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The Joint Development of Offshore Oil and Gas in Relation to Maritime Boundary Delimitation

by

Masahiro Miyoshi

Edited by

Clive Schofield

International Boundaries Research Unit
Department of Geography
University of Durham
South Road
Durham DH1 3LE
UK

Tel: UK + 44 (0) 191 334 1961 Fax: UK +44 (0) 191 334 1962
E-mail: ibru@durham.ac.uk
www: http://www-ibru.dur.ac.uk

The Author

Masahiro Miyoshi has been a Professor of International Law since 1978. He obtained a BA from Tokyo University of Foreign Studies in 1960, an MA in Law from Keio-Gijuku University, Tokyo, in 1963 and a PhD in International Law from the University of London in 1989. He was a Visiting Fellow at the Environment and Policy Institute, East-West Center, Hawaii, in 1983 and at the Max-Planck-Institut in Heidelberg in 1988. He has been a Technical Adviser to the Coordinating Committee for Coastal and Offshore Geoscience Programmes in East and Southeast Asia (CCOP), Bangkok, since 1987.

Contents

List of Figures

The Joint Development of Offshore Oil and Gas in Relation to Maritime Boundary Delimitation

Masahiro Miyoshi

1. Introduction – A Brief History of Joint Development

The current idea of joint development of offshore oil and gas dates back to the judgment of the International Court of Justice (ICJ) in the *North Sea Continental Shelf* cases of 1969. At that time the Court referred to the possibility of the parties deciding on *"a régime of joint jurisdiction, use, or exploitation for the zones of overlap or any part of them."*[1] This topic is extensively discussed in Judge Jessup's separate opinion[2] which draws on a pioneering work on the subject by William T. Onorato in 1968.[3] The latter wrote another extensive discussion of the topic ten years later.[4]

However, the original idea of joint development seems to date further back to the 1930s when studies and judicial cases on joint petroleum development can be found in the United States.[5] Some cases of joint development of coal, natural gas and petroleum across international boundaries on the European continent were also evident during the 1950s and 1960s.[6]

For all such earlier precedents and studies, a turning point appears to have come with the conclusion of the Japan-South Korea Joint Development Agreement in January 1974.[7] This represented the first application of the idea of joint development of offshore oil where the parties failed to agree on boundary delimitation, as indicated in the ICJ judgment of 1969. The Japan-Korea agreement was the outcome of unsuccessful negotiations for the settlement of the two countries' continental shelf dispute, spurred on by a report of the technical committee of the UN Economic Commission for Asia and the Far East (ECAFE) concerning its findings from a seismic survey in the East China Sea conducted in 1969.[8] In fact this agreement was

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1 *ICJ Reports 1969*: 53, para. 101(C)(2).

2 *ICJ Reports 1969*: 66-84.

3 Onorato, 1968.

4 Lagoni, 1979 and 1984.

5 See American Institute of Mining and Metallurgical Engineers, 1930; Midcontinent Oil and Gas Association, 1930; Ely, 1938.

6 See, for example, the Belgium-Netherlands Treaty Fixing a Mining Boundary between the Coal Mines Situated along the Meuse on Both Sides of the Frontier of 23 October 1950 (136 *United Nations Treaty Series (UNTS)*: 33-9) and the Treaty Fixing an Extension of the Mining Boundary between the Coal Mines Situated along the Meuse on Both Sides of the Frontier of 5 April 1963 (507 *UNTS*: 267-9); the Netherlands-Germany Treaty Fixing a Mining Boundary between the Coalfields Situated to the East of the Netherlands-German Frontier of 18 January 1952 (179 *UNTS*: 156-162), the Netherlands-Germany Treaty of 8 November 1960 Amending and Supplementing the Treaty of 18 January 1952 (450 *UNTS*: 414-418), and the Netherlands-Germany Supplementary Agreement of 14 May 1962 to the Treaty concerning Arrangements for Co-operation in the Ems Estuary (Ems-Dollard Treaty), signed between the Kingdom of the Netherlands and the Federal Republic of Germany on 8 April 1960 (which is intended to promote the exploitation of *"all solid, liquid or gaseous underground substances"* underlying the Ems Estuary) (509 *UNTS*: 140-156); and, the Czechoslovakia-Austria Agreement concerning the Working of Common Deposits of Natural Gas and Petroleum of 23 January 1960 (495 *UNTS*: 134-140).

7 For the text of the Agreement, see Charney and Alexander (1993: 1,073-1,089).

8 Committee for Co-ordination of Joint Prospecting for Mineral Resources in Asian Offshore Areas (CCOP) of the ECAFE, *Technical Bulletin*, Vol. 2, May, 1969. For a brief account of the background of this

preceded by one day by the France-Spain agreement, but the latter differed significantly from the Japan-South Korea accord in that it devised a common zone for joint development across the agreed boundary line.[9]

Five years later the Japan-Korea precedent was followed by the Malaysia-Thailand Memorandum of Understanding for a joint development zone in the Gulf of Thailand,[10] another outcome of unsuccessful negotiations to define a continental shelf boundary.[11] These developments prompted the East-West Centre in Honolulu, Hawaii, in collaboration with the Committee for Co-ordination of Joint Prospecting for Mineral Resources in Asian Offshore Areas (CCOP), the technical committee of the ECAFE, to organise a workshop in 1980 on the hydrocarbon potential and possibilities of its joint development in the South China Sea which remained practically unexplored at that time.

The first workshop was attended by far more geologists than lawyers, political scientists or economists. However, the second workshop, held in 1983, which was essentially a follow-up session and was also held in Honolulu, attracted more lawyers and political scientists. The third workshop, held in Bangkok, Thailand in 1985, boasted still more social scientists. A fourth workshop, the last one in the series, was held in Bali, Indonesia in 1989. The first two workshops produced proceedings containing the papers presented,[12] but the last two workshops failed to produce such an output.

In the meantime, the British Institute of International and Comparative Law organised a team to study joint development of offshore oil and gas, and completed a model agreement with a commentary in 1989.[13] A number of academic and practising lawyers subsequently gathered for a two-day workshop in London to discuss the model agreement under the auspices of the Institute in July 1989. Its proceedings appeared in 1990 as Vol.II of the 1989 publication.[14] These two volumes present the most comprehensive and detailed treatment of the subject to date.

2. The Basic Concept of Joint Development

Along with the texts of joint development agreements, the most detailed being the Timor Gap Treaty of 1989 between Australia and Indonesia, the literature on joint development abounds, and one may suspect that there is little more left to discuss on the basic concept of joint development. However, in view of the many still undelimited maritime boundaries and consequent disputes in the world's seas, for example the Spratly Islands dispute in the South China Sea, there remains the need to discuss the basic concept of joint development further from not only theoretical but also practical viewpoints.[15]

Agreement, see Oda (1974: 98) and Park (1981: 1,335-1,341).

9 For the text of the France-Spain agreement, see Charney-Alexander (1993: 1,727-1,734).

10 For the text of the Malaysia-Thailand Memorandum of Understanding, see Charney-Alexander (1993: 1,107-1,110).

11 For a brief account of the background to the Memorandum of Understanding, see Polahan, 1981.

12 Valencia, 1981 and 1985.

13 Fox, 1989.

14 Fox, 1990.

15 See, for example, Gao, 1997: 641-643; and, Miyoshi, 1997: 610-611.

For the purposes of this *Briefing*, it is proposed at the outset to define joint development as:

> *An inter-governmental arrangement of a provisional nature, designed for functional purposes of joint exploration for and/or exploitation of hydrocarbon resources of the sea-bed beyond the territorial sea.*

This definition does not include, as a matter of basic arrangement, a joint venture between a government and a private oil company nor a consortium of private companies. Admittedly this is a narrow definition, but it is appropriate to the past joint development arrangements that will be discussed below.[16]

The very basis of the legal concept of joint development rests on the fluid nature of petroleum or natural gas. If a deposit lies across the boundary line of two or more neighbouring land owners, a single owner's extraction damages the potential share of the other owner or owners. It is desirable, therefore, to avoid such an eventuality on the basis of some form of cooperation between them in the exploitation of the resource.[17] Thus the idea of unitisation arose whereby a deposit of fluid petroleum or natural gas should be treated as a single deposit if it lies across the boundary line and straddles different jurisdictions.[18] This concept later led on to a number of international agreements on unitisation in the 1960s and 1970s.[19] Among these examples is the Frigg Gas Field Agreement of 10 May 1976 which contains model provisions for unitisation in general.[20]

The general applicability of the provisions outlined in the above-mentioned agreement resides in their correct and scrupulous logic that if a fluid resource lies in a geological structure straddling an international boundary line, its effective exploitation should be conducted by a single operator based on agreed cooperation between the states concerned, and that a detailed procedure of a practical nature should be devised for its implementation. Such an idea of unitisation would also be the correct way of exploiting a deposit of fluid resources on the seabed to which neighbouring coastal states have overlapping claims, whether the boundary line is determined or not. Indeed it is hard, or impossible, to refute the rationale of this logic or principle.

However, any assertion that unitisation has become an established customary rule of international law goes too far.[21] If this were the case, then a negative attitude towards joint development, a sheer

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16 For some discussions of the legal concept of joint development, see the summaries of discussions in the lawyers groups at the three East-West Centre workshops of 1980, 1983 and 1985, reproduced in the Appendixes 1-3, in Miyoshi (1988: 16-18). *Cf.* 'Research Team's Definition of Joint Development', in Fox (1989: 45).

17 See Miyoshi, 1988: 5-6.

18 See the UN Secretariat's memorandum presented to the International Law Commission, which says: *"Le principe qu'il ne faut pas perdre du vue et dont la pratique obligera à tenir compte est celui de l'unité du gisement"* (United Nations, 1950: 112, para. 337).

19 A few examples include: the Czech-Austrian Agreement concerning the Working of Common Deposits of Natural Gas and Petroleum in the Vysoká-Zwerndorf frontier area of 23 January 1960 (495 *UNTS*: 134-40); the Dutch-German Ems-Dollard Treaty of 8 April 1960 and its Supplementary Agreement of 14 May 1962 (509 *UNTS* 94, *Ibid.*: 140-8); the British-Norwegian Agreement relating to the Delimitation of the Continental Shelf of 10 March 1965 (551 *UNTS*: 214); the British-Norwegian Agreement relating to the Exploitation of the Frigg Field Reservoir and the Transmission of Gas therefrom to the United Kingdom of 10 May 1976 (*Cmnd*. 6491).

20 A good commentary on the Frigg Gas Field Agreement is provided by Woodliffe, 1977.

21 See, for example, Onorato, 1968: 101; *Id.*, 1977: 337; *Id.*, 1981: 1,315; *Id.*, 1985: 539; Shihata and Onorato, 1992: 3-4.

abstention from 'positive cooperation' in favour of it, would amount to an act against the alleged rule, and consequently an illegal act, under customary international law.

Another important point is that a requirement for the formation of a customary rule of international law is that the practice of states whose interests are 'specially affected' should be included in general state practice, as the International Court of Justice specified in its judgment in the *North Sea Continental Shelf* cases of 1969.[22] The many agreements between the states in the North Sea region which provide for unitisation may suggest the existence of *opinio juris sive necessitatis*[23] among them for the alleged rule of joint development. But what of states in the other regions of the world? The coastal states of, say, the South China Sea are undoubtedly just as interested in the development of hydrocarbon resources as those of the North Sea, and therefore their interests would also be 'specially affected' in the formation of such a customary rule. It cannot be claimed, however, that there exists any general state practice or *opinio juris* among them in favour of such a rule.

The *"doctrinal debate"*, in the words of Gao Zhiguo,[24] has perhaps not come to an end yet. It is worth noting in this connection that a research team of the British Institute of International and Comparative Law, working on joint development of offshore oil and gas, acknowledged that:

> *In the light of this conflict of views it would seem that international law only entails an obligation to consult and negotiate where States have broadly agreed on the delimitation of their maritime boundaries. There would seem to be no body of State practice upon which to underpin such a general obligation in the case where no boundary has been drawn in a disputed area...It would seem in these circumstances that a disputant State may carry out unilateral prospecting in the disputed area.*
>
> *Our conclusion, therefore, is that in contradiction to agreed boundary areas where a known field straddles the boundary, there is at present as regards disputed areas no clear rule of customary law which requires a State to inform and consult other interested parties.*[25]

If this is not the final word on the doctrinal debate, it is a fair account and assessment of the problem upon which there has been a conflict of views.

Apart from the mentioned aspect of doctrinal conflict, there is common ground among the debating commentators with respect to the obligation of interested states to abstain from unilateral development of the resource concerned. The reason for this resides in the basic fact that extraction by a single state can deplete the fluid deposit in which the other adjacent states are entitled to shares. Obviously, some form of cooperation, for example unitisation, is necessary for equitable exploitation of the deposit. Pending agreement on such positive cooperation, there must be a negative form of cooperation to refrain from proceeding to a unilateral act of extraction. This is implied in Articles 74(3) and 83(3) of the UN Convention on the Law of the Sea of 1982, which provide that:

22 *ICJ Reports 1969*: 43, para. 74.
23 Meaning: *"the belief that a given norm is legally binding or necessary."*
24 Gao, 1997: 642.
25 Fox, 1989: 35.

> *...the States concerned, in a spirit of understanding and cooperation, shall make every effort...during this transitional period, not to jeopardise or hamper the reaching of the final agreement...*

The basis of this thesis is that the coastal state has sovereign rights over the natural resources on its continental shelf under customary international law. Such rights are:

> *...exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the express consent of the coastal State"*, and *"do not depend on occupation, effective or notional, or on any express proclamation."*[26]

Thus strictly no state may encroach upon such rights of other states without their express consent, and consequently a unilateral exploitation may not start if an offer for joint development is refused.

It may nevertheless be asked whether sovereign rights are so absolute as to allow a state to veto any proposed joint development project. The answer must be in the affirmative as a matter of principle. But it does not exclude the possibility of a state choosing to place its potential share of the common deposit at the disposal of an adjacent state or states in exchange for some adequate compensation, for example, an agreed amount of extracted resource or sale of its share, as the past Arabian/Persian Gulf experience shows. Such a freedom cannot be denied, since it is part of the state's most basic attribute of sovereignty. Ultimately, it remains a question of a particular state's political will to choose or not to choose to accede to the idea of joint development.[27]

3. Precedents of Joint Development Schemes

3.1 Maritime Boundary Delimitation and Joint Development

Joint development may be devised either in the absence of agreed boundaries or additionally where boundaries are delimited. More difficult problems would seem to be involved in the first category of cases than in the second, because the states concerned have been unable to agree on the delimitation of boundaries and their failure to agree implies that they have fundamentally different positions. In this sense they can only agree to the idea of joint development to the extent that they are prepared to set aside the intricate issue of delimitation for future consideration in favour of more immediate economic or other practical interests.

According to Blake and Swarbrick (1996) there are only 136 maritime boundaries wholly or partially agreed of a total of 379 in the world as of 1996. In other words, there still remain 246 potential maritime boundaries, or 64.1% of the total, yet to be delimited. Despite the existence of so many potential areas for delimitation, there are far fewer actual boundary disputes. Generally,

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26 UN Convention on the Law of the Sea, Article 77(2), (4); Convention on the Continental Shelf of 1958, Article 2(2), (3).

27 The state's free will to agree, whatever the content of the agreement, is true not only of joint development but also boundary delimitation, as is amply shown in past international agreements on maritime boundary delimitation and the decisions of the International Court of Justice and some international arbitral tribunals in boundary delimitation cases.

disputes do not come to the surface unless or until the interested states become acutely aware of the need for delimitation with a view to exploitation of the resource in the disputed area. Instead, they simply leave the matter of delimitation untouched or dormant.

Thus, joint development is not the only alternative, but merely one of the alternatives, to boundary delimitation. However, once interested states feel the need to explore for or exploit a resource the deposit of which lies in overlapping claim areas, theoretically they have only two choices: one is to determine a definite boundary to identify the location of the deposit on one side of it or the other, and the other to share the resource in agreed proportions when it is found to straddle the hypothetical boundary.

However, even if the boundary is determined as in the first choice, that is not the end of the matter. Experience shows that the states concerned normally agree on a further procedure of unitisation in anticipation of future discovery of new deposits astride the agreed boundary.[28]

Another noteworthy, though incidental, point of joint development is that it can have a by-product of defusing tension between the agreeing states. While they remain unable to agree on boundary delimitation because of their adherence to their respective claims, a joint development arrangement will generate revenue to them which may last for a certain period of time to help to alleviate their otherwise ill-disposed relations.[29] This can be a useful practical measure where the dispute over boundary delimitation remains deadlocked over a long period of time, as in the South China Sea or elsewhere.

3.2 Joint Development Agreements in the Absence of Boundaries

3.2.1 Kuwait – Saudi Arabia Agreement of 7 July 1965

Strictly speaking, this case is not a precedent for joint development as defined in this paper, because the two countries did not agree on joint development at first but let their concessionaires conclude such an agreement and their common concessionaires go ahead with operations, thereby virtually realising a joint work.[30]

The Kuwaiti-Saudi Arabian arrangements in respect of their Neutral Zone (see Figure 1) could conveniently be divided into two broad phases: the pre-partition period and the post-partition period.[31]

Both Kuwait and Saudi Arabia granted separate concession agreements to American oil companies in respect of their undivided half shares in the Neutral Zone. Kuwait signed a concession agreement with the American Independent Oil Company (Aminoil) on 28 June 1948, and Saudi Arabia likewise signed a concession agreement with the Pacific Western Oil Corporation (subsequently Getty Oil Company) on 20 February 1949. The agreements covered

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28 See Ong (1995: 83-84) for Southeast Asian examples.

29 *Cf.* Wälde, 1990: 156.

30 For a similar critical comment, see El Ghoneimy (1966 : 714).

31 The Kuwait-Saudi Arabia Neutral Zone was established in 1922 by the Uqair Protocol and covered an area of 5,700km^2. According to the Protocol, in the Neutral Zone, *"…the government of Najd [Saudi Arabia] and Kuwait will share equal rights until through the good offices of Great Britain a further agreement is made…concerning it."*

the land territories of the Zone.[32] From the outset the two countries seem to have inclined towards joint development of the Neutral Zone by their two concessionaires. For example, the Saudi Arabia-Pacific Western Oil Corporation Agreement states in part:

> *The Company may enter into any agreement or agreements with any other party, not deemed undesirable by the Government having any rights to or with respect to the oil, gas or other petroleum products pertaining to the remaining undivided one-half interest in said Neutral Zone, for conducting any or all operations hereunder as joint operations...*[33]

Pacific Western Oil Corporation signed an agreement on joint drilling with Aminoil on 26 June 1956, and then the Joint Operating Agreement with the same on 5 February 1960.[34]

Under this Agreement, a common and coordinated programme of exploitation was established under the direction of the Joint Operating Committee, which supervised the concessionaires' respective field operations in the Zone.[35] In short, with the consent and encouragement of the interested countries, the two concessionaires devised a scheme of joint development which was both commercially acceptable and politically palatable. All this, moreover, was made possible without prior boundary delimitation or partition.[36]

A second aspect of the Kuwait-Saudi Arabia arrangement is its offshore operations. Saudi Arabia granted a concession in respect of the offshore areas of the Neutral Zone to the Arabian Oil Company, a consortium of Japanese firms, on 10 December 1957. A similar agreement was concluded between Kuwait and the same Japanese consortium on 5 July 1958 in respect of Kuwait's undivided half-share of the offshore areas of the Zone.

On the exercise of jurisdiction in the Neutral Zone, the Agreement for Extradition of Offenders between Kuwait and Saudi Arabia signed on 20 April 1942 sheds some light. The relevant terms of the Agreement, in so far as it affects jurisdiction over Kuwaiti and Saudi offenders fleeing from or into the Neutral Zone, are as follows:

1. *Where an offence, as defined in Article 3 of this Agreement [= highway robbery, theft, plunder, murder, wounding, raiding, smuggling and violent assault], has been committed in either of the two territories and the offender has fled to the Neutral Zone, the offender shall be deemed to be still within the territory in which the offence was committed, and may be arrested and tried by the Government thereof.*

2. *Where an offence, as defined in Article 3 of this Agreement, has been committed in the Neutral Zone and the offender escapes to the territory of the Government of which he is a national, he shall be deemed to have committed the offence within the territory of his own Government and shall be liable to arrest and trial by that Government.*

3. *Where an offence, as defined in Article 3 of the Agreement, has been committed in the Neutral Zone, and the offender being a national of one of the two Governments, escapes into the territory of the other, he shall be deemed to have committed the offence within the*

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32 Al-Baharna, 1968: 267.

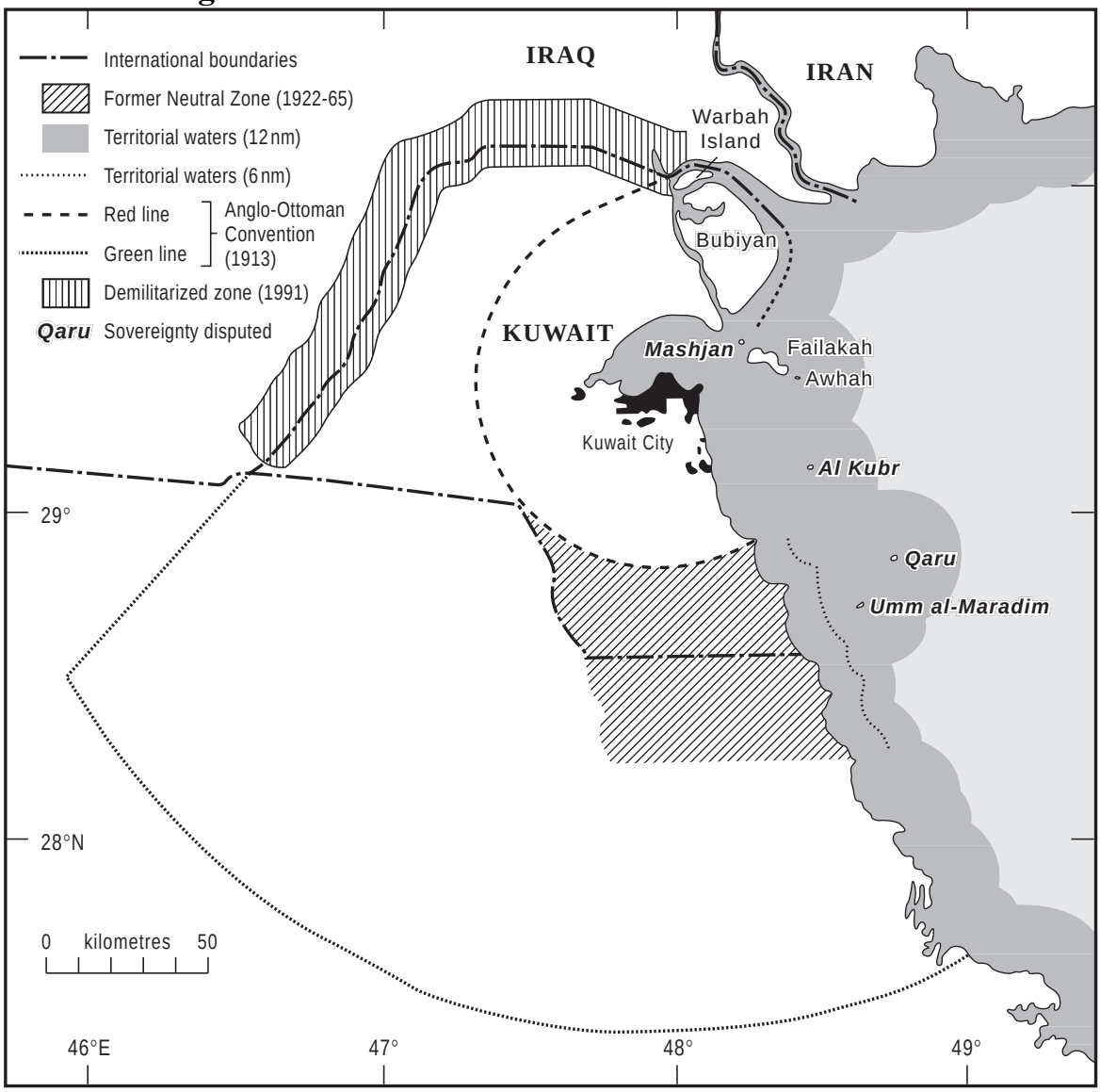
33 Agreement between the Government of the Kingdom of Saudi Arabia and Pacific West Oil Corporation, Rabi II 22 (20 February 1949), as quoted in Onorato (1985: 541).

34 Onorato, 1985: 544, note 6.

35 For detailed descriptions of the unitised operations under the Agreement, see Onorato (1985: 541-543).

36 Onorato, 1985: 543.

Figure 1: The Kuwait – Saudi Arabia Neutral Zone



territory of the Government of which he is a national, and shall be liable to extradition proceedings under this Agreement (Article 8).[37]

When the Neutral Zone was partitioned by virtue of the Agreement of 7 July 1965,[38] an international boundary line was drawn equally to divide it.[39] Significantly, however, the exercise of the exclusive rights of *"administration, legislation and defence"* by each country in the portion of the Zone attached to it does not affect, in any manner, the *"equal rights"* of both countries in respect of the exploitation of natural resources of the whole Zone, notwithstanding the partition (Article 3).

37 10 *UNTS* 99, at 102.

38 Text of the Agreement in *International Legal Materials*, Vol. 4, No. 6 (1965): 1,134-1,137.

39 According to El-Ghoneimy, the pre-partition Neutral Zone was a 'condominium' over which the two countries exercised sovereignty conjointly in favour of their purely economic interests, but such a situation led in fact to *"a certain confusion in the Zone from the point of view of the administration of justice, customs control, public order and the like"*, calling for a speedy remedy which could be sought either in a *"political partition of the Zone"* or in a *"joint well-organised administration"* (El-Ghoneimy, 1966: 715).

The partition line extends from the land territory to the territorial sea, placing the waters north of the boundary line under Kuwaiti sovereignty and the southern waters under Saudi Arabian sovereignty (Article 7(1)). However, for the purpose of exploiting the natural resources in the Partitioned Zone, *"not more than six marine miles of the sea-bed and sub-soil adjoining the Partitioned Zone shall be annexed to the principal land of that Partitioned Zone"* (Article 7(2)). In respect of the sea areas beyond the six nautical mile territorial sea, the Partition Agreement provides in Article 8(2):

> *And, the two Contracting Parties shall exercise their equal rights in the submerged Zone beyond the aforesaid six miles limit mentioned in the previous Article, by means of shared exploitation unless the two Parties agree otherwise.*

Thus the territorial sea is clearly divided, while no express division is mentioned in respect of the areas further seawards, leaving the jurisdictional division of the continental shelf unclear. Saudi Arabia had earlier adopted a 12nm territorial sea regime by a Royal Decree of 16 February 1958, but in the Partition Agreement of 1965, agreed to fix the territorial sea at 6nm (Article 7(2)). Kuwait claimed a 6nm limit before its extension to 12nm by a Decree of 17 December 1967.[40] Consequently, unless they agree otherwise, the two countries exercise their equal rights independently in the exploitation of natural resources in marine areas beyond the 6nm limit.

In order to safeguard the continued efforts of the two countries in exploiting natural resources in the Partitioned Zone, a joint permanent committee, composed of an equal number of representatives of the two countries, was set up with the status of a consultative body for competent Ministers for Natural Resources of the two governments (Articles 17 and 18). Its functions include:

1. facilitation of the traffic of functionaries and employees of concessionaires in the Partitioned Zone and of firms and organisations associated therewith;
2. studies relating to exploitation projects of common natural resources;
3. study of new licences, contracts and concessions relating to common natural resources and recommendations to the two competent Ministers as to what it deems appropriate thereon; and,
4. consideration of whatever the two competent Ministers refer to it (Article 19).

The two competent ministers decide by agreement the number of committee members, its rules of procedure and the manner of securing the necessary appropriations for it (Article 18), and the granting or amending any new concessions in the Partitioned Zone, including its offshore areas (Article 20).

One commentator sees historic significance in the Partition Agreement of 1965, stating:

> *...the significance of this agreement lies in the fact that it opens the door to a new era of full co-operation between the two neighbouring Arab States in matters relating to the future exploitation of natural resources in the Zone.*[41]

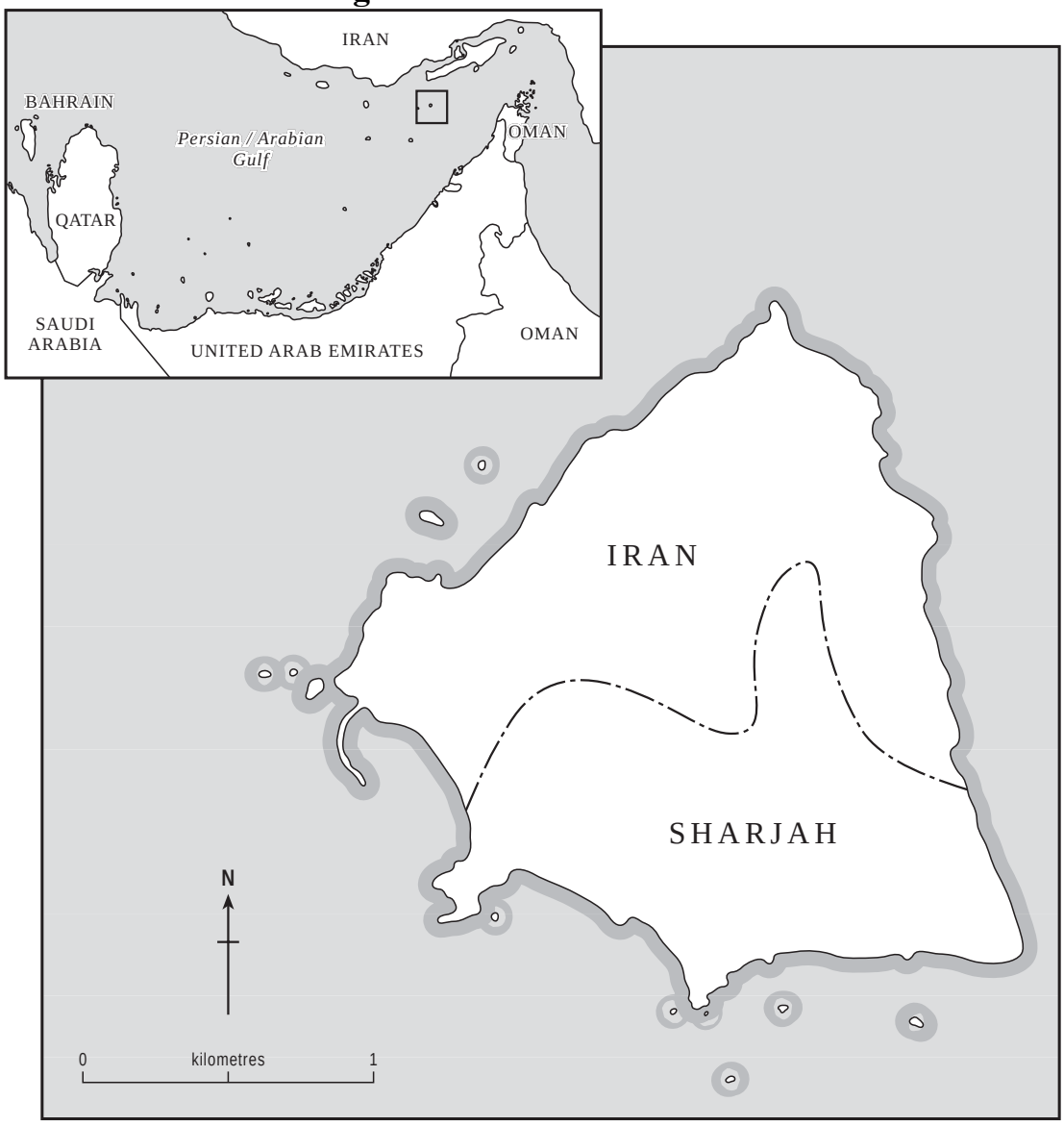
[40] The Geographer, 1975: 116.
[41] Al-Baharna, 1968: 277.

3.2.2 Iran – Sharjah Memorandum of Understanding of 29 November 1971

This is a case of a revenue sharing arrangement in respect of the territorial sea, rather than the continental shelf, of a disputed island and provides for a single oil company to operate under a memorandum of understanding between Iran and Sharjah.

The island of Abu Musa was (and still is) the subject of a long-standing dispute between the two countries. On 29 November 1971 the Memorandum of Understanding between Iran and Sharjah was first announced by the Ruler of Sharjah in the context of a tense political situation between the two states. A day later the Iranian prime minister told the parliament that Iranian troops had landed to take up strategic positions on the island and hoisted the Iranian flag there the day before.[42] The Memorandum, in its first sentence, states: *"Neither Iran nor Sharjah will give up its claim to Abu Musa nor recognize the other's claim"*, and goes on to provide for Iran's *"full jurisdiction"* in the agreed areas occupied by Iranian troops and Sharjah's retention of *"full jurisdiction"* over the remainder of the island (Para. 2(a),(b)) (see Figure 2).

Figure 2: Abu Musa Island



Although the settlement would be of a temporary nature, the parties also agreed on an equal sharing of revenues accruing from the exploitation of Abu Musa's resources. Paragraph 4 of the Memorandum states:

> *Exploitation of petroleum resources of Abu Musa and of the seabed and subsoil beneath its territorial sea will be conducted by Buttes Gas and Oil Company under the existing agreement, which must be acceptable to Iran. Half the government oil revenues hereafter attributable to the said exploitation shall be paid direct by the Company to Iran and half to Sharjah.*[43]

This is an example of a revenue sharing arrangement, with a single oil company designated to conduct exploitation on behalf of the two governments.

3.2.3 Japan – South Korea Agreement of 30 January 1974

This is the first application of the idea of joint development as indicated in the judgment of the International Court of Justice in the *North Sea Continental* cases of 1969. The two countries agreed on the continental shelf boundary in the Sea of Japan and Tsushima (or Korea) Strait comparatively easily,[44] but their positions in respect of the southern part of the continental shelf in the East China Sea were significantly different and proved to be irreconcilable.

The dispute arose when South Korea granted concessions for the exploration of continental shelf areas in the Yellow and East China Seas to several major international oil companies on the basis of its Submarine Resources Development Law of 1 January 1970. The southernmost part of those concession areas extended beyond an hypothetical median line with Japan to overlap with some concession areas licensed to Japanese oil companies. Whilst Japan based its position on the equidistance or median line principle, South Korea claimed its shelf extended beyond the median line, drawing on the natural prolongation doctrine which had just been propounded extensively in the *North Sea Continental Shelf* cases in 1969.[45]

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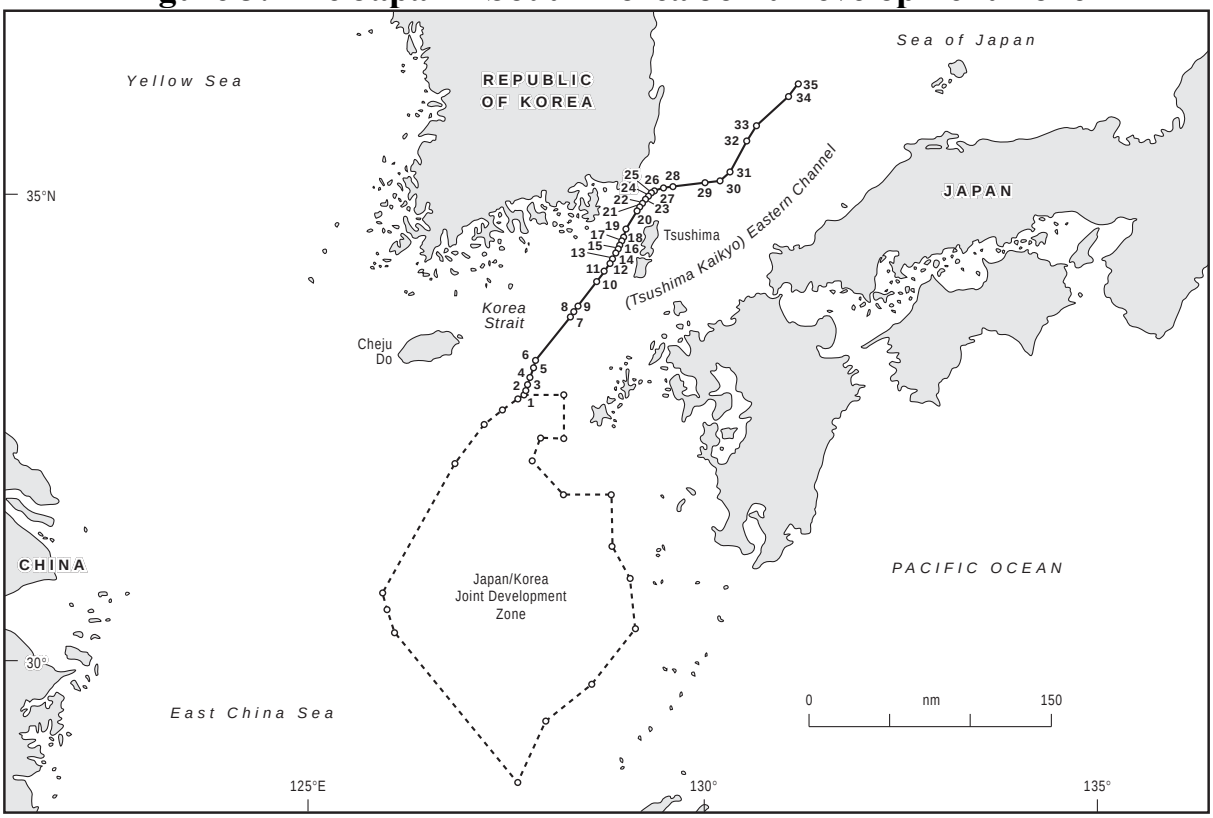
43 Text of the Memorandum of Understanding in *Middle East Economic Survey*, Supplement to Vol. 15, No. 28 (5 May 1972): 2. For more details of the Memorandum and its background, see *ibid.*: 122-8, and MacDonald, 1980: 131-134. Litigations between the oil companies of Buttes and Occidental seem to shed some light on the status of the island of Abu Musa. According to *Buttes Gas and Oil Co.* v. *Hammer*, 1981, for example, while Occidental obtained from the Ruler of Umm al Qaiwan (UAQ) an exclusive concession to explore and exploit its territorial and offshore waters on 10 November 1969 and the concession area included oil deposits 9nm from the island, Buttes on 29 December 1969 obtained from the Ruler of Sharjah the exclusive right to explore and exploit the latter's territorial and contiguous waters over which he exercised jurisdiction and control. The trouble began when Sharjah extended its territorial waters from 3nm to 12nm to enclose the location of the deposits therein by a decree allegedly made in March or April 1970, although Buttes contended that the decree had been issued on 10 September 1969. In May 1970 Iran reiterated its claim to Abu Musa and demanded that no exploration or other activities take place in the disputed area. After a show of force by the British government, which had control over the Emirates till 1971, the Ruler of UAQ on 2 June 1970 ordered Occidental not to operate within 12nm from the island. Then after proposals for arbitration and mediation, which came to nothing, an understanding was reached between Iran and Sharjah in November 1971, as described in the text, shortly before the British withdrawal from the Arabian Gulf. ([1982] A.C. 888, at 924-925, 926-930.)

44 But the issue of territorial sovereignty over Takeshima (or Tokdo in Korean) had to be put aside for future negotiations. See Oda, 1974: 99. This issue remains unresolved and is a formidable issue in the current negotiations between the two countries for the establishment of a new provisional fishery zone, following their ratification of the UN Convention on the Law of the Sea in 1996.

45 For a background to the dispute, see Takeyama (1984: 281-283).

Figure 3: The Japan – South Korea Joint Development Zone



Under the Joint Development Agreement, concessionaires, authorised by the two respective governments, have an undivided interest with respect to each of the nine defined sub-zones, and one operator is chosen from among the concessionaires so authorised for a particular sub-zone. Thus a joint venture or consortium is not allowed for the exploration or exploitation of any of the sub-zones (see Figure 3).[46]

This 'operator formula' has made it unnecessary to decide the respective jurisdictions of the two countries, for *"the laws and regulations of one Party shall apply with respect to matters relating to exploration and exploitation of natural resources in the subzones with respect to which the Party has authorized concessionaires designated and acting as operators."* (Agreement, Article 19). Thus, Japanese law is applied in a sub-zone where a Japanese concessionaire works as the operator, while in an adjacent sub-zone Korean law is applied because the operator there is a concessionaire authorised by the Korean government, the choice of the operator being made on an 'equitable basis'. However, the law shifts from Japanese to Korean law and vice versa as the operator alternates between the concessionaires of the two governments for a sub-zone with the shift of work phase from exploration to exploitation. Expenses incurred in the exploration and exploitation phases are to be shared equally, and so are the natural resources extracted in a sub-zone, between the concessionaires of the two countries.

The issue of boundary delimitation is shelved in the Agreement:

> *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* (Article 28).

46 For details on licensing in the Japan-South Korea Agreement, see Miyoshi (1993).

Such reservation of the positions of the parties will in principle remain effective for a period of fifty years, the duration of the Agreement (Article 31(2)). When, however, the parties agree to terminate the Agreement before its expiration on the ground that natural resources are no longer economically exploitable, that reservation will correspondingly come to an end. It is interesting to note that, unlike other joint development accords, the Agreement has no provision that the parties continue to negotiate the boundary delimitation in the sea area involved.

Among the many legal issues of concern,[47] the question of fisheries interests has proved the single most important practical issue, an obligation specifically referred to in the Agreement[48] and one of the items to be included in operating agreements (Article 5(1)). The Joint Development Zone area is traditionally one of the most important fishing grounds of the Japanese fishing industry, and the two countries have different views concerning compensation for alleged damage to the fishing industry in the Zone: it has been customary to make compensation for damage done to fishing in Japan but not so in Korea.

For purposes of liaison between the two governments, a Joint Commission was set up, with two national sections, each composed of two members appointed by their governments (Article 24). Being a consultative body rather than a powerful joint authority, the Joint Commission has set up a joint subcommittee of experts for practical discussion of technical matters. The Joint Commission has held intermittent meetings alternately in Tokyo and Seoul.

The first round of exploration work over a period of eight years came to an end in May 1987 when the duration of the exploratory licences expired.[49] As a result of consultations for a review of the allocation of the nine sub-zones and the test-drilling obligations, the two governments exchanged Notes on these matters[50] on 31 August 1987 to re-divide the Joint Development Zone into six sub-zones of more or less equal size and to ease the drilling obligations from eleven to seven in the light of the recent international crude market situation.[51]

3.2.4 Malaysia – Thailand Memorandum of Understanding of 21 February 1979

Malaysia and Thailand, together with Indonesia, delimited their continental shelf boundaries in the northern part of the Straits of Malacca in their Agreement of 21 December 1971. But in respect of the Gulf of Thailand, the two countries failed to agree on continental shelf boundary delimitation beyond a point approximately 39nm offshore, and put it aside for a period of fifty years during which they agreed to pursue joint development in the Memorandum of

47 See, for example, Miyoshi (1993).

48 The Joint Development Agreement, Article 27 provides:

> *Exploration and exploitation of natural resources in the Joint Development Zone shall be carried out in such a manner that* ***other legitimate activities*** *in the Joint Development Zone and its superjacent waters* ***such as navigation and fisheries will not be unduly affected*** (emphasis added).

49 The Joint Development Agreement, Article 10(2) provides that the term of the exploration right expires unless it is replaced by the exploitation right during its term of eight years.

50 The Joint Development Agreement, Article 3(2) permits the amendment of the Appendix thereto, which provides for six sub-zones, without modification of the Agreement itself, and Article 11(1) provides for a separate arrangement to be made for the number of wells to be drilled.

51 According to a telephone interview with an official at the Petroleum Development Division of the Petroleum Department, the Agency of Natural Resources and Energy of the Ministry of International Trade and Industry on 9 February 1993, the second round of exploration has since started only in terms of joint data analysis with respect to the past surveys while no surveys have been conducted in the meantime.

Figure 4: The Malaysia – Thailand Joint Development Area and Malaysia – Vietnam Defined Area

Understanding of 21 February 1979 (Article 3(1)) (see Figure 4).[52] Unlike Japan and South Korea in the East China Sea, however, they pledged:

> *...to continue to resolve the problem of the delimitation of the continental shelf in the Gulf of Thailand between the two countries by negotiations or such other peaceful means as agreed on by both Parties, in accordance with the principles of international law and practice especially those agreed to in the Agreed Minutes of the Malaysia-Thailand Officers' Meeting, 27 February-1 March 1978, and the spirit of friendship and in the interest of mutual security* (Article 2).

[52] For the text of the Memorandum of Understanding, see Charney and Alexander (1993: 1,107-1,110).

Indeed the two countries later succeeded in determining a partial boundary of the continental shelf between the outer limits of the territorial sea boundary and the top of the defined joint development area in another Memorandum of Understanding, dated 24 October 1979 (Article 1). In view of their failure to agree on the continental shelf boundary further offshore in the joint development area, they decided *"to continue negotiations to complete the delimitation of the continental shelf boundary of the two countries in the Gulf of Thailand"* (Article 3).

In the wedge-shaped heptagonal area agreed upon for joint development, a line of criminal jurisdiction runs from its top to bottom to bisect the wedge (Memorandum of February, Article 5). Thailand has criminal jurisdiction on the northern side of the line and Malaysia on the southern side. The line has, however, been drawn for criminal jurisdictional purposes only, and must not be construed as indicating the continental shelf boundary.[53] Nor must such jurisdictional definition prejudice the sovereign rights of either country in the joint development area (Article 5).

A striking feature of the Memorandum is a powerful Joint Authority. Composed of two Co-Chairmen, one from each country, and an equal number of members from each country, the Joint Authority assumes *"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 joint development area and also for the *"development, control and administration of the joint development area."* It exercises *"on behalf of both Parties all the powers necessary for, incidental to or connected with the discharge of its functions relating to the exploration and exploitation"* (Article 3).

In the implementation of the Memorandum of February 1979, some issues of a practical and technical nature arose, as might have been expected to some extent from the comparative simplicity of its provisions. Thus with the adoption of the Joint Authority Constitution on 19 October 1981[54], the need arose for an adjustment of the relevant domestic laws in the field of oil exploration and exploitation. While Malaysia introduced the system of production sharing contracts in 1976 as a result of its Petroleum Development Act of 1974, which afforded the basis for the establishment of PETRONAS, the national oil corporation, Thailand had no equivalent contract system. This necessitated coordination as to whether the Joint Authority should have powers of licensing, stipulating terms of licenses and authorising exemptions; whether mining activities under a production sharing contract should not be spelt out; and whether the Joint Authority's limit of flexibility should be clearly defined.[55]

Subsequently the two countries came to agree on such detailed technical points in the Agreement on the Constitution and Other Matters Relating to the Establishment of the Malaysia-Thailand Joint Authority of 30 May 1990.[56] Two major aspects of the new Agreement may be conveniently mentioned here. The first is the powers and functions of the Joint Authority, and the second is the adoption of a production sharing contract system.

The Joint Authority has now *"a juristic personality and such capacities as shall be provided for in the Acts of Parliament to be enacted by the Government of Malaysia and the Government of the Kingdom of Thailand"* as *"an integral part of this Agreement"* (Article 1(1), (2)). On the basis of its general strong powers of controlling *"all exploration and exploitation of the non-living*

53 No civil jurisdiction is provided in the Memorandum of Understanding of February, 1979.
54 See Ariffin, 1985: 534.
55 See Ariffin, 1985: 535.
56 For the text of this agreement, see Charney and Alexander (1993: 1,111-1,123).

resources in the Joint Development Area" and responsibility for *"the formulation of policies for the same"* (Article 7(1)), the Joint Authority has the powers and functions, *inter alia*, to decide on the plan of operation and the working programme; to permit operations and conclude transactions or contracts; to approve and extend the period of exploration and exploitation; to approve the work programmes and budgets of the contractor; to approve the production programmes of the contractor, including the production costs, conditions and schedules of the production; to inspect and audit the operator's books and accounts; to approve and award tenders and contracts (Article 7(2) (d), (e), (f), (g), (h)).

The Agreement of 1990 introduces a production sharing system, which was one of the focal points of difference in the negotiations between the two countries at the time of the 1979 Memorandum of Understanding.[57] Article 8(1) of the Agreement expressly provides: *"any contract awarded to any person for the exploration and exploitation of petroleum in the Joint Development Area shall...be a production sharing contract."* Such a production sharing contract is to include these terms and conditions, amongst others: the duration of the contract not exceeding 35 years; the payment of 10% of gross production of petroleum by the contractor to the Joint Authority as royalty; 50% of gross production to be applied by the contractor for the recovery of costs; the remainder of gross production to be profit and divided equally between the Joint Authority and the contractor; all costs of operations to be borne by the contractor; any dispute arising out of the contract to be referred to arbitration unless settled amicably (Article 8(2) (a), (b), (c), (d), (e), (h)).

3.2.5 Australia – Indonesia Treaty of 11 December 1989

Australia and Indonesia concluded two agreements on the delimitation of sea-bed boundaries, one in the Arafura Sea and the other in the offshore areas of West Timor in the early 1970s.[58] However, the two states were unable to determine the boundary off East Timor which belonged to a third country, Portugal, thus leaving the 'Timor Gap' of some 250km in length. In the negotiations between Australia and Portugal for boundary delimitation in the Timor Gap in 1974 and 1975, Australia based its position on the natural prolongation doctrine, as it had done in the 1971 and 1972 agreements with Indonesia, whereas Portugal favoured the median line principle in this sea area.

In December 1975, Indonesia made a military advance into East Timor, and formally incorporated it as the 27th province on 17 July 1976. Australia subsequently changed its policy and moved to negotiate a sea-bed boundary with Indonesia, rather than Portugal. It announced its intention of recognising Indonesian sovereignty over East Timor in December 1978,[59] and gave its *de jure* recognition to the Indonesian position in February 1979.[60] In October 1981, Australia and Indonesia signed a Memorandum of Understanding for a provisional fisheries surveillance and enforcement arrangement. The agreed provisional fisheries surveillance and enforcement line, broadly a median line, was understood however not to affect the sea-bed boundary negotiations (see Figure 5).[61]

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57 See Ariffin, 1985: 535.

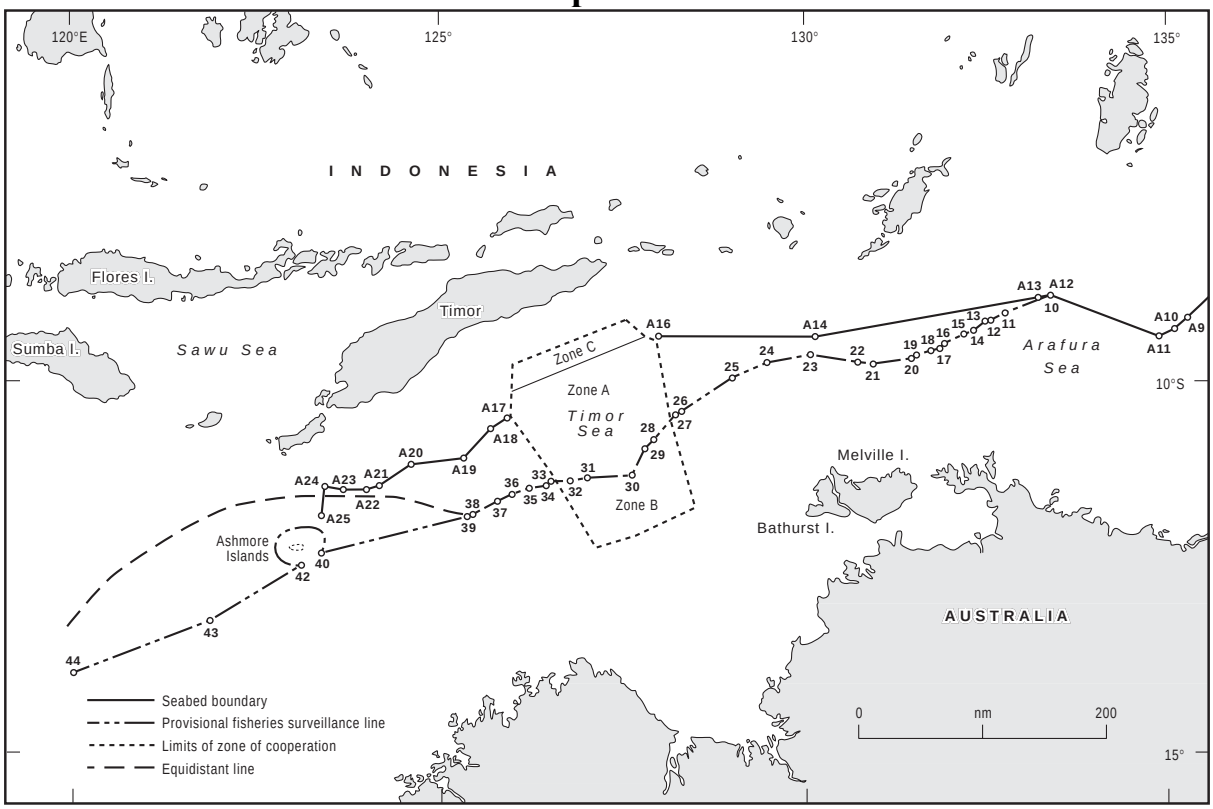
58 The Agreement of 18 May 1971, and the Supplementary Agreement of 9 October 1972. For their text, see Charney and Alexander (1993: 1,202-1,205 and 1,215-1,218).

59 For example, a government reply to Parliament on 22 August 1985 made this clear (*Australian Yearbook of International Law*, Vol. 11 (1984-877): 239).

60 Bergin, 1990: 384.

61 Memorandum of Understanding of 29 October 1981, para. (6). For the text of the Memorandum, see Charney and Alexander (1993: 1,238-1,239).

Figure 5: The Australia – Indonesia Zone of Cooperation



In the meantime, oil exploration work which had been going on since the mid-1970s led to the discovery of a promising oil well some 200km to the west of the Timor Gap in 1983.[62] The ICJ judgment in the *Libya/Malta Continental Shelf* case of 1985, which adopted the 'distance criterion' as the basis of title to the continental shelf[63] weakened Australia's position based largely on natural prolongation. This seems to have enhanced the urge to conclude an early practical agreement on the exploitation of oil. Thus the two countries came to agree in principle to shelve the issue of boundary delimitation in the Timor Gap area in favour of a joint development scheme.[64] At the time of the Australian foreign minister's visit to Indonesia in 1988, the two countries agreed on basic principles for the establishment of a *"zone of cooperation"*, and formally signed the Treaty on the Zone of Cooperation on 11 December 1989.[65]

The Treaty on the Zone of Cooperation has 34 Articles with four Annexes: Annex A, *"Designation and Description Including Maps and Coordinates of the Areas Comprising the Zone of Cooperation"*; Annex B, *"Petroleum Mining Code for Area A of the Zone of Cooperation"*; Annex C, *"Model Production Sharing Contract between the Joint Authority and (Contractors)"*; and Annex D, *"Taxation Code for the Avoidance of Double Taxation in Respect of Activities Connected with Area A of the Zone of Cooperation."* It is by far the most detailed agreement ever concluded for joint development, and has almost all conceivable technical points prescribed in it and its Annexes.

62 For example, the Australian Minister of Natural Resources and Energy testified to this effect at a Parliament session on 8 September 1983. *Australian Yearbook of International Law*, Vol. 10 (1981-83): 349.

63 *ICJ Reports 1985*: 46-57, paras. 61-62.

64 Bergin, 1990: 384.

65 Bergin, 1990: 384-385.

The Zone of Cooperation comprises three Areas: Area A under joint control, Area B under Australian jurisdiction and Area C under Indonesian jurisdiction. The northern limit of the Zone is a simplified line of the bathymetric axis of the Timor Trough, its southern limit the limit of the 200nm exclusive economic zone (EEZ) of the Island of Timor, the boundary between Area A and Area C is a simplified line of 1,500 metre isobath, the boundary between Area A and Area B is a median line between East Timor and Australia, whilst the East and West limits of the Zone are simplified equidistant lines.[66]

In delimiting the Zone of Cooperation, use was made of both the Timor Trough and median lines, ensuring both the Australian position of natural prolongation and the Indonesian median line principle.[67] Indeed the Treaty itself lays down that nothing in it shall prejudice the position of either country on a permanent continental shelf boundary nor its sovereign rights in the Zone, and that the two countries will continue their efforts for permanent boundary delimitation (Article 2(3), (4)). In this sense the Treaty has set up a provisional regime for a period of 40 years, after which it will continue in force for successive terms of 20 years unless the two countries agree on permanent boundary delimitation by the end of each term, including the initial term of 40 years (Article 33(1), (2)).

In Area A the rights and responsibilities of the two countries are exercised by a Ministerial Council and Joint Authority, and petroleum operations are carried out through production sharing contracts to be entered into between the Joint Authority and limited liability corporations specifically established for the sole purpose of the contract (Article 3(1), (2)). In Area B Australia notifies Indonesia of the grant, renewal, surrender, expiry and cancellation of titles made by Australia being exploration permits, retention leases and production licenses, and pays to Indonesia 10% of gross Resource Rent Tax collected from corporations (Article 4(1)). In Area C Indonesia notifies Australia of the grant, renewal, surrender, expiry and cancellation of petroleum exploration and production agreements made by Indonesia, and pays to Australia 10% of Contractors' Income Tax collected from corporations (Article 4(2)).

The Ministerial Council consists of an equal number of Ministers designated for that purpose by the two countries (Article 5(2)). The Council has overall responsibility for all matters relating to exploration and exploitation in Area A, and its major functions include: giving directions to the Joint Authority, amending the Petroleum Mining Code, modifying the Model Production Sharing Contract, approving production sharing contracts, approving the Joint Authority's marketing of petroleum production, approving the distribution of revenues in Area A to the two countries, settling disputes in the Joint Authority, inspecting and auditing the Joint Authority's books and accounts, etc. (Article 6(1)).

The Joint Authority has juridical personality and such legal capacities under the laws of the two countries as are necessary for the exercise of its powers and the performance of its functions. It is responsible to the Ministerial Council, and has its head office in Indonesia and an office in Australia, each headed by an Executive Director (Article 7(3), (5)). It consists of Executive Directors appointed by the Ministerial Council comprising an equal number of persons from each country, and the Technical, Financial and Legal Directorates as well as the Corporate Services Directorate. The Executive Directors and the four Directors constitute the Executive Board (Article 9(1), (4)). Its very detailed management functions include, amongst others: dividing Area

66 See Figure 5.
67 Bergin, 1990: 385.

A into contract areas, issuing prospecting approvals, commissioning environmental investigations, advertising of contract areas, assessing applications, etc. (Article 8).

Cooperation in Area A is specified by clauses on surveillance, security matters, search and rescue, air traffic services, hydrographic and seismic surveys, marine scientific research, protection of the marine environment, liability of contractors for pollution of the marine environment, unitisation between Area A and areas outside it, and construction of facilities (Articles 12-21). Provisions for applicable laws cover the law applicable to production sharing contracts, application of customs, migration and quarantine laws, employment, health and safety for workers, petroleum industry vessels, criminal jurisdiction, civil actions, and the application of taxation law (Articles 22-29).

The extremely detailed provisions in the main Treaty and its Annexes seem to be designed for all conceivable matters and circumstances relating to petroleum exploration and exploitation in the Zone of Cooperation. It would seem that the Treaty was drawn up after elaborate research into past joint development agreements[68]and the work of the British Institute of International and Comparative Law on joint development, which had been completed just a few months before it was signed.[69]

Subsequently the two countries signed the Treaty Establishing an Exclusive Economic Zone Boundary and Certain Seabed Boundaries on 14 March 1997. Under this new Treaty three maritime boundaries are put in place:

1. The western extension of the sea-bed boundary which, at the western end, recognises the maximum extension of the Australian continental shelf claimable under the UN Convention on the Law of the Sea, and moves east following a median line between the natural prolongation of the Australian continent and the agreed EEZ boundary, then moving south to the Provisional Fisheries Surveillance and Enforcement Line (PFSEL), and then following a straight line to the westernmost point of the 24nm radial limit around the Ashmore Islands. The sea-bed boundary then follows the 24nm limit around the islands until it intersects with a straight line drawn south from the concluding point of the 1972 sea-bed Agreement (Article 1);

2. The complete EEZ (water column) boundary between continental Australia and Indonesia which generally follows the PFSEL, a *de facto* water column line since 1981, with two adjustments, one the extension of the boundary in a north-westerly direction to the existing intersection of the Australian and Indonesian EEZ boundaries with the high seas, and the other the replacement of the 12nm radial limit of the PFSEL around the Ashmore Islands with one of 24nm (Article 2); and,

3. The Christmas Island-Java boundary, a combined EEZ/sea-bed boundary in a single line, which is an adjusted median line constructed by two straight-line segments extending from a point on the line of shortest distance between Christmas Island and Java to the

[68] As the author participated in all the workshops on joint development sponsored by the East-West Centre in the early 1980s, he can bear witness to the keen interest which the lawyers from the Australian government showed in, for example, the applicable law and jurisdictional issues at the third workshop in Bangkok in 1985. In retrospect they would then have been working closely on such issues in preparation for what was later to become the 1989 Treaty. No Australian lawyer had participated in the first two workshops in 1980 and 1983.

[69] Fox, 1989.

intersections of the boundaries of the Indonesian EEZ and Australian EEZ to the west and east of Christmas Island (Article 3).[70]

The 1997 Treaty is understood not to affect the legal regime of the Treaty on the Zone of Cooperation of 1989,[71] although the EEZ boundary which is only relevant to the water column runs through the Zone of Cooperation as did the PFSEL.

3.2.6 Malaysia – Vietnam Memorandum of Understanding of 5 June 1992

Malaysia and Vietnam signed a Memorandum of Understanding for the exploration and exploitation of petroleum in the Gulf of Thailand on 5 June 1992. It was known for many years that there were overlapping claims between the two countries over the continental shelf in that sea area.[72] As a result, the parties thought it in their best interests, pending delimitation of the continental shelf boundary, to enter into an *"interim arrangement for the purpose of exploring and exploiting petroleum in the seabed in the overlapping area"* (Preamble).

Little is known about matters other than those laid down in the skeleton Memorandum which has yet to be ratified. Diplomatic notes are to be exchanged between the governments, which will specify the duration of the Memorandum (Article 5) and the date of its entry into force (Article 7), but to the best of this author's knowledge no such exchange has been made. A skeleton memorandum of understanding followed by a detailed agreement is not unprecedented: the Malaysia-Thailand Memorandum of Understanding of 1979 was duly supplemented by their subsequent Treaty of 1990. What follows is a brief outline of the Memorandum of Understanding between Malaysia and Vietnam of 1992.

The overlapping claim area, named the *"Defined Area"*, is bounded by a series of straight lines joining six coordinated points off the northeast coast of West Malaysia and off the southwest coast of Vietnam (Article 1(1)) (see Figure 4). According to the Memorandum the actual location of those points will be determined by a method to be agreed upon between the Directorate of National Mapping of Malaysia and the Department of Geo-Cartography and the Navy Geo-Cartography Section of Vietnam (Article 1(2)). In the event of an oil field being discovered partly in the Defined Area and partly outside it, a unitisation procedure will come into play (Article2(2)). All costs and benefits derived from the exploration and exploitation in the Defined Area are to be borne and shared equally by the two countries (Article 2(3)).

In respect of management, PETRONAS for Malaysia and PETROVIETNAM for Vietnam will undertake exploration and exploitation (Article 3(a)). Those two national oil companies will enter

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70 The Government of Australia, *Explanatory Notes* on the Treaty of 1997, para. 5, *International Legal Materials*, Vol. 36 (1997): 1066.

71 Article 8 of the 1997 Treaty provides:

1. *Nothing contained in this Treaty affects the rights and obligations of either Party as a Contracting State to the Zone of Cooperation Treaty.*
2. *Nothing contained in this Treaty and no acts or activities taking place pursuant to this Treaty shall be interpreted as prejudicing the position of either Party on a permanent seabed delimitation in the Zone of Cooperation established under the Zone of Cooperation Treaty nor shall anything contained in this Treaty be considered as affecting the respective seabed rights claimed by each Party in the Zone of Cooperation.*

72 See, for example, a brief mention made of the overlap of claims between Malaysia and Vietnam in the Gulf of Thailand in Valencia and Van Dyke (1994: 218-219).

into a commercial arrangement for the exploration and exploitation of petroleum in the Defined Area, subject to the approval of their respective governments (Article 3(b)).

It was agreed that as the Memorandum is an *"interim arrangement"* for the specific purpose of exploring and exploiting oil in the Defined Area, the positions and claims of the two countries in relation to and over it are not to be prejudiced by any provisions in the Memorandum (Preamble, Article 4(a)). As for the settlement of disputes that may arise out of the interpretation or implementation of the Memorandum, the method chosen is *"consultation or negotiation"*[73] (Article 6).

3.2.7 Colombia – Jamaica Treaty of 12 November 1993

The Maritime Delimitation Treaty between Jamaica and the Republic of Colombia of 12 November 1993 is an agreement partly concerned with delimiting a sea area and partly with establishing a joint development zone where the parties were unable to agree on delimitation. In the western Caribbean sea with complex geographical configurations of the coastal states, Colombia has negotiated a number of boundary delimitations with its neighbours.[74] For Colombia this agreement is the penultimate agreement, another such agreement with Nicaragua remaining to be concluded. To Jamaica, however, this represents its first-ever maritime boundary delimitation agreement.[75]

This treaty, partly defining a boundary and partly a joint regime area, resembles the Japan-South Korea continental shelf agreements of 1974 combined: one agreement relating to the northern part of the zone dealt with delimitation in the Sea of Japan while that concerned with the southern part established a joint development zone in the East China Sea where the two Far Eastern countries were unable to agree on a boundary line.[76]

Here, the eastern boundary delimitation will be briefly touched on, then the joint area will be dealt with in some detail. As is apparent from a map of the western part of the Caribbean Sea, the scope of any bilateral boundary delimitation is limited by other delimitations within the region. The present treaty is no exception; indeed it is bound up with not only Colombia's other delimitations with its neighbours but also the other delimitations between the other states in this region.[77] Particularly relevant are the 1986 Colombia-Honduras treaty to the west and the 1978

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73 This method of consultation or negotiation, not relying on a third-party procedure, has been the most basic form of dispute settlement between states and nothing unusual in the past international agreements on boundary delimitation or joint development. However, socialist countries have stuck to the idea of direct negotiations for dispute settlement, and it is possible that Vietnam, a socialist country, may have insisted on it.

74 See the Colombia-Costa Rica Treaty on Delimitation of Marine and Submarine Areas and Maritime Co-operation of 17 March 1977 (Charney and Alexander, 1993: 464-476); the Colombia-Dominican Republic Agreement on the Delimitation of Marine and Submarine Areas and Maritime Co-operation of 13 January 1979 (*ibid*.: 477-490); the Colombia-Haiti Agreement on the Delimitation of Maritime Boundaries of 17 February 1979 (*ibid*.: 491-502); the Colombia-Honduras Maritime Delimitation Treaty of 2 August 1986 (*ibid*.: 503-518); and, the Colombia-Panama Treaty on the Delimitation of Marine and Submarine Areas and Associated Matters of 20 November 1976, (*ibid*.: 519-535).

75 Nweihed, 1998: 2,179. Since its independence in 1962, Jamaica remained cautious and conservative in adopting emergent maritime legal regimes (*Ibid*.: 2,183).

76 See Section 3.2.3.

77 See, besides the Colombian agreements mentioned in note 72 above, the Costa Rica-Panama agreement of 1980, the Cuba-Haiti agreement of 1977, the Cuba-Mexico agreement of 1976, the Dominican Republic-

Colombia-Haiti agreement to the east. Any future Colombia-Nicaragua agreement would also be significant. Nicaragua has made repeated claims to Colombia's insular territory by granting oil concessions on the continental shelf to the east of meridian 82°00'00"W from the late 1960s.[78] The 82°W meridian was virtually established as the boundary of the maritime zones of jurisdiction between Colombia and Nicaragua in their 1928-30 Treaty.[79] Furthermore, there exists the potential for dispute with Honduras, which also seems to claim some Colombian insular territory. This is implied by the failure of Honduras to ratify its 1986 treaty with Colombia.[80]

Despite these potential disputes, the present treaty defines the boundary in the eastern sector by a combination of geodesic lines drawn between four specified geographical coordinates, with the boundary line proceeding eastwards in the direction of the Colombia-Haiti boundary line until it is intercepted by the future Jamaica-Haiti boundary line (Article 1) (see Figure 6). What is interesting to note in terms of resource development is that although the boundary line in the eastern sector is thus defined, any hydrocarbon resource found straddling the line will be exploited in such a manner that the distribution of the extracted resource should be proportional to the volume of the same resource found on each side of the line (Article 2). This is a unitisation clause in a simplified form.

In the western sector of the treaty area the parties agreed to set up a *"Joint Regime Area"* (JRA), a *"zone of joint management, control, exploration and exploitation of the living and non-living resources"*, *"[p]ending the determination of the jurisdictional limits of each Party"* (Article 3(1)). The JRA, designated by geodesic lines joining nine specified points, is broadly an inverted triangle-shaped zone, and connected to the eastern delimitation line at its apex. Within its designated geographical area, however, two circles with a radius of 12nm are described around the cays of Serranilla at the western end and the cays of Bajo Nuevo at the eastern end, both *prima facie* belonging to Colombia.[81] The zones around the cays are excluded from the legal regime of the JRA. On the other hand, Alice Shoal, which belongs to Jamaica,[82] is enclosed in the JRA in a rectangular protrusion from the base of the inverted triangle. Thus the JRA has a surface area of some 4,500nm^2, not including the two enclaves of some 45nm^2.[83]

In the JRA the parties may carry out these activities:

> *(a) Exploration and exploitation of the natural resources, whether living or non-living, of the waters superjacent to the seabed and the seabed and its subsoil, and other activities for the economic exploitation and exploration of the Joint Regime Area;*

Venezuela agreement of 1979 (Charney and Alexander, 1993: 537-549, 551-563, 565-576 and 577-590). For a discussion of the rationale for multilateral maritime boundary delimitation in lieu of a network of bilateral boundaries, see Miyoshi (forthcoming, 1998).

78 Nweihed, 1993a: 505.

79 Nweihed, 1993b: 465.

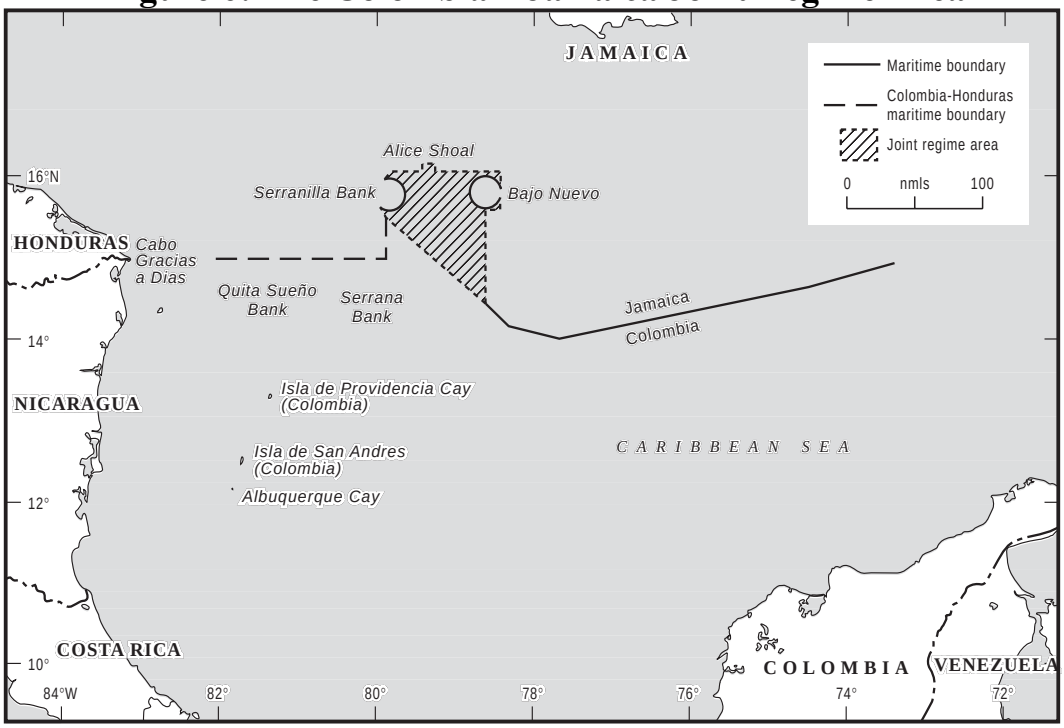
80 Nweihed, 1998: 2,192.

81 The treaty does not specify which state has sovereignty or jurisdiction over the cays. Honduras lays claim to Serranilla, and Jamaica may be assumed to have preferred to avoid direct recognition of Colombia's sovereignty over the two enclaves. But Jamaica agreed to define these enclaves in the legend of the chart attached to the treaty as *"Colombia's Territorial Sea in Serranilla and Bajo Nuevo"* (Nweihed, 1998a: 2,192).

82 Nweihed, 1998: 2,191.

83 *Ibid.*: 2,181.

Figure 6: The Colombia – Jamaica Joint Regime Area



(b) *The establishment and use of artificial islands, installations and structures; and,*

(f) *Such measures as are authorised by the Treaty, or as the Parties may otherwise agree for ensuring compliance with and enforcement of the regime established by this Treaty* (Article 3(2)).

These provisions show that the treaty is designed for the EEZ with its living and non-living resources. For purposes of this paper, what follows will be an analysis of the matters concerning non-living resources, with some incidental discussion of those relating to living resources.

The exploration and exploitation of non-living resources, as well as marine scientific research and the protection and preservation of the marine environment, are to be carried out on a joint basis agreed upon between the parties (Article 3(3)). Thus the *"joint basis"* can vary, being open to subsequent agreement. On the face of it, any arrangement for the *"joint basis"* is to be made by the parties. However, a Joint Commission, to be set up with one representative from each party (Article 4(2)), will be responsible for the elaboration of the *"modalities for the implementation and the carrying out of the activities set out in paragraph 2 of article 3"* and *"carry out functions which may be assigned to it by the Parties for the purpose of implementing the provisions of this Treaty"* (Article 4(1)). It is possible, therefore, that the Joint Commission, if assigned the job, may help to formulate the *"joint basis."*

In respect of management and control over activities in the JRA, there are some controversial points in the treaty provisions. First, third states and international organisations or vessels of such states and organisations are not authorised to carry out any of the activities (a) to (f) as listed above (Article 3(4)). Put simply, this appears to be a total exclusion of third states from the EEZ of the signatories, and can be interpreted as being contrary to the provision of the UN Convention on the Law of the Sea, which both signatories have ratified, that coastal states must give third states access to the surplus of the allowable catch in the EEZ under certain conditions.[84] The

[84] UN Convention on the Law of the Sea, Article 62, paragraph 2.

parties are not, however, precluded from entering into or authorising arrangements for leases, licenses, joint ventures or technical assistance programmes (Article 3(4)).

Secondly, in the JRA the parties have their *"flag State jurisdiction"* over their nationals and vessels. However, when one of the parties alleges a breach of the treaty provisions by nationals or vessels of the other party, that party brings it to the attention of the other party, so that both parties may forthwith commence consultations with a view to an amicable settlement within 14 days. Upon receipt of the allegation, the recipient party must ensure that the alleged breach not recur (Article 3(5)). If the JRA is a joint zone, it may be argued that jurisdiction may also be jointly exercised. But the parties have not adopted this method.

Thirdly, the parties have agreed to adopt measures ensuring that nationals and vessels of third States comply with any regulations and measures implementing the activities (a) to (f) listed above (Article 3(6)). This is the other side of the coin of the exclusion of third states from the mentioned activities in the JRA. But the treaty says nothing as to which of the parties will take enforcement action against breaches of such regulations and measures by third states' nationals or vessels.

A Joint Commission of one representative from each party will be established with the functions to *"elaborate the modalities for the implementation and the carrying out of the activities set out in paragraph 2 of article 3, the measures adopted pursuant to paragraph 6 of article 3 and carry out any other functions which may be assigned to it by the Parties for the purpose of implementing the provisions of this Treaty"* (Article 4(2), (1)). The conclusions of the Joint Commission, adopted by consensus, are recommendations to the parties, but when adopted by the parties, are binding on them (Article 4(3)). Its functions are not specified in such detail as in some other joint development agreements, but to the extent that the parties are ready to adopt its conclusions, it has fairly strong powers. Any dispute which may arise between the parties concerning the interpretation or application of the treaty is settled by agreement between them in accordance with international law (Article 7). No means of third party settlement is provided. Interestingly the treaty has no provision for its duration.

3.2.8 Argentina – United Kingdom Joint Declaration of 27 September 1995

Chronologically, discussion of the Argentine-British joint development arrangement of 1995 may conveniently be started from the aftermath of the 1982 Falklands war.[85] On 29 October 1986 the British government established a *"Falkland Islands Interim Conservation and Management Zone"*, with a view to bringing the growing fishing operations on the high seas around the Falklands under control. With due regard to the entitlement to 200nm, the zone extended to 150nm from the centre of the Falkland Islands but was modified in the south-west to reduce the area of potential overlap with Argentina's then 200nm territorial sea,[86] perhaps partly because its immediate predecessor was the Total Exclusion Zone aimed at excluding Argentine ships and aircraft from the Falklands region during and following the 1982 conflict.[87] On 28 November 1990, following a series of meetings between Argentine and British officials, a Joint Statement on

[85] For a brief history of the dispute over the Falkland Islands between Argentina and the United Kingdom, see, for example, Armstrong and Forbes (1997: 4-12); Evans (1991: 473-482); and, Wälde and McHardy (1996: 301).

[86] Churchill, 1997: 463.

[87] Armstrong and Forbes, 1997: 14; Evans, 1991: 478.

the Conservation of Fisheries was issued in which the two governments would cooperate over the conservation of fish stocks in the South Atlantic Ocean between 45°S and 60°S.[88]

In a subsequent Proclamation of the Governor, dated 22 November 1991, some areas of the continental shelf were defined as *"designated areas"* to coincide with the total area over which fisheries jurisdiction is asserted.[89] This Proclamation, together with the Continental Shelf Ordinance of 1991 passed by the Legislative Council of the Colony of the Falkland Islands, provided an interim framework for preliminary exploration of the continental shelf within the designated areas, thus allowing a number of exploratory activities to make petroleum geologists reasonably hopeful of prospects in those areas.[90] Again a further Offshore Minerals Ordinance of October 1994, with detailed provisions for licensing and other practical matters in six parts and four schedules, replaced the Continental Shelf Ordinance of 1991.[91]

On the other hand, Argentina still claims the islands, as it has done for well over a century. It continues to pass legislation pertaining to the islands, which, according to certain sources, might include taxation on companies benefiting from any future Falklands oil bonanza. This will make companies with substantial investments in Argentina cautious, while it may also be noted that Argentine passport holders are not allowed onto the islands and that an applicant group with more than 49% Argentinean interests will not be granted licenses.[92]

Thus starting from the Joint Statement on the Conservation of Fisheries on 28 November 1990, the two countries were slowly to head towards a joint development scheme in the field of oil and gas. The cautiously drafted Joint Statement notes that nothing in the conduct or content of any meetings between the two countries must be interpreted to mean a change in the position of either country with regard to *"the sovereignty or territorial or maritime jurisdiction over the Falkland Islands, South Georgia, the South Sandwich Islands and the surrounding maritime areas"* (Para. 1). This same 'without prejudice' clause was to be repeated in the Joint Declaration on Cooperation over Offshore Activities in the South West Atlantic of 27 September 1995 (Para. 1(1), (2)). Even more noteworthy is Argentina's confirmation of its position of sovereignty over the mentioned island groups in its Presidential Declaration made upon ratification of the UN Convention on the Law of the Sea of 18 October 1995, three weeks after the Joint Declaration.[93]

After a reaffirmation of the reserved issue of sovereignty and jurisdiction following the formula of the Joint Statement of 19 October 1990 (Para.1), the Joint Declaration provides for a scheme of cooperation in the exploration for and exploitation of hydrocarbons in a specified *"Special Area"* (see Figure 7):

88 Joint Statement, para. 2.

89 Governor's Proclamation, paras. 2, 3.

90 Armstrong and Forbes, 1997: 20-22.

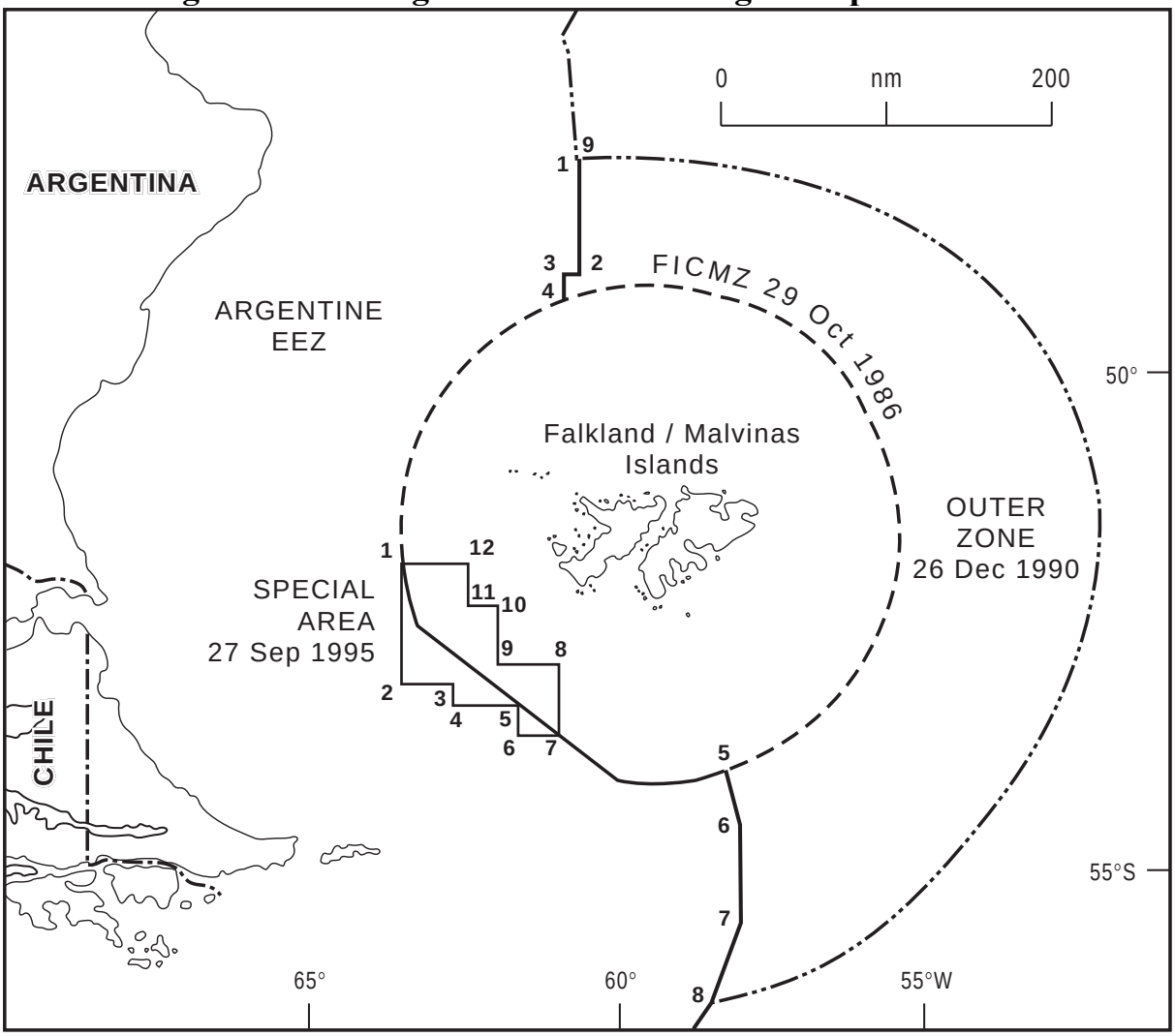
91 Wälde and McHardy, 1996: 301.

92 Armstrong and Forbes, 1997: 28-29.

93 The Declaration Made Upon Ratification of the United Nations Convention on the Law of the Sea, dated 18 October 1995, operative paragraph (d)(4):

> *The Argentine Republic reaffirms its legitimate and inalienable sovereignty over the Malvinas and the South Georgia and South Sandwich Islands and their respective maritime and island zones, which form an integral part of its national territory...*

Figure 7: The Argentina – United Kingdom Special Area



The two Governments agreed to cooperate in order to encourage offshore activities in the South West Atlantic in accordance with the provisions contained herein. Exploration for and exploitation of hydrocarbons by the offshore oil and gas industry will be carried out in accordance with sound commercial principles and good oil practice, drawing upon Governments' experience both in the South West Atlantic and in the North Sea. Cooperation will be furthered:

> *(a) by means of the establishment of a Joint Commission, composed of delegations from both sides;*
>
> *(b) by means of coordinated activities in up to 6 tranches, each of about 3,500km², the first ones to be situated within the sedimentary structure as identified in the Annex* (Para. 2).

The Joint Commission's functions include: the submission to both governments of recommendations and proposed standards for the protection of the marine environment; the coordination of activities in the tranches; the promotion of the exploration for and exploitation of hydrocarbons; the proposition to the two governments of further areas of special cooperation on the basis of geological data known to both sides; and the consideration and submission of recommendations to the two governments on any related matter which may arise in the future,

including the possible need to agree on the unitisation of any discoveries in accordance with good oil field practice, on pipeline operations and on the efficient use of infrastructure. (Para. 4(a)-(e)).

With respect to the coordination of activities in the tranches, a sub-committee will be established and, under the supervision of the Joint Commission,

> *(i) encourage commercial activities in each tranche by means such as joint ventures and consortia from the two sides,*
> *(ii) seek nominations from companies for each tranche, to be offered upon terms appropriate for a challenging environment,*
> *(iii) make recommendations on proposals made to the two governments by companies for development projects in each tranche, including the limits of the tranches,*
> *(iv) seek close co-ordination in regard to all aspects of future operations, including overall levels of fees, royalties, charges and taxes, the harmonisation of timing, commercial terms and conditions, and compliance with recommended standards,*
> *(v) recommend on the basis of geological data known to both sides, additional tranches either within the sedimentary structure referred to in the Annex or in a further area to be agreed by the governments on the recommendation of the Commission* (Para. 4(b)).

Thus the UK-Argentine Joint Commission would seem to have powers somewhere between those of the liaison-type Japanese-Korean Joint Commission and those of the strong-powered Thai-Malaysian Joint Authority or of the Australian-Indonesian Joint Authority.

Finally, it is worth noting that the Joint Declaration lacks both the duration of the arrangement and any provision on criminal jurisdiction over exploration or exploitation activities in the Special Area. Even so, as the UK government acknowledges, the understanding would be a welcome one *"as a beneficial factor which will ensure the oil industry and improve the climate for exploration for and exploitation of hydrocarbons in a frontier area."*[94]

3.3 Joint Development Agreements Where Boundaries Are Delimited

There are some precedents for joint development in sea areas where boundaries are determined. The countries concerned have opted to define an area for joint development in addition to the boundary delimitation, across or beyond the boundary line or beyond the agreed bathymetry for some practical reasons.

3.3.1 Bahrain – Saudi Arabia Agreement of 22 February 1958

In the Agreement concerning the Delimitation of the Continental Shelf of 22 February 1958, the first boundary agreement to be concluded in the Arabian Gulf, Bahrain and Saudi Arabia devised a kind of joint development area for equal revenue sharing, in addition to boundary delimitation.

[94] Declaration of the British Government with regard to the Joint Declaration Signed by the British and Argentine Foreign Ministers On Cooperation Over Offshore Activities in the South West Atlantic, para. 4. But see Churchill (1997: 476), for a more cautious evaluation of the joint arrangements.

In 1941 the Bahrain Petroleum company, BAPCO, was granted exploration rights in the Fasht Abu-Sa'fah oil field. When Saudi Arabia objected to this, BAPCO suspended operations and the two governments entered into negotiations. Bahrain proposed a division of the oil field, but the two governments were unable to agree on how the oil field should be divided. They agreed instead to delimit the northern sector of their continental shelf boundary so that it might coincide with the limits of the oil field by placing the field entirely on Saudi Arabia's side of the boundary, and equally to share oil revenues from the field.[95]

The agreed boundary is a median line, and as Bahrain had proposed in the negotiations, one disputed island Al Baina As Saghir was left to Bahrain while the other disputed island Al Baina As Kabir left to Saudi Arabia (First Clause, Paras. 8 and 9).

But unusually, a clearly defined hexagonal area was added to the delimitation as a kind of joint development area (see Figure 8). The whole of this area lies on the Saudi Arabian side of the boundary line *"in accordance with the wish of H.H. the Ruler of Bahrain and the agreement of H.M. the King of Saudi Arabia."* In the area thus designated the exploitation of oil will be carried out in such a way as the Saudi Arabian government chooses, but on the condition that it grants to Bahrain 50% of the net revenue accruing to it (Second Clause). This revenue sharing arrangement, however, does not affect Saudi Arabian sovereignty nor right of administration over the hexagonal area. (Second Clause)

3.3.2 France – Spain Agreement of 29 January 1974

On 29 January 1974 France and Spain concluded a Convention on the Delimitation of the Continental Shelf in the Bay of Biscay, together with a Convention on the Delimitation of the Territorial Sea and Contiguous Zone in the Bay of Biscay, and delimited a boundary line. Starting from the midpoint of a negotiated closing line across the Bidassoa estuary mouth, the boundary line extends through a series of designated turning points and terminates at a point on a construction line between Cabo Ortegal on the Spanish coast and Pointe du Raz on the French coast (see Figure 9).[96]

The Continental Shelf Convention, in addition to the said delimitation of the boundary, lays down a joint development scheme as a complementary system. Article 3 of the Convention provides:

> *1. The contracting parties agree to apply the complementary procedures provided in Annex II for the awarding of rights of exploration and exploitation of natural resources in the zone defined by the geodetic lines joining the following coordinates...*

The joint development zone thus defined lies across the last seaward segment of the continental shelf boundary line, with an area of 814nm².[97]

Under the provisions applicable to the zone, as laid down in Annex II of the Convention, the two countries encourage exploitation of the zone conducive to equal shares of its resources (Para.1), and consistent with this principle, undertook to encourage agreements between

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95 Pietrowski, 1993: 1,490.

96 Convention on the Delimitation of the Territorial Sea and Contiguous Zone, Article 2(1), and Convention on the Delimitation of the Continental Shelf, Article 2(1). For more details, see The Geographer (1979: 10-15).

97 The Geographer, 1979: 15.

Figure 8: The Bahrain – Saudi Arabia Revenue Sharing Area

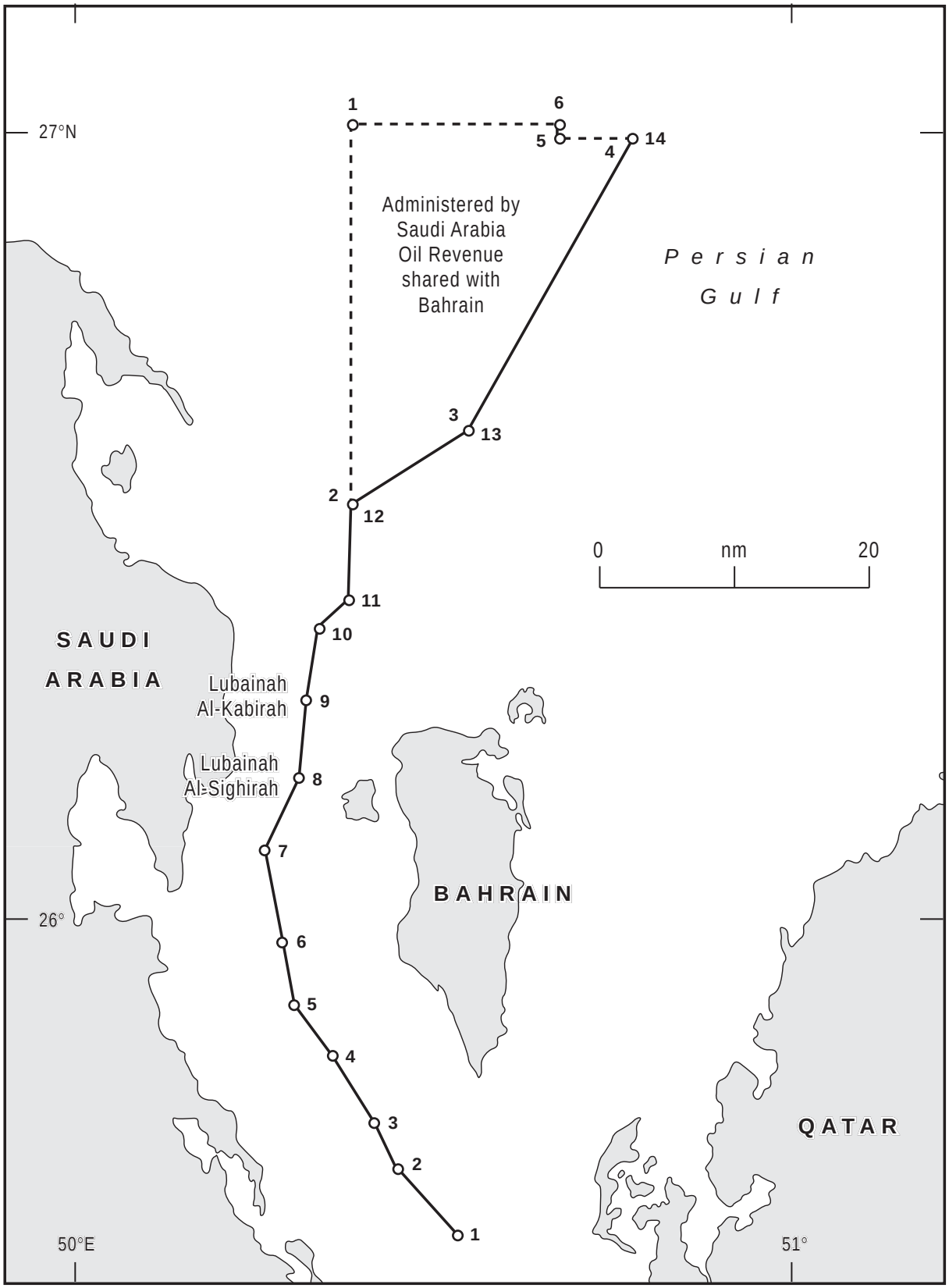
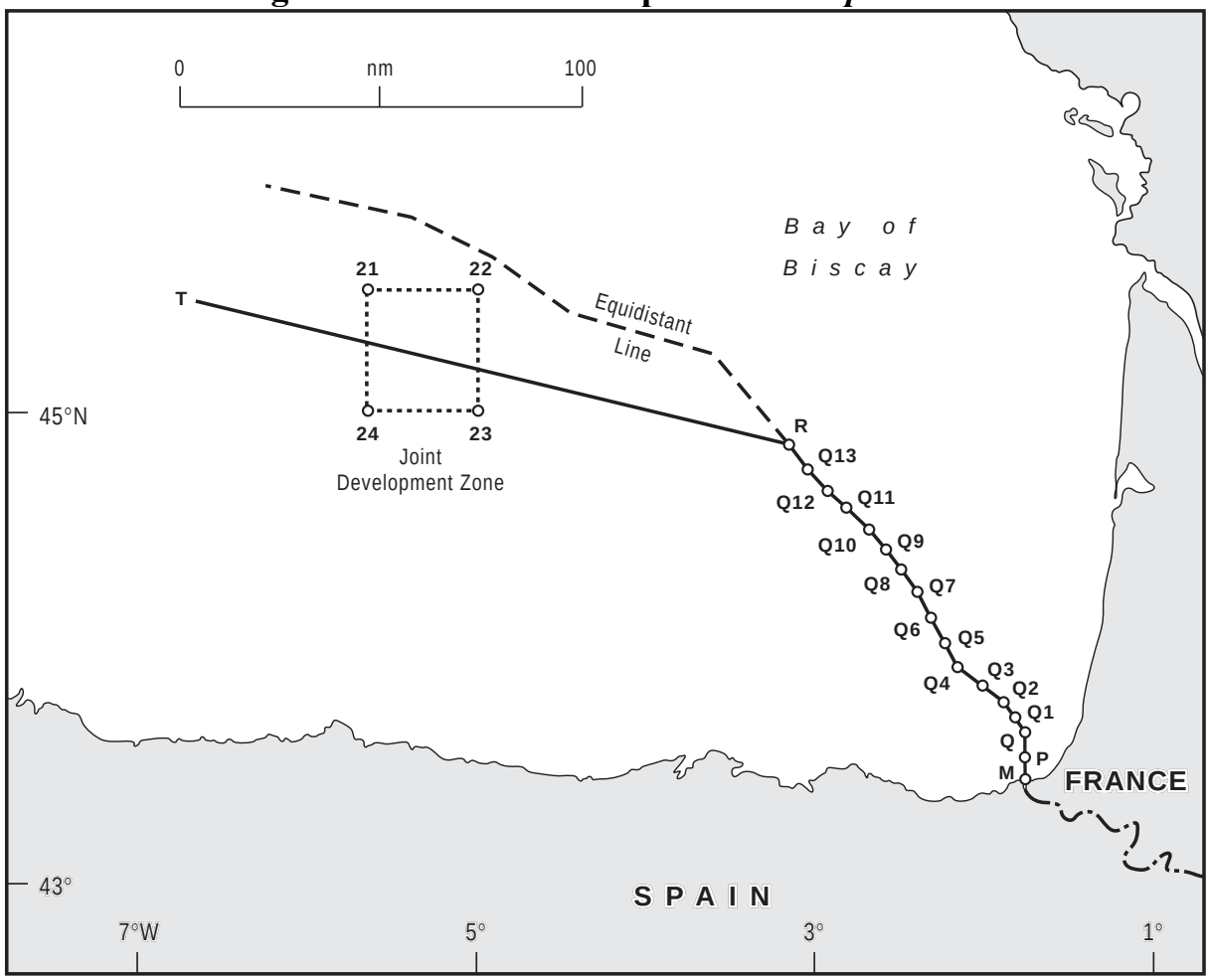


Figure 9: The France – Spain *"Zone Speciale"*



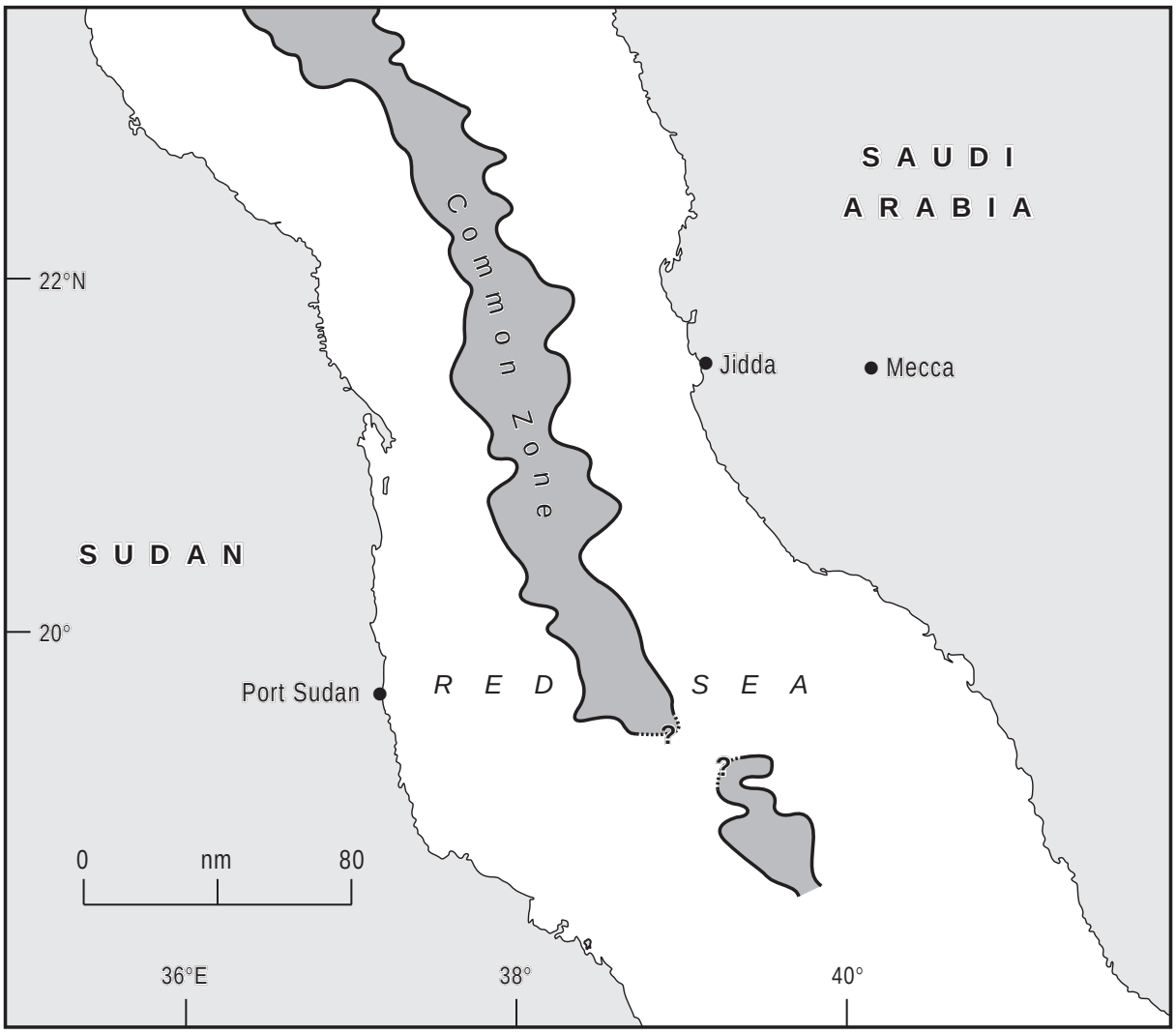
companies applying for exploration rights in the zone in order to permit the companies of the other country's nationality to participate in such exploration on an equal partnership basis and with financing of operations proportional to each company's interests (Para.2). The two countries further undertook to adopt appropriate procedures for encouraging the mentioned partnership agreements and also for a system of exporting to one country the products obtained from the exploitation in the other country's sector of the zone by the company or companies designated by the first country (Para. 7). Needless to say that since the continental shelf boundary is defined and the joint development zone straddles it, the line also constitutes the jurisdiction line.

3.3.3 Saudi Arabia – Sudan Agreement of 16 May 1974

By an Agreement Relating to the Joint Exploitation of the Natural Resources of the Seabed and Subsoil of the Red Sea in the Common Zone of 16 May 1974, Saudi Arabia and Sudan established a joint development system with some unique features.

The Common Zone is such an area of the sea-bed as is left in the middle of the Red Sea after each country's exclusive sovereign rights over the sea-bed are reserved up to a line where the depth of the superadjacent waters is under 1,000 metres (Articles 3-5) This provides for the delimitation of the sea-bed boundaries as well as the establishment of the Common Zone (see Figure 10). In the

Figure 10: The Saudi Arabia – Sudan Common Zone



Common Zone thus defined, the two countries have *"equal sovereign rights in all the natural resources"* and those rights are exclusive to them (Article 5).

The Joint Commission, established to ensure the prompt and efficient exploitation of the natural resources of the Common Zone, has fairly strong powers:

1. To survey, delimit and demarcate the boundaries of the Common Zone;
2. To undertake the studies concerning the exploration and the exploitation of the natural resources of the Common Zone;
3. To encourage the specialised bodies to undertake operations for the exploration of the natural resources of the Common Zone;
4. To consider and decide, in accordance with the conditions it prescribes, on the applications for licenses and concessions concerning exploration and exploitation;
5. To take the steps necessary to expedite the exploitation of the natural resources of the Common Zone;
6. To organise the supervision of the exploitation at the production stage;

7. To make such regulations as may be necessary for the discharge of the functions assigned to it;
8. To prepare the estimates for all the expenses of the Joint Commission; and,
9. To undertake any other functions or duties that may be entrusted to it by the two Governments (Article 7).

The Joint Commission is further empowered to determine the manner in which any accumulation or deposit of a natural resource found to extend across the boundary of the exclusive sovereign rights area of either government and the Common Zone is to be exploited. But any decision of the Joint Commission in this regard must guarantee for the government involved an equitable share in the proceeds of the exploitation (Article 14).

The Joint Commission is also authorised to decide on the question of the Sudanese concession of exploitation rights granted to the Sudanese Minerals Limited and the West German Company of Preussag by virtue of an agreement of 15 May 1973, in such a manner as to preserve the right of the Sudanese government and in the context of the regime of the Common Zone, despite Sudan's legal obligations based on the agreement (Article 13).

Finally, in the matter of financing the work of the Joint Commission, Saudi Arabia alone undertakes to provide funds and recovers them from the returns of the production of the Common Zone and in a manner to be agreed upon between the two governments (Article 12).

3.3.4 Iceland – Norway Agreement of 22 October 1981

By virtue of the Agreement between Iceland and Norway of 28 May 1980 concerning fishery and continental shelf questions, the two countries referred the question of delimitation of the continental shelf between Iceland and the Norwegian island of Jan Mayen to an international conciliation commission. The Conciliation Commission, instead of proposing a delimitation line for the continental shelf different from the previously determined economic zone line, recommended the adoption of *"a joint development agreement covering substantially all of the area offering any significant prospect of hydrocarbon production."*[98] Based on a few *"special considerations"*, including geological and economic factors, the Conciliation Commission recommended a detailed three-stage joint development programme.[99]

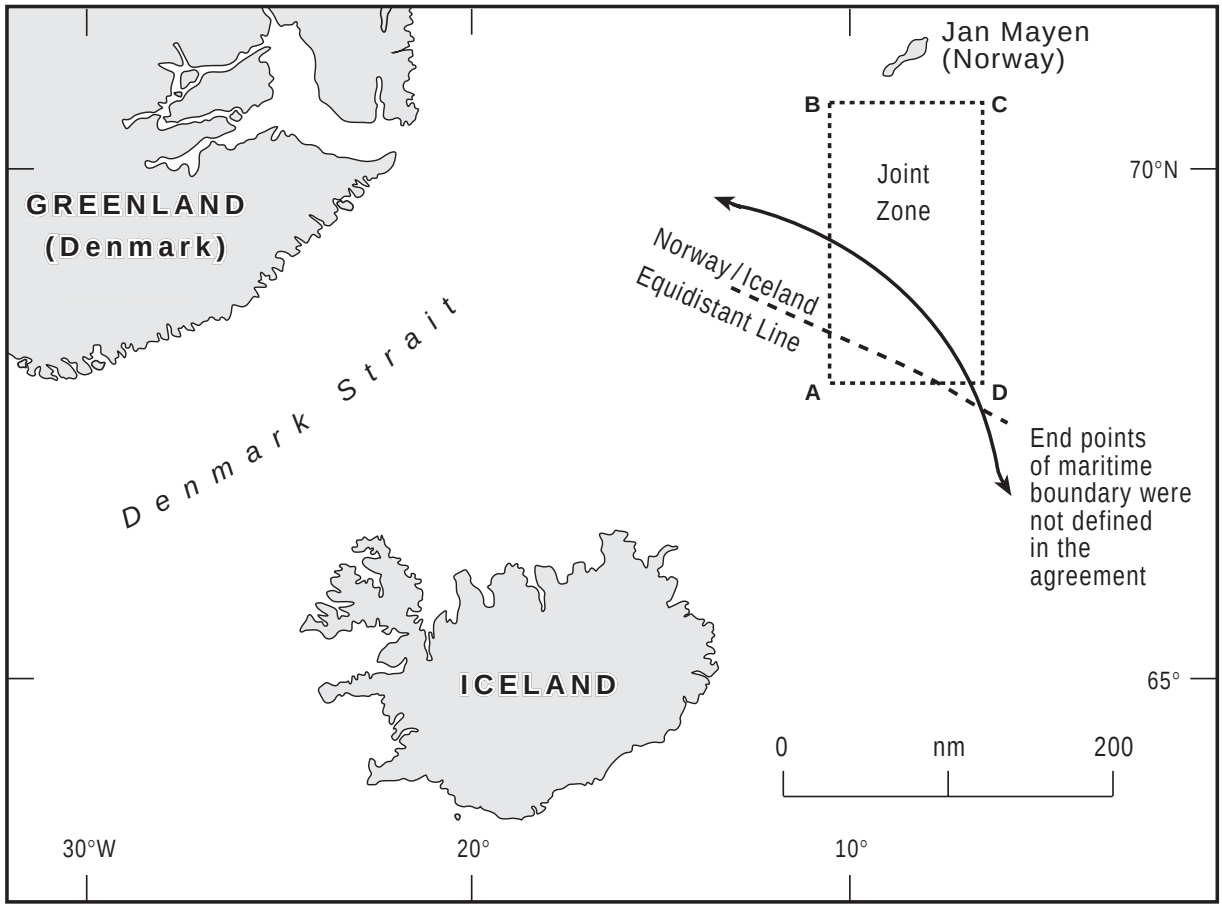
Pursuant to the Conciliation Commission's recommendations, the two countries signed an Agreement on the Continental Shelf on 22 October 1981. Article 1 of the Agreement provides that the continental shelf boundary should coincide with the delimitation line for the economic zones of the two countries. Thus the joint development zone lies astride the boundary, its northern sector having an area of approximately 32,750km² and its southern sector approximately 12,720km² (see Figure 11).

The first exploration phase envisaged systematic geological mapping of the zone, with the parties jointly carrying out seismic, and if necessary, magnetic surveys. According to the Agreement, the Norwegian Petroleum Directorate is designated as responsible for such surveys, financed by the

98 Report and Recommendations to the Governments of Iceland and Norway of the Conciliation Commission on the Continental Shelf Area between Iceland and Jan Mayen, June, 1981, *International Legal Materials*, Vol. 20 (1981): 825-826.

99 *International Legal Materials*, Vol. 20 (1981): 826-840. See also Evensen, 1981: 711-738.

Figure 11: The Iceland – Norway Joint Development Area



Petroleum Directorate itself or the Norwegian State. Experts of the two countries have an equal opportunity to participate in the surveys and the assessment of the resulting data (Article 3). When such surveys indicate that it is desirable to carry out more detailed surveys and drilling, the basic form of any exclusive exploration and production licences is a joint venture contract, unless the parties agree otherwise, and governmental and non-governmental oil companies may be allowed to participate in such contracts (Article 4).

In the joint development zone the parties are mutually entitled to participate with a share of 25% in more detailed surveys in the other party's sector of the zone (Articles 5 and 6). In negotiations with outside governmental or non-governmental oil companies, Norway is obliged to seek to arrive at an arrangement whereby both the Norwegian and the Icelandic percentage of the costs of such oil exploration activities are carried by the company or companies concerned up to the stage where commercial finds have been declared, whereas Iceland is not placed under such an obligation (Articles 5 and 6). If commercial finds are discovered in the Norweigan sector of the zone, Iceland is entitled to participate in their development in return for reimbursing Norway for that share of the costs incurred up to that juncture – a sum corresponding to Iceland's share of the costs had Iceland participated in the exploration from the outset (Article 5). But no corresponding entitlement of Norway is provided in the Agreement. After a commercial discovery has been declared, each of the parties must carry its costs in the further development of the field in proportion to its share under the contract concerned (Article 7).

If a hydrocarbon deposit lies across the boundary line or lies in its entirety south of the line but extends beyond the joint development zone, the solution provided is to apply the usual unitisation principles for the distribution and exploitation of the deposit. If a hydrocarbon deposit lies in its entirety north of the boundary line, but extends beyond the joint development zone, the deposit is to be considered to lie in its entirety within the zone (Article 8).

The advantageous position of Iceland in this arrangement is not only based on the *"special considerations"* as the Conciliation Commission specified, but also could be accounted for by some underlying, although essentially extraneous, political relationships between the two countries.[100]

3.3.5 Libya – Tunisia Agreement of 8 August 1988

Following the ICJ judgments of 1982 and 1985 in their *Continental Shelf* case, Libya and Tunisia signed three agreements concerning the implementation of the 1982 judgment, the creation of a joint venture for oil exploration and exploitation, and the financing of joint projects.[101] The first agreement delimits the continental shelf boundary as indicated in the judgment, while the others prescribe measures for a joint development undertaking.

The official texts of the joint development agreements are not yet publicly available, but from the information available through published sources, the agreed joint development zone appears to be in two parts, divided approximately by a line running close to the boundary indicated by the judgment of 1982 (see Figure 12). A joint Libyan-Tunisian exploration company is to be set up in Tunisia with a special status as an offshore enterprise to explore the gas field in the north-west part of the joint zone.[102]

By a separate agreement Tunisia is to receive 10% of the income from future production in the oil fields on the Libyan continental shelf, corresponding to the south-east part of the joint exploration zone.[103]

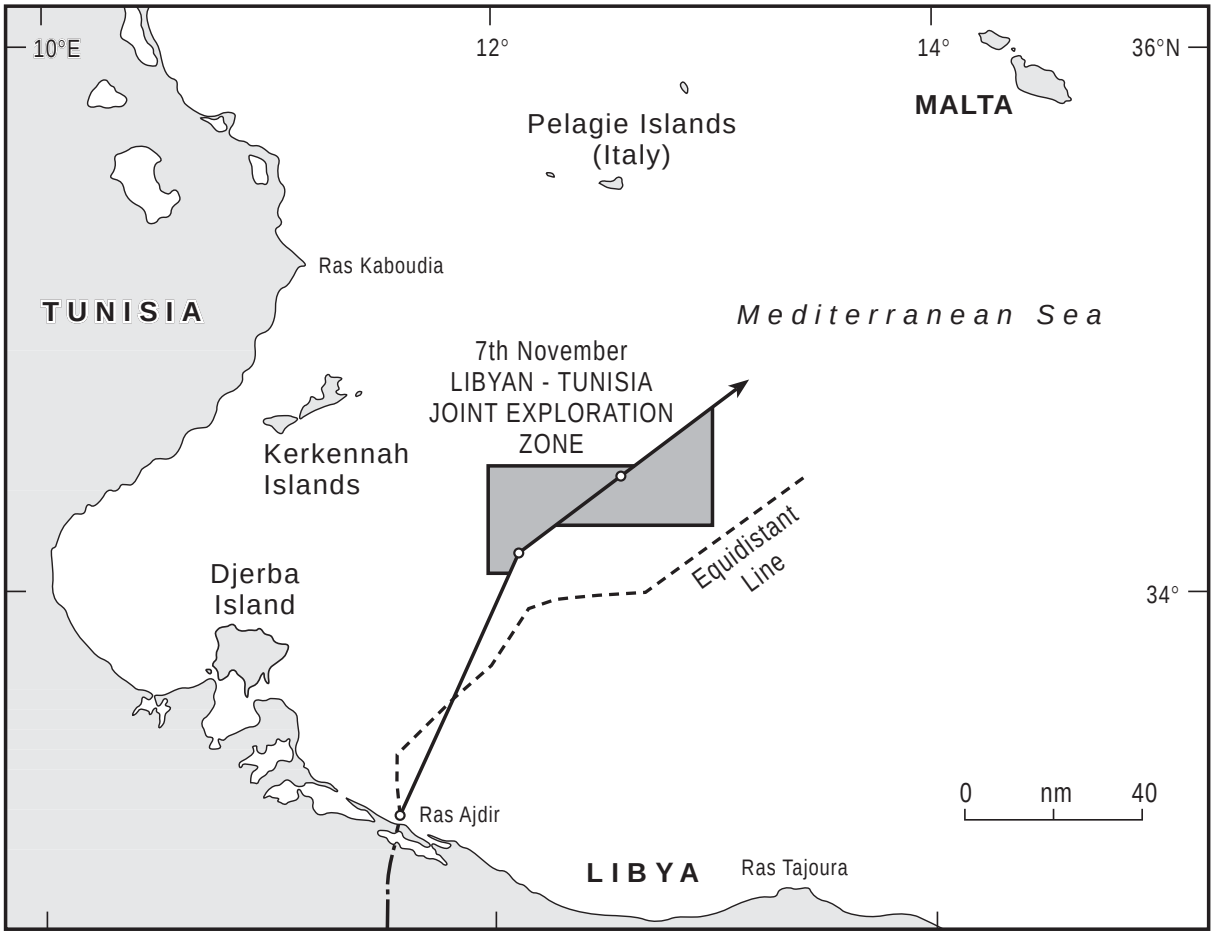
100 Østreng, 1985: 555-571.

101 Scovazzi, 1993: 1,664.

102 Fox, 1989: 64.

103 Fox, 1989: 64. It may be noted that the agreed scheme is similar to what Judge *ad hoc* Evensen proposed in his dissenting opinion attached to the 1982 ICJ judgment. Judge Evensen, based on the understanding that joint exploration is a corollary to other equity considerations (*ICJ Reports 1982*: 320-321), proposed a joint development scheme for consideration by the parties. His starting point was an *"adjusted equidistance line"* of delimitation which starts at the point where the 26° line from Ras Ajdir intersects the 12nm territorial sea limit and veers in a direction some 46°-47° (north-east). A line veering some 10°-15° from such delimitation line on each side of it would form a wedge-shaped joint development zone (*Ibid.*: 321). Each of the parties has jurisdiction on its side of the delimitation line, being entitled to a 50% participation, either directly or through concessionaires, in the other's sector of the zone. The parties should establish a permanent consultative committee for activities in the joint exploitation areas. Unitisation procedures should be provided in order to regulate the exploitation and the shared ownership where a petroleum deposit either straddles the line of delimitation or the outer lines restricting the zones of joint exploration (*Ibid.*: 321-322).

Figure 12: The Libya – Tunisia Joint Exploration Zone



3.3.6 Guinea-Bissau – Senegal Agreement of 14 October 1993

This is a joint development agreement, in respect not only of oil and gas but also living marine resources, based on a previous maritime boundary agreement between the parties' respective colonial powers signed in 1960. The 1960 agreement, however, dealt with the territorial sea, the contiguous zone and the continental shelf only. Besides, its legal validity was disputed by one of the parties, which, with the agreement of the other, submitted the issue to arbitration. The validity of the arbitration tribunal's award was in turn disputed and an application filed with the International Court of Justice for its judgment. Pending its final jugment, a further case on the boundary of all the maritime zones, including the EEZ, was filed with the same Court in March, 1991. The application was rejected by the ICJ in November 1991. In the meantime negotiations between the parties continued, resulting in the joint development agreement of 1993. Thus, the March 1991 application to the ICJ was withdrawn in 1995.

It may be seen from the preceding paragraph that the joint development agreement of 1993 is based, if only partially, on a former arrangement for maritime boundary delimitation. But the agreement includes provisions bearing on the EEZ which as a legal regime did not exist at the time of the former boundary arrangement. In view of the complex issues involved in this case as a whole, it seems in order to assess the legal aspects of the history of the Guinea-Bissau – Senegal maritime dispute before proceeding to an analysis of the agreement.

On 26 April 1960 France and Portugal exchanged notes on the boundary delimitation in respect of the territorial sea, the contiguous zone and the continental shelf between the Republic of Senegal and the Portuguese Province of Guinea, defining a straight line running at 240° starting from the intersection of the extension of the land boundary and the low-water mark.[104] However, Guinea-Bissau disputed the validity of this line in respect of the EEZ, and the matter was submitted to an arbitral tribunal for a clarification of whether the Exchange of Notes had the force of law. In its award of 31 July 1989 the arbitral tribunal found that the Exchange of Notes had the force of law in respect of the three specified maritime areas of the territorial sea, the contiguous zone and the continental shelf.[105]

Dissatisfied with this award, Guinea-Bissau on 23 August 1989 filed an application in the Registry of the International Court of Justice instituting proceedings in respect of a dispute concerning the existence and validity of the arbitral award of 31 July 1989.[106] But the Court, after a careful examination of the issues raised by the applicant, rejected all its submissions and held that the arbitral award is valid and binding for the two parties,[107] meaning that the 1960 French-Portuguese Exchange of Notes has the force of law as between Senegal and Guinea-Bissau in respect of the three specified maritime areas.

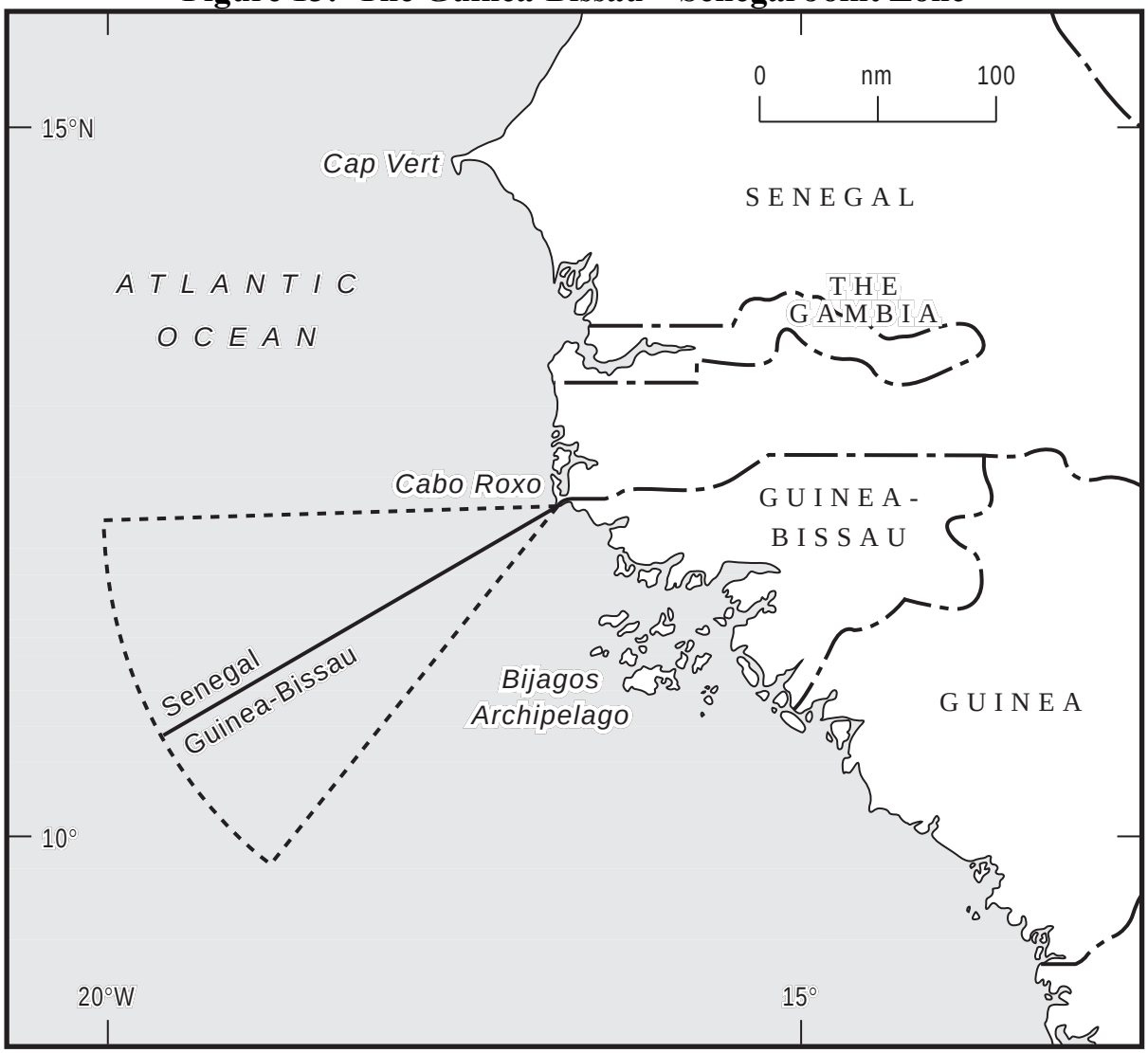
It is worth noting, however, that both the 1989 arbitral award and the 1991 ICJ judgment failed to deal substantively with the delimitation of EEZ boundaries, as the ICJ itself admitted.[108] Furthermore, on 12 March 1991 Guinea-Bissau filed a second application with the ICJ with the submission that *"all the maritime territories appertaining respectively to Guinea-Bissau and Senegal"* be delimited, and the Agent of Senegal made a declaration in the proceedings before the ICJ that a solution of the dispute would be to negotiate *"a boundary for the exclusive economic zone, or should it prove impossible to reach an agreement, to bring the matter before the Court."*[109] Indeed the ICJ itself took note of the second application and the Senegalese declaration, and considered it highly desirable that *"the elements of the dispute that were not settled by the Arbitral Award of 31 July 1989 be resolved as soon as possible, as both Parties desire."*[110] Thus the way was paved for direct negotiations between the parties for a line delimiting all the maritime areas, including the EEZ.

What lay before the parties, however, was the line of 240° as the effective delimitation line for the territorial sea, the contiguous zone and the continental shelf. This was not open for re-negotiation. The parties were free to choose either the same delimitation line or another line for the EEZ. But they agreed instead on a zone straddling the boundary line for the purpose of joint development of EEZ resources. The Management and Cooperation Agreement of 14 October 1993 is a broad-termed agreement with basic provisions of a general nature. This was later to be supplemented by a Protocol Relating to the Organisation and Operation of the Agency for Management and Cooperation of 12 June 1995. As these developments made the proceedings before the ICJ instituted by the second application of Guinea-Bissau unnecessary, they were discontinued and the case removed from the list by an order of the Court on 8 November 1995.[111]

104 Text of the Exchange of Notes in Charney and Alexander (1993: 873-874).
105 Sentence du 31 juillet 1989, para. 88, 20 *Reports of International Arbitral Awards*, 153.
106 *ICJ Reports 1991*: 55, para. 1.
107 *Ibid*.: 75-76, para. 69.
108 *Ibid*.: 74, para. 66.
109 *Ibid*.: 74-75, para. 67.
110 *Ibid*.: 75, para. 68.
111 *ICJ Reports 1995*: 426.

The Management and Cooperation Agreement of 1993 lays down the joint maritime zone situated between the 268° and 220° azimuths drawn from Cape Roxo, with the respective territorial seas of the parties excluded from it (Article 1(1), (2)). Thus the zone lies across the 240° line as delimited by the 1960 agreement, consisting of an arc of 48° of a circle with a radius of 200nm centred on Cape Roxo (see Figure 13).[112]

Figure 13: The Guinea-Bissau – Senegal Joint Zone



A striking feature of the agreement is that the zone is set up for the dual purpose of exploiting both fishery and continental shelf resources. While the exploitation of fishery resources is to be shared equally between the parties, that of continental shelf resources is to be shared in the proportion of 85% to Senegal and 15% to Guinea-Bissau.[113] In the event of discovery of additional resources, however, these proportions will be revised, having regard to the magnitude of such discoveries (Article 2).

112 Prescott (1998: 2,252) suggests that the distance of 200nm is an assumption since neither the 1960 agreement nor the 1993 agreement specifies the length of the 240° line or the boundaries of the zone.

113 This unequal division seems to be based on existing and proved reserves of gas that have been developed by Senegal and an Irish oil company. There seem to have been no reports of oil or gas discoveries on the Guinea-Bissau side of the 1960 boundary (Prescott, 1998: 2,253).

It was agreed to establish an International Agency for the exploitation of the zone, the organisation and operation of which was to be subsequently agreed upon between the parties (Article 4). The Agency will succeed to the rights and obligations arising out of the agreements relating to exploitation of the resources of the zone (Article 5).
As is common in joint development agreements, the parties' legal titles and claims to non-delimited areas are reserved (Articles 6 and 9). The entry into force of this agreement depends on an additional agreement concerning the establishment of the International Agency (Article 7). In the event of suspension or expiry of this agreement, effective for an initial period of 20 years, the parties will negotiate any unsettled delimitations or refer the matter to arbitration or the International Court of Justice, as they do with respect to disputes concerning the agreement or the International Agency (Articles 8 and 9).

By a Protocol of Agreement Relating to the Organisation and Operation of the Agency for Management and Cooperation of 12 June 1995, the Agency for Management and Cooperation was established in Dakar (Articles 2 and 3). It has the following functions *"in the field of mineral and petroleum resource development"* for the purposes of this paper:

- *To carry out all relevant geological and geophysical studies, drilling operations, and other activities with a view to prospecting for and the exploration and exploitation of mineral and petroleum resources in the zone, or to make arrangements to have them carried out;*
- *To promote mineral and petroleum resource prospecting, exploration and exploitation activities in the zone;*
- *To market all or part of its share of minerals or petroleum resources produced;*

and in general (Article 5):

- *To monitor the rational exploitation of the zone's resources;*
- *To cooperate with the States' Parties and the competent international organisations in enforcing within the zone the terms of Articles 16 to 23 of this Protocol as regards:*
  Safety;
  Monitoring of regulations and supervision of resource prospecting, exploration and exploitation activities;
  Protection of the marine environment;
  Pollution prevention and control;
- *To perform these functions with respect to all activities in the zone, the Agency may act alone or in association with other companies or international organisations*.

In the matter of jurisdiction, the Agency holds exclusive mineral or oil titles (and fishing rights) in the zone, and acts in this connection through the *"Enterprise"*, which:

- *May carry out such work or activities as it may deem appropriate and monitor the execution thereof, or arrange for such execution and monitoring to be carried out by holders of mining or hydrocarbon resource development licences...;*
- *Shall take all appropriate action with a view to facilitating the mustering of such financial support as may be required for purposes of its activities;*
- *In particular, shall assist holders of mining or hydrocarbon resource development licences...in their administrative dealings with each State Party with a view to the successful prosecution of their resource prospecting, exploration and exploitation operations in the zone;*

- *Shall organise promotional campaigns with a view to attracting the interest of other companies in resource prospecting, exploration and exploitation operations in the zone* (Article 6).

The Authority, consisting of the Heads of State or of Government or of persons delegated by them (Article 9), defines the general policy of the Agency with the following additional functions:

> *(a) Providing the Enterprise with guidance and instructions regarding the performance of its functions;*
> *(b) Upon the recommendation of the Board of Directors of the Enterprise, and in a manner not incompatible with the aims of this Protocol and of the Agreement of 14 October 1993, amending regulations governing prospecting, exploration and exploitation of the resources of the area, as well as those governing monitoring and scientific research;*
> *(c) Supervising the application of this Protocol, the Agreement of 14 October 1993, and the regulations applicable to the Enterprise, and recommending to the Board of Directors any necessary modifications;*
> *(d) Exercising and determining the scope of police powers in the zone* (Article 10(1),(4)).

The applicable law with regard to mineral or oil resource prospecting, exploration and exploitation and monitoring and scientific research in the mining and petroleum domain, is the law of Senegal as amended and modified in conformity with the terms of Article 10(4)(b) above, as at the time of signature of this Protocol (Article 24(1)), while the applicable law with respect to fisheries resources is the law of Guinea-Bissau (Article 24(2)).

4. Theoretical Review of Precedents

Some precedents for joint development discussed in Sections 3.2 and 3.3 above are naturally *sui generis* with their own peculiar backgrounds and circumstances. But some common aspects would seem to emerge for generalisation.

4.1 Absence or Presence of Boundaries

As it involves the sovereign rights, if not sovereignty, of the coastal countries concerned, the adjustment of overlapping claims to the continental shelf or the exclusive economic zone is so very difficult a matter that the delimitation of boundaries or division of overlapping claim areas can prove impossible in the immediate term. Nevertheless, if the interested countries have a will to set aside the formidable issue of delimitation for a while in favour of prospective economic profits to accrue from a provisional compromise settlement, they have a chance to devise a joint development scheme. It is also possible that they may defuse their tense relations by such a provisional measure for at least a certain period of time.

These would seem to be some, if not all, of the reasons why some joint development schemes have been arranged. In the Japan-South Korea arrangement of 1974, for example, the two countries were deadlocked in the boundary negotiations with regard to the southern part of the

continental shelf while agreeing in respect of the northern part. At that time the natural prolongation doctrine, as enunciated by the ICJ in the *North Sea Continental Shelf* cases of 1969, had greater weight than today, and South Korea readily based its position on it, whereas Japan stuck to the median line principle. The stalemate that ensued from these two fundamentally different, and apparently irreconcilable, positions had to be shelved or frozen in some way. This eventually turned out to be the choice of a joint development idea as indicated in the *North Sea Continental Shelf* judgment.[114]

The Malaysia-Thailand arrangement five years later, or for that matter any of the subsequent arrangements between Australia and Indonesia, Malaysia and Vietnam, and Argentina and the United Kingdom, may be said to have had a similar situation of irreconcilable positions between the respective parties, although the circumstances naturally varied from one arrangement to another. As a logical alternative the parties might have left the conflict as it was, doing nothing about it until the time came for them to agree on the delimitation of boundaries. As a matter of fact they were unable to do so, perhaps because they either could not afford to stand idly by, when potential economic benefits appeared to them to be in sight, or they were urged for some political considerations to choose a provisional compromise settlement of joint development.

By contrast, in cases where the boundary was determined and a joint development zone defined subsequently, the parties would have thought it in their interests to devise such a zone either across the boundary as in the France-Spain, Iceland-Norway and Libya-Tunisia agreements or in addition to the boundary as in the Bahrain-Saudi Arabia and Saudi Arabia-Sudan agreements. Of

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114 The choice of boundary delimitation or joint development is illustrated in an illuminating way by a statement of an official of the Japanese Ministry of Foreign Affairs who was responsible for the negotiations with the South Koreans which eventually led to the Joint Development Agreement of 1974. The Director General of the Asian Affairs Bureau testified at a meeting of the House of Representatives Standing Committee on Foreign Affairs in April, 1977 in these words:

> *As I remember clearly from my direct participation in the meetings of legal experts over a period of three years at the initial stage of negotiations, the Japanese position that the continental shelf is one share by the two opposite countries of Japan and the Republic of Korea, and the Korean position that the continental shelf ends at the trough lying to the north-west of Ryukyu Islands to which Japan cannot lay claim were, so to say, a well-matched game. Both sides invoked every possible doctrine and precedent at the numerous meetings, but the debate lacked decisive points on either side and proved endless.*
>
> *Then we proposed that the question be submitted to the International Court of Justice for a judicial decision since it was a purely legal dispute. But the Republic of Korea had not accepted the compulsory jurisdiction of the Court, and was not under an obligation to appear before the Court even though Japan had submitted the case to it. The two countries would have had to conclude a special agreement to bring the matter to the Court. It would have taken several years to do so. In other words, the way a special agreement is drafted could have contributed to a decision in favour of one or the other party – its drafting would have involved such difficulties. Had the court taken up the case, together some ten years would have been necessary for a decision. Furthermore, the proceedings would have cost very much – asking for an expert opinion in writing, collecting relevant documentation, etc., could have cost very much indeed.*
>
> *There was a view on the one hand that so much time and money should be spent for a judicial decision on the basis of which resources should be developed. On the other hand was another view that instead of seeking such a decision for so much time and money, it might be a good idea to try joint development if the positions of the parties were a close game. As a result it was agreed that joint development should be attempted. Neither side's legal position has won nor lost the game in this arrangement. Either side could have claimed that it had conceded too much in it. The legal debate has thus been shelved in Article XXVIII of the Agreement* (Author's translation from the original Japanese text) (*Official Records of the House of Representatives Standing Committee on Foreign Affairs*, 22 April 1977: 23).

these two broad types of joint arrangements where the boundary is defined, the first could perhaps be said to be a variant of unitisation.

4.2 Definition of Jurisdiction

It is needless to say that, except in a couple of instances, in cases where the boundary is delimited, the issue of jurisdiction is reasonably clear in the joint development zone as well.[115] But jurisdiction is not necessarily clear in cases where the boundary is not determined.[116]
The issue was a major concern in the Japan-South Korea and Australia-Indonesia arrangements,[117] though it was clearly defined in different ways. In the Japan-South Korea arrangement the issues of jurisdiction and the applicable law in the Joint Development Zone are settled in an 'operator formula': the party which authorises a concessionaire designated as the operator in a given sub-zone has jurisdiction in that sub-zone and applies its law there. However, as development work is divided into two phases of exploration and exploitation and the operator alternates in the two phases between the two concessionaires authorised by the parties, the jurisdiction and applicable law in a given sub-zone shifts from one to the other with the shift of development work from exploration to exploitation. This is a unique system, and perhaps only possible between the parties, such as Japan and South Korea, which have legal systems not radically different from each other.[118]

Where joint development is agreed to by means of a skeleton arrangement, as in the cases of the Malaysia-Vietnam Memorandum of Understanding of 1992 and the Argentina-United Kingdom Joint Declaration of 1995, detailed provisions would seem to be made in a subsequent separate agreement. Indeed in the case of the Malaysia-Thailand Memorandum of 1979, which was a minimum instrument of understanding, a subsequent agreement was entered into with detailed provisions for practical measures to take for the implementation of the Memorandum.[119] The initial Memorandum of Understanding, however, had already had a provision for criminal jurisdiction, but no more details were laid down in the later treaty. Perhaps the powerful Joint Authority is to be responsible for any further practical measures in respect of jurisdictional and other matters.

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115 See, for example, 'Provisions Applicable to the Zone Defined in Article 3 of This Convention', Annex II to the French-Spanish Convention on the Delimitation of the Continental Shelf in the Bay of Biscay of 1974 (Charney and Alexander, 1993: 1,732-1,733); and, the Iceland-Norway Agreement on the Continental Shelf of 1981, Articles 3 to 9 (*ibid.*: 1,763-1,765). See also the Kuwait-Saudi Arabia Neutral Zone Partition Agreement of 1965 which provided for a clear dividing line, placing the northern side of the line in Kuwait and the southern side in Saudi Arabia (Article 2). Thus jurisdiction is defined in respect of *"administration, legislation and defence"*, but this is *"without prejudice to the rights of the contracting parties to natural resources in the whole of the Partitioned Zone"* (Article 3). The Joint Permanent Committee is entrusted with the continued efforts of the parties in exploiting the natural resources (Article 1).

116 See, for example, the Malaysia-Vietnam, Argentina-United Kingdom agreements.

117 For a concise exposition of the Australia-Indonesia arrangement in respect of jurisdiction and the applicable law, see Burmester (1990: 128-140).

118 Even so, the 'operator formula' may in fact create difficult situations because of minor, if not major, differences in the relevant law applicable. As a matter of fact, no problem has arisen in this respect in the Japan-South Korea arrangement. This is because only exploratory work has been done and no exploitation of seabed resources has taken place. Apart from such practical experience, the author recalls that the lawyers from the Australian government participating in the third East-West Centre workshop in Bangkok in 1985 were very critical of the 'operator formula' for its allegedly confusing nature. See *supra* note 62.

119 See Section 3.2.4 above.

4.3 Powers and Functions of the Joint Commission

The Joint Commission or Authority in a joint development scheme is of two types: one with strong supervisory and decision-making powers and the other a liaison or consultative body under the direction of the governments. A Joint Commission of the first type, such as the Thai-Malaysian Joint Authority[120] and the Saudi-Sudanese Joint Commission,[121] while responsible to the governments, has strong and wide-ranging functions in the implementation of the projected joint development work.

By contrast, the Japanese-South Korean Joint Commission of the second type is a typically 'weak-powered' body with powers and functions designed for liaison purposes only.[122] Its composition itself may be illustrative of its powers: the Japanese section consists of the Deputy Director-General of the Asian Affairs Bureau of the Ministry of Foreign Affairs and the Director-General of the Petroleum Department of the Agency of Natural Resources and Energy of the Ministry of International Trade and Industry, while the Korean section consists of the counterparts in the Ministry of Foreign Affairs and the Ministry of Energy and Resources. These members, being government officials, are clearly not full-time officers nor empowered to exercise decision-making functions, but they do meet regularly for consultation and report thereon to their respective governments.

Under the Australia-Indonesia Timor Gap Treaty, the Joint Authority, being responsible to the Ministerial Council, has powers to perform practical management functions for exploration and exploitation in Area A of the Zone of Cooperation, including the conclusion of production sharing contracts with corporations.[123] In other words, this Joint Authority may be said to be a management arm of the Ministerial Council which has 'overall responsibility' for all matters relating to exploration and exploitation in Area A.

In the France-Spain Convention of 1974 which in part established a joint development zone, there is no provision to set up a joint commission for its management. Nor does there seem to be a joint commission established between Iceland and Norway under their Agreement of 1981 for exploration and exploitation in the designated joint zone.

A few words may be in order in this context concerning a new 'variant' of the joint commission. Although created and discussed in the context of joint development of hydrocarbons onshore, rather than offshore, the *"Corporation"* established under the agreements of 1988 between the two Sectors of Yemen as a joint commission/commercial enterprise is claimed to present a new departure from the 'classic' type of such an entity.[124]

As a result of the discovery of oil fields in the provinces of Maarib of the Yemen Arab Republic (YAR) and Shabwah of the People's Democratic Republic of Yemen (PDRY) in the mid-1980s, the YAR and the PDRY (collectively, the *"Two Sectors"*) agreed to establish a jointly owned stock company, the Yemenite Petroleum and Minerals Development Corporation (*"the Corporation"*) to develop the potential oil reserves of this area (*"the Common Region"*), as an integral part of the ongoing dialogue between the YAR and the PDRY for national unity of all

120 See Section 3.2.4 above.
121 See Section 3.3.3 above.
122 See Section 3.2.3 above.
123 See Section 3.2.5 above.
124 Onorato, 1990: 653-662.

Yemen. In the first agreement, the Taiz Agreement of 17 April 1988, a joint investment in natural resources (hydrocarbons) in the Common Region was agreed on, and later in the Sana'a Agreement of 4 May 1988 the scheme was further elaborated on. Thus the third Agreement of Aden of 19 November 1988 finalised the whole programme by establishing the Corporation, to which the rights to the development of oil and minerals of the Common Region are granted. The investment by the Two Sectors in the Corporation was defined in the Aden Agreement as *"[e]xploration operations for oil and minerals, their production, transportation, refining, storage, distribution, trade and manufacture of derivatives therefrom."*[125]

The Corporation may develop the oil and minerals of the Common Region directly or through the use of contractors or sub-contractors on the one hand, and operate as the management body with multiple functions of an international joint commission on the other. In this second category of functions, including political supervision, consultation and policy, it is governed by the *"General Assembly"* composed of some ministers of the Two Sectors.[126] Thus, a single joint entity is entrusted with dual management-enterprise functions, in other words many of the critical attributes of a strong, central joint commission under the 'classic' pattern as well as the prerogative to conduct actual development, acting as its own operator. This combination is unique and may be unprecedented. It is thus claimed that such a corporate entity with combined functions of management and actual development operation may well have both greater flexibility and potentially broader application than any of the previous models.[127]

4.4 Other Legitimate Uses of the Sea

Some joint development agreements expressly refer to free use of the designated sea area for navigational, fisheries and other purposes, while others do not. If a joint development zone is established for the exploitation of the resources of the continental shelf, its superjacent waters remain part of the high seas, and the designated area must in principle be open to such free uses. Thus the securing of such legitimate uses of the sea can be a formidable problem in the establishment of a joint development zone.

A typical difficulty arose in the negotiations of the Japan-South Korea Agreement of 1974, because the projected joint development zone is traditionally a very important fishing ground, at least to the Japanese fishing industry. As a result of consultations with fishermen and their associations with interests in the projected zone, the Japan Fishery Society compiled a three-point request with recommendations:

1. That in establishing a mining right and implementing a submarine resources development plan, measures be taken to have prior consultations with the Ministers concerned;
2. That not only must measures be taken to prevent any environmental disruption by mining which is likely to arise in the operation of development enterprises from actually arising, but also measures be organised to compensate for any damage caused by it if it should arise; and,
3. That adequate measures be adopted for compensation for any damage caused by the loss of fishing grounds and the restraint of fishing.[128]

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125 *Ibid.*: 653-657.
126 *Ibid.*: 657-659.
127 *Ibid.*: 661.
128 Statement of the Deputy Director-General of the Fishery Agency at a meeting of the House of

The Japanese negotiators could not afford to ignore these requests, but had considerable difficulty in persuading their Korean counterparts of the necessity for such compensation, which simply did not exist in Korea.[129]
The Japanese-Korean difficulties with regard to fisheries interests are not an isolated problem. There seems to have been some conflict of fisheries interests between Malaysia and Thailand in the process of implementing their Memorandum of Understanding.[130]

When, however, a joint development zone is established in a sea area where overlapping claims exist over exclusive economic zones (EEZs), some different considerations must be taken into account. Whereas the continental shelf leaves its superjacent waters intact as part of the high seas under general international law, the EEZ which, unlike the continental shelf, must be expressly claimed, places its water column under the coastal state's jurisdiction. Fishing operations, for example, are not free in the EEZ as they are in the high seas over the continental shelf. The coastal state has sovereign rights over the exploration, exploitation, conservation and management of natural resources of not only the sea-bed and its sub-soil but also of the superjacent waters, and jurisdiction with regard to artificial islands, installations and structures, marine scientific research, and the protection and preservation of the marine environment (UN Convention, Article 56(1)). Consequently, unless the countries concerned agree either to delimit clearly or share such sovereign rights or jurisdictions within their overlapping EEZs, or to 'freeze' or put them aside for the purposes of the joint development zone, the regime of joint development itself cannot be established. Put simply, the EEZ has more rights and jurisdictions to be 'frozen' for joint development than the continental shelf has.

It must also be noted, however, that, as far as the sea-bed of the EEZ is concerned, the regime of the continental shelf takes precedence (Article 56(3)). It follows therefore that the position is not essentially different from the position where only the continental shelf is claimed by the countries planning joint development, although there are more complex jurisdictional issues involved.[131]

4.5 Interests of Third Countries

Whether in a boundary delimitation or joint development zone delineation, two countries are normally involved. But it can be easily appreciated that such an undertaking can affect the interests or rights of neighbouring third countries. Indeed in the Gulf of Thailand, for example, a most recent maritime boundary delimitation agreement attests to this matter.

The Thailand-Vietnam Agreement on Maritime Boundary Delimitation of 9 August 1997[132] determines the boundary line by a straight line between two designated points in Article 1(1). But those two points are identified as those coinciding with the two other delimitation points designated in the other agreements in the same sea area: one, *"Point C"*, is *"the northernmost point of the Joint Development Area"* established by the Memorandum of Understanding of 1979 between Malaysia and Thailand, and the other, *"Point K"*, a point situated on the Cambodia-

Representatives Standing Committee on Commerce and Industry (Author's translation from the Japanese text) (*Official Records of the House of Representatives Standing Committee on Commerce and Industry*, 1 November 1977, 33).

129 See Miyoshi, 1985: 550.

130 See Townsend-Gault, 1990: 104-105.

131 See Churchill, 1990: 62-66.

132 The text of the Agreement was provided by Clive Schofield, Deputy Director of the International Boundaries Research Unit (IBRU), University of Durham.

Vietnam maritime boundary, a *"straight line equidistant from Tho Chu islands and Pulo Wai drawn from Point O Latitude N 09°35'00".4159 and Longitude E 103°10'15".9808"* (Article 1(2), (3)) (see Figure 4). The parties to the Agreement under review, Thailand and Vietnam, are also party to one or the other of the two other agreements, and that may be the reason why those end points have been successfully treated in the three relevant agreements.[133]

But, in the case of the Japan-South Korea Agreement of 1974, China claimed that its rights were being encroached upon by the Japanese-Korean Joint Development Zone,[134] as did Malta similarly in the Libya-Tunisia *Continental Shelf* case and Italy in the Malta-Libya *Continental Shelf* case respectively before the International Court of Justice.[135] The Arbitral Tribunal in the Anglo-French *Continental Shelf* case mentioned the possible impact of the delimitation on a future Anglo-Irish continental shelf boundary delimitation, although it refrained in the end from actually taking that into account in its decision on the ground that such consideration was outside its jurisdiction.[136] All these moves, whether in state practice or jurisprudence, indicate the rationale of consideration of the interests or rights of adjacent third countries.[137]

4.6 Technical Points for Inclusion in Joint Development Agreements

There are a number of technical points for inclusion in any joint development agreement. A discussion of these issues is, however, beyond the scope of this *Briefing*. A review of detailed points is best left for other expert discussions, most notably the *"Model Agreement for States for Joint Development with Explanatory Commentary"* prepared by a research team under the auspices of the British Institute of International and Comparative Law in 1989 and its *"Revised Model Agreement"* of 1990.[138]

5. Conclusion – The Outlook for Joint Development

It has been shown above that joint development is not the only alternative but one of the alternatives to boundary delimitation. Indeed, where there is the logical need for delimitation of boundaries, it often happens that no delimitation is effected, either because the interested countries do not feel an urgent need for it or because they are unable to agree on the applicable rules and principles of delimitation. Even when a boundary is successfully determined, there may still remain the need to work out a unitisation arrangement for possible future discovery of a new

133 In fact, on 17 February 1998 Cambodia lodged a protest with both Thailand and Vietnam concerning their maritime boundary agreement of 9 August 1997. Although the latter agreement made reference to a Cambodian-Vietnamese maritime boundary, Cambodia stated in its note that it *"has never agreed to"* this *"so-called maritime boundary."* A copy of this protest note was provided by Clive Schofield at IBRU.

134 China made its first protest in a morning radio broadcast from Beijing on 4 December 1970 against the Japan-South Korea-Taiwan trilateral talks that were going on then. Later it repeated its protest in February and December, 1971 (Miyoshi, forthcoming: note 58)

135 *ICJ Reports 1981*: 16-17, para. 28; and, *ICJ Reports 1984*: 12, para. 17.

136 Decision of 30 June 1977, para. 24, United Nations, *Reports of International Arbitral Awards*, Vol. 18: 25.

137 For a fuller discussion of this question of third party interests or rights in maritime boundary delimitation or establishment of joint development, see Miyoshi (forthcoming).

138 Fox, 1989 and 1990.

deposit lying astride the boundary. Indeed provisions for such unitisation are almost always included in maritime boundary agreements.[139]

Fisheries issues must also be addressed in some way, however clearly the boundary may be defined. Fish stocks defy any boundaries, and the fishing industry may have historic rights in the prospective joint development area, which could give rise to the question of responsibility for any damage to it. This may possibly involve navigation as well.[140]

The past joint development programmes have not all been successful in commercial terms. In some cases oil companies seem to have lost investment incentives, which depend in a way on crude oil market conditions. But since petroleum is destined to remain a major source of energy for man in the foreseeable future, there will be a long-term demand for it.

There are many unresolved maritime boundary disputes, and some interested countries have advocated or agreed to the idea of joint development in lieu of boundary delimitation. It might help to defuse the tension of outstanding maritime boundary disputes or even be their permanent replacement, because they may have been caused by keen interests of those countries in natural resources under the disputed waters. Joint development may therefore also be conducive to confidence-building in the overall relations between the interested countries.

One more question that remains to be addressed in this regard is whether joint development has to be organised only between two interested countries, as it has been in the past, or whether it can be instituted between three or more interested countries. Ideally, multilateral arrangements could contribute to the solution of outstanding maritime boundary disputes. The rationale for multilateralism in boundary delimitation has already been pointed out and accepted not only among some countries, but also, albeit theoretically, in international arbitral and judicial decisions.[141] However, at present the idea of a multilateral joint development arrangement seems to be entertained by just a few Southeast Asian countries in their relations with China, the staunch bilateralist, in the South China Sea. Perhaps it will take a long time before such an idea can materialise, if it is possible at all.

139 For examples in the Southeast Asian context, see Ong (1995: 83-84).

140 See, briefly, Churchill, 1990: 64-65.

141 See Miyoshi, 1998. The idea of a multilateral joint development arrangement seems to be entertained by some Southeast Asian claimant countries in respect of the sea areas surrounding the Spratly Islands in the South China sea, while China, one of the claimants and the arch bilateralist, seems to be opposed to the idea.

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