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Undelimited Maritime Boundaries in the Pacific Ocean Excluding the Asian Rim

Victor Prescott and Grant Boyes

Maritime Briefing

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by

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Preface

This analysis expresses the views of the authors who do not know whether the governments of any countries mentioned support or disagree with the descriptions provided or the conclusions reached.

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Undelimited Maritime Boundaries in the Pacific Ocean Excluding the Asian Rim

Victor Prescott and Grant Boyes

1. Introduction

This study was prompted by Jonathan Charney's concept of analysing delimited maritime boundaries which led to the first three volumes of *International Maritime Boundaries*. These volumes stand unchallenged as the major published contribution to the analysis of the bases of maritime boundaries which result from negotiations or adjudications. Charney's concept involved studying the influence of nine considerations, dealing with subjects such as politics, baselines, islands and geography for each delimited boundary and then studying each of these considerations separately across the entire range of examples.

The present study has a simpler structure because it is dealing with boundaries which have not yet been delimited. The analysis of each undelimited bilateral boundary begins with a short introduction that notes the status of each country and the types of maritime regimes, such as territorial waters and exclusive economic zones (EEZs), which might eventually be separated by a delimited boundary.

The second section defines the line of equidistance which is related to all appropriate basepoints located on the mainland or islands. A line of equidistance, which may also be called a median line, was selected for two reasons. First every point on a median line is equidistant from the nearest points of the baselines of the two countries concerned. This means that providing there is agreement on the basepoints to be used the line of equidistance constructed by different cartographers will be identical. In short, the line of equidistance is an impartial construction once the basepoints have been selected. The problem of selecting basepoints is considered below. The second reason for drawing lines of equidistance is that it is generally the first line constructed by countries preparing for boundary delimitations. Countries know that the line of equidistance will deliver to them the seabed and seas that are closer to their baselines than the baselines of any neighbour. Most countries would regard the marine area surrounded by a line of equidistance as the minimum acceptable area.

Having drawn the line of equidistance persons responsible for preparing the claim will certainly consider whether there are any arguments which might be used by either side to argue that it would make an inequitable boundary. Median lines can be drawn between any agreed basepoints. For example countries might decide to relate the line to straight or archipelagic baselines, or only agreed principal islands. In this analysis the line of equidistance was not related to straight baselines.

Straight baselines were avoided because not all countries possess straight baselines and because some straight baselines would deflect the line of equidistance to the definite advantage of the country that drew them. There are examples where countries either have refused to accept the baselines of the country with which they negotiated or have insisted on the right to draw equivalent straight baselines or construction lines which would offset the opposing baselines.

All the lines of equidistance were constructed between features which the authors considered fulfilled the terms of Article 121 to be basepoints from which extended maritime zones could be claimed. Briefly, if a feature is an island claims can be made to the full suite of maritime zones while if the feature is a rock one of two conditions must be satisfied before similar claims can be made. Those conditions are that the rock can support habitation or economic life of its own. Article 121 is perhaps the most badly drafted article in the United Nations Convention on the Law of the Sea (UNCLOS) and its interpretation has excited fierce debate amongst some academics. Most of the contenders fall into one of two groups.

The first group has argued in favour of the widest possible interpretation of the term rock and the narrowest interpretation of the two qualifications. Some members of this group would include sand cays and barren islands in the category of rocks. The second group has supported a narrow interpretation of the term rock and the broad definition of the qualifications.

For many governments the interpretation of Article 121 is a matter of practical politics rather than academic debate. The overwhelming response of governments is to adopt the opinion of the second group of academics for their own islands and rocks and the view of the first group of academics for the small islands and rocks of neighbours that have a major influence on the course of the line of equidistance. For every self-denying decision, such as that by Britain regarding Rockall, there are dozens of cases of countries defending the use of tiny rocks as basepoints. In the final analysis it for the country that owns the rock or island to decide whether extended maritime claims can be made from it. If the claims appears to be unreasonable it is for neighbours negotiating maritime boundaries to argue for such a feature to be discounted.

In this study we have made the following assumptions about the status of basepoints. First, states owning offshore islands and rocks are entitled to interpret the term 'rock' in a strict sense and thus consider all sand cays to be islands. Second that all inhabited features, however small, may be used to generate claims to extended maritime zones. Third that rocks of one country, recognised by a neighbour as being an appropriate feature in generating maritime boundaries, fulfil the requirements of Article 121. Fourth that rocks used as basepoints in a system of straight or archipelagic baselines may be used to generate extended maritime claims. Fifth, that countries will normally try to claim that rocks, which will move the line of equidistance in their favour, can sustain habitation or an economic life of their own.[1] We have sometimes drawn attention to the possibility of a third party disputing the status of some features used in the delimitation of maritime boundaries, such as South Indispensable Reef and Ceva-i-Ra. It has been assumed that Tonga does not intend to claim an extended maritime zone from Teleki Tokelau and Teleki Tonga.

The final section explores the possibility that geographical circumstances might persuade one or both countries to argue that the line of equidistance would create an inequitable maritime boundary. Where there is a clear economic disparity between the parties to a dispute, the less well-off state frequently advances the argument that it should be compensated for this circumstance by means of shifting the delimitation line in its favour. This sort of argument could be applied to several of the potential delimitations in the area under consideration, for

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[1]   Thus, with regard to Kiribati – USA [Jarvis Island] and Kiribati – USA [Palmyra Atoll and Kingman Reef], it is assumed that the USA will extend EEZ claims from these features despite the fact that both Jarvis Island and Kingman Reef are uninhabited.

example where there is a clear disparity between the populations of states concerned.[2] Such economic arguments have met with little sympathy before the International Court of Justice, which has on more than one occasion held that such factors are not of relevance as they are liable to significant change over time and have not been considered as valid arguments for the modification of an equidistance line in the context of this study.

Nevertheless, it is worth acknowledging that there is a significant difference between the approach adopted by the courts and that of states entering into bilateral or multilateral negotiations. This is unsurprising in that, firstly, states are quite free to raise any factors they choose for consideration between them, and, secondly, economic and environmental issues are frequently the prime concern of the parties and thus the driving force behind the negotiations in the first place. In certain circumstances, therefore, these issues might hold a major role in determining the course of the delimitation line.

In the Charney volumes, a separate map illustrated each individual analysis. That would not be appropriate in the south and central Pacific Ocean where regional maps are sufficient (see Figure 1), however, when necessary, as in the case of the area offshore from the Gulf of Fonseca, separate maps has been included (see Figures 2-8).

2. Undelimited Maritime Boundaries

Australia [Macquarie Island] – New Zealand

Introduction
Macquarie Island, lying approximately 1,500km southeast of Tasmania, has been part of that Australian state since the nineteenth century (The Hydrographer, 1974: 123-9). Apart from New Zealand's possessions in Antarctica, Campbell and Auckland Islands are the most southerly territories of New Zealand (The Hydrographer, 1971: 424-32). Claims from these islands to an EEZ 200 nautical miles (nm) wide by Australia and New Zealand overlap (see Figure 1).

The line of equidistance
The strict line of equidistance is based on these three sub-Antarctic islands. They are all islands in terms of Article 121 of the 1982 United Nations Convention on the Law of the Sea (UNCLOS). The line of equidistance extends for about 260nm between two termini located 200nm from the nearest islands. Australia has indicated its view of the location of the median line in the declaration of the limits of its EEZ (Prescott, 1995: 104). The coordinates of the ten points are listed as follows:

51°09' S, 160°39' E
51°12' S, 160°42' E
52°15' S, 162°04' E

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[2]   For example, France [Wallis and Futuna] – Tonga (15,129 vs. 229,979), France [Wallis and Futuna] – Tonga (15,129 vs. 109,082), Indonesia – Palau (18,467 vs. 216 million), Niue – Tonga (2,103 vs. 109,082), and Niue – USA [American Samoa] (2,103 vs. 63,786).

MALAYSIA

VIETNAM

CHINA

Christmas Island (Australia)

I N D O N E S I A

PHILIPPINES

PALAU

FEDERATED STATES OF MICRONESIA

Guam (U.S.)

Northern Mariana Islands (U.S.)

A U S T R A L I A

PAPUA NEW GUINEA

Lord Howe Island

New Caledonia (France)

SOLOMON ISLANDS

NAURU

MARSHALL ISLANDS

Wake Island (U.S.)

Macquarie Island (Australia)

Norfolk Island (Australia)

Matthew Island

Hunter Island

VANUATU

KIRIBATI (GILBERT ISLANDS)

NEW ZEALAND

FIJI

Wallis & Futuna (France)

TUVALU

Howland Island and Baker Island (U.S.)

Johnston Island (U.S.)

Chatham Islands

Kermadec Islands (N.Z.)

TONGA

SAMOA

American Samoa (U.S.)

Tokelau (N.Z.)

KIRIBATI (PHOENIX ISLANDS)

Palmyra Island (U.S.)

Kingman Reef (U.S.)

Hawaii (U.S.)

NIUE

COOK ISLANDS

Jarvis Island (U.S.)

KIRIBATI (LINE ISLANDS)

French Polynesia (France)

Pitcairn Islands (U.K.)

scale: 0 — 1000 nautical miles

110°E 120° 130° 140° 150° 160° 170° 180° 170°W 160° 150° 140° 130°

50°S 40° 30° 20° 10° 0° 10°N 20°

Legend:
- Equidistance line
- Agreed maritime boundary
- Disputed area
- Fishery zone
- Exclusive economic zone
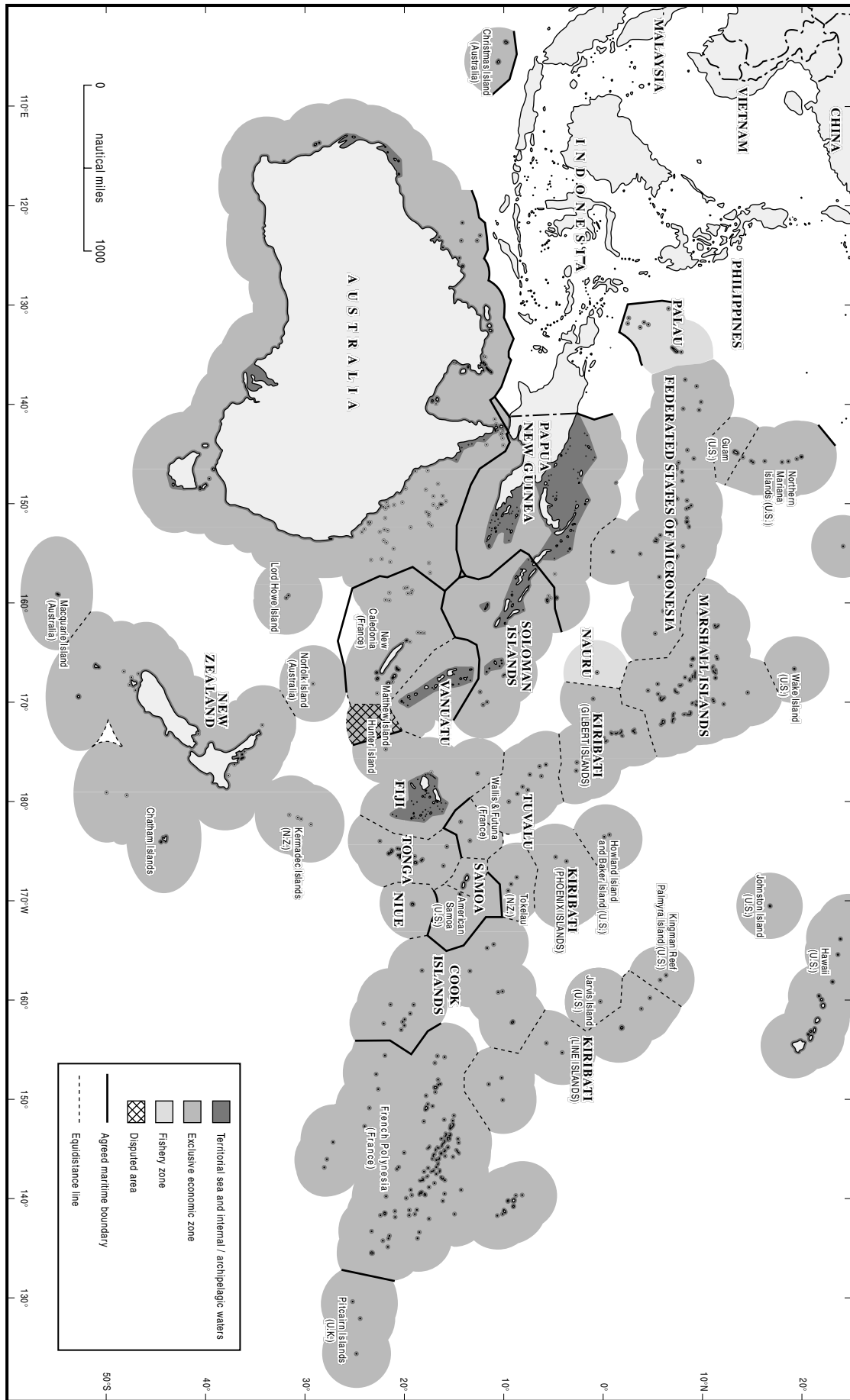- Territorial sea and internal / archipelagic waters

Figure 1: Maritime Boundaries in the Southwestern Pacific Ocean

52°26' S, 162°19' E
53°43' S, 164°05' E
53°50' S, 164°16' E
54°01' S, 164°21' E
54°21' S, 164°32' E
54°42' S, 164°43' E
54°43' S, 164°43' E.

The closest that the line runs to the islands on either side is 170nm.

Factors which might encourage discussions about deviations from the line of equidistance
The line of equidistance delivers to Australia the southern tip of the Campbell Plateau which appears to be a broad submarine elevation which forms a natural component of the continental margin bordering the south and southeast coast of New Zealand. The deep water separation between the Macquarie Ridge and the Campbell Plateau lies closer to Macquarie Island than Campbell Island. This means that New Zealand could argue that the seabed boundary should deliver its entire natural prolongation. It would be using the argument which Australia has used so successfully in the Timor Sea. New Zealand might also suggest that claims to the water column from the small Macquarie Island, remote from the Australian mainland should be discounted in view of the proximity of New Zealand's South Island which is about 200nm closer to Macquarie Island than Tasmania.

Australia [Norfolk Island] – New Zealand

Introduction
Australia's sovereignty over the outlying Norfolk Island means that claims to an EEZ 200nm wide overlaps with a similar claim from New Zealand territory (see Figure 1).

The line of equidistance
The line of equidistance separating the EEZs is based on Norfolk and Philip Islands belonging to Australia and the Three Kings Islands belonging to New Zealand. These are all islands according to the definition contained in Article 121 of UNCLOS. Norfolk Island lies about 770nm east of the Australian mainland and about 380nm north of New Zealand's North Island (The Hydrographer, 1973, vol.III: 212-3). Philip Island lies about 3nm south of Norfolk Island. The Three Kings Islands are located about 30nm from the northern tip of the North Island of New Zealand (The Hydrographer, 1971: 105). The line of equidistance between these two sets of islands extends for approximately 160nm and consists of four segments. The termini of this line are located 200nm from the nearest islands. Australia has published its version of that line of equidistance in its 1994 proclamation of the limits of its EEZ (Prescott, 1995). From east to west the line joins points with the following coordinates: 30°54' S, 171°15' E; 31°11' S, 170°46' E; 31°18' S, 170°35' E; 31°18' S, 170°33' E; 32°26' S, 168°39' E (Prescott, 1995: 104).

It seems likely that Australia and New Zealand will claim the continental margin beyond 200nm so that a seabed boundary would be necessary in addition to the EEZ boundary (Prescott, 1998). The principal area where claims could be made to the margin wider than 200nm lies west of the western terminus of the EEZ boundary. The area involves two ridges which extend northwards from western and northern New Zealand. The Lord Howe Rise, on which

Australia's Lord Howe Island stands, marks the western limit of the New Caledonian Basin while the Norfolk Ridge surmounted by Norfolk Island marks its eastern limit (Symonds and Willcox, 1988: 13). A line of equidistance dividing this submarine area of ridges and basin consists of two segments extending westwards from the western terminus of the EEZ for about 340nm to a terminus in the vicinity of 38°45' S, 161°50' E (Symonds and Willcox, 1988: Figure 16).

This terminus coincides with one of the absolute limits contained in Article 76 of UNCLOS. That limit is located 100nm seawards of the 2,500 metre isobath. The area of the Norfolk Ridge forming part of the continental margin between New Zealand and Norfolk Island falls almost entirely within the EEZ and a much larger area of the Lord Howe Rise lies outside the EEZs of both countries. This means that the nature of these ridges becomes significant. If they are deemed to be oceanic ridges, then there can be no claim beyond the 200nm EEZ according to Article 76(3). If they are deemed to be submarine ridges, then the maximum claim is 350nm from the baseline from which the territorial sea is measured, according to Article 76(6). This qualification would not prevent claims to those parts of Norfolk Ridge more than 200nm from the territory of New Zealand and Australia.

If Lord Howe Rise was deemed to be a submarine ridge there would be parts of the feature which lie more than 350nm from the nearest territory of Australia and New Zealand and which could not be claimed. This means there would be no common boundary between the two countries on the Lord Howe Rise. However if Lord Howe Rise was deemed to be a submarine elevation which forms a natural component of the continental margin, then the limit of 100nm seaward of the 2,500 metre isobath could be used under the terms of Article 76(6).

The morphological characteristics of the Rise could support this view. It has the configuration of a broad submarine plateau, extending north from the margin adjacent to the west coast of New Zealand's South Island past Lord Howe Island and Middleton and Elizabeth Reefs to the Bellong Plateau surmounted by Iles Chesterfield. It can be expected that the two countries will agree that the Rise is a submarine elevation which is a natural component of the continental margins of Lord Howe Island and South Island because that is the only designation which would allow the entire rise and parts of the adjoining basin to be claimed.

It is never safe to regard the generic name given to a feature such as ridge, rise, swell or plateau as a reliable definition of the feature because such names are given for different reasons by different navigators. However in this case it is a useful indication that this feature has the configuration of a broad flat submarine elevation rather than the usually narrow rugged form of many ridges. Symonds and Willcox (1988: 13) have reported that the rise consists of Palaeozoic and igneous basement which are considered to possess only low hydrocarbon prospects. However, they note that thicker sediments on the western flank of the Rise might have interesting future hydrocarbon potential. Any claims by either country to parts of the margin beyond 200nm will need to be submitted to the Commission on the Limits of the Continental Shelf by 2004 in accordance with Article 76(8). If Australia and New Zealand believe that the area can be divided by a common boundary, then it might be possible to make joint or very similar applications.

There are unconfirmed reports that Australia, New Zealand and France, from New Caledonia, may be able to make claims to the seabed beyond 200nm eastwards of the Norfolk Ridge on the western edges of the South Fiji Basin.

Factors which might encourage discussions about deviations from the line of equidistance
In respect of the line of equidistance which separates the EEZs New Zealand might argue that the marked disparity in size between its North Island and Australia's Norfolk Island justifies a displacement of the line of equidistance in New Zealand's favour. Australia could counter that view by referring to the fact that Norfolk Island was given full effect in negotiations with France despite the fact that New Caledonia is a much larger island than Norfolk Island.

New Zealand could argue that the part of Norfolk Ridge which lies more than 200nm southwest from Norfolk Island and north of the line of equidistance should belong to New Zealand because it is the natural prolongation of North Island. It would be necessary to support such a claim with geological evidence and it would be open to Australia to use the same argument supported by equivalent evidence to claim that the area is part of the natural prolongation of the seabed south of Norfolk Island.

If it is assumed that both countries treat the Lord Howe Rise as a submarine elevation, it is possible that both will argue that the boundary should be moved from the line of equidistance in their favour on grounds of natural prolongation. This might be difficult for both sides because there has never been a successful claim to natural prolongation. Anderson (Charney and Alexander, 1993:1,804 and 1,838) has noted that after the International Court of Justice had agreed with West Germany that its seabed claims should be based on natural prolongation, the boundaries it settled with Denmark and the Netherlands, the other parties to the case, were entirely unrelated to geological or topographical factors. New Zealand might also argue that a claim from the small Lord Howe Island should be discounted because of the much longer coastline of South Island. However, issues of proportionality, however defined, seem to be relevant in adjudicated delimitations rather than negotiated delimitations.

Canada – United States of America [Dixon Entrance]

Introduction
Canada and the United States share a coastline in four different regions. Two are located on the Pacific Ocean in the vicinity of Dixon Entrance and Juan de Fuca Strait, a third region is located in the Arctic Ocean, and the fourth is found in the Gulf of Maine on the Atlantic coast. To date only the boundary through most of the Gulf of Maine and part of the boundary in the vicinity of Juan de Fuca Strait have been delimited. This analysis deals with the boundary through Dixon Entrance and its extensions to the limit of the intersection of the EEZs and continental margins of both countries (see Figure 2).

The line of equidistance
The line of equidistance begins from a point at the southern end of the Portland Canal which was determined by a tribunal of impartial jurists in October 1903 (Parry, 1980: 200-3; Paullin, 1932: 69-71). It extends for approximately 80nm to the seaward limit of Dixon Entrance between Petrel and Langara Islands belonging to the United States and Canada respectively. The course of the line of equidistance through Dixon Entrance is based on Dundas, Zayas, Graham and Langara Islands on the Canadian side and a small island 6nm south of Duke Island, and Prince of Wales and Dall Islands on the American side. Gray (1997: 62) has produced a useful sketch map of this sector of the line of equidistance. Seaward of Dixon Entrance, the boundary extends for approximately 210nm to a terminus 200nm from the nearest land in the vicinity of 53°29' N and 136°59' W in water about 3,000 metres deep. This sector of the
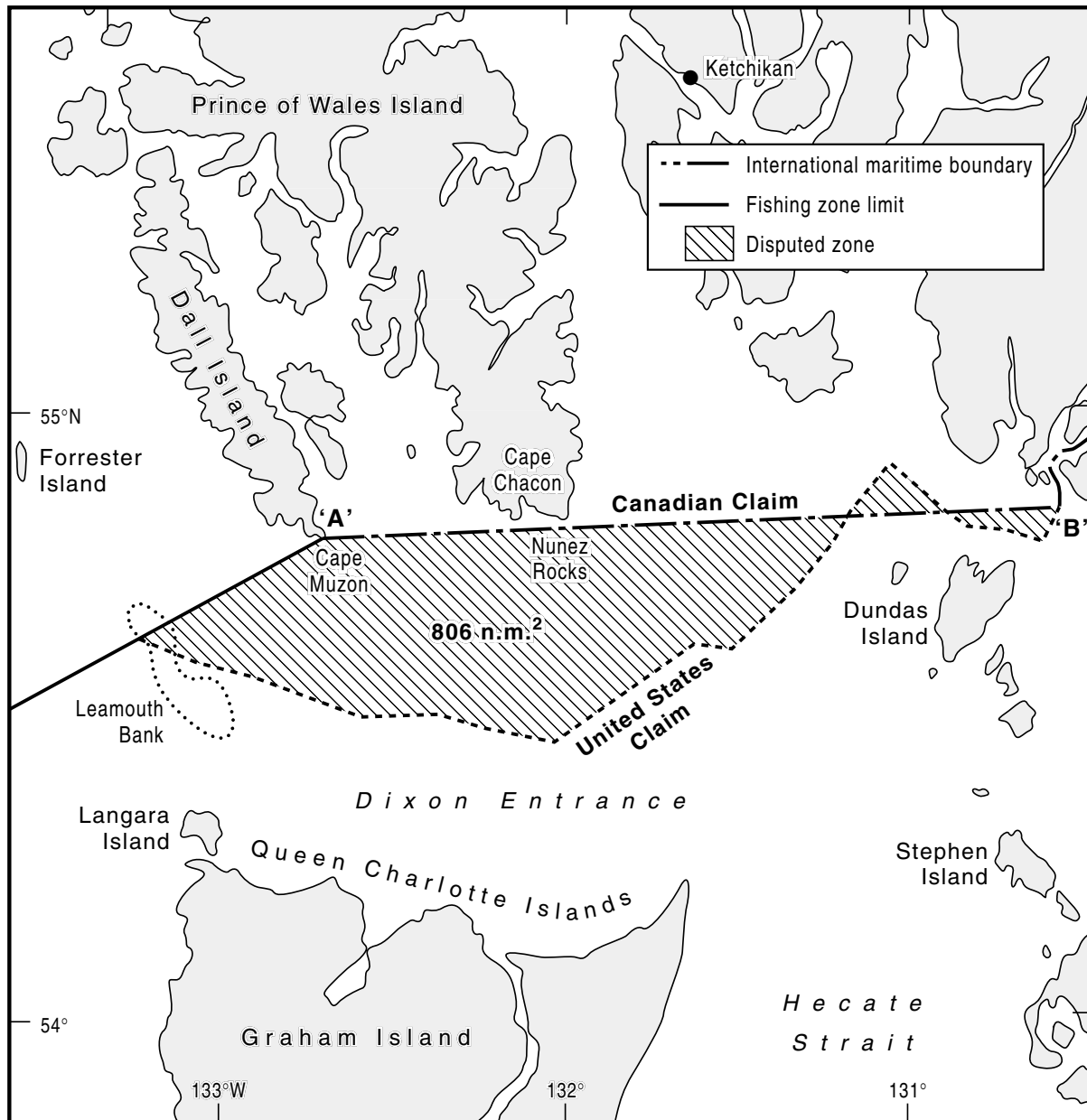
Figure 2: The Dixon Entrance

equidistance line is based on Petrel and Forrester Islands on the American side and Langara Island, Graham and Frederick Islands on the Canadian side.

A map produced by the State Department of the United States (1973) which shows the composite theoretical division of the seabed, marks a wide continental rise in the Gulf of Alaska extending far beyond 200nm from the coast (Prescott, 1998: 56-8). It also shows an equidistant division of that feature between Canada and the United States extending from the vicinity of Dixon Entrance for about 180nm from the EEZ limit. The terminus of the line of equidistance dividing the rise beyond 200nm lies in the vicinity of 52°15 N and 144°50' W on the State Department map. When transferred to a map at a scale of 1:2.5 million that point appears to lie more than 100nm seaward of the 2,500 metre isobath and more than 350nm from the baselines from which the territorial seas of Canada and the United States are measured. It therefore seems unlikely that a claim could be made to the entire feature. Any claim to the margin beyond 200nm would need to be submitted to the Commission on the Limits of the Continental Shelf.

This wide continental rise has a lobe which extends southwards from the line of equidistance to about 43° N. This lobe is separated from the continental margin south of the entrance to Juan de Fuca Strait by an area of the deep sea bed. If that correctly represents the seabed morphology and structure it seems possible that Canada is the only country that could claim the lobe. It would be more difficult for the United States to claim that the lobe was part of its natural prolongation when it is separated from the continental margin south of the Strait. However, the State Department map shows a line of equidistance continuing from Juan de Fuca Strait more than 200nm from the coast, to place the southern tip of the lobe under American jurisdiction.

A three-dimensional map of the Pacific Ocean Floor produced by the National Geographic Society (1969) supports the view that the lobe is separated from the coastal continental margin southwards from the northern tip of Vancouver Island. A map produced by the United Nations (1977) for the Second Committee of the Third United Nations Conference on the Law of the Sea showing the limit of the continental margin and various possible seaward claims based on different formulae from Article 76 does not show a lobe separated from the narrow American margin south of Juan de Fuca Strait. Instead it shows a wide margin extending south to about 4° N. If that represents the correct situation the United States would be able to claim the margin beyond 200nm off its coast south of Juan de Fuca Strait.

Factors which might encourage discussions about deviations from the line of equidistance
It appears that the United States would consider the line of equidistance favourably, but Gray (1997: 62-3) notes that Canada believes that the line of equidistance from the mouth of Portland Canal to the seaward limit of Dixon Entrance would not be appropriate. The Canadian objection to a line of equidistance is based on a conviction that the maritime boundary through Dixon Entrance was settled by an Anglo-American Tribunal in October 1903 (Parry, 1980: 200-3). The origin of that Tribunal can be traced to the Anglo-Russian Treaty of 1825 which delimited, in rather general terms, the boundary between British and Russian possessions in North America (Paullin, 1932: 69). When the United States purchased Alaska from Russia in 1867, the definition of the eastern limit of Alaska was identical to the description in the Anglo-Russian Treaty of 42 years earlier (Malloy, 1923, vol.2: 1,521-2). However, the boundary description of 1825 was imprecise and it was necessary for American and British authorities to unravel the ambiguities that existed.

The most important uncertainties relate to the land boundary and need not be considered here. In January 1903 it was agreed to establish a Tribunal of *"six impartial jurists of repute"* to answer seven questions (Parry, 1980a: 336-41). The first three questions concerned the Portland Canal and Dixon Entrance. The Tribunal was asked to establish the point of commencement of the line, the channel in the Portland Canal that the line followed and the course of the line between the point of commencement and entrances to Portland Canal (Parry, 1980a: 340-1). The Tribunal completed its work in October 1903 and provided the following answers. The point of commencement was Cape Muzon on Dall Island, the channel of the Portland Canal started at 55°56' N and passed north of Pearse and Wales Islands, and the course of the boundary was a straight line marked A-B on the map attached to the report (Parry, 1980: 202). It is the view of the Canadian authorities that the line A-B marks the maritime boundary between Canada and the United States. Gray (1997: 63) estimates that the area lying between the line of equidistance, claimed by the United States and the Tribunal line claimed by Canada measures approximately 828nm[2].

The United States holds the view that the line A-B was intended only to indicate which islands belonged to Canada and the United States. It is much easier to find evidence which supports the American view. First, the agreement that established the Tribunal contained the following instructions to guide its deliberations:

> *III. It is agreed by the High Contracting Parties that the Tribunal shall consider in the settlement of the questions submitted to its decision the Treaties, respectively concluded between [Britain and Russia] under date of the 28th (16th) February, AD 1825, and between [the United States and Russia] under date of the 18th (30th) March, AD 1867,* **and particularly the Articles III,** *IV and V of the first-mentioned Treaty* (Parry, 1980a: 338-9, emphasis added).

This instruction was then followed by the original text of the 1825 treaty 'word for word'. That treaty was published in French:

> *III. La ligne de dèmarcation entre les possessions des Hautes Parties Contractantes sur la côte du Continent et les Iles de l'Amérique Nord-ouest, sera tracée ainsi qu'il suit* (Parry, 1980a: 339).

> *[III. The line of demarcation between the possessions of the High Contracting Parties on the coast of the Continent and the Islands of the American North-west will be traced as follows].*

This preamble to Article III of the 1825 Treaty between Britain and Russia makes it clear that the line being described was intended to divide their land territories on the mainland and the offshore islands. There is no reference to the boundary dividing the sea. Thus when the Tribunal in 1903 interpreted the course of the boundary defined in 1825 by the Line A-B it could not be drawing a maritime boundary. The purpose of this sector of the boundary defined in 1825 was to distinguish which islands belonged to each country. That was still its purpose in 1903 and it could be done easily by a single straight line.

Second, if the Canadian view of Line A-B was correct it would mean that the American members of the Tribunal had agreed to forfeit any rights to territorial waters from Cape Muzon and to accept territorial waters only 1nm wide south of Prince of Wales Island. That is simply not credible. Territorial waters were well established by 1903 and three years before the United States bought Alaska, the American Ambassador in Paris was telling the French authorities that *"...no other rule than the three-mile rule was known or recognised as a principle of international law"* (Crocker, 1919: 659-60).

Third, it is interesting to compare the lines drawn by the Tribunal in 1903 with the line drawn through Juan de Fuca Strait in 1873. Paullin (1932: 71-2) described the 1873 line as the *"San Juan Water Boundary."* The boundary through Juan de Fuca Strait has been accepted as a maritime boundary by both Canada and the United States. The description of the agreed line confirms that it was a boundary separating waters and not just islands. Lines were commonly used to divide islands during the nineteenth century between France and China, France and Portugal and Germany and Britain for example. All that was needed was to ensure that the line did not intersect any of the islands. The boundary through Juan de Fuca Strait was drawn with great care to divide the waters at critical points equally between Canada and the United States. Five points are described as *"midway"* between two points on opposite coasts, four points are

described as *"equidistant"* from two coasts, one point is named at *"the middle of the channel"* and another at the *"centre of the fairway"* (Parry, 1977: 38-9). There are also references to the boundary avoiding Kelp Reef and the boundary changing direction at *"...the North end of middle Bank in between 13 and 18 fathoms of water"* (Parry, 1977: 38).

Canada – United States of America [Juan de Fuca Strait]

Introduction
As previously noted Canada and the United States share a coastline in four separate regions; two in the Pacific Ocean and one each in the Arctic and Atlantic Oceans. This analysis deals with the completion of the maritime boundary in the vicinity of Juan de Fuca Strait at the terminus of parallel 49° N (see Figure 3).

The line of equidistance
Britain and the United States signed a treaty in 1846 and Article 1 defined the continuation of the boundary formed by parallel 49° N into and through Juan de Fuca Strait (Parry, 1977: 36). Since the treaty did not specify which of the two main channels would define the boundary, and since the two parties could not agree on one of the channels, the matter was referred to the Emperor of Germany by an agreement of 1871 (Parry, 1977: 36). Emperor William gave his decision in October 1872 selecting the Canal of Haro which was the channel preferred by the United States (Parry, 1977a: 126).

In March 1873 the boundary through the channel was delimited (Parry, 1977: 36-9). The boundary is defined mainly by courses and distances and it terminates in the entrance to the Strait between Bonilla Point, on the south coast of Vancouver Island 2nm southeast of Carmanah Point, and Tatooch Lighthouse, which is on an island of the same name 3.6 cables[3] northwest of Cape Flattery on the American coast. The terminus is specified as being equidistant between the points of reference which are *"...nearly due North and South (true)"* (Parry, 1977: 39).

The terminus appears to be located near 48°29' N and 124°40' W and it is from this point that the line of equidistance may be continued to the limit of the EEZ. The points proceeding northwest along the coast of Vancouver Island which determine the line of equidistance are Carmanah Point, Pachena Point, Amphritite Point, Lennard Island and Estevan Point. The equivalent points along the American coast proceeding south are a small island or rock located off Cape Alava, and Cape Johnson. The line of equidistance extends for about 220nm from the entrance of Juan de Fuca Strait to a terminus near 46°31' N and 128°16' W where the depth of the ocean is around 2,000 metres.

Factors which might encourage discussions about deviations from the line of equidistance
It is interesting that two countries which have considerable experience in negotiating maritime boundaries and which possess excellent technical services have not been able to delimit one of their four potential maritime boundaries. The Gulf of Maine boundary was delimited by the International Court of Justice and the boundary through Juan de Fuca strait was delimited by the German Emperor. According to Gray, in an excellent article on Canada's unresolved

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[3]   One cable length is equivalent to 608 feet (185m) in the British Navy and 720 feet (219m) in the US Navy. It is understood that the latter applies in this case.
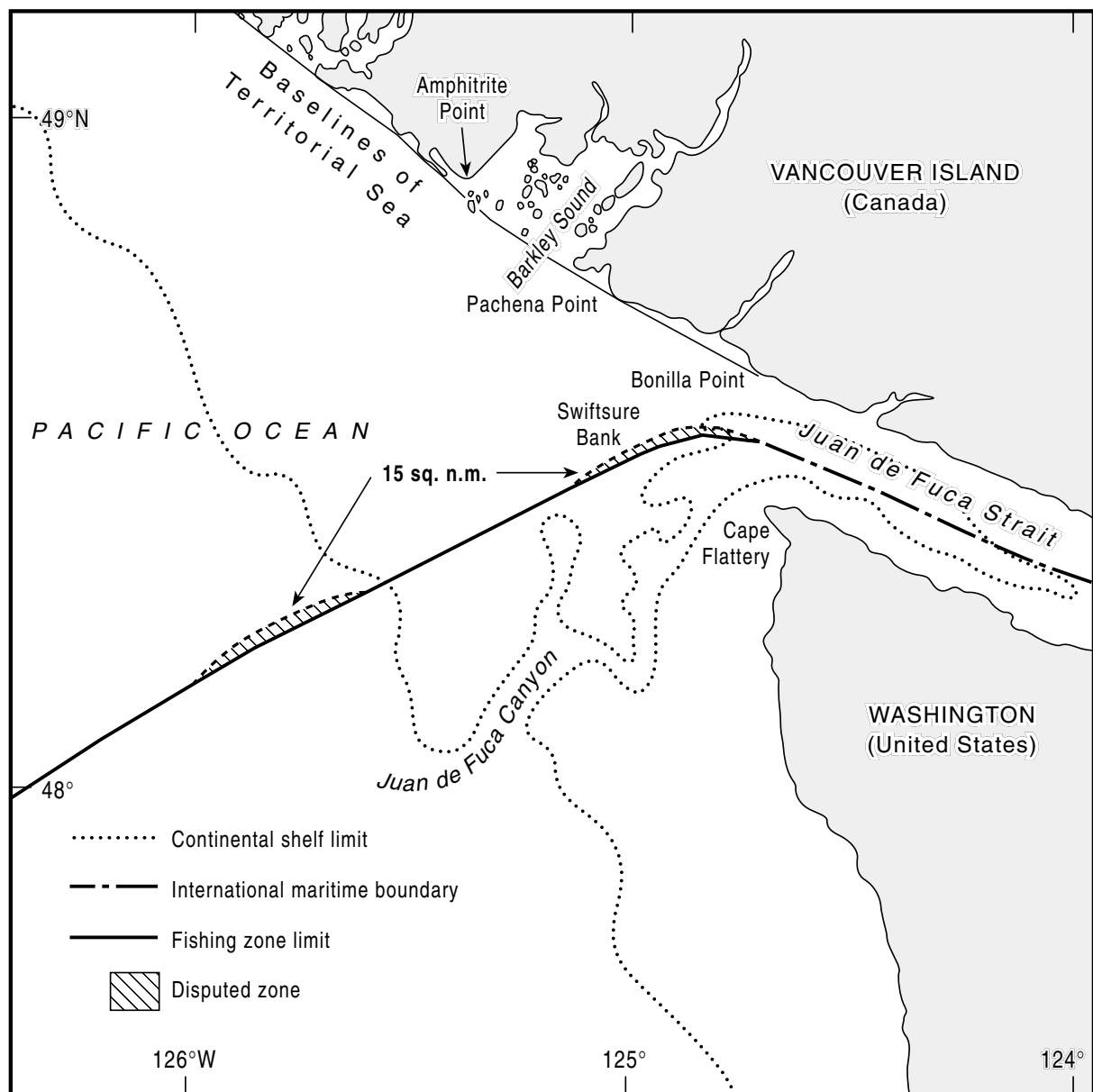
Figure 3: The Juan de Fuca Strait

maritime boundaries, both countries are agreed that the boundary should be a line of equidistance, but they cannot agree on the baselines which will generate it (Gray, 1997: 61-2). Canada wishes to use its straight baselines while the United States wishes to use the normal baseline of both countries. Gray considers that the two small areas of difference between the two lines total only about 15nm^2 but they lie near Swiftsure Bank, the site of a valuable fishery.

Costa Rica – Nicaragua

Introduction
Costa Rica and Nicaragua are adjacent on the south coast of the Isthmus of Central America. Claims from each territory to territorial seas and EEZs overlap (see Figure 4).

The line of equidistance
The landward origin of the line of equidistance is located at *"...the center point of Salinas Bay in the South sea..."* by the treaty of 1858 signed by the two countries (United States' State

Department, 1976a: 2). That point was fixed at 11°03'47" N and 85°43'52" W by Edward Alexander, who had been appointed an engineer arbitrator, in his fifth award in March 1900 (United States' State Department, 1976a: 3). The coast of the isthmus northwest of this point is generally smooth as far as the Golfo de Tehuantepec off the coast of Mexico. Southeastwards from the terminus of the land boundary between Costa Rica and Nicaragua there is a marked bulge in the coast formed by the Provinces of Guanacaste and Puntarenas. This bulge has the effect of forcing the line of equidistance westwards in favour of Costa Rica. The line of equidistance extends for about 220nm to a terminus near 9°43' N and 89°10' W and intersects the Central American Trench 70nm from the coast.

Factors which might encourage discussion about deviations from the line of equidistance
It is possible that Nicaragua might suggest that the line of equidistance produces an inequitable boundary. The seaward terminus of the Costa Rica-Nicaragua line of equidistance lies only 25nm from the seaward terminus of the line of equidistance separating the claims of El Salvador and Honduras. This means that Honduras' maritime zone narrows as it extends seawards from a coast measuring approximately 180nm to a seaward limit 25nm wide. It is in a similar but more extreme situation to that which faced Panama when it negotiated its maritime boundaries in the Pacific Ocean. Nicaragua might seek relief from its coastal geography by suggesting that the line of equidistance should be abandoned in favour of a more southerly course from its intersection with the Central American Trench.

There seem to be two objections which Costa Rica might raise to such a suggestion. The first is that Costa Rica's position in the Caribbean Sea is similar to Nicaragua's in the Pacific Ocean. Costa Rica's northern maritime zone is compressed by lines of equidistance drawn with Nicaragua and Panama. The second is that any southerly deviation of the line of equidistance in the Pacific Ocean would be severely restricted if Costa Rica wished to retain exclusive control of Guardian Bank, a submarine feature which is reported to have a least depth of nine metres (The Hydrographer, 1975: 79). There is some doubt about the exact position of this feature.

Cook Islands – Kiribati

Introduction
The Cook Islands form a self-governing territory in a free association with New Zealand which retains responsibility for external relations in consultation with the Cook Islands. The territory consists of the Northern and Lower Cook Islands (see Figure 1).

Kiribati has been an independent republic since 12 July 1979 and consists of three detached groups of islands which previously were the Gilbert Islands, the Phoenix Islands and eight of the eleven Line Islands. The other three islands are territories of the United States of America. The 200nm EEZs claimed by the Cook Islands and Kiribati overlap.

The line of equidistance
A line of equidistance based on all relevant features would be related to Tongareva the northernmost of the Cook Islands, and Starbuck and Vostok which are two of the former Line Islands (Naval Intelligence Division, 1943-5, vol.II: 488-9 and 551; The Hydrographer, 1969-70, vol. III: 196-7, 199-202). All these features are islands within the terms of Article 121 of UNCLOS.

The line of equidistance consists of two segments. The first is drawn between Penrhyn [Tongarev] and Starbuck Island and the second between Penrhyn and Vostok Island. The segments join at a point equidistant from all three islands. The line of equidistance measures 510nm and its termini are in the vicinity of 5°50' S, 159°20' W and 11°45' S, 155°32' W, 200nm from each island.

Factors which might encourage discussions about variations from the line of equidistance
There do not appear to be any grounds which would allow one side to argue with confidence for a boundary which deviated from the line of equidistance.

Cook Islands – Niue

Introduction
The Cook Islands and Niue are both self-governing territories in free association with New Zealand, which retains responsibility for external relations in consultation with the local authorities on the islands. When claims to a 200nm EEZ are made by both territories, they overlap (see Figure 1).

The line of equidistance
Only two islands are involved in constructing a line of equidistance between these territories. They are Palmerston [Auorua] (Naval Intelligence Division, 1943-5, vol.II: 561-2; The Hydrographer, 1969-70, vol.III: 80; Bryan, 1972: 7) belonging to the Cook Islands and Niue [Savage] (Naval Intelligence Handbook, 1943-5, vol.II: 562-80; The Hydrographer, 1969-70, vol.II: 435; Bryan, 1972: 8). Both these features are islands within the terms of Article 121 of UNCLOS and may be used for claiming extended maritime zones.

The line of equidistance would measure approximately 115nm and join a tri-junction involving Rose Island in American Samoa (Naval Intelligence Division, 1943-5, vol.II: 275-6; The Hydrographer, 1969-70, vol.II: 440) and the point where the claims to 200nm zones from Niue Island and Palmerston Island intersect. The tri-junction will lie in the vicinity of 17°34' S and 166°39' W. The 1980 boundary agreed between the United States and New Zealand (between American Samoa and the Cook Islands) commences at this tri-junction which is defined by the coordinates 17°33'28" S and 166°38'35" W (Charney and Alexander, 1993, vol.I: 985-93). The intersection of the extended zones is near the point 19°38' S and 166°20' W.

The 1985 American chart showing claimed and potential maritime zones in the south Pacific (United States Department of State, 1985) places the intersection of the extended maritime zones at 21°10' S and 164°40' W. This location is 200nm from Palmerston Island in the Cook Islands and from Beveridge Reef which lies within the extended claim from Niue Island. The opinion that Beveridge Reef can justify any maritime claim appears to be mistaken. In fact Niue has accepted that there are no high water features in Beveridge Reef, and does not even claim territorial waters around the reef. A sketch plan made by sailors on board HMNZS *Canterbury* in May 1979 records that the reef is awash at low water.

The 1985 American chart provides the following information beside Beveridge Reef; *"(8) (rep.1921)."* Findlay gives an early published account of this reef:

> *Beveridge Reef, a very dangerous shoal, first announced in the Nautical Magazine, August 1833. p.442. It is also the same reef called King George Reef, Middleton Reef and Nicholson Shoal. It is nearly certain that all these reports refer to the same danger, as the routes of several vessels near the parallel of 20° [S] including the French vessels "Provencale" in 1859 and "Meyere" in 1870, sufficiently show there is not a second.*

> *According to the original notice, no part of it appears above water, but the sea breaks over it in many places. On the inside of the reef there appeared to be deepwater. Its extent is about 10 miles North and South and about 8 miles East and West. On the West, near the S.W. point, there appeared to be an opening. The position first assigned agrees exactly with that obtained by Sir Edward Belcher [a hydrographer]. By this latter it is called Lagoon Reef, and his account is as follows:- "By our survey it appears that this reef occupies an outline similar to that of a coral island, having an entrance to the N.W. All the mass of shoal water appeared to be contracted at its S.W. extremity, but no rocks above water could be traced. The S.W. extremity was determined to be in lat. 20°2' S, long. 167°49' W, which differs from that assigned by Captain Nicholson. We termed it Lagoon Reef."*

> *But some portion of it would appear to have become an island, as Mr Edward Howard of the American barque HERMIONE (1855) discovered a coral island in the exact position, in length 3 miles, width 2 miles* (Findlay, 1884: 532).

Seven years later, The Hydrographer (1891: 50) in the second edition of *Pacific Islands*, vol.II, published a digest of Findlay's first two paragraphs and copied the third paragraph in full. When the fifth edition was published in 1918 there was no reference to Howard's discovery (The Hydrographer, 1918: 532) but there was reference to a southwest entrance discovered by Captain Allen of the SS *Daion* (whose name was corrected to *Dawn* in the sixth edition). The view that no rocks stand above high water has been maintained in subsequent editions of the British sailing directions.

The United States Hydrographic Office (1926) published the third edition of *Pacific Islands Pilot* which included the following reference to Beveridge Reef:

> *Beveridge Reef (20°02'Sth.,167°49' W. H.O.Chart 825a) is a lagoon reef, and when first reported in 1833, the sea was breaking on it in many places. It is described as having an outline similar to that of a coral atoll, having an entrance on the northwest side. The mass of shallow water appeared to be contracted to the southwestern extremity, and* **two rocks showing 6 and 8ft (1.8 and 2.4 m) above water were seen by a steamer in 1921** [The remainder of the reference dealt with details of the entrance and the abundance of fish] (US Hydrographic Office, 1926: 288, emphasis added).

This description explains the information on the 1985 American chart, but the 1988 edition of the American pilot contained no reference to the rocks standing above high water (United States Defence Mapping Agency, 1988: 76).

Factors which might encourage discussion about variations from the line of equidistance
There is no obvious reason for either country to claim that an equidistant boundary was inequitable.

Cook Islands – Tokelau

Introduction
The Cook Islands form a self-governing territory in a free association with New Zealand which retains responsibility for external affairs in consultation with the government of the Cook Islands. Tokelau is a territory of New Zealand.[4] Exclusive economic claims 200nm wide from some islands in these territories overlap (see Figure 1).

The line of equidistance
If a line of equidistance was based on all relevant features it would be related to one island in each territory. Toka Cay in the Cook Islands, lies at the terminus of a submarine reef extending 3.12nm westwards from Motu Katowa [Motu Kavata] in the group called Pukapuka [Danger Islands]; the relevant island of Tokelau is called Fakaofo [Fakaofu Faakafo, Bowditch] (Naval Intelligence Division, 1943-5, vol.II: 505, 557; The Hydrographer, 1968-70, vol.II: 533; vol.III: 204; Bryan, 1972: 7-8). Both these features are islands within the terms of Article 121 of UNCLOS.

The line of equidistance between these two features consists of one segment measuring about 120nm. The northern terminus lies in the locality of 8°15' S, 168° W at a point 200nm from each island. The southern terminus is in the locality of 10°02' S, 168°30' W. This point is equidistant from both islands and Swains Island [Olosega, Olosenga, Quiros, Gente Hermosa, Jennings] in American Samoa and is approximately 150nm from each island.

It seems probable that the tri-junction is located at 10°01'26" S, 168°31'25" W. The reason for this view is that those coordinates are given for Point 25 on the maritime boundary delimited between American Samoa and the Cook Islands in June 1980 (Charney and Alexander, 1993: 985-94) and Point 1 of the maritime boundary delimited between American Samoa and Tokelau in December 1980 (Charney and Alexander, 1993: 1,125-34). It is known that all features in each of the countries were used in generating the line of equidistance, although the lines separating American Samoa and Tokelau were simplified.

It is possible that the location of the tri-junction needs re-surveying because GPS surveys have recently been made of the relevant basepoints in the Cook Islands and Tokelau. However, the American authorities might not welcome any reconsideration of the tri-junction because there was some dissatisfaction in the Tokelauan community with the boundary negotiated on their behalf by New Zealand with the United States.

Factors which might encourage discussions about variations from the line of equidistance
There do not seem to be any factors that would enable either country to argue for any variation from the line of equidistance.

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[4]   It is understood that the Tokelau authorities are drafting a constitution and developing institutions and patterns of self-government, as Tokelau moves toward free association with New Zealand.

El Salvador – Guatemala

Introduction
El Salvador and Guatemala are adjacent states on the south coast of the isthmus of Central America. Their claims to territorial seas and EEZs overlap (see Figure 4).

The line of equidistance
The terminus of the land boundary between El Salvador and Guatemala is located in the Rio La Paz. There are no islands along the adjoining coasts to complicate any line of equidistance. The Rio La Paz flows into a wide embayment of the coast between Punta Remedios in El Salvador and Sipacate in Guatemala. Because the terminus is closer to Punta Remedios, the line of equidistance trends southwest in favour of El Salvador until it reaches approximately 70nm from the coast over the Central American Trench. The line then trends south-southwest to the seaward terminus, approximately 206nm from the land terminus. The seaward terminus is located in the vicinity of 10°42' N and 91°38' W. Guatemala's maritime zone has a seaward limit extending about 185nm.

Factors that might encourage discussions about deviations from the line of equidistance
There do not seem to be any factors that might enable either country to argue that the line of equidistance would create an inequitable maritime boundary.

El Salvador – Honduras – Nicaragua

Introduction
These three countries have been considered together because their maritime limits have been linked by a judgement of the International Court of Justice (International Court of Justice, 1993: 193-248). The original case concerned the land boundary between El Salvador and Honduras which had its origins in the Spanish colonial boundary of 1821 and it involved the
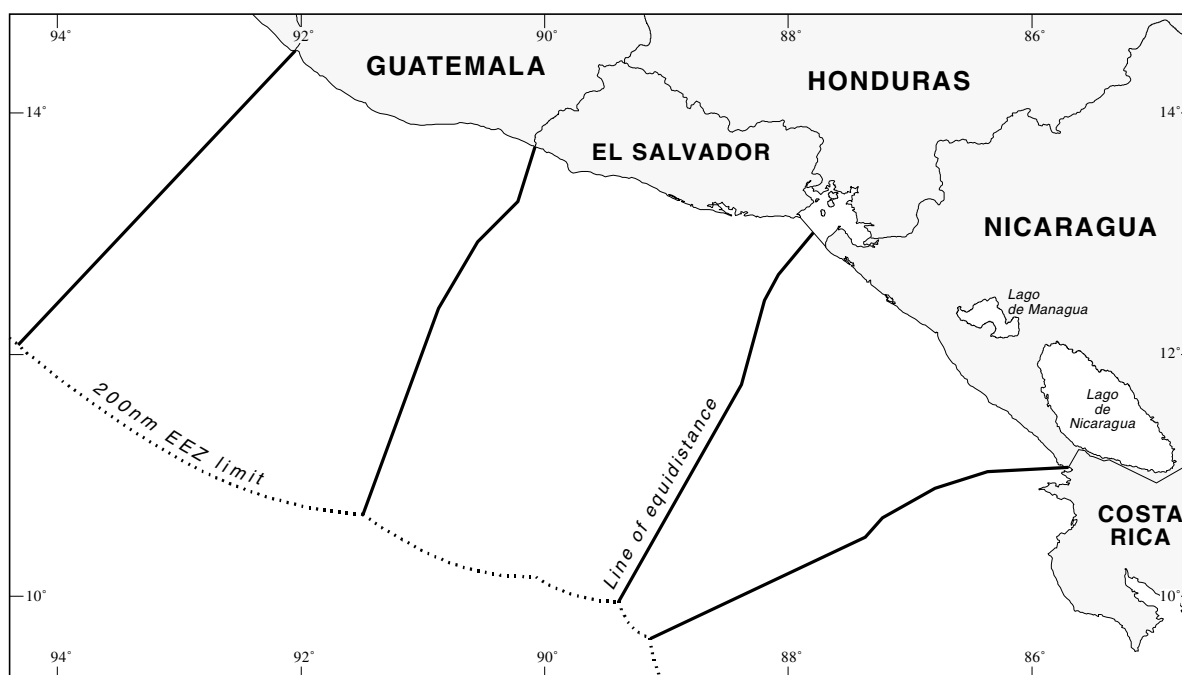

Figure 4: Maritime Boundaries off Pacific Central America

principle of *uti possidetis juris*. The dispute extended into the Gulf of Fonseca [Golfo de Fonseca], where the land boundary terminated. Nicaragua was therefore allowed to join the case.

There were three maritime issues to be resolved. The first dealt with the legal status of the waters in the Gulf of Fonseca; the second with the authority of the Court to delimit marine spaces; and the third with the legal status of waters outside the Gulf of Fonseca.

The Court decided that the Gulf of Fonseca is an historic bay with some areas under the exclusive sovereignty of each country and the remainder under joint sovereignty.

> *...the Gulf of Fonseca is an historic bay. The waters...[are]...held in sovereignty by the Republic of El Salvador, the Republic of Honduras and the Republic of Nicaragua, jointly, and continue to be so held, as defined in the present Judgement, but excluding a belt, as at present established, extending 3 [nautical] miles (1 marine league) from the littoral of each of the three States, such belt being under the exclusive sovereignty of the coastal State, and subject to the delimitation between Honduras and Nicaragua effected in June 1900, and to the existing rights of innocent passage through the 3-mile belt, and the waters held in sovereignty jointly: the waters at the central portion of the closing line of the Gulf, that is to say between a point on a line 3 [nautical] miles (1 marine league) from Punta Amapala and a point on that line 3 [nautical] miles (1 marine league) from Punta Cosiguina, are subject to the joint entitlement of all three States unless and until a delimitation of the relevant maritime area be effected* (International Court of Justice, 1993: 240-1).

The Court decided on the historic status of this bay because it had been held first by Spain before 1821, then by its successor the Federal Republic of Central America until 1839, and then jointly by the three countries, as confirmed by a judgement in a case before the Central American Court of Justice in 1917. That case had been brought by El Salvador objecting to an agreement between the United States and Nicaragua regarding the construction of a canal and of a naval base in the Gulf of Fonseca.

Judge Oda cast the solitary vote against this decision. He argued that there was no concept of a plural-state bay in international law and that the Court was simply repeating the error of the 1917 Court (Kwiatkowska, 1993: 282). It is certainly the case that the decision leaves some problems of delimitation in the bay.

The first concerns the statement that each state is entitled to a belt of presumably internal waters 3nm wide which is subject to the 1900 delimitation. Honduras and Nicaragua are affected by this delimitation, but it is not clear whether they may claim as far as the line of delimitation, which is up to 6nm from the coast of both states, or whether the delimitation is only recognised up to 3nm from the coast (see Figure 5). Part of the 1900 boundary lies less than 3nm from the coast of Nicaragua. The second problem arises from the statement about waters in the mouth of the bay adjacent to the closing line. Those waters are defined as lying between points 3nm from Punta Amapala and Punta Cosiguina. In fact, if Nicaragua is entitled to a belt of waters 3nm wide, that belt intersects the closing line 4nm from Punta Cosiguina. This intersection, marked C in Figure 5, is generated from the coast at point D.
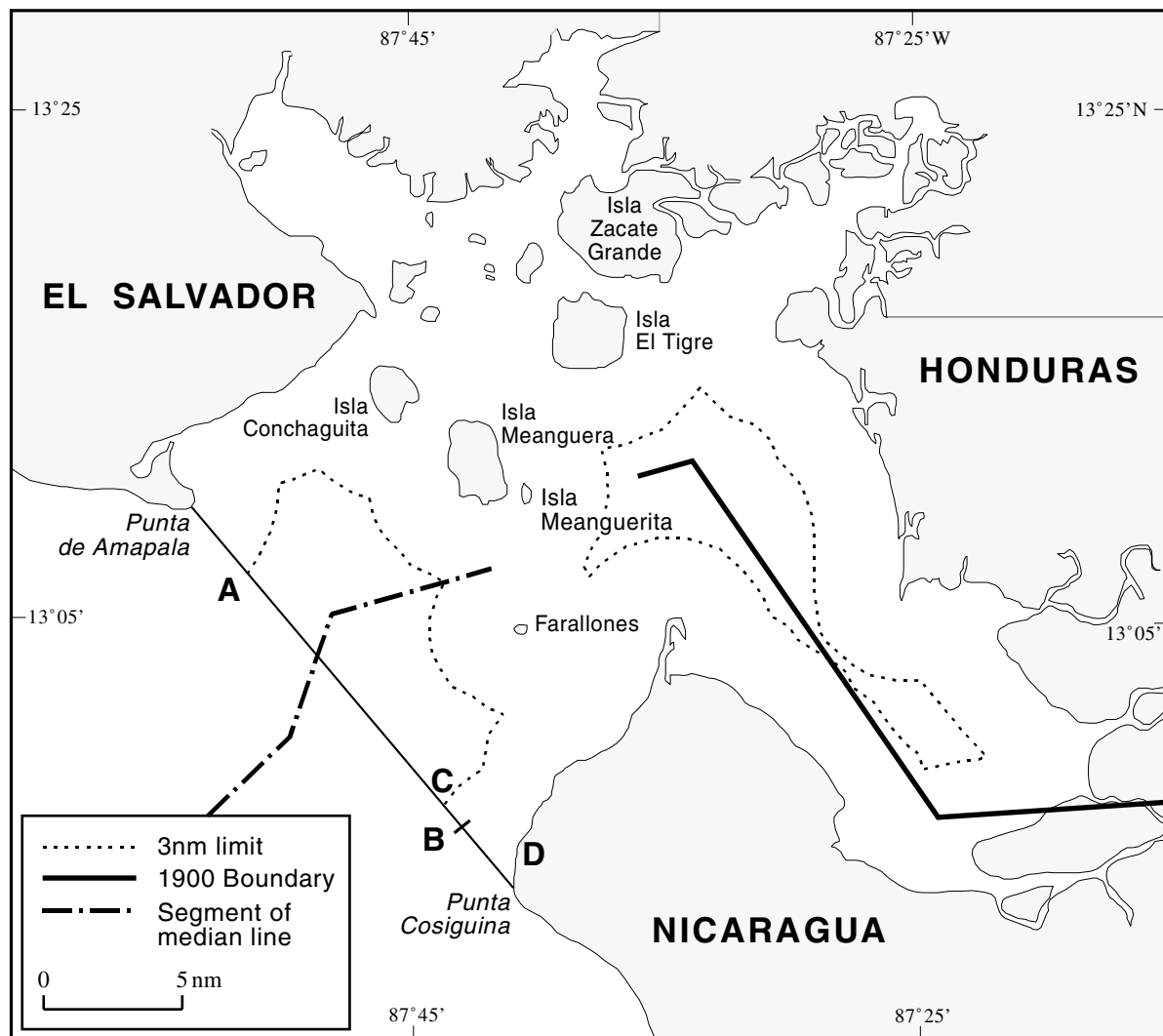
Figure 5: The Gulf of Fonseca

On the second issue the Court decided by four votes to one that it did not have the power to make any maritime delimitations inside or outside the bay. Judge Oda voted with the majority. With regard to the third issue he again cast the only vote against the decision that Honduras had the right to make claims to areas of territorial waters, EEZ and continental shelf from the central point of the bay's closing line. His opposition followed logically from his view about the legal status of the waters of the bay and he held that Honduras was locked into the bay by the seaward territories of El Salvador and Nicaragua (Kwiatkowska, 1993: 284).

There are several solutions to the problem of delimiting the maritime zones outside the closing line of the Gulf of Fonseca, but it might be very difficult to secure agreement amongst the three states and presumably it would not be possible for any two of the states to agree on a boundary without the concurrence of the third.

The difficulty will arise from the fact that El Salvador is the country that appears to be the big loser under the Court's decision to allow Honduras to make claims from the closing line. That might be judged harsh treatment by El Salvador, when it ponders the fact that the areas which the three countries can claim out to 200nm from their coasts are 58,600nm^2 for Honduras, 46,600nm^2 for Nicaragua and 26,800nm^2 for El Salvador (The Geographer, 1972: 16, 19, 24).
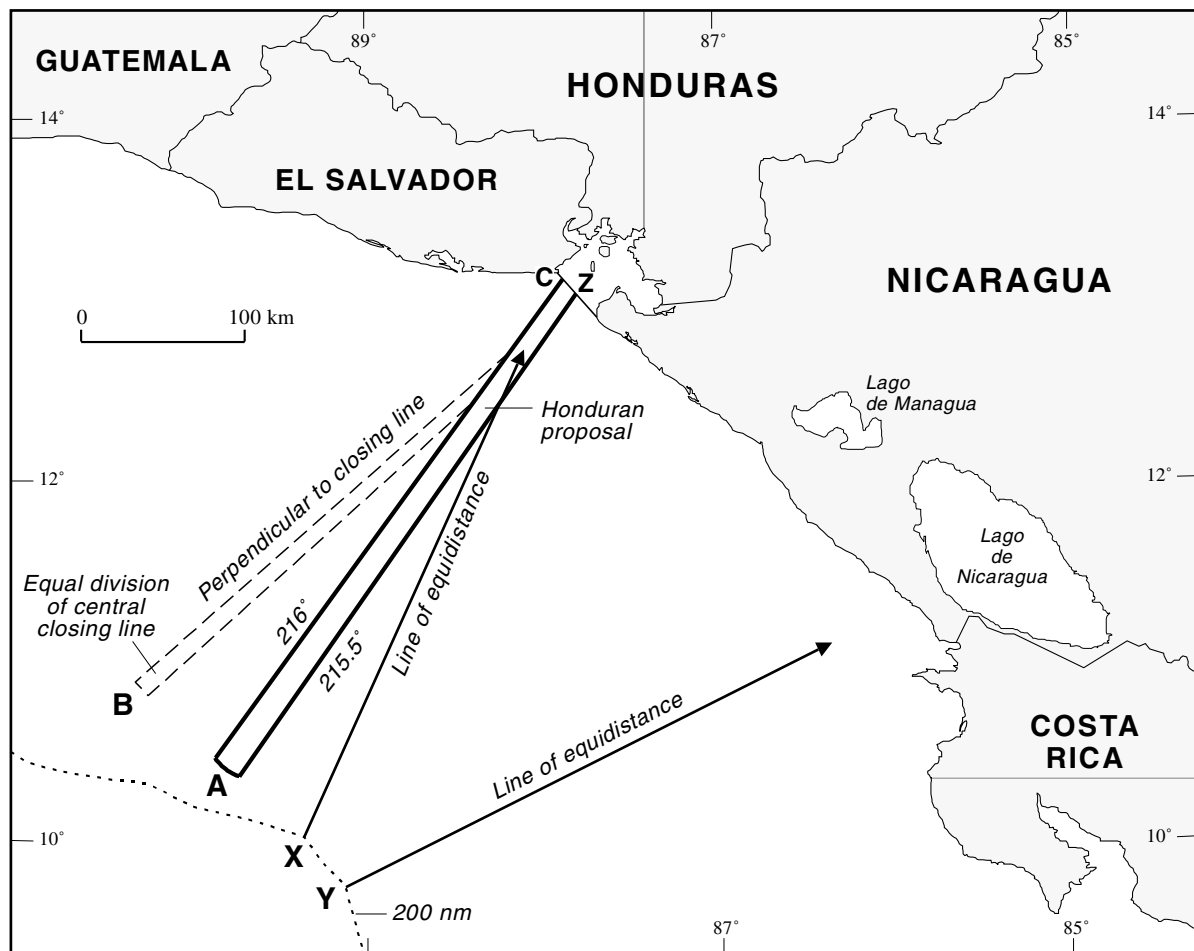
Figure 6: Offshore the Gulf of Fonseca

If Honduras had not been given such a right it is likely that El Salvador would have sought an equidistant boundary with Nicaragua. In Figure 6 that line is shown terminating at X 200nm from the coast. Point X is located in the vicinity of 10° N and 89°28' W. The location of that line almost certainly means that any *"modest corridor or fan"* (Bowett, 1991: 42) secured by Honduras will lie mainly in areas which El Salvador might have claimed. An obvious corridor could be constructed by dividing the central portion of the baseline into three equal parts measuring 4.3nm. El Salvador and Nicaragua could then add their shares to the Court's grant of 3nm off the entrance points to the Gulf of Fonseca and Honduras could claim a corridor 4.3nm wide and 200nm long in the centre of the closing line and perpendicular to it. That corridor is shown terminating at B (see Figure 6). This corridor would have an area of 2,949nm^2. It appears that this judgement has bequeathed to the three countries serious problems of delimitation seaward of the closing line of the Gulf of Fonseca that none of them could have envisaged.

The complications can be illustrated by the following analysis. A witness for Honduras outlined a method by which an area satisfactory to Honduras could be identified (Bowett, 1991: 36-42). The method starts by identifying the section of closing line which should belong to Honduras. Not wishing to infringe on any area that Nicaragua might claim, the eastern half of the line is excluded on the mistaken view that Nicaragua has no reasonable claim beyond that centre point. In fact a line of equidistance between Nicaragua and its neighbours would intersect the closing line 2nm west of its centre point (see Figure 5). It is then argued that the western half of the closing line should be divided so that El Salvador secures 3nm adjacent to Punta de

Amapala and Honduras obtains the remaining 6.5nm. This unequal division is justified by three arguments.

First, because although the relevant sections of coast controlled by each state in the bay are almost the same length, the Honduras coast faces the Pacific (Bowett, 1991: 36) while much of the coast of El Salvador is at right angles to the closing line shielded by the mainland. Presumably the authorities in El Salvador would point to the coasts of their islands which face the Pacific Ocean and the fact that the Honduran coast is shielded from the Pacific Ocean by El Salvador's mainland and islands. Second, it is argued that 3nm is El Salvador's traditional claim. Third, and most importantly, attention is drawn to El Salvador's long Pacific coast.

Having divided the baseline, the second stage identifies the area in dispute between El Salvador and Honduras. The area is calculated to be 27,100km^2. The area is bounded on the east by a line drawn from the centre of the closing line at right angles to the general direction of the coast. This line has an azimuth of 215.5°. A similar line is constructed from a point half way along the Pacific coast of El Salvador on an azimuth of 195.5°. Since the next stage of this method involves the division of this area of potential dispute on a basis of proportionality it is in Honduras' interest to make the area in dispute as large as possible.

The third stage in the method divides the area of potential dispute according to the proportions suggested by their coastal lengths which produces a ratio according to Honduras of 4.6:1 in favour of El Salvador. When the disputed area is divided in those proportions Honduras is entitled to 4,839km^2.

The final stage produces this allotment by drawing the boundary between the two countries from a point on the closing line 3nm from Punta de Amapala on an azimuth of 216° for 200nm. The eastern limit of Honduras' claim according to this method is the line drawn from the centre of the closing line on an azimuth of 215.5° for 200nm. That area is shown terminating at A in Figure 5. Point A is located in the vicinity of 10°20' N and 89°48' W.

The reasoning behind this method is ingenious but not compelling. For example, El Salvador could argue that the area in dispute is bounded on the west not by the line drawn from the centre point of its Pacific coast, but from the point 33nm west of Punta de Amapala where the general direction of its coast makes a significant change. When calculations based on that length of coast are made according to the method described, the Honduran entitlement shrinks to 2,300km^2, which is less than it would secure from a zone 200nm wide drawn from an equal share of the central portion of the closing line.

The geomorphological continental shelf off the closing line is about 46nm wide so this entire exercise seems to be concerned more with a matter of principle than with the material reward Honduras will secure for its efforts.

Because any claim 200nm from the closing line will not reach the overlapping arcs drawn on a radius of 200nm from the mainlands of El Salvador and Nicaragua, the Honduran corridor will be surrounded by claims from those two countries. It will be necessary for El Salvador and Nicaragua to agree on a maritime boundary east of the Honduran fan. This Honduran *cul-de-sac* will resemble a similar feature awarded to France from the islands of St Pierre and Miquelon, which is surrounded entirely by Canadian waters and seabed (Charney, 1993: 399-401). The terminus of the line of equidistance between El Salvador and Nicaragua would be

located near 10° N and 89°25' W and this would mean that El Salvador's maritime zone had a seaward limit extending about 75nm. The most seaward parts of the coast of El Salvador that influence the line of equidistance are in the vicinity of Punta San Juan and Punta San Sebastian. The most seaward part of Nicaragua's coast that affects this line of equidistance is Punta Castanones.

Federated States of Micronesia – Marshall Islands

Introduction
The Republic of the Marshall Islands and the Federated States of Micronesia are both constitutional democracies in free association with the United States of America. When each claims an EEZ 200nm wide, the zones overlap (see Figure 1).

The line of equidistance
A strict line of equidistance is based on five islands belonging to Micronesia and four which are part of the Marshall Islands. Kosrae [Kusaie, Kusae, Ualan, Oualan, Wolan, Strong, Hope, Teyea, Armstrong], Pingelap [McAskill, Musgrave, Petelap, Pinerappu], Mokil [Duperrey, Mogol, Mokiri], Pohnpei [Ponape, Bonabi, Panope, Ascension] and Pakin [Pagenema] belong to Micronesia; Ebon, [Boston, Epon], Namorik [Bering, Namurikku], Ujae [Catherine, Katherine, Udjae, Uzyae] and Ujelang [Arecifos, Providence, Udjelang, Uziran] to the Marshall Islands (Naval Intelligence Division, 1943-5, vol.IV: 401-12, 416, 422-3; The Hydrographer, 1969-70, vol.I: 524-8, vol.II: 508-9, 517, 522; Bryan, 1972: 11). All these features satisfy the definition of islands contained in Article 121 of UNCLOS.

The line of equidistance is composed of eight segments varying in length from about 30nm to 180nm. The line extends for a total of 760nm between two termini each 200nm distant from the nearest island. The southern terminus is located near 3°97' N, 165°40' E and the northern terminus is in the vicinity of 10°30' N, 157°28' E.

Factors which might encourage discussions about deviations from the line of equidistance
There do not seem to be any grounds for arguing the line of equidistance would create an inequitable marine boundary. However, the states involved might decide to eliminate some of the short segments by exchanging equivalent areas of sea.

Federated States of Micronesia – Papua New Guinea

Introduction
The Federated States of Micronesia is a constitutional democracy in free association with the United States of America; Papua New Guinea is an independent republic. Both are archipelagic states but Papua New Guinea possesses some very large islands that enables it to draw archipelagic baselines. The Federated States consists of small widely scattered islands which do not allow the construction of straight baselines except possibly at a very small scale (see Figure 1).

The line of equidistance
A strict line of equidistance between these two countries would involve one island from the Federated States and five belonging to Papua New Guinea. The solitary island is

Kapingamarangi Atoll [Greenwich, Gurinitti, Kobmoyton, Pikiram, Makarama]; the islands belonging to Papua New Guinea are Tench, Simberi, Mahur, Niguria and Nugarba [Goodman] Islands (Naval Intelligence Division, 1943-5, vol.IV: 266-7, 410; The Hydrographer, 1969-70, vol.I: 466, 467-8, 572; Bryan, 1972: 11). All these features qualify as islands according to the tests contained in Article 121 of UNCLOS.

The line consists of five segments extending a total of 420nm between termini located 200nm from the nearest islands. The northwest terminus is located at 1°40' N and 151°32' E while the southeast terminus is located at 1°10' S and 157°20' E.

Factors that might encourage discussions about deviations from the line of equidistance
It is possible that Papua New Guinea might argue that the line of equidistance would produce an inequitable maritime boundary. Such a view might be based on the proposition that Kapingamarangi Atoll, which determines the line of equidistance from the standpoint of the Federated States, is small and lies 160nm from the nearest island in the Federated States, whereas the islands of Papua New Guinea are comparatively large and form a compact group. It would be surprising if the Federated States, which possess limited land and other resources, would find such an argument persuasive.

Federated States of Micronesia – Palau

Introduction
The Republic of Palau and the Federated States of Micronesia are constitutional democracies in free association with the United States of America. When they each claim a 200nm EEZ the zones overlap (see Figure 1).

The line of equidistance
The line of equidistance between these states is based on the westernmost islands of the Federated States of Micronesia called Ngulu [Kurru, Ngolog, Lamuniur, Ngoli, Metalotuc] and Yap [Bap, Heap, Jap, Yapa Yappu] and Babeldoab [Bapelthuap] and Kayangel which form part of Palau (Naval Intelligence Unit, 1943-5, vol.IV: 362-8, 378-84; The Hydrographer, 1969-70, vol.I: 548-51, 544-6; Bryan, 1972: 12). All these features are islands in terms of Article 121 of UNCLOS. The line of equidistance consists of three segments totalling about 405nm joining termini at the intersection of arcs with a radius of 200nm drawn from the nearest islands. The southern intersection is near 4°58' N and 136°51' E, the northern intersection if located in the vicinity of 11°22' N and 135°16' E.

Factors which might encourage discussions about deviations from the line of equidistance
It seems likely that both sides would regard the line of equidistance as an equitable marine boundary.

Federated States of Micronesia – United States of America [Guam Island]

Introduction
The Federated States of Micronesia is a constitutional democracy; Guam is an organised unincorporated territory of the United States. When claims for EEZs are made from both territories they overlap (see Figure 1).

The line of equidistance
A line of equidistance based on all relevant features is based on Guam Island [Guahan, Gwam, Huajan, Omia Jima, San Juan] (Naval Intelligence Division, 1943-5, vol.IV: 462-82. The Hydrographer, 1969-70, vol.I: 551; Bryan, 1972: 12) and the islands of Gaferut [Grimes, Grimasu], Faraulep [Faraarappu, Fouraulap, Huraarappu], Fais [Astrolabe, Fais, Fays, Huhaesu, Fuhaesu, Pais, Tromelin] and Ulithi [Falalop, Mackenzie, Urushi] (Naval Intelligence Division, 1943-5, vol.IV: 384-8; The Hydrographer, 1969-70, vol.I: 551, 553, 556; Bryan, 1972: 12) in the Federated States of Micronesia. All these features are islands from which extended maritime zones can be claimed according to Article 121 of UNCLOS.

The line consists of four segments and has a total length of about 450nm. The termini of the line are located at the intersection of claims to EEZs by both countries. The eastern termini is located in the vicinity of 11°45' N, 147°50' E; the western terminus is near 13°05' N, 141°50' E.

Factors which might encourage discussions about deviations from the line of equidistance
There do not appear any grounds on which either state might argue that the line of equidistance would be an inequitable maritime boundary.

Fiji – Tonga

Introduction
Fiji and Tonga are both independent states. Fiji is a republic and Tonga is an hereditary constitutional monarchy. While Fiji claims a 200nm EEZ, Tonga has yet to implement such a claim. When such a claim is made by Tonga there will be an overlap between the two zones (see Figures 1 and 7).

The line of equidistance
If a median line were to be adopted as a suitable method of delimitation, the relevant features would appear to be Vanuabalavu, Nuku Cikobia, Reid, Bukatatanoa, Cakau Levu, Naevo, Vuata Vatoa, Ono-i-lau, Tuvana-i-colo, and Tuvana-i-ra on the Fijian side (Naval Intelligence Division, 1943-5, vol.III: 111-2, 119, 260-1, 264-5, 291-4; The Hydrographer, 1969-70, vol.II: 364, 370-1, 377-9, 385, 489) and Niuafo'ou, Fonualei, Late [Latte, Lette, Bickerton's], an unnamed volcanic island, Tofua [Tofoa], Hunga Ha'apai [Hanga Hapei, Hanga Haabai], Tongatapu [Tongataboo, Amsterdam, New Amsterdam] and Ata [Pystaart] on the Tongan side (Naval Intelligence Division, 1943-5, vol.IV: 90-3, 96,103-4, 108; The Hydrographer, 1969-70, vol.II: 397-80, 396, 405, 415, 424, 432; Bryan, 1972: 9). All these islands satisfy the provisions of Article 121 of UNCLOS and can be used to make extended maritime claims.

The line of equidistance would lie between a northern tri-junction with Wallis and Futuna Islands, which are an overseas territory of France, and a southern intersection of the seas 200nm wide claimed from each country. This tri-junction point will be in the vicinity of 15°55'50" S, 177°23'35" W; its position will depend upon the final choice of base points made by the respective countries on the islands of Vanuabalavu (Fiji), Niuafo'ou (Tonga) and Ile Alofi (France).

A median line solution appears to have five major component parts to its geometry. From the north, the respective lengths of the line appear to be approximately 60, 54, 14, 200 and 235nm,
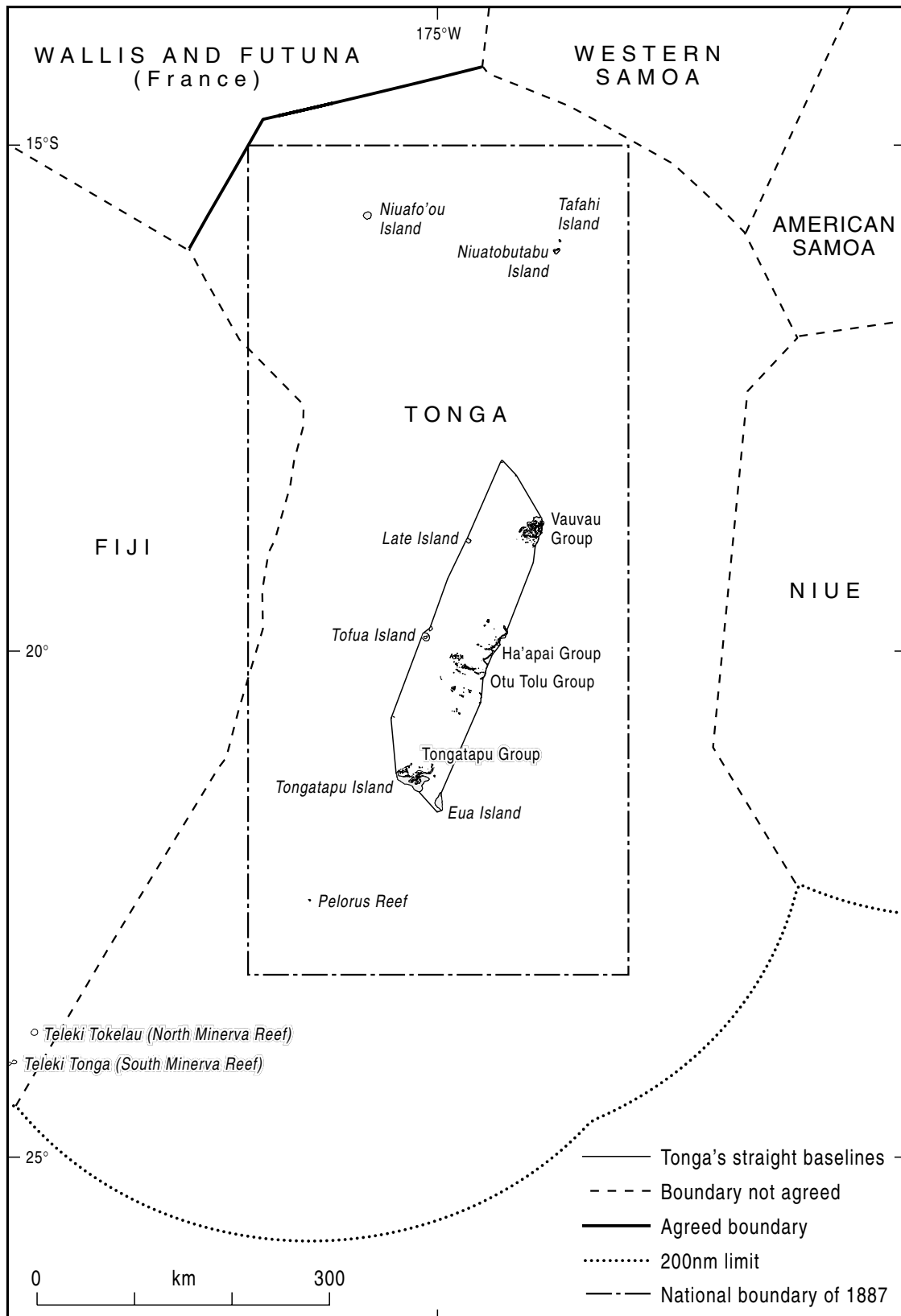
Figure 7: Maritime Claims Around Tonga

with the mid-section having a number of minor variations to its overall north-south direction. The final line will depend on the selection of base points and of course both sides might agree to simplify the boundary by exchanging equal areas of seas and seabed. It is also possible that if Fiji argues in favour of relating the line of equidistance to its archipelagic baselines that Tonga will insist on drawing archipelagic baselines or construction lines if archipelagic baselines cannot be drawn to include the westernmost line of islands.

For the purposes of this discussion it has been assumed that extended maritime claims are not made from Teleki Tokelau and Teleki Tonga [North and South Minerva Reefs] which belong to Tonga under the claim made in its *Royal Proclamation* of 1887 (see Figure 7). The assumption is based on the fact that the claim to these features in 1972 refers specifically to territorial waters within a radius of 12nm. It is unclear whether these reefs meet the requirements of Article 121 of UNCLOS to justify claims to zones beyond the territorial sea. Following this assumption the intersection of zones 200nm from Ata (belonging to Tonga) and Tuvana-i-Colo (belonging to Fiji) would be located near the point 24°25' S and 179°08 W about 30nm south of Teleki Tonga [South Minerva Reef].

This assumption to avoid one problem, namely the status of Teleki Tokelau and Teleki Tonga in terms of Article 121 of UNCLOS, creates another difficulty. The resulting line of equidistance ignoring these features passes through the western edge of the overlapping territorial seas which properly are delimited around these two reefs. One solution to the problem would be for the delimited line to leave the equidistant course when it intersects the northern edge of the territorial sea boundary, then to follow that territorial sea limit until the southern intersection with the median line is reached, then to resume coincidence with the line of equidistance to the intersection of the zones 200nm wide. Such an arrangement would include the features within the limits of the EEZ.

Factors which might encourage discussion about deviations from the line of equidistance
A Tongan Royal Proclamation dating from the last century may be considered by Tonga as a reason to seek a maritime boundary which deviates from a line of equidistance. This Royal Proclamation of 24 August 1887 established the Kingdom of Tonga as all islands, reefs, foreshore and waters lying between the Latitudes 15° S and 23°30' S and the Longitudes of 173° W and 177° W (see Figure 7). The geographic coordinates that define the western limits of this proclamation extend beyond any line of equidistance with Fiji between parallels 17° S and 21° S. The area involved by this extension is approximately 5,300nm^2. Tongan authorities could argue that it is a long-standing proclamation which has not been disputed and the outer limits of the proclaimed zone should not be breached by any line of delimitation with neighbouring countries. Tonga may claim also that the seas encompassed by the Proclamation are the territorial seas of Tonga and beyond claims by neighbours.

Fiji could counter any such claims on the basis that proclamations, such as that of 1887, need to be placed in the context of what constituted the norms of international law and international practice at the time of the Proclamation. It is normally considered that such limits, whether proclaimed unilaterally, as by Tonga, or bilaterally, as by Britain and Germany in the Solomon Islands, and Spain and the United States in the Philippines, served only to distinguish which features standing above high-water belong to the country or countries concerned. Certainly in 1887 most claims did not extend more than 3nm from the coastlines of mainlands or islands. Exceptions to this rule might be found in some historic waters or bays, such as the mouth of the St Lawrence River in 1763, (United States State Department, 1995: 23) and the coast of

Norway in 1869 and 1889 (Prescott, 1975: 79) and some fishing grounds for sedentary species off the coasts of Ceylon in 1811 and Ireland in 1839 (Prescott, 1975: 143).

The Proclamation does require consideration in the context of a long standing and unchallenged definition of an area within which Toga is able to claim sovereignty of high water features. This is because the area between Tonga and Fiji is an area which has documented and continuing volcanic activity which leads to the formation of islands. The last was in 1995 and it is still above high water. In 1997 it stood 25 metres high and possessed an area of about seven hectares. This regional characteristic may lead to either a variation from a median line solution or, at least, a particular reference and determination in any maritime boundary agreement between the two countries. New Zealand Chart 14638 (1996) at a scale of 1:1.5 million records volcanic eruptions in 1937, 1977, 1992, 1993 and 1995 along the western edge of the Tongan archipelago between parallels 19° S and 21° S.

The American chart showing claimed and maritime zones in the south Pacific shows a line of equidistance between Fiji and Tonga giving full effect to Teleki Tokelau and Teleki Tonga. This delimitation adds about 60,000nm^2 to Tonga's potential claim and creates the need for a maritime boundary with New Zealand's Kermadec Islands. This interpretation is also presented by Buchholz (1987).

Fiji – Tuvalu

Introduction
Fiji and Tuvalu are independent states. Fiji is a republic, Tuvalu maintains a connection with the British Sovereign. Claims to 200nm EEZs from both territories overlap (see Figure 1). It is understood that negotiations regarding this boundary have occurred but no agreement has yet been signed.

Line of equidistance
A strict line of equidistance is based on one Fijian island and three islands belonging to Tuvalu. The Fijian island is called Rotuma [Rotumah], the Tuvalu islands are called Niulakita [Nurakita], Nukufetau [De Peyster] and Nui [Egg, Netherland] (Naval Intelligence Division, 1943-5, vol.III: 66-76, 380-3; The Hydrographer, 1969-70, vol.II: 381, 465, 472-4; Bryan, 1972: 8, 16). All these features are islands within the terms of Article 121 of UNCLOS.

The line of equidistance extends for 365nm and consists of three segments measuring from 50nm to 230nm. The termini of this line consists of one tri-junction with Hoorn Island (which is part of Wallis and Futuna) and a point 200nm from Rotuma and Nui. The eastern tri-junction is located in the vicinity of 13°15' S, 179°30' E, about 148nm from each island; the western limit of the adjacent EEZs is near 9°50' S, 174°52' E.

A Fijian chart (RFMF Hydrographic Office, 1981) at a scale of 1:3.5 million shows the limits of Fiji's EEZ by median lines vis-à-vis adjacent states and by arcs of circles drawn at a radius of 200nm where adjacent states are more than 400nm distant. On the reverse of the map there is a list of 101 points with coordinates given to the nearest second of latitude and longitude. Although the points on the chart are not numbered, it is possible to identify them and the termini of the Fiji-Tuvalu line of equidistance are given as 13°14'05" S, 179°31'48" E and

9°46'59" S, 174°57' E. A note on the chart indicates that the positions have been based on or approximated to the best WGS72 data available.

Factors which might encourage discussions about deviations from the line of equidistance
There do not seem to be any factors which would enable either country to argue that a line of equidistance would create an inequitable marine boundary.

Fiji – Vanuatu

Introduction
Fiji and Vanuatu are republics and when EEZs 200nm wide are claimed from their territories, they overlap. Vanuatu claims two islands called Matthew and Hunter which are also claimed and presently controlled by France which regards these islands as part of New Caledonia (see Figure 1).

In 1983, France and Fiji agreed on lines of equidistance to separate the EEZs claimed by France from New Caledonia and Wallis and Futuna and by Fiji from all its islands (Charney and Alexander, 1993: 995-1,001). In constructing the line of equidistance Hunter Island was used as a French basepoint and Ceva-i-ra was used by Fiji. Ceva-i-ra is an isolated cay measuring 365 metres by 73 metres standing 1.8 metres high; it lies 230nm south west of Kandavu in the main Fijian archipelago. Both these islands appear to satisfy the rules in Article 121 to qualify as islands from which the entire suite of maritime zones may be claimed. However, there are reports that the small cay on Ceva-i-ra migrates over the surface of the reef and is sometimes washed over by waves at high tide.

Article 3 of the 1983 agreement noted that the *"Agreement is without prejudice to sovereign rights of any neighbouring State in the areas to which it [the Agreement] applies"* (Charney and Alexander, 1993: 1,001). Presumably this means that Fiji expresses no opinion on the dispute between France and Vanuatu. If eventually Vanuatu secures control over Matthew and Hunter Islands it could accept the boundary agreed between France and Fiji. Presumably it could also try to negotiate a new boundary that would move the line of equidistance in favour of claims it made from Hunter Island.

The Franco-Fijian maritime boundary terminates in the north at a tri-junction with Futuna which is part of Vanuatu. That tri-junction is located at 20°01'21" S and 172°45'53" E according to Annex 1 of the 1983 Agreement between France and Fiji. That point was defined in a list of coordinates on the reverse of a 1981 Fijian chart showing limits of Fiji's EEZ at a scale of 1:3.5 million (RFMF Hydrographic Office, 1981). This indicates that Fiji was claiming an EEZ from Ceva-i-ra before the boundary was negotiated with France.

The line of equidistance
Whether or not Vanuatu eventually owns Matthew and Hunter Islands, the line of equidistance between Fiji and Vanuatu will have to be extended northwards of the present tri-junction on the boundary drawn by France and Fiji which is 145nm from Ceva-i-ra [Conway Reef], Hunter and Futuna [Foutouna, Erronan, Eronan] Islands; the latter island is part of Vanuatu (Naval Intelligence Division, 1943-5, vol.III: 601-4; The Hydrographer, 1969-70, vol.II: 133, 153; Bryan, 1972: 16). These islands all satisfy the criteria specified in Article 121 of UNCLOS. The continuation northwards is based on Ceva-i-ra and Futuna Island as far as a point 200nm

distant from the two islands. That point is recorded on the 1981 Fijian chart (RFMF Hydrographic Office, 1981) as 20°01'23" S and 172°45'53" E. This marine boundary measures 105nm.

Factors which might encourage discussion about deviations from the line of equidistance
Futuna Island is roughly circular, with a diameter of 2nm and an elevation of 533 metres. It is therefore a more substantial island than the cay on Ceva-i-ra and might be considered as grounds for discounting the claim from Ceva-i-ra in favour of Vanuatu. However, UNCLOS makes no distinctions between islands on the basis of size, and it could be assumed that since France was willing to give Ceva-i-ra full effect that Fiji would be unwilling to accept any other arrangement.

France [French Polynesia] – Kiribati

Introduction
French Polynesia forms an overseas territory of France and consists of four groups of islands. From the southwest to the northeast their names are Tubai Islands, Society Islands, Tuamoto Archipelago and Marquesas Islands. The only maritime boundaries France has delimited in respect of French Polynesia are with the British territory of Pitcairn and the Cook Islands (Charney and Alexander, 1993: 1,003-10, 1,175-81; 1998: 2,295-98).

Kiribati consists of three separate groups of islands formerly called the Gilbert Islands, the Phoenix Islands and eight of the eleven Line Islands. Kiribati has drawn no marine boundaries with any of its neighbours. Both France and Kiribati have claimed EEZs 200nm wide which overlap (see Figure 1). It is understood that negotiations concerning this boundary have taken place but that no agreement has yet been signed.

The line of equidistance
The line of equidistance between these territories separates the Society Islands and Tuamoto Archipelago of French Polynesia and the former Line Islands of Kiribati respectively. If the line of equidistance is drawn between all relevant features there are two Kiribati islands involved and six French islands. The islands of Kiribati are called Flint and Caroline [Thornton] (Naval Intelligence Division, 1943-5, vol.II: 490; The Hydrographer, 1969-70, vol.III: 195).

The relevant islands of French Polynesia are from west to east called Bellingshausen [Motu One], Tupai [Motu Iti, Tubai], Matahiva [Mataiva, Mataiwa, Lazeroff], Tikehau [Krusenstern], Rangiroa [Rahiroa, Riaroa, Vliegen, Deana] and Ahe [Peacock] (Naval Intelligence Division, vol.II: 186, 190, 213-4; The Hydrographer, 1969-70, vol.III, 113-5,174, 176; Bryan, 1972: 6-7). All these features are islands within the terms of Article 121 of the 1982 Convention on the Law of the Sea.

The line of equidistance would extend for 565nm between two termini located 200nm from the nearest islands in positions 11°40' S, 155°10'W and 10°09' S, 147° W. The line consists of five segments varying in length between 81nm and 155nm. Flint Island plays the major role in determining the boundary for Kiribati accounting for 397nm.

Factors which might encourage discussions about deviations from the line of equidistance
Apart from suggestions to simplify the boundary there do not appear to be any arguments
which either side could use with confidence to claim that an equidistant boundary would be
inequitable.

France [New Caledonia] – Vanuatu

Introduction
New Caledonia is an overseas territory of France while Vanuatu is a republic. Claims to an
EEZ 200nm wide from both territories overlap (see Figure 1).

The line of equidistance
For three reasons it is not possible to be specific about the line of equidistance in this case.
First, it is uncertain whether Vanuatu will accept South Indispensable Reef as an appropriate
basepoint for the claim by the Solomon Islands as Australia and France have done. Second,
there are some features off the coast of New Caledonia which may or may not be suitable
basepoints for claiming an EEZ. Third, the southern terminus of this line of equidistance will
depend on whether Matthew and Hunter Islands finally belong to France or Vanuatu.

If South Indispensable Reef is accepted by France and Vanuatu as an appropriate basepoint the
tri-junction will be located near 14°45' S and 163°18' E. The maritime boundary agreed
between France and the Solomon Islands in 1990 (Charney and Alexander, 1993: 1,172-3) has
an eastern terminus at 14°50'03" S and 163°10' E. This Point 26a lies about 10nm southwest
of the tri-junction based on South Indispensable Reef. If those countries decide that Rennell
Island is the appropriate basepoint and the Solomon Islands accepts that view the tri-junction
will be in the vicinity of 14°27' S and 163° E. Since it is unlikely that the Solomon Islands
would agree to alter the eastern terminus of its boundary with New Caledonia it is probable that
the tri-junction will be somewhere between Point 26a and the tri-junction based on South
Indispensable Reef. This view is based on the fact that any decision to extend the France-
Solomon Islands boundary northwest to the tri-junction using Rennell Island would deliver to
France a narrow triangular area of about 240nm^2 on a base measuring 10nm. Such an area
might cause administrative and management problems that outweigh the advantage gained
through jurisdiction over the additional fishing space.

There are two features off the east coast of New Caledonia which France might regard as
suitable basepoints but which Vanuatu might challenge. They are called Petrie Reef and
Astrolabe Reef (The Hydrographer, 1969-70, vol.II: 132, 148). In the 1969 *Pilot* it is noted
that Petrie Reef is surmounted by a 20ft sandbank. On the British Admiralty Chart 780
published in 1977 and corrected to 1978 the height of 20ft has been crossed out and the word
"awash" written in magenta. The word *"awash"* also appears beside Petrie Reef on the chart
of boundaries in the South Pacific published by the United States State Department in 1985. In
this analysis Petrie Reef has not been considered as a basepoint but a final decision on its
relevance must be made by both countries when reliable information is available. The
Hydrographer includes the following comments about Astrolabe Reef.

> *Except for some rocky heads and small sandbanks, which were covered at high water,*
> *no trace could be found of the islet which had been seen and approached by Dumont*
> *D'Urville [in 1827] to a distance of 2 miles* (The Hydrographer, 1969-70, vol.II: 148).

This description suggests that Astrolabe Reef is a low-tide elevation and it is located more than 12nm from the nearest land. It was not used in constructing the line of equidistance. However, France is certain to survey the feature carefully before negotiating any maritime boundary with Vanuatu.

The location of the southern terminus of the maritime boundary between France and Vanuatu will depend on which country finally owns Hunter and Matthew Islands. If France owns those two islands the terminus of the boundary will be the tri-junction with Fiji that was defined in the 1983 treaty between Fiji and France at 20°01'21" S and 172°45'53" E. That tri-junction is based on Ceva-i-ra a Fijian island, Hunter Island held by France and Vanuatu's Futuna Island. If Hunter and Matthew Islands finally belong to Vanuatu the terminus of the boundary with France will be located at a point 200nm south of Walpole Island which is part of New Caledonia and Matthew Island held by Vanuatu. That point is near 25°20' S, 170°32' E.

Assuming, for this analysis, that Petrie and Astrolabe Reefs are not suitable basepoints the islands and features which would be involved in constructing a line of equidistance are Espiritu Santo [Marina], Malekula [Mallicola], Efate [Vate], Eromanga [Erromango], Tana [Tanna] and Aneityum [Annatam, Annattom] belonging to Vanuatu and Huon, Surprise, islands on Cook Reef, Beautemps-Beaupré, Ouvea (Uvea), Lifou, Tiga (Tika), Mare and Walpole belonging to New Caledonia (Naval Intelligence Unit, 1943-5, vol.III: 426, 498-502, 507-8. 575-85, 601-2, 604; The Hydrographer, 1969-70, vol.II, 124, 129, 130-1, 134, 136-8, 140, 143, 151-2, 154-66, 183-6, 204-13; Bryan, 1972: 16). All these features can be considered to be islands in terms of Article 121 of UNCLOS. If France owns Matthew and Hunter Islands the line of equidistance will be formed of 15 segments totalling about 720nm. If those two islands belong to Vanuatu the line of equidistance would be formed by 14 segments extending 790nm.

Factors which might encourage discussions about deviations from the line of equidistance
There will have to be agreement between the two sides on which features forming part of New Caledonia will be used as basepoints in constructing any boundary. The strict line of equidistance involves several islands and a large number of segments. There could be agreement to simplify the line of equidistance by an equal exchange of marine areas. It seems unlikely that any boundary will be drawn until there is agreement over the status of Matthew and Hunter Islands. However, it would be possible for the two sides to agree that until a final agreement is reached on that question the area of sea that attaches to Matthew and Hunter Islands will form a joint EEZ. In such a zone longline fishing for albacore would be more valuable than any possible mineral resources. Nevertheless, in the long term, there might be some mineral potential since submarine venting occurs in some sectors. The prospects for purse seine fishing in the area are poor.

France [Wallis and Futuna] – New Zealand [Tokelau]

Introduction
Wallis and Futuna is an overseas territory of France and Tokelau is a territory of New Zealand. Claims from these territories to an EEZ 200nm wide overlap (see Figure 1).

The line of equidistance
Construction of the line of equidistance between these two territories involves one island from each territory. The French island is Wallis [Uvea, Uea] and the New Zealand island is Atafu

[Oatafu, Duke of York] (Naval Intelligence Division, 1943-5, vol.II: 517, vol.III: 276-90; The Hydrographer, 1969-70, vol.II: 143, 534; Bryan, 1972: 8). Both these islands satisfy the conditions set in Article 121 of UNCLOS.

The line of equidistance measures 93nm and joins the tri-junction with Samoa to a point 200nm from Wallis and Atafu Islands. The tri-junction with Savaii Island is located in the vicinity of 10°55' S, 174°15' W about 175nm from the nearest islands and the junction of the 200nm zones is in the vicinity of 10° S, 175°30' W.

Factors which might encourage discussion about deviations from the line of equidistance
There do not appear to be any arguments that might enable either country to claim that the line of equidistance would form an inequitable boundary.

France [Wallis and Futuna] – Samoa

Introduction
Wallis and Futuna is an overseas territory of France. Samoa is a constitutional monarchy and its colonial period ended in 1962 when New Zealand's trusteeship from the United Nations ended. EEZs 200nm wide claimed from these territories overlap (see Figure 1).

Line of equidistance
This line of equidistance is produced by reference to only two relevant features. These features are Wallis Island [Uvea, Uea] belonging to France and Savaii Island which is part of Samoa (Naval Intelligence Division, 1943-5, vol.II: 680 and vol.III: 276; The Hydrographer, 1969-70, vol.II: 143, 158; Bryan, 1972: 8). Both these features satisfy the requirements of Article 121 of UNCLOS to be considered as fully-fledged islands.

The single segment measures 195nm between tri-junctions with Tokelau, a territory of New Zealand and Tonga. The Tongan tri-junction is based on Niuafo-ou Island and is located in the general vicinity of 14°15' S, 174°30' W, about 115nm from the three islands. The tri-junction with Tokelau is related to Atafu Island and is located in the vicinity of 10°55' S, 174°15' W, about 175nm from the three islands.

Factors which might encourage discussion about deviations from the line of equidistance
This line of equidistance is the simplest possible type of the line. The only possible argument that the boundary was inequitable might be raised by Samoa which might seek from some or all of its neighbours relief from the severe restrictions on its maritime domain based on lines of equidistance.

France [Wallis and Futuna] – Tuvalu

Introduction
Wallis and Futuna is an overseas territory of France and Tuvalu is an independent democracy which retains its link with the British Sovereign. Claims to 200nm EEZs from each territory overlap (see Figure 1).

The line of equidistance
A strict line of equidistance is based on two islands from each territory. Niulakita [Nurakita, Nuiakita] and Nukulailai [Nukulailai, Mitchell] Islands form the southernmost territory of Tuvalu and Futuna [Hoorn, Horne] and Wallis [Uvea, Uea] Islands are the main islands of the French overseas territory (Naval Intelligence Division, 1943-5, vol.III: 276-301, 383; The Hydrographer, 1969-70, vol.II: 384-6, 388, 465-6; Bryan, 1972: 8). All these features are islands within the terms of Article 121 of UNCLOS. The line of equidistance extends for 300nm and is composed of three segments varying in length from 60nm to 170nm. The line joins a tri-junction point with Fiji in the west and a point 200nm from the nearest island of each territory in the east. The western tri-junction is about 148nm from the nearest island of each territory in the vicinity of 13°15'S and 179°30' E. The Fijian island is called Rotuma [Rotumah] (Naval Intelligence Handbook, 1943-5, vol.III: 66-76. The Hydrographer, 1969, vol.II: 381-3; Bryan 1972: 16). The eastern terminus if located near 10° S and 176°45' W.

Factors which might encourage discussion about deviations from the line of equidistance
There do not seem to be any factors which would justify the opinion that the line of equidistance would make an inequitable boundary.

Guatemala – Mexico

Introduction
Mexico and Guatemala are adjacent states on the west coast of central America and their claims to territorial seas and EEZs overlap (see Figure 4).

The line of equidistance
The western terminus of the international boundary agreed on 27 September 1882 between Guatemala and Mexico is located in the sea 3 leagues (9nm) from the mouth of the River Suchiate (United States Department of State, 1976: 2). No coordinates are given for the terminus but it seems possible that the point is located 9nm seawards from the centre of the mouth on a line drawn perpendicular to the straight line closing the mouth of the river. The coast of central America northwest and southeast from the mouth of the River Suchiate is remarkably straight for distances of 265km and 85km respectively. The line of equidistance seems to be perpendicular to the coast at the mouth of the River Suchiate and extends for 200nm. It terminates in the vicinity of 12° N and 94°28' W. This line intersects the Central American Trench 72nm from the coast and there appear to be no prospects that either country would seek to claim areas of seabed more than 200nm from the coast.

Factors which might encourage discussions about deviations from the line of equidistance
There do not seem to be any factors that could be used by either side to argue that the line of equidistance would form an inequitable marine boundary.

Indonesia – Palau

Introduction
Palau and Indonesia are archipelagic states but only Indonesia has drawn archipelagic baselines. Both countries have claimed EEZs 200nm wide and those zones overlap off the northeastern sector of the Indonesian archipelago (see Figure 8).
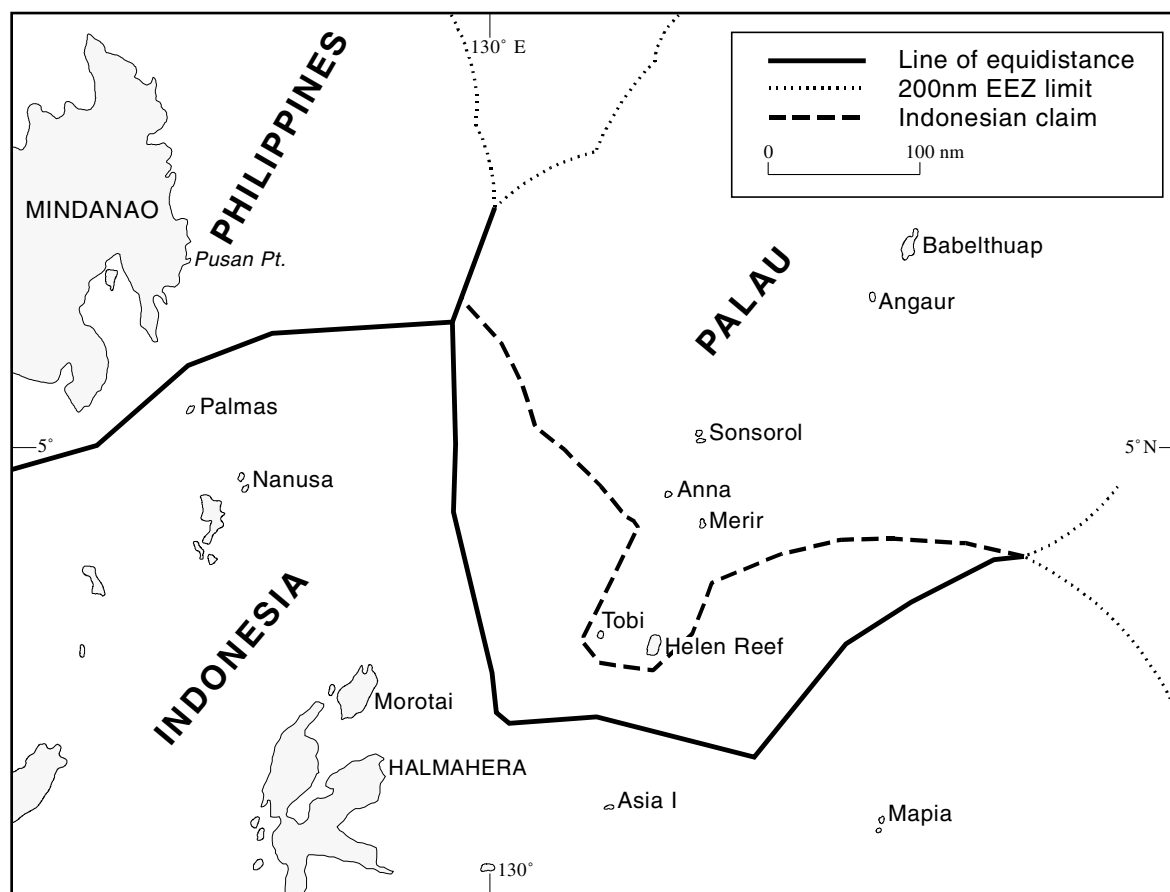
Figure 8: Indonesia – Palau

The line of equidistance
In constructing a line of equidistance to divide the overlapping claims five Indonesian islands and six Palauan islands are involved. The Indonesian islands are called Nanusa, Morotai, Halmahera, Asia and Mapia (The Hydrographer, 1980, vol.III: 40, 45, 60, 125, 148-9). The Palauan islands are called Sonsorol, Pulo Anna, Tobi, Helen and Angaur [Angour] (Naval Intelligence Division, vol.IV: 375, 377-8; The Hydrographer, 1969, vol.I: 540, 547-8). All these features satisfy the rules that define islands in Article 121 of UNCLOS.

The line of equidistance consists of nine segments varying in length from 10nm to 160nm. The line which extends for about 710nm links a tri-junction based on Mindanao Island, which is part of the Philippines, and Nanusa and Sonoril Islands and a point 200nm distant from Mapia and Angour Islands The tri-junction is in the vicinity of 6°40' N and 129°30' E and the intersection of the 200nm limits is near 4° N and 135°59' E.

Factors which might encourage discussions about deviations from the line of equidistance
There is no obvious factor which might lead either side to argue that the line of equidistance would produce an inequitable maritime boundary. However, Indonesia has published a map which extends across the line of equidistance at the expense of Palau (Department Pertahanan Keamanan Staf Territorial Pankorwilnas, 1983). This map is at a scale of 1:5 million and shows the territorial sea as a solid black line and claims to the continental shelf and EEZ by cross and diagonal shading respectively.

In respect of the boundary with Palau Indonesia has claimed a full 200nm zone from the two termini and left Palau with a small rectangular re-entrant measuring about 95nm deep by 65nm wide. Within this rectangle are Tobi And Helen Islands. The line shown on the Indonesian map, which claims to show the areas under Indonesian jurisdiction, lies entirely on Palau's side of the line of equidistance and transfers about 37,500nm^2 from Palau's entitlement up to a line of equidistance to Indonesia. The Indonesian boundary appears to run about 12nm from Tobi Island when the Indonesian line is transferred to a nautical chart. On the Indonesian map the feature shown as Tobi Island does not exist while an unnamed feature about 20nm to the southwest is in the correct position for Tobi Island.

It is possible that the Indonesian map was drawn as an ambit claim which should not be taken too seriously by Indonesia's neighbours. After all the line shown in respect of Australia was not the equitable boundary which the two countries negotiated in 1997 (Prescott, 1997). Perhaps Indonesia believes that because Halmahera is a more substantial island than Tobi Island the claim from Palau should be discounted. However, the islands of Nanusa and Asia and Mapia, which are given full effect by Indonesia in delimiting the 200nm limit, are no more significant than Tobi or Helen Islands. Perhaps the Indonesian argument is that Indonesia is a much larger country than Palau and therefore deserves a larger share of the overlapping zone.

Palau could respond that it is a much poorer country than Indonesia with very restricted access to resources and therefore should be treated generously by Indonesia. Papua New Guinea used this argument very successfully in Torres Strait when drawing a boundary with Australia. At present Palau carries out enforcement activities fairly rigorously against Indonesian fishermen in the zone of overlapping claims. There do not seem to have been any significant objections to these activities by Indonesia. Fishermen convicted of illegal fishing are made to work with half their wages going to pay a fine and the other half is saved for an air fare back to Indonesia. The difficulty with this scheme is that during the interval of detention some Indonesian fishermen decide they would prefer to remain in Palau.

Japan – Northern Marianas

Introduction
Japan is a constitutional monarchy while the Northern Marianas is a Commonwealth in political union with the United States of America. Federal funds for the Commonwealth are administered by the United States Department of the Interior through the Office of Insular Affairs. When claims to 200nm EEZs are made from these territories they overlap (see Figure 1).

The line of equidistance
The line of equidistance involves one island from each territory. Both are barren volcanic islands and they are called Farallon de Pajeros [Guy Rock, Uracas, Urakasu] belonging to the Northern Marianas and Minami lo-Shima (Naval Intelligence Division, 1943-5, vol.IV: 444; The Hydrographer, 1969-70, vol.I: 595; The Hydrographer, 1979, vol.II: 240; Bryan, 1972: 13). The line joins two intersections of the 200nm zones which lie 285nm apart. The western terminus is located near 20°55' N, 141°15' E and the eastern intersection is in the vicinity of 23°58' N, 145°06 E.

Factors which might encourage discussions about deviations from the line of equidistance
If only one of these islands had been a barren volcano it is possible that one country might have argued that such a feature should be discounted even though it was an island. Because the islands are similar there seems to be no factor which would encourage either country to argue that the line of equidistance based on them would create an inequitable maritime boundary.

Kiribati – Marshall Islands

Introduction
The Republic of Kiribati is composed of three groups of islands and the western group, called the Kimbali [Gilbert] Islands, is adjacent to the southern islands of the Republic of the Marshall Islands. The Marshall Islands is in free association with the United States of America. Claims to 200nm EEZs from their nearest islands overlap (see Figure 1).

The line of equidistance
The line of equidistance between the two territories involves three islands belonging to Kiribati and four which form part of the Marshall Islands. Banaba [Ocean, Panopa], Abaiang [Apiang, Apia, Charlotte] and Butaritari [Maki, Taritari] and Makin form part of Kiribati while Ebon [Boston, Epon], Jaluit [Bonham, Djaluit, Coquille, Elizabeth], Mili [Mille, Mire, Mulgrave] and Knox [Narik, Narikirikku] belong to the Marshall Islands (Naval Intelligence Division, 1943-5, vol.III: 371-2, vol. IV: 348, 419-21, 423, 431-2; The Hydrographer, 1969-70, vol.II: 490-5, 498-500, 508-11; Bryan, 1972: 9, 11). All these features qualify as islands under the terms contained in Article 121 of UNCLOS. The line of equidistance consists of five segments varying in length from 10nm to 290nm and extends for about 515nm between a tri-junction with Nauru and a point 200nm distant from the nearest islands. The tri-junction with Nauru is located near 1°45' N and 168°34' E; the other terminus lies 200nm from Butaritari and Knox Atolls in the vicinity of 5° 30' N and 175°30' E.

Factors which might encourage discussion about deviations from the line of equidistance
There do not appear to be any factors which would enable either country to claim that the line of equidistance would make an inequitable marine boundary. However, some of the segments are short and the negotiators might decide to simplify the line by using fewer segments and exchanging equal areas of sea.

Kiribati – Nauru

Introduction
Kiribati and Nauru are independent republics and claims to EEZs 200nm wide from each territory overlap (see Figure 1).

Line of equidistance
This line of equidistance is constructed between Nauru [Pleasant] and Kiribati's Ocean Island [Banaba, Paanopa] (Naval Intelligence Division, 1943-5, vol.III: 363-8; The Hydrographer, 1969-70, vol. II: 495-7; Bryan, 1972: 9). Both these features are islands within the terms of Article 121 of UNCLOS. This line of equidistance measures 335nm between a tri-junction and a point 200nm from the islands. The northern tri-junction is 170nm from both islands and Ebon

Atoll which is part of the Marshall Islands in the vicinity of 1°45' N, 168°34' E. The southern point 200nm from each of the islands is located near 3°45' S, 167°50' E.

Factors which might encourage discussions about deviations from the line of equidistance
There do not appear to be any factors which might persuade either country to argue for deviations from the line of equidistance to produce a more equitable boundary.

Kiribati – New Zealand [Tokelau]

Introduction
Kiribati is a republic consisting of three separate island groups formerly named the Gilbert, Phoenix and eight of the eleven Line Islands. Tokelau is a territory of New Zealand. Claims to EEZs 200nm wide from both territories overlap (see Figure 1).

The line of equidistance
If all the relevant features are used to construct the line of equidistance they will comprise two from Tokelau and three from Kiribati The two Tokelauan islands are called Atafu [Oatafu, Duke of York] and Fakaofu [Fakkaafo, Bowditch]; the three Kiribati islands are called Gardner [Kemins, Nikumaroro], Hull [Orora] and Sydney [Manra] (Naval Intelligence Division, 1943-5, vol.II: 498-500, 516-7; The Hydrographer, 1969-70, vol.II: 525-5, 533-4; Bryan, 1972: 8). All these features are islands within the terms of Article 121 of UNCLOS. The line of equidistance measures 533nm composed of four segments varying in length from 63-180nm. The termini of the line of equidistance are located 200nm from the nearest features in the locality of 6°55' S, 169°W and 7°42' S, 175°40'W. The closest the line of equidistance approaches to the islands is about 120nm.

Factors which might encourage discussions about variations from the line of equidistance
There appear to be no arguments which either side could use to support the view that the line of equidistance produced an inequitable boundary.

Kiribati – Tuvalu

Introduction
Kiribati and Tuvalu are independent democratic states, Kiribati opted for a republican constitution when it became independent whilst Tuvalu continued its association with the British Sovereign. Claims to 200nm EEZs from both of these territories overlap (see Figure 1).

Line of equidistance
A strict line of equidistance would be drawn between three Kirabati islands and two belonging to Tuvalu. The Kiribati Islands are Tabiteuea [Tabeteuea, Tapootoouea, Drummond], Tamana [Rocher] and Arorae [Arorai, Hurd] and those belonging to Tuvalu are called Namumea [Namomea, St Augustine] and Nintao [Lynx, Spinden, Sepper] (Naval Intelligence Division, 1943-5, vol.III: 377-80; The Hydrographer, 1969-70, vol.II: 474-6, 478; Bryan, 1972: 8-9). All these features qualify as islands under the terms of Article 121 of UNCLOS. The line of equidistance consists of four segments totalling 431nm and varying in length from 32nm to 162nm. This line of equidistance joins two points which are each 200nm distant from the

nearest island in each territory. The eastern terminus is in the vicinity of 4°S and 18° E and the eastern terminus is near 4°15' S and 173° E.

Factors which might encourage discussions about deviations from the line of equidistance
There does not seem to be any factor which would provide justification for a claim that the line of equidistance would make an inequitable boundary.

Kiribati – United States of America [Baker and Howland Islands]

Introduction
The Republic of Kiribati consists of three separate groups of islands formerly called the Gilbert, Phoenix and eight of the eleven Line Islands. Baker and Howland Islands are unincorporated territories of the United States administered by the Fish and Wildlife Service of the Department of the Interior as part of the National Wildlife Refuge System. Claims to EEZs 200nm wide from these territories overlap (see Figure 1).

Line of equidistance
The relevant features for the construction of this line of equidistance are Baker [New Nantucket, Phoebe] Island belonging the United States and the Gardner [Kemins, Nikumaroro], McKean and Canton [Mary, Mary Balcout, Swallow, Abaruringa] Islands that are part of Kiribati (Naval Intelligence Division, 1943-5, vol.II: 491-6, 498, 501-2; The Hydrographer, 1969-70, vol.II: 525-6, 529-31; Bryan, 1972: 8). All these features are islands in terms of Article 121 of UNCLOS.

The line of equidistance consists of three segments measuring from 20nm to 238nm and has a total length of 323nm. The termini lie 200nm from Baker and Gardner Islands in the west in the vicinity of 3°30' S, 177°20 W and 200nm from Baker and Canton Islands in the east in the vicinity of 0°10' N, 173°10' W.

Factors which might encourage discussions about deviations from the line of equidistance
There do not seem to be any factors which might allow either party to argue that the line of equidistance is inequitable.

Kiribati – United States of America [Jarvis Island]

Introduction
Kiribati is a republic and consists of three separate groups of islands formerly called the Gilbert Islands, the Phoenix Islands and eight of the eleven Line Islands.

Jarvis Island is an unincorporated territory of the United States of America administered by the Fish and Wildlife Service of the US Department of the Interior as part of the National Wildlife Refuge System (Central Intelligence Agency, 1991: 162). The EEZs claimed by the two countries overlap (see Figure 1).

The line of equidistance
If all the relevant features were used in drawing a line of equidistance they would include Jarvis Island [Brock, Brook, Bunker, Jervis, Volunteer] and the northern Line Islands belonging to

Kiribati which are called Kiritimati-E [Christmas Island], Washington Island [New York, Prospect], Fanning Island [Tapuaerangi], Malden [Independence] (Naval Intelligence Division, 1943-5, vol.II: 475-88; The Hydrographer, 1969-70, vol.III: 197, 205-6, 208, 211; Bryan, 1972: 8). All these features satisfy the definition of an island contained in Article 121 of UNCLOS.

The line of equidistance extends through four segments between termini 200nm from the nearest islands located at 2° N, 162° 30' W and 3° 10' S, 158° 110' W. The segments vary in length from 45nm to 245nm and total 540nm.

Factors which might encourage discussions about variations from the line of equidistance
Apart from proposals that the boundary might be simplified the only argument against the line of equidistance might be advanced by Kiribati. It could argue that the relevant length of the islands' coastlines is 52km for the islands of Kiribati and only 3km for Jarvis Island justifying an alteration of the delimitation line in its favour.

Kiribati – United States of America [Palmyra Atoll and Kingman Reef]

Introduction
Kiribati is a republic consisting of separate groups of islands which were formerly called the Gilbert Islands, the Phoenix Islands and eight of the eleven Line Islands. Palmyra Atoll and Kingman Reef are unincorporated territories administered by the Department of Territorial and International Affairs of the US Department of the Interior and the US Navy respectively (CIA, 1991: 168 and 242). The EEZs claimed by these two states overlap (Figure 1).

The line of equidistance
There are only two relevant features to construct a line of equidistance in this situation. Washington Island [New York, Prospect] belonging to Kiribati and Palmyra Atoll [Samarang] controlled by the United States lie about 120nm apart and control the construction of the line of equidistance between two points 200nm to the west and the east of these islands (Naval Intelligence Division, 1943-5, vol.II: 481-5; The Hydrographer, 1969-70: 211-2; Bryan, 1972: 8). Both features satisfy the definition of islands in Article 121 of UNCLOS.

The line of equidistance consists of one segment measuring 330nm between points at 2°40'N, 163°05' W and 7°55' N and 154°30' W 200nm from each island.

Factors which might encourage discussions about deviations from the line of equidistance
There do not appear to be any grounds for suggesting the line of equidistance would produce an inequitable boundary.

Marshall Islands – Nauru

Introduction
The Marshall Islands is a constitutional republic in free association with the United States of America; Nauru is a constitutional republic. Claims to 200nm EEZs from each territory overlap (Figure 1).

Line of equidistance
This line of equidistance is drawn between Nauru [Pleasant] and Ebon Island [Boston, Epon] which is part of the Marshall Islands (Naval Intelligence Division, 1943-5, vol.III: 363-6, vol.IV: 423; The Hydrographer, 1969-70, vol.II: 496-7, 508-9; Bryan, 1972: 9, 110). Both these features qualify to be considered as islands under the terms of Article 121 of UNCLOS. The line extends for 165nm between a tri-junction and a point 200nm from each island. The eastern tri-junction with Banaba [Ocean Island] which is part of Kiribati is 170nm from each island in the vicinity of 1°45' N, 168°34' E. The western terminus 200nm from each island is near 2°40' N, 166' E.

Factors which might encourage discussions about deviations from the line of equidistance
There do not seem to be any factors which might be used by either side to argue that the line of equidistance would create an inequitable marine boundary.

Marshall Islands – United States of America [Wake Island]

Introduction
The Marshall Islands is a constitutional democracy in free association with the United States. Wake Island is an unincorporated territory of the United States that is administered by the United States Air Force (Figure 1).

The line of equidistance
Only two islands would be involved in drawing a line of equidistance between these territories. They are Wake Island [Halcyon, Mandana, Otori Jima, San Francisco] (Naval Intelligence Unit, 1943-5, vol.IV: 482-4; The Hydrographer, 1969-70, vol.II: 523-4; Bryan, 1972: 13) and Taongi Atoll [Pakuk, Gaspar Rico, Pakaakkuk] (Naval Intelligence Handbook, 1943-5, vol.IV: 423; The Hydrographer, 1969-70, vol.II: 508; Bryan, 1972: 11) which is the northernmost island in the Marshall Islands. Both features qualify as islands under the terms of Article 121 of UNCLOS.

The line of equidistance which they generate consists of one segment extending about 275nm. The termini of the line are located where the EEZs of both territories intersect. They are located at 16° N, 165°40' E and 15°55' N, 170° E.

Factors which might encourage discussions about deviations from the line of equidistance
There do not appear to be any arguments which either side could use to claim that a boundary based on the line of equidistance was inequitable.

New Zealand [Tokelau] – Samoa

Introduction
Tokelau is a territory of New Zealand and Samoa is a republic. Claims made from these territories to EEZs overlap (Figure 1).

Line of equidistance
Three islands are involved in drawing the short line of equidistance. The islands are Atafu [Oatafu, Duke of York] and Nukunono [Duke of Clarence] belonging to Tokelau and Savaii

which is part of Samoa and they are all islands within the terms of Article 121 of UNCLOS (Naval Intelligence Division, 1943-5, vol.II: 505, 517, 660-4; The Hydrographer, 1969-70, vol.II: 458, 533-4; Bryan, 1972: 8). The line of equidistance consists of a single segment 33nm in length joining two tri-junctions. The first western tri-junction is with claims from Wallis and Futuna an overseas territory of France and it lies in the vicinity of 10°55' S, 174°15'W, 175nm from the islands. Wallis Island [Uvea, Uea] is the island in Wallis and Futuna which generates the tri-junction (Naval Intelligence Division, 1943-5, vol.III: 76-90; The Hydrographer, 1969-70, vol.II: 143). The eastern tri-junction is formed with Swains Island [Olosega, Olosenga, Quiros, Gente Hermosa, Jennings] which is part of American Samoa (Naval Intelligence Division, 1943-5, vol.II: 518; The Hydrographer, 1969-70, vol.II: 463; Bryan, 1972: 8) and it lies in the vicinity of 11° S and 173°45' W, 155nm from the islands. The maritime boundary agreed between New Zealand and the United States between their territories of Tokelau and American Samoa has a western terminus at Point 8 with the coordinates 11°02'17" S and 173° 44' 48" W and this is reported to be the tri-junction with claims from Samoa (Charney and Alexander, 1993: 1,125)

Factors which might encourage discussion about deviations from the line of equidistance
Possible arguments that a boundary coincident with the line of equidistance is inequitable might be raised by Samoa because of the restrictions on its claims to seas in the direction of all its neighbours. The argument might be framed in the first instance on the disparity between the lengths of the coasts of the islands which make up Samoa and the islands of surrounding territories. The relevant coast of Savai'i is 57km long compared with 5km for Atafu.

Niue – Tonga

Introduction
Niue is a self-governing territory in free association with New Zealand. The Niue authorities are responsible for internal affairs and New Zealand is responsible for external affairs. Tonga is an independent constitutional monarchy. Claims to exclusive economic territories from these territories overlap (see Figures 1 and 7).

The line of equidistance
The are six Tongan features involved in fixing a line of equidistance with the solitary island of Niue. They are Niuatoputapu [Keppel's, Traitors], Vava'u, Hakaufussi Cay. Ha'ano, Otu Tolu and 'Eua [Eooa, Middleburgh] (Naval intelligence Division, 1943-5, vol.III: 93-6, 99, 102, 104-8; The Hydrographer, 1969-70, vol.II: 397, 409-10, 421-31, 434; Bryan, 1972: 9). All these features are islands within the terms of Article 121 of UNCLOS. The line of equidistance consists of six segments varying in length from 15nm to 121nm. The line measures 331nm and joins a tri-junction in the north with the intersection of claims to EEZs 200nm wide. The northern tri-junction is located in the vicinity 16°50' S and 171°20' W and involves Tutiula in American Samoa; the intersection of EEZs is located near 22°09' S and 171°27' W.

Factors which might encourage discussions about deviations from the line of equidistance
There do not seem to be any factors that might enable either side to complain that the line of equidistance would make an inequitable boundary.

Niue – United States of America [American Samoa]

Introduction
Niue is a self-governing territory in free association with New Zealand. The Niue authorities are responsible for internal affairs and New Zealand is responsible for external affairs. American Samoa is an unincorporated and unorganised territory of the United States under the administration of the Office of Territorial and International Affairs in the Department of the Interior. Claims from these two territories to 200nm EEZs overlap (see Figure 1).

Line of equidistance
The line of equidistance is generated between Niue Island [Savage] and the American islands called Tutiula, Ta'u and Rose Naval Intelligence Division, 1943-5, vol.II: 669-73, vol.III: 276-90; The Hydrographer, 1969-70, vol.II: 440-1, 143; Bryan, 1972: 8). All these islands satisfy the definition of islands in Article 121 of UNCLOS. The line of equidistance consists of three segments which total 282nm joining two tri-junctions. The eastern tri-junction in the vicinity of 17°35' S and 166°42' W is with Palmerston Island [Muarua] (Naval Intelligence Division, 1943-5, vol.II: 561; The Hydrographer, 1967, vol.II: 80; Bryan, 1972: 7) which belongs to the Cook Islands. The 1980 maritime boundary agreement between the Cook Islands and the United States in respect of American Samoa originates at a point with the coordinates 17°33'28" S and 166°39'35" W, which is reported to be the tri-junction with Niue and 199nm from each island (Charney and Alexander, 1993: 985-93). The western tri-junction is with Niuatoputapu Island, belonging to Tonga, in the vicinity of 16°50' S and 171°20' W about 150nm from each of the islands.

Factors which might encourage discussion about deviations from the line of equidistance
There do not appear to be any factors which would allow either side to suggest that the line of equidistance would produce an inequitable boundary.

Northern Marianas – United States of America [Guam]

Introduction
The Commonwealth of the Northern Marianas is in a political union with the United States. United States federal funds to the Commonwealth are administered by the United States Department of the Interior, Office of Insular Affairs. Guam is an organised, unincorporated territory of the United States. When claims to 200nm EEZs are drawn from these territories they overlap (see Figure 1).

The line of equidistance
In drawing a line of equidistance to separate the claims from these territories only Guam [Omia, Jima, Guahan, Gwam, San Juan] Island and Rota [Luta, Sarpan, Santa Ana, Zarpano] Island are involved. The line of equidistance appears to consist of one segment on medium-scale charts, but there are probably more than one segment as different points are used along the coast of Guam. The boundary measures about 405nm between two points 200nm from the islands. The western terminus is in the vicinity of 15°45' N and 142°08' E and the eastern terminus is near 12°03' N and 147°52' E.

Factors which might encourage discussions about deviations from the line of equidistance
There do not appear to be any factors which would encourage either side to argue that the line of equidistance would create an inequitable boundary.

Samoa – Tonga

Introduction
Tonga and Samoa are both independent constitutional monarchies. Claims by them to an EEZ 200nm wide overlap (see Figures 1 and 7).

The line of equidistance
If a line of equidistance is drawn giving full effect to all relevant features, two islands of each country would be involved. They are Niuafo-ou [Niuafoo, Niafou, Proby, Goodhope, Tin Can] and Tafahi [Boscawen, Cocos and Marqueen] belonging to Tonga and Savaii and Upolu belonging to Samoa (Naval Intelligence Division, 1943-5, vol.II: 660, 665, vol.III: 111, 108; The Hydrographer, 1969-70, vol.II: 433, 435, 447-9, 458-60; Bryan, 1972: 9). All these features are islands within the terms of Article 121 of UNCLOS. The line of equidistance consists of three segments between Niuafo-ou and Savaii, Savaii and Tafahi and Tafahi and Upolu. The line is about 180nm long and terminates at tri-junctions in the northwest with the French Overseas Territory Wallis and Futuna and in the southeast with American Samoa. The tri-junction with the French Territory is equidistant from Savaii, Niuafo-ou and Wallis Island. It is located in the vicinity of 14°15' S, 174°30' W and is about 115nm from the nearest islands of each country. The tri-junction with American Samoa is equidistant from Upolu, Tafahi and Tutuila in the American territory. The tri-junction is about 115nm from the nearest island of each country in the vicinity of 15°50' S and 171°52' W.

Factors which might encourage discussion about variations from the line of equidistance
There is one factor which might encourage Samoa to propose that the line of equidistance should be varied in its favour. Samoa, which has a larger population than the total populations of its four neighbours, secures a much smaller area of sea than any of them if their marine boundaries are drawn as lines of equidistance. Samoa and American Samoa are the only two countries in the region which cannot claim a full 200nm EEZ in at least one direction. However, the ratios of seas claimed by Tonga, American Samoa, Tokelau and Wallis and Futuna to the seas available for Samoa are 4.1, 3, 2.4, and 1.9 respectively.

Samoa is the most confined of the countries in the region and it would be unusual if it did not seek some relief from this condition from all its neighbours. It is possible that such efforts might be met by pointing to the fact that Samoa possesses twice as much land as the total owned by its four neighbours. Samoa might also raise the issue of the disparity in the coastal lengths of features on which the line of equidistance is based.

Samoa – United States of America [American Samoa]

Introduction
Claims to 200nm EEZs from Samoa and American Samoa overlap. American Samoa is an unincorporated and unorganised territory of the United States administered by the Office of Territorial and International Affairs in the Department of the Interior. The United States has

negotiated equidistant maritime boundaries with Tokelau, Cook Islands and Niue. Boundaries remain to be negotiated with Samoa and Tonga (see Figure 1).

The line of equidistance
A strict line of equidistance would involve the islands of Savaii and Upolu belonging to Samoa and the islands called Swains [Olosega, Olosenga, Quiros, Gente Hermosa, Jennings], Ofu and Tutuila which are part of American Samoa (Naval Intelligence Division, 1943-5, vol.II: 517-8, 533, 660-4, 674; The Hydrographer, 1969-70, vol.II: 441, 463, 533; Bryan, 1972: 8). The line consists of six main segments measuring from 14nm to 88nm in length and totalling about 450nm. Because the line of equidistance probably will be generated from a series of different points located close together on the coasts of Opolu and Tutuila there might be some additional very short segments in a strict line of equidistance. The line of equidistance joins a northern tri-junction based on Nukunono [Duke of Clarence] belonging to Tokelau and a southern tri-junction with Tafahi [Boscawen, Cocos, Marqueen] which is part of Tonga (Naval Intelligence Division, 1943-5, vol.II: 505, vol.III: 108-10; The Hydrographer, 1969-70, vol.II: 435; Bryan, 1972: 9). The northern tri-junction is in the vicinity of 11° S, 173°45' W about 155nm from the nearest islands. The terminus of the maritime boundary separating Tokelau and American Samoa is located at 11°02'17" S and 173°44'48" W which is reported to be the tri-junction with the territory of Samoa (Charney and Alexander, 1993: 1,125). The southern tri-junction is near 15°50' S, 171°52' W about 115nm from the nearest islands.

Factors which might encourage discussion about variations from the line of equidistance
It would be surprising if Samoa did not consider that lines of equidistance with all its neighbours would produce inequitable boundaries. Despite having a larger land area than the land area of all its neighbours added together, it has the smallest entitlement to seas within the line of equidistance of all territories in the south Pacific Ocean.

Solomon Islands – Vanuatu

Introduction
Solomon Islands is an independent parliamentary democracy that has retained its connection with the British Sovereign; Vanuatu is a Republic. When claims to an EEZ 200nm wide are made from their territories they overlap (see Figure 1).

The line of equidistance
The line of equidistance using all relevant islands would involve seven features belonging to Solomon Islands and six islands belonging to Vanuatu. Those belonging to the Solomon Islands are South Indispensable Reef, Santa Catalina [Owa Riki], Nendo [Ndeni, Egmont, Santa Cruz], Utupua, Vanikoro [La Perouse], Tikopia [Tucopia], Fataka [Fakutaka, Mitre]; the six islands of Vanuatu are Espiritu Santo [Marina], Hiu [Hiw, North], Vat Ganai, Mota Lava [Saddle, Vatua], Mera Lava [Meralav, Pic de l'Eroilet, Star Peak] and Maewo [Aurora] (Naval Intelligence division, 1943-4, vol.III: 581-5, 590-2, 597-8, 601-3, 611, 691, 693-7; The Hydrographer, 1969-70, vol.I: 321-2, 315, vol.II: 204, 227, 231, 238-9, 242-3, 245, 249-50; Bryan, 1972: 17).

If Vanuatu was prepared to allow Solomon Islands to use South Indispensable Reef, which is awash and not surmounted by an island or rock, the tri-junction with New Calledonia would be located in the vicinity of 14°45' S, 163°18' E. Both Australia and France permitted the use of

South Indispensable Reef in fixing their tri-junction with the Solomon islands. France allowed the use of South Indispensable Reef in drawing the boundary delimited between the Solomon Islands and New Caledonia. This boundary terminated at 14°50'03" S and 163°10' E about 10nm southwest of the tri-junction using South Indispensable Reef (Charney and Alexander, 1993, vol.I: 172-3). If Vanuatu argued for Rennell Island as the correct nearest basepoint for Solomon Islands the tri-junction with New Caledonia would be located near 14°27' S and 163° E. Indispensable North Reef, which is surmounted by two rocks would be less favourable to Solomon Islands than Rennell Island. The baseline which is described assumes that South Indispensable Reef is used as a basepoint. It is also assumed that the outer limits of the islands and reefs are used rather than archipelagic baselines which both Solomon Islands and Vanuatu have proclaimed.

The line of equidistance consists of 11 segments, measuring from 20nm to 110nm, extending about 650nm. The western terminus, however it is defined, is the tri-junction with New Caledonia. The eastern terminus is a point 200nm from Fatutuka, belonging to the Solomon Islands and Maewo belong to Vanuatu. This intersection is located near 14°50' S and 171°36' E.

Factors which might encourage discussions about deviations from the line of equidistance
Although it is possible that the two countries might prefer to base a line of equidistance on their archipelagic baselines rather than entirely on the outer limits of islands and reefs it will be surprising if the boundary is not based on a line of equidistance. It is also possible that the two countries might decide to simplify the line of equidistance to make administration of their marine areas easier in the manner adopted by Papua New Guinea and Solomon Islands in their agreement of 1989 (Prescott, 1994). It is believed that there have been negotiations by the two countries on a maritime boundary which have made some progress. It is possible that some revised surveys related to specific datum will be necessary before a final line can be delimited.

Tonga – United States of America [American Samoa]

Introduction
Tonga is a constitutional monarchy while American Samoa is an unincorporated and unorganised territory of the United States administered by the United States Department of the Interior's Office of Territorial and International Affairs. The claims to EEZs 200nm wide from these territories overlap (see Figures 1 and 7).

The line of equidistance
This line of equidistance is based on three relevant islands. The only American island involved is Tutuila Island, although both the western and southern points of this island form relevant basepoints. The Tongan islands involved in constructing a line of equidistance are called Tafahi [Boscowen, Cocos, Marqueen] and Niuatoputapu [Niuatobutabu, Keppel's, Traitors] (Naval Intelligence Handbook, 1943-5, vol.II: 669-73, vol.III: 108; The Hydrographer, 1969-70, vol.II: 434-5, 441; Bryan, 1972, 8-9). All these islands pass the tests set out in Article 121 of UNCLOS. The line composed of three segments closely aligned on similar bearings measures 68nm and connects two tri-junctions. The tri-junction with Samoa is related to Opolu Island and is located in the vicinity of 15°50' S, 171°52' W, about 115nm from each island. The tri-junction with Niue lies in the vicinity of 16°50' S, 171°20' W, about 150nm from each island.

Factors which might encourage discussions about deviations from the line of equidistance
There appear no factors which would justify the view that this line of equidistance make an inequitable boundary.

3.   Conclusions

This analysis reviews 42 undelimited boundary situations. Because of uncertainty about how the parties will react to the judgement on the Gulf of Fonseca and its offshore areas the boundaries separating the maritime domains of El Salvador, Honduras and Nicaragua have been treated as a single undelimited boundary situation. The 42 cases can be grouped according to the relationships of the coasts: 36 cases concern opposite coasts, four concern adjacent coasts, including the El Salvador, Honduras and Nicaragua complication, and two concern opposite and adjacent coasts. This grouping corresponds to three distinct regional locations. The situations involving opposite coasts are found in the south and west Pacific Ocean, the adjacent cases are located on the west coast of central America and the opposite and adjacent coasts are found on the northwest coast of North America.

When the maritime zones separated by the boundaries are examined there are 34 cases where only EEZs are concerned and all of them are located in the south and west Pacific Ocean. There are four cases where the boundaries will separate territorial seas and EEZs and they are all located along the coast of Central America. There are two cases where the boundaries will separate territorial waters and EEZs and which might also involve the continental margins more than 200nm from the coast. These delimitations involve Canada and the United States. The delimitation between Australia's Norfolk Island and New Zealand will concern the exclusive economic zone and might involve the seabed beyond 200 nm. The only case about which there is uncertainty concerns Fiji and Tonga. If Tonga claims only a territorial sea from Tokelau Teleki and Tonga Teleki it is possible that in the vicinity of those reefs the boundary, for a short distance, will separate the EEZ of Fiji from the territorial seas of Tonga. The remainder of the maritime boundary will separate EEZs.

Possible general considerations that might persuade one country to argue that a line of equidistance is inequitable have been identified in six cases. There are five such cases in the South and West Pacific Ocean and one in Central America. The majority of these delimitations involve possible arguments that one country should obtain relief from restricted claims, such as Samoa, or that one country's territory is larger than the territory of its neighbours, such as Papua New Guinea and the Federated States of Micronesia.

There are six cases where there are more significant specific factors regarding variations in the lines of equidistance. The first involves the territorial dispute over Hunter and Matthew Islands between France in New Caledonia and Vanuatu. The disagreement between Canada and the United States over the interpretation of the Alaskan boundary award in the vicinity of Dixon Entrance seems incapable of resolution until Canada retreats from the view that the line drawn by the Commission to distinguish the ownership of islands is a maritime boundary.

The more recent judgement in respect of the Gulf of Fonseca and its offshore waters appears to present a major obstacle to agreement between El Salvador and Honduras and a significant obstacle to a delimitation between Honduras and Nicaragua within and outside the Gulf. Until

those boundaries are settled it will probably be unlikely that El Salvador and Nicaragua will be able to settle their common boundary.

The *Royal Proclamation* of Tonga, defining a frame within which islands are claimed, will create difficulties for Tonga's negotiations with Fiji if Tonga claimed all the waters and seabed in the frame. In addition the status of the Minerva Reefs could create problems if Tongan authorities deemed they could justify claims to an exclusive economic zone. Any maintenance by Indonesia of claims in the direction of Palau shown on its 1983 map would create difficulties for Palau. Finally, it seems likely that New Zealand will argue that any delimitation between Macquarie and Campbell Islands should be related to the natural prolongation of New Zealand's continental margin rather than a line of equidistance.

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