “simultaneously” and represent “an indivisible package.”\textsuperscript{113} Although the MoU mentioned “accelerated negotiation”,\textsuperscript{114} no agreement has yet been realized. Nonetheless, the conclusion of the MoU and the ensuing (and ongoing) negotiations must be considered a substantial positive step forward towards resolution of this longstanding maritime dispute (see Figures 8 and 17).

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure17.png}
\caption{Thai-Cambodia Memorandum of Understanding Areas}
\end{figure}

\textsuperscript{111} It can be inferred that the area of overlap between the parties has been reduced following the resolution of Cambodia and Vietnam’s sovereignty dispute over islands. Uncertainty does, however, persist in relation to the southern limit of the area covered by the MoU. See McDorman, T.L., “Maritime Boundary Delimitation in the Gulf of Thailand,” \textit{Hogaku Shimpo} [The Chuo Law Review], CIX, no. 5-6 (March 2003): 253-280, at 278-279. See also Schofield, 2007: 301-303 and Schofield and Tan-Mullins, 2008: 113-115.
\textsuperscript{112} McDorman, 2003: 277.
\textsuperscript{113} Cambodia-Thailand MoU, Article 2.
\textsuperscript{114} \textit{bid.}
China – Japan

It was reported on 16 June 2008 that China and Japan had reached “principled consensus” on cooperation in the East China Sea.\textsuperscript{115} The broad area of overlap between the parties’ claim in East China Sea results from their radically different views on the method of maritime delimitation to be applied – Japan basing its claim on equidistance and China on natural prolongation principles which would see a boundary line coincident with the Okinawa Trough, leaving much of the East China Sea on the Chinese side of the line. As a “first step” towards making the East China Sea a “sea of peace cooperation and friendship”, China and Japan agreed to joint development of a specified block of seabed. The joint area to be explored “under the principle of mutual benefit”, straddles the median line between the parties’ coasts and has an area of approximately 2,700km\textsuperscript{2} (see Figure 9).\textsuperscript{116} Additionally, the two countries agreed to allow a Japanese corporation to invest in the Chinese entity already engaged in development activities in relation to the Chunxiao gas field (called the Shirakaba gas field by Japan), located on the Chinese side of but in close proximity to the theoretical median line. The June 2008 agreement makes it clear that cooperation will be entered into “in the transitional period prior to delimitation without prejudicing their respective legal positions.”\textsuperscript{117} Further negotiations were anticipated regarding converting this agreement in principle into a formal treaty and with regard to other disputed gas fields in close proximity to the median line in the East China Sea.

Barbados – Guyana

On 2 December 2003 Barbados and Guyana signed an Exclusive Economic Zone Cooperation Treaty concerning their bilateral areas of overlapping EEZs.\textsuperscript{118} It is indicated in the preamble to the agreement that while the “relevance and applicability” of provisional arrangements of a practical nature consistent with LOSC, Articles 74(3) and 83(3) is recognised, it is also recognised that “such provisional arrangements shall be without prejudice to the final delimitation”\textsuperscript{119} and this is explicitly stated in Article 1 of the treaty\textsuperscript{120} which further states that:

\begin{quote}
The Parties agree that nothing contained in the Treaty nor any act done by either Party under the provisions of the Treaty will represent a derogation from or diminution or renunciation of the rights either Party within the Cooperation Zone or throughout the full breadth of their respective exclusive economic zones.\textsuperscript{121}
\end{quote}

The geographical extent of the Cooperation Zone established through the treaty is defined in an Annex as “a triangle formed by sections of arc of radius 200 nautical miles, joining points CZ1, CZ2 and CZ3” (see Figure 18). This area is referred to as being within the 200 nautical miles EEZ claims of Barbados and Guyana “and beyond the outer limits of the EEZs of other States.” The Cooperation Zone established through the agreement between Barbados and

\begin{footnotes}
\item[117] \textit{Ibid}.
\item[119] \textit{Ibid}., Preamble.
\item[120] \textit{Ibid}., Article 1(2).
\item[121] \textit{Ibid}., Article 1(3).
\end{footnotes}
Guyana is “for the exercise of joint jurisdiction, control, management, development and exploration and exploitation of living and non-living resources” within the zone. The agreement states that the two States shall exercise “joint jurisdiction” within the Cooperation Zone and it is specified that activities in the joint zone “shall be evidenced by their agreement in writing” and further that in the absence of such an agreement in writing “neither Party can exercise its jurisdiction.” Concerning joint jurisdiction over living natural resources this is to be achieved through a “Joint Fisheries Licensing Agreement” and for joint jurisdiction over non-living resources via a “Joint Non-Living Resources Commission.” Regarding activities to police the joint zone the agreement includes a commitment to negotiate a security agreement but until such an agreement is concluded unilateral enforcement is provided for.

Figure 18: The Barbados – Guyana Zone of Cooperation

122 Ibid., Article 1.
123 Ibid., Article 3.
124 Ibid., Article 6.
125 Ibid., Article 7.