

ARBITRATION UNDER ANNEX VII OF THE UNITED NATIONS
CONVENTION ON THE LAW OF THE SEA

REPUBLIC OF THE PHILIPPINES

v.

PEOPLE'S REPUBLIC OF CHINA

SUPPLEMENTAL WRITTEN SUBMISSION OF THE PHILIPPINES

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16 MARCH 2015

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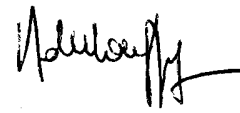
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L A W O F T H E S E A

B U L L E T I N

No. 1

SEPTEMBER 1983



OFFICE OF THE SPECIAL REPRESENTATIVE
OF THE SECRETARY-GENERAL FOR THE LAW OF THE SEA

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**VIET NAM
S T A T E M E N T**

**BY THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIET NAM
ON THE TERRITORIAL SEA BASELINE OF VIET NAM.**

In implementing the provisions of Paragraph 1 of the Statement on the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf issued by the Government of the Socialist Republic of Viet Nam on May 12, 1977 after being approved by the Standing Committee of the National Assembly of the Socialist Republic of Viet Nam,

The Government of the Socialist Republic of Viet Nam makes the following statement on the baseline from which the breadth of the territorial sea of Viet Nam shall be measured :

1/ The baseline from which the territorial sea of the continental territory of Viet Nam shall be measured is constituted by straight lines connecting those points the co-ordinates of which are listed in the annex attached herewith.

2/ The territorial sea baseline of Viet Nam which starts from point O - the meeting point of the two baselines for measuring the breadth of the territorial sea of the Socialist Republic of Viet Nam and that of the People's Republic of Kampuchea, located in the sea on the line linking the Tho Chu Archipelago with Poulo Wai Island - and which ends at Con Co Island shall be drawn following the co-ordinates listed in the attached annex on the 1/100,000 scale charts published by the Vietnamese people's Navy prior to 1979.

3/ The Gulf of Bac Bo (Tonkin Gulf) is a gulf situated between the Socialist Republic of Viet Nam and the People's Republic of China, the maritime frontier in the gulf between Viet Nam and China is delineated according to the June 26, 1887 convention of frontier boundary signed between France and the Qing Dynasty of China.

The part of the gulf appertaining to Viet Nam constitutes the historic waters and is subjected to the juridical regime of internal waters of the Socialist Republic of Viet Nam.

The baseline from Con Co Island to the mouth of the gulf will be defined following the settlement of the problem relating to the closing line of the gulf.

4/ The baseline for measuring the breadth of the territorial sea of the Hoang Sa and Truong Sa Archipelagoes will be determined in a coming instrument in conformity with Paragraph 5 of the May 12, 1977 Statement of the Government of the Socialist Republic of Viet Nam.

5/ The sea as lying behind the baseline and facing the coast or the islands of Viet Nam constitutes the internal waters of the Socialist Republic of Viet Nam.

6/ The Government of the Socialist Republic of Viet Nam holds that all differences with countries concerned relating to different sea areas and the continental shelf will be settled through negotiations on the basis of mutual respect for each other's national independence and sovereignty in conformity with international law and practice.

HANOI, November 12, 1982.

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A N N E X

THE CO-ORDINATES OF THE POINTS ESTABLISHING THE STRAIGHT
BASELINE FROM WHICH THE BREADTH OF THE TERRITORIAL SEA
OF VIET NAM IS MEASURED.

(Attached to the November 12, 1982 Statement by the Government
of the Socialist Republic of Viet Nam).

POINTS	GEOGRAPHICAL DESCRIPTION	LATITUDE (N)	LONGITUDE (E)
0	On the Southwestern demarcation line of the historic waters of the Socialist Republic of Viet Nam and the People's Republic of Kampuchea.		
A1	At the Island of Nhan, Tho Chu Archipelago, Kien Giang province	09° 15' 0	103° 27' 0
A2	At Da Le Island which is South-East of Hon Khoai Island, Minh Hai province	08° 22' 8	104° 52' 4
A3	At Tai Lon Islet, Con Dao Islands, Con Dao - Vung Tau administrative sector.	08° 37' 8	106° 37' 5
A4	At Bong Lang Islet, Con Dao Islands	08° 38' 9	106° 40' 3
A5	At Bay Canh Islet, Con Dao Islands	08° 39' 7	106° 42' 1
A6	At Hon Hai Islet (Phu Qui group), Thuan Hai province	09° 58' 0	109° 05' 0
A7	At Hon Doi Islet, Thuan Hai province	12° 39' 0	109° 28' 0
A8	At Dai Lanh Cape, Phu Khanh province	12° 53' 8	109° 27' 2
A9	At Ong Can Islet, Phu Khanh province	13° 54' 0	109° 21' 0
A10	At Ly Son Island, Nghia Binh province	15° 23' 1	109° 09' 0
A11	At Con Co Island, Binh Tri Thien province	17° 10' 0	107° 20' 6

Annex 501

U.S. Department of State, Bureau of Oceans and International Environmental and Scientific Affairs, "Straight Baseline Claim: China", *Limits in the Seas*, No. 117 (9 July 1996)

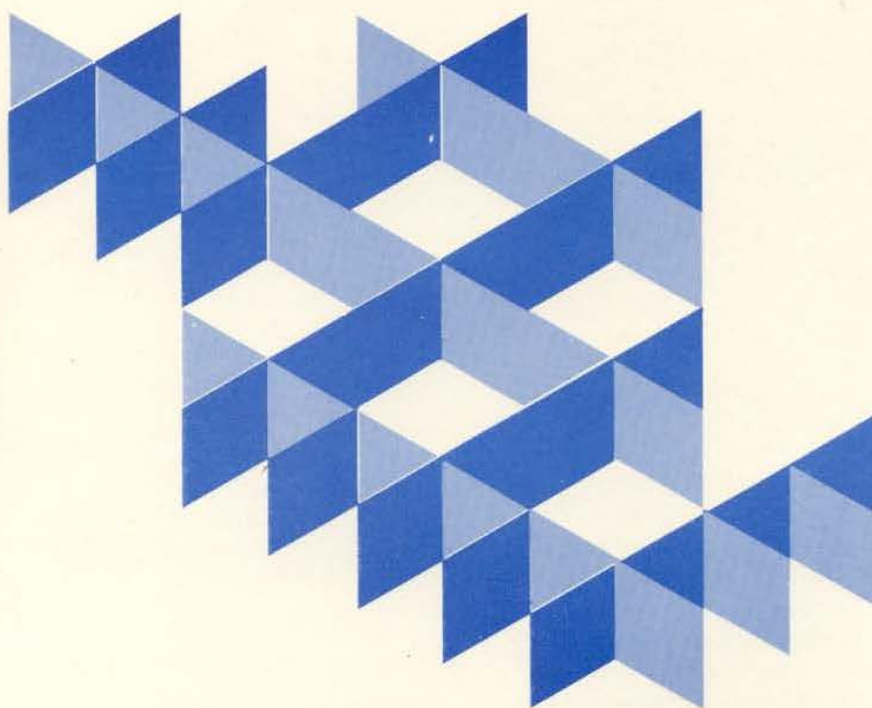
United States Department of State
*Bureau of Oceans and International
Environmental and Scientific Affairs*



Limits in the Seas

No. 117

Straight Baseline Claim:
China



This paper is one of a series issued by the Office of Ocean Affairs, Bureau of Oceans and International Environmental and Scientific Affairs in the Department of State. The aim of the series is to set forth the basis of national arrangements for the measurement of marine areas by coastal states. It is intended for background use only. This paper does not necessarily represent an official acceptance by the United States Government of the limits claimed.

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LIMITS IN THE SEAS

No. 117

STRAIGHT BASELINES CLAIM:

CHINA

July 9, 1996

**Office of Ocean Affairs
Bureau of Oceans and International
Environmental and Scientific Affairs
U.S. Department of State**

INTRODUCTION

The People's Republic of China issued a Declaration on 15 May 1996 declaring straight baselines along parts of its coast. From these straight baselines China will measure the breadth of its territorial sea, contiguous zone, and its other claimed maritime zones. The Declaration, which is reprinted in Annex I to this study, indicates that only a part of China's straight baselines are being claimed at this point in time: "(China) ... hereby announces the baselines of part of its territorial sea adjacent to the mainland and those of the territorial sea adjacent to its Xisha Islands...."¹ The Declaration does not address China's baseline from its land boundary terminus with North Korea to point 1 of the Declaration (including the Bo-Hai area), along its coast in the Gulf of Tonkin, or around other islands it claims in the South China Sea.

China first claimed straight baselines in its Declaration on the Territorial Sea, made on September 4, 1958. In this Declaration China claimed that the baseline for measuring the breadth of its territorial sea is "the line composed of the straight lines connecting basepoints on the mainland coast and on the outermost of the coastal islands." However, no specific geographic coordinates were given to define these base points.²

On February 25, 1992, China enacted The Law of the People's Republic of China on the Territorial Sea and the Contiguous Zone (reproduced at Annex 2 of this study). Again, no specifics were given on the baselines other than that found in Article 3 which stated that "the method of straight baselines composed of all the straight lines joining the adjacent base points shall be employed in drawing the baselines of the territorial sea of the People's Republic of China." Neither the 1958 nor the 1992 law make reference to the low-water mark as the normal baseline.

MAY 15, 1996 DECLARATION

China has claimed two sets of straight baseline systems in this Declaration. This first system comprises 49 base points along features on, and adjacent to, its mainland coast and on Hainan Island beginning at point 1 (Shandonggaojiao) on the eastern tip of the Shandong peninsula situated to the southeast of Bo-Hai, south to point 49 situated on the west coast of Hainan Island. The second system encompasses the Paracel Islands, in the northern part of the South China Sea, with 28 basepoints.

¹ The Xisha (Paracel) Islands are also claimed by Vietnam. The analysis in this paper of China's straight baseline claim around these islands does not necessarily reflect a recognition by the United States Government of China's sovereignty to these islands.

² See Limits in the Seas No. 43, "Straight Baselines, Peoples Republic of China", July 1, 1972 (LIS No. 43). The analysis found in LIS No. 43 was based on this non-specific Declaration. The analysis contained in this present study supersedes that of LIS No. 43.

In its Declaration, China has not provided technical information regarding the base points or baselines. There is no statement of datum, spheroid, or type of "straight" lines to be used.³

BASIS FOR ANALYSIS

The United Nations Convention on the Law of the Sea (LOS Convention) reflects customary international law for the principles that underlie the proper and legal establishment of baselines.⁴ The rules for drawing baselines are contained in articles 5-11 and 13-14 of the LOS Convention. Article 5 states that "except where otherwise provided in this Convention, the normal baseline for measuring the breadth of the territorial sea is the low-water line along the coast." Paragraph 1 of Article 7 is the paramount paragraph that establishes the geographical conditions that must be met should a coastal state elect to claim straight baselines in particular locations. This paragraph states that straight baselines may be drawn only in two specific geographic situations, that is, (a) "in localities where the coastline is deeply indented and cut into", or (b), "if there is a fringe of islands along the coast in its immediate vicinity".⁵

The purpose of authorizing the use of straight baselines is to allow the coastal State, at its discretion, to enclose those waters which have, as a result of their close interrelationship with the land, the character of internal waters. According to the LOS Convention, "the sea areas lying within the lines must be sufficiently closely linked to the land domain to be subject to the regime of internal waters".⁶ By using straight baselines a State may also eliminate complex patterns, including enclaves, in its territorial sea, that would otherwise result from the use of normal baselines.⁷

A United Nations study stated that when determining whether "conditions apply which would permit the use of straight baselines it is necessary to focus on the spirit as well as the letter of the first paragraph of article 7" (of the LOS Convention).⁸ And, as a noted geographer has stated, "proper straight baselines usually have a number of segments, each composed of several legs, interspersed with sections of the low-water mark of island and mainland coasts....The length of individual legs is short and the baseline is rarely more than 24 nautical miles from an exposed coast".⁹ Article 14 of the LOS Convention

³ The official Chinese charts were not obtainable for this study. This analysis uses charts of a 1:300,000 scale and larger, produced by the U.S. Defense Mapping Agency (DMA). Under Article 16 of the LOS Convention, a State is obligated to give due publicity to either the charts or a listing of geographic coordinates, specifying geodetic datum. Distances are calculated on the World Geodetic System 1984 (WGS 84). All mileage cited in this study unless otherwise noted, are nautical miles. One nautical mile equals 1,852 meters. Straight lines can be depicted as rhumb lines, arcs of great circles, or geodesics.

⁴ China deposited its instrument of ratification of the LOS Convention on June 6, 1996.

⁵ LOS Convention, Article 7(1); also found in Article 4(1) of the Convention on the Territorial Sea and the Contiguous Zone (15 U.S.T. 1606, T.I.A.S. No. 639, 516 U.N.T.S. 205).

⁶ LOS Convention, article 7(3).

⁷ J. Ashley Roach and Robert W. Smith (Roach and Smith), *United States Responses to Excessive Maritime Claims*, 2nd edition, Martinus Nijhoff Publishers, 1996, p. 60.

⁸ United Nations, Baselines: An Examination of the Relevant Provisions of the United Nations Convention on the Law of the Sea, 1989, p. 17.

⁹ Victor Prescott, The Maritime Political Boundaries of the World, 1985, p. 69.

acknowledges that a combination of methods is appropriate for determining the type of baselines in particular areas: "The coastal State may determine baselines in turn by any of the methods provided for in the foregoing articles to suit different conditions."

Much of China's coastline does not meet either of the two LOS Convention geographic conditions required for applying straight baselines. And, for the most part, the waters enclosed by the new straight baseline system do not have the close relationship with the land, but rather reflect the characteristics of high seas or territorial sea. In these areas it would be appropriate to use the normal baseline, the low-water line.

ANALYSIS OF THE BASELINES

"Mainland" and Hainan Island baseline system

The 48 segments that connect the 49 base points total 1,734.1 miles. China has claimed a continuous set of straight baseline segments from the northeast section of its coast all the way to the west coast of Hainan Island. The segments range in length from 0.1 miles (segment 45-46 on Hainan Island) to 121.7 miles (segment 8-9 off the northeast coast of China). See Annex 3 for a listing of baseline lengths. As shown in Table 1, over half of the baseline segments (25 of the 48 segments) are in excess of 24 miles in length, with 3 (6%) of the segments exceeding 100 miles.

TABLE 1
Length of China's
Mainland and Hainan Island Baseline Segments

Length (nautical miles)	Number of Segments (percent of total)
Less than 24	23 (48%)
24.1 to 48	9 (19%)
48.1 to 100	13 (27%)
Greater than 100	3 (6%)

Neither the LOS Convention nor the Convention on the Territorial Sea and the Contiguous Zone place a specific distance limit on the length of a straight baseline. However, several analyses have suggested limits ranging from 24 to 48 miles.¹⁰ The position of the United

¹⁰ See Roach and Smith, p. 64 (24 miles); Robert D. Hodgson and Lewis M. Alexander, "Towards an Objective Analysis of Special Circumstances: Bays, Rivers, Coastal and Oceanic Archipelagoes and Atolls," Law of the Sea Institute Occasional Paper No. 13, 1971, p. 8 (45 miles); Peter B. Beazley, Maritime Limits and Baselines: A Guide to their Delineation, The Hydrographic Society Special Publication No. 2 (2nd ed., revised August 1978), p. 9 (45 miles); Limits in the Seas No. 106,

States is that as a general rule baseline segments should not exceed 24 miles.¹¹ The following analysis supports 24 miles as the maximum baseline length:

The 24-mile maximum segment length is implied from a close reading of the relevant articles of the LOS Convention. Article 7(1) speaks of the 'immediate vicinity' of the coast. Article 7(3) states that 'the sea areas lying within the line must be sufficiently closely linked to the land domain to be subject to the regime of internal waters.' In both of these descriptions, the implication is strong that the waters to be internalized would otherwise be part of the territorial sea. It is difficult to envision a situation where international waters (beyond 12 miles from the appropriate low-water line) could be somehow 'sufficiently closely linked' as to be subject to conversion to internal waters.

This implication is reinforced by article 8(2) which guarantees the right of innocent passage in areas converted to internal waters by straight baselines. Innocent passage is a regime applicable to the territorial sea (with a maximum breadth of 12 miles). Preservation of innocent passage carries over pre-existing rights in waters that were territorial in nature before the application of straight baselines. Given this theme of linkage to territorial waters, it follows that, as a rule, no straight baseline segment should exceed 24 miles.¹²

As will be pointed out in the analysis that follows, the length and location of many of China's straight baseline segments are such that they do not meet the criteria set forth in the LOS Convention.

Generally, the Chinese coastline from the Shandong peninsula (point 1) to the area of Shanghai (off of which base point 11 is situated) is essentially smooth with no fringing islands. Along this part of the coastline there are a few indentations which may meet the juridical bay criteria.

Base points 1 through 5 (refer to the illustrative map in back of this study) are situated near the Shandong peninsula which is neither deeply indented nor fringed with islands. Between points 2 and 3 there are two indentations in the coast which could have juridical bay closing lines drawn across their respective entrances. Neither juridical bay closing line, however, would affect the measurement of the 12 mile territorial sea as there are other features seaward of the possible closing line. In this particular area (specifically, the territorial sea drawn from baseline segment 2-3) approximately 20 square nautical miles (sq.nm-70 sq. kilometers) of territorial sea is claimed that should remain high seas. A comparable amount of area is claimed as internal waters that should be territorial sea.

The Chinese coastline between base points 5 to 8 is relatively smooth, with a few small indentations that could be closed off by juridical bay closing lines. The city of Qingdao sits on the largest of these juridical bays. Points 6, 7, and 8 are situated on very small islets

"Developing Standard Guidelines for Evaluating Straight Baselines", August 31, 1987 (48 miles).

¹¹ U.S. Department of State Dispatch Supplement, "Law of the Sea Convention, Letters of Transmittal and Submittal and Commentary", Vol. 6, February 1995, p.8.

¹² Roach and Smith, footnote 24, pp. 64-65.

adjacent to about 140 miles of coastline (between 119°50'E and 122°15'E). Segments 6-7 and 7-8 are 84.1 and 71.8 miles apart, respectively. The respective distances of points 6, 7, and 8 to the mainland are approximately 5, 16, and 26 miles. There is only one other small islet in the immediate vicinity of segment 6-7 and none near segment 7-8. Given the paucity of islands, this offshore area cannot be considered "fringed" with islands. The territorial sea should be drawn from the "normal" baseline (low-water line) of these islets and from the mainland low-water line (as depicted on official Chinese charts). In this area China has claimed about 1,175 sq.nm (4,023 sq.km.) of territorial sea that should remain high seas, and about 600 sq.nm (2,055 sq.km) of internal waters that should be high seas. In addition, there is a significant area that has been claimed as internal waters that should be territorial seas.

Segments 8-9 (121.7 miles), 9-10 (25.6 miles), and 10-11 (100.2 miles) are situated off the east coast of China in an area of extensive low-tide elevations.¹³ On the chart used for this analysis, point 9 is located in the water of less than 3 meters depth.¹⁴ Point 10 is situated on a low-tide elevation that is more than 12 miles from the mainland. There are no islands in the vicinity of the mainland near segments 8-9 and 9-10. With the exception of the several rivers that empty into the Yellow Sea and East China Sea in this area, the mainland coast is relatively smooth.

Under international law, a State may use the low-water line of a low-tide elevation as the baseline from which to measure the territorial sea only if that low-tide elevation is situated wholly or partly at a distance not exceeding the breadth of the territorial sea as measured from the mainland or from an island.¹⁵ In the case of China, the low-water line of any low-tide elevation situated within 12 miles of the mainland or an island could be used to determine the territorial sea limit. There are eight low-tide elevations, including the one on which point 10 sits, depicted on DMA chart 94260 that cannot be used to determine the territorial sea because no part of any of these low-tide elevations are within 12 miles of the mainland or an island.

In addition, straight baselines cannot be drawn to and from low-tide elevations "unless lighthouses or similar installations which are permanently above sea level have been built on them or except in instances where the drawing of baselines to and from such elevations has received general international recognition."¹⁶ It is believed that no such conditions exist in this region off China's coast.

Thus, in the area of segments 8-9, 9-10, and 10-11, the proper baseline would be in the low-water line of the mainland and those low-tide elevations situated in whole, or in part, at a distance no greater than 12 miles from the mainland. As such, in this region China has

¹³ A low-tide elevation, according to article 13 of the LOS Convention, "is a naturally formed area of land which is surrounded by and above water at low tide but submerged at high tide".

¹⁴ Points 9 and 10 were plotted on DMA chart 94260, 5th ed., Aug. 26, 1995, 1:300,000. The chart was compiled, in part, from China chart 9306, 1976 ed., corrected to 1986, 1:300,000.

¹⁵ LOS Convention, article 13.

¹⁶ LOS Convention, article 7(4).

claimed approximately 1,995 sq.nm (6,831 sq.km) of territorial sea that should be high seas, and about 550 sq.nm (1,880 sq.km) of internal waters that should be high seas, and a large area of internal waters that should be territorial sea.

Point 11, which is situated east of Shanghai near the mouth of the Chianggiang (Yangtze River), is on an isolated islet and should not be a part of a straight baseline system.

From about 30°50'N (southeast of Shanghai and landward of point 12) to about 27°30'N, in the vicinity of point 18 (on Nanjishan Liedao), there are fringing islands near the mainland that would meet the fringing islands requirement of article 7(1). However, with the possible exception of points 16 and 17, and perhaps point 18, the other points are situated on small islets isolated from the other coastal islands. Points 12 and 13, for example, appear to be situated on rocks about 60 miles from the mainland and more than 16 miles from the Ma'an Qundao (Ma'an Liedao) island group where straight baselines may be valid. Points 14 and 15 also are situated on islands that do not meet the requirement that the fringe of islands be "along the coast in its immediate vicinity".

Baseline segments connecting points 18 through 24 are located along the western fringe of the Taiwan Strait.¹⁷ While the coastline in this area can be characterized as being deeply indented and fringed with islands, modifications are required in the current baseline system. Points 19 and 20 are on features isolated from the "fringe" by about 21 miles. Segments 18-19 (73.2 miles), 19-20 (14.3 miles), and 20-21 (50.3 miles) enclose waters that are not "closely linked to the land domain".

Similarly, points 22, 23, and 24 are features that are not a part of fringing islands. The coastal area landward of these points do have fringing islands "along the coast in its immediate vicinity" on which straight baselines could be drawn.

Straight baseline segments 24-25 (30.8 miles), 25-26 (1.1 miles), and 26-27 (43.8 miles) are not justifiable in that islets on which points 24, 25, and 26 sit are not fringing islands. The coastline landward of points 24 to 27 does contain several juridical bays and the territorial sea in this area should be drawn from the low-water line of the islands and mainland, and the juridical bay closing lines.

Segments 27-28 (84.6 miles), 28-29 (71.3 miles), 29-30 (66.8 miles), and 30-31 (25.4 miles) connect base points situated on small islets and rocks. The mainland landward of segment 27-28 does have an indentation or two that could be closed off by juridical bay closing lines. Point 28, however, is an isolated islet 19 miles seaward of the mainland. Segments 28-29 and 29-30 enclose Hong Kong and Macao which have not yet come under Chinese sovereignty. Base point 31 is an isolated rock; straight baseline segments would be proper from point 30 extending west northwest which would connect several large coastal islands to the mainland.

¹⁷ It is noted that base points 19 and 22 are located on islands administered by Taiwan, and that the straight baseline system encloses other islands that are administered by Taiwan.

Baseline segment 31-32 (107.8 miles) connects the rock at point 31 to a small island off the northeast coast of Hainan Island. The segment cuts off the eastern approaches to Hainan Strait, an international strait. Here, China is enclosing large areas of high seas and claiming them as internal waters. Hainan Island has no fringing islands as only a few scattered islands are situated off the coast. Other than a few small juridical bays, the baseline should be the low-water line. The straight baselines have minimal effect on the territorial sea limit.

Xisha (Paracel Islands)

China has created 28 basepoints and connected them to enclose the Paracel Islands.¹⁸ Regardless of whose sovereignty the Paracel Islands comes under, straight baselines cannot be drawn in this area. The Paracel Islands comprise about a dozen small islands and reefs scattered over an area approximately 120 miles by 100 miles. The largest islands in the Paracels, Woody Island and Pattle Island, are only 1.62 sq.km (400 acres) and 0.26 sq.km (64 acres), respectively. The remaining features in this area are smaller islets, rocks and reefs, some of which are depicted as being above the tidal datum.¹⁹ While it is possible for an island to meet the requirements of article 7 and to have straight baselines drawn, these standards are not met here. The proper baseline would be the low-water line of the islands and reefs.

China (or Vietnam) would not be allowed to establish archipelagic straight baselines around the Paracel Islands, since the LOS Convention is quite clear in stating that an archipelagic State "means a State constituted wholly by one or more archipelagoes and may include other islands."²⁰ And, an archipelago "means a group of islands, including parts of islands, interconnecting waters and other natural features which are so closely interrelated that such islands, waters and other natural features form an intrinsic geographic, economic and political, or which historically have been regarded as such".²¹ As continental states, China and Vietnam cannot establish archipelagic straight baselines around islands belonging to them.

¹⁸ Point 28 is connected to point 1 to complete the enclosure.

¹⁹ As shown on DMA 93250, 13th ed., June 17, 1989. This chart was used for the calculations made for the analysis in footnote 19 below.

²⁰ LOS Convention, article 46.

²¹ Ibid. Hypothetically, even if the Paracel Islands were an independent island state, the water/land area ratio required by article 47 of the LOS Convention would be exceeded. The land area, which would include islands, rocks, and the waters surrounded by reefs above water, is about 665 square kilometers; the water area within China's claimed straight baselines is 17,375 square kilometers. The water to land ratio would approximate 26.1:1, far exceeding the maximum allowed ratio of 9:1.

ANNEX I

Declaration
Of the Government of the People's Republic of China
On the Baseline of the Territorial Sea
of the People's Republic of China
15 May 1996

In accordance with the Law of the People's Republic of China on the Territorial Sea and the Contiguous Zone Adopted and Promulgated on 25 February 1992, the Government of the People's Republic of China hereby announces the baselines of part of its territorial sea adjacent to the mainland and those of its territorial sea to the Xisha Islands as follows:

I. The baseline of part of the territorial sea adjacent to the mainland are composed of all the straight lines joining the adjacent base points listed below:

1. Shandonggaojiao (1)		26. Nanpengliedao (2)	37° 24.0'N 122° 42.3'E
2. Shandonggaojiao (2)		27. Shibeishanjiao	22° 57.1'N 122° 42.3'E
3. Moyedao (1)	36° 57.8'N 122° 34.2'E	28. Zhentouyan	22° 18.9'N 115° 07.5'E
4. Moyedao (2)	36° 55.1'N 122° 32.7'E	29. Jiapengliedao	21° 48.5'N 113° 58.0'E
5. Moyedao (3)	36° 53.7'N 122° 31.1'E	30. Weijiadao	21° 34.1'N 112° 47.9'E
6. Sushandao	36° 44.8'N 122° 15.8'E	31. Dafanishi	21° 27.7'N 112° 21.5'E
7. Chaoliandao	35° 53.6'N 120° 53.1'E	32. Qizhouliedao	19° 53.0'N 111° 16.4'E
8. Dashandao	35° 00.2'N 119° 54.2'E	33. Shuangfan	19° 53.0'N 111° 12.8'E
9. Macaiheng	33° 21.8'N 121° 20.8'E	34. Dazhoudao (1)	18° 39.7'N 110° 29.6'E
10. Waikejiao	33° 00.9'N 121° 38.4'E	35. Dazhoudao (2)	18° 39.4'N 110° 29.1'E
11. Shesshandao	31° 25.3'N 122° 14.6'E	36. Shuangfanshi	18° 26.1'N 110° 08.4'E
12. Haijaio	30° 44.1'N 123° 09.4'E	37. Lingshuijiao	18° 23.0'N 110° 03.0'E
13. Dongnanjiao	30° 43.5'N 123° 09.7'E	38. Dongzhou (1)	18° 11.0'N 109° 42.1'E
14. Liangxiongdiyu	30° 10.1'N 122° 56.7'E	39. Dongzhou (2)	18° 11.0'N 109° 41.8'E
15. Yushanliedao	28° 53.3'N 122° 16.5'E	40. Jinmujiao	18° 09.5'N 109° 34.4'E
16. Taizhouliedao (1)	28° 23.9'N 121° 55.0'E	41. Shenshijiao	18° 14.6'N 109° 07.6'E
17. Taizhouliedao (2)	28° 23.5'N 121° 54.7'E	42. Xigudao	18° 19.3'N 108° 57.1'E
18. Daotiaoshan	27° 27.9'N 121° 07.8'E	43. Yinggezui (1)	18° 30.2'N 108° 41.3'E
19. Dongyindao	26° 22.6'N 120° 30.4'E	44. Yinggezui (2)	18° 30.4'N 108° 41.1'E
20. Dongshadao	26° 09.4'N 120° 24.3'E	45. Yinggezui (3)	18° 31.0'N 108° 40.6'E
21. Niushandao	25° 25.8'N 119° 56.3'E	46. Yinggezui (4)	18° 31.1'N 108° 40.5'E
22. Wuqiuyu	24° 58.6'N 119° 28.7'E	47. Gan'enjiao	18° 50.5'N 108° 37.3'E
23. Dongdingdao	24° 09.7'N 118° 14.2'E	48. Sigengshajiao	19° 11.6'N 108° 36.0'E
24. Daganshan	23° 31.9'N 117° 41.3'E	49. Junbijiao	19° 21.1'N 108° 38.6'E
25. Nanpengliedao (1)			23° 12.9'N 117° 14.9'E

II. The baseline of the territorial sea adjacent to the Xisha Islands of the People's Republic of China are composed of all the straight lines joining the adjacent base points listed below:

1. Dongdao (1)	16° 40.5'N 112° 44.2'E	19. Beijiao (5)	17° 06.5'N 111° 29.2'E
2. Dongdao (2)	16° 40.1'N 112° 44.5'E	20. Beijiao (6)	17° 07.0'N 111° 31.0'E
3. Dongdao (3)	16° 39.8'N 112° 44.7'E	21. Beijiao (7)	17° 07.1'N 111° 31.6'E
4. Langhuajiao (1)	16° 04.4'N 112° 35.8'E	22. Beijiao (8)	17° 06.9'N 111° 32.0'E
5. Langhuajiao (2)	16° 01.9'N 112° 32.7'E	23. Zhaoshudao (1)	16° 59.9'N 112° 14.7'E
6. Langhuajiao (3)	16° 01.5'N 112° 31.8'E	24. Zhaoshudao (2)	16° 59.7'N 112° 15.6'E
7. Langhuajiao (4)	16° 01.0'N 112° 29.8'E	25. Zhaoshudao (3)	16° 59.4'N 112° 16.6'E
8. Zhongjiandao (1)	15° 46.5'N 111° 12.6'E	26. Beidao	16° 58.4'N 112° 18.3'E
15. Beijiao (1)	17° 04.9'N 111° 26.9'E	27. Zhongdao	16° 57.6'N 112° 19.6'E
16. Beijiao (2)	17° 05.4'N 111° 26.9'E	28. Nandao	16° 56.9'N 112° 20.5'E
17. Beijiao (3)	17° 05.7'N 111° 27.2'E	29. Dongdao (1)	16° 40.5'N 112° 44.2'E
18. Beijiao (4)	17° 06.0'N 111° 27.8'E		

The Government of the People's Republic of China will announce the remaining baselines of the territorial sea of the People's Republic of China at another time.

ANNEX 2

Law of the People's Republic of China on the Territorial Sea and the Contiguous Zone²²

(Adopted at the 24th Meeting of the Standing Committee of the Seventh National People's Congress on February 25, 1992)

Article 1 This Law is enacted for the People's Republic of China to exercise its sovereignty over its territorial sea and the control over its contiguous zone, and to safeguard its national security and its maritime rights and interests.

Article 2 The territorial sea of the People's Republic of China is the sea belt adjacent to the land territory and internal waters of the People's Republic of China.

The land territory of the People's Republic of China includes the mainland of the People's Republic of China and its coastal islands; Taiwan and all islands appertaining thereto including the Diaoyu Islands, the Penghu Islands; the Dongsha Islands; the Xisha Islands; the Zhongsha Islands and the Nansha Islands; as well as all the other islands belonging to the People's Republic of China.

The waters on the landward side of the baselines of the territorial sea of the People's Republic of China constitute the internal waters of the People's Republic of China.

Article 3 The breadth of the territorial sea of the People's Republic of China is twelve nautical miles, measured from the baselines of the territorial sea.

The method of straight baselines composed of all the straight lines joining the adjacent base points shall be employed in drawing the baselines of the territorial sea of the People's Republic of China.

The outer limit of the territorial sea of the People's Republic of China is the line every point of which is at a distance equal to twelve nautical miles from the nearest point of the baseline of the territorial sea.

Article 4 The contiguous zone of the People's Republic of China is the sea belt adjacent to and beyond the territorial sea. The breadth of the contiguous zone is twelve nautical miles.

²² Translated by the Legislative Affairs Commission of the Standing Committee of the National People's Congress of the People's Republic of China.

The outer limit of the contiguous zone of the People's Republic of China is the line every point of which is at a distance equal to twenty four nautical miles from the nearest point of the baseline of the territorial sea.

Article 5 The sovereignty of the People's Republic of China over its territorial sea extends to the air space over the territorial sea as well as to the bed and subsoil of the territorial sea.

Article 6 Foreign ships for non-military purposes shall enjoy the right of innocent passage through the territorial sea of the People's Republic of China in accordance with the law.

Foreign ships for military purposes shall be subject to approval by the Government of the People's Republic of China for entering the territorial sea of the People's Republic of China.

Article 7 Foreign submarines and other underwater vehicles, when passing through the territorial sea of the People's Republic of China, shall navigate on the surface and show their flag.

Article 8 Foreign ships passing through the territorial sea of the People's Republic of China must comply with the laws and regulations of the People's Republic of China and shall not be prejudicial to the peace, security and good order of the People's Republic of China.

Foreign nuclear-powered ships and ships carrying nuclear, noxious or other dangerous substances, when passing through the territorial sea of the People's Republic of China, must carry relevant documents and take special precautionary measures.

The Government of the People's Republic of China shall have the right to take all necessary measures to prevent and stop non-innocent passage through its territorial sea.

Cases of foreign ships violating the laws or regulations of the People's Republic of China shall be handled by the relevant organs of the People's Republic of China in accordance with the law.

Article 9 The Government of the People's Republic of China may, for maintaining the safety of navigation or for other special needs, request foreign ships passing through the territorial sea of the People's Republic of China to use the designated sea lanes or to navigate according to the prescribed traffic separation schemes. The specific regulations to this effect shall be promulgated by the Government of the People's Republic of China or its competent authorities concerned.

Article 10 In the case of violation of the laws or regulations of the People's Republic of China by a foreign ship for military purposes or a foreign government ship for non-commercial purposes when passing through the territorial sea of the People's Republic of China, the competent authorities of the People's Republic of China shall have the right to order it to leave the territorial sea immediately and the flag state shall bear international responsibility for any loss or damage thus caused.

Article 11 All international organizations, foreign organizations or individuals shall obtain approval from the Government of the People's Republic of China for carrying out scientific research, marine operations or other activities in the territorial sea of the People's Republic of China, and shall comply with the laws and regulations of the People's Republic of China.

All illegal entries into the territorial sea of the People's Republic of China for carrying out scientific research, marine operations or other activities in contravention of the provisions of the preceding paragraph of this Article, shall be dealt with by the relevant organs of the People's Republic of China in accordance with the law.

Article 12 No aircraft of a foreign state may enter the air space over the territorial sea of the People's Republic of China unless there is a relevant protocol or agreement between the Government of that state and the Government of the People's Republic of China, or approval or acceptance by the Government of the People's Republic of China or the competent authorities authorized by it.

Article 13 The People's Republic of China has the right to exercise control in the contiguous zone to prevent and impose penalties for activities infringing the laws or regulations concerning security, the customs, finance, sanitation or entry and exit control within its land territory, internal waters or territorial sea.

Article 14 The competent authorities concerned of the People's Republic of China may, when they have good reasons to believe that a foreign ship has violated the laws or regulations of the People's Republic of China, exercise the right of hot pursuit against the foreign ship.

Such pursuit shall be commenced when the foreign ship or one of its boats or other craft engaged in activities by using the ship pursued as a mother ship is within the internal waters, the territorial sea or the contiguous zone of the People's Republic of China.

**Annex 2
(cont'd)**

**Law of the People's Republic of China
on the Territorial Sea and the Contiguous Zone**

If the foreign ship is within the contiguous zone of the People's Republic of China, the pursuit may be undertaken only when there has been a violation of the rights as provided for in the relevant laws or regulations listed in Article 13 of this Law.

The pursuit, if not interrupted, may be continued outside the territorial sea or the contiguous zone until the ship pursued enters the territorial sea of its own country or of a third State.

The right of hot pursuit provided for in this Article shall be exercised by ships or aircraft of the People's Republic of China for military purposes, or by ships or aircraft on government service authorized by the Government of the People's Republic of China.

Article 15 The baselines of the territorial sea of the People's Republic of China shall be promulgated by the Government of the People's Republic of China.

Article 16 The Government of the People's Republic of China shall formulate the relevant regulations in accordance with this Law.

Article 17 This Law shall come into force on the date of promulgation.

**Order of the President of
the People's Republic of China
No. 55**

The Law of the People's Republic of China on the Territorial Sea and the Contiguous Zone, adopted at the 24th Meeting of the Standing Committee of the Seventh National People's Congress of the People's Republic of China on February 25, 1992, is hereby promulgated and shall come into force on the date of promulgation.

Yang Shangkun
President of the People's Republic of China

February 25, 1992

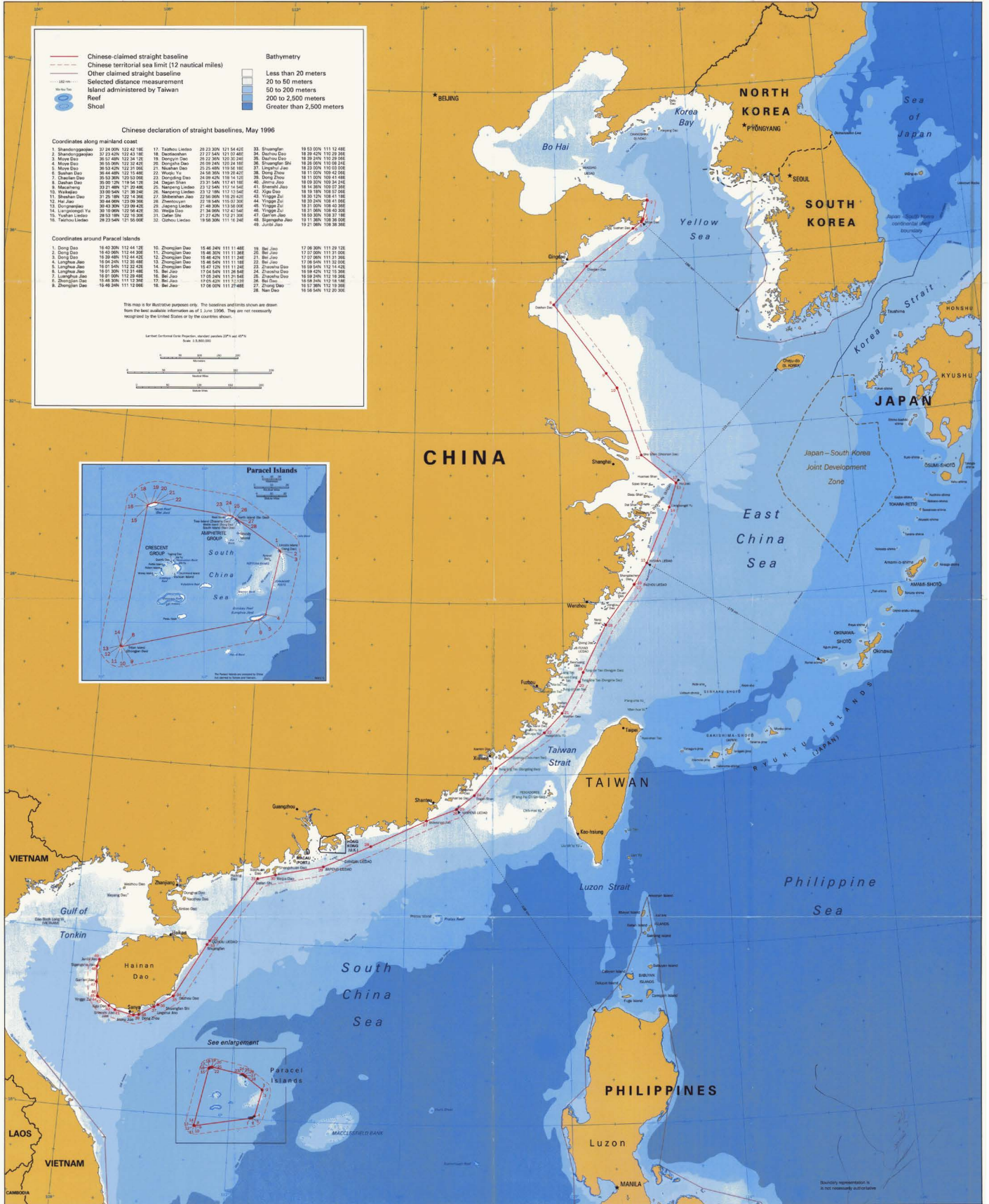
ANNEX 3
China's Straight Baselines
Segment Lengths and Reference Charts

Baseline Segment	Distance (nautical miles)	Defense Mapping Agency chart	Baseline Segment	Distance (nautical miles)	Defense Mapping Agency chart
I. Mainland					
1-2	0.3	94440	25-26	1.1	94040
2-3	26.7	94440	26-27	43.8	94040
3-4	3.0	94440	27-28	84.6	93730
4-5	1.9	94290	28-29	71.3	93730
5-6	15.2	94290	29-30	66.8	93730/93720
6-7	84.1	94290	30-31	25.4	93720
7-8	71.8	94290	31-32	107.8	93720/93690
8-9	121.7	94290/94260	32-33	6.4	93690
9-10	25.6	94260	33-34	83.7	93690
10-11	100.2	94260	34-35	0.6	93690
11-12	62.5	94260	35-36	23.7	93690
12-13	0.6	94260	36-37	6.0	93690
13-14	35.2	94260	37-38	23.2	93690
14-15	84.2	94203/94180	38-39	0.3	93690
15-16	34.9	94180	39-40	7.2	93690
16-17	0.5	94180	40-41	26.0	93680
17-18	69.3	94180	41-42	11.0	93680
18-19	73.2	94180	42-43	18.5	93680
19-20	14.3	94160	43-44	0.3	93680
20-21	50.3	94160	44-45	0.8	93680
21-22	36.9	94160	45-46	0.1	93680
22-23	83.6	94060	46-47	19.6	93680
23-24	48.3	94060	47-48	21.0	93680
24-25	30.8	94060	48-49	9.8	93680

ANNEX 3
(cont'd)
China's Straight Baselines
Segment Lengths and Reference Charts

Baseline Segment	Distance (nautical miles)	Defense Mapping Agency chart	Baseline Segment	Distance (nautical miles)	Defense Mapping Agency chart
II. Xisha (Paracel) Islands					
1-2	0.5	93520	15-16	0.5	93520
2-3	0.4	93520	16-17	0.4	93520
3-4	36.3	93520	17-18	0.6	93520
4-5	3.9	93520	18-19	1.4	93520
5-6	1.0	93520	19-20	1.8	93520
6-7	2.0	93520	20-21	0.6	93520
7-8	75.8	93520	21-22	0.4	93520
8-9	0.5	93520	22-23	41.5	93520
9-10	0.3	93520	23-24	0.9	93520
10-11	0.2	93520	24-25	1.0	93520
11-12	0.3	93520	25-26	1.9	93520
12-13	0.2	93520	26-27	1.5	93520
13-14	0.3	93520	27-28	1.1	93520
14-15	78.8	93520	28- 1	28.0	93520

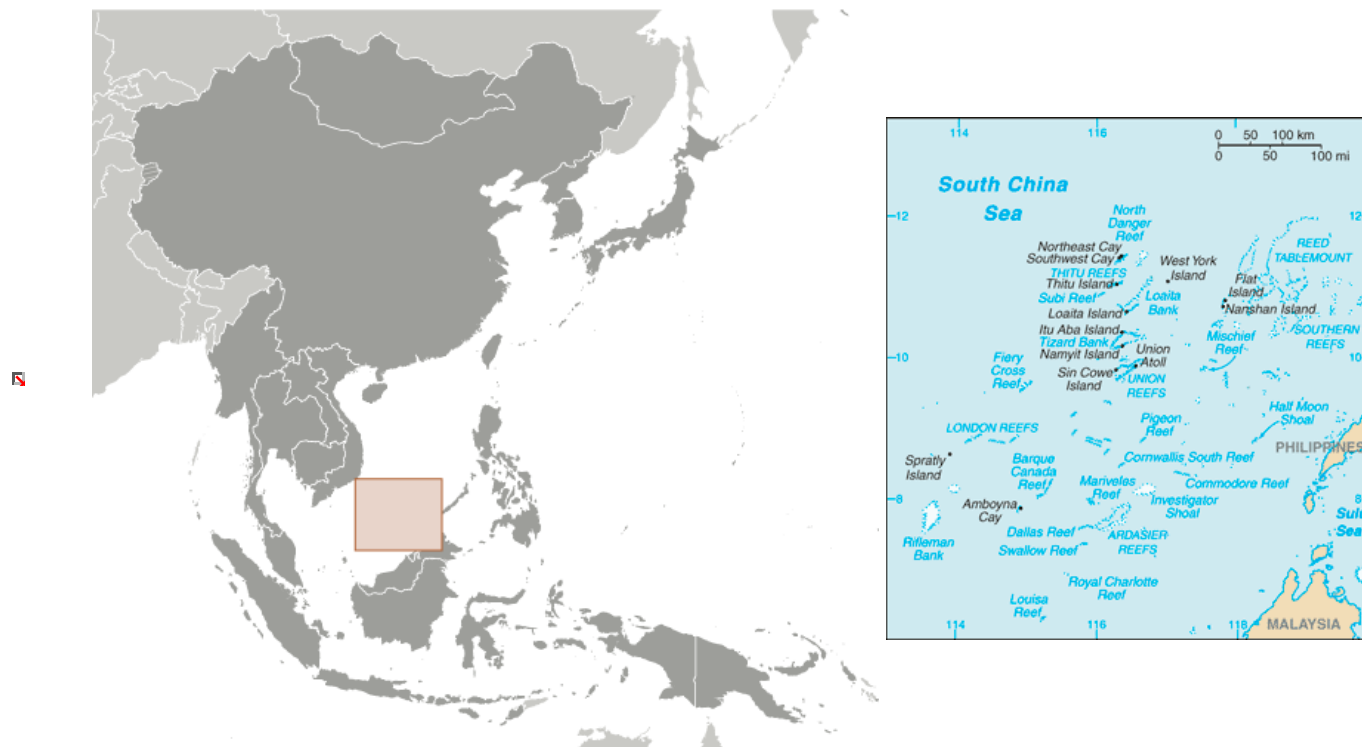
China's Claimed Straight Baselines



Annex 502

United States Central Intelligence Agency, "Spratly Islands", *CIA World Factbook* (28 May 2014)

The World Factbook



East & Southeast Asia :: Spratly Islands

Introduction :: Spratly Islands

Background:

The Spratly Islands consist of more than 100 small islands or reefs. They are surrounded by rich fishing grounds and potentially by gas and oil deposits. They are claimed in their entirety by China, Taiwan, and Vietnam, while portions are claimed by Malaysia and the Philippines. About 45 islands are occupied by relatively small numbers of military forces from China, Malaysia, the Philippines, Taiwan, and Vietnam. Since 1985 Brunei has claimed a continental shelf that overlaps a southern reef but has not made any formal claim to the reef. Brunei claims an exclusive economic zone over this area.

Geography :: Spratly Islands

Location:

Southeastern Asia, group of reefs and islands in the South China Sea, about two-thirds of the way from southern Vietnam to the southern Philippines

Geographic coordinates:

8 38 N, 111 55 E

Map references:

Southeast Asia

Area:

total: less than 5 sq km

country comparison to the world: 248

land: less than 5 sq km

water: 0 sq km

note: includes 100 or so islets, coral reefs, and sea mounts scattered over an area of nearly 410,000 sq km of the central South China Sea

Area - comparative:

NA

Land boundaries:

0 km

Coastline:

926 km

Maritime claims:

NA

Climate:

tropical

Terrain:

flat

Elevation extremes:

lowest point: South China Sea 0 m

highest point: unnamed location on Southwest Cay 4 m

Natural resources:

fish, guano, undetermined oil and natural gas potential

Land use:

arable land: 0%

permanent crops: 0%

other: 100% (2011)

Irrigated land:

5,700 sq km (2006)

Natural hazards:

typhoons; numerous reefs and shoals pose a serious maritime hazard

Environment - current issues:

NA

Geography - note:

strategically located near several primary shipping lanes in the central South China Sea; includes numerous small islands, atolls, shoals, and coral reefs

People and Society :: Spratly Islands

Population:

no indigenous inhabitants

note: there are scattered garrisons occupied by military personnel of several claimant states

Government :: Spratly Islands

Country name:

conventional long form: none

conventional short form: Spratly Islands

Economy :: Spratly Islands

Economy - overview:

Economic activity is limited to commercial fishing. The proximity to nearby oil- and gas-producing sedimentary basins suggests the potential for oil and gas deposits, but the region is largely unexplored. There are no reliable estimates of potential reserves. Commercial exploitation has yet to be developed.

Transportation :: Spratly Islands

Airports:

4 (2013)

country comparison to the world: 191

Airports - with paved runways:

total: 3

914 to 1,523 m: 2

under 914 m: 1 (2013)

Airports - with unpaved runways:

total: 1

914 to 1,523 m: 1 (2013)

Heliports:

3 (2013)

Ports and terminals:

none; offshore anchorage only

Military :: Spratly Islands

Military - note:

Spratly Islands consist of more than 100 small islands or reefs of which about 45 are claimed and occupied by China, Malaysia, the Philippines, Taiwan, and Vietnam

Transnational Issues :: Spratly Islands

Disputes - international:

all of the Spratly Islands are claimed by China (including Taiwan) and Vietnam; parts of them are claimed by Brunei, Malaysia and the Philippines; despite no public territorial claim to Louisa Reef, Brunei implicitly lays claim by including it within the natural prolongation of its continental shelf and basis for a seabed median with Vietnam; claimants in November 2002 signed the "Declaration on the Conduct of Parties in the South China Sea," which has eased tensions but falls short of a legally binding "code of conduct"; in March 2005, the national oil companies of China, the Philippines, and Vietnam signed a joint accord to conduct marine seismic activities in the Spratly Islands

Annex 503

Treaty between United Kingdom and the Netherlands, respecting Territory and Commerce in the East Indies
(17 Mar. 1824), *reprinted in The Edinburgh Annual Register, for 1824*, Vol. 17, Parts 1-3 (1825)

THE
EDINBURGH
ANNUAL REGISTER,
FOR 1824.

VOL. SEVENTEENTH.—PARTS I. II. AND III.



EDINBURGH :

Printed by James Ballantyne and Co.

FOR ARCHIBALD CONSTABLE AND CO., EDINBURGH;

AND HURST, ROBINSON, AND CO.,

LONDON.

1825.

more or less satisfactory progress, in each state, towards a regular and settled form of government."

At a subsequent period, in a communication made, in the first instance, to France, and afterwards to other powers, as well as to Spain, the same opinions were repeated; with this specific addition—that, in either of two cases, (now happily not likely to occur)—in that of any attempt on the part of Spain to receive the obsolete interdiction of intercourse with countries over which she has no longer any actual dominion;—or in that of the employment of foreign assistance to re-establish her dominion in those countries, by force of arms; the recognition of such new states by his Majesty would be decided and immediate.

After thus declaring to you, for the information of the court of Madrid, the deliberate opinion of the British government on the points on which Spain requires the advice of her allies, it does not appear to the British cabinet at all necessary to go into the conference, to declare that opinion anew, even if it were perfectly clear, from the tenor of M. Ofalia's Instruction, that Great Britain is in fact included in the invitation to the conference at Paris.

Every one of the powers so invited has been constantly and unreservedly apprized, not only of each step which the British government has taken, but of every opinion which it has formed on this subject; and this dispatch will be communicated to them all.

If those powers should severally come to the same conclusion with Great Britain, the concurrent expression of their several opinions cannot have less weight in the judgment of Spain, and must naturally be more acceptable to her feelings, than if such concurrence, being the result of a conference of five powers, should carry the appearance of a concerted dictation.

If (unhappily, as we think) the Al-

fies, or any of them, should come to a different conclusion, we shall at least have avoided the inconvenience of a discussion, by which our own opinion could not have been changed;—we shall have avoided an appearance of mystery, by which the jealousy of other parties might have been excited;—we shall have avoided a delay, which the state of the question may hardly allow.

Meanwhile, this explicit recapitulation of the whole course of our sentiments and of our proceedings on this momentous subject, must at once acquit us of any indisposition to answer the call of Spain for friendly counsel, and protect us against the suspicion of having any purpose to conceal from Spain or from the world.

I am, &c.

(Signed) GEORGE CANNING.
The Right Hon. Sir W. A'Court,
G.C.B. &c.

TREATY BETWEEN HIS BRITANNIC MAJESTY AND THE KING OF THE NETHERLANDS, RESPECTING TERRITORY AND COMMERCE IN THE EAST INDIES.

Signed at London, March 17, 1824.

(Presented to both Houses of Parliament, by Command of His Majesty.)

IN the Name of the Most Holy and undivided Trinity:

HIS Majesty the King of the United Kingdom of Great Britain and Ireland, and his Majesty the King of the Netherlands, desiring to place upon a footing, mutually beneficial, their respective possessions, and the commerce of their subjects, in the East Indies, so that the welfare and prosperity of both nations may be promoted, in all time to come, without those differences and jealousies which have, in former

times, interrupted the harmony which ought always to subsist between them; and being anxious that all occasions of misunderstanding between their respective agents may be, as much as possible, prevented; and in order to determine certain questions which have occurred in the execution of the Convention made at London on the 13th of August, 1814, in so far as it respects the possessions of his Netherland Majesty in the East, have nominated their Plenipotentiaries: that is to say,—

His Majesty the King of the United Kingdom of Great Britain and Ireland, the Right Hon. George Canning, a Member of his said Majesty's Most Honourable Privy Council, a Member of Parliament, and his said Majesty's Principal Secretary of State for Foreign Affairs; and the Right Hon. Charles Watkin Williams Wynn, a Member of his said Majesty's Most Honourable Privy Council, a Member of Parliament, Lieutenant-Colonel Commandant of the Montgomeryshire Regiment of Yeomanry Cavalry, and President of his said Majesty's Board of Commissioners for the Affairs of India:—

And his Majesty the King of the Netherlands, Baron Henry Fagel, Member of the Equestrian Corps of the Province of Holland, Counsellor of State, Knight Grand Cross of the Royal Order of the Belgic Lion, and of the Royal Guelphic Order, and Ambassador Extraordinary and Plenipotentiary of his said Majesty to his Majesty the King of Great Britain:— And Anton Reinhard Falck, Commander of the Royal Order of the Belgic Lion, and his said Majesty's Minister of the Department of Public Instruction, National Industry, and Colonies:—

Who, after having mutually communicated the full powers, found in good and due form, have agreed on the following Articles:—

Article 1. The High Contracting Parties engage to admit the subjects of each other to trade with their respective possessions in the Eastern Archipelago, and on the Continent of India, and in Ceylon, upon the footing of the most favoured nation; their respective subjects conforming themselves to the local regulations of each settlement.

2. The subjects and vessels of one nation shall not pay, upon importation or exportation, at the ports of the other in the Eastern Seas, any duty at a rate beyond the double of that at which the subjects and vessels of the nation to which the port belongs are charged.

The duties paid on exports or imports at a British port, on the Continent of India, or in Ceylon, on Dutch bottoms, shall be arranged so as, in no case, to be charged at more than double the amount of the duties paid by British subjects, and on British bottoms.

In regard to any article upon which no duty is imposed, when imported or exported by the subjects, or on the vessels, of the nation to which the port belongs, the duty charged upon the subjects or vessels of the other shall, in no case, exceed six per cent.

3. The High Contracting Parties engage, that no treaty hereafter made by either, with any native power in the Eastern Seas, shall contain any article tending, either expressly, or by the imposition of unequal duties, to exclude the trade of the other party from the ports of such native power: and that if, in any treaty now existing in either part, any article to that effect has been admitted, such article shall be abrogated upon the conclusion of the present Treaty.

It is understood that, before the conclusion of the present Treaty, communication has been made by each of the contracting parties to the other,

of all treaties or engagements subsisting between each of them, respectively, and any native power in the Eastern Seas ; and that the like communication shall be made of all such treaties concluded by them, respectively, hereafter.

4. Their Britannic and Netherland Majesties engage to give strict orders, as well to their civil and military authorities, as to their ships of war, to respect the freedom of trade established by Articles 1st, 2d, and 3d ; and, in no case, to impede a free communication of the natives in the Eastern Archipelago, with the ports of the two governments, respectively, or of the subjects of the two governments with the ports belonging to the native powers.

5. Their Britannic and Netherland Majesties, in like manner, engage to concur effectually in repressing piracy in those seas : They will not grant either asylum or protection to vessels engaged in piracy ; and they will, in no case, permit the ships or merchandize captured by such vessels to be introduced, deposited, or sold, in any of their possessions.

6. It is agreed that orders shall be given by the two governments to their officers and agents in the East, not to form any new settlement on any of the islands in the Eastern Seas, without previous authority from their respective governments in Europe.

7. The Molucca Islands, and especially Amboyna, Banda, Ternate, and their immediate dependencies, are excepted from the operation of the 1st, 2d, 3d, and 4th Articles, until the Netherland government shall think fit to abandon the monopoly of spices ; but if the said government shall, at any time previous to such abandonment of the monopoly, allow the subjects of any power, other than a native Asiatic power, to carry on any commercial intercourse with the said islands, the

subjects of his Britannic Majesty shall be admitted to such intercourse, upon a footing precisely similar.

8. His Netherland Majesty cedes to his Britannic Majesty all his establishments on the Continent of India ; and renounces all privileges and exemptions enjoyed or claimed in virtue of those establishments.

9. The Factory of Fort Marlborough, and all the English possessions on the island of Sumatra, are hereby ceded to his Netherland Majesty : and his Britannic Majesty further engages, that no British settlement shall be formed on that island, nor any treaty concluded by British authority, with any native prince, chief, or state therein.

10. The town and fort of Malacca, and its dependencies, are hereby ceded to his Britannic Majesty ; and his Netherland Majesty engages, for himself and his subjects, never to form any establishment on any part of the peninsula of Malacca, or to conclude any treaty with any native prince, chief, or state therein.

11. His Britannic Majesty withdraws the objections which have been made to the occupation of the island of Billiton and its dependencies, by the agents of the Netherland government.

12. His Netherland Majesty withdraws the objections which have been made to the occupation of the island of Singapore, by the subjects of his Britannic Majesty.

His Britannic Majesty, however, engages, that no British establishment shall be made on the Carimon Isles, or on the islands of Battam, Bintang, Lingin, or on any of the other islands south of the Straits of Singapore, nor any treaty concluded by British authority with the chiefs of those islands.

13. All the colonies, possessions, and establishments, which are ceded by the preceding Articles, shall be delivered up to the officers of the respective Sovereigns on the 1st of March, 1825.

The fortifications shall remain in the state in which they shall be at the period of the notification of this Treaty in India ; but no claim shall be made, on either side, for ordnance or stores of any description, either left or removed by the ceding power, nor for any arrears of revenue, or any charge of administration whatever.

14. All the inhabitants of the territories hereby ceded, shall enjoy, for a period of six years from the date of the ratification of the present Treaty, the liberty of disposing, as they please, of their property, and of transporting themselves, without let or hindrance, to any country to which they may wish to remove.

15. The High Contracting Parties agree that none of the territories or establishments mentioned in Articles 8, 9, 10, 11, and 12, shall be at any time transferred to any other power. In case of any of the said possessions being abandoned by one of the present Contracting Parties, the right of occupation thereof shall immediately pass to the other.

16. It is agreed that all accounts and reclamations, arising out of the restoration of Java, and other possessions, to the officers of his Netherland Majesty in the East Indies, as well those which were the subject of a convention made at Java on the 24th June, 1817, between the Commissioners of the two nations, as all others, shall be finally and completely closed and satisfied, on the payment of the sum of 100,000*l.* sterling money, to be made in London, on the part of the Netherlands, before the expiration of the year 1825.

17. The present Treaty shall be ratified, and the ratification exchanged at London, within three months from the date hereof, or sooner, if possible.

In witness whereof, the respective Plenipotentiaries have signed the same, and affixed thereunto the seals of their arms.

Done at London, the 17th day of March, in the year of our Lord 1824.

(L.S.) GEORGE CANNING.

(L.S.) CHARLES WATKINS WIL-
LIAMS WYNN.

PRINCIPAL HEADS OF THE REPORT OF THE COMMISSIONERS ON THE FORMS OF PROCESS, AND COURSE OF APPEALS IN SCOTLAND.

PROCEEDINGS IN ORDINARY CAUSES.

IN considering the forms of proceeding in ordinary causes, the Commissioners have directed their attention, in the first place, to the preparation of the Cause which stands the first in order of the subjects to which they are required to attend.

I. PREPARATION OF THE CAUSES.

In Scotland, the preparatory plead-

ings in a cause are not carried on, as in England, by the counsel of the parties out of court ; but the cause, in its first stage, is brought before a single Judge, called the Lord Ordinary, in the Outer House, to be prepared for judgment, under his superintendance and interlocutory orders, and although there have arisen in this stage of the proceedings, faults and imperfections which require correction, it appears to the Commissioners, that without changing this course of judicial superintendance, it is possible, by certain alterations in the existing forms,

Annex 504

Note Verbale from Ministry of Foreign Affairs, Republic of France, to the Chinese Legation to Paris (4 Jan. 1932)

[illegible]

[stamp:] [illegible] JAN 1932

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POLITICAL DIRECTORATE[stamp:] POLITICAL AND TRADE
DIRECTORATE [illegible]

Our letter to the Chinese Chargé d'Affaires on 5 January. His attention was drawn to the fact that this is merely a legal problem and that the French [illegible] has no other intention than to [illegible] in the most amicable fashion, according to the law. 5-1-32

re: Paracel islands

The Ministry of Foreign Affairs has the honor of drawing the attention of the Chinese Legation to Paris to the Paracel Archipelago.

This group of small islands and reefs, located 150 miles off the coast of Annam and inhabited intermittently by turtle fishermen, has always been dependent on the Annam Empire.

In the annals of the Court of Hué Dai-Nam-Nhut-Thong-Chi

CHINESE LEGATION

to PARIS

M. Maggiar, 11/30/31

Note on the origin of the affair of 28 March 1930 [illegible]

volume VI, published under the reign of the Emperor Tu-Dac, it is stated that, at the start of the reign of Nguyen “the company of Hoang-Sa was created, consisting of 70 men from the village of Vinh An, which embarked every year in the third month to sail to the Paracel Islands for fishing purposes, and returned in the 8th month to offer to the capital the products collected on these islands.”

In 1816, the Emperor Gia Long established his authority over the islands in a definitive manner and took possession of them with a solemn hoisting of his flag. In 1835, the Emperor Ming Mang sent a mission to the Paracel islands to build a pagoda and a stele there.

It is notable that in 18[illegible], following the shipwrecks of the ships “Bellona” and “Unoji [illegible]” in this area and sale by the Chinese fishermen of copper from these wrecks, the English Consul in Hoi-How, intervening with the Chinese government to request punishment for the guilty, was informed

that the matter was not the responsibility of the Chinese government, as “the Paracel islands are not part of the Chinese Empire.”

In 1899, finally, because of the dangers presented by these reefs for sailors, full studies were carried out by the competent departments in the General Government of Indochina with a view to building a lighthouse on the Paracel Islands.

Despite this situation of law, certain Chinese authorities would appear for some time to have been casting doubt on Annamite sovereignty and making claims to this archipelago.

In these conditions, the Ministry of Foreign Affairs believes there is a need to remind the Chinese Legation that Annam has priority rights over the archipelago, and ask it to acknowledge that these sovereignty rights are based on the taking of possession of the Paracel islands in 1816 by the Emperor Gia Long.

The Ministry of Foreign Affairs has no doubt that the Chinese Government is prepared, as is the French Government, to examine and clarify this legal problem in a most amicable manner.

MAY 1932

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DIRECTION POLITIQUE

DIRECTION POLITIQUE
ET COMMERCE

Ser. E 13-9



5-1-32

Paris 30/11/31
Note remise au
Choyi d'affaires de Chine
le 5 janvier. Son attention a été attirée
sur le fait qu'il s'agit seulement d'un problème juridique
et que le pt français n'a pas d'autre prétentions sur de la
mer que les parcs la mer
à l'égard des Iles Paracels
américain par les
moyens de
droit

Le Ministère des Affaires Etrangères a l'honneur
d'attirer l'attention de la Légation de Chine à Paris
sur l'Archipel des Iles **Paracels**.

Ce groupe d'îlots et de récifs, situé à 150 miles
de la côte l'Annam et habité de façon intermittente par
des pêcheurs de tortues, a toujours dépendu de l'Empire
d'Annam.

Dans les annales de la Cour de Hué Dai-Nax Nhut

LEGATION DE CHINE
à PARIS

M. Maggiar, 30/11/31

Vo
Note sur l'origine de l'affaire
du 28 Mars 1930
classé au 1er titre du dossier

Thống Chi, livre VI, publiées sous le règne de l'Empereur Tu-Duc, il est signalé qu'au début du règne de Nguyen fut créée la compagnie des Hoang Sa, formée par 70 hommes du village de Vinh An, laquelle s'embarquait chaque année au troisième mois pour se rendre aux îles Paracels aux fins de pêche et en revenait le 8ème mois offrir à la capitale les produits récoltés sur ces îles.

En 1816, l'Empereur Gia Long établit son autorité sur l'archipel d'une façon définitive et en prit possession en y arborant solennellement son drapeau. En 1835, l'Empereur Ming Mang envoya aux Paracels une mission pour y édifier une pagode et une stèle.

Il est à noter qu'en 1800, à la suite des naufrages des navires "Bellona" et "Unoji Maru" dans ces parages et de ventes par des pêcheurs chinois de cuivre provenant de ces épaves, le Consul d'Angleterre à Hoi-How, intervenant auprès du Gouvernement chinois pour demander la punition des coupables, fut informé

que la question n'était pas du ressort de ce dernier, "les Paracels ne faisant ^{pas} partie de l'Empire chinois".

En 1899, enfin, en raison des dangers présentés par ces récifs pour les navigateurs, des études très complètes furent faites par les services compétents du Gouvernement Général de l'Indochine pour l'établissement d'un phare aux Iles Paracels.

Malgré cette situation de droit, certaines autorités chinoises paraîtraient depuis quelque temps mettre en doute la souveraineté annamite et feraient valoir des prétentions sur cet Archipel.

Dans ces conditions, le Ministère des Affaires Etrangères croit devoir rappeler à la Légation de Chine l'antériorité des droits de l'Annam sur l'archipel, et la prier de bien vouloir prendre acte que ces droits de souveraineté se trouvent fondés sur la prise de possession des Paracels en 1816 par l'Empereur Gia Long.

Le.....

Le Ministère des Affaires Etrangères ne doute pas
que le Gouvernement chinois ne soit disposé, tout comme
l'est le Gouvernement français, à examiner dans l'esprit
le plus amical, la mise au point de ce problème juridique./.

Annex 505

Government of the Republic of the Philippines and Government of the People's Republic of China, *Joint Statement: Framework of Bilateral Cooperation in the Twenty-First Century* (16 May 2000)

**JOINT STATEMENT BETWEEN
THE GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES
AND THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA
ON THE FRAMEWORK OF BILATERAL COOPERATION
IN THE TWENTY-FIRST CENTURY**

The Republic of the Philippines and the People's Republic of China have made great progress in their cooperation in the political, economic, cultural, educational, scientific and technological and other fields on the basis of equality and mutual benefit since the establishment of diplomatic relations on 9 June 1975, bringing concrete benefits to the two peoples.

The Government of the Republic of the Philippines and the Government of the People's Republic of China (hereinafter referred to as "the two sides") believe that it is now opportune to establish a framework for future bilateral cooperation. This new framework will draw on the strength of their long, historical friendship and geographical proximity in order to advance the fundamental interests of their two peoples and thereby contribute to peace, security, stability, sustained growth, and development in Asia and the rest of the world. The two sides will establish a long-term and stable relationship on the basis of good neighborliness, cooperation, and mutual trust and benefit. They will undertake to elevate Philippines-China relations to greater heights in the 21st century and to this end, state the following:

1. The two sides reaffirm that the purposes and principles of the United Nations Charter, the Five Principles of Peaceful Coexistence, the principles established in the Treaty of Amity and Cooperation in Southeast Asia and other universally recognized principles of international law are the basic norms governing the relations between the two countries.
2. The two sides agree to maintain close and frequent high-level contacts and exchange of visits at all levels, including government officials, the private sector, non-government organizations, the academic community, press and media, and their peoples to contribute to a comprehensive, stable, and sustained development of bilateral relations.

The two sides agree to maintain and strengthen the mechanism of annual meetings between senior officials and their respective Foreign Ministries for consultations on bilateral, regional, and international issues of mutual concern.

The two sides agree to make further exchanges and cooperation in the defense and military fields, strengthen consultations between their military and defense personnel and diplomatic officials on security issues, to include exchanges between their military establishments on matters relating to humanitarian rescue and assistance, disaster relief and mitigation, and

BILLYAN C. DE LA CRUZ
 Acting Director
 Central Records Division
 Department of Foreign Affairs
 4
 AY 24 2000

enhanced cooperation between their respective strategic and security research institutes.

5. The two sides acknowledge the similarities in their respective national development goals, and agree to optimize the use of existing frameworks for cooperation in the fields of trade, investment, science and technology, agriculture, education and culture, tourism, civil aviation, and taxation. They will undertake the following:


- a) Promote better bilateral trade and investment flows, and improve industrial cooperation by:
 - i. Exploring all possible measures to effect increases in trade volumes and product choices;
 - ii. Agreeing to provide a conducive market environment, through identification and removal of trade and investment impediments;
 - iii. Improving transparency of trade-related regulations;
 - iv. Undertaking investment promotion, and joint investment in third countries; and
 - v. Encouraging a pro-active role for the business sectors of both sides.
- b) Intensify exchanges and cooperation in the financial field on the basis of reciprocity. They will work together for the reform of the international financial system.
- c) Expand scientific and technological cooperation in accordance with the Agreement on Science and Technology Cooperation signed on 14 March 1978, and enter into new areas of cooperation through joint research, technology transfer and other means.
- d) Implement the Agreement on the Cooperation in the Field of Agriculture signed on 13 September 1999, by promoting economic and technological cooperation in the agricultural field, increasing data exchange, conducting joint research, and encouraging their enterprises, scientific research institutes, and business groups concerned to take an active part in agricultural cooperation, so as to bring about common growth of the two economies.
- e) Continue to implement the biennial executive programs in accordance with the Cultural Agreement signed on 8 July 1979. They will further enhance their exchanges and cooperation in the fields of culture, arts, education, film, sports, health care, religion, social science, and book publication

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BELEN C. DE LA CRUZ
Acting Director
Central Records Division
Department of Foreign Affairs

MAY 24 2000

through, among others, the exchange of delegations and art troupes, visits by experts, and exhibitions held in each other's country.

- f) Further develop bilateral tourism cooperation and expand the tourism market in an effort to achieve common development of their tourism industries.
6. Either side shall accord to the other due facilitation in accordance with international norms so that the nationals of either country who reside, work or travel in the territory of the other country may receive consular protection by the appropriate officials of their own country when they are in distress or involved in legal, labor or other disputes.
 7. The two sides will continue to explore new areas for cooperation among their law enforcement, judicial, security, and defense agencies in order to address the serious threats posed by organized transnational crimes.
 8. The two sides will continue to provide policy guidance to their respective national agencies in order to strengthen the role of the various Joint Committees in identified areas of cooperation.
 9. The two sides commit themselves to the maintenance of peace and stability in the South China Sea. They agree to promote a peaceful settlement of disputes through bilateral friendly consultations and negotiations in accordance with universally-recognized principles of international law, including the 1982 United Nations Convention on the Law of the Sea. They reaffirm their adherence to the 1995 Joint Statement between the two countries on the South China Sea and agree not to take actions that might complicate or escalate the situation. The two sides expressed their determination to follow through the work of the Philippines-China Working Group on Confidence Building Measures to enhance peace and stability in the region. They reiterate that they will contribute positively toward the formulation and adoption of the regional Code of Conduct in the South China Sea.
 10. The two sides recognize and respect the universality of human rights taking into account their distinct culture, tradition, and practices. They shall encourage exchanges and cooperation on human rights on the basis of equality, mutual respect, with a view to enhancing mutual understanding. They will work together for the progress and protection of the cause of human rights.
 11. The two sides affirm their commitment to respect the independence, sovereignty, and territorial integrity of each other. The Philippine Government reaffirms its One-China Policy and recognizes that Taiwan is an integral part of Chinese territory.


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 Acting Director
 Central Records Division
 Department of Foreign Affairs
 MAY 24 2000

12. The two sides agree to deepen cooperation between the People's Republic of China (PRC) and the Association of Southeast Asian Nations (ASEAN), recognizing that close Philippines-China relations contribute to the promotion of PRC-ASEAN and ASEAN + 3 (PRC, Republic of Korea, and Japan) relations. They will jointly promote dialogue and cooperation in East Asia in accordance with the Joint Statement on East Asia Cooperation issued in Manila on 28 November 1999 to make a significant contribution to the peace, stability, and prosperity of the region and the world.
13. The two sides agree to continue their coordination and cooperation at the Association of Southeast Asian Nations, ASEAN Regional Forum, Asia-Pacific Economic Cooperation, ASEM, World Trade Organization, United Nations, and other multilateral fora. They will actively promote and protect the common interests of developing countries in regional and international fora, particularly in the areas of trade and finance, human resources development, and the promotion of the interests of labor, farmers, and women and children, among others.
14. The two sides agree to promote the establishment of an equitable and rational world order.

The above statement will be jointly reviewed by the Ministers of Foreign Affairs of the two sides, if requested by either side.

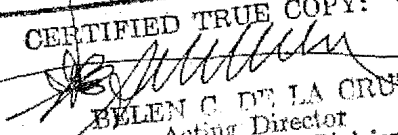
Done in Beijing, China on this 16th day of May 2000.



For the Government of the
Republic of the Philippines



For the Government of the
People's Republic of China

CERTIFIED TRUE COPY:

BELEN C. DE LA CRUZ
Acting Director
Central Records Division
Department of Foreign Affairs

MAY 24 2000

Annex 506

Government of the Republic of the Philippines and Government of the People's Republic of China, *Joint Statement: 3rd Philippines-China Experts' Group Meeting on Confidence-Building Measures, Manila, 3-4 April 2001* (4 Apr. 2001)

EMBARGOED UNTIL 11:30 A.M., 4 APRIL 2001

**JOINT PRESS STATEMENT OF THE
3RD PHILIPPINES-CHINA EXPERTS' GROUP MEETING
ON CONFIDENCE-BUILDING MEASURES
MANILA, 3-4 APRIL 2001**

The 3rd Philippines-China Experts' Group Meeting on Confidence-Building Measures convened in Manila on 3-4 April 2001. The meeting was co-chaired by Assistant Secretary of the Office of Asian and Pacific Affairs Willy C. Gaa and Director-General of the Asian Department Madame Fu Ying. During the Meeting, Madame Fu Ying paid a courtesy call on His Excellency Vice President and Foreign Secretary Teofisto T. Guingona, Jr. and His Excellency Foreign Affairs Undersecretary Lauro L. Baja, Jr.

- I. The two sides reviewed previous agreements and understandings on principles provided under the Joint Statement on Philippines-China Consultations on the South China Sea and on other Areas of Cooperation of August 1995, the Joint Statement of the 1st Philippines-China Experts Group Meeting on Confidence Building Measures of March 1999, and the results of the 2nd Philippines-China Experts Working Group on Confidence Building Measures of October 1999.
- II. The two sides expressed satisfaction that the meeting manifested the determination of both countries to preserve and advance the excellent relations that prevail between them. They agreed that developing friendship and cooperation between the Philippines and China conforms with the basic interest of the two peoples, and that the two sides should establish a long-term and stable relationship on the basis of good neighborliness, cooperation, and mutual trust and benefit in accordance with the Philippine-China Joint Statement on the Framework of Bilateral Cooperation in the 21st Century.
- III. The two sides reviewed the situation in the South China Sea. They agreed to continue with the commitment not to allow bilateral differences to affect the overall development of Philippines-China relations, the enormous potentials of which remain unexplored.
- IV. The two sides noted that the bilateral consultation mechanism to explore ways of cooperation in the South China Sea has been effective. The series of understanding and consensus reached by the two sides have played a constructive role in the maintenance of the sound development of Philippines-China relations and peace and stability of the South China Sea area.

- V. The two sides exchanged views on the incidents around Scarborough Shoal/Huangyan Island and agreed that neither side shall take any action that might complicate and escalate the situation in this area.
- VI. In regard to confidence-building measures, the two sides confirmed the following understanding and consensus:
1. The two sides stated the importance of the preservation of the marine species and habitats and exchanged views on such measures including moratorium on fishing;
 2. The two sides agreed to discuss and prepare for joint search and rescue table-top exercises;
 3. China will consider positively the Philippine proposal of holding a Philippines-China symposium/workshop;
 4. The two sides agreed, in principle, to set-up a direct line of communication between the fisheries departments of both countries, the modalities of which shall be discussed at the Working Group on Fisheries Cooperation;
 5. The two sides agreed to study a mechanism for settling fishery disputes under the framework of the Experts' Group Meeting on Confidence Building Measures.
 6. The two sides agreed to look into the possibility of convening soon the Philippines-China Working Groups on Fisheries Cooperation and on Marine Environmental Protection. The Philippine side expressed appreciation for China's offer to host both meetings in the near future, the dates of which shall be mutually agreed upon through diplomatic channels;
 7. The two sides agreed to discuss the three Chinese proposed cooperation projects: "Comparative Studies on Red Tide", "Marine Environment Protection Capacity", and "Analysis and Prediction of Surge Affecting the South China Sea" under the framework of the Working Group on Marine Environmental Protection;
 8. The two sides will expand bilateral military dialogue and cooperation, including more exchanges of visits by senior defense and military officials and active exploration of reciprocal cooperation in language training;
 9. China welcomes the proposed port call on China of a Philippine naval vessel to reciprocate previous visits of Chinese naval vessels to the Philippines at a time convenient to both sides; and

10. The two sides agreed to refrain from making any actions or provocative statements that might complicate or escalate the situation in the interest of maintaining regional peace and stability.
- VII. The two sides agreed to look into ways of implementing the following confidence building measures agreed upon in the previous two meetings of this group.
1. The Armed Forces of the two sides to exchange and share experience in rescue operation, disaster relief and engineering technology; and
 2. The two sides to hold consultations on issues concerning the exchange of navigational bulletins, release of notices to mariners and navigational warnings, and have in-depth and detailed discussions on the issues concerning marine navigation safety.
- VIII. The two sides will strengthen their cooperation to contribute positively toward the formulation and adoption of an ASEAN-China regional code of conduct in the South China Sea.
- IX. The Chinese side appreciated the warm reception and hospitality by the Philippine side.

Annex 507

Government of the Republic of the Philippines and Government of the People's Republic of China, *Joint Statement* (1 Sept. 2011)

**JOINT STATEMENT
OF THE REPUBLIC OF THE PHILIPPINES
AND THE PEOPLE'S REPUBLIC OF CHINA**

BEIJING, 1 SEPTEMBER 2011

1. At the invitation of President Hu Jintao of the People's Republic of China, Philippine President Benigno S. Aquino III is undertaking a State Visit to China from 30 August to 3 September 2011. From Beijing, President Aquino is proceeding to Shanghai and Fujian. Both sides agreed that this a milestone visit in the development of Philippines-China bilateral relations.
2. President Aquino and President Hu had a fruitful meeting. H.E. Wu Bangguo, Chairman of the Standing Committee of the National People's Congress and H.E. Wen Jiabao, Premier of the State Council, met with President Aquino respectively. The two leaders shared a positive assessment of the development of Philippines-China relations in the last 36 years since the establishment of diplomatic relations on 9 June 1975. They reiterated their commitment to jointly pursue a long-term and stable relationship of strategic cooperation on the basis of mutual respect, equality and mutual benefit. They also agreed that the Joint Action Plan for Strategic Cooperation signed by the two sides on 29 October 2009 will continue to guide cooperation in all fields. The Philippines reaffirmed its adherence to the one China policy.
3. The two leaders welcomed the various agreements signed by the two sides in the course of the visit, expressing confidence that these will further strengthen bilateral cooperation in the fields of, among others, trade, economic and technical cooperation, tourism, nautical connectivity, media, sports, culture and information.
4. Acknowledging that the two countries are close neighbors bound by time-honored friendship, vibrant trade and sustained people-to-people contacts over the centuries, the two leaders committed themselves to continue strengthening the strategic and cooperative relationship for peace and development between the Philippines and China.
5. The two leaders affirmed the importance of the existing Philippines-China bilateral dialogue mechanisms in enhancing understanding, broadening cooperation and striving for a stronger relationship.
6. The two sides agreed to increase regular high-level exchanges, visits and meetings between leaders, cabinet members, legislators, judicial officials, defense and military officials and local government officials. They also agreed to encourage more exchanges among youth, entrepreneurs,

educators, media practitioners and artists, among others, to strengthen better understanding and mutual trust between the two countries and peoples.

7. The two leaders agreed that with the current instability of the global economy and the growing role of emerging and developing economies in sustaining growth, it is highly practical and important for the Philippines and China to broaden and strengthen their economic and trade cooperation. The two leaders affirmed that the Philippines-China Five-Year Development Program for Trade and Economic Cooperation (2012-2016) serves as the blueprint for future efforts in the following sectors: agriculture and fishery, infrastructure and public works, mining, energy, information and communications technology (ICT), processing and manufacturing, tourism, engineering services and forestry.
8. Both sides agreed to further expand the volume of bilateral trade and accordingly set a target of US\$60 billion in total two-way trade by 2016. They also agreed to improve the trade structure, promote a more vigorous exchange of investments and explore new areas of economic cooperation in the fields of, among others, new and renewable energy, shipping and ports.
9. China affirmed its support for the Public Private Partnership (PPP) program of the Philippine government and committed to encourage its qualified companies to participate in the competitive bidding processes of the program.
10. The Philippines expressed appreciation to China for its development assistance to various economic, agricultural and infrastructure projects in the Philippines.
11. The two sides will discuss the establishment of a nautical highway that will infuse new energy to bilateral trade and economic activities between the two countries which complement and support the connectivity between ASEAN and China.
12. The two leaders welcomed the increasing number of twinning arrangements between their cities and provinces and stressed the role of such arrangements as bridges of promoting mutual understanding and friendship between the two countries and peoples.
13. The two leaders agreed that 2012-2013 will be the "Philippines-China Years of Friendly Exchanges." The two leaders expressed satisfaction that two-way tourist arrivals have breached the one-million mark. They agreed to adopt the goal of doubling two-way tourist arrivals to two (2) million by

2016. They expressed optimism that an expansion of capacity entitlements in air services will contribute to the attainment of this goal.

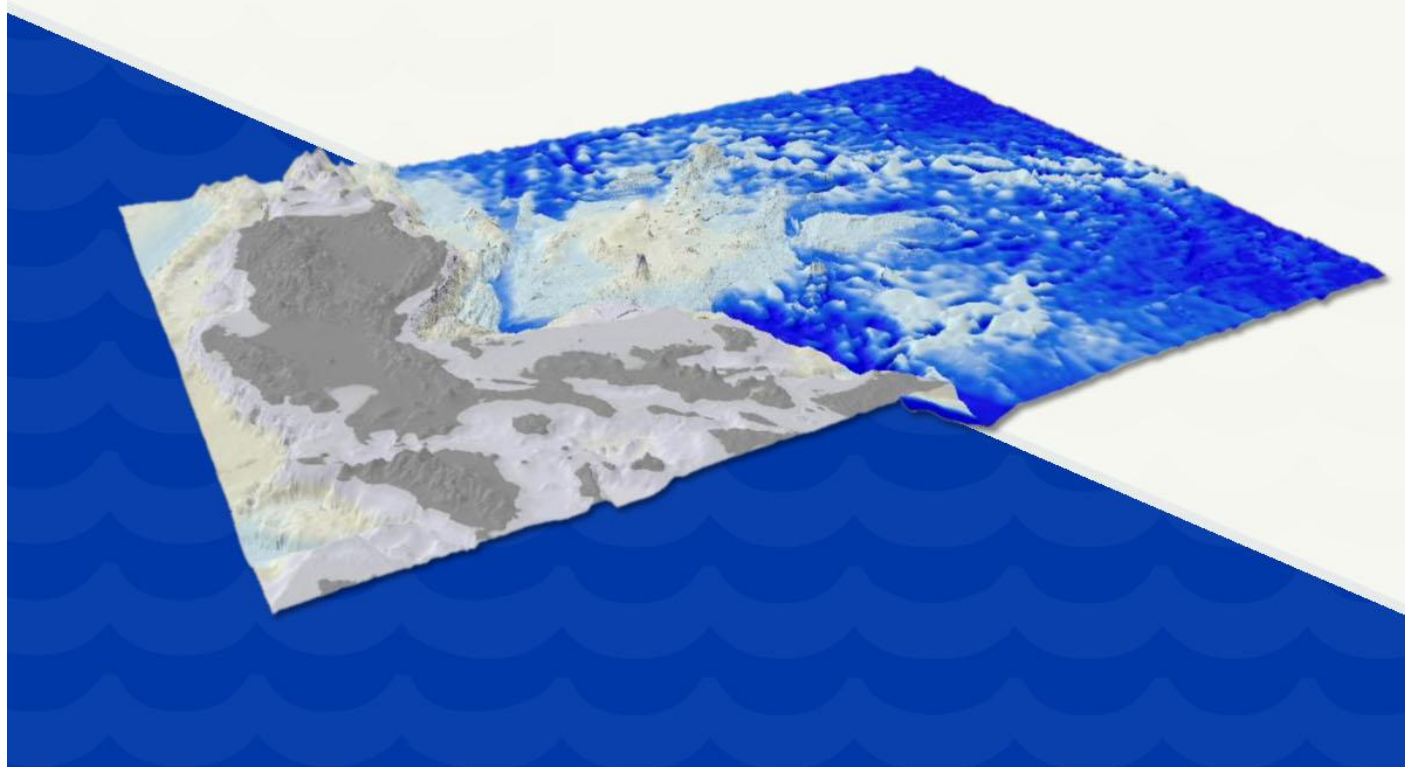
14. Noting that the two countries have active judicial and law-enforcement exchanges and cooperation through existing bilateral agreements, the two leaders agreed to fulfill the legal procedures to expedite the entry into force of the Treaty between the Republic of the Philippines and the People's Republic of China Concerning Mutual Legal Assistance in Criminal Matters, and begin negotiations at an early date for a bilateral agreement on Transfer of Sentenced Persons. They reaffirmed their commitment to strengthening cooperation in combating transnational crimes, including drug trafficking and trafficking in persons.
15. Both leaders exchanged views on the maritime disputes and agreed not to let the maritime disputes affect the broader picture of friendship and cooperation between the two countries. The two leaders reiterated their commitment to addressing the disputes through peaceful dialogue, to maintain continued regional peace, security, stability and an environment conducive to economic progress. Both leaders reaffirmed their commitments to respect and abide by the Declaration on the Conduct of Parties in the South China Sea signed by China and the ASEAN member countries in 2002.
16. The two leaders expressed satisfaction with the progress of ASEAN-China relations in the past 20 years and affirmed the principle of ASEAN centrality in the discussions on the nature and shape of a future regional architecture in Asia.
17. The two leaders expressed their willingness to further strengthen cooperation in the United Nations, Asia-Pacific Economic Cooperation, Asia-Europe Meeting, World Trade Organization, United Nations Climate Change Conference and other regional and multilateral organizations.

Annex 508

Republic of the Philippines, *A Partial Submission of Data and Information on the Outer Limits of the Continental Shelf of the Republic of the Philippines Pursuant to Article 76(8) of the United Nations Convention on the Law of the Sea: Executive Summary* (8 Apr. 2009)



A PARTIAL SUBMISSION OF DATA AND INFORMATION
ON THE OUTER LIMITS OF THE CONTINENTAL SHELF
OF THE REPUBLIC OF THE PHILIPPINES
PURSUANT TO ARTICLE 76 (8) OF THE
UNITED NATIONS CONVENTION ON
THE LAW OF THE SEA



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EXECUTIVE SUMMARY

1.0 INTRODUCTION

The Republic of the Philippines presents to the Commission on the Limits of the Continental Shelf (CLCS), this partial submission containing information on the outer limits of a portion of its continental shelf extending beyond 200 nautical miles (M) from the baselines from which the breadth of the territorial sea is measured in accordance with the 1982 United Nations Convention on the Law of the Sea (UNCLOS). This Submission is made without prejudice to the right of the Philippines to make other submissions for other areas at a future time.

The Philippines is located in Southeast Asia, surrounded by the Philippine Sea to the East, the South China Sea to the West, the Bashi Channel to the North, and Celebes Sea, Malaysia and Indonesia to the South (Figure 1). This Submission establishes that the natural prolongation of the Philippine territory from its coast to the outer edge of the continental margin extends beyond 200 M in the Benham Rise Region east of Luzon, one of the main islands of the Philippines. Hydrographic, geological, and geophysical data and information collected by the Philippines, together with those compiled from acknowledged international scientific investigations, are used in a manner consistent with accepted international scientific practices to determine the geomorphology and geological nature, structure, and extent of the continental shelf beyond 200 M in that region. The outer limits of the continental shelf beyond 200 M in this area are delineated in accordance with the rules and methodologies described in the provisions of Article 76 of UNCLOS and the Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf (CLCS/11).

ECS Submission of the Republic of the Philippines

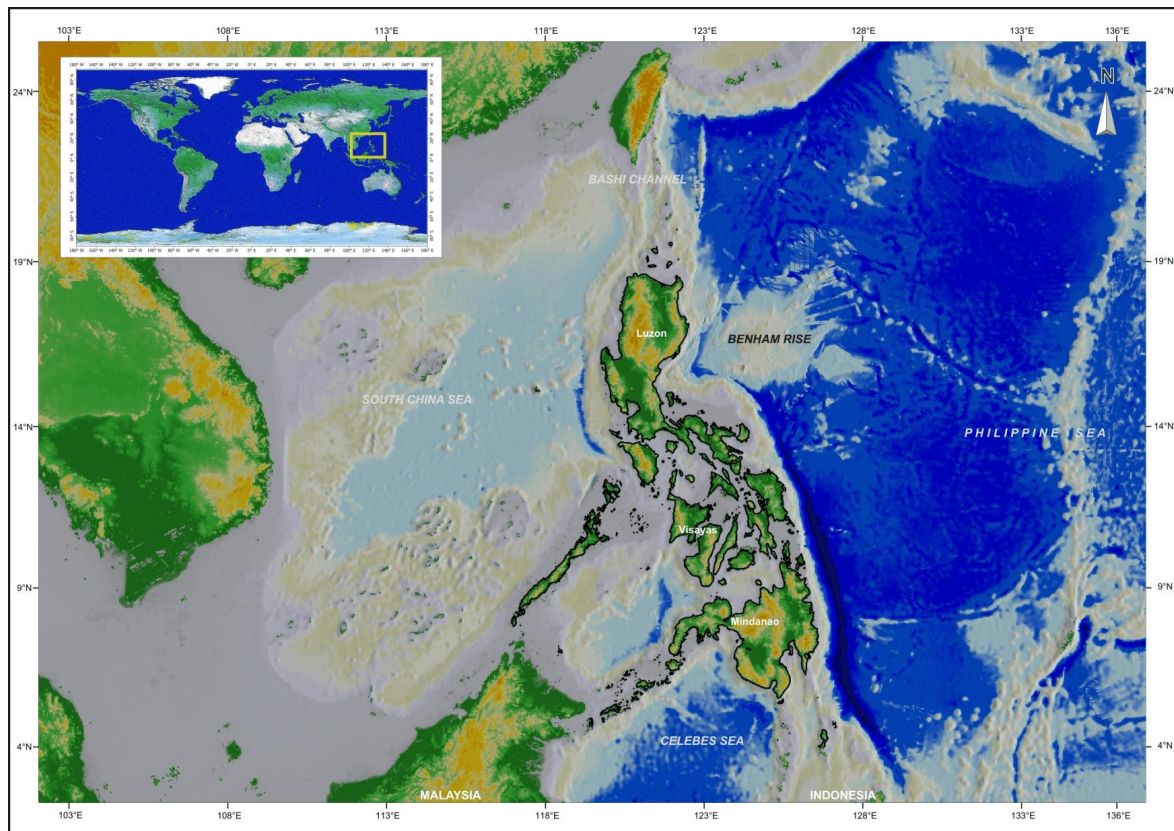


Figure 1 Geographic setting of the Philippines and Benham Rise.

2.0 LEGAL CONSIDERATIONS

2.1 The Philippines as State-Party to UNCLOS

The Republic of the Philippines signed the UNCLOS on 10 December 1982 at the close of the Third United Nations Conference on the Law of the Sea in Montego Bay, Jamaica. The Convention entered into force for the Philippines on 16 November 1994.

2.2 Definition of the Continental Shelf

Paragraph 1 of Article 76 of the Convention defines the continental shelf that may be subject to the sovereign rights and jurisdiction of the coastal State:

1. The continental shelf of a coastal State comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.

The nature of the continental shelf and its constituent parts are generally explained in paragraph 3 of Article 76:

3. The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the sea-bed and subsoil of the shelf, the slope, and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof.

It is accepted that the above paragraphs of Article 76 provide a *legal* definition that is different from and independent of the geological or geographical meaning of the term “continental shelf.” This distinction lays the basis for the entitlement of a coastal State to a continental shelf even though its land territory may not be continental in nature.

2.3 Establishment of the Commission on the Limits of the Continental Shelf

The consistent implementation of the provisions of Article 76 of UNCLOS is the responsibility of all coastal States that intend to exercise national jurisdiction over the continental shelf beyond 200 M from the baselines from which the breadth of their territorial sea is measured. To assist coastal States in carrying out this responsibility, UNCLOS established the CLCS, and provided for a procedure for the submission of information on the determination of the outer limits of the continental shelf beyond 200 M in paragraphs 8 and 9 of Article 76:

8. Information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission on the Limits of the Continental Shelf set up under Annex II on the basis of equitable geographical representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.

9. The coastal State shall deposit with the Secretary-General of the United Nations charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf. The Secretary-General shall give due publicity thereto.

2.4 Rules for Determination of the Outer Limits

Article 76 of UNCLOS and the Scientific and Technical Guidelines of the Commission (CLCS/11) provide for a clear process and distinct criteria for defining the outer limits of the continental shelf, where the continental margin extends beyond 200 M.

The first step in determining the outer limits of the continental shelf according to the Scientific and Technical Guidelines is for coastal States to satisfy a *test of appurtenance*, stated in paragraph 4(a) of Article 76 of the Convention:

4(a). For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured...

Coastal States may resort to spatial, geographical, geomorphological, geological, and geophysical criteria to demonstrate that the outer edge of their continental margin extends beyond 200 M from their baselines. If the test of appurtenance is satisfied, the coastal State is obliged to establish the outer limits of the continental shelf. There are complex rules governing the exercise of this obligation, contained in paragraphs 4, 5, and 6 of Article 76 of UNCLOS.

Two of these rules are affirmative rules expressed in paragraph 4. Both rules base the determination of the outer edge of the continental margin upon reference to the foot of the continental slope:

(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or

(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the slope.

The use of the inclusive disjunction “or” permits coastal States to use either one or both of the above rules to determine the outer edge of the continental margin.

The maximum distance to which the outer limits of the continental shelf can extend is then subject to two negative rules, expressed as spatial constraints, contained in paragraphs 5 and 6 of Article 76:

5. The fixed points comprising the line of the outer limits of the continental shelf on the sea-bed, drawn in accordance with paragraph 4(a)(i) and (ii), either shall not exceed 350 nautical miles from the baselines from which

the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2,500 metre isobath, which is a line connecting the depth of 2,500 metres.

6. Notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs.

These establish that regardless of which method under paragraph 4(a) is used to determine the distance from the foot of the continental slope, the location of the outer limit cannot exceed either 350 M from the baselines of the coastal State's territorial sea, or 100 M from the 2,500 meter isobath. The use of the disjunctive "or" permits the coastal State to choose the relevant constraint. Thus, the outer limit itself is defined by the coastal State through the application of some or all of the four rules.

2.5 Timeliness of this Partial Submission

Article 4 of Annex II to UNCLOS states that the information on the outer limits of the continental shelf shall be submitted to the CLCS within ten years from the entry into force of the Convention. However, at the Eleventh Meeting of the States Parties to the Convention on 18-21 May 2001, it was agreed that this ten-year period commenced only on 13 May 1999, the date when the Scientific and Technical Guidelines of the Commission were adopted. (*See SPLOS/72*) This deadline applies for those States Parties for which the Convention entered into force prior to 13 May 1999, including the Philippines.

2.6 UNCLOS Provisions Invoked

In this Submission, the relevant provisions of Article 76 are invoked in relation to Articles 46, 47, and 48 of UNCLOS. Under Article 46, the Philippines qualifies as an archipelagic State, described as follows:

(a) “archipelagic State” means a State constituted wholly by one or more archipelagoes and may include other islands;

(b) “archipelago” means a group of islands, including parts of islands, interconnecting waters and other natural features which are so closely interrelated that such islands, waters and other natural features form an intrinsic geographical, economic, and political entity, or which historically have been regarded as such.

As an archipelagic State, the Philippines may then draw archipelagic baselines in accordance with the rules provided in paragraphs 1 to 5 of Article 47 quoted below:

1. An archipelagic State may draw straight archipelagic baselines joining the outermost points of the outermost islands and drying reefs of the archipelago provided that within such baselines are included the main islands and an area in which the ratio of the area of the water to the area of the land, including atolls, is between 1 to 1 and 9 to 1.

2. The length of such baselines shall not exceed 100 nautical miles, except that up to 3 per cent of the total number of baselines enclosing any archipelago may exceed that length, up to a maximum length of 125 nautical miles.

3. The drawing of such baselines shall not depart to any appreciable extent from the general configuration of the archipelago.

4. Such baselines shall not be drawn to and from low-tide elevations, unless lighthouses or similar installations which are permanently above sea level have been built on them or where a low-tide elevation is situated wholly or partly at a distance not exceeding the breadth of the territorial sea from the nearest island.

5. The system of such baselines shall not be applied by an archipelagic State in such a manner as to cut off from the high seas or the exclusive economic zone the territorial sea of another State...

The baselines used in this Submission conform with these requirements. Such baselines may therefore be used as the basis for delineating the maritime territorial and jurisdictional zones, including the continental shelf, in accordance with Article 48 of UNCLOS, which states:

The breadth of the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf shall be measured from archipelagic baselines drawn in accordance with Article 47.

3.0 AREA OF THIS SUBMISSION

The Philippines identified regions to its East and West over which it may be entitled to extended continental shelves. In conformity with Annex I of the Rules of Procedure of the Commission (CLCS/40, Rev. 1), the Philippines is making a partial submission that covers the Benham Rise Region on the country's east coast. The Benham Rise Region is bounded to the North and East by the West Philippine Basin, and to the West and South by the Philippine Island of Luzon. It is enclosed by the coordinates 119° 30'E to 132° 00'E longitude and 12°10'N to 20°30'N latitude. (Figure 2)

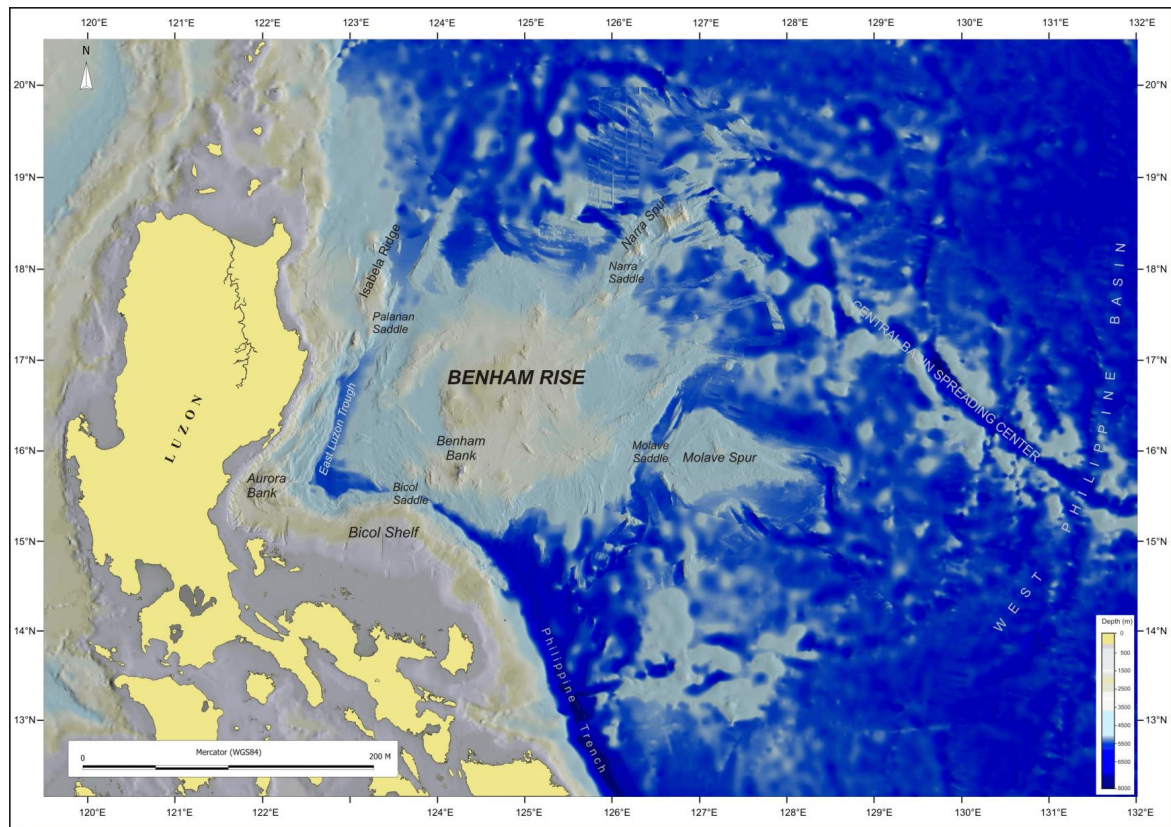


Figure 2 The bathymetric model of the Benham Rise Region.

3.1 Basis

The Philippines notes that neither the rules of Article 76 nor the mandate given to the Commission under the Convention were intended to supersede the sovereign prerogative of all coastal States to delimit continental shelf boundaries between them. Paragraph 10 of Article 76 specifically provides:

10. The provisions of this article are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts.

The Convention further clarifies that the procedure for submission of information to the Commission, and actions taken by the Commission in relation thereto, do not affect that sovereign prerogative. Article 9 of Annex II of UNCLOS emphasizes:

The actions of the Commission shall not prejudice matters relating to delimitation of boundaries between States with opposite or adjacent coasts.

This non-prejudice clause is reiterated in Rule 46 of the Rules of Procedure of the Commission. (CLCS/40/Rev. 1)

The implications of the procedure for determination of the outer limits of the continental shelf on pending matters relating to maritime boundary delimitation between States were adequately considered by the Commission after soliciting comments and opinions from States, the United Nations Legal Counsel, and the Meeting of States Parties in drafting its Rules of Procedure (See CLCS/7, CLCS/9). Indeed, Section 1 of Annex I of the Rules of Procedure of the Commission clearly expresses the view that:

1. The Commission recognizes that the competence with respect to matters regarding disputes which may arise in connection with the establishment of the outer limits of the continental shelf rests with States.

Since continental shelf boundaries between States are still not delimited in many parts of the world, the submission of information by any coastal State which has not yet delimited its continental shelf with its opposite or adjacent neighbors may be seen under certain circumstances as prejudicial to the interests of those affected by the submission. Furthermore, any action taken by the Commission on such a submission would be contrary to the sole competence of States to delimit their continental shelf boundaries. In order to prevent this situation, the Commission may accept partial submissions, described by Section 3 of Annex I of the Rules of Procedure of the Commission which states that:

3. A submission may be made by a coastal State for a portion of its continental shelf in order not to prejudice questions relating to the delimitation of boundaries between States in any other portion or portions of the continental shelf for which a submission may be made later, notwithstanding the provisions regarding the ten-year period established by article 4 of Annex II to the Convention.

Partial submissions may therefore be made by a single coastal State for areas of its continental shelf that are not the subject of a maritime boundary dispute or a future maritime boundary delimitation. In addition, joint or separate submissions may be made by two or more coastal States under Section 4 of Annex I of the Rules of Procedure of the Commission. It provides:

4. Joint or separate submissions to the Commission requesting the Commission to make recommendations with respect to delineation may be made by two or more coastal States by agreement:

(a) Without regard to the delimitation of boundaries between those States; or

(b) Having indicated by means of geodetic coordinates the extent to which a submission is without prejudice to the matters relating to the delimitation of boundaries with another or other States Parties to this Agreement.

All these options prevent the Commission from inadvertently contradicting the sovereign prerogative of coastal States to resolve disputes and delimit their maritime boundaries. At the same time, they allow coastal States the option and right to defer the submission of information to the Commission regarding areas where there are undelimited continental shelf boundaries, until such time that the coastal States involved have been able to come to an agreement on the delimitation.

3.2 State Practice

The options for partial, joint, and separate submissions by coastal States are all consistent with State practice. Coastal States that previously made submissions to the Commission have invoked and acted in conformity with its guidelines and procedures, including those that have relevance to the future delimitation of continental shelf boundaries. After the Commission became operational, coastal States with pending delimitation issues made partial, joint and separate submissions.

3.3 Exercise of the Option of Partial Submission

As a gesture of good faith, the Philippines makes this partial submission in order to avoid creating or provoking maritime boundary disputes where there are none, or exacerbating them where they may exist, in areas where maritime boundaries have not yet been delimited between opposite or adjacent coastal States. This is to build confidence and promote international cooperation in the peaceful and amicable resolution of maritime boundary issues. It does not in any manner prejudice the position of any coastal State.

3.4 Reservation of the Right to Make Other Submissions in the Future

Accordingly, this partial Submission is made with reference to the Benham Rise Region along the Pacific coast and does not include other areas. The Philippines expressly reserves its right to make other submissions for such other areas of the continental shelf beyond 200 M at a future time in conformity with the provisions of Annex I to the Rules of Procedure of the Commission.

3.5 Absence of Disputes

The Benham Rise Region is not subject to any maritime boundary disputes, claims, or controversies.

4.0 MEMBERS OF THE COMMISSION WHO PROVIDED ADVICE

Commissioner Galo Carrera-Hurtado of the United Mexican States provided advice to the Republic of the Philippines in the preparation of this Submission.

5.0 INSTITUTIONS THAT CONTRIBUTED TO THIS SUBMISSION

This Submission was made possible through the efforts of the following institutions:

- The Commission on Maritime and Ocean Affairs (CMOA);
- The Department of Environment and Natural Resources (DENR), through the National Mapping and Resource Information Authority (NAMRIA), and the Mines and Geosciences Bureau (MGB)
- The Department of Foreign Affairs (DFA)
- The Department of Justice (DOJ)
- The Department of Energy (DOE) and the Philippine National Oil Company Exploration Corporation (PNOC-EC)
- The National Security Council (NSC)
- The Philippine Coast Guard (PCG)
- The University of the Philippines (UP) through the National Institute of Geological Sciences (NIGS) and the Institute of International Legal Studies (IILS)
- The Norwegian Agency for Development (NORAD)
- The Institute of Geological and Nuclear Sciences of New Zealand (GNS-Science)
- Bundesanstalt für Geowissenschaften und Rohstoffe (BGR)
- Japan International Cooperation Agency (JICA)

6.0 THE OUTER LIMITS OF THE CONTINENTAL SHELF IN THE BENHAM RISE REGION

6.1 The Test of Appurtenance

A series of multi-beam bathymetric surveys were conducted by the National Mapping and Resource Information Authority (NAMRIA) in order to determine the morphology of the seabed in the Benham Rise Region. The hydrographic data collected, composed of bathymetric measurements from multi-beam echo-sounding survey cruises conducted between 2004 and 2008, were supplemented by additional data from international bathymetric surveys.

In addition to the bathymetric measurements and geomorphological analyses, geological and geophysical data from Philippine and international research projects were compiled and analyzed. These include seismic, magnetic, gravity, and other geological data, as well as the latest published academic literature in geology and geophysics. The information were collected to determine the nature and structure of the seabed and subsoil in the Benham Rise Region and their relationship to the land territory of the Philippines.

Analysis of all the data and information collected clearly demonstrated a natural prolongation and geomorphological continuity between the Philippine Island of Luzon and Benham Rise, the structure of which extends beyond 200 M from the baselines of the territorial sea.

6.2 The Foot of the Continental Slope plus 60 M Formula

Multi-beam swath bathymetric measurements were used to identify the foot of the continental slope as stipulated in paragraph 4(b) of Article 76, by the points of maximum change in gradient of the seabed in the region where the base of Benham Rise and its associated structures meet the deep ocean floor of the Pacific Ocean. The outer edge of the continental margin in the Benham Rise Region is then determined solely by application of Paragraph 4(a)(i) of Article 76, by reference to fixed points not more than

60 M from the foot of the continental slope. This is shown by the red and white dashed line in Figure 3.

6.3 The 1% Sediment Thickness Formula

The formula in paragraph 4(a)(ii) of Article 76, referring to the percentage of sediment thickness in comparison with the shortest distance to the foot of the continental slope, was not used. Information on sediment thickness at the relevant locations in the Benham Rise Region is not available from marine geophysical surveys to date.

6.4 The 350 M Constraint Line

Geodetic information was collected to calculate the location of the constraint line located 350 M from the baselines from which the breadth of the territorial sea is measured, in accordance with paragraphs 5 and 6 of Article 76. This constraint is satisfied since the outer limits of the continental shelf are located landward of the constraint line. This constraint line is shown by the solid yellow line in Figure 3.

6.5 The 2,500 m plus 100 M Constraint Line

Multi-beam bathymetric measurements were used to determine the location of the 2,500 metre isobath in the areas of the Benham Rise Region beyond 200 M from the baselines from which the breadth of the territorial sea is measured. Geodetic methods were used to determine the location of the constraint line located 100 M from the location of the isobath, as described in paragraph 5 of Article 76. However, this constraint line was not applied since the outer edge of the continental margin lies well inside the 350 M constraint line.

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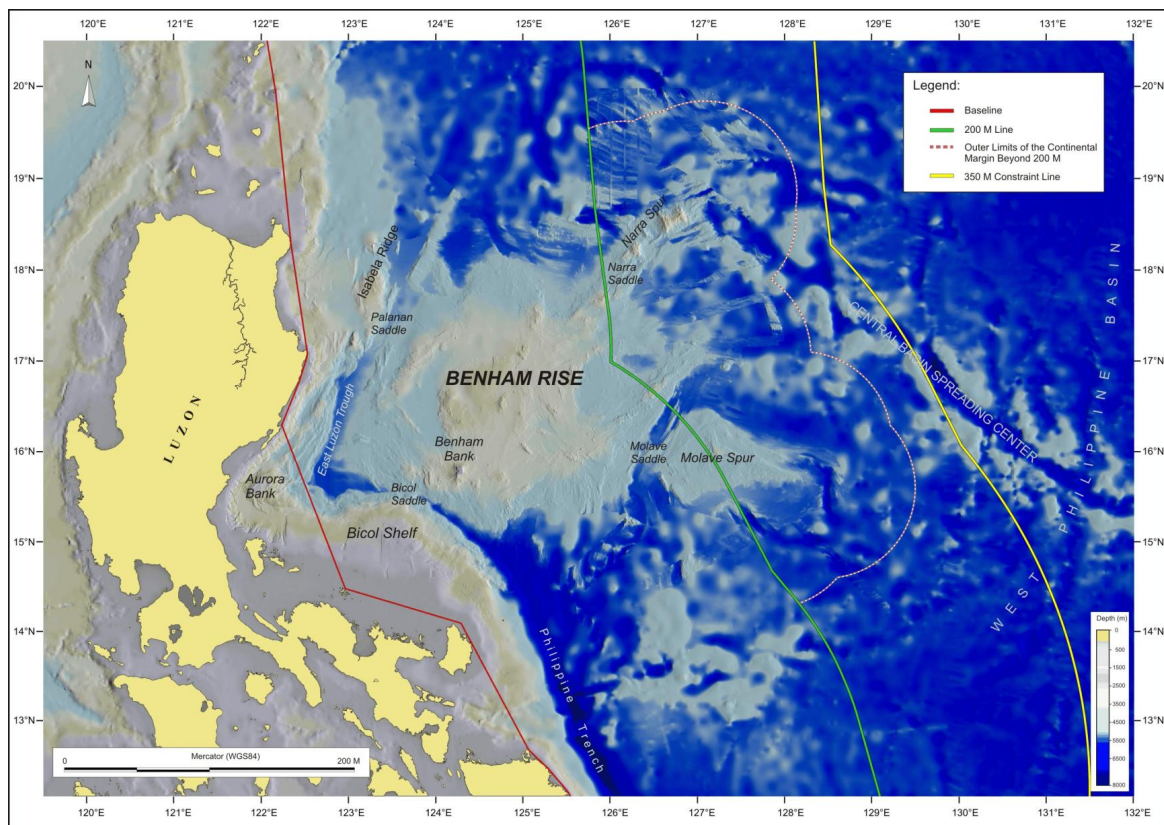


Figure 3 The outer edge of the continental margin in the Benham Rise Region, determined in accordance with the rules of Article 76 (4)(a)(i) of UNCLOS and the Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf.

6.6 The Outer Limits of the Continental Shelf

The outer limits of the continental shelf beyond 200 M in the Benham Rise Region is delineated by straight lines not more than 60 M in length, connecting fixed points not more than 60 M from the foot of the continental slope. The outer limits are illustrated by the orange line in Figure 4. In accordance with paragraph 7 of Article 76, Table 1 lists the coordinates of latitude and longitude (in WGS84) of the turning points of the outer limits, and the distances of the straight lines connecting them.

Table 1 Fixed points comprising the outer limits of the continental shelf of the Philippines in the Benham Rise Region, from and to points of intersection with the 200 M line, proceeding in a clockwise direction from the North to the South.

Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
ECS-B-001	19° 33' 42.04"	125° 45' 02.66"	0.206
ECS-B-002	19° 33' 46.99"	125° 45' 14.63"	1.000
ECS-B-003	19° 34' 10.10"	125° 46' 13.31"	1.000
ECS-B-004	19° 34' 32.27"	125° 47' 12.38"	1.000
ECS-B-005	19° 34' 53.50"	125° 48' 11.85"	1.000
ECS-B-006	19° 35' 13.79"	125° 49' 11.67"	1.000
ECS-B-007	19° 35' 33.12"	125° 50' 11.86"	1.000
ECS-B-008	19° 35' 51.49"	125° 51' 12.37"	1.000
ECS-B-009	19° 36' 08.90"	125° 52' 13.20"	1.000
ECS-B-010	19° 36' 25.34"	125° 53' 14.34"	1.000
ECS-B-011	19° 36' 40.81"	125° 54' 15.76"	53.613
ECS-B-012	19° 49' 49.15"	126° 49' 22.37"	1.000
ECS-B-013	19° 50' 03.64"	126° 50' 24.15"	1.000
ECS-B-014	19° 50' 17.15"	126° 51' 26.17"	1.000
ECS-B-015	19° 50' 29.67"	126° 52' 28.42"	1.000
ECS-B-016	19° 50' 41.21"	126° 53' 30.88"	1.000
ECS-B-017	19° 50' 51.75"	126° 54' 33.55"	1.000
ECS-B-018	19° 51' 01.29"	126° 55' 36.39"	1.000
ECS-B-019	19° 51' 09.83"	126° 56' 39.40"	1.000
ECS-B-020	19° 51' 17.38"	126° 57' 42.54"	1.000
ECS-B-021	19° 51' 23.92"	126° 58' 45.81"	1.000
ECS-B-022	19° 51' 29.46"	126° 59' 49.20"	1.000
ECS-B-023	19° 51' 33.99"	127° 00' 52.66"	1.000
ECS-B-024	19° 51' 37.51"	127° 01' 56.21"	1.000
ECS-B-025	19° 51' 40.03"	127° 02' 59.80"	1.000
ECS-B-026	19° 51' 41.53"	127° 04' 03.43"	0.991
ECS-B-027	19° 51' 42.03"	127° 05' 06.52"	1.000
ECS-B-028	19° 51' 41.52"	127° 06' 10.17"	1.000
ECS-B-029	19° 51' 40.01"	127° 07' 13.80"	1.000

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Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
ECS-B-030	19° 51' 37.48"	127° 08' 17.39"	1.000
ECS-B-031	19° 51' 33.95"	127° 09' 20.94"	1.000
ECS-B-032	19° 51' 29.41"	127° 10' 24.41"	1.000
ECS-B-033	19° 51' 23.87"	127° 11' 27.78"	1.000
ECS-B-034	19° 51' 17.32"	127° 12' 31.05"	1.000
ECS-B-035	19° 51' 09.76"	127° 13' 34.21"	1.000
ECS-B-036	19° 51' 01.21"	127° 14' 37.20"	1.000
ECS-B-037	19° 50' 51.66"	127° 15' 40.05"	1.000
ECS-B-038	19° 50' 41.11"	127° 16' 42.71"	1.000
ECS-B-039	19° 50' 29.56"	127° 17' 45.17"	1.000
ECS-B-040	19° 50' 17.04"	127° 18' 47.42"	1.000
ECS-B-041	19° 50' 03.52"	127° 19' 49.44"	1.000
ECS-B-042	19° 49' 49.02"	127° 20' 51.21"	1.000
ECS-B-043	19° 49' 33.54"	127° 21' 52.71"	1.000
ECS-B-044	19° 49' 17.09"	127° 22' 53.93"	1.000
ECS-B-045	19° 48' 59.67"	127° 23' 54.85"	1.000
ECS-B-046	19° 48' 41.29"	127° 24' 55.44"	1.000
ECS-B-047	19° 48' 21.95"	127° 25' 55.70"	1.000
ECS-B-048	19° 48' 01.66"	127° 26' 55.61"	1.000
ECS-B-049	19° 47' 40.41"	127° 27' 55.14"	1.000
ECS-B-050	19° 47' 18.23"	127° 28' 54.29"	1.000
ECS-B-051	19° 46' 55.11"	127° 29' 53.04"	1.000
ECS-B-052	19° 46' 31.06"	127° 30' 51.37"	1.000
ECS-B-053	19° 46' 06.10"	127° 31' 49.26"	1.000
ECS-B-054	19° 45' 40.21"	127° 32' 46.69"	1.000
ECS-B-055	19° 45' 13.42"	127° 33' 43.66"	1.000
ECS-B-056	19° 44' 45.73"	127° 34' 40.15"	1.000
ECS-B-057	19° 44' 17.14"	127° 35' 36.13"	1.000
ECS-B-058	19° 43' 47.68"	127° 36' 31.59"	1.000
ECS-B-059	19° 43' 17.33"	127° 37' 26.53"	1.000
ECS-B-060	19° 42' 46.12"	127° 38' 20.92"	1.000
ECS-B-061	19° 42' 14.05"	127° 39' 14.75"	1.000
ECS-B-062	19° 41' 41.13"	127° 40' 07.99"	1.000
ECS-B-063	19° 41' 07.37"	127° 41' 00.64"	1.000
ECS-B-064	19° 40' 32.78"	127° 41' 52.69"	1.000
ECS-B-065	19° 39' 57.37"	127° 42' 44.12"	1.000
ECS-B-066	19° 39' 21.14"	127° 43' 34.91"	1.000
ECS-B-067	19° 38' 44.12"	127° 44' 25.04"	1.000
ECS-B-068	19° 38' 06.31"	127° 45' 14.51"	1.000
ECS-B-069	19° 37' 27.72"	127° 46' 03.31"	1.000
ECS-B-070	19° 36' 48.36"	127° 46' 51.42"	1.000
ECS-B-071	19° 36' 08.24"	127° 47' 38.81"	1.000
ECS-B-072	19° 35' 27.37"	127° 48' 25.49"	1.000
ECS-B-073	19° 34' 45.77"	127° 49' 11.44"	1.000
ECS-B-074	19° 34' 03.45"	127° 49' 56.64"	1.000

Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
ECS-B-075	19° 33' 20.42"	127° 50' 41.08"	1.000
ECS-B-076	19° 32' 36.68"	127° 51' 24.77"	1.000
ECS-B-077	19° 31' 52.27"	127° 52' 07.67"	1.000
ECS-B-078	19° 31' 07.17"	127° 52' 49.76"	1.000
ECS-B-079	19° 30' 21.42"	127° 53' 31.06"	1.000
ECS-B-080	19° 29' 35.01"	127° 54' 11.54"	1.000
ECS-B-081	19° 28' 47.97"	127° 54' 51.20"	1.000
ECS-B-082	19° 28' 00.31"	127° 55' 30.01"	1.000
ECS-B-083	19° 27' 12.03"	127° 56' 07.98"	1.000
ECS-B-084	19° 26' 23.17"	127° 56' 45.09"	1.000
ECS-B-085	19° 25' 33.72"	127° 57' 21.32"	1.000
ECS-B-086	19° 24' 43.70"	127° 57' 56.68"	1.000
ECS-B-087	19° 23' 53.13"	127° 58' 31.15"	1.000
ECS-B-088	19° 23' 02.02"	127° 59' 04.72"	1.000
ECS-B-089	19° 22' 10.38"	127° 59' 37.38"	1.000
ECS-B-090	19° 21' 18.23"	128° 00' 09.13"	1.000
ECS-B-091	19° 20' 25.59"	128° 00' 39.94"	1.000
ECS-B-092	19° 19' 32.46"	128° 01' 09.83"	1.000
ECS-B-093	19° 18' 38.87"	128° 01' 38.78"	1.000
ECS-B-094	19° 17' 44.83"	128° 02' 06.77"	1.000
ECS-B-095	19° 16' 50.35"	128° 02' 33.81"	1.000
ECS-B-096	19° 15' 55.45"	128° 02' 59.88"	1.000
ECS-B-097	19° 15' 00.13"	128° 03' 24.98"	1.000
ECS-B-098	19° 14' 04.44"	128° 03' 49.11"	1.000
ECS-B-099	19° 13' 08.37"	128° 04' 12.24"	1.000
ECS-B-100	19° 12' 11.93"	128° 04' 34.38"	1.000
ECS-B-101	19° 11' 15.16"	128° 04' 55.53"	1.000
ECS-B-102	19° 10' 18.05"	128° 05' 15.68"	1.000
ECS-B-103	19° 09' 20.64"	128° 05' 34.82"	1.000
ECS-B-104	19° 08' 22.93"	128° 05' 52.94"	1.000
ECS-B-105	19° 07' 24.93"	128° 06' 10.05"	1.000
ECS-B-106	19° 06' 26.68"	128° 06' 26.14"	1.000
ECS-B-107	19° 05' 28.18"	128° 06' 41.19"	1.000
ECS-B-108	19° 04' 29.45"	128° 06' 55.22"	1.000
ECS-B-109	19° 03' 30.50"	128° 07' 08.21"	1.000
ECS-B-110	19° 02' 31.36"	128° 07' 20.17"	1.000
ECS-B-111	19° 01' 32.03"	128° 07' 31.09"	1.000
ECS-B-112	19° 00' 32.53"	128° 07' 40.96"	1.000
ECS-B-113	18° 59' 32.89"	128° 07' 49.79"	1.000
ECS-B-114	18° 58' 33.13"	128° 07' 57.57"	1.000
ECS-B-115	18° 57' 33.24"	128° 08' 04.30"	1.000
ECS-B-116	18° 56' 33.25"	128° 08' 09.98"	1.000
ECS-B-117	18° 55' 33.19"	128° 08' 14.61"	1.000
ECS-B-118	18° 54' 33.06"	128° 08' 18.19"	1.000
ECS-B-119	18° 53' 32.87"	128° 08' 20.71"	1.000

ECS Submission of the Republic of the Philippines

Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
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ECS-B-121	18° 51' 32.43"	128° 08' 22.58"	1.000
ECS-B-122	18° 50' 32.20"	128° 08' 21.94"	1.000
ECS-B-123	18° 49' 32.00"	128° 08' 20.25"	15.195
ECS-B-124	18° 34' 17.07"	128° 07' 54.46"	1.000
ECS-B-125	18° 33' 16.90"	128° 07' 51.72"	1.000
ECS-B-126	18° 32' 16.77"	128° 07' 47.94"	1.000
ECS-B-127	18° 31' 16.72"	128° 07' 43.10"	59.106
ECS-B-128	17° 32' 02.38"	128° 11' 20.68"	59.695
ECS-B-129	16° 49' 41.58"	128° 55' 28.36"	1.000
ECS-B-130	16° 48' 58.56"	128° 56' 12.14"	1.000
ECS-B-131	16° 48' 14.84"	128° 56' 55.17"	1.000
ECS-B-132	16° 47' 30.44"	128° 57' 37.44"	1.000
ECS-B-133	16° 46' 45.36"	128° 58' 18.92"	1.000
ECS-B-134	16° 45' 59.62"	128° 58' 59.61"	1.000
ECS-B-135	16° 45' 13.23"	128° 59' 39.50"	1.000
ECS-B-136	16° 44' 26.20"	129° 00' 18.58"	1.000
ECS-B-137	16° 43' 38.55"	129° 00' 56.83"	1.000
ECS-B-138	16° 42' 50.30"	129° 01' 34.25"	1.000
ECS-B-139	16° 42' 01.44"	129° 02' 10.83"	1.000
ECS-B-140	16° 41' 12.00"	129° 02' 46.55"	1.000
ECS-B-141	16° 40' 21.99"	129° 03' 21.40"	1.000
ECS-B-142	16° 39' 31.44"	129° 03' 55.38"	1.000
ECS-B-143	16° 38' 40.33"	129° 04' 28.47"	1.000
ECS-B-144	16° 37' 48.70"	129° 05' 00.67"	1.000
ECS-B-145	16° 36' 56.57"	129° 05' 31.98"	1.000
ECS-B-146	16° 36' 03.93"	129° 06' 02.37"	1.000
ECS-B-147	16° 35' 10.81"	129° 06' 31.85"	34.955
ECS-B-148	16° 03' 57.69"	129° 23' 08.67"	1.000
ECS-B-149	16° 03' 03.66"	129° 23' 36.23"	1.000
ECS-B-150	16° 02' 09.18"	129° 24' 02.83"	1.000
ECS-B-151	16° 01' 14.28"	129° 24' 28.50"	1.000
ECS-B-152	16° 00' 18.98"	129° 24' 53.21"	1.000
ECS-B-153	15° 59' 23.29"	129° 25' 16.96"	1.000
ECS-B-154	15° 58' 27.22"	129° 25' 39.76"	1.000
ECS-B-155	15° 57' 30.79"	129° 26' 01.57"	1.000
ECS-B-156	15° 56' 34.02"	129° 26' 22.40"	1.000
ECS-B-157	15° 55' 36.91"	129° 26' 42.25"	1.000
ECS-B-158	15° 54' 39.50"	129° 27' 01.11"	1.000
ECS-B-159	15° 53' 41.78"	129° 27' 18.98"	1.000
ECS-B-160	15° 52' 43.79"	129° 27' 35.85"	1.000
ECS-B-161	15° 51' 45.53"	129° 27' 51.72"	1.000
ECS-B-162	15° 50' 47.03"	129° 28' 06.57"	1.000
ECS-B-163	15° 49' 48.29"	129° 28' 20.42"	1.000
ECS-B-164	15° 48' 49.34"	129° 28' 33.25"	1.000

Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
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ECS-B-166	15° 46' 50.85"	129° 28' 55.85"	1.000
ECS-B-167	15° 45' 51.35"	129° 29' 05.62"	1.000
ECS-B-168	15° 44' 51.70"	129° 29' 14.36"	1.000
ECS-B-169	15° 43' 51.91"	129° 29' 22.07"	1.000
ECS-B-170	15° 42' 52.01"	129° 29' 28.75"	1.000
ECS-B-171	15° 41' 52.02"	129° 29' 34.40"	1.000
ECS-B-172	15° 40' 51.94"	129° 29' 39.01"	1.000
ECS-B-173	15° 39' 51.79"	129° 29' 42.59"	1.000
ECS-B-174	15° 38' 51.59"	129° 29' 45.14"	1.000
ECS-B-175	15° 37' 51.36"	129° 29' 46.64"	1.000
ECS-B-176	15° 36' 51.11"	129° 29' 47.12"	1.000
ECS-B-177	15° 35' 50.87"	129° 29' 46.55"	1.000
ECS-B-178	15° 34' 50.64"	129° 29' 44.95"	1.000
ECS-B-179	15° 33' 50.45"	129° 29' 42.32"	1.000
ECS-B-180	15° 32' 50.30"	129° 29' 38.65"	1.000
ECS-B-181	15° 31' 50.22"	129° 29' 33.95"	1.000
ECS-B-182	15° 30' 50.23"	129° 29' 28.22"	1.000
ECS-B-183	15° 29' 50.34"	129° 29' 21.46"	1.000
ECS-B-184	15° 28' 50.56"	129° 29' 13.67"	1.000
ECS-B-185	15° 27' 50.93"	129° 29' 04.86"	1.000
ECS-B-186	15° 26' 51.43"	129° 28' 55.02"	1.000
ECS-B-187	15° 25' 52.11"	129° 28' 44.17"	1.000
ECS-B-188	15° 24' 52.97"	129° 28' 32.29"	1.000
ECS-B-189	15° 23' 54.04"	129° 28' 19.41"	1.000
ECS-B-190	15° 22' 55.31"	129° 28' 05.52"	1.000
ECS-B-191	15° 21' 56.82"	129° 27' 50.63"	1.000
ECS-B-192	15° 20' 58.57"	129° 27' 34.74"	1.000
ECS-B-193	15° 20' 00.60"	129° 27' 17.85"	1.000
ECS-B-194	15° 19' 02.90"	129° 26' 59.96"	1.000
ECS-B-195	15° 18' 05.50"	129° 26' 41.09"	1.000
ECS-B-196	15° 17' 08.41"	129° 26' 21.25"	1.000
ECS-B-197	15° 16' 11.65"	129° 26' 00.43"	1.000
ECS-B-198	15° 15' 15.24"	129° 25' 38.64"	1.000
ECS-B-199	15° 14' 19.19"	129° 25' 15.89"	1.000
ECS-B-200	15° 13' 23.50"	129° 24' 52.18"	1.000
ECS-B-201	15° 12' 28.21"	129° 24' 27.53"	1.000
ECS-B-202	15° 11' 33.32"	129° 24' 01.94"	1.000
ECS-B-203	15° 10' 38.87"	129° 23' 35.40"	1.000
ECS-B-204	15° 09' 44.84"	129° 23' 07.95"	1.000
ECS-B-205	15° 08' 51.26"	129° 22' 39.57"	1.000
ECS-B-206	15° 07' 58.15"	129° 22' 10.28"	1.000
ECS-B-207	15° 07' 05.52"	129° 21' 40.09"	1.000
ECS-B-208	15° 06' 13.38"	129° 21' 09.00"	1.000
ECS-B-209	15° 05' 21.75"	129° 20' 37.03"	1.000

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Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
ECS-B-210	15° 04' 30.65"	129° 20' 04.19"	1.000
ECS-B-211	15° 03' 40.08"	129° 19' 30.46"	1.000
ECS-B-212	15° 02' 50.07"	129° 18' 55.89"	1.000
ECS-B-213	15° 02' 00.62"	129° 18' 20.47"	1.000
ECS-B-214	15° 01' 11.74"	129° 17' 44.21"	1.000
ECS-B-215	15° 00' 23.47"	129° 17' 07.12"	1.000
ECS-B-216	14° 59' 35.80"	129° 16' 29.22"	1.000
ECS-B-217	14° 58' 48.74"	129° 15' 50.50"	1.000
ECS-B-218	14° 58' 02.32"	129° 15' 10.99"	1.000
ECS-B-219	14° 57' 16.54"	129° 14' 30.69"	1.000
ECS-B-220	14° 56' 31.42"	129° 13' 49.62"	1.000
ECS-B-221	14° 55' 46.97"	129° 13' 07.79"	1.000
ECS-B-222	14° 55' 03.20"	129° 12' 25.21"	1.000
ECS-B-223	14° 54' 20.12"	129° 11' 41.88"	1.000
ECS-B-224	14° 53' 37.75"	129° 10' 57.84"	1.000
ECS-B-225	14° 52' 56.10"	129° 10' 13.06"	1.000
ECS-B-226	14° 52' 15.17"	129° 09' 27.59"	1.000
ECS-B-227	14° 51' 34.99"	129° 08' 41.44"	1.000
ECS-B-228	14° 50' 55.56"	129° 07' 54.60"	1.000
ECS-B-229	14° 50' 16.88"	129° 07' 07.10"	1.000
ECS-B-230	14° 49' 38.98"	129° 06' 18.95"	1.000
ECS-B-231	14° 49' 01.87"	129° 05' 30.16"	1.000
ECS-B-232	14° 48' 25.55"	129° 04' 40.74"	1.000
ECS-B-233	14° 47' 50.02"	129° 03' 50.72"	1.000
ECS-B-234	14° 47' 15.32"	129° 03' 00.10"	1.000
ECS-B-235	14° 46' 41.43"	129° 02' 08.89"	1.000
ECS-B-236	14° 46' 08.38"	129° 01' 17.12"	1.000
ECS-B-237	14° 45' 36.17"	129° 00' 24.79"	1.000
ECS-B-238	14° 45' 04.81"	128° 59' 31.93"	1.000
ECS-B-239	14° 44' 34.30"	128° 58' 38.53"	1.000
ECS-B-240	14° 44' 04.66"	128° 57' 44.63"	1.000
ECS-B-241	14° 43' 35.90"	128° 56' 50.22"	41.084
ECS-B-242	14° 23' 56.75"	128° 19' 35.26"	1.000
ECS-B-243	14° 23' 27.98"	128° 18' 40.94"	1.000
ECS-B-244	14° 23' 00.09"	128° 17' 46.15"	1.000
ECS-B-245	14° 22' 33.10"	128° 16' 50.88"	1.000
ECS-B-246	14° 22' 07.01"	128° 15' 55.16"	1.000
ECS-B-247	14° 21' 41.82"	128° 14' 59.02"	1.000
ECS-B-248	14° 21' 17.53"	128° 14' 02.45"	1.000
ECS-B-249	14° 20' 54.18"	128° 13' 05.48"	1.000
ECS-B-250	14° 20' 31.74"	128° 12' 08.12"	1.000
ECS-B-251	14° 20' 10.23"	128° 11' 10.39"	1.000
ECS-B-252	14° 19' 49.67"	128° 10' 12.30"	0.408
ECS-B-253	14° 19' 41.66"	128° 09' 48.46"	N/A

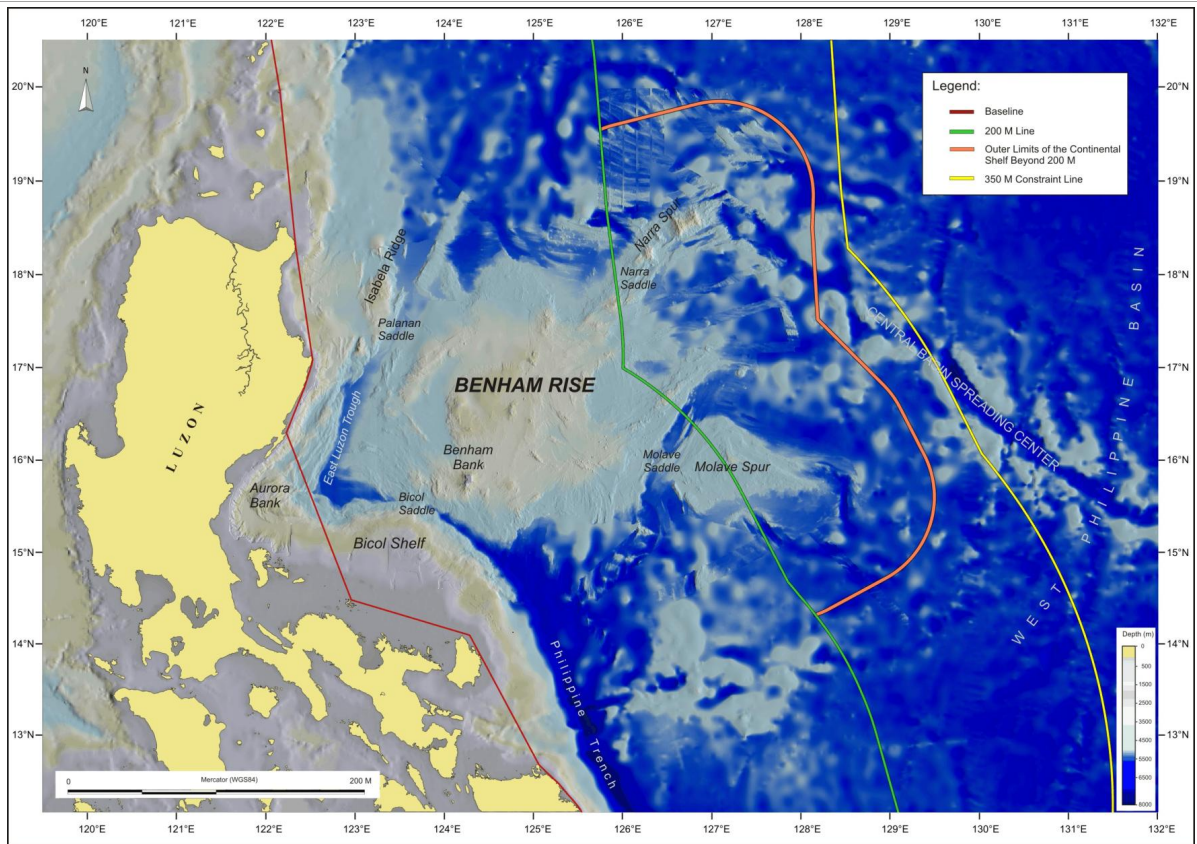
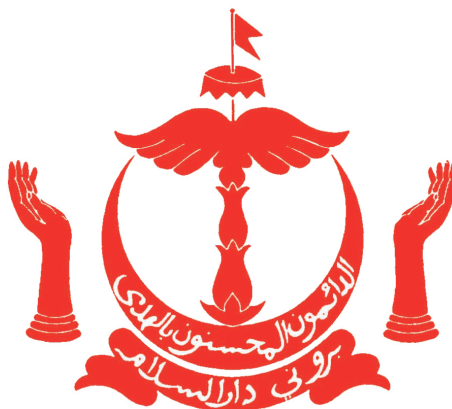


Figure 4 The outer limits of the continental shelf beyond 200 M in the Benham Rise region. The 200 M line and the 350 M constraint line are also shown.

Annex 509

Brunei Darussalam, *Preliminary Submission concerning the Outer Limits of its Continental Shelf* (12 May 2009)



**Brunei Darussalam's Preliminary Submission
concerning the Outer Limits of its Continental Shelf**

**Brunei Darussalam's Preliminary Submission to the Secretary-General
concerning the Outer Limits of its Continental Shelf**

1. Introduction

(a) Relevant Provisions of UNCLOS

1. Brunei Darussalam ('Brunei') is a State party to the 1982 United Nations Convention on the Law of the Sea ('UNCLOS'), which it signed on 5 December 1984 and ratified on 5 November 1996.

2. Article 77, paragraphs 1 – 3, of UNCLOS provide that:

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

2. The rights referred to in paragraph 1 are exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the express consent of the coastal State.

3. The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation."

3. Article 76, paragraph 1, of UNCLOS establishes the right of coastal States to determine the outer limits of the continental shelf. This provision states that:

"The continental shelf of a coastal State comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance."

Article 76, paragraph 8, of UNCLOS further states that:

"Information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission on the Limits of the Continental Shelf set up under Annex II on the basis of equitable geographic representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established on the basis of these recommendations shall be final and binding."

4. Under Annex II, Article 4, of UNCLOS, if a coastal State intends to make a submission to the Commission on the Limits of the Continental Shelf (the 'Commission') pursuant to Article 76, paragraph 8, it must do so within 10 years of entry into force of UNCLOS for that State.

5. However, by a Decision dated 29 May 2001 (SPLOS/72) taken during the eleventh meeting of UNCLOS States Parties, it was decided as follows (at paragraph (a)):

"In the case of a State Party for which the Convention entered into force before 13 May 1999, it is understood that the ten-year time period referred to in article 4 of Annex II to the Convention shall be taken to have commenced on 13 May 1999."

6. By a subsequent Decision dated 20 June 2008 (SPLOS/183) taken during the eighteenth meeting of UNCLOS States Parties, it was further decided as follows (at paragraph 1):

"(a) It is understood that the time period referred to in article 4 of annex II to the Convention and the decision contained in SPLOS/72, paragraph (a), may be satisfied by submitting to the Secretary-General preliminary information indicative of the outer limits of the continental shelf beyond 200 nautical miles and a description of the status of preparation and intended date of making a submission in accordance with the requirements of article 76 of the Convention and with the Rules of Procedure and the Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf;

(b) Pending the receipt of the submission in accordance with the requirements of article 76 of the Convention and with the Rules of Procedure and the Scientific and Technical Guidelines of the Commission, preliminary information submitted in accordance with subparagraph (a) above shall not be considered by the Commission;

(c) Preliminary information submitted by a coastal state in accordance with subparagraph (a) is without prejudice to the submission in accordance with the requirements of article 76 of the Convention and with the Rules of Procedure and the Scientific and Technical Guidelines of the Commission, and the consideration of the submission by the Commission;

(d) The Secretary-General shall inform the Commission and notify member States of the receipt of preliminary information in accordance with subparagraph (a), and make such information publicly available, including on the website of the Commission;"

7. In accordance with Article 76 of UNCLOS, and Decisions SPLOS/72 and SPLOS/183 taken during meetings of UNCLOS States Parties, Brunei hereby provides to the Secretary-General preliminary information indicative of the outer limits of Brunei's continental shelf beyond 200 nautical miles and a description of the status of preparation and intended date of Brunei making a full submission to the Commission under Article 76, paragraph 8, of UNCLOS. Pursuant to paragraph 1(c) of Decision SPLOS/183, all information provided to the Secretary-General in this preliminary submission (the 'Preliminary Submission') is without prejudice to any submission made by Brunei to the Commission in accordance with Article 76 of UNCLOS, or to its rights to its continental shelf.

8. In accordance with paragraph 1(a) of Decision SPLOS/183, this Preliminary Submission satisfies the time-limit referred to in Article 4 of Annex II to UNCLOS and in Decision SPLOS/72.

(b) The Relevant Area

9. Brunei is located in Southeast Asia on the north-western coast of the island of Borneo, bordered to the south, east and west by the Malaysian state of Sarawak. Brunei's north-facing coastline extends for approximately 160km along the South China Sea, including Brunei Bay. Brunei's baselines conform to UNCLOS Part II, Section 2.

10. The maritime boundaries between Brunei and Malaysia out to 200 nautical miles have been delimited by two series of agreements.

- First, the territorial sea and continental shelf between Brunei and Malaysia were delimited as far as the 100 fathom isobath by two 1958 British Orders in Council.¹
- Second, the territorial sea, the Exclusive Economic Zone and the continental shelf out to a distance of 200 nautical miles were delimited by an Exchange of Letters dated 16 March 2009.

¹ The North Borneo (Definition of Boundaries) Order in Council, 1958, Statutory Instruments 1958 No. 1517; and, the Sarawak (Definition of Boundaries) Order in Council, 1958, Statutory Instruments 1958 No. 1518.

11. On the basis of technical studies carried out to date, Brunei's continental shelf as defined in accordance with Article 76 of UNCLOS extends beyond 200 nautical miles from the baselines from which the breadth of Brunei's territorial sea is measured. Brunei's entitlement to such extended continental shelf rights is the subject of the information provided in this Preliminary Submission to the Secretary-General and will similarly be the subject of Brunei's full submission to the Commission to be submitted at a later date.

12. Brunei notes that there may exist areas of potential overlapping entitlements in respect of its continental shelf beyond 200 nautical miles. This Preliminary Submission is made without prejudice to any future delimitation of boundaries with other States.

(c) **Preliminary Information Indicative of the Outer Limits of Brunei's Continental Shelf**

13. The preparation of detailed studies of Brunei's continental shelf is the responsibility of the Technical Working Committee of the Brunei Outer Continental Shelf Project, which has also engaged outside technical assistance.

14. As described below, Brunei has made a preliminary identification and selection of the relevant methodologies and formulae by which the outer limits of its continental shelf may be delineated. This has been undertaken on the basis of the Scientific and Technical Guidelines of the Commission (CLCS/11, the 'Guidelines').

15. Brunei has researched and analysed significant amounts of data relating to its continental shelf. This includes extensive morphological, geological, geophysical and tectonic data.

16. On the basis of the selected methodologies/formulae and the data analysed, Brunei has made significant progress towards preparation of a full submission to the Commission in accordance with Article 76, paragraph 8, of UNCLOS. However, this process has yet to be completed.

2. Formulae Lines Employed by Brunei To Establish the Outer Edge of Its Continental Margin

17. Article 76, paragraph 4, of UNCLOS provides that:

"(a) For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by either:

(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or

(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the continental slope.

(b) In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base."

18. Consistent with Article 76, paragraph 4, Brunei will establish the outer edge of the continental margin in the following manner, taking account also of the Guidelines:

- First, in accordance with Article 76, paragraph 4(b), the foot of the continental slope will be identified via the method of establishing the point of maximum change in gradient at the base of the relevant continental slope.
- Second, the edge of the continental margin will then be established in accordance with the formula prescribed at Article 76, paragraph 4(a)(ii), i.e. a line delineated by fixed points not more than 60 nautical miles from the foot of the continental slope. Brunei notes that this formula is commonly referred to as the "Hedberg Formula".

3. The Test of Appurtenance

19. With respect to the requirements of Article 76, paragraph 4(a), of UNCLOS, Brunei notes that the Guidelines describe the process by means of which this provision is examined as the "Test of Appurtenance" (CLCS/11, paragraph 2.2.2). The Guidelines further explain that:

"The test of appurtenance is designed to determine the legal entitlement of a coastal State to delineate the outer limits of the continental shelf throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance." (CLCS/11, paragraph 2.2.2)

20. Brunei's full submission to the Commission in accordance with Article 76 of UNCLOS will show that there is a continuous natural prolongation from the territory of Brunei extending across the areas known as the Northwest Borneo Shelf, the Northwest Borneo Trough and the Dangerous Grounds to the edge of the deep ocean floor of the South China Sea Basin. This will be evidenced by onshore and offshore morphology, and geological and geophysical data (including rock samples, seismic data, and gravity and magnetic data), supported by regional tectonic interpretations.

21. In satisfaction of the test of appurtenance, Brunei's full submission to the Commission will show that the edge of the continental margin, lying at the transition between the Dangerous Grounds and the deep ocean floor of the South China Sea, is situated beyond 200 nautical miles from the baselines from which Brunei's territorial sea is measured.

22. Brunei will thereby demonstrate that it is entitled to delineate the outer limits of its continental shelf consistent with the set of rules provided in Article 76, paragraphs 4 to 10, of UNCLOS.

4. Constraint Lines

23. According to Article 76, paragraph 5, of UNCLOS, the fixed points determined with reference to the foot of the continental slope may not lie beyond the outer envelope of two specified constraint lines:

"The fixed points comprising the line of the outer limits of the continental shelf on the sea-bed, drawn in accordance with paragraph 4(a)(i) and (ii), either shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2,500 metre isobath, which is a line connecting the depth of 2,500 metres."

24. Brunei's extended continental shelf lies within the 350 nautical mile constraint line.

5. Full Submission

25. Brunei will make a full submission with respect to the outer limits of its continental shelf having regard to, first, the outer edge of the relevant continental margin established on the basis of a Hedberg Formula line, second, the test of appurtenance and, third, the 350 nautical mile constraint line.

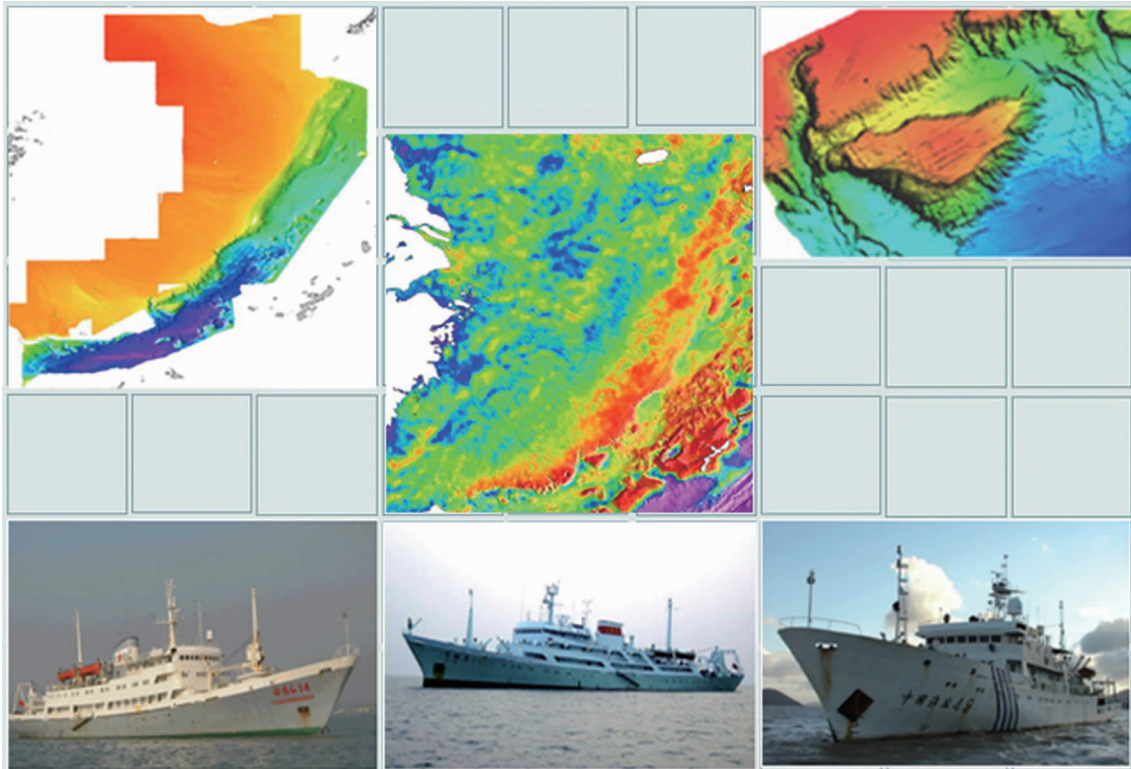
26. It will be necessary to agree upon the delimitation of Brunei's extended continental shelf and the continental shelves of neighbouring States, in accordance with international law. Brunei understands that all submissions made to the Commission are made without prejudice to questions of delimitation.

27. Brunei expects that it will be in a position to make a full submission to the Commission concerning the outer limits of its continental shelf within 12 months.

Annex 510

People's Republic of China, *Submission by the People's Republic of China Concerning the Outer Limits of the Continental Shelf beyond 200 Nautical Miles in Part of the East China Sea: Executive Summary* (14 Dec. 2012)

Submission
by the People's Republic of China
Concerning the Outer Limits of the Continental Shelf
beyond 200 Nautical Miles in Part of the East China Sea



EXECUTIVE SUMMARY



1. Introduction

The People's Republic of China (hereinafter referred to as "China") signed on 10 December 1982 and ratified on 15 May 1996 the United Nations Convention on the Law of the Sea (hereinafter referred to as "the Convention").

According to article 76(8) of the Convention, article 4 of Annex II to the Convention and the Decision of the eleventh Meeting of States Parties to the Convention (SPLOS/72), the States Parties for which the Convention entered into force before 13 May 1999 shall submit particulars of the outer limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured to the Commission on the Limits of the Continental Shelf (hereinafter referred to as "the Commission") along with supporting scientific and technical data before 13 May 2009.

A decision (SPLOS/183) was made at the eighteenth Meeting of States Parties to the Convention that "the time period referred to in article 4 of Annex II to the Convention and the decision contained in SPLOS/72, paragraph (a), may be satisfied by submitting to the Secretary-General preliminary information indicative of the outer limits of the continental shelf beyond 200 nautical miles and a description of the status of preparation and intended date of making a submission in accordance with the requirements of article 76 of the Convention and with the Rules of Procedure and the Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf."

The geomorphologic and geological features show that the continental shelf in the East China Sea (hereinafter referred to as "ECS") is the natural prolongation of China's land territory, and the Okinawa Trough is an important geomorphologic unit with prominent cut-off characteristics, which is the termination to where the continental shelf of ECS extends. The continental shelf in ECS extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea of China is measured.

China delineates the outer limits of the continental shelf beyond 200 nautical miles in part of ECS in accordance with article 76 of the Convention, Annex II to the Convention, the Rules of Procedure of the Commission and the Scientific and Technical Guidelines of the Commission.

The Chinese Government submitted the Preliminary Information on Defining the Outer Limits of Its Continental Shelf beyond 200 Nautical Miles to the Secretary-General of the United Nations on 12 May 2009. It is specified in the Preliminary Information that "China is making preparations for the submission of the information on the outer limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured. China has conducted data gathering and processing in the sea areas concerned, is formulating the submission in accordance with the requirements of article 76 of the Convention, the Rules of Procedure of the Commission and the Scientific and Technical Guidelines of the Commission, and is undertaking relevant work of assessment and review", and that "China is intended to make a submission on the outer limits of all



or part of its continental shelf that extends beyond 200 nautical miles at an appropriate date upon completion of the above work. ”

The Chinese Government has completed the preparation of the information on the outer limits of the continental shelf beyond 200 nautical miles in part of ECS and hereby makes the partial Submission.

Paragraph 3 of Annex I to the Rules of Procedure of the Commission provides that “A submission may be made by a coastal State for a portion of its continental shelf in order not to prejudice questions relating to the delimitation of boundaries between States in any other portion or portions of the continental shelf for which a submission may be made later, notwithstanding the provisions regarding the ten-year period established by article 4 of Annex II to the Convention. ”

This Submission is a partial submission concerning the outer limits of the continental shelf beyond 200 nautical miles in part of ECS. This Submission of the Chinese Government is without prejudice to any future submission by China on delineation of the outer limits of the continental shelf in ECS and other seas.

The preparation of this Submission was carried out with the State Oceanic Administration of China and the Ministry of Foreign Affairs of China taking the lead. The majority of the data used in this submission was taken from the projects organized by the State Oceanic Administration of China, and part of the data was provided by the China Geological Survey, the Chinese Academy of Sciences and China Petrochemical Corporation, etc.

2. Maps and Coordinates

The data and information contained in this Submission are intended to prove that China's continental shelf in ECS extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, and to delineate the outer limits of the continental shelf in part of ECS.

Two figures and one table are included in this Executive Summary.

Figure 1 is the geomorphologic map of ECS.

Figure 2 is the map depicting the outer limits of the continental shelf in part of ECS.

Table 1 lists the coordinates defining the fixed points comprising the line of the outer limits of the continental shelf in part of ECS, description of and distance between the fixed points.

3. Commission Members Who Provided Advice during the Preparation of the Submission

During the preparation of this Submission, Prof. Lu Wenzheng, member of the Commission provided advice.

4. Provisions of Article 76 Invoked in Support of the Submission



seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin”. If a claim of a coastal State on continental shelf involves areas that extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, the outer limits of the continental shelf beyond 200 nautical miles shall be delineated in accordance with the provisions in paragraphs 4 ~ 6 of article 76, and information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission.

Provisions invoked in this Submission to delineate the outer limits of the continental shelf beyond 200 nautical miles in part of ECS include article 76(4)(a)(ii) of the Convention, i. e. “a line delineated by reference to fixed points not more than 60 nautical miles from the foot of the continental slope” and article 76(5), i. e. “the fixed points comprising the line of the outer limits of the continental shelf on the seabed ... shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured.”

Article 76(7) provides that “the coastal State shall delineate the outer limits of its continental shelf, where that shelf extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by straight lines not exceeding 60 nautical miles in length, connecting fixed points, defined by coordinates of latitude and longitude.” In this Submission, the lengths of the straight lines connecting the 10 fixed points comprising the line of the outer limits of the continental shelf beyond 200 nautical miles do not exceed 60 nautical miles.

5. Natural Prolongation of Land Territory

ECS, located to the east of the mainland of China, consists of three geomorphologic units: the shelf, the slope and the Okinawa Trough. The continental shelf of ECS is the natural prolongation of the mainland of China. The maximal width of the shelf exceeds 500 km. The seafloor topography is flat and inclines southeastwards. The gentle inclination ends at the shelf break where the water depth deepens sharply and the slope of ECS begins. The gradient of the slope of ECS is gentle in the north and steep in the south. The topography shows a step-by-step decline in general. The slope of ECS is corroded by numerous seafloor canyons, and the sediments caused by turbidity current are formed in the foot region of the slope outboard of the canyons, leading to complicated topography at the base and in the foot region of the slope. Okinawa Trough is a generally elongated depression. The length of the trough is about 1,200 km from north to south and the width is 100 to 150 km from east to west. The water depth of the trough gradually increases from northeast to southwest, and the maximum water depth is over 2,300 meters (Figure 1).

The shelf of ECS, together with the eastern part of the mainland of China, is tectonically viewed as a whole, because both of them hold the same ancient continental core. The interaction between the Pacific Plate and the Eurasian Plate since the Mesozoic era, had gradually resulted in the formation of the tectonic framework of ECS. The Okinawa Trough was gradually formed by breakup and rifting at the



edge of the continental shelf of ECS. The regional structural features of ECS vary from west to east in strips of tectonic units, namely the Fujian-Zhejiang rise zone, ECS shelf basin, the Diaoyu Dao upfold zone and the Okinawa Trough basin, with the geologic ages in descending order from west to east.

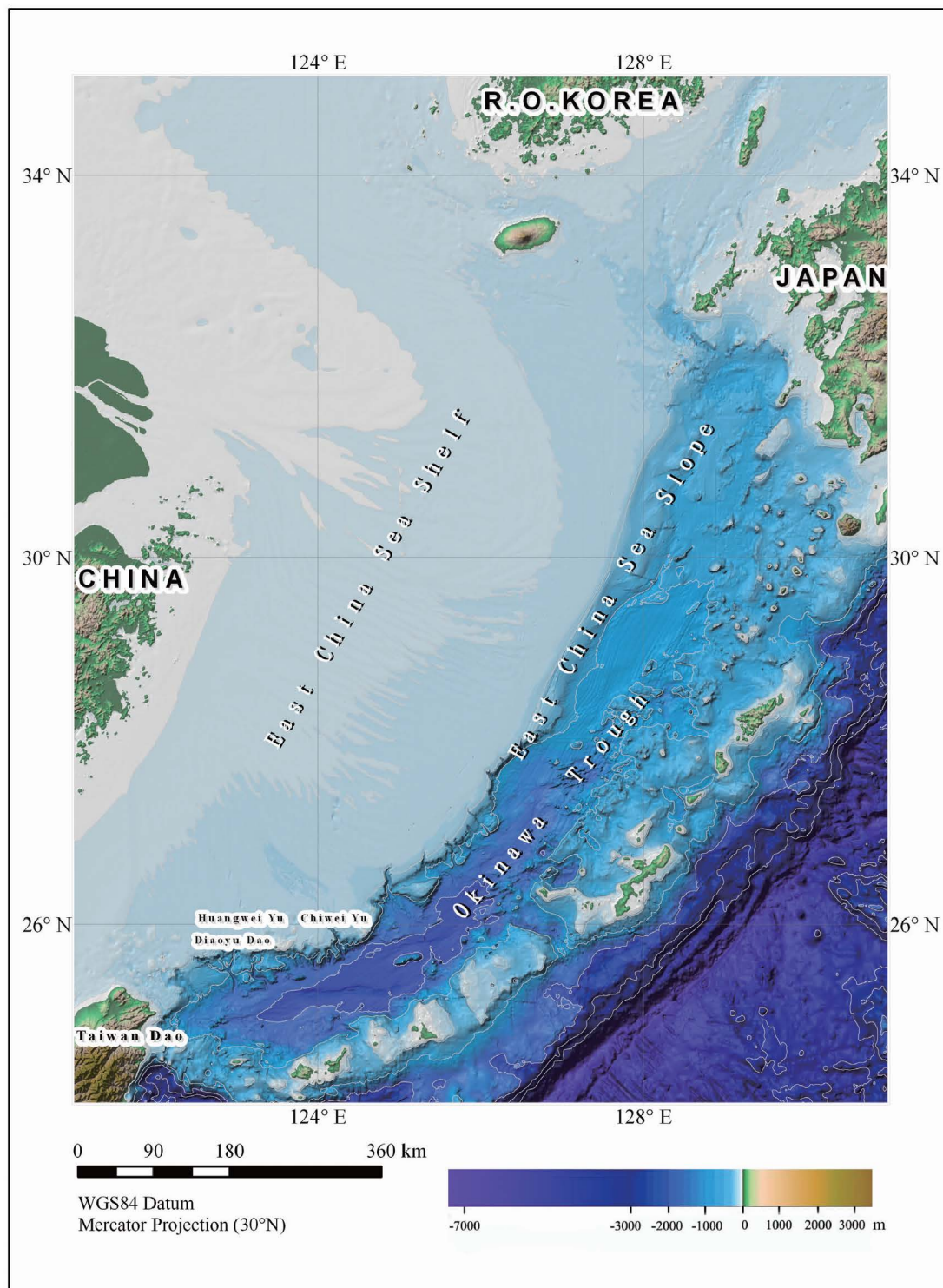


Figure 1 Geomorphologic map of ECS



The Fujian-Zhejiang rise zone consists of a series of islands and reefs in the offshore and Fujian-Zhejiang mainland region, and as a whole the zone shows NE orientation. The basement of the zone is composed of two rock series, one is NEE-trending pre-Sinian metamorphic rock series dominated by plagioclase amphibolite with local migmatization, and the other is NNE-trending Mesozoic volcanic and detrital rock series.

ECS shelf basin, to the east of the Fujian-Zhejiang rise zone, is the main component of East China Sea shelf. The basin generally manifests NNE-NE-trending depressions composed of a series of sags, which has infilled by extremely thick Cenozoic deposits. In the middle part of the basin, an uplift consists of a series of NNE-NE-trending highs divided the basin into West-and East depression belts. The main part of the West depression belt is a Paleocene and Eocene eastward dipping dustpan-like depression with the basement of volcanic rocks and pre-Sinian metamorphic rocks found also in the coastal area of Zhejiang and Fujian provinces. The East depression belt, with the basement formed by pre-Mesozoic low-grade metamorphic rocks, has received deposits since the Eocene era. Late Yanshanian and early Himalayan volcanic rocks can be found in local area of the sags.

The Diaoyu Dao upfold zone, located between ECS shelf basin and the Okinawa Trough, is bordered by faults on both sides. The zone, extending from the Goto Islands of Japan in the north to the Taiwan Dao of China in the south, is a NNE-NEE trending upfold belt with old basement. The zone was upfolded in the Himalayan period, associated with large-scale magmatic activities, and the Paleogene system experienced intensive folding and metamorphism.

Okinawa Trough basin is situated to the east of the Diaoyu Dao upfold zone. Due to mantle upwelling and crust extension, a NNE-NE-trending central rifted zone was formed along the base of the trough basin. The geological characteristics of the Okinawa Trough basin are distinctly different from those of adjacent East China Sea shelf, e. g. , sharply thinned crust, magnetic anomaly lineation and high heat flow value. Seismic refraction indicates that the crustal thickness of the middle and southern part of the Okinawa Trough has been sharply thinned with the minimum crustal thickness of about 13 km, and the stripped magnetic anomalies were identified. The Okinawa Trough is one of the high heat flow regions in the world, with intensive modern volcanism and seafloor hydrothermal activities. Olivine tholeiite found in the southern part of the trough bears the characteristics of oceanic tholeiite, which originates from high extent partial melting of source rock and is resulted from rapid mantle upwelling under the tectonic setting of extremely thinned crust caused by extension.

In conclusion, the shelf of ECS is of stable continental crust. At the Okinawa Trough, however, due to the upwelling of the upper mantle and the sharp thinning of the continental crust, the crust is transformed from thinned continental crust to transitional crust. Nascent oceanic crust occurs in the central rifted zone of the south part of the Okinawa Trough. The shelf of ECS, the slope of ECS and the Okinawa Trough form a passive continental margin. The Okinawa Trough is the natural termination of the continental shelf of ECS.



6. Description of the Outer Limits of Continental Shelf in Part of ECS

6.1 The Foot of the Slope (hereinafter referred to as “FOS”) and the outer envelope of 60 nautical miles from FOS

Article 76(4)(b) of the Convention provides that “in the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in gradient at its base”. According to paragraph 5.1.3 of the Scientific and Technical Guidelines of the Commission, the fundamental requirements for the determination of the foot of the continental slope are: first, identification of the region defined as the base of the slope; and second, determination of the location of the point of maximum change in the gradient at the base of the slope.

According to the geomorphological features of the seafloor and paragraph 5.4.5 of the Scientific and Technical Guidelines of the Commission, the slope base region referred to in this Submission are defined as the area of sudden topographical change between the base of the steep slope of ECS and the relatively smooth upper rise of the Okinawa Trough.

Based on the multi-beam bathymetric field data at a grid of 200m × 200m and the geomorphological features and trends of the seafloor, a series of profiles are selected from the slope of ECS to the Okinawa Trough and 12 points of maximum change of gradient on the base of the slope are defined as FOS. The outer envelope of 60 nautical miles from FOS is formed based on the 12 FOS (Figure 2).

6.2 Maximum water depth points and outer limits of ECS’s continental shelf beyond 200 nautical miles

The determination of the outer envelop of 60 nautical miles from FOS according to article 76(4)(a)(ii) of the Convention confirms that ECS’s continental shelf has naturally prolonged to the Okinawa Trough’s axis. Considering the geographical conditions and based on the topographical change of the seafloor, the outer limits of ECS’s continental shelf beyond 200 nautical miles is defined as the line connecting of the maximum water depth points on the axial area of the profile which is vertical to the trend of the Okinawa Trough (hereinafter referred to as the “maximum water depth points”).

The axial area of the Okinawa Trough is determined based on the regional geological structure, the crustal structure, the petrologic characteristics, and the topographical and geomorphological features of the seafloor. Based on the multi-beam bathymetric field data of the relevant sea area that China obtained in 1996—2002 and with reference to GEBCO 30” × 30” bathymetric data, a series of morphological profiles which are perpendicular to the trending of the Okinawa Trough’s axis, are chosen. A maximum water depth point is selected from each profile. This Submission has selected 8 maximum water depth points as the fixed points for determining the outer limits of the continental shelf beyond 200 nautical miles in part of ECS. A line comprising straight lines connecting these points

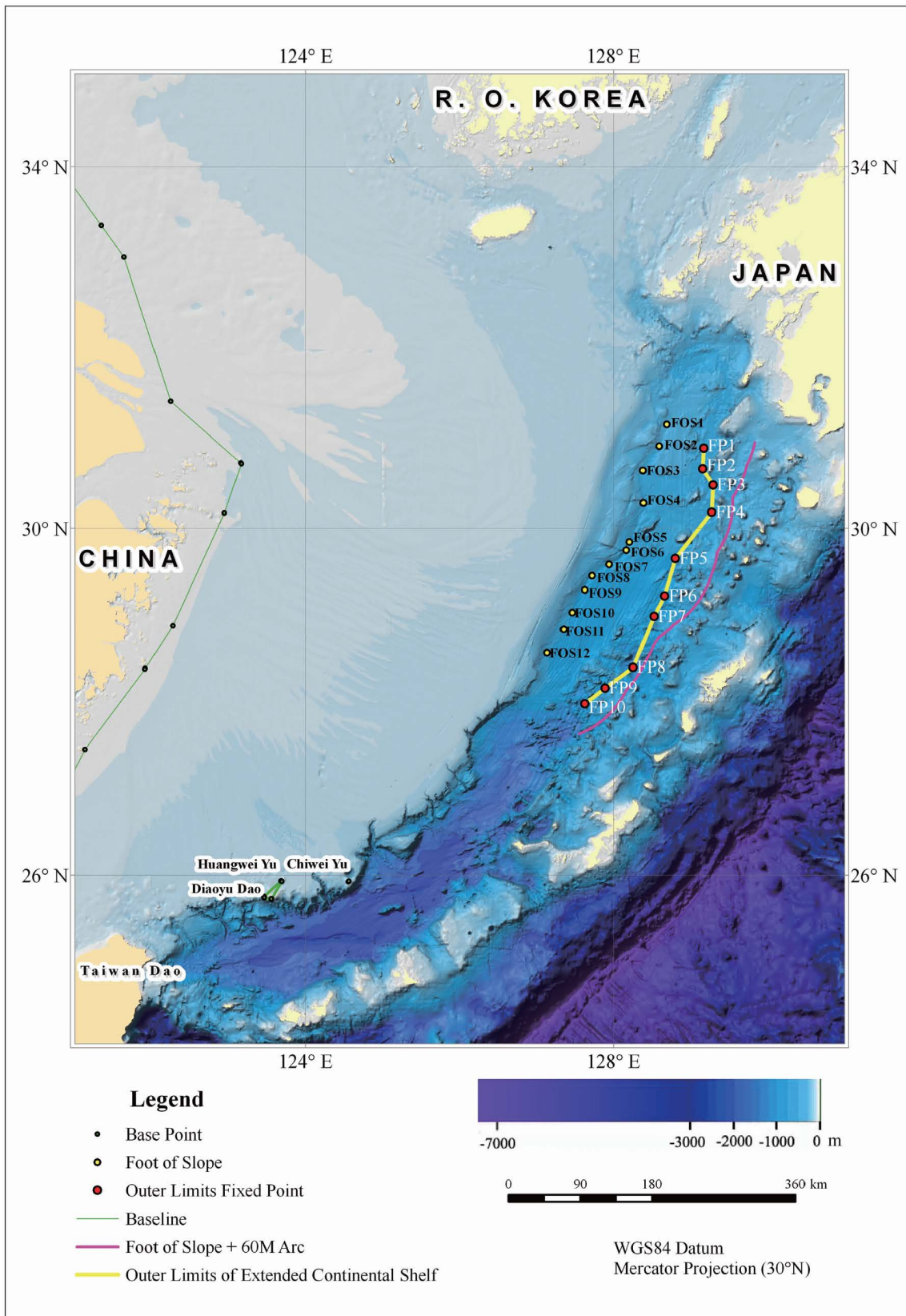


Figure 2 Map depicting the outer limits of the continental shelf in part of ECS



forms the outer limits of ECS's continental shelf beyond 200 nautical miles, which does not exceed the outer envelope of 60 nautical miles from FOS or 350 nautical miles from the baselines from which the breadth of the territorial sea is measured.

The outer limits of ECS's continental shelf beyond 200 nautical miles is composed of 10 fixed points (FP1 – FP10) in the present Submission, all of which are the maximum water depth points of the Okinawa Trough (Figure 2). The straight lines connecting the fixed points do not exceed 60 nautical miles in length. See Table 1 for the coordinates of these points.

Table 1 Coordinates defining the fixed points comprising the line of the outer limits of the continental shelf in partial area of ECS, description of and distance between the fixed points

FixedPoint	Latitude (°N)	Longitude (°E)	Description of Fixed Point	From Fixed Point	To Fixed Point	Distance (M)
FP1	30.8991	129.1708	maximum water depth point on the axis of the Okinawa Trough	—	—	—
FP2	30.6679	129.1588	maximum water depth point on the axis of the Okinawa Trough	FP1	FP2	13.85
FP3	30.4867	129.2928	maximum water depth point on the axis of the Okinawa Trough	FP2	FP3	12.88
FP4	30.1781	129.2767	maximum water depth point on the axis of the Okinawa Trough	FP3	FP4	18.49
FP5	29.6552	128.8008	maximum water depth point on the axis of the Okinawa Trough	FP4	FP5	39.94
FP6	29.2286	128.6608	maximum water depth point on the axis of the Okinawa Trough	FP5	FP6	26.56
FP7	28.9953	128.5228	maximum water depth point on the axis of the Okinawa Trough	FP6	FP7	15.73
FP8	28.4127	128.2528	maximum water depth point on the axis of the Okinawa Trough	FP7	FP8	37.66
FP9	28.1746	127.8888	maximum water depth point on the axis of the Okinawa Trough	FP8	FP9	23.97
FP10	27.9931	127.6248	maximum water depth point on the axis of the Okinawa Trough	FP9	FP10	17.73

7. Maritime Delimitations

Paragraph 2 of Annex I to the Rules of Procedure of the Commission provides that in case there is a dispute in the delimitation of the continental shelf between opposite or adjacent States, or in other cases of unresolved land or maritime disputes, related to the submission, the Commission shall be: (a) Informed of such disputes by the coastal States making the submission; and (b) Assured by the coastal States making the submission to the extent possible that the submission will not prejudice



matters relating to the delimitation of boundaries between States.

In accordance with the provision in paragraph 2 of Annex I to the Rules of Procedure of the Commission, the Chinese Government hereby informs the Commission that China, the Republic of Korea and Japan are yet to complete the delimitation of the continental shelf in the area involved in this Submission. According to article 76(10) of the Convention, recommendations of the Commission with regard to this Submission will not prejudice future delimitation of the continental shelf between China and the states concerned.



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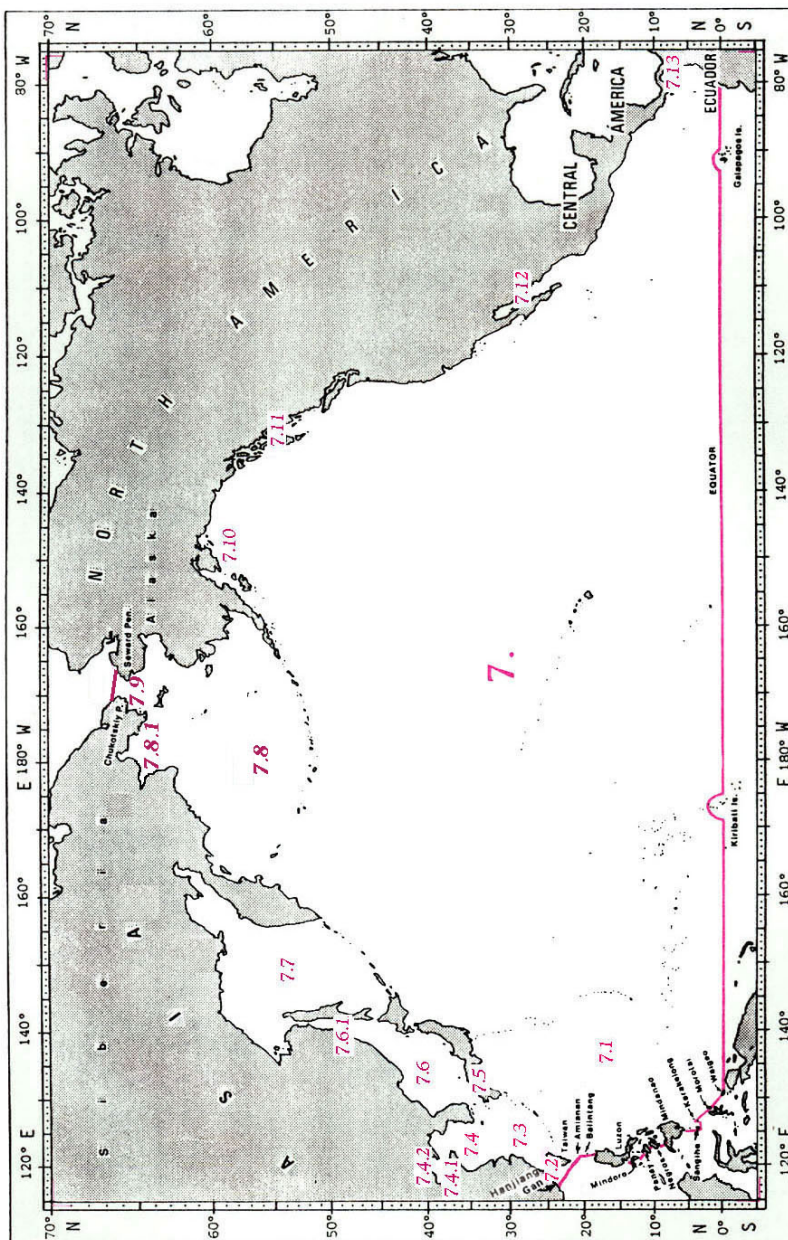
Annex 511

International Hydrographic Organization, *Limits of Oceans and Seas: North Pacific*, Special Publication No. 23 (Draft 4th ed. 2002)

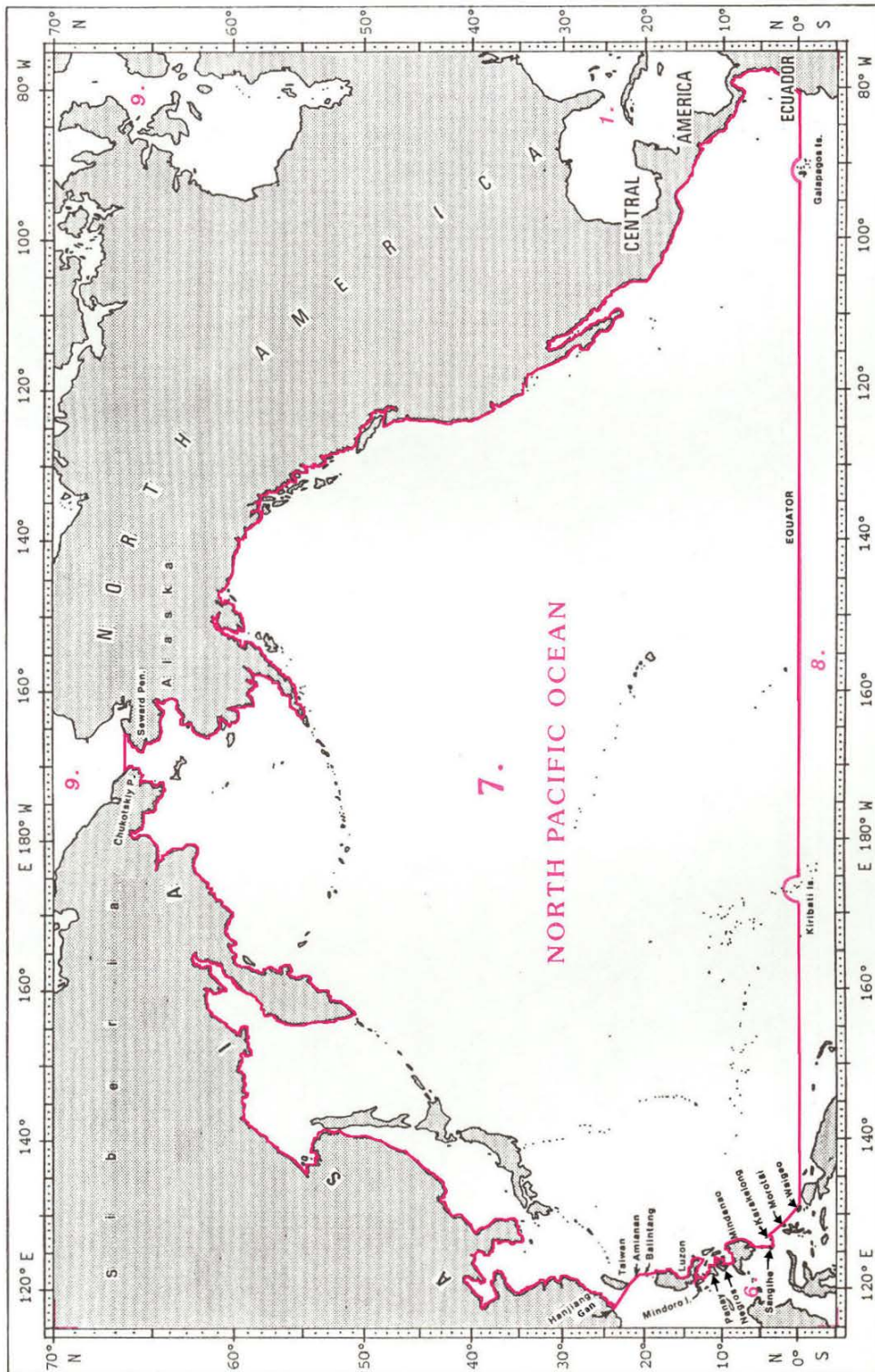
CHAPTER 7

NORTH PACIFIC OCEAN AND ITS SUB-DIVISIONS

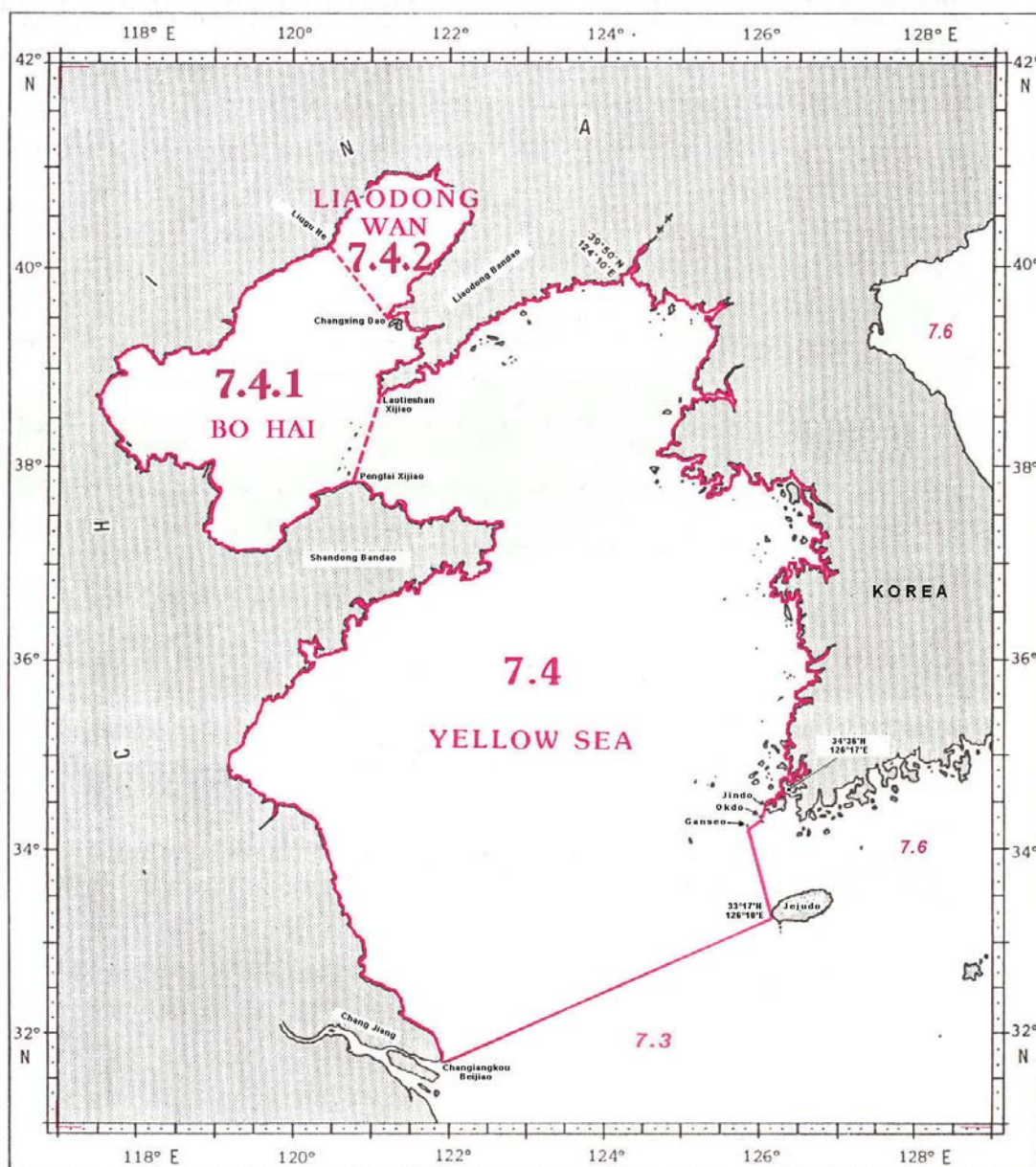
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NORTH PACIFIC OCEAN



YELLOW SEA, BO HAI and LIAODONG WAN



7.4 YELLOW SEA

The Yellow Sea is situated northwestward and adjacent to the Eastern China Sea, between the coast of China and the western coast of Korea and includes the Bo Hai and Liadong Hai. Its limits are the following:

On the South:

A line from 34°36'N – 126°17'E, on the southwestern coast of Korea southward to the northern extremity of Jindo¹ (34°35'N - 126°15'E) and, along the western coast of this island, to its western extremity (34°25'N - 126°05'E);

¹ Do (Korean) = Island

thence a line joining the western extremity of Jindo¹ southwestward to the northern extremity of Okdo (34°22'N - 126°01'E) and to Kansō (34°12'N - 125°48'E);
and thence from Kansō southeastward to the western extremity of Jejudo (33°17'N - 126°10'E) (*the common limit with Area 7.6*).

thence a line joining the western extremity of Jejudo southwestward to Changiangkou Beijiǎo² (31°42'N - 121°54'E), the northernmost point of the mouth of Chang Jiang³ (Yangste River), on the coast of China (*the common limit with the Eastern China Sea, see 7.3*).

On the West North and East:

The coasts of China and Korea from Changjiangkou Baijiao northward eastward and southward, along the coasts of China and Korea to position 34°36'N – 126°17'E on the southwestern coast of Korea.

7.4.1 BO HAI⁴

The Bo Hai is situated in the northwest part of the Yellow Sea and bounded by the coast of China. Its limits are the following:

On the East:

A line joining the mouth of Liugu He⁵ (40°16'N - 120°30'E), in Liaoning Province, southeastward to the western extremity of Changxing Dao⁶ (39°33'N - 121°14'E), on the western coast of Liaodong Bandao⁷ (*the common limit with the Liaodong Wan⁸, see 7.4.2*);

thence following the western coast of the Liandong Bandao, in China, to Laotieshen Xijiǎo (38°44'N – 121°08'E), the southwestern extremity of Liandong Bandao;

thence southward to Penglai Xijiǎo (37°50'N – 120°45'E), the northern extremity of Shandong Bandao (*the common limit with the Yellow Sea, see 7.4*).

On the West:

From Penglai Xijiǎo, westward, northward and northeastwards, along the coast of China to Lingu He.

7.4.2 LIAODONG WAN

The Liaodong Wan is situated in the Yellow Sea and in northeastward and adjacent to the Bo Hai and bounded by the coast of China. Its southern common limit with the Bo Hai (*see 7.4.1*) is the following:

A line joining the mouth of Liugu He (40°16'N - 120°30'E), in Liaoning Province, southeastward to the western extremity of Changxing Dao (39°33'N - 121°14'E), on the western coast of Liaodong Bandao.

¹ Do (Korean) = Island

² Beijiǎo (Chinese) = North Cape

³ Jiang (Chinese) = River

⁴ Hai (Chinese) = Sea

⁵ He (Chinese) = River

⁶ Dao (Chinese) = Island

⁷ Bandao (Chinese) = Peninsula

⁸ Wan (Chinese) = Gulf

Annex 512

Dr. Alexander Zadorozhny, *Expert Opinion on the Russian term “исторические правооснования” in Article 298(1)(a)(i) of the 1982 United Nations Convention on the Law of the Sea* (8 Mar. 2015)

**ARBITRATION UNDER ANNEX VII OF THE UNITED NATIONS CONVENTION
ON THE LAW OF THE SEA**

The Republic of Philippines

v.

The People's Republic of China

Supplemental Written Submission of the Philippines

**The proper interpretation of the Russian term “исторические
правооснования” in the Russian text of Article 298(1)(a)(i) of the 1982
United Nations Convention on the Law of the Sea**

Expert opinion prepared by

Dr. Alexander Zadorozhny
Professor of International Law
Institute of International Relations of Kyiv National Taras Shevchenko University
Ukraine

8 March 2015

A. Introduction

1. The Agent of the Republic of the Philippines, Acting Solicitor General Florin Hilbay, has asked me to provide an expert opinion on the proper interpretation of the Russian term “исторические правооснования”, which appears in the Russian text of Article 298(1)(a)(i) of the 1982 United Nations Convention on the Law of the Sea (UNCLOS).

2. As to my qualifications, I am a Professor of International Law and am the Chairman of Public International Law at the International Law Department of the Institute of International Relations of Kyiv National Taras Shevchenko University. I am also President of the Ukrainian Association of International Law, Corresponding Member of the Ukrainian Academy of Legal Sciences (2004), and Member of the Permanent Court of International Arbitration for Ukraine (The Hague) (2004). I have also been Editor-in-chief of the Ukrainian Journal of International Law and Member of the Editorial Board of the Ukrainian Yearbook of International Law. I teach and research public international law, including the law of the sea and international dispute settlement. I am fluent in Ukrainian, Russian and English.

3. In preparing my expert opinion, I relied on relevant Russian-English and English-Russian Dictionaries and works of leading Russian scholars in public international law, including the law of the sea.

B. The meaning of the Russian term “исторические правооснования” in the Russian text of Article 298(1)(a)(i) of UNCLOS

4. The Russian text of Article 298(1)(a)(i) sets forth the optional exception to applicability of Section 2 on compulsory procedures entailing binding decisions in the following terms:

1. При подписании, ратификации настоящей Конвенции или присоединении к ней, или в любое время после этого государство без ущерба для обязательств, вытекающих из Раздела 1, может в письменной форме заявить, что оно не принимает одну или несколько процедур, предусмотренных в Разделе 2, в отношении одной или более нижеследующих категорий споров:

а) i) споров, связанных с толкованием или применением статей 15, 74 и 83, касающихся делимитации морских границ, или споров, связанных с историческими заливами или правооснованиями, при условии, что государство, сделавшее такое заявление, когда такой спор возникает после вступления в силу настоящей Конвенции, и если в течение разумного периода времени в ходе переговоров между сторонами не достигнуто соглашение, по просьбе любой из них, соглашается на передачу спора на урегулирование по согласительной процедуре, указанной в Разделе 2 Приложения V; и при условии, что такая передача исключает рассмотрение любого спора, который неизбежно связан с встречным урегулированием любого нерешенного спора, касающегося суверенитета или других прав на материковую или островную территорию.

5. The Russian term “исторические правооснования” in Article 298(1)(a)(i) means “historic titles” and should not be confused with the concept of “historic rights”, which relates to non-exclusive rights short of sovereignty. This conclusion finds support in relevant dictionaries and legal doctrine, as elaborated below.

a. Legal Dictionaries

6. As a threshold matter, the Russian term “исторические правооснования” consists of two words: an adjective “исторические”, translated as “historic”, which qualifies a compound noun “правооснования”

formed by “право”, translated as “right”, and “основания”,¹ translated as “bases”.²

7. The Russian-English Dictionary of Diplomacy, which covers international law terms, including those relating to the law of the sea³, translates the term “правооснование” as “title”.⁴ This dictionary also distinguishes the term “правооснование” (“title”) from the term “право”, which means “right” and has a distinct normative content, as illustrated in the following examples:

- “*право навигации*” means “navigation *right*”;⁵
- “*право плавания под морским флагом*” means “*right* to fly a maritime flag”;⁶
- “*право прохода*” means “*right* of passage”;⁷
- “*право свободного доступа к морю*” means “*right* of free access to the sea”.⁸

8. Equally the Russian-English Law Dictionary translates the term “правооснование” as “title (in the sense of ownership)”.⁹ By expressly specifying that “title” is used “in the sense of ownership”, the dictionary

¹ “Основания” is the plural form of singular “основание”, which means “basis”.

² In the Russian language, the terms “правооснования” and “основания права” are equivalent and may be used interchangeably.

³ K.V. Zhuravchenko (ed.), *Russian-English Dictionary of Diplomacy* (2006), p. V. (Русско-английский дипломатический словарь / под рук. К.В. Журавченко. – 3-е изд., перераб. и доп. – М.: Рус. яз. – 2006, ст. V).

⁴ K.V. Zhuravchenko (ed.), *Russian-English Dictionary of Diplomacy* (2006), p. 464.

⁵ K.V. Zhuravchenko (ed.), *Russian-English Dictionary of Diplomacy* (2006), p.460.

⁶ K.V. Zhuravchenko (ed.), *Russian-English Dictionary of Diplomacy* (2006), p.460.

⁷ K.V. Zhuravchenko (ed.), *Russian-English Dictionary of Diplomacy* (2006), p.460.

⁸ K.V. Zhuravchenko (ed.), *Russian-English Dictionary of Diplomacy* (2006), p.461.

⁹ L.L. Gousev, *Russian-English Law Dictionary* (2003), p. 308.

confirms that the Russian term “правооснование” is linked to the concept of “sovereignty” in international law, not to a “right”.

9. The referenced Russian-English dictionaries also accord with the English-Russian Law Dictionary, which translates the term “title” as “правооснование”.¹⁰

10. It follows from both Russian-English and English-Russian legal dictionaries that the legal meaning of the Russian term “исторические правооснования” corresponds to the English term “historical titles”. Indeed, the Russian term “правооснование” is a synonym of the term “титул”, which means “title”. By contrast, the Russian language uses the term “право” to describe the concept of “right,” and “historic rights” in Russian would be “исторические права.”

11. The distinction between the Russian terms for “title” and “right” is also reflected in the Russian and English texts of UNCLOS. Where the Convention refers to “rights” as distinguished from “title” the Russian word used is “право” not “правооснования”. The relevant examples include:

- Article 17 (“*Право мирного прохода*” means “*Right of innocent passage*”);
- Article 53 (“*Право архипелажного прохода по морским коридорам*” means “*Right of archipelagic sea lanes passage*”);
- Article 56 (“*Права, юрисдикция и обязанности прибрежного государства в исключительной экономической зоне*” means “*Rights, jurisdiction and duties of the coastal State in the exclusive economic zone*”);

¹⁰ A.G. Pivovarov & V.I. Osipov, *English-Russian Legal Dictionary* (2003), p. 799; Пивовар А. Г. Большой англо-русский юридический словарь. – М.: «Экзамен». – 2003, с.797 (A.G. Pivovarov, *Big English-Russian Legal Dictionary* (2003), p.797).

- Article 58 (“*Права и обязанности государств в исключительной экономической зоне*” means “*Rights and duties of other States in the exclusive economic zone*”);
- Article 70 (“*Право государств, находящихся в географически неблагоприятном положении*” means “*Right of geographically disadvantaged States*”);
- Article 72 (“*Ограничение на передачу прав*” means “*Restrictions on transfer of rights*”);
- Article 77 (“*Права прибрежного государства на континентальный шельф*” means “*Rights of the coastal State over the continental shelf*”);
- Article 90 (“*Право судоходства*” means “*Right of navigation*”);
- Article 297(1) (“*К спорам, касающимся толкования или применения настоящей Конвенции в отношении осуществления прибрежным государством своих суверенных прав или юрисдикции*” means “*Disputes concerning the interpretation or application of this Convention with regard to the exercise by a coastal State of its sovereign rights or jurisdiction...*”);
- Article 299 (“*Право сторон договориться о процедуре*” means “*Right of the parties to agree upon a procedure*”).

b. Russian legal doctrine

12. Russian legal doctrine further supports the conclusion that the Russian term “*исторические правооснования*” corresponds to the English term “*historical titles*” and is legally distinct from “*historic rights*” (“*исторические права*”).

13. This is most authoritatively confirmed by Professor A.N. Vylegzhanin, the Head of the International Law Department at Moscow Institute of International Relations (at the Ministry of Foreign Affairs of the Russian Federation) and one of Russian leading scholars in the law of the sea, in his seminal treatise “*Qualification of Maritime Areas as Historic Waters in International Law: Theory and State Practice*”.¹¹

14. In this treatise, Professor Vylegzhanin uses interchangeably the terms “историческое правооснование” and “исторический титул”, which both mean “historical title”. For example, he addresses the ICJ decision in the *Anglo-Norwegian Fisheries* case of 1951, in which the Court, dealing with a claim based on a historical title, set forth the following definition of “historic waters”:

By “historic waters” are usually meant waters which are treated as internal waters but which would not have that character were it not for the existence of a historic title.

15. Professor Vylegzhanin translates this definition into Russian as follows:

Историческими водами называют те внутренние воды, на которые имеются *исторические правооснования (исторический титул)*.¹²

16. Thus, he uses the term “исторические правооснования” to convey the meaning of the English term “historic title”. As a synonym of “исторические правооснования”, he also uses the term “исторический

¹¹ Выегжанин А.Н. (ред.), *Международно-правовая квалификация морских районов в качестве исторических вод (Теория и практика Государств)* (2012) (A.N. Vylegzhanin (ed.), *Qualification of Maritime Areas as Historic Waters in International Law: Theory and State Practice* (2012)).

¹² Выегжанин А.Н. (ред.), *Международно-правовая квалификация морских районов в качестве исторических вод (Теория и практика Государств)* (2012), p. 20.

титул” (“historic title”).¹³ Notably, Professor Vylegzhanin does not use the term “исторические права” (“historic rights”).

17. This is because he draws a clear legal distinction between the concept “историческое правооснование” (“historic title”) and the concept “исторические права” (“historic rights”). *First*, Professor Vylegzhanin observes that unlike a historic title, historic rights are non-exclusive and unrelated to sovereignty or jurisdiction over maritime zones.¹⁴ *Second*, he observes that unlike historic rights, which may exist farther ashore based on fishing practice, historic waters claimed on the basis of a historic title must be adjacent to the coastline of a State, and “a State may not have a historic title to a maritime area located at the coasts of other States.”¹⁵

¹³ Other Russian scholars are to the same effect. See e.g. E.L. Sokolova, *Institute of Historic Waters in Modern International Law (PhD Dissertation (2014))* (Like A.N. Vylegzhanin, E.L. Sokolova also uses interchangeably the terms “историческое правооснование” and “исторический титул”, which both mean a “historical title”. For example, in section 1.3 entitled “Соотношение понятий исторические правооснования (исторический титул) и приобретательная давность в международном праве”, the term “исторический титул” is used as an explanation for the term “исторические правооснования”). Access mode: http://www.mgimo.ru/files2/y12_2014/262261/sokolova_diss.pdf.

¹⁴ Выегжанин А.Н. (ред.), *Международно-правовая квалификация морских районов в качестве исторических вод (Теория и практика Государств)* (2012), р. 29 (“Исторические права отличаются от «исторических вод» и тем, что первые не представляют собой зональные требования юрисдикции или суверенитета”) (“Historical rights are also different from “historic waters” in that the latter do not constitute claims to jurisdiction or sovereignty in maritime areas.”).

¹⁵ Выегжанин А.Н. (ред.), *Международно-правовая квалификация морских районов в качестве исторических вод (Теория и практика Государств)* (2012), р. 30. («Различие между понятиями «исторических вод» и «исторических прав» состоит и в том, что объявляемые прибрежным государством исторические воды должны обязательно прилегать к его побережью. Буше (Bochez), например, специально отметил, что «государство не может иметь исторический титул на морской район, расположенный у побережья других государств»». (ударение автора)) (“The difference between “historic waters” and “historic rights” also lies in the fact that declared by a State historic waters *must be adjacent to its coast*. Bochez, for example, specifically stressed that “a State cannot have a historic title to a maritime area located at the coasts of other States.”) (emphasis by the author).

18. It follows that in Russian legal doctrine the term “исторические правооснования” means “historical titles”, which presupposes the exercise of sovereignty over a near shore maritime area for a long period of time with acquiescence of third States. By contrast, Russian legal doctrine uses the terms “исторические права” to describe non-exclusive “historic rights” short of sovereignty.

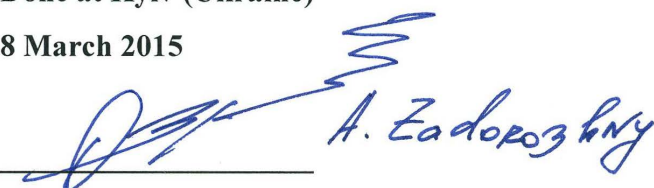
C. CONCLUSION

19. The relevant legal dictionaries and doctrinal works of Russian scholars in the law of the sea confirm that in the Russian text of Article 298(1)(a)(i) the term “исторические правооснования” means “historic titles”, which is exactly the same term that is used in the English text of this provision.

20. The Russian legal doctrine also distinguishes between “historic titles” (“исторические правооснования”) and “historic rights” (исторические права): the latter involves exclusive rights of sovereignty; the former relates to non-exclusive rights short of sovereignty.

Done at Kyiv (Ukraine)

8 March 2015

A handwritten signature in blue ink, appearing to read 'A. Zadorozhny', is written over a horizontal line. The signature is stylized and includes a large, decorative flourish above the name.

Professor Alexander Zadorozhny

Alexander Zadorozhny

Professor of International Law, Chairman of the International Public Law Chair, Head of International Law Department, Institute of International Relations of Kyiv National Taras Shevchenko University

Born on **June 26, 1960** in the village of Krasny Kut, Luhansk region, Ukrainian SSR

1982 — graduated Kyiv State Taras Shevchenko University with honors, majoring in international law, English interpreter.

1982-1988 — Assistant Professor, International Law Department of Kyiv State Taras Shevchenko University

1988-2003 — Deputy Dean, Associate Professor, International Law Department, Faculty of International Relations and International Law, Kyiv State Taras Shevchenko University (since 1993 - Institute of International Relations of Kyiv National Taras Shevchenko University)

Since 2003 — Professor of International Law, Chairman of the International Public Law Chair, Head of International Law Department, Institute of International Relations of Kyiv National Taras Shevchenko University.

1998-2006 — Member of the Ukrainian Parliament (Verkhovna Rada of Ukraine), 3rd and 4th convocations

1998-2000 — Member of the Parliamentary Committee for Foreign Affairs

As a member of Committee on foreign affairs took part in the Ukrainian-EU parliamentary committee established in Brussels in 1998 in accordance with the article 90 of The Agreement on partnership and cooperation between Ukraine and EU. Prepared materials and suggestions to 6 meetings of Committee and worked in 3 working groups of Committee. Implementing the recommendations of the Committee drafted 12 laws regarding the implementation of the

Committees' decisions in the legislation of Ukraine. Drafted 27 bills on adaptation of the Ukrainian Laws to the requirements of European legislation. In 1999 was elected and until 2002 headed a group of inter-parliamentary relations with the Republic of Hungary.

2000-2002 — Chairman of the Parliamentary Committee on Legal Policy

Legislative and law-drafting activity in the field of human rights and the rights of national minorities in Ukraine. As a Chairman of the Committee he introduced more than 100 bills to ensure the reform of the judiciary, executive service, the judicial process. A special place in legislative and law-drafting activity is engaged in providing advice to Parliamentary committee of the Central European Initiative, to which he was delegated in 2000. He took part in more than 20 meetings of the CEI inter-parliamentary groups. As a result of their work he introduced 17 draft laws on due procedural rights of citizens in the judiciary, the rights of national minorities in Ukraine and migrant workers from Ukraine.

2002-2006 — Member of the Parliamentary Committee on Legal Policy

2002-2005 — Permanent Representative of the President of Ukraine to the Parliament (Verkhovna Rada) of Ukraine

As the Permanent Representative of the President of Ukraine to the Verkhovna Rada of Ukraine accompanied in the legislative body of more than 200 presidential and government bills. Personally developed and introduced 54 bills: on the rights of minorities, on the rights of voters and the electronic register of voters, to protect citizens' personal data, to ensure the rights of young parents and others. He participated in 27 scientific legal conferences, published 31 scientific articles and two monographs on the effectiveness of the legislative process and for deputies' immunity. Participated in 11 committees and boards of the President of Ukraine and the Constitutional Committee of the Verkhovna Rada of Ukraine. Introduced 2 bills on amendments to the Constitution of Ukraine.

2007-2008 — Vice-Rector, Kyiv National Taras Shevchenko University

As Vice Rector of the University for educational and pedagogical work of humanitarian faculties prepared and participated in 17 scientific and educational conferences (6 international), participated in the preparation of guidelines for the organization of Master's programs in

foreign languages for Ukrainian and foreign students, has prepared guidance on training foreign students legal disciplines at the Law Faculty and the Faculty of International Law.

2008-2010 — Adviser of the Prime Minister of Ukraine

As Advisor to the Prime Minister of Ukraine was preparing draft legislation and regulations, and took part in the preparation of the draft program of the Government on legal policy, took part in the drafting of international treaties.

2014 – nominated by the Minister of Foreign Affairs of Ukraine as the Chairman of the Council of Experts in International Law for the MFA of Ukraine

1990-1998 — Founder, President of *Proxen* law firm

Ph.D. in International Law (1988), President of Ukrainian Association of International Law (1999), Honored Lawyer of Ukraine (2000), Professor (2003), Corresponding Member of the Ukrainian Academy of Legal Sciences (2004), Member of the Permanent Court of International Arbitration for Ukraine (The Hague) (2004)

Fluent in Ukrainian, Russian, and English

Member of the National Council on reforming of the judicial system of Ukraine, the National Council on Adaptation of Ukrainian legislation to European Union law, Member of the International Bar Association.

Prepared thirteen Ph.D's in International Law

Interests: History and theory of Public International Law, Law of the Sea, International Disputes Settlement, Comparative and Ukrainian Constitutional law, Foreign policy of Ukraine and International law, Legal regulation of foreign trade, International Environmental and Water Law

PhD thesis “Genesis and Evolution of Mondialism: international legal aspects” (1988)

Author of over 200 publications on the International Law and Constitutional Law – including three individual monographic books and

four text-books (as a co-author) on Public International Law, author (co-author) of over 300 draft laws

Editor-in-chief of the *Ukrainian Journal of International Law*

Member of the Editorial Board of the *Ukrainian Yearbook of International Law*

Deputy Chairman of the Editorial Board of the Ukrainian Diplomatic Encyclopedia

Chairman of the Editorial Board of the *Library of International Law Chair* book series – 32 volumes published in 2004-2015

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Annex 513

C. Schofield, et al., *An Appraisal of the Geographical Characteristics and Status of Certain Insular Features in the South China Sea* (Mar. 2015)

**ARBITRATION UNDER ANNEX VII OF THE UNITED NATIONS CONVENTION
ON THE LAW OF THE SEA**

REPUBLIC OF THE PHILIPPINES

v.

PEOPLE'S REPUBLIC OF CHINA

Supplemental Written Submission of the Philippines

**An Appraisal of the Geographical Characteristics and Status of Certain Insular
Features in the South China Sea**

Report prepared by

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March 2015

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An Appraisal of the Geographical Characteristics and Status of Certain Insular Features in the South China Sea

1. Introduction and Scope

The present report provides a description and analysis of the geographical characteristics of certain insular features in the South China Sea. The objective here is to provide a critical assessment of the insular features in question, leading to conclusions as to the appropriate categorisation of these features and therefore their capacity to generate claims to maritime jurisdiction. The report starts with a brief introductory section providing an overview of general geographical descriptions and characterisations of the South China Sea islands and island groups. Some contextual information concerning the geographical characteristics and the history of charting and surveying activities in the South China Sea is then provided. The report then turns to consideration of the geographical characteristics of insular status. That is, an assessment of the key criteria of a geographical character by which different categories of insular feature can be distinguished in keeping with the provisions of the United Nations Convention on the Law of the Sea (UNCLOS) to which both China and the Philippines are parties.¹

Geographical factors that are likely to assist in the task of identifying and distinguishing between different types of insular feature, the rationale behind the choice of these factors together with the methods by which these factors are identified and highlighted are then outlined. This draws on the past work of the authors, includes reference to nautical charts and sailing directions and features the analysis of high resolution satellite imagery including the application of advanced techniques featuring the analysis of digital elevation models. The report provides an appraisal of the geographical characteristics and status of all 49 insular features regarding which the Arbitration Tribunal has requested further information in its Request of 16 December 2014. These features are predominantly within the Spratly Islands group although two features are located further to the north.

It can be noted that the term “insular features” is used here as a broad ‘catch-all’ term to encompass a range of different types of offshore features including islands, rocks, reefs, low-tide elevations and artificial islands, installations and structures, as well as entirely submerged features of the seabed such as sub-surface shoals and banks. It is also worth observing that the authors, whilst requested to prepare the present report by the Government of the Philippines, do so as independent experts and do not seek to adopt any national opinion. Further, the issue of sovereignty over insular features is not dealt with in this report. Instead, the report seeks to provide an objective appraisal of geographical characteristics and appropriate classification of certain insular features of the South China Sea.

2. Geographical and Historical Overview

The South China Sea is a large semi-enclosed ocean space located between the southern coast of China and Taiwan to the north, the mainland and peninsular coasts of Southeast Asia to the west and the archipelagic island groups of the Philippines, Borneo and Indonesia to the east

¹ United Nations Convention on the Law of the Sea, adopted 10 December 1982, 1833 UNTS 3 (entered into force 16 November 1994) (UNCLOS).

and south. In total eight States (or entities) border the South China Sea: Brunei, the People's Republic of China (PRC), Indonesia, Malaysia, the Philippines, Singapore, Taiwan (Republic of China), and Vietnam.

The limits of the South China Sea have been defined as extending southwards from the Strait of Taiwan to around the 3° South parallel of latitude.² It has, however, been suggested that the 1° North parallel of latitude may be a more appropriate southern limit.³ If the latter definition is taken, the total surface area of the South China Sea (including the Gulf of Thailand) has been calculated at approximately three million square kilometres (equivalent to around 874,660 square nautical miles (nm)).⁴ The coastal geography of the South China Sea is characterized and complicated by the presence of a profusion of generally small islands, islets, rocks and reefs.

Main Islands Groups of the South China Sea

As noted, a key feature of the maritime geography of the South China Sea is the presence of myriad predominantly small islands, islets, rocks, cays, shoals and drying reefs. The principle island groups of the South China Sea are as follows (clockwise from the northwest):

- *The Paracel Islands* which comprise around 130 features, predominantly divided between the Crescent and Amphritite groups;⁵
- *The Pratas Islands*, the principle feature of which is Pratas Reef which is a large circular coral reef, enclosing a substantial lagoon;⁶
- *Scarborough Reef (or Shoal)*, a large coral atoll, submerged at high tide save for several small outcrops, and associated lagoon;⁷
- *Macclesfield Bank*, an entirely submerged bank located to the west of Scarborough Reef;⁸
- *The Spratly Islands*, consisting of over 100 insular features of varying character including a number of predominantly very small islands, islets, rocks, reefs as well as numerous low-tide elevations and submerged features, scattered over a considerable area of the southwestern South China Sea.⁹; and,
- *The Natuna Islands* which comprise an extensive (over 200) group of islands in the southwestern South China Sea.¹⁰

² According to the International Hydrographic Organization, the southernmost defining point of the South China Sea is Lucipara Point on the east coast of Sumatra. See, International Hydrographic Organization, *Limits of Oceans and Seas*, Special Publication No. 23, 3rd ed. (Monte Carlo: IHO, 1953), 30.

³ Hasjim Djajal, "South China Sea Island Disputes," in M. H. Nordquist and J. N. Moore, eds., *Security Flashpoints: Oil, Islands, Sea Access and Military Confrontation* (The Hague: Martinus Nijhoff Publishers, 1998), 109–133, at 109.

⁴ *Ibid.* Technically the correct abbreviation for a nautical mile is "M", while "nm" denotes nanometres. However, "nm" is widely used by many authorities (for example the UN Office of Ocean Affairs and the Law of the Sea) and appears to cause less confusion than "M", which is often assumed to be an abbreviation for metres.

⁵ See, for example, United Kingdom Hydrographic Office (UKHO), *China Sea Pilot*, Vol.1, 8th edition, Admiralty Sailing Directions, Taunton: UKHO, 2010, pp.75-78.

⁶ *Ibid.*, p.78.

⁷ See, United Kingdom Hydrographic Office, *China Sea Pilot*, Vol.2, 9th edition, Admiralty Sailing Directions, Taunton: UKHO, 2010, p.74.

⁸ Termed a "below-water atoll" in the relevant British Admiralty Pilot with a least depth of water of 9.1m over it. See, UKHO, *China Sea Pilot*, Vol.1, *op.cit.*, pp.68-69.

⁹ Estimated to be of the order of 240,000km². See, Daniel J. Dzurek, *The Spratly Islands: Who's On First?*, (International Boundaries Research Unit, Durham, 1996): 1.

¹⁰ See, UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, pp.78-86.

This report is primarily concerned with the insular features that comprise the Spratly Islands, although Scarborough Reef and Macclesfield Bank located to the north of these features are also discussed, as is Reed Bank at the eastern margins of the Spratly Islands group.

A Labyrinth of Detached Shoals

With respect to the Spratly Islands, one notable early, 1889, description of these features by Findlay aptly refers to a “labyrinth of detached shoals.”¹¹ It can further be observed that traditionally the islands of the South China Sea have generally been ignored and avoided. Predominantly consisting of very small, uninhabited islets of little apparent intrinsic worth, they have long been regarded as little more than hazards to navigation. For example, British Admiralty navigational charts routinely marking the area occupied by the Spratly Islands, appropriately enough, as “Dangerous Ground”.¹² Indeed, the navigationally complex and hazardous character of the waters of the South China Sea is highlighted by the fact that many of the names, in English language at least, attributed to insular features in the area are, in fact, derived from vessels that were wrecked upon them. A case in point here is Scarborough Reef, concerning which the relevant British Admiralty sailing directions note was “named after the *Scarborough* which struck the reef in 1748”.¹³

In this context, the past studies of the second author of this report on the history of hydrographic surveys in the South China Sea are instructive. These show that early charts of the Spratly Islands group also featured a notable degree of uncertainty associated with the features shown on them. For example, the first edition of Captain James Horsburgh’s chart of the China Sea of 1821 included the notation “Position Uncertain” against multiple features.¹⁴ Subsequent charts of the era frequently included the notations “?” or “ED” standing for existence doubtful or “PD” signifying position doubtful.¹⁵ It is also the case that such early charts frequently included insular features that are now known to be non-existent.¹⁶ A key reason why this occurred and was sustained over multiple versions and updates of charts of the area lies in its strategic significance meaning that hydrographic information was routinely treated as confidential, classified as secret and thus not shared among charting authorities. For example, in the late 1920s, with concerns growing over the possibility of conflict, the UK Admiralty opted not to ‘fill in’ blank areas within the Dangerous Ground on published charts in order to keep potentially valuable hydrographic information confidential.¹⁷ Such policies inevitably led to confusion and inconsistencies between charts published by different sources.

These studies also serve to demonstrate how little frequented the Spratly Islands group generally was and illustrate how early explorations of the Spratlys group including the first detailed surveying of them was largely pioneered and conducted by the British Admiralty with the contributions of Japanese, United States and French hydrographers being more limited and generally occurring at a later date.¹⁸ This led to consternation in London when France formally claimed Spratly Island in the face of rising Japanese interest in certain

¹¹ Findlay, A.G., *Indian Archipelago and China Directory*, 3rd edn. (Richard Holmes Laurie, London, 1889), p.vi (first published in 1869).

¹² David Hancox and J.R. Victor Prescott, *Secret Hydrographic Surveys in the Spratly Islands*, (The Maritime Institute of Malaysia, Kuala Lumpur, 1997) at 11.

¹³ United Kingdom Hydrographic Office, *China Sea Pilot*, Vol.2, 9th edition, Admiralty Sailing Directions, (Taunton: UKHO, 2010), p.74.

¹⁴ Hancox and Prescott, 1997, at p.7.

¹⁵ *Ibid.*, at pp.14-15.

¹⁶ *Ibid.*, at p.7.

¹⁷ *Ibid.*, at p.50.

¹⁸ *Ibid.*, at p.135.

islands in the region including Itu Aba, Amboyna Cay and Spratly Island itself. In respect of the French sovereignty claim it has been observed that:

To say that the Admiralty was annoyed would be an understatement. The Royal Navy had surveyed Spratly Island and Amboyna Cay in 1868; long before any French naval ship had been near those islands.¹⁹

The picture provided by accounts of early surveying efforts in the South China Sea and with respect to the Spratly Islands in particular is of an area of very little interest to anyone save for mariners keen to avoid the threats to safe navigation that they represented. The South China Sea islands were therefore generally regarded as being of little value and were largely ill-frequented in consequence.

3. Geographical Aspects to Insular Status

The Regime of Islands is contained in Article 121 of UNCLOS:

1. An island is a naturally formed area of land, surrounded by water, which is above water at high tide.
2. Except as provided for in paragraph 3, the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf of an island are determined in accordance with the provisions of this convention applicable to other land territory.
3. Rocks which cannot sustain human habitation or economic life of their own shall have no exclusive economic zone or continental shelf.

Where an island exists on an atoll or in the case of islands possessing fringing reefs, Article 6 of UNCLOS, dealing with Reefs, applies:

In the case of islands situated on atolls or of islands having fringing reefs, the baseline for measuring the breadth of the territorial sea is the seaward low-water line of the reef, as shown by the appropriate symbol on charts officially recognized by the coastal State.

The terms “atoll” and “fringing reef”, which are used in Article 6 of UNCLOS have strict scientific meanings. However it does not appear that the drafters of the Article meant for these terms to be used in a restrictive sense.²⁰

The other key article dealing with insular features in UNCLOS is Article 13 which concerns low-tide elevations (LTEs) as follows:

¹⁹ *Ibid.*, at p.53.

²⁰ The United Nations expert commission study on baselines notes that geomorphologists reserve the term “atoll” for reefs which surround a lagoon and are surmounted by one or more islands; such reefs being generally pierced by channels and the lagoon waters having an average depth of 45 metres. The United Nations study goes on to acknowledge that such atolls are also categorised according to their location, with oceanic and shelf atolls being distinguished. Similarly, the term “fringing reef” has a strict scientific meaning, the most significant element of which is the fact that fringing reefs are the result of biological processes and are therefore distinct in character from rock platforms. See, United Nations, *Baselines: An Examination of the Relevant Provisions of the United Nations Convention on the Law of the Sea*, (Office for Ocean Affairs and the Law of the Sea, United Nations, 1989), at 6 and 8.

1. A low-tide elevation is a naturally formed area of land which is surrounded by and above water at low tide but submerged at high tide. Where a low-tide elevation is situated wholly or partly at a distance not exceeding the breadth of the territorial sea from the mainland or an island, the low-water line on that elevation may be used as the baseline for measuring the breadth of the territorial sea.
2. Where a low-tide elevation is wholly situated at a distance exceeding the breadth of the territorial sea from the mainland or an island, it has no territorial sea of its own.

The “naturally formed” component to Article 121(1) serves to disqualify artificially constructed ‘islands’ and artificial structures such as platforms constructed on features that are not themselves above high-tide such as submerged shoals or low-tide elevations. This is further reinforced by Article 60(8) of UNCLOS which states unambiguously that:

Artificial islands, installations and structures do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea, the exclusive economic zone or the continental shelf.

A distinction can, however, arguably be made here between wholly artificial island-building whereby a feature that is not naturally above high tide, such as a low-tide elevation or an entirely and permanently submerged shoal, is built up or subject to construction activities resulting in an installation or structure that emerges above high tide on the one hand and reclamation activities that result in the extension of an existing naturally formed feature that is above high tide. The former action would result in the construction of an artificial island, installation or structure entitled to no more than a 500 metre safety zone in keeping with Article 60(5) of UNCLOS. The latter action would simply extend and enhance a feature already fulfilling the terms of Article 121(1). Indeed, many States have undertaken extensive land reclamation works along their coasts which have served to increase their land area substantially and thus advance their normal baselines from which their maritime claims are measured further seaward into what was formerly maritime space. This practice is longstanding and can be regarded as generally accepted. That said, it is the view of the authors that the build-up, extension or enhancement of a naturally formed feature should not serve to change its insular status, for instance transforming a feature qualifying as an UNCLOS Article 121(3) “rock” into one capable of generating EEZ and continental shelf claims.

In keeping with these provisions there are three broad categories of insular feature: islands, low-tide elevations and artificial islands, installations and structures. Additionally, a fourth category can be identified, consisting of entirely submerged features that never emerge above low-water and therefore form part of the seabed and potentially the continental shelf.

Further, within the category of islands two distinct types of island can be distinguished. First, islands which, in accordance with Article 121(2)’s requirement that islands be treated in the same manner as “other land territory” can be used to generate a full suite of maritime zones, including continental shelf and EEZ rights. Second, Article 121(3) outlines a disadvantaged sub-category of island, termed “rocks”, which, being unable to sustain human habitation or economic life of their own, possess no continental shelf and EEZ rights.

Similarly, with respect to LTEs, two groups can be discerned, that is, low-tide elevations that fall wholly or partially within a territorial sea limit generated from the baselines of a feature

that is itself above high tide and those that fall entirely beyond such a territorial sea limit. The former may be used as part of the proximate state's territorial sea baselines.

The objective of this report is to highlight geographical aspects that can assist in distinguishing between these following distinct different categories of insular feature:

- Islands that are capable of generating continental shelf and EEZ rights.
- “Rocks” which, unable to sustain human habitation or economic life of their own.
- Low-tide elevations that fall wholly or partially within a territorial sea limit generated from the baselines of a feature that is itself above high tide.
- Low-tide elevations that fall beyond the territorial sea limit measured from the baselines associated with an above high-tide feature.
- Submerged features.
- Artificial islands, installations and structures

These geographical factors involve:

- Hydrographic issues: critically the question of whether a particular feature is above or below low and high tide levels;
- Geological issues relating to the physical make up or composition of a particular feature;
- Size considerations, that is, what the areal extend of a features is; and,
- Socio-economic criteria associated with the capacity of a feature to sustain human habitation or an economic life of its own.
- Distance measurements in order to ascertain whether any features identified as low-tide elevations fall wholly or partially within a territorial sea limit of an above high-water feature.

Distinguishing between types of insular feature:

Identifying Islands

Article 121(1) sets down four requirements for a feature to qualify legally as an island are identified: an island must be “naturally formed”, be an “area of land”, be “surrounded by water” and must also be “above water at high tide.” These are essentially geographical criteria.

As noted above, the “naturally formed” requirement serves to disqualify artificially constructed ‘islands’ and artificial structures such as platforms constructed on features that are not themselves above high-tide such as submerged shoals or low-tide elevations. This is underlined by UNCLOS Article 60(8)’s explicit statement that artificial islands, installations and structures “do not possess the status of islands”. Numerous such man made, generally military, structures exist on insular features among the Spratly Islands group. A potentially problematic issue here is that such ‘island-building’ activities that have occurred on a number of insular features among the Spratly Islands potentially making it difficult to discern naturally formed versus man-made (or enhanced) features. Reference to satellite imagery is deemed to be especially helpful with respect to distinguishing between man-made, artificial islands, installations and structures and features that are naturally formed but have experienced construction or reclamation activities that have served to significantly alter the character of a feature.

In principle, the size of a particular insular feature is not relevant to its status as an island so long as some part of it qualifies as a naturally formed area of land above high tide.²¹ Nonetheless, the majority of the features under consideration in this report are extremely small. Consequently, for those features identified as being above the high water level, area calculations are included as this is considered to be pertinent information regarding their geographical character.

Similarly, the “surrounded by water” requirement may also be regarded as self-evident and is not regarded as a problematic one with respect to the features reviewed in this study. This is demonstrated through reference to the satellite images included in the report.

The requirement that islands be “above high tide” is a critical consideration in order to discern whether a particular feature can be classified as being above high-tide and therefore subject to the regime of islands, Article 121, or is subject to Article 13 concerning low-tide elevations (above low-tide but submerged at high-tide) or is a non-insular, submerged feature (submerged at low-tide).

Here it can be noted that UNCLOS (nor, indeed, the 1958 Convention on the Territorial Sea and Contiguous Zone that preceded it),²² does not specify a particular tidal level or vertical datum, to be used in the definition of high or, indeed, low tides. The term “vertical datum” refers to the level of reference for vertical measurements such as depths and heights of tide. Additionally, defining tidal levels is likely to be technically challenging in the context of the complex tidal regime of the South China Sea which is variable spatially and temporally and which has not been subject to detailed hydrographic surveys in recent times.²³

Reference to nautical charting and the descriptions of features contained in sailing directions provides particularly useful information on this aspect of defining islands. This is supplemented by analysis of satellite imagery, including multi-spectral a (see below). Despite reference to these sources of information concerning tidal levels, uncertainties persist. This indicates that in the absence of detailed surveying, potentially including fieldwork, on individual insular features the question of whether they qualify as being subject to the Regime of Islands (Article 121) or are, in fact, low-tide elevations (subject to Article 13) will remain open to some question. The authors have sought to take into consideration all available information in reaching their conclusions as to the appropriate categorisation of the insular features covered by this report.

Distinguishing between islands capable of generating continental shelf and EEZ rights and “rocks” which cannot

Once features are established as being above water at high tide (as well as naturally formed, land and surrounded by water) then the question becomes how to discern between features capable of generating extended maritime claims and those that are not.

²¹ See, in particular, *Territorial and Maritime Dispute* (Nicaragua v. Colombia), Judgment, 19 November 2012, at para.37, available at <www.icj-cij.org/docket/files/124/17164.pdf>.

²² *Convention on the Territorial Sea and Contiguous Zone*, opened for signature 29 April 1958, 516 UNTS 205 (entered into force 10 September 1964).

²³ Y. Lyons, ‘Prospects for Satellite Imagery of Insular Features and Surrounding Marine Habitats in the South China Sea’, *Marine Policy* 45 (2014), pp.146-155, at p.150.

Article 121(3) of LOSC states that: “Rocks which cannot sustain human habitation or economic life of their own shall have no exclusive economic zone or continental shelf.” Rocks are islands, since they are defined as part of Article 121 dealing with the regime of islands. That is a “rock” must fulfil the terms of Article 121(1) and be “naturally formed”, an “area of land”, “surrounded by water” and “above water at high tide.” A “rock” is, in effect, a disadvantaged sub-category of islands whose zone-generative capacity, and thus value to a potential claimant, is significantly reduced.

Distinguishing between those features that qualify as islands and may be used as a basis to claim EEZ and continental shelf rights and those that do not because they are “rocks” within the meaning of Article 121(3) is challenging. Article 121 is drafted in ambiguous manner and is open to varied interpretation. Here it should be acknowledged that whilst this issue has inspired considerable attention and analysis from, particularly, legal scholars, no authoritative or definitive interpretation concerning how to discern between these different types of island has emerge.

Among the potential interpretations of the term “rock”, it has been suggested that interpretation should be on the basis of the ordinary meaning of the word, that is, as a hard, stony, hard part of the earth’s surface.²⁴ This would serve to exclude features not physically composed of rocky materials such as sand islets and coral cays from consideration as Article 121(3) rocks. Commentators are, however, divided on whether the term “rock” should be applied in such a restrictively literal sense. An alternative view is that the definition should be broadened to encompass features such as islets, coral cays, sandbanks that are not physically composed of rocky materials. In the absence of a general consensus as well as the lack of an authoritative interpretation on this point, it remains unclear as to what role the physical characteristics of a particular feature should play in determining its insular status.

The geographical area of the insular feature in question has also proved to be a prominent theme in the discussions on how to distinguish between features capable of generating claims to a full suite of maritime claims and those incapable of doing so. Arguments in this vein were evident in the run up to and during the drafting of Article 10 of the 1958 Convention on the Territorial Sea and Contiguous Zone.²⁵ During the Third Conference on the Law of the Sea (UNCLOS III), which resulted in UNCLOS, the issue of island size as a basis for differentiating the maritime entitlements of islands was again raised.²⁶ Malta presented draft articles which distinguished between “islands” and “islets” on the basis of size. While both islands and islets were defined as a “naturally formed area of land”, the former were to be “more than one square kilometre in area” and the latter “less than one square kilometre in area”.²⁷ According to the Maltese proposal, maritime claims from islands “less than 10 square kilometre in area” were to be restricted and a special convention was to be drafted in respect of the maritime claims of other, larger, islands “taking into account all relevant

²⁴ See, Prescott, J.R.V. and Schofield, C.H., *The Maritime Political Boundaries of the World*, (Leiden/Boston: Martinus Nijhoff Publishers, 2005), pp.61-62.

²⁵ See, Jayewardene, H.W., *The Regime of Islands in International Law*, (Dordrecht: Martinus Nijhoff, 1990), at 4-5.

²⁶ See, Nandan, S.N. and Rosenne, S. (eds.) *United Nations Convention on the Law of the Sea 1982: A Commentary*, Volume III (Dordrecht: Kluwer Law International, 1995), at 328. On the legislative history of Article 121, see also, United Nations, Division for Ocean Affairs and the Law of the Sea, *Régime of islands: Legislative history of Part VIII (Article 121) of the United Nations Convention on the Law of the Sea*, (United Nations: New York, 1988).

²⁷ UN Doc.A/AC.138/SC.II/L.28, Article 1. See, Nandan and Rosenne, 1995: 328.

circumstances.”²⁸ Ireland also made a proposal that islands should possess at least 10 per cent of the land area and 10 per cent of the population of the State.²⁹ A group of 14 African States similarly suggested that the maritime spaces of islands should be determined “according to equitable principles taking into account all relevant factors and circumstances” including island size, island population (or lack of), “contiguity to the principal territory”, whether the island was “situated on the continental shelf of another territory”, and the feature’s geological and geomorphological structure and configuration.³⁰ Romania also made proposals, concerning both size and habitability. Romania suggested a new category of insular feature – “islets and small islands”.³¹ According to the Romanian view, such features being “uninhabited and without economic life, which are situated on the continental shelf of the coast, do not possess any of the shelf or other marine space of the same nature.”³² Romania’s proposals, similar to those of Malta and the aforementioned African States were aimed at denying or restricting small insular features from the maritime zones to be accorded to “true” islands.

An attempt to tackle the problem of defining islands by size was undertaken by Robert Hodgson, the Geographer at the United States Department of State. His 1973 Research Study, *Islands: Normal and Special Circumstances*, included a categorisation of islands as follows:

1. rocks, less than .001 square mile in area;
2. islets, between .001 and 1 square mile;
3. isles, greater than 1 square mile but not more than 1,000 square miles; and,
4. islands, larger than 1,000 square miles.³³

Contrary views were, however, expressed, notably on the part of states in possession of many insular features, including small ones, such as Greece. For example, the representative of Greece reacted to the above-mentioned Maltese proposal by observing that:

...the regime of islands could not be legally based on criteria of size, population, geographical location or geological configuration without jeopardising the principles of sovereign equality and the integrity of territorial sovereignty.³⁴

Ultimately, and in large part to opposing national positions and conflicting national interests, the final text of Article 121 and particularly its third paragraph which was proposed at the third session of UNCLOS III in 1975,³⁵ remained (and remains) ambiguous and no arbitrary size criteria was included in the Article to distinguish between islands capable of generating EEZ and continental shelf rights and “rocks” which cannot. Nonetheless, this can be

²⁸ UN Doc.A/AC.138/SC.II/L.28, Articles 9, 11 and 15. See, Nandan and Rosenne, 1995: 328-329.

²⁹ UN Doc.A/CONF.62/C.2/L.43 (1974).

³⁰ UN Doc.A/AC.138/SC.II/L.40. See, Nandan and Rosenne, 1995: 329-330. The 14 States were Algeria, Cameroon, Ghana, Ivory Coast, Kenya, Liberia, Madagascar, Mauritius, Senegal, Sierra Leone, Somalia, Sudan, Tunisia and Tanzania (Nandan and Rosenne, 1995: 329-330).

³¹ UN Doc.A/AC.138/SC.II/L.53. See, Nandan and Rosenne, 1995: 330.

³² *Ibid.*

³³ Hodgson, R., *Islands: Normal and Special Circumstances*, (Washington D.C.:U.S. Department of State, Bureau of Intelligence and Research, Research Study, 1973).

³⁴ UN Doc.A/AC.138/SC.II/L.29. See, Nandan and Rosenne, 1995: 329.

³⁵ Article 132 of the Informal Single Negotiating Text of 1975 proposed by Reynaldo Galindo Pohl, of El Salvador, Chairman of the Second Committee of UNCLOS III at the time. See, United Nations, 1980 (A/CONF.62/WP8/Part II). See also, Nandan and Rosenne, 1995: 335.

considered as being pertinent to their classification as an island capable of generating claims to EEZ and continental shelf rights and one that is not, that is, an Article 121(3) “rock”.

Other proposals for the interpretation of Article 121(3) have centred around the phrases “cannot sustain human habitation” and “economic life of their own”. To an extent informed by the drafting history of Article 121, such proposals have tended to revolve around factors such as the presence of vegetation or water and evidence of human habitation and activity or development either in the past or at present. These factors may be considered to be useful indicators of the potential capacity of a particular insular feature to sustain human habitation or an economic life of its own. The question of whether a given feature can sustain human habitation or an economic life of its own can be regarded as a critical consideration with respect to assessment of the South China Sea insular features covered in this report.

Here it can also be observed that numerous islands, especially small, remote and sparsely inhabited or uninhabited islands that are arguably analogous to the features under consideration in this report, have only been accorded weight with respect to territorial sea boundary delimitation. That is they have, in effect been treated as though they had the status of Article 121(3) “rocks” although this was not made explicit. Pertinent examples where this has occurred in the jurisprudence of international Courts and Tribunals include the *Gulf of Maine Case* where numerous small islets and low-tide elevations were ignored,³⁶ in the *Eritrea/Yemen Arbitration* where isolated islands, al-Tayr and the Zubayr group, had no influence on the delimitation line³⁷ and in the *Qatar/Bahrain Case* where a potentially influential small island, Qit’at Jaradah, was discounted.³⁸ Similarly, Serpents’ Island was deemed inappropriate for use as a basepoint in the construction of a provisional equidistance-based boundary line in the *Black Sea Case*,³⁹ with the International Court of Justice concluding that “Serpents’ Island should have no effect on the delimitation in this case, other than that stemming from the role of the 12-nautical-mile arc of its territorial sea.”⁴⁰ In analogous fashion Bangladesh’s St. Martin’s Island, a feature with an area of 8 km² and home to a permanent population of around 7,000 people, was also not used as a basepoint for the construction of the provisional delimitation line for EEZ and continental shelf by the International Tribunal for the Law of the Sea.⁴¹

Identifying Low-tide Elevations

Article 13 of LOSC, which repeats the terminology found in Article 11 of the Geneva Convention on the Territorial Sea and Contiguous Zone, defines a low-tide elevation as a “naturally-formed area of land which is surrounded by water at low-tide but submerged at high-tide.” Low-tide elevations are not capable of generating claims to maritime space in

³⁶ *Delimitation of the Maritime Boundary in the Gulf of Maine Area* (Canada v. United States), [1984] *ICJ Reports* 246 (hereinafter, “*Gulf of Maine Case*”), para. 210.

³⁷ *Eritrea/Yemen Arbitration, Award of the Arbitral Tribunal in the Second Stage of the Proceedings (Maritime Delimitation)*, Award of 17 December 1999, available at, <http://www.pca-cpa.org/showpage.asp?pag_id=1160>, paras. 147-148.

³⁸ *Case concerning Maritime Delimitation and Territorial Questions between Qatar and Bahrain* (Qatar v. Bahrain), [2001] *ICJ Reports* 40, para.219.

³⁹ *Case Concerning Maritime Delimitation in the Black Sea* (Romania v. Ukraine), Judgment of 3 February 2009, available at <<http://www.icj-cij.org/docket/files/132/14987.pdf>>, para. 149.

⁴⁰ *Ibid.*, para.188.

⁴¹ *Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal* (Bangladesh/Myanmar), International Tribunal for the Law of the Sea (ITLOS), Case no.16, Judgment, 14 March 2012, paras 143 and 265, available at <www.itlos.org/fileadmin/itlos/documents/cases/case_no_16/1-C16_Judgment_14_02_2012.pdf>.

their own right and are considered to be distinct from the islands as a result of their being inundated state at high tide. The key consideration here is, once again, vertical datum issues. That is, whether a given feature is permanently below the high water mark yet above low water. As noted above, observations drawn from sailing directions that a given feature “drys” can be considered as a particularly useful indicator here and where a feature is described as such it has been classified as low-tide elevation (or potential low-tide elevation), even if reference to high-resolution satellite imagery has not proved to be persuasive on this point. Additionally, analysis of satellite imagery is helpful in this regard. It is worth noting, however, that where features of especially low elevation are under consideration, confirming that they do indeed emerge above low-water level can be highly problematic, especially in the absence of modern hydrographic surveys in large part thanks to the disputes that exist in the South China Sea.

Identifying Low-tide Elevation that can be used as basepoints to generate territorial sea rights and those that cannot

As noted above, Article 13(1) provides that where a low-tide elevation is “wholly or partly at a distance not exceeding the breadth of the territorial sea from the mainland or an island, the low-water line on that elevation may be used as the baseline for measuring the breadth of the territorial sea” whereas Article 13(2) states that where a low-tide elevation is “wholly situated at a distance exceeding the breadth of the territorial sea from the mainland or an island, it has no territorial sea of its own.”

In order to identify which low-tide elevations may be used as basepoints from which to measure territorial sea limits and those which cannot land, areas, including islands, need to be defined as do low-tide elevations. The baselines associated with both islands and low-tide elevations then need to be analysed. A 12 nautical mile territorial sea limit from the baselines associated with mainland and islands can then be defined in order to determine which, if any, low tide elevations fall wholly or partially within the outer territorial sea limits so described. This was achieved through the computation of geodetically rigorous 12 nautical mile limits defined from interpreted normal baselines within a geographical information system (GIS) (see below).

Identifying Submerged features

The key issue concerning the identification of wholly submerged features is, once again, related to tidal levels and vertical datum issues. Suggestions in sailing directions that features have a “least depth” over them of a number of metres is highly suggestive that the feature in question is a wholly submerged one. Additionally, analysis of satellite imagery, including use of multi-spectral analysis has been applied to support interpretation (see below).

Identifying artificial islands, installations and structures

As noted above, a significant number of insular features located in the Spratly Islands group have had man-made structures build on them. Generally such interventions can be readily identified with analysis of satellite imagery particularly useful in this regard. Nonetheless, there are some instances of substantial ‘island-building’ activities. Where there is no other insular feature above high-water at a particular location difficulties may exist on the issue of verifying whether the man-made structure was built on, and entirely covers, a naturally formed feature. In such instances further investigation, especially regarding the history of the feature in question, potentially coupled with fieldwork is recommended.

4. Research Approach

This report builds on the previous work of the authors, especially the above-noted historical and archival work of the second author related to hydrographic surveys among the Spratly Islands group and his past analysis of nautical charting and sailing directions of the South China Sea.⁴² The report also draws upon contemporary hydrographic information and observations. It also features analysis of satellite imagery, including multi-spectral analysis of high resolution satellite imagery, coupled with use of digital elevation models and integrated in a geographical information system (GIS) capable of making calculations in a geodetically robust manner.

The following data sources and analysis techniques were used in the preparation of the report:

Nautical charting

United Kingdom Hydrographic Organisation (UKHO) Admiralty Nautical Charts were used in the compilation of this study. These were incorporated into the GIS used for analysis as GeoTIFF's.⁴³ Additionally other charts were used consulted as required.⁴⁴ However, the small scale of available charting compares poorly with the scale and resolution of satellite imagery available. That is, in a format that is georeferenced and can therefore be used in the GIS with its spatial characteristics preserved. The GIS used was the CARIS LOTS (Law of the Sea), Version 4.1.1 software (see below).

Satellite imagery

A variety of satellite imagery was used in the present analysis. This included Landsat imagery of several types and drawn from differing timeframes with a range of resolutions. This includes Minor Landsat TM4⁴⁵ & TM5⁴⁶ (1970 - 1999) at 30.0 and 28.5 metre ground resolution imagery, Landsat TM7⁴⁷ (2000 - 2006) at 14.25 metre ground resolution Imagery (in formats⁴⁸ allowing for multi-spectral image analysis – see below), and Landsat TM8⁴⁹ (2010 - 2014) at 14.25 metre ground resolution imagery. The latter system includes digital elevation modelling (DEM) capability for topography (elevation) and bathymetry (water depths) or 'Topo-Bathy'. This 3D Elevation information allows for additional precision mapping and feature identification procedures, particularly when combined with the availability of modern high resolution satellite imagery (acquired via DigitalGlobe) ranging 0.5 to 1.0 metre ground resolution.⁵⁰

It should be noted, in order of least to most accurate mapping quality for all features in this study, the following order should be considered. As there was limited availability of high-resolution imagery, the 22 above high-water features covered in the first group analysed

⁴² Hancox, D. and Prescott, J.R.V., *A Geographical Description of the Spratly Islands and An Account of Hydrographic Surveys Amongst Those Islands*, Maritime Briefing, 1, 6 (International Boundaries Research Unit, Durham, 1995), and Hancox, D. and Prescott, J.R.V., *Secret Hydrographic Surveys in the Spratly Islands*, (The Maritime Institute of Malaysia, Kuala Lumpur, 1997).

⁴³ Notably UKHO Nautical Chart 3483 (1:1,500,000 scale Published ~ Dec 2013) and Chart 2660 (1:1,550,000 scale Published ~ April 1972).

⁴⁴ For example, Malaysian Navy Chart MAL6 (1:1,250,000 scale Published ~ October 1991).

⁴⁵ Landsat TM4 (30.0m Imagery (1970 - 1990) = 2x scenes were used.

⁴⁶ Landsat TM5 (28.5m Imagery (1990 - 1999) = 2x scenes were used.

⁴⁷ Landsat TM7 (14.25m Imagery (2000 - 2006) = 8x scenes were used.

⁴⁸ MrSID Formats & as GeoTIFFs.

⁴⁹ Landsat TM8 (14.25m Imagery & DEM) (2010 - 2014) = 15x scenes were used.

⁵⁰ Digital Globe Imagery: multiple images were used at 0.5 to 3.0 metre resolution (2005 - 2014).

below (Section 5.1) are covered by high-resolution imagery, while the remaining features were analysed using combinations of nautical charts and Landsat TM7 imagery.

Precisions and accuracies associated from used Digital datasets (in order of least to most accurate) are as follows:

- UKHO Admiralty Charts (as GeoTIFFs): = +/- 1000 metres ground accuracy.
- MrSIDs satellite images (as static Landsat TM7 (B7+B5+B4) combination): +/- 50 metres ground accuracy.
- Landsat TM7 (GeoTIFF's as Multi-spectral Analysis): +/- 25 metres ground accuracy.
- Recent High Resolution Satellite Imagery (as GeoTIFFs ~ Digital Globe): 0.50 to 1.00 metre, equivalent to +/- 5.0 metres ground accuracy

Satellite imagery proved to be especially valuable in the appraisal and classification of features. Here it should be noted that the land/sea interface shown on the imagery is generally understood to show mean high water (MHW). However, as the absolute time the high-resolution satellite imagery shown above was captured is not known, it cannot be stated with total confidence that this is the case. Nonetheless, the satellite imagery acquired and analysed for the present report has proved to be invaluable in enhancing understanding of the geographical characteristics of the insular features under discussion. Analysis of satellite imagery was, it should be emphasised, not used in isolation but was complemented by other sources of hydrographic and other geographic information including nautical charts and sailing directions.

GIS Analysis

All data, analysis and measurements were conducted in the CARIS LOTS (Law of the Sea) GIS software program (Version V4.1.1). All basemaps and measurements were calculated geodetically using the WGS84 Datum, Mercator projection, 0.25 metre ground resolution.

This specialised GIS package, specifically designed for law of the sea applications, allows for geodetically robust calculations to be made. Area calculations provided in the report, for instance concerning the above high-water areas of insular features, are provided in geodetic and planimetric terms. The former are preferable in the maritime domain as they take into account datum and spheroid calculations and therefore the curvature of the Earth. In contrast, planimetric calculations are in common usage for terrestrially oriented GIS. Both calculations are included for the sake of completeness.

Coastlines

All computed coastlines were conducted interactively, in CARIS LOTS, digitizing the land-sea interface using the best available imagery combinations (outlined above). The features identified as being above high-water and meeting the requirements of Article 121(1) of UNCLOS below were for the most part analysed using sub-metre high resolution imagery at a scale of 1:1000. The land areas of these features, termed “Geodetic Areas”, were computed using these interpreted coastlines which, as noted were predominantly based on sub-metre source information.

Normal Baselines

As noted above, Article 6 of UNCLOS provides that where islands are located on an atoll or an island possesses fringing reefs, baselines consistent with the “seaward low-water line of the reef” are applicable. This logic was followed and used for all features covered in this study. The methodology employed can be characterised as a “visual interpretation”,

facilitated through the GIS coupled with high resolution satellite imagery. This technique has been shown to deliver results with far superior positional accuracy as when compared to the (older) currently available nautical charts for the study region. In most cases, the surveys which provide the basis for the depiction of the features on these charts were collected 40 or more years ago, and when compared to present day high resolution (high accuracy) imagery, differences and discrepancies can be in the thousands of metres. Therefore, although these “visual interpreted” normal, low-water line baselines will not be as accurate as compared to a 2 x 2 metre LiDAR⁵¹ (Topo-Bathy) Survey for the entire region, the costs involved in conducting such a survey are prohibitive high (estimated to be in excess of US\$25 million and involving months of data collection for LiDAR surveys). Moreover, even should cost considerations be overcome, ensuring safe operations for conducting such surveys in the region in question must be considered to be highly problematic.

Theoretical Territorial Sea Limits

The interpreted normal baselines (forming the outer edges of the drying fringing reefs) were used in CARIS LOTS GIS software to then produce the geodetic territorial sea limits, comprising 12 nautical mile envelopes of arcs measured from such baselines for all islands identified in the course of the present study.

Finally, regarding the research approach adopted in this study its limitations should be acknowledged. It remains the case that for a number of features conflicting reports exist regarding a particular feature potentially suggesting differing insular status. The application of the techniques outlined above can aid in the clarification of the geographical characteristics of insular features but given the scale and resolution of available imagery this cannot necessarily deliver definitive answers in all cases. In such a situation, a critical yet balanced approach taking into account best available information was adopted.

Multi-spectral Analysis of Satellite Imagery

The CARIS LOTS (Law of the Sea ~ V4.1) software offers advanced multi-spectral image analysis functionality. This capability was specifically written into the GIS by the third author of the present report when he was Product Manager of the software so as to make use of modern-day available Landsat Satellite Imagery. All recent Landsat collected satellite imagery campaigns (TM5, 1990 - 1999), (TM7, 2000 - 2012) and (TM8, 2013-present day) can be used with this advance mapping technique.

Multi-spectral analysis, makes use of different red, green and blue (R+G+B) (8-bit + 8-bit + 8-bit) combinations of whatever aged TM satellite imagery available. The resulting 24-bit colour images (depending on the band Combination) provides for a variety of spectral results. Typically there are six usable Bands are available, exhibiting varying spectral signatures, in a single Landsat TM scene that may be used for this exercise (Bands 1-5 and Band 7 with Band 6 not usable for this purpose being a thermal and cannot be combined with the other Bands). The Multi-spectral Analysis Tool within the CARIS LOTS GIS Law of the Sea Software allows for any three band combination (in R+G+B) such that, with six individual Bands available there are up to 216 combinations of Bands available for Multi-spectral Image Analysis (that is, $6 \times 6 \times 6 = 216$).

For example, a combination of Band 3 + Band 2 + Band 1, which is used in this study, typically will results in a normal colour photograph, showing waters in blue, vegetation as

⁵¹ A combination of the terms “light” and “radar”.

green, beaches as white sand and near shore reefs as darker brown and so forth. In contrast, a multi-spectral analysis using an opposite combination of Bands, that is, Band 7 + Band 5 + Band 1, will show *only* features that are above water, so no underwater features (such as shallows, submerged reefs) are shown. This technique was used in the analysis for all 122 named and reviewed features in the present study. The imagery, although recent and considered modern-day, is still at 14.25 metre ground resolution, and therefore will not yield the same results as compared to the sub-metre commercial satellite imagery such as Quick Bird, IKONOS, and DigiGlobe, but, none of those will allow for multi-spectral image analysis as they are static images.

The technique of multispectral image analysis was used to collect information on the location of coastlines (in the case of above high-water features such as islands), and to assist in the interpretation of normal baselines coincident with low-water lines. The latest Landsat TM8 satellite also now offers a digital elevation model (DEM) component the use of which allows for three-dimensional advanced mapping and image analysis. While this technique is no substitute for on the ground field mapping it was employed as a further aid in precision mapping for the most critical features reviewed in this study. This approach is arguably especially valuable where undertaking field surveys is problematic if not impossible as is the case for the insular features under discussion in this report.

An example of the type of map that can be produced through the application of this technique is provided for Barque Canada Reef.

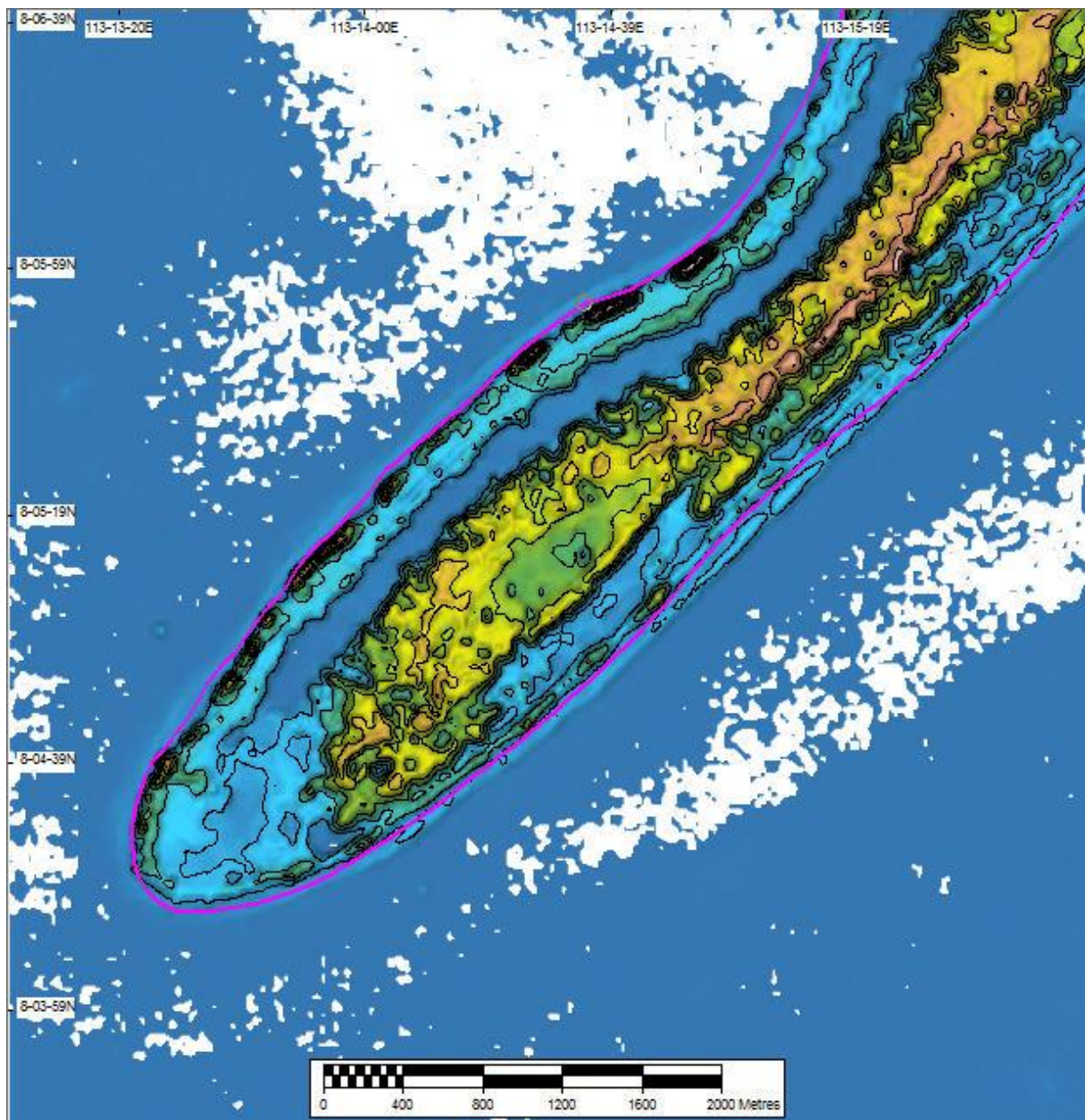


Figure 4.1: Close up image showing Landsat TM8 DEM Results for Barque Canada Reef at 1:25,000 scale with Shaded Relief, Contours Draped and interpreted Normal Baseline Shown (purple line).

5. Appraisal by Category of Feature

Five categories of insular feature are identified in the following sections. These are:

- Features that exhibit measurable areas of naturally formed land territory, surrounded by water that is above high tide. These features are designated as **Above High-tide Features** (see Section 5.1);
- Features that are reported to have some part of them, naturally formed and surrounded by water, observed to be above water at high tide. These potentially above high-water features are of such limited area that their existence predominantly cannot necessarily be confirmed by reference to satellite imagery. On the balance of evidence available, drawn from a variety of sources, the authors have critically appraised and classified these features. These features are collectively designated as **Potential Above High-tide Features** (see Section 5.2);
- Low-tide elevations, that is, features understood to be submerged at high tide and exposed at low tide. These features are categorised as **Low-tide Elevations** (see Section 5.3);
- As a sub-set of the above category, low-tide elevations that fall wholly or partially within a territorial sea limit defined from the baselines of an above high-tide feature (that is, in this scenario an island within the meaning on Article 121(1)) These features are categorised as **Contributing Low-tide Elevations** (see Section 5.4);
- Wholly and permanently submerged features, termed **Submerged Features** (see Section 5.5).

5.1 Above High-tide Features

Twenty-two features are identified here as naturally formed areas of land, surrounded by water and showing measurable areas of territory above high water by reference to charts and sailing directions and confirmed through the interpretation of predominantly high resolution satellite imagery where the high water line shown is understood to equate to mean high water (MHW). As observed above, as the exact time the high-resolution satellite imagery was captured is not known, it cannot be stated with absolute confidence that this is the case. Use of satellite imagery has therefore been coupled with other sources of information including nautical charting and sailing directions.

These features can therefore be classified as islands within the meaning of Article 121(1) off UNCLOS. They are, however, uniformly small, some of them extremely so and may best be characterised as islets or merely sand banks. They are not, therefore, rocks in the ordinary meaning of the term, that is, they are generally not composed of rocky material in a strict geological sense. However, in addition to their often extremely small size which inevitably means that they exhibit very short coastal fronts, by no means all are vegetated and, critically, evidence of socio-economic activity on these features is generally severely limited. Indeed, where people are present on these features they are almost invariably either military or other government personnel who have been stationed there. Indigenous populations are entirely absent as, in the main, is viable economic activity. Consequently, the capacity of these features to sustain human habitation or an economic life of their own is highly questionable leading to the authors reaching the conclusion that they may be appropriately classified as features incapable of generating EEZ or continental shelf rights.

In the maps accompanying this report these above high-tide features have a 12 nautical mile territorial sea illustrated (with a **red line**), which has been measured from the normal baselines of the features concerned, which are generally located at the seaward edge of fringing reefs around these features.

As noted above, the physical extent is, strictly speaking, immaterial with respect their status as a feature qualifying as an Article 121(1) island. Nonetheless, their land area can be considered as being pertinent, and potentially highly so, to their classification as an island capable of generating claims to EEZ and continental shelf rights and one that is not. Accordingly they are presented here from the largest to the least extensive feature as follows:

- Itu Abu Island
- Commodore Reef
- Thitu Island
- Swallow Reef
- West York Island
- Northeast Cay
- Spratly Island
- Southwest Cay
- Loaita Island
- Mariveles Reef
- Namyit Island
- Nanshan Island
- Sand Cay
- Sin Cowe Island

Pearson Reef
West (London) Reef
Amboyna Cay
Grierson Reef (Sin Cowe East)
Central (London) Reef
Lankiam Cay
Flat Island
Fiery Cross Reef

5.1.1 Itu Aba Island

Itu Aba Island is located on the Tizard Bank which consists of a large lagoon with multiple reefs and shoals at its periphery including Eldad Reef, the Gaven Reefs, Petley (or Petly) Reef, Namyit Island and Sand Cay. Itu Aba is known to be the largest island in the Spratly Islands group being reported to have a length of the order of 1,400m and a maximum width of approximately 370m.⁵² As can be seen from the image below showing an airstrip and buildings constructed on the feature it is permanently occupied. Sailing directions and nautical charting are consistent in indicating that the feature is permanently above water at high tide, as shown by the fact that it is largely covered in trees and low-lying scrub.



Figure 5.1.1a: This is a 1:6,000 scale high resolution, 0.60 metre ground resolution image, dated 30 March 2012, sourced from Digital Globe.

The green lines shown on the figure, which can be understood to be consistent with mean high water (MHW), constitute interpreted above high-water areas of land whilst the blue lines represent the outer edges of the reef.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic area: 0.4639 km² (46.39 hectares) or 0.1351 nm²
 Planimetric: 0.4794 km².

It should be noted that the blue lines depicted on the image represent an interpreted normal baseline for the feature which is consistent with the seaward low-water line of the fringing reef surrounding the island, in keeping with Article 6 of UNCLOS (see above). It can be noted that the use of high, sub-metre, resolution imagery allows for the seaward edge of the reef to be readily and accurately determined. This is certainly the case when compared to the largest scale nautical charting available (see Figure 5.1.1b below). These normal baselines

⁵² Hancox and Prescott, 1995, p.8. See also, UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.71.

were then used to construct a theoretical territorial sea limit, as outlined in the methodology above, in order to determine which, if any of the features identified as low-tide elevations fall wholly or partially within this limit and can therefore be used as to provide basepoints for defining a territorial sea limit of their own in line with Article 13 of UNCLOS.

The following images are included here to illustrate the sources of data used in this study. While all of these images are of Itu Aba Island, analogous techniques have been applied to all 49 features included in this study. The images and examples shown below are included for illustrative purposes. For all of the 22 main (land) features reviewed below, the highest quality imagery available, often sub-metric, was used.

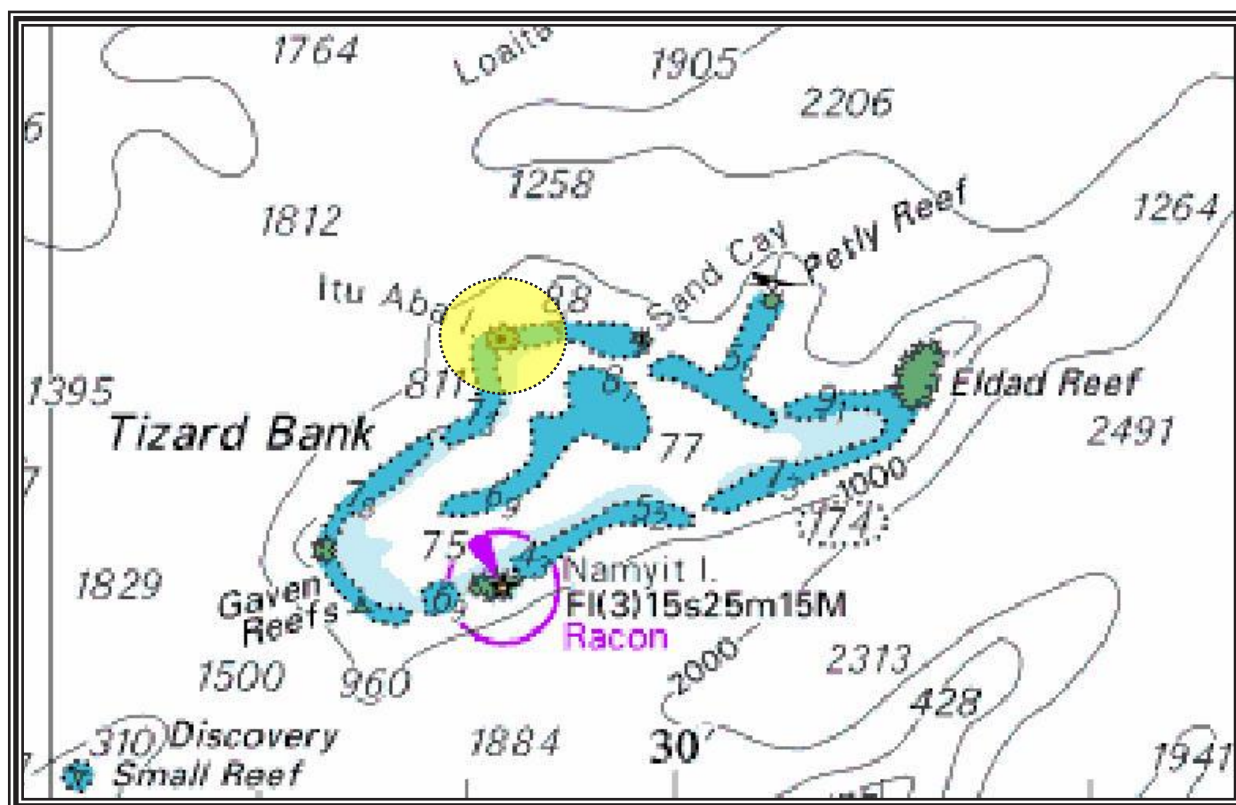


Figure 5.1.1b: This is a 1:400,000 scale image of UKHO Admiralty Nautical Chart 3483 (December 2013). Itu Abu Island and its fringing reef can be seen (in shaded yellow region). This is the largest scale chart for these waters as covered by the UKHO Admiralty, a recognized world-standard charting agency. This chart clearly does not show required level of detail for the accurate determination of normal baselines as compared to the recent present day high-resolution image (see above).

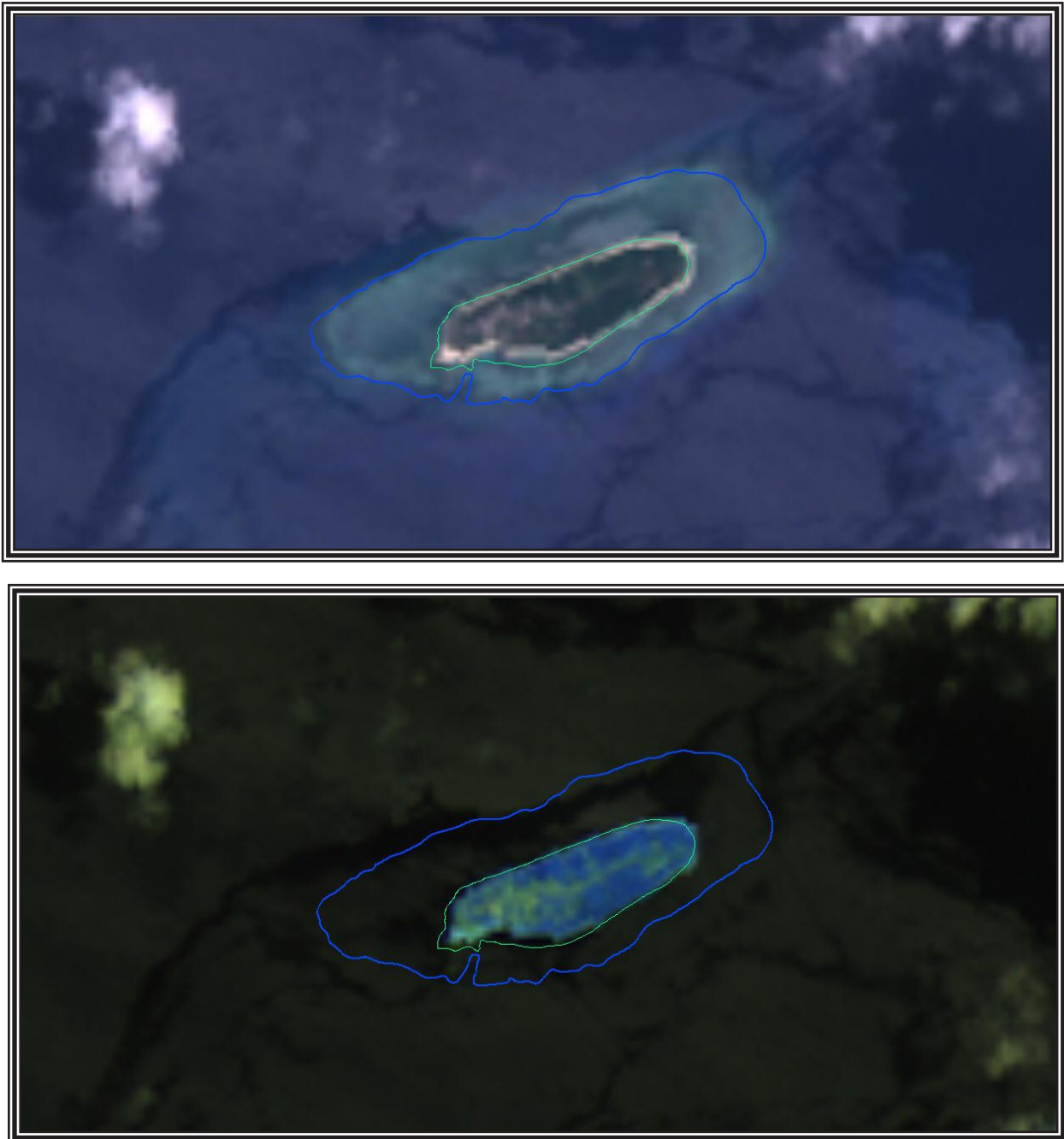


Figure 5.1.1c: These two images above are 1:12,000 scale Landsat TM7 multi-spectral scenes, with 14.25 metre ground resolution, dating from 25 April 2000 as GeoTIFF imagery. The technique of multi-spectral analysis allows for various spectral image Band combinations to depict different visual information. These images, although much coarser resolution than the high-resolution imagery (see Figure 1a above), do show consistent results.

The upper image of the two, shows a Band combination of (B3+B2+B1) and in this multi-spectral combination, it illustrates features, such as the fringing reef surrounding the island, located in shallow water and is potentially useful for determining the location of low-water line normal baselines features. This Band combination also clearly shows the above high-water territorial extent of the island, with the beaches in white and green vegetation in green with some man-made features such as buildings and roads also identifiable. In contrast, the lower image shows a Band combination of B7+B5+B4, which only shows features sitting above the water. Consequently, shallow water features such as fringing reefs and lagoon areas within the outer reef edge are not shown. This combination serves to highlight and emphasise features located above high water.



Figure 5.1.1d: This image above is 1:12,000 scale image derived from Landsat TM7 data in a specific static proprietary format called MrSIDs. This type of image format cannot be altered for the purposes of multi-spectral analysis as they are fixed in a specific Band combination of B7+B4+B2. The accuracy for such imagery is +/- 50 metres on the ground. The images are still useful as they still show the location of low water features such as shallow fringing reef areas and how the outermost reef edge coincides with interpreted normal baselines (illustrated in Figure 1a above). Additionally, the image clearly shows the extent of the land (above high water) area of the island with beaches, green vegetation and some indication of man-made build-up features, such as buildings and roads, evident.

Assessment

Itu Aba meets the requirements of Article 121(1). That is, it is a naturally formed feature, composed of land, surrounded by water and elevated above the high tide level. It is vegetated and is occupied, being host to government and military personnel. There is no permanent indigenous population, the personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

It would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.2 Commodore Reef

Commodore Reef is a linear reef, oriented in a broadly east-west direction. It has two lagoon areas joined by a series of low-lying sand cays that are around 0.5m above water at high tide. The feature is not vegetated nor are any buildings or other man-made developments save for the save for what appears to be a military installation, represented by the pink symbol (with indicative red arrow) shown on the image below.



Figure 5.1.2: This is a 1:27,500 scale Landsat TM7, 14.25 metre ground resolution image, dated 26 November 1999 in multi-spectral Band combination of B3+B2+B1.

The green lines shown on the figure constitute interpreted above high-water areas of land whilst the blue lines represent the outer edges of the reef.

As high-resolution, sub-metric imagery was unavailable for this figure, the next best imagery was used for analysis, namely Landsat TM7 with a ground resolution of the order of 14.25 metres.

The combined area of the three sand cays within the green line, that is, above the high water level has been calculated as follows:

Geodetic area: 0.4484 km² (44.84 hectares) or 0.1306 nm²,
 Planimetric: 0.4580 km²

Assessment

Commodore Reef meets the requirements of Article 121(1). That is, it is a naturally formed feature, composed of land, surrounded by water and elevated above the high tide level, even if only moderately. It is not vegetated and there are no signs of development on the feature although it is occupied with an artificial installation or structure. There is no permanent indigenous population, the personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

It would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.3 Thitu Island

Thitu Island is located towards the southern side of the western reef of the two Thitu Reefs. The island is reported to have an elevation of 3.6m and is vegetated. It is occupied and shows signs of significant man-made construction and intervention, most obviously the addition of a run way which extends well beyond the footprint of the naturally formed feature itself. Satellite imagery also clearly shows the construction of buildings and roads.



Figure 5.1.3a: This is a 1:7,500 scale high-resolution, 0.75 metre ground resolution image, dated 4 March 2014 Digital Globe.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.3434 km² (34.34 hectares) or 0.1000 nm²

Planimetric: 0.3564 km²

This area does not include the obvious man-made runway extensions.

The blue line represents normal baselines consistent with the seaward low water line of the feature.

Alternatively, those parts of the runway that extend seaward of Thitu Island's original coastline can be regarded as land reclamation efforts on a naturally formed land feature, surrounded by water and above water at high tide, in which case they can serve to enhance the area of the feature in the image below.



Figure 5.1.3b: This is a 1:7,500 scale high-resolution, 0.75 metre ground resolution image, dated 4 March 2014, sourced from Digital Globe.

The land area above high tide, within green lines, and therefore including the full area of the runway constructed on Thitu Island has been calculated as follows:

Geodetic: 0.3991 km² (39.91 hectares) or 0.1162 nm²
 Planimetric: 0.4142 km²

Assessment

Thitu Island meets the requirements of Article 121(1). That is it is a naturally formed feature, composed of land, surrounded by water and elevated above the high tide level. It is vegetated and is occupied, being host to government and military personnel. Some construction activity has taken place on the island, most notably the addition of a runway that exceeds the dimensions of the original naturally formed feature. There is no permanent indigenous population, the personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

It would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.4 Swallow Reef

A naturally-formed rocky island standing around 2 metres above high water is located on the southern rim of this reef. This feature is occupied and it is clear that it has experienced considerable physical intervention including substantial land reclamation works which have resulted in the original naturally-formed island present on Swallow Reef being substantially extended (see red/brown coloured area in the image below).



Figure 5.1.4: This is a 1:4,000 scale high-resolution, 2.00 metre ground resolution image, dated 4 March 2014, sourced from Digital Globe.

The green lines shown on the figure constitute interpreted above high-water areas of land whilst the blue lines represent the outer edges of the reef.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.3572 km² (35.72 hectares) or 0.1040 nm²
 Planimetric: 0.3631 km²

The above figures shows present day area of the feature illustrated in red/brown colour. Older reports states that the naturally formed above high-tide feature was originally considerably smaller, comprising a small sandy islet with a few palm trees located on it.

Assessment

Swallow Reef meets the requirements of Article 121(1). That is it is a naturally formed feature, composed of land, surrounded by water and elevated above the high tide level. It is vegetated and is occupied, being host to government and military personnel. Substantial construction activities have taken place such that the original naturally formed above high tide feature has been significantly expanded in area. There is no permanent indigenous

population, the personnel stationed there are reliant on supplies provided from outside. Viable economic activity associated with the island is considered to be questionable.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.5 West York Island

This island has a reported elevation of around 3 metres and is vegetated with trees, including a grove of tall coconut palms, and bushes. It is reported to be occupied although only limited man-made construction can be discerned from the image below.



Figure 5.1.5: This is a 1:17,500 scale Landsat TM7 image with a 14.25 metre ground resolution dating from 21 April 2001. The image is in multi-spectral Band combination B3+B2+B1.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

As high-resolution sub-metric imagery was unavailable for this feature, the next best available imagery (Landsat TM7 ~ 14.25 metre) was used.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.2525 km² (25.25 hectares) or 0.0735nm²

Planimetric: 0.2621 km²

Assessment

West York Island fulfils the requirements of Article 121(1). It is a naturally formed feature, composed of land, surrounded by water and elevated above the high tide level.

It is vegetated and is occupied, being host to a military garrison and other government personnel. There is no permanent indigenous population, the those stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.6 Northeast Cay

This feature has an elevation of up to 3 metres. It is thickly vegetated and is occupied with satellite imagery showing evidence of construction. A light is exhibited from the island and there are indications that the feature has been used as a base for operations or refuge from storms by fishermen.

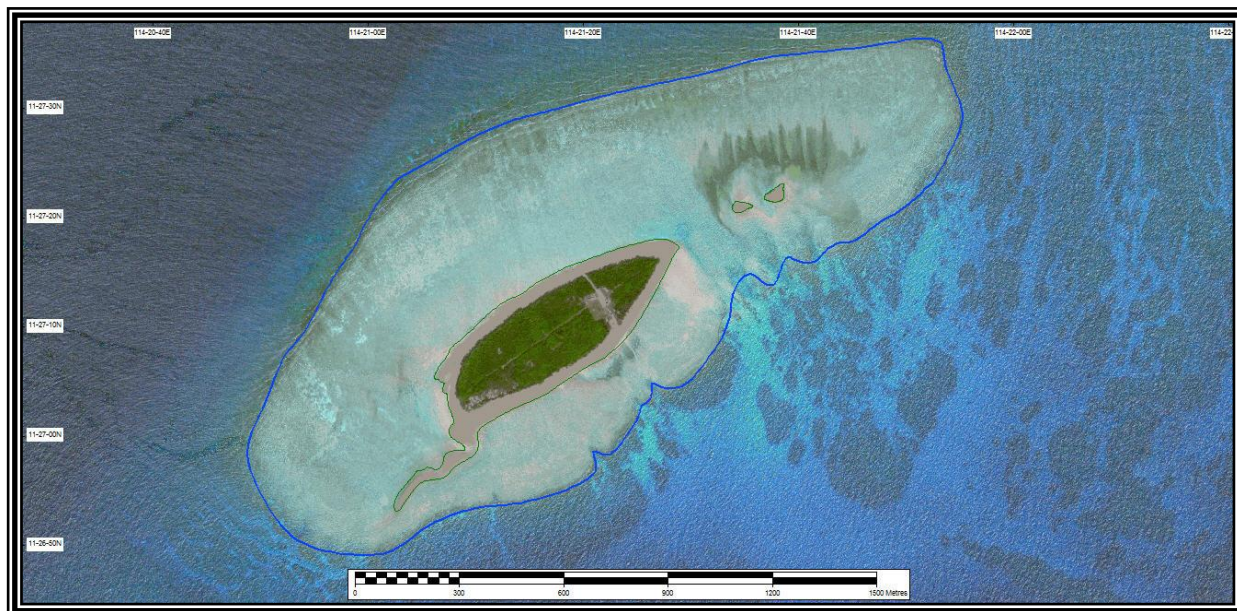


Figure 5.1.6: This is a 1:7,500 scale high-resolution, 0.75 metre ground resolution image, dated 26 January 2005, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.1867 km² (18.67 hectares) or 0.0544 nm²
 Planimetric: 0.1943 km²

Two small nearby sandy islets:

Geodetic: 0.0031 km² or 0.0009 nm²
 Planimetric: 0.0032 km²

Assessment

Northeast Cay meets the requirements of Article 121(1). That is, it is a naturally formed feature, composed of land, surrounded by water and elevated above the high tide level.

The feature is vegetated and is occupied. However there is no permanent indigenous population and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.7 Spratly Island

This island, which provides the collective name for the Spratly Islands group as a whole, has been described as having “the shape of an isosceles triangle with a base aligned northeast – southwest measuring 750 metres and the apex 350 metres distant.”⁵³ It is vegetated and clearly occupied with considerable evidence of the construction of buildings and roads, a jetty as well as sea defences (a sea wall) on the northern shoreline. The island is low-lying but stands around 2 metres above high water.



Figure 5.1.7: This is a 1:4,000 scale high-resolution 0.35 metre ground resolution image dated 29 May 2004, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.1662 km² (16.62 hectares) or 0.0484 nm²
 Planimetric: 0.1700 km²

Assessment

Spratly Island is an island within the meaning of Article 121(1). That is, it is a naturally formed feature, composed of land, surrounded by water and elevated above the high tide level.

The feature is vegetated and is occupied. However there is no permanent indigenous population and those military and other official personnel stationed there are reliant on

⁵³ Hancox and Prescott, 1995, p.14.

supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.8 Southwest Cay

Part of the larger feature, or complex of features, North Danger Reef, this oval-shaped feature, around 650 metres long and 280 metres wide with an elevation of 4 metres, is reportedly well vegetated. The cay is home to numerous seabirds which have, in the past, given rise to the exploitation of guano from the cay. Use of the island by fishermen has also been reported.



Figure 5.1.8: This is a 1:6,000 scale high-resolution, 0.50 metre ground resolution image dated 16 February 2006, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.1560 km² (15.60 hectares) or 0.0454 nm²

Planimetric: 0.1623 km²

Assessment

Southwest Cay is an island within the meaning of Article 121(1). That is, it is a naturally formed feature, composed of land, surrounded by water and elevated above the high tide level.

The feature is vegetated and is occupied. However there is no permanent indigenous population and those military and other official personnel stationed there are reliant on supplies provided from outside. Although the island has on occasion been used by fishermen and guano mining activities took place there in the past, these economic activities can be considered to be extremely limited and no longer viable.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.9 Loaita Island and nearby Cay

Loaita Island is located in the southern part of Loaita Bank. It is reported as being 1.5-2 metres in elevation and vegetated. It is reported to be occupied although there is little indication of development or construction activity to be drawn from available satellite imagery. A small sand cay located to the east of Loaita Island is included in this description.

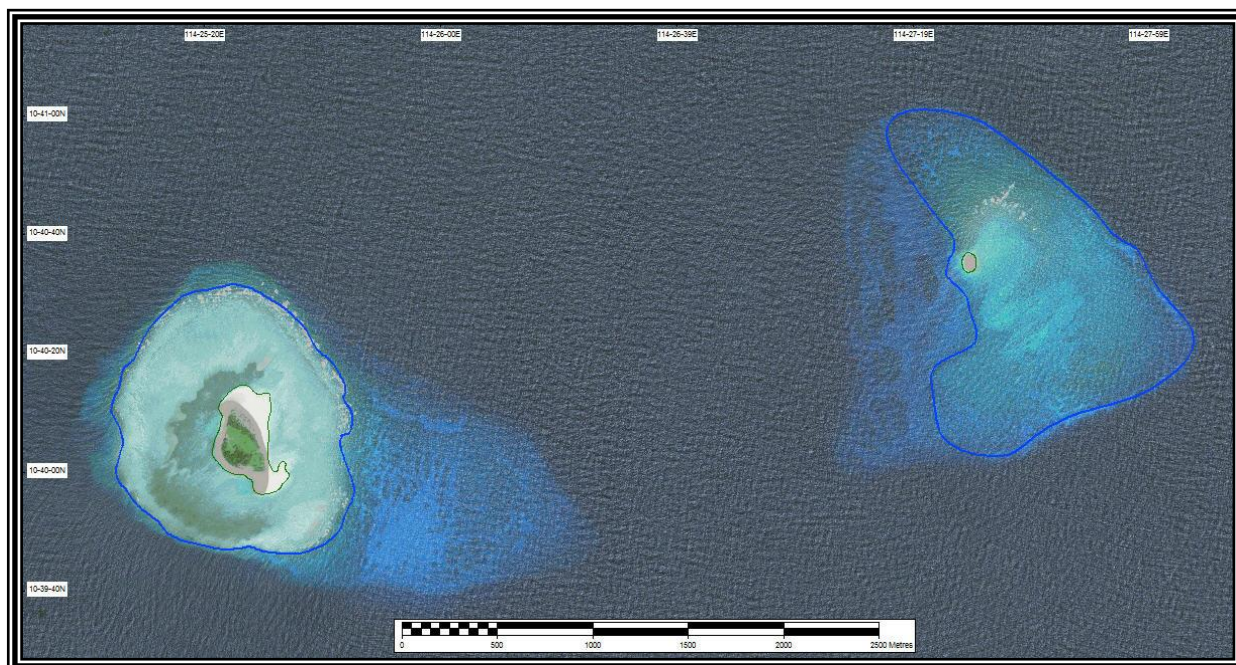


Figure 5.1.9: This is a 1:15,000 scale high-resolution, 1.00 metre ground resolution image, dated 16 February 2006, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.1317 km² (13.17 hectares) or 0.0384 nm²
 Planimetric: 0.1364 km²

Cay Area: Geodetic: 0.0059 km² or 0.0017 nm²
 Planimetric: 0.0062 km²

Assessment

Loaita Island is an island within the meaning of Article 121(1) as is the small cay located to the east. That is, these features are naturally formed, composed of land, surrounded by water and elevated above the high tide level.

Loaita Island is vegetated and is occupied. However there is no permanent indigenous population and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past. The small sand cay to the east is neither vegetated or occupied and no development or economic activity is evident.

In the view of the authors it would therefore be appropriate to treat these features in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.10 Mariveles Reef

This substantial drying reef is oriented northwest to southeast and comprises two lagoons, with the one to the northwest of the feature being considerably larger than the one to the southeast. The two lagoons are separated by a sandy cay that has an elevation of around 2 metres, on which rocks standing above high water are reportedly located.⁵⁴ The feature is occupied although evidence of development is unclear from available satellite and DEM imagery.



Figure 5.1.10a: This is a 1:35,000 scale Landsat TM8, 14.25 metre ground resolution image, in Multi-spectral Band combination B2+B3+B4.

⁵⁴ See, UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.69.

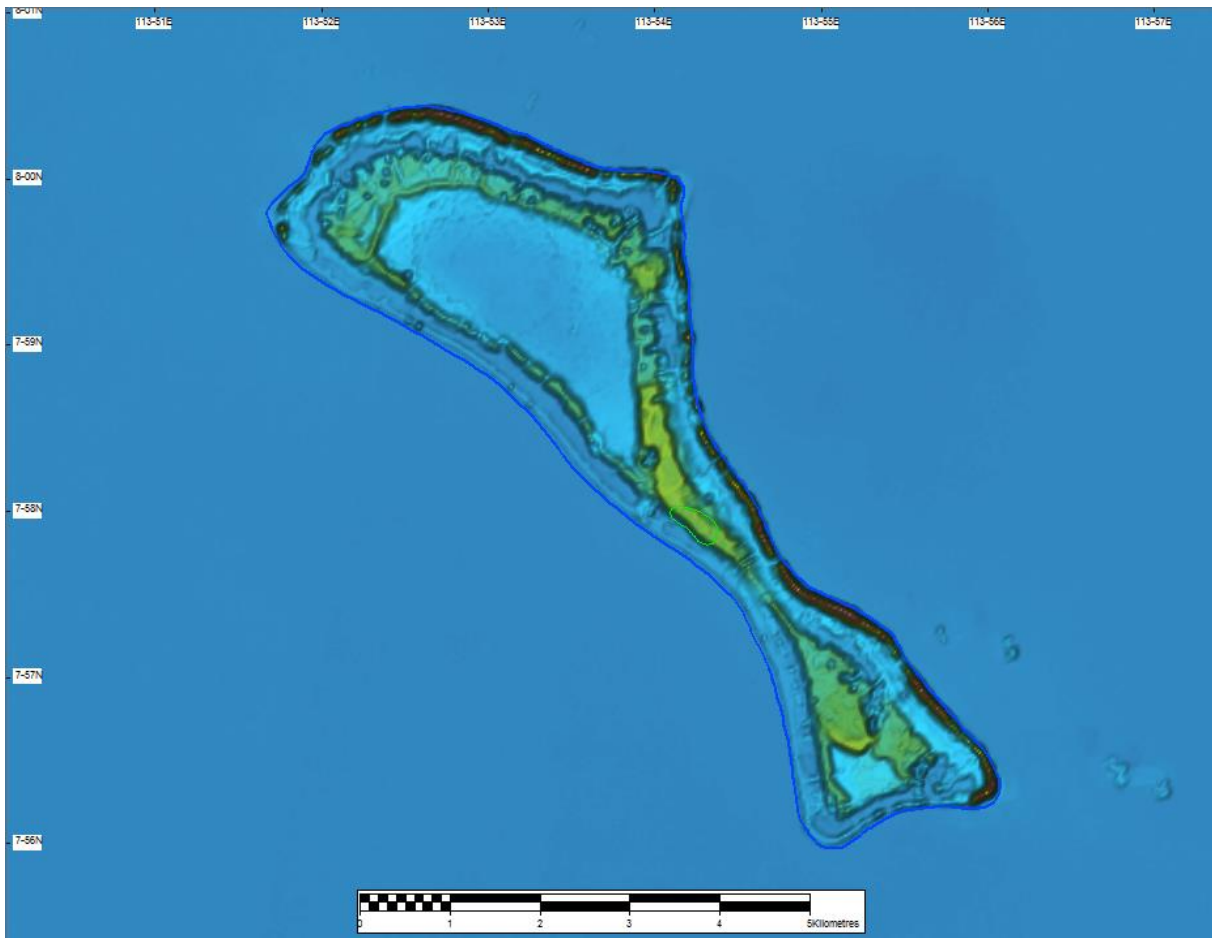


Figure 5.1.10a: This is a DEM image of Mariveles Reef at a scale of 1:30,000.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Area calculations:

Geodetic: 0.1250 km² (12.50 hectares) or 0.0364nm²

Planimetric = 0.1274 km²

Assessment

Based on the balance of evidence it is considered that Mariveles Reef is an island within the meaning of Article 121(1) in that it is naturally formed, composed of land, surrounded by water and elevated above the high tide level.

The above high tide feature consists of a sandy bank located between two lagoons situated atop a larger coral atoll. Some uncertainties remain concerning whether this feature is permanently above high water but several sources of evidence (charts, sailing directions and satellite imagery) point to this being the case. The feature is not vegetated and is occupied with construction activities having occurred resulting in what appears to be an artificial structure located on the south side of the feature. There is no permanent indigenous population and those military and other official personnel stationed there are entirely reliant

on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.11 Namyit Island

Namyit Island is located on the Tizard Bank which consists of a large lagoon with multiple reefs and shoals at its periphery including Eldad Reef, the Gaven Reefs, Itu Aba Island, Petley (or Petly) Reef and Sand Cay. This feature is among the highest among the Spratly Islands being up to 18.6 metres in elevation. It is an occupied feature and substantial building activity has occurred on the island which is also vegetated.



Figure 5.1.11: This is a 1:7,500 scale high-resolution, 0.90 metre ground resolution image, dated 30 May 2014, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.0868 km² (8.68 hectares) or 0.0253 nm²
 Planimetric: 0.0896 km²

Assessment

As it is naturally formed, composed of land, surrounded by water and elevated above the high tide level Namyit Island is an island within the meaning of Article 121(1).

Namyit Island is vegetated and is occupied. However there is no permanent indigenous population and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.12 Nanshan Island

Nanshan Island is a low-lying, around 2 metre elevation, sandy feature that is vegetated, including some tall trees. It is occupied with some limited evidence of construction evident on it. Flat Island is also located on the same bank.

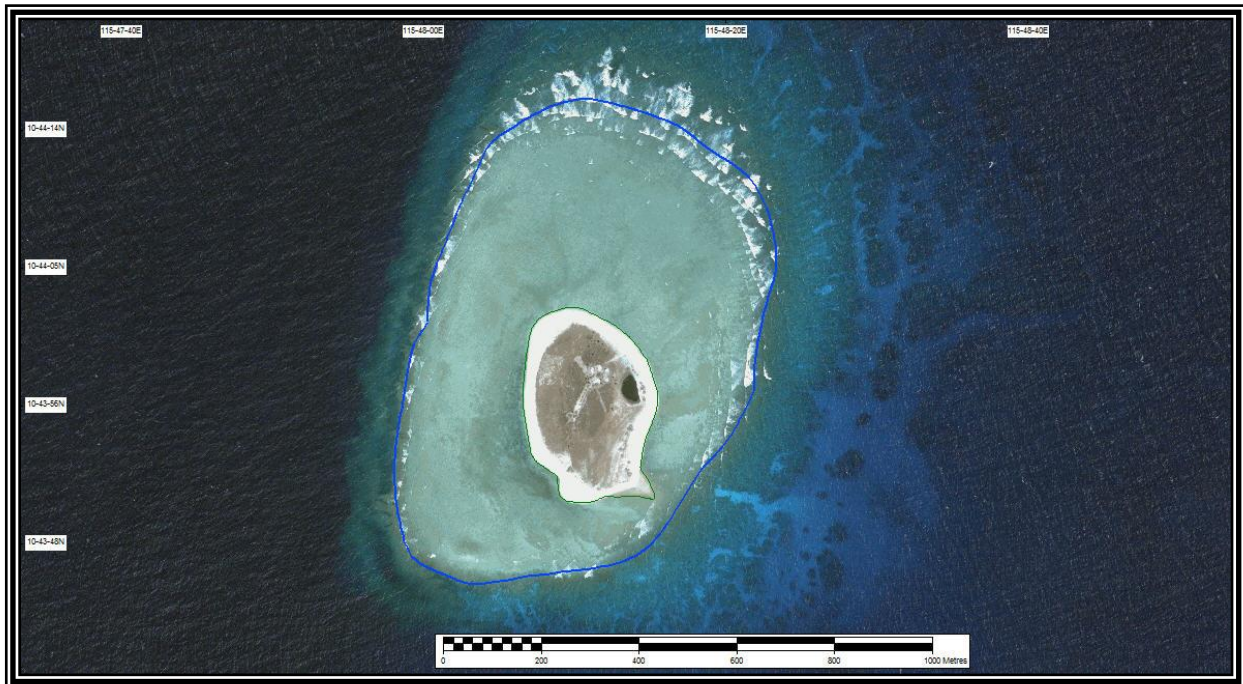


Figure 5.1.12: This is a 1:6,000 scale high-resolution, 0.50 metre ground resolution image, dated 3 March 2004, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.0836 km² (8.36 hectares) or 0.0243 nm²
 Planimetric: 0.0865 km²

Assessment

Nanshan Island is an island within the meaning of Article 121(1) as it is naturally formed, composed of land, surrounded by water and elevated above the high tide level.

The feature is vegetated and is occupied. However there is no permanent indigenous population and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.13 Sand Cay

Sand Cay is part of the large coral bank, Tizard Bank, which comprises a large lagoon bordered by multiple reefs and shoals including, the Gaven Reefs, Namyit Island and Petley (or Petly) Reef. Itu Aba, Namyit Island, Petley (or Petly) Reef, Eldad Reef and the Gaven Reefs are also located on Tizard Bank. Sand Cay is a vegetated feature that is occupied and has witnessed noticeable construction activities as illustrated from the satellite image.

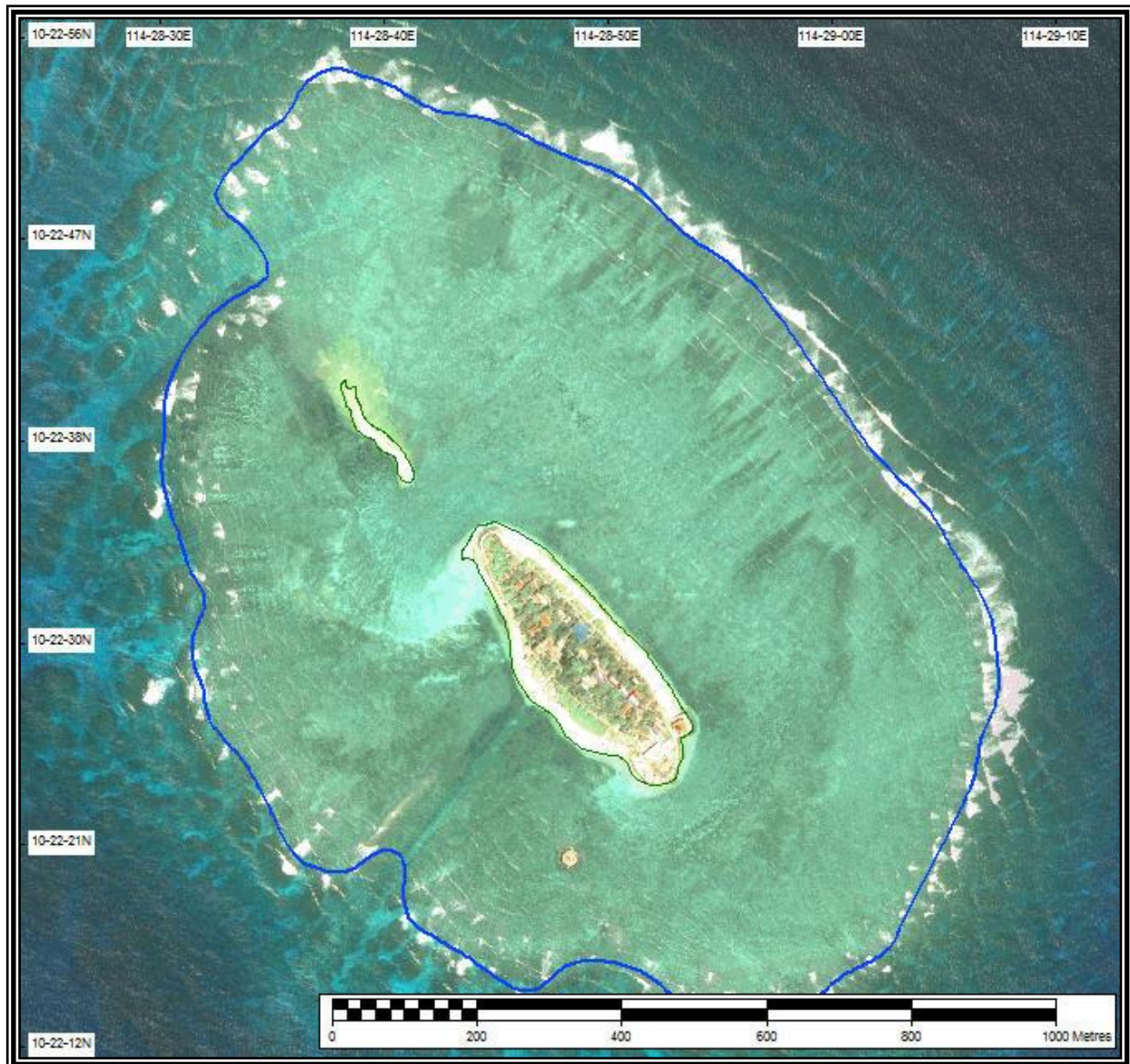


Figure 5.1.13: This is a 1:6,500 scale high-resolution, 0.50 metre ground resolution image, dated 30 March 2012, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.0504 km² (5.04 hectares) or 0.0147 nm²
Planimetric: 0.0521 km²

Cay Area

Geodetic: 0.0028 km² or 0.0008 nm²
Planimetric: 0.0029 km²

Assessment

Sand Cay is an island within the meaning of Article 121(1) as it is naturally formed, composed of land, surrounded by water and elevated above the high tide level.

The feature is vegetated and is occupied with some construction activity evident on the island. However there is no permanent indigenous population and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.14 Sin Cowe Island

Sin Cowe Island is part of the Union Bank which consists of a group of numerous reefs surrounding a large area of shallow waters, including Collins Reef, Landsdowne Reef, Lankiam Cay, Sin Cowe East (Grierson Reef), and Whitsun Reef. It is located in the centre of a circular reef and stands up to 4 metres above high water. It is vegetated, occupied and shows some evidence of construction activities, including buildings.

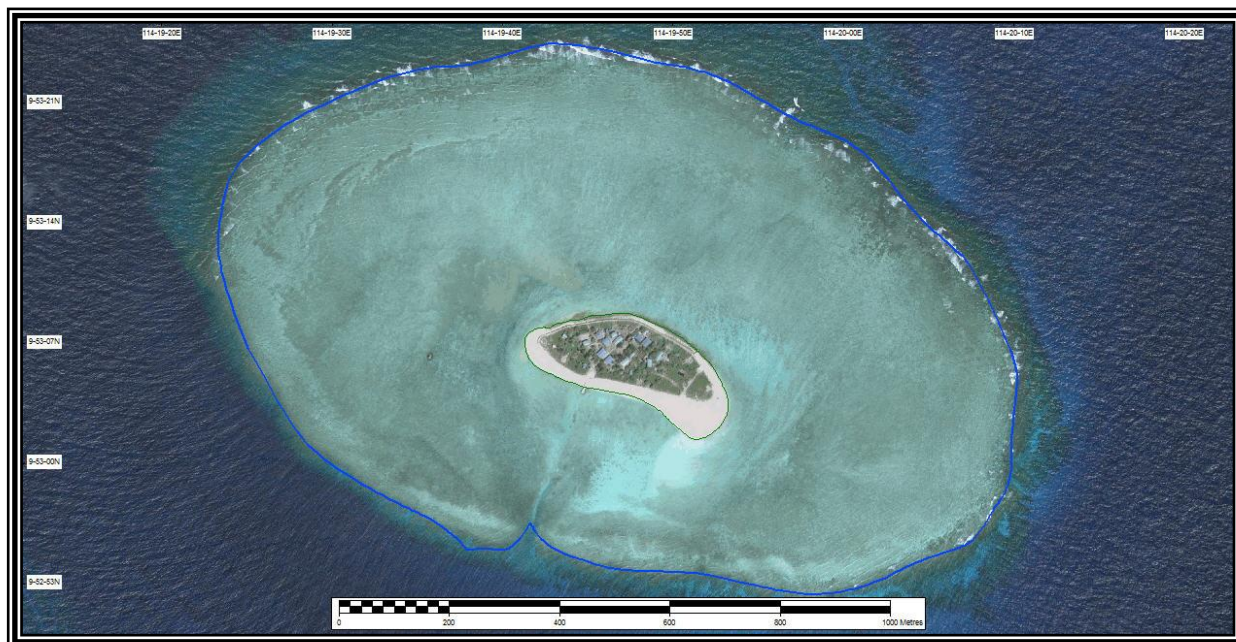


Figure 5.1.14: This is a 1:5,000 scale high-resolution, 0.50 metre ground resolution image, dated 16 February 2006, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.0454 km² (4.54 hectares) or 0.0132 nm²
 Planimetric: 0.0467 km²

Assessment

Sin Cowe Island is an island within the meaning of Article 121(1) as it is naturally formed, composed of land, surrounded by water and elevated above the high tide level.

The feature is vegetated and is occupied and construction activities have taken place there. However, there is no permanent indigenous population on the island and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.15 Pearson Reef

A small, low-lying sand cay that is elevated around 1 metre above high tide is located at the north-eastern end of this linear reef.⁵⁵



Figure 5.1.15a: This is a 1:30,000 scale Landsat TM8 14.25 metre ground resolution image, in Multi-spectral Band combination B2+B3+B4.

⁵⁵ See, UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.69.

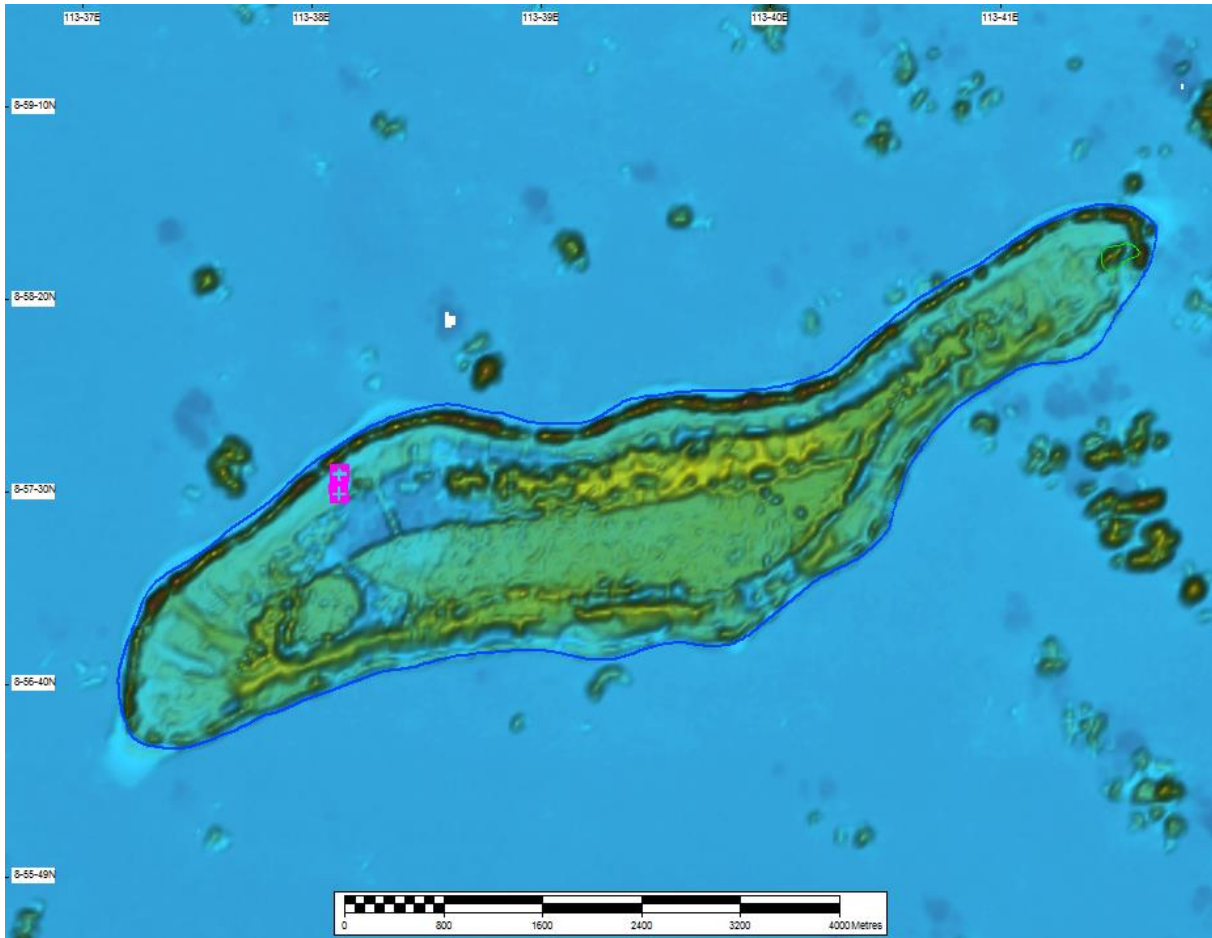


Figure 5.1.15a: This is a DEM image of Pearson Reef at a scale of 1:30,000.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

4x small Cays Area:
 Geodetic: 0.0436 km² (4.36 hectares) or 0.0127nm²
 Planimetric = 0.0447 km²

Assessment

On the balance of available evidence Pearson Reef is considered to be an island within the meaning of Article 121(1) as it is naturally formed, composed of land, surrounded by water and elevated above the high tide level, even if only marginally.

The feature is not vegetated but is occupied and construction activities and artificial structures can be noted on the feature. However there is no permanent indigenous population and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

In the view of the authors it would therefore be appropriate to treat these features in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.16 West (London) Reef

This feature is part of the London Reefs together Central, East and Cuarteron Reefs. It comprises four small, low-lying sand islets and man-made structures. At least one of the sandy islets is naturally formed and above high tide. These features are vegetated. Other than the artificial structures to house occupying military forces, there is no sign of development of the feature.

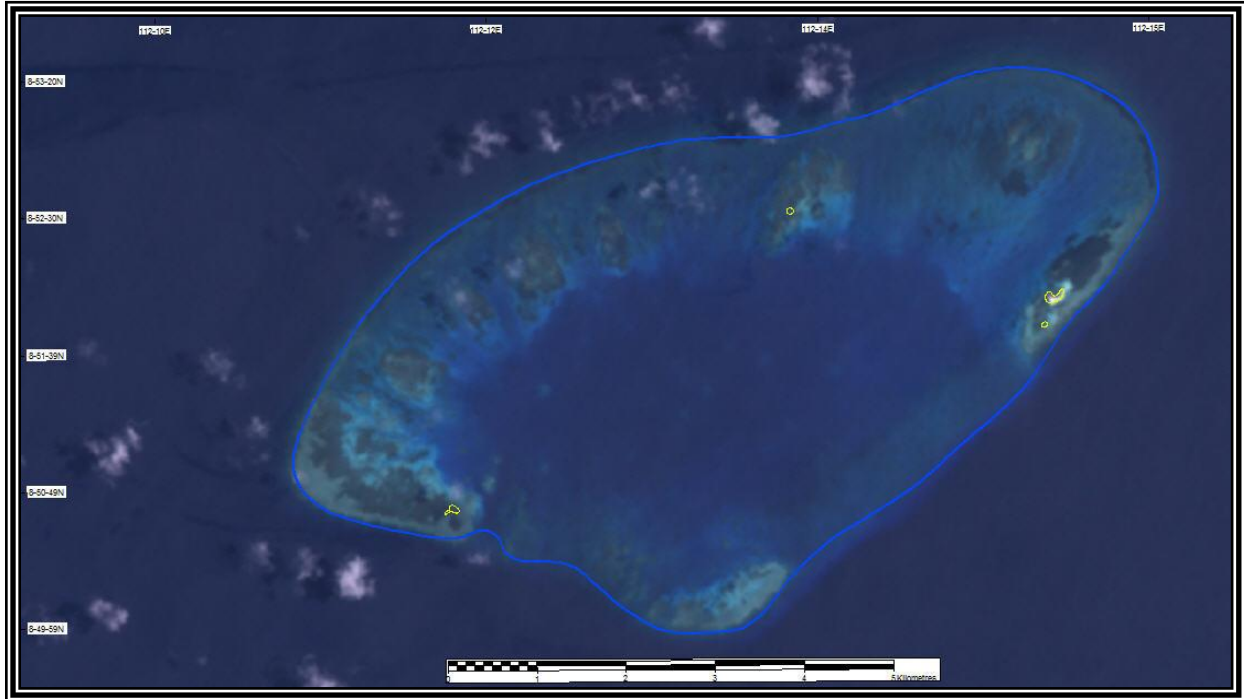


Figure 5.1.16: This is a 1:35,000 scale Landsat TM7, 14.25 metre ground resolution image, dated 16 April 2000 in Multi-spectral Band combination B3+B2+B1.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

There was no high-resolution Imagery available for this feature, therefore the next best Imagery was used (Landsat TM7 ~ 14.25 metre).

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

4x small Cays Area
 Geodetic: 0.0327 km² (3.27 hectares) or 0.0095nm²
 Planimetric: 0.0334 km²

Assessment

On the balance of available evidence West Reef is considered to be an island within the meaning of Article 121(1) as it is naturally formed, composed of land, surrounded by water and elevated above the high tide level.

The feature comprises four small, low-lying sandy elevations. There is no evidence of the feature supporting human habitation or meaningful economic activities.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock at most and accord it no more than a 12 nautical mile territorial sea.

5.1.17 Amboyna Cay

Amboyna Cay is a low-lying sandy feature standing approximately 2 metres above high tide.⁵⁶ The feature is vegetated, occupied and some construction activity has occurred.

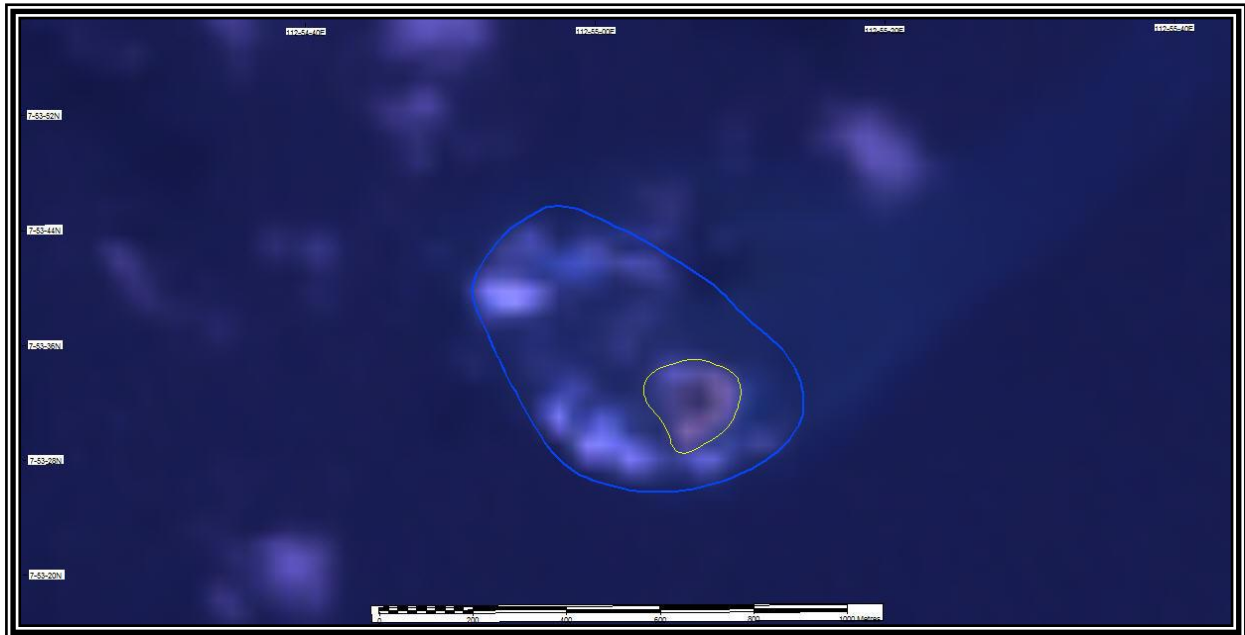


Figure 5.1.17: This is a 1:6,000 scale Landsat TM7, 14.25 metre ground resolution image, dated 31 July 2009 in Multi-spectral Band combination B3+B2+B1.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

There was no high-resolution Imagery available for this feature, therefore the next best Imagery was used (Landsat TM7 ~ 14.25 metre).

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Cay Areas

Geodetic: 0.0290 km² (2.90 hectares) / 0.0084nm²

Planimetric: 0.0295 km²

Assessment

Amboyna Cay is an island within the meaning of Article 121(1) as it is naturally formed, composed of land, surrounded by water and elevated above the high tide level.

The feature is vegetated and is occupied and construction activities are evident. However, there is no permanent indigenous population on the island and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

⁵⁶ See, UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.70.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.18 Grierson Reef (Sin Cowe East)

Grierson Reef Reef, also referred to as Sin Cowe East Island, is part of the Union Bank and Reefs which consists of a group of numerous reefs surrounding a large area of shallow waters including Collins Reef, Landsdowne Reef, Lankiam Cay, Sin Cowe Island and Whitsun Reef. It is a low-lying sandy feature that is vegetated, is occupied and has had buildings constructed on it.

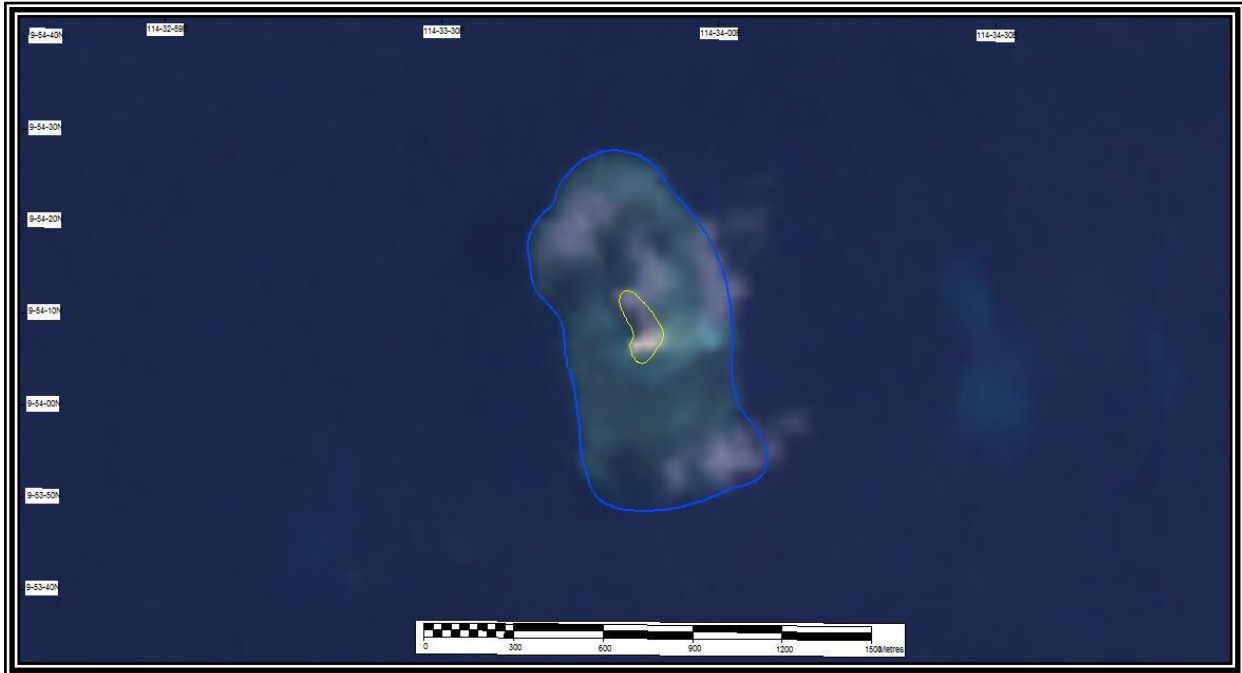


Figure 5.1.18: This is a 1:20,000 scale Landsat TM7, 14.25 metre ground resolution image, dated 21 April 2001 in Multi-spectral Band combination B3+B2+B1.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

There was no high-resolution imagery available for this feature, therefore the next best Imagery was used (Landsat TM7 ~ 14.25 metre).

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.0199 km² (1.99 hectares) or 0.0058nm²
 Planimetric: 0.0205 km²

Assessment

On the balance of available evidence Grierson Reef (Sin Cowe East) is considered to be an island within the meaning of Article 121(1) on account of it being naturally formed, composed of land, surrounded by water and elevated above the high tide level.

The island supports vegetation and is occupied with construction activities having taken place there in order to house its military garrison. However, there is no permanent indigenous

population on the island and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

In the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock and accord it no more than a 12 nautical mile territorial sea.

5.1.19 Central Reef (London Reefs)

Central Reef of the London Reefs, which also includes East, West and Cuarteron Reefs, consists of a belt of coral within which two sandy islets can be observed. Sailing directions indicate the presence of a sandbank that covers at high tide. The feature is occupied and construction activities have occurred. It is unclear to what extent a naturally formed feature above high tide existed prior to such artificial interventions taking place.

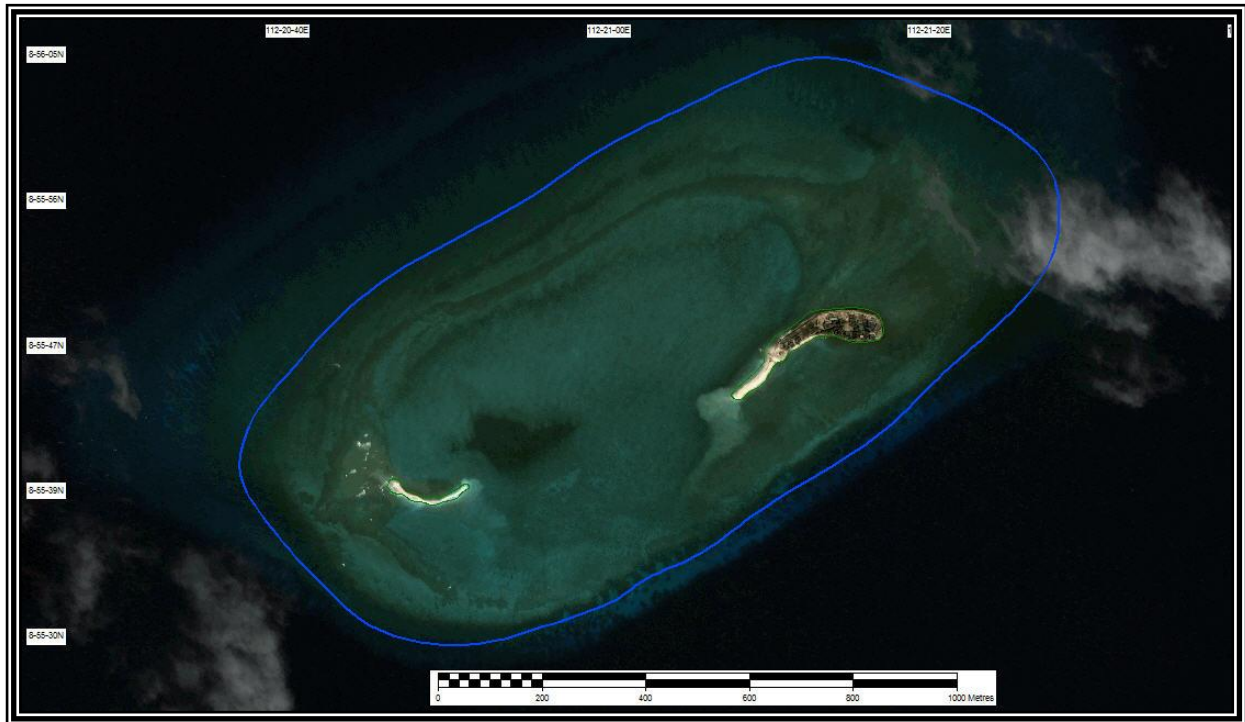


Figure 5.1.19: This is a 1:6,000 scale high-resolution, 0.50 metre ground resolution image, dated 27 May 2009, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the larger feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.0141 km² (1.41 hectares) or 0.0041 nm²
 Planimetric: 0.0144 km²

The area of the smaller feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.0024 km² or 0.0007 nm²
 Planimetric: 0.0025 km²

Assessment

Central Reef is arguably an island within the meaning of Article 121(1). However, it is not entirely clear whether the features that show above high tide are naturally formed.

The island has vegetation and is occupied with construction activities having taken place there in order to house its military garrison. However, there is no permanent indigenous population on the island and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

In the view of the authors it would therefore be appropriate to, at most, treat this feature in the same manner as an UNCLOS Article 121(3) rock at most and accord it no more than a 12 nautical mile territorial sea. Further investigation including fieldwork may be required to ascertain if the feature met with the terms of Article 121(1) prior to island-building activities taking place there.

5.1.20 Lankiam Cay

Lankiam Cay is located on Union Bank, which consists of a group of numerous reefs surrounding a large area of shallow water, including Collins Reef, Landsdowne Reef, Sin Cowe Island, Sin Cowe East (Grierson Reef) and Whitsun Reef.

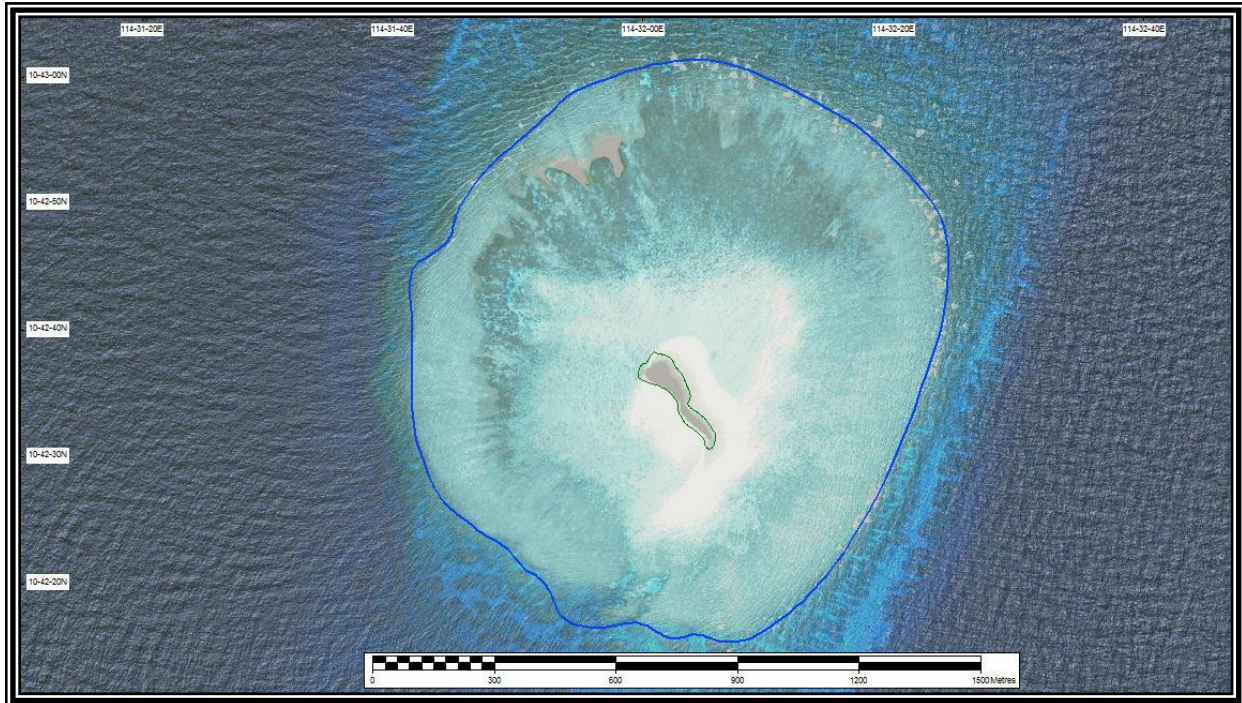


Figure 5.1.20: This is a 1:7,500 scale high-resolution 0.80 metre ground resolution image, dated 16 February 2006, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.0125 km² (1.25 hectares) or 0.0036 nm²
 Planimetric: 0.00130 km²

Assessment

Lankiam Cay is a low-lying sandy island that qualifies as an island according to the terms of Article 121(1) on account of it being naturally formed, composed of land, surrounded by water and elevated above the high tide level.

The island is unvegetated and while it is technically occupied it is notable that the structures within which the occupying forces are housed are clearly man-made ones on stilts. However, there is no permanent indigenous population on the island and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

On the balance of available evidence, in the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock at most and accord it no more than a 12 nautical mile territorial sea.

5.1.21 Flat Island

Flat Island is a low-lying sandy feature located on the same bank as Nanshan Island. Flat Island reaches an elevation of around 2 metres. It lack vegetation but is occupied. Evidence of development is limited. The forces in occupation reside in accommodation built on stilts secured into the feature.

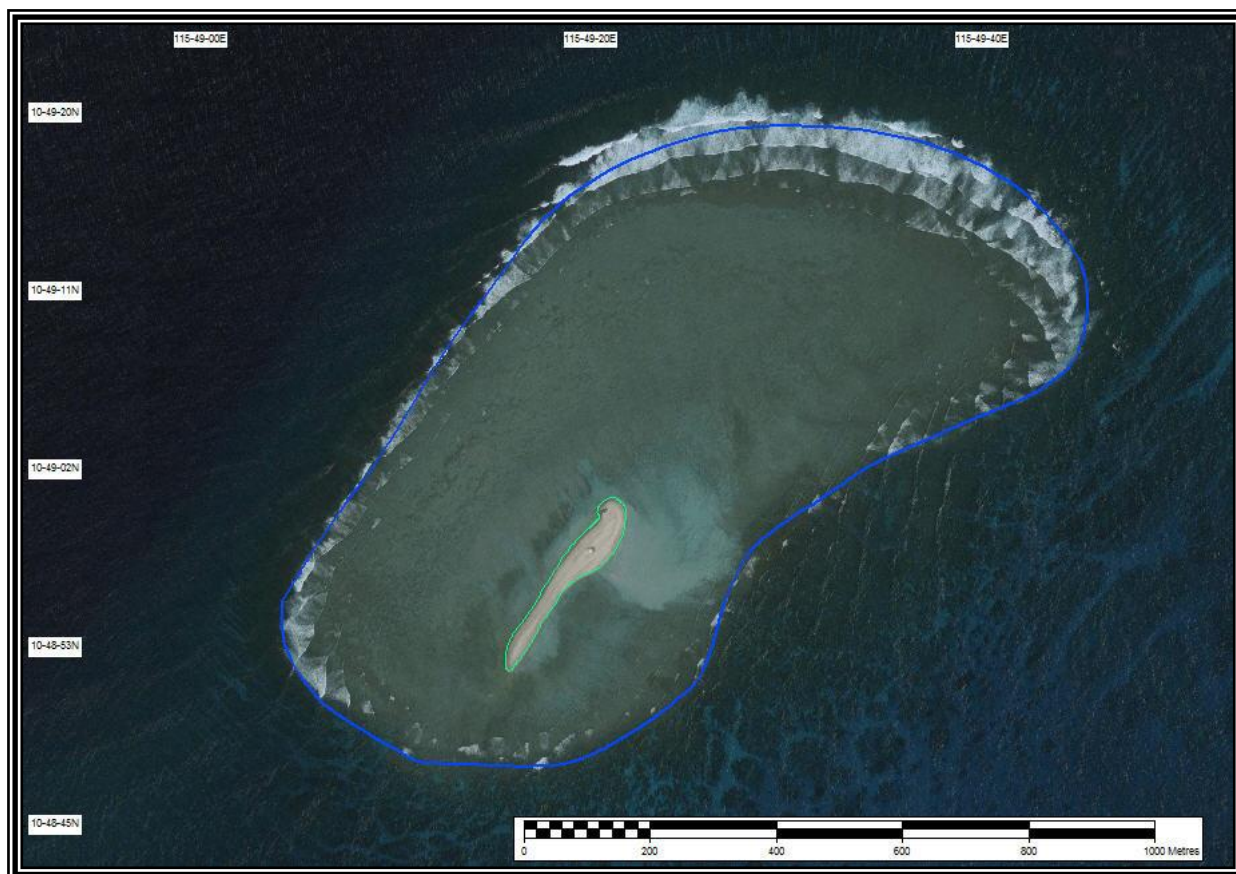


Figure 5.1.21: This is a 1:6,000 scale high-resolution, 0.45 metre ground resolution image, dated 24 February 2006, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines. Whether this feature is permanently above high-water is not entirely certain.

The area of the feature within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.0114 km² (1.14 hectares) or 0.0033 nm²
 Planimetric: 0.00118 km²

Assessment

Flat Island is a low-lying sandy feature that qualifies as an island within the meaning of Article 121(1) on account of it being naturally formed, composed of land, surrounded by water and elevated above the high tide level.

The island supports no vegetation. It is occupied with the military and other government personnel stationed there being housed in artificial structures on stilts. There is no permanent indigenous population on the island and those military and other official personnel stationed there are reliant on supplies provided from outside and there is no evidence of meaningful economic activity ongoing or in the past.

On the balance of the available evidence in the view of the authors it would therefore be appropriate to treat this feature in the same manner as an UNCLOS Article 121(3) rock at most and accord it no more than a 12 nautical mile territorial sea.

5.1.22 Fiery Cross Reef

Sailing directions indicate that “[w]ith the exception of a prominent rock (9°33′.40N 112° 53′.64N) 1m high...the whole reef usually covers at HW” (high water).⁵⁷ The above high-water rock noted is reported to be located at the southwestern end of the reef. Analysis of high-resolution satellite imagery showed no indications of the rock observed in the sailing directions, suggesting that it is simply too small to be seen on the satellite image. The satellite imagery did, however, suggest the presence of two very small areas above high water in the northern part of the reef. No visible vegetation or signs of development such as construction activities were detected.

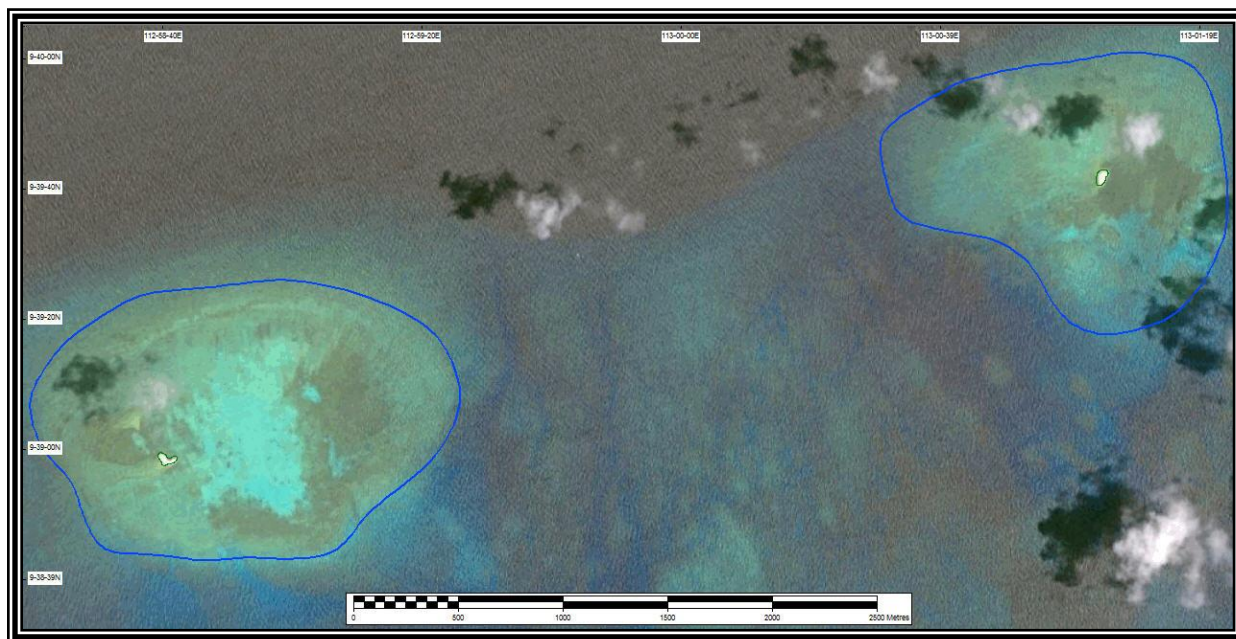


Figure 5.1.22: This is a 1:13,000 scale high-resolution 1.00 metre ground resolution image, dated 3 April 2014, sourced from Digital Globe.

Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

The combined area of the two features within the green line, that is, above the high water level has been calculated as follows:

Geodetic: 0.0062 km² (0.62 hectares) or 0.0018 nm²
 Planimetric: 0.0064 km²

Assessment

The two small sand islets that make up this feature arguably constitute islands in accordance with Article 121(1) as they are naturally formed, composed of land, surrounded by water and elevated above the high tide level. However, as the absolute time the high-resolution satellite imagery shown above was captured is not known, it cannot be stated with total confidence that these features are dry at high tide. The image above is therefore only indicative of the presence of above high-water features. Further research efforts, potentially including field

⁵⁷ See, UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.71.

surveys would be required in order to reach a more definitive conclusion on these two small islets as well as the presence of the reported above high-water rock at the southern end of the reef. It can also be noted that these features are not vegetated and there is no evidence of economic activity ongoing or in the past.

With this in mind as well as the observations in sailing directions that at least one rock exists on the feature above high water, for the purposes of this study Fiery Cross Reef is evaluated to be a “rock”.

On the balance of available geographic evidence, including observations in sailing directions that at least one rock exists on the feature above high water, in the view of the authors this feature can be considered to be an UNCLOS Article 121(3) rock and should therefore be accorded no more than a 12 nautical mile territorial sea.

5.2 Additional Potential High Water Elevations

This group of features predominantly consists of reefs and shoals which are reported as being submerged or awash at high tide but with individual or small groups of rocks or very small islets being visible at high water.⁵⁸ With certain exception they are generally designated as potential high water elevations as analysis of best resolution available satellite imagery has often proved to be inconclusive in confirming whether any parts of a particular feature remain above water at high tide. This suggests that if part of the feature, such as an isolated rock, is above high water, it is so small that it escapes detection via analysis of satellite imagery. Alternatively, it may mean that that part of the feature above high tide may have eroded away since it was observed to break high water or that the relevant observation was incorrect.

The generally extremely small size of the features listed here and the fact that they are predominantly uninhabited reefs (save for the possible presence of military garrisons housed on man-made structures) with a few isolated rocks or patches above high tide indicates that these features can be considered, at most, to be Article 121(3) rocks. Indeed, a number of the features listed here may, in fact, be more appropriately classified as low-tide elevations. A number of examples of imagery used to help in determining the status of these features is included below, namely with respect to Scarborough Reef (or Shoal), Alicia Annie Reef, Erica Reef, Investigator Shoal, Lansdowne Reef and Tennent Reef.

For the purposes of the present report where a feature has been reported as having some part of it, such as an isolated rock or coral patch, above high water, it is included in this section assessing potential high water elevations. With regard to the maps accompanying this report, where a particular feature among this group has been assessed as being an above high water feature it has had a 12 nautical mile territorial sea buffered around it (shown with a **green line**), measured from normal baselines generally located at the seaward edge of fringing reefs around these features. This exercise is undertaken in order to ascertain whether any of the low-tide elevations identified in the following category of insular features falls wholly or partially within this territorial sea limit from a potential above high water land feature and may therefore itself be used to provide basepoints for the measurement territorial sea.

⁵⁸ Particular reference was made to the British Admiralty Pilot for the area under consideration: UKHO, *China Sea Pilot*, Vol.2, *op.cit.*

Northern Sector

Scarborough Reef (or Shoal)

The relevant British Admiralty Sailing Directions (Pilot) describe Scarborough Reef as being “step-to on all sides and consists of a narrow belt of coral enclosing a lagoon of clear blue water”.⁵⁹ South Rock, at 3m high, is the “tallest rock” located at the southeast extremity of the reef.

It is notable that none of these observed above high water rocks are evident on 14.25 metre satellite imagery, either in multi-spectral Band combination designed to maximise water penetration or in the combination intended to highlight any features located above high tide level (see below).



Figure 5.2.1a: Landsat TM7 14.25m resolution image, dated 23 February 2000, in multi-spectral analysis combination B3+B2+B1

⁵⁹ UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.74.

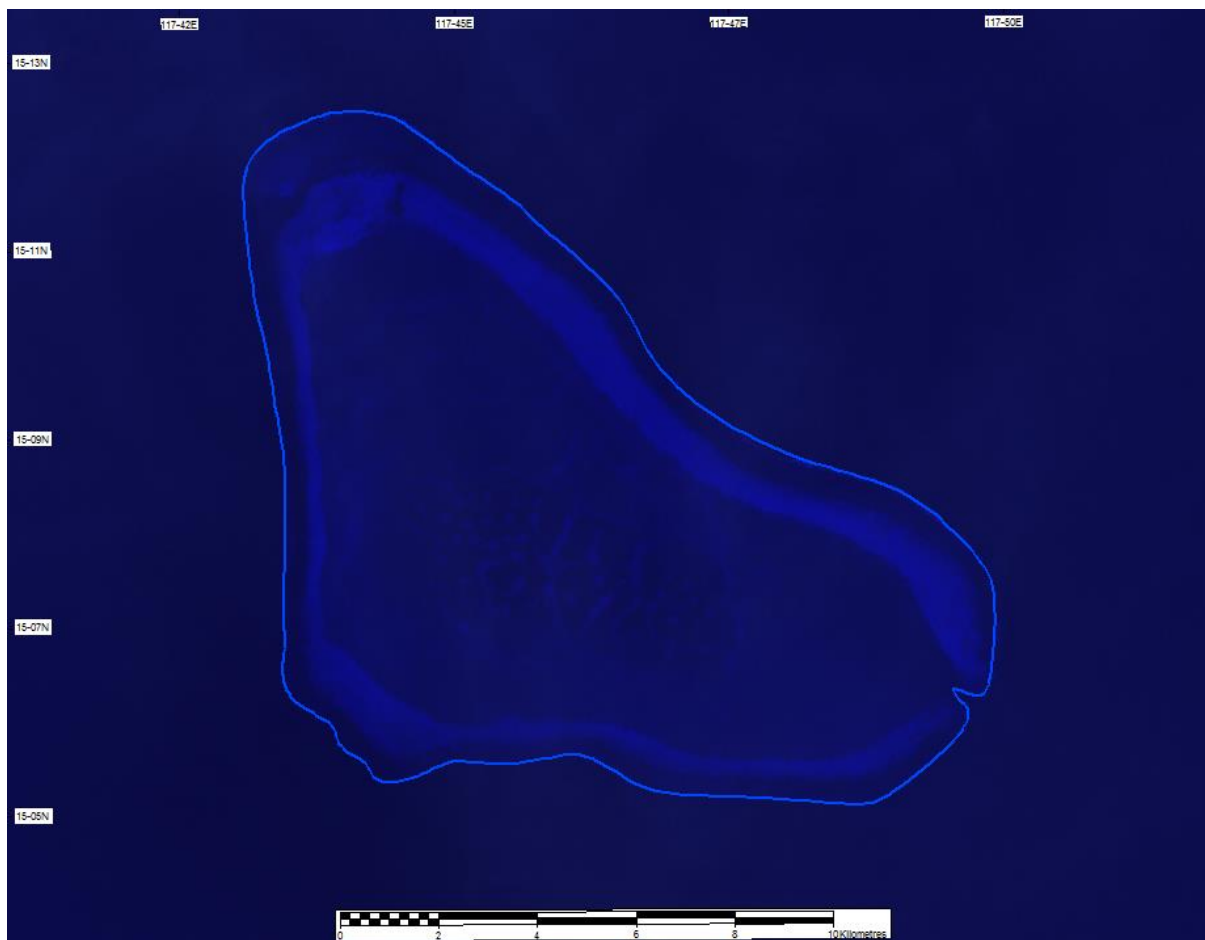


Figure 5.2.1b: Landsat TM7 14.25m resolution image, dated 23 February 2000, in multi-spectral analysis combination B7+B5+B

Assessment: In the view of the authors this feature is an Article 121(3) “rock”.

Southern Sector (Spratly Islands)

Alicia Annie Reef

This feature is noted in sailing directions as being one “which dries, encloses a shallow lagoon, and has numerous rocks on it which are just visible at HW [high water]”.⁶⁰ A small, low-lying sand cay is also noted at its northern end,⁶¹ which, it has been noted, stands “1.2 metres above high water”.⁶² Analysis of satellite imagery, suggests the presence of rocky areas, interpreted from multi-spectral analysis of recent 14.25 metre resolution imagery.

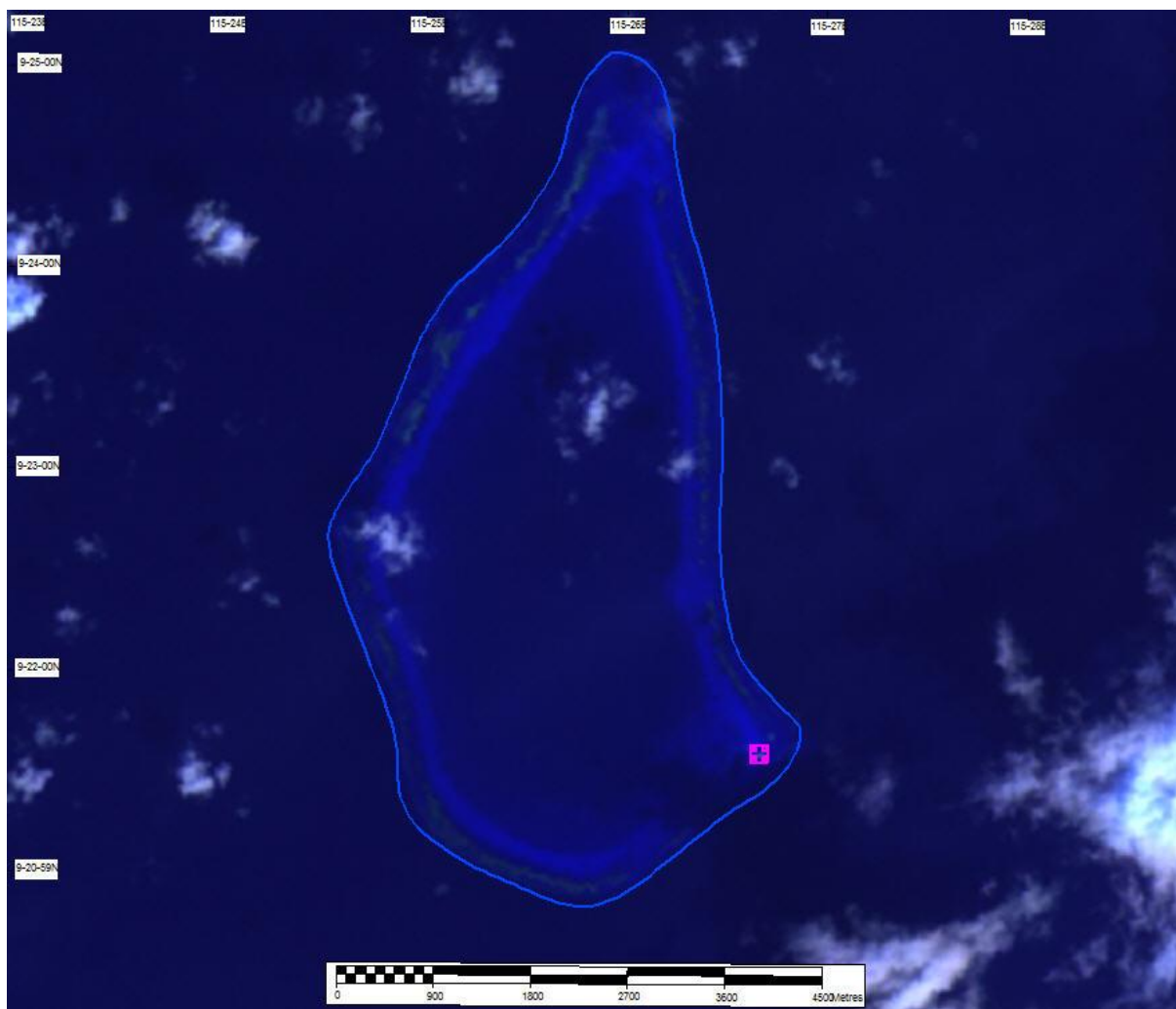


Figure 5.2.2: Landsat TM7 14.25m resolution image, dated 26 November 1999, in multi-spectral combination B7+B5+B1.

Assessment: In the view of the authors this feature is an Article 121(3) “rock”.

⁶⁰ UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.67.

⁶¹ *Ibid.*

⁶² Hancox and Prescott, 1995 at p.29.

Barque Canada Reef

This feature is a drying reef with a group of rocks reportedly being located at its northeast extremity.⁶³ It has also been suggested that a large rock standing 4.5 metres above high tide exists at its southwest extremity while another group of rocks with an elevation of 2 metres above high tide are located in the central part of the reef.⁶⁴ Analysis of satellite imagery (Landsat TM7 14.25m resolution) showed no indications of drying areas and/or rocks (see also Figure 4.1 above). If they indeed exist then it is likely that they are too small to be seen on the satellite image.

Assessment: In the view of the authors this feature is an Article 121(3) “rock” at most.

Cornwallis South Reef

Sailing directions indicate that this feature is a drying reef which would therefore qualify as a low-tide elevation. Analysis of satellite imagery (Landsat TM7 14.25m resolution) suggest the presence of extensive drying areas (grey shading at eastern edge of reef) and, potentially, rocky areas that may be elevated above high water.

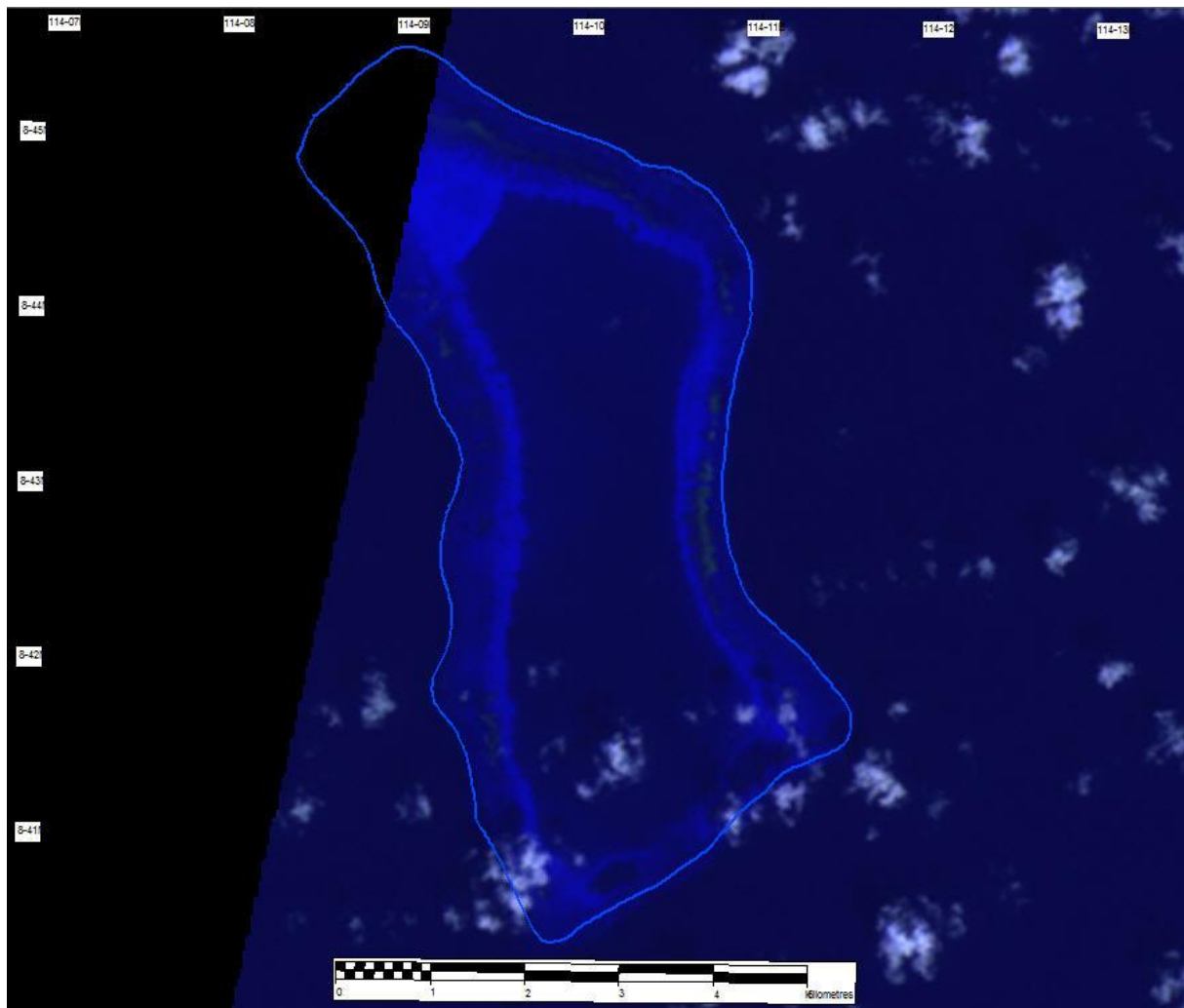


Figure 5.2.3: Landsat TM7 image, 14.25m resolution, dated 26 November 1999, showing multi-spectral analysis combination B7+B5+B1.

⁶³ UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.70.

⁶⁴ Hancox and Prescott, 1995 at p.17.

Assessment: On the available evidence it is the view of the authors this feature should be considered to be a low-tide elevation.

Cuarteron Reef

This feature, which is part of the London Reefs group, together Central, East and West Reefs It is described as being “encumbered by rocks”, some of which are 1-2 metres high.⁶⁵ Analysis of satellite imagery (Landsat TM7 14.25m resolution) showed no indications of drying areas and/or rocks. If they indeed exist then it is likely that they are too small to be seen on the satellite image.

Assessment: In the view of the authors this feature is an Article 121(3) “rock” at most.

Dallas Reef

This feature is a drying reef which forms part of Ardasier Bank.⁶⁶ Analysis of satellite imagery (Landsat TM7 14.25m resolution) showed no indications of drying areas and/or rocks. If they indeed exist then it is likely that they are too small to be seen on the satellite image.

Assessment: In the view of the authors this feature is a low-tide elevation.

Discovery Great Reef

This elongated, north-south oriented reef has been observed to have “several above-water rocks on it.”⁶⁷ It is, however, notable that sailing directions make no mention of the rocks located on the reef standing above high water. It is also the case that three artificial installations and structures have been constructed on the reef. Analysis of satellite imagery (Landsat TM7 14.25m resolution) showed no indications of drying areas and/or rocks. If they indeed exist then it is likely that they are too small to be seen on the satellite image.

Assessment: On the available evidence it is the view of the authors this feature should be considered to be a low-tide elevation.

East Reef

This feature is part of the London Reefs group. The western edge of the feature reportedly includes a number of rocks, including one that stands 1 metre above high tide.⁶⁸ Sailing directions indicate merely that the “one or two” rocks located on the western side of the feature “seldom cover, even though the sea breaks heavily on the reef.”⁶⁹ Analysis of satellite imagery (Landsat TM7 14.25m resolution) showed no indications of drying areas and/or rocks. If they indeed exist then it is likely that they are too small to be seen on the satellite image.

Assessment: In the view of the authors this feature is an Article 121(3) “rock” at most.

Eldad Reef

This feature is the largest reef that uncovers on Tizard Bank, which comprises a large lagoon bordered by multiple reefs and shoals including, the Gaven Reefs, Namyit Island, Petley (or Petly) Reef and Sand Cay. Eldad Reef is reported to be a drying reef with “a few large, and many small above-water rocks lie on the reef.”⁷⁰ Sailing directions do not, however, record

⁶⁵ UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.71.

⁶⁶ *Ibid.*, p.69.

⁶⁷ *Ibid.*, p.72.

⁶⁸ Hancox and Prescott, 1995 at p.14.

⁶⁹ UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.71.

⁷⁰ UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.71.

whether these rocks stand above the high water level. Additionally, analysis of satellite imagery (Landsat TM7 14.25m resolution) showed no indications of drying areas and/or rocks. If they indeed exist then it is likely that they are too small to be seen on the satellite image.

Assessment: On the available evidence it is the view of the authors this feature should be considered to be a low-tide elevation.

Erica Reef

A drying reef with “a few rocks” that “may show above HW [high water]”.⁷¹ reported on its eastern edge that may stand above high water. Analysis of satellite imagery (Landsat TM7 14.25m resolution) suggest the presence of drying areas and, potentially, rocky areas (grey shading at eastern edge of reef) that may be elevated above high water.

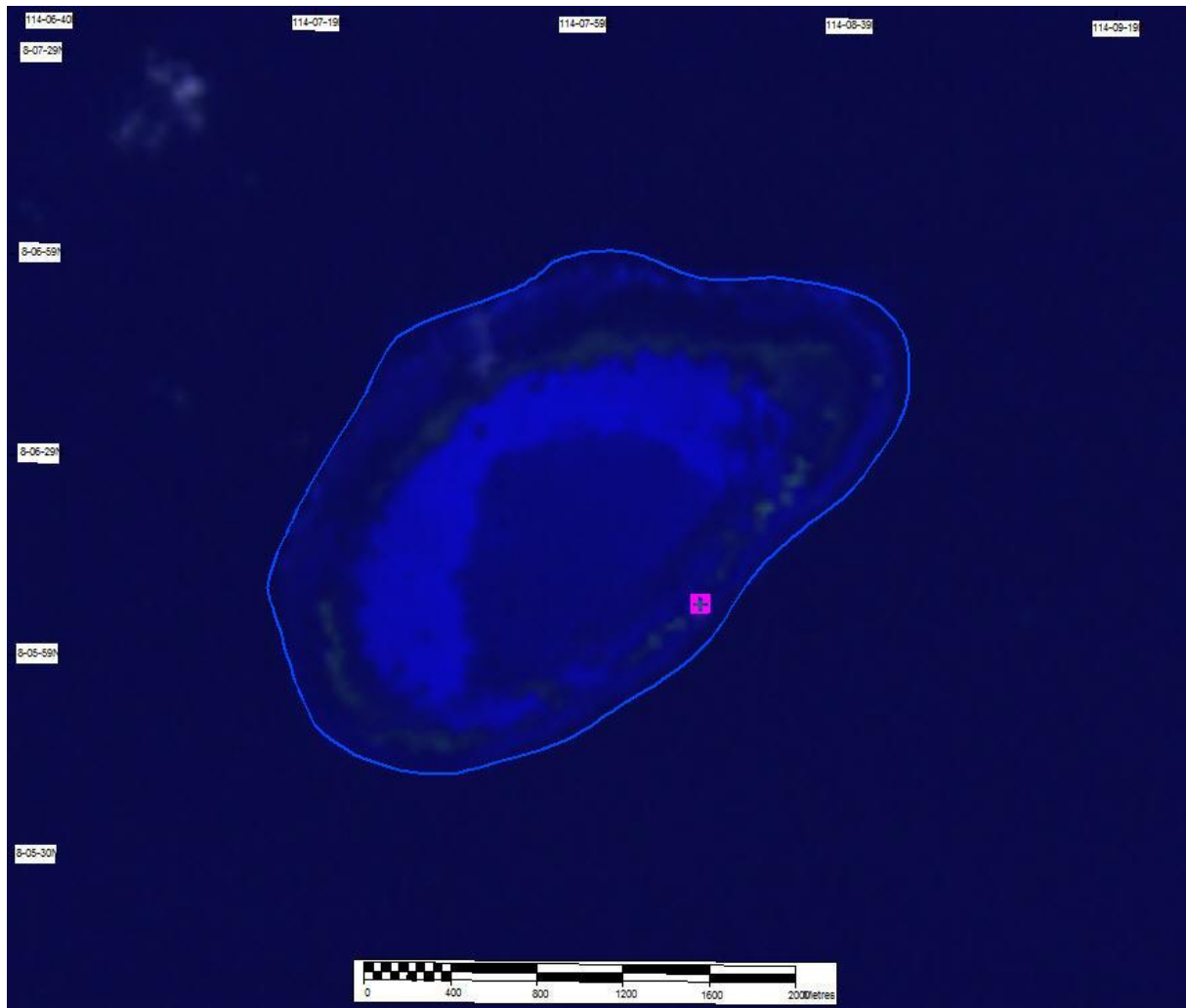


Figure 5.2.3: Landsat TM7 14.25m resolution image, dated 26 November 1999, showing multi-spectral analysis band combination B7+B5+B1.

Assessment: In the view of the authors this feature is an Article 121(3) “rock” at most.

⁷¹ *Ibid.*, p.69.

Gaven Reefs

The two features that make up Gaven Reefs are located on Tizard Bank, a large lagoon fringed by numerous reefs and shoals including Itu Aba, Namyt Island, Petley (or Petly) Reef, Eldad Reef and Sand Cay. Sailing directions suggest that these features cover at high tide.⁷²

However, recent high-resolution satellite imagery (1.75 meter ground resolution, dated 16 December 2012 sourced from Digital Globe) suggests the presence of two very small above-water features located on the northern reef and three analogous features were detected on the southern reef. The combined area of these potential sand islets is 4.14 hectares (geodetic). Interpreted coastlines at mean high water are shown with green lines while the low water lines at the outer edge of the surrounding reef are shown as blue lines.

Two man-made structures are also clearly visible on northern of the two reefs (pink square symbols). It is possible that these structures have been built on small above high tide features analogous to the others situated on Gaven Reefs. For area calculation purposes they have been assumed to be artificial installations or structures and not included. Neither visible vegetation, nor any sign of development was evident on these features. They lie approximately 8.278 nautical miles east of Namyt Island (5.1.11 in this report).

⁷² *Ibid.*, p.71.

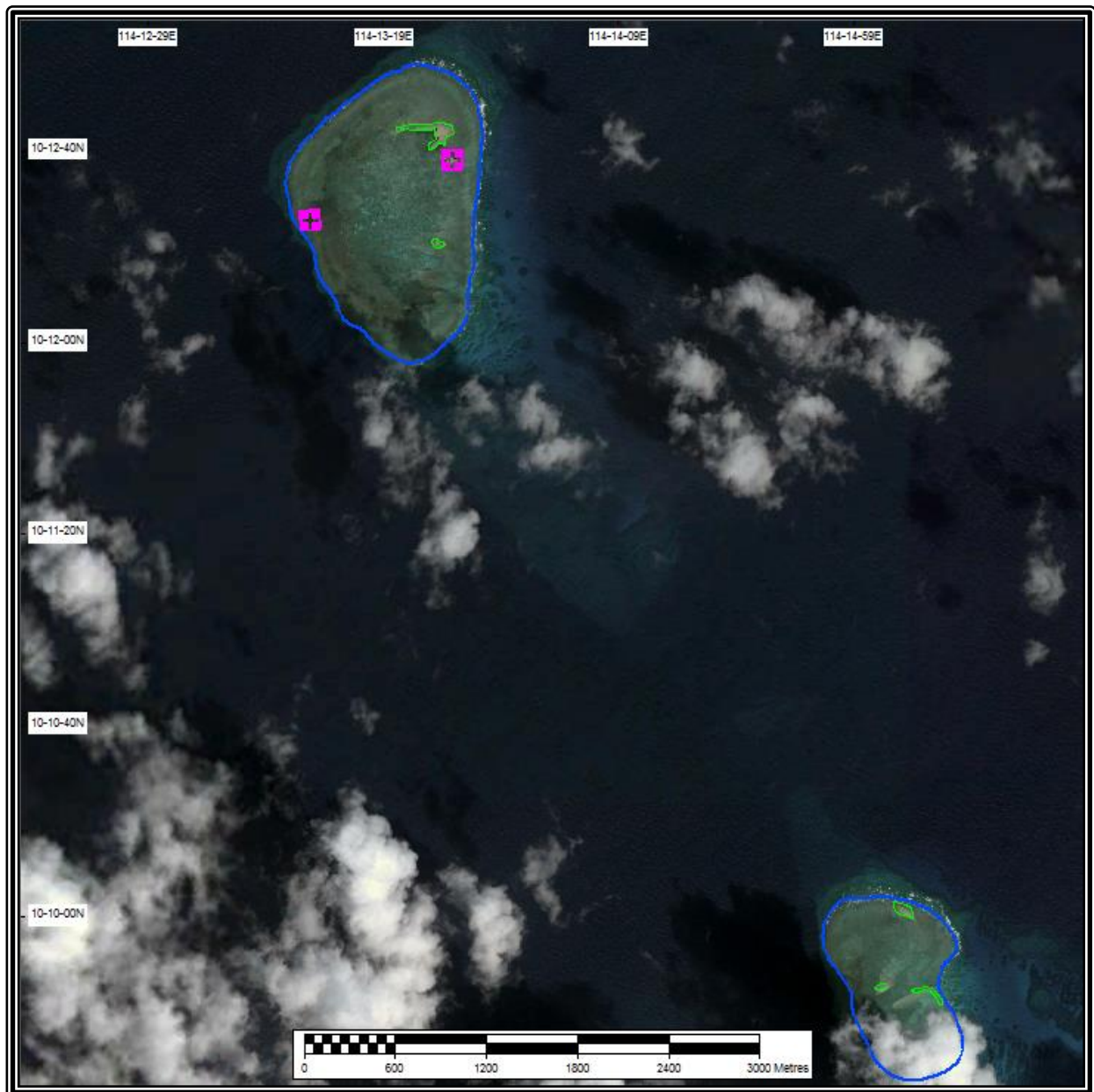


Figure 5.2.4: This is a 1:27,500 scale Landsat high-resolution, 1.75 metre ground resolution image, dated 16 December 2012, sourced from Digital Globe.

As the absolute time the high-resolution satellite imagery shown above was captured is not known, it cannot be stated with total confidence that these features are dry at high tide. The image above is therefore only indicative of the presence of above high-water features. Further research efforts, potentially including field surveys would be required in order to reach a more definitive conclusion. With this in mind as well as the observations in sailing directions that the feature covers at high water, for the purposes of this study these features are considered to be low-tide elevations.

Assessment: On the available evidence it is the view of the authors this feature should be considered to be a low-tide elevation.

Investigator Shoal

This predominantly submerged coral atoll dries at low tide and some rocks may be visible at high tide.⁷³ Analysis of satellite imagery (Landsat TM7 14.25m resolution) showed no indications of drying areas and/or rocks and suggest that no near surface features are present

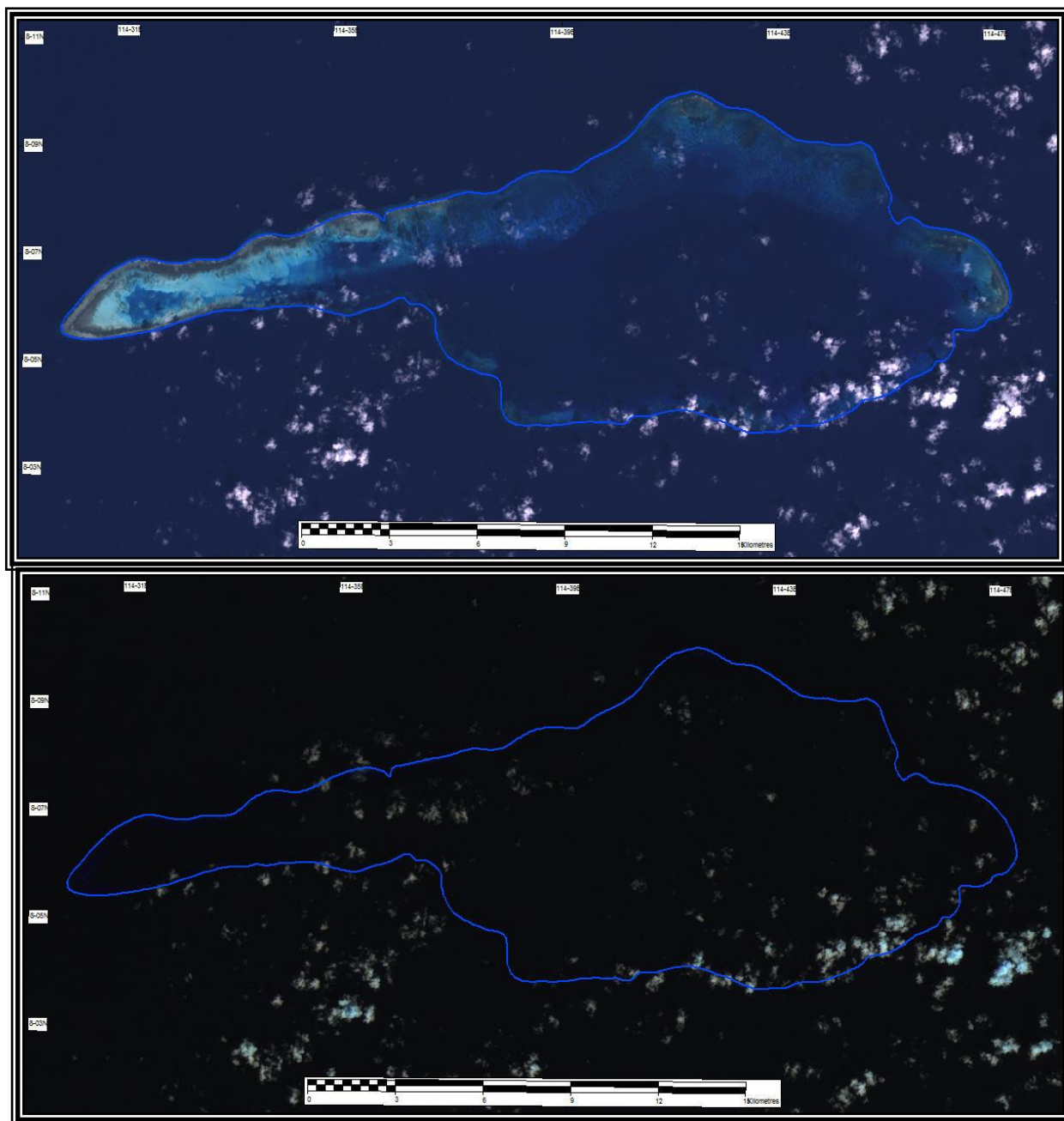


Figure 5.2.5: The two images above serve to illustrate typical feature analysis using CARIS LOTS GIS, coupled with recent Landsat TM7, 14.25m resolution satellite imagery, dated 26 November 1999. Both images are of Investigator Reef depicted in two different multi-spectral band combinations. Features in this category typically show some evidence of shallower water features (upper Image) but tend to show no discernable near surface features (bottom image).

Assessment: In the view of the authors this feature is a low-tide elevation.

⁷³ Hancox and Prescott, 1995 at p.30.

Johnson Reef (Johnson South Reef)

Part of the Union Bank and Reefs, it is reported that on this feature “a number of large rocks show above high tide at the southeast side of the reef.”⁷⁴ Analysis of satellite imagery (Landsat TM7 14.25m resolution) showed no indications of drying areas and/or rocks. If they indeed exist then it is likely that they are too small to be seen on the satellite image.

Assessment: In the view of the authors this feature is an Article 121(3) “rock” at most.

Ladd Reef

Ladd Reef lies 15 nautical miles to the west of Spratly Island. It is reported to be a drying reef with boulders located on it.⁷⁵ Analysis of satellite imagery (Landsat TM7 14.25m resolution) showed no indications of drying areas and/or rocks. If they exist then it is likely that they are too small to be seen on the satellite image.

Assessment: In the view of the authors this feature is a low-tide elevation.

⁷⁴ *Ibid.*, p.10.

⁷⁵ *Ibid.*, p.15.

Landsdowne Reef

Landsdowne Reef is part of the Union Bank and associated Reefs which consists of a group of numerous reefs surrounding a large area of shallow waters including Collins Reef, Lankiam Cay, Sin Cowe Island, Sin Cowe East (Grierson Reef), and Whitsun Reef. Multi-spectral analysis of satellite imagery (Landsat TM7 14.25m resolution) suggested the presence of small potential drying areas (together with a man-made structure or installation).

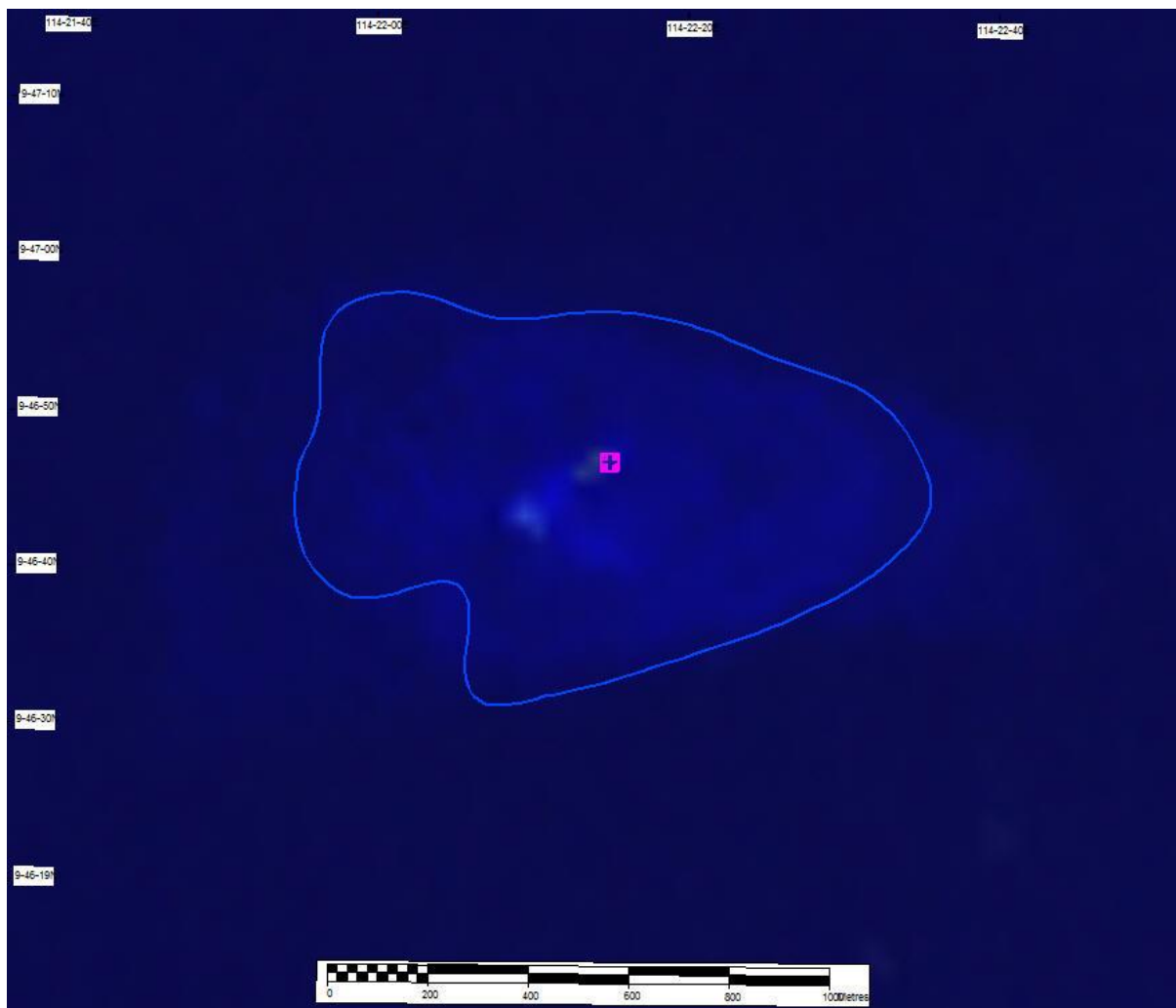


Figure 5.2.6: Landsat TM7 14.25m resolution image, dated, 21 April 2001, showing multi-spectral analysis band combination B7+B5+B

Assessment: In the view of the authors this feature is a low-tide elevation.

Tennent (Pigeon) Reef

This drying reef reportedly has “numerous above-water rocks on it.”⁷⁶ Rocks standing above high water reported. Analysis of satellite imagery (Landsat TM7, 14.25m resolution), suggests the presence of rocky areas (grey shading at edge of reef), interpreted from multi-spectral analysis of recent 14.25 metre resolution imagery. Evidence to support the existence of rocks standing above high water was inconclusive, however.

⁷⁶ UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, p.69.

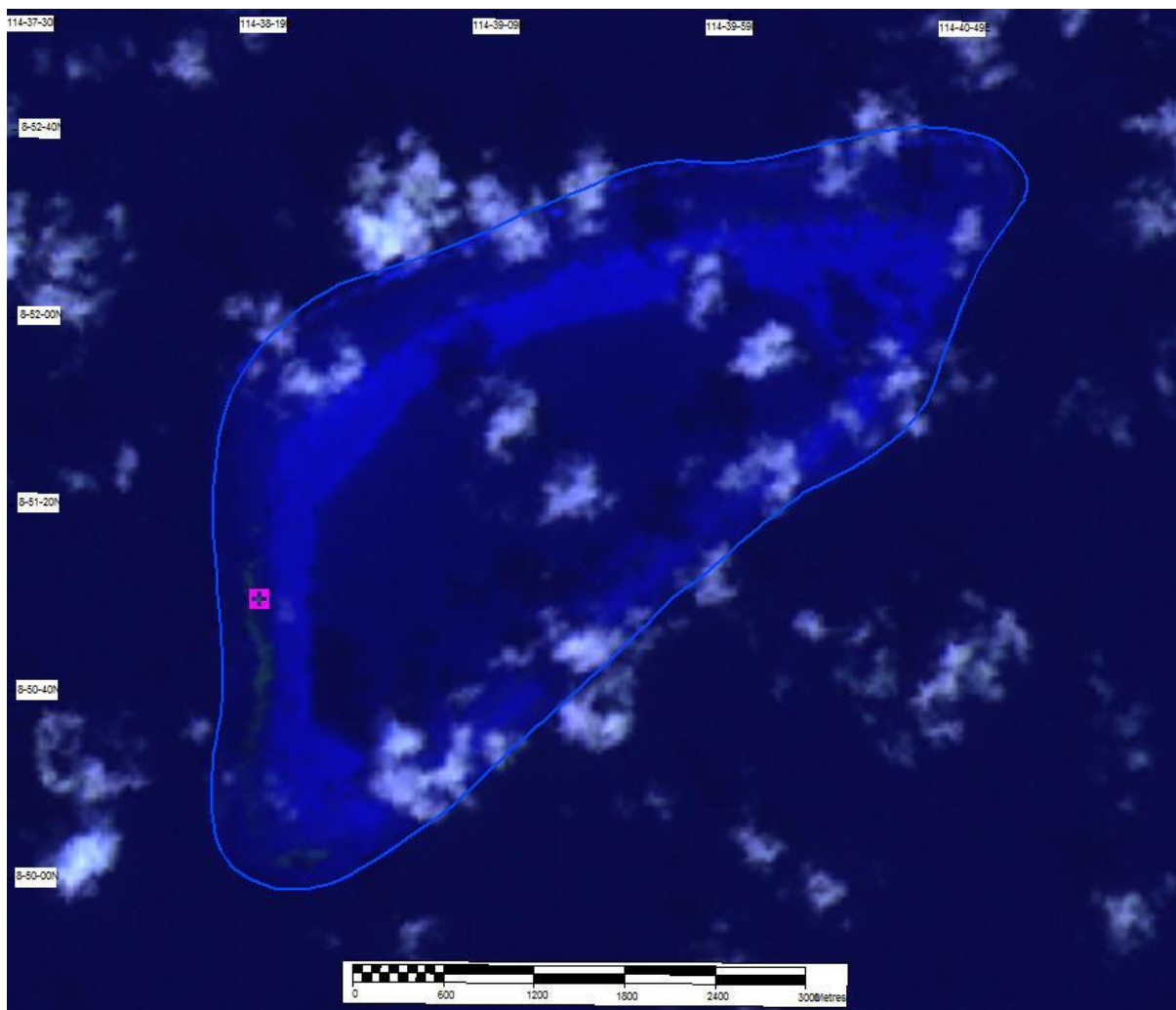


Figure 5.2.5: Landsat TM7, 14.25m resolution image, dated 26 November 1999, showing multi-spectral analysis band combination B7+B5+B1.

Assessment: On the available evidence it is the view of the authors this feature should be considered to be a low-tide elevation.

Whitsun Reef

This feature is the largest coral reef among the Union Reefs which consists of a group of numerous reefs surrounding a large area of shallow waters including Collins Reef, Landsdowne Reef, Lankiam Cay, Sin Cowe Island, Sin Cowe East (Grierson Reef), and Whitsun Reef. The presence of a small cay has been reported in the past. Analysis of satellite imagery (Landsat TM7, 14.25m resolution) showed no indications of drying areas and/or rocks.

Assessment: In the view of the authors this feature is a low-tide elevation.

5.3 Low-tide Elevations (LTEs)

The following 18 features have been determined to be low-tide elevations. That is, features which are submerged at high tide and dry at low tide, in keeping with Article 13 of UNCLOS. These features are as follows:

Alison Reef
 Ardasier Reef
 Collins Reef
 Cornwallis South Reef
 Dallas Reef
 Discovery Great Reef
 Eldad Reef
 Gaven Reefs
 Investigator Shoal
 Ladd Reef
 Landsdowne Reef
 McKennan (Hughes) Reef
 Mischief Reef
 Petly Reef
 Second Thomas Shoal
 Subi Reef
 Tennent (Pigeon) Reef and,
 Whitsun Reef.

These features are generally described in sailing directions that either “dry” or that “drying patches” exist. For example, the term “dries” is applied to Alison Reef, Ardasier Reef, Cornwallis South Reef, Discovery Great Reef, Mischief Reef, Northeast Investigator Shoal, Subi Reef and Tennent (Pigeon) Reef.⁷⁷ Similarly, it is observed that Investigator Shoal “dries in places”⁷⁸ and that Ladd Reef “dries in parts”.⁷⁹ Nautical charting consulted also depicts these features, together with Eldad Reef, Gaven Reefs, Landsdowne Reef, McKennan (Hughes) Reef, Petley (or Petly) Reef, Second Thomas Shoal and Whitsun Reef as drying features at low-tide.

Additionally, all of these features have been verified as being low-tide elevations through multi-spectral analysis of satellite imagery. For assessments regarding Cornwallis South Reef

The following figures illustrate typical feature analysis used, in combination with sailing directions and other sources mentioned above, to determine that a particular feature is a low-tide elevation through the use of CARIS LOTS GIS, coupled with using recent Landsat TM7 satellite imagery and three-dimensional advanced DEM mapping and image analysis. A DEM image for Alison Reef is provided together with two images of Subi Reef showing two distinct multi-spectral band combinations.

⁷⁷ See, UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, pp.66-73.

⁷⁸ *Ibid.*, p.69.

⁷⁹ *Ibid.*, p.70.

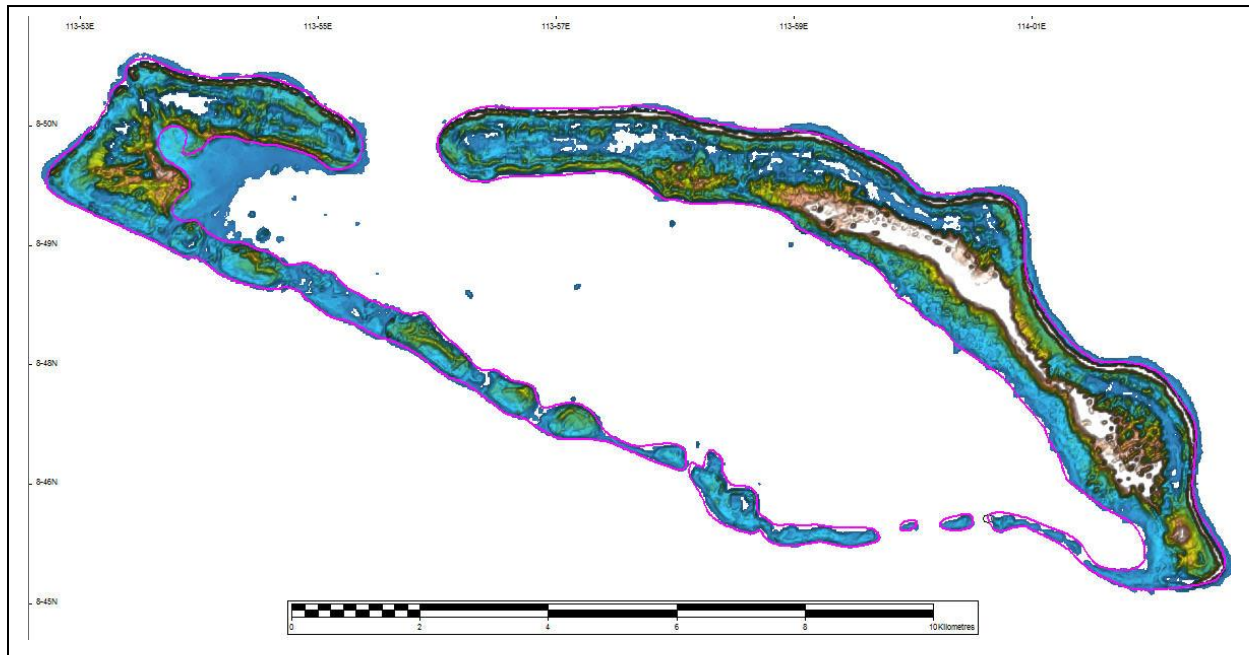


Figure 5.3.1: Close up image showing Landsat TM8 DEM Results for Alison Reef with 10 metre resolution 3D Shaded Relief, Contours Draped and Normal Baseline Shown (purple line).

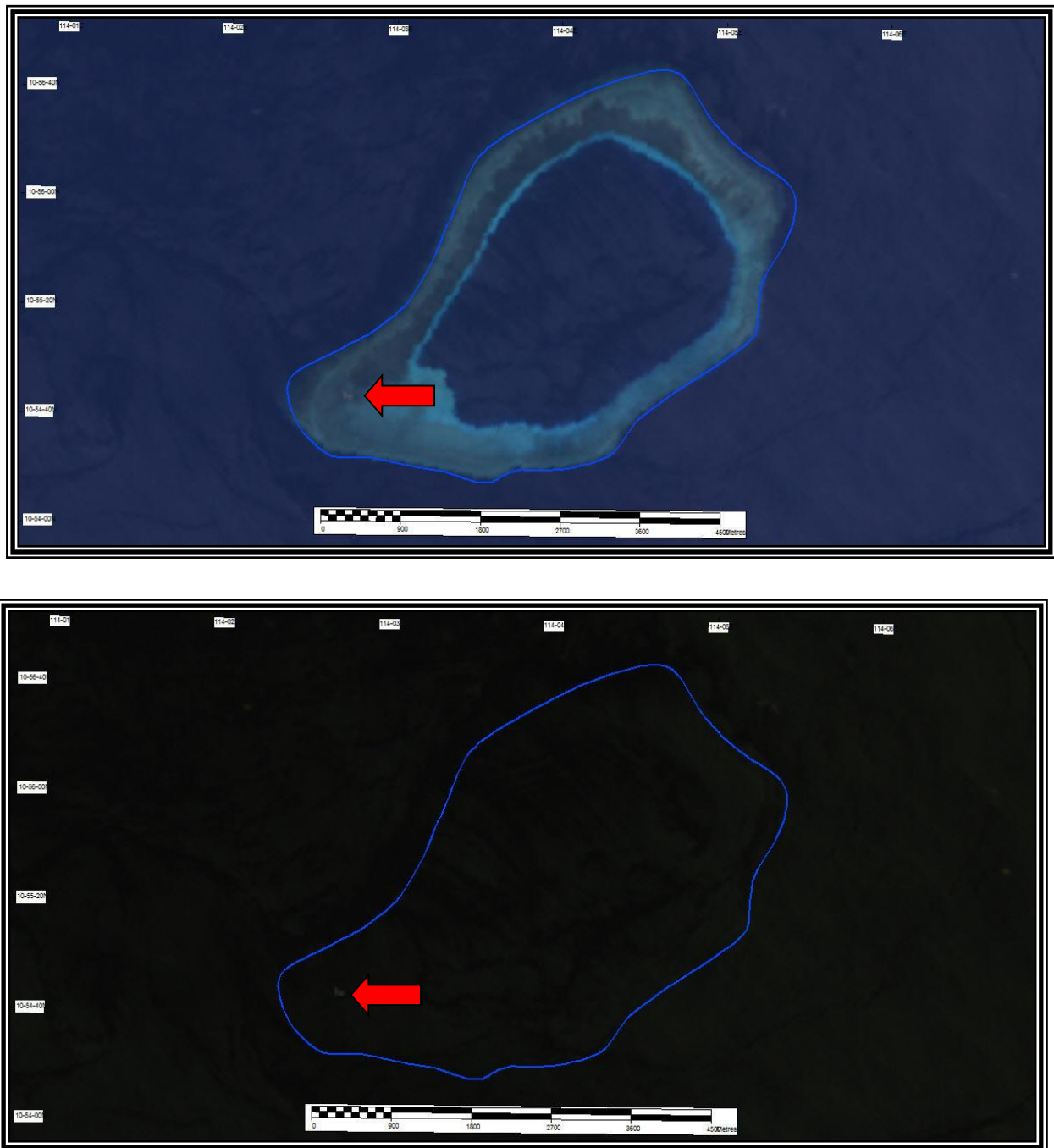


Figure 5.3.2: Both examples above show Subi Reef as seen in two different multi-spectral band combinations. The upper image shows a band combination designed to highlight shallow water and suggests the presence of drying areas. The lower image provides the band combination that highlights only those features above high water level. In this case the only above high tide part of Subi Reef is the small feature identified with a red arrow which is a man-made installation, structure or artificial island. On the basis of this analysis, allied to reports that the reef usually dries and is marked by breakers, Subi Reef is classified as a low-tide elevation.

5.4 Low-tide Elevations Wholly or Partially within a Territorial Sea Limit

The following 8 features have been determined to be wholly or partially within a 12 nautical mile limit as defined from the interpreted normal baselines of confirmed or potential above high water features.

Collins Reef
Eldad Reef
Gaven Reefs
Landsdowne Reef
McKenna (Hughes) Reef
Petley (or Petly) Reef
Subi Reef and,
Whitsun Reef

As such, and in line with the terms of Article 13(1) of UNCLOS, such low-tide elevations can themselves generate a territorial sea of their own. These ‘additional’ areas of territorial sea, extending seawards of the territorial sea generated from the above high-water features discussed in Sections 5.1 and 5.2 of this report, are illustrated in the maps accompanying this report (with **red lines**).

5.5 Submerged Features

The following features have been confirmed through the analysis conducted for this report to be wholly submerged features which therefore have no capacity to generate claims to maritime jurisdiction. These are Macclesfield Bank located to the north of the Spratly Islands group and Reed Bank located towards the eastern margins of the Spratly Islands group.

Macclesfield Bank is termed a “below-water atoll” in the relevant British Admiralty Pilot with a least depth of water of 9.1m over it.⁸⁰ Similarly, the Reed Bank (or Tablemount) is identified as a large bank “with a least known depth of 16.5 m” over it.⁸¹

Analysis of satellite imagery shows that no waves are apparent breaking over these features, suggesting water depths in the range of 5-10 metres plus, confirming that these features are submerged.

⁸⁰ See, UKHO, *China Sea Pilot*, Vol.1, *op.cit.*, pp.68-69.

⁸¹ See, UKHO, *China Sea Pilot*, Vol.2, *op.cit.*, pp.68.

6. Conclusions

The objective of this report has been to provide an appraisal of the geographical characteristics and appropriate classification of certain South China Sea insular features against the backdrop of the relevant provisions of the United Nations Convention on the Law of the Sea. Two features were assessed to the north of the Spratly Islands group, namely Scarborough Reef (or Shoal) and Macclesfield Bank. The primary focus of the report was, however, on the group of features generally known by the collective name the Spratly Islands, and a further 47 features that are part of the Spratly Islands group were analysed.

The appraisal undertaken here involved reference to charts and sailing directions, coupled with GIS analysis and the interpretation of high-resolution satellite imagery including the application of techniques such as multi-spectral image analysis and advanced three-dimensional mapping techniques as an aid to the evaluation and interpretation of features. Here it can be observed that satellite imagery, even at high resolution, although extremely useful for this appraisal in terms of highlighting the geographical characteristics of the insular features under consideration has its limitations and on occasion uncertainties remain. This suggests that further research including, potentially, field verification of the characteristics of certain features would be appropriate if at all feasible. Overall, a critical yet balanced approach has been adopted taking into account all available sources of information relating to the features covered by this report.

A central consideration in this report is the interpretation and analysis of the geographical aspects of the Regime of Islands and provisions of the United Nations Law of the Sea Convention relating to low-tide elevations as well as artificial islands, installations and structures. It is acknowledged that there is no definitive or authoritative interpretation of certain aspects of the Regime of Islands. This is particularly evident in relation to the issue of distinguishing between features capable of generating EEZ and continental shelf rights and “rocks” within the meaning of UNCLOS Article 121(3) which cannot.

In order to inform the appropriate classification of insular features a number of factors were taken into consideration. In particular, the appraisal takes into account hydrographic factors, that is, whether a given feature is above or below high and low water lines. Additionally, factors such as size, presence of vegetation, water sources and evidence of habitation and economic development or activity have been taken into account as indicators on insular status. The authors have sought to take all of these factors and the best available information available into consideration in order to reach a determination on the appropriate classification of the insular features analysed here.

On the basis of these considerations the following conclusions have been reached:

Northern Sector

Regarding the aforementioned two features located to the north of the Spratly Islands group, the authors are of the view that Scarborough Reef (or Shoal) is a “rock” within the meaning of Article 121(3) of UNCLOS. Macclesfield Bank was determined to be an entirely submerged feature.

Southern Sector (Spratly Islands)

This report identifies 22 features of measurable above high-water area that, in the view of the authors, can be classified as islands in keeping with Article 121(1). That is, they are naturally

formed, composed of land, surrounded by water and elevated above the high tide level. All of these features are small and in the majority of cases extremely so. Indeed, the 22 features covered in Section 5.1 of this report have a total area of just 3.13km².

As these features are predominantly composed of sand and coral accumulations located on reef structures they are not rocks in a strictly physical sense. In addition to having restricted spatial extents, these features are remote from (mainland) shore, lack indigenous population and where a garrison or other government personnel are present they are wholly dependent on supplies provided from sources other than the island itself. Further, evidence of socio-economic activity and development is predominantly lacking. Taking all of these factors into consideration it was concluded that it would be appropriate to treat all of these features in the same manner as an UNCLOS Article 121(3) rock and accord them no more than a 12 nautical mile territorial sea.

These insular features are, in order of size from greatest to least area:

Itu Abu Island
 Commodore Reef
 Thitu Island
 Swallow Reef
 West York Island
 Northeast Cay
 Spratly Island
 Southwest Cay
 Loaita Island
 Mariveles Reef
 Namyt Island
 Nanshan Island
 Sand Cay
 Sin Cowe Island
 Pearson Reef
 West (London) Reef
 Amboyna Cay
 Sin Cowe East (Grierson Reef)
 Central (London) Reef
 Lankiam Cay
 Flat Island and,
 Fiery Cross Reef

A further 6 features within the Spratly Islands were classified as islands in keeping with Article 121(1) being naturally formed feature, composed of land, surrounded by water and elevated above the high tide level. With the features standing above high-water level being extremely small individual rocks or shoals the existence of which predominantly could not be determined by reference to even high-resolution satellite imagery, these features were classified as “rocks” consistent with Article 121(3) of UNCLOS.

These features, appraised to be Article 121(3) rocks are:

Alicia Annie Reef
 Barque Canada Reef
 Cuarteron Reef

East Reef (London Reefs)
Erica Reef and,
Johnson Reef (Johnson South Reef)

Additionally, the following 18 features have been assessed to be low-tide elevations. That is, features which are submerged at high tide and dry at low tide, in keeping with Article 13 of UNCLOS:

Alison Reef
Ardasier Reef
Collins Reef
Cornwallis South Reef
Dallas Reef
Discovery Great Reef
Eldad Reef
Gaven Reefs
Investigator Shoal
Ladd Reef
Landsdowne Reef
McKenna (Hughes) Reef
Mischief Reef
Petly Reef
Second Thomas Shoal
Subi Reef
Tennent (Pigeon) Reef and,
Whitsun Reef.

Finally, in addition to Macclesfield, located to the north of the Spratly Islands, Reed Bank was confirmed through the analysis conducted for this report to be a wholly submerged feature with no capacity to generate claims to maritime jurisdiction.

The impact of this appraisal and classification is illustrated on the maps included at the end of this report. The first groups of above-mentioned features, that is, features of measurable area which have been assessed as meeting the requirements of Article 121(1) of UNCLOS have a 12 nautical mile territorial sea limit defined around them, measured from their interpreted normal baselines (with a **black line**). The second group of extremely small above high-water features that have, nonetheless, been determined to satisfy the terms of Article 121(1) of UNCLOS have also had a 12 nautical mile territorial sea buffered from their interpreted normal baselines (with a **green line**).⁸² The area of the territorial sea defined from these above high-water features, that is, within the black and green lines shown on the maps below combined, is 43,648.52 km² or 12,712.18 nm².⁸³

Additionally, a number of low-tide elevations fall wholly or partially within these defined 12 nautical mile territorial sea limits, namely:

Collins Reef

⁸² This group comprises Scarborough Reef and 6 features located in the Spratly Islands group: Alicia Annie Reef, Barque Canada Reef, Cuarteron Reef, East Reef (London Reefs), Erica Reef and Johnson Reef (Johnson South Reef).

⁸³ These figures are geodetic calculations. The planimetric equivalent is 44,966.27 km².

Eldad Reef
 Gaven Reefs
 Landsdowne Reef
 McKennan (Hughes) Reef
 Petley Reef
 Subi Reef and,
 Whitsun Reef

Accordingly, these 8 low-tide elevations can themselves be used as basepoints to measure a territorial sea in keeping with Article 13(1) of UNCLOS. These ‘additional’ areas of territorial sea measured from these 8 low-tide elevations are illustrated on the maps accompanying this report (with a **red line**). These supplementary areas of territorial sea total 3,753.34 km² or 1,093.12 nm² of maritime space.⁸⁴

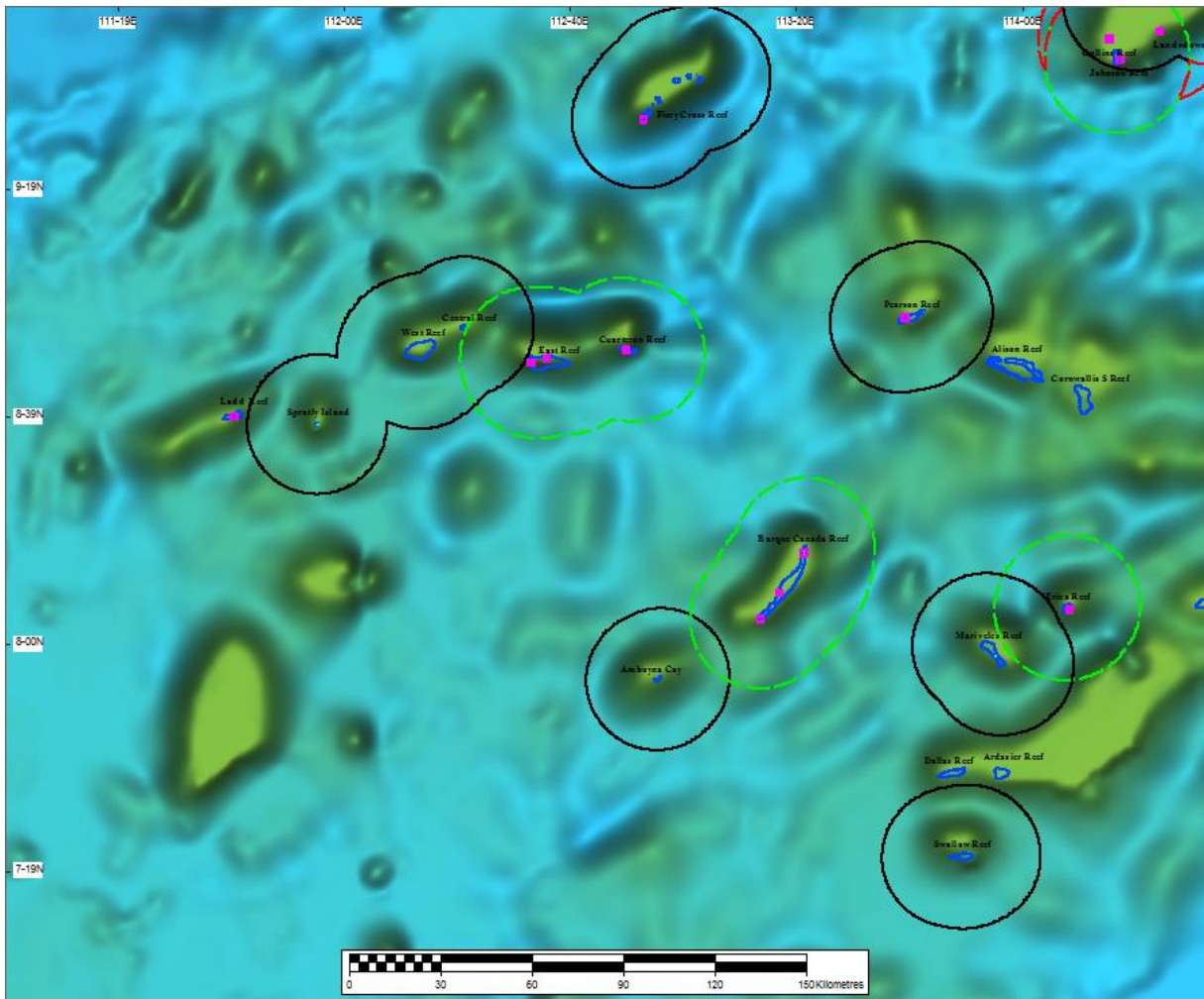
The combined area of territorial sea generated from the 29 above high-water features identified above, together with the ‘extra’ territorial sea areas generated from the 8 low-tide elevations that fall wholly or partially within the territorial sea areas measured from the 29 aforementioned above high-water features is 47,401.86 km² or 13,805.30 nm².⁸⁵

Low-tide elevations located entirely beyond the limits of territorial seas defined from the 18 features meeting the requirements of Article 121(1) of UNCLOS have no 12 nautical mile limit of their own defined on the maps accompanying this report. Similarly, the two features included in this reported which have been confirmed as being submerged, namely Macclesfield Bank and Reed Bank, have no capacity to generate claims to maritime jurisdiction and therefore have no maritime claims defined from them on these maps. Finally, a number of artificial islands, installations and structures are marked on the maps with pink symbols but no claims to maritime jurisdiction are attributed to them.

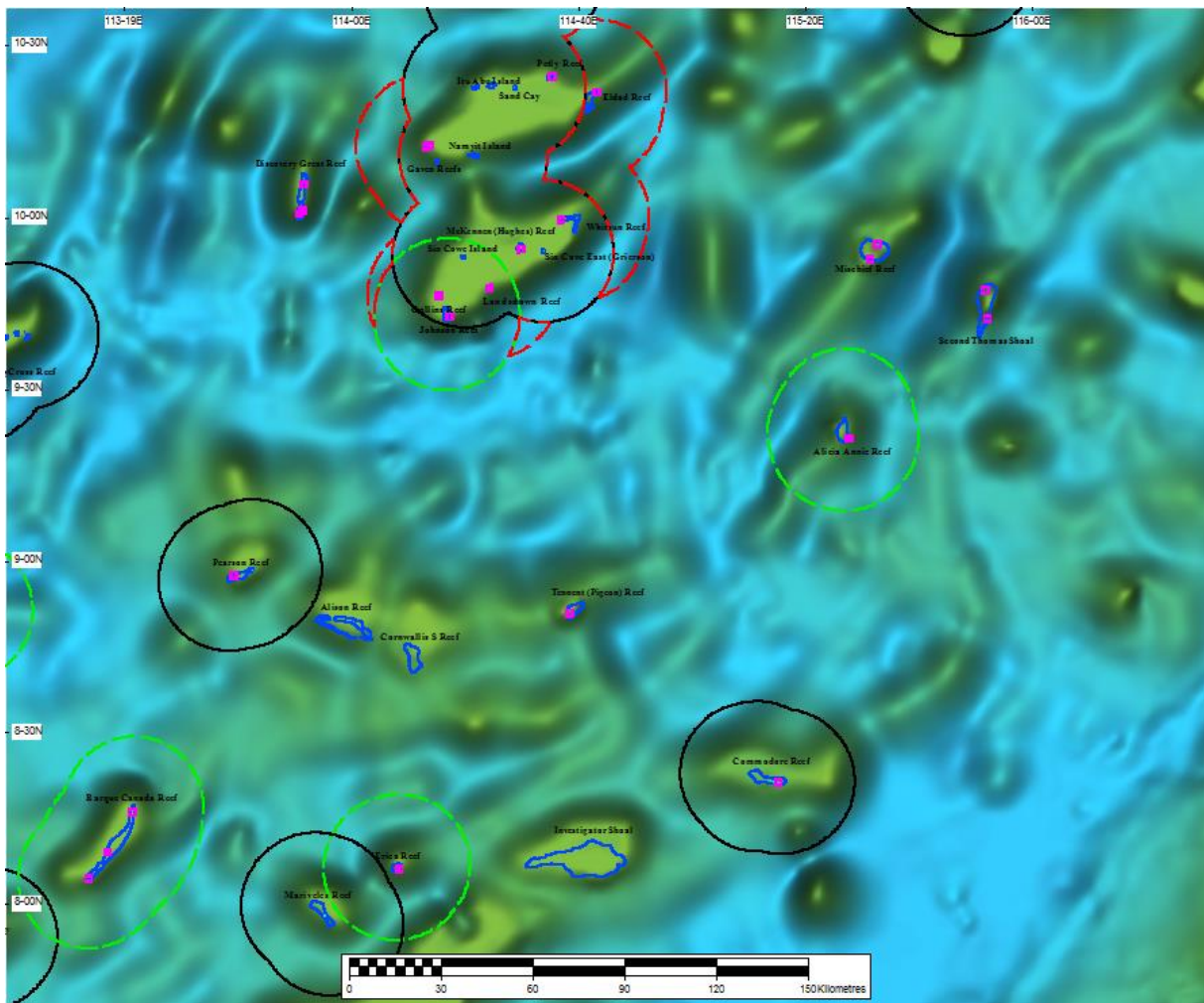
⁸⁴ These figures are geodetic calculations. The planimetric equivalent is 3,880.06 km².

⁸⁵ These figures are geodetic calculations. The planimetric equivalent is 48,846.33 km².

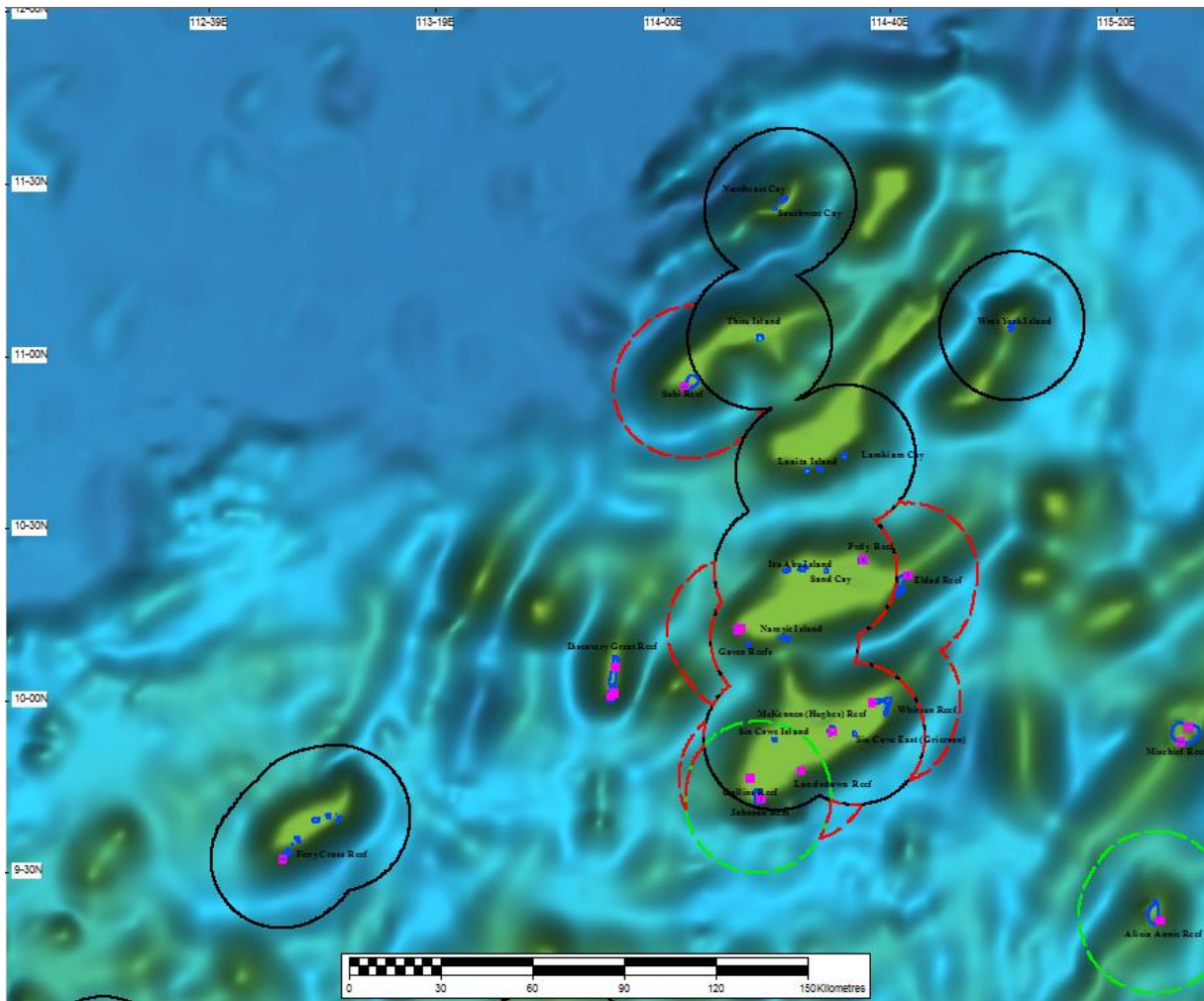
Maps



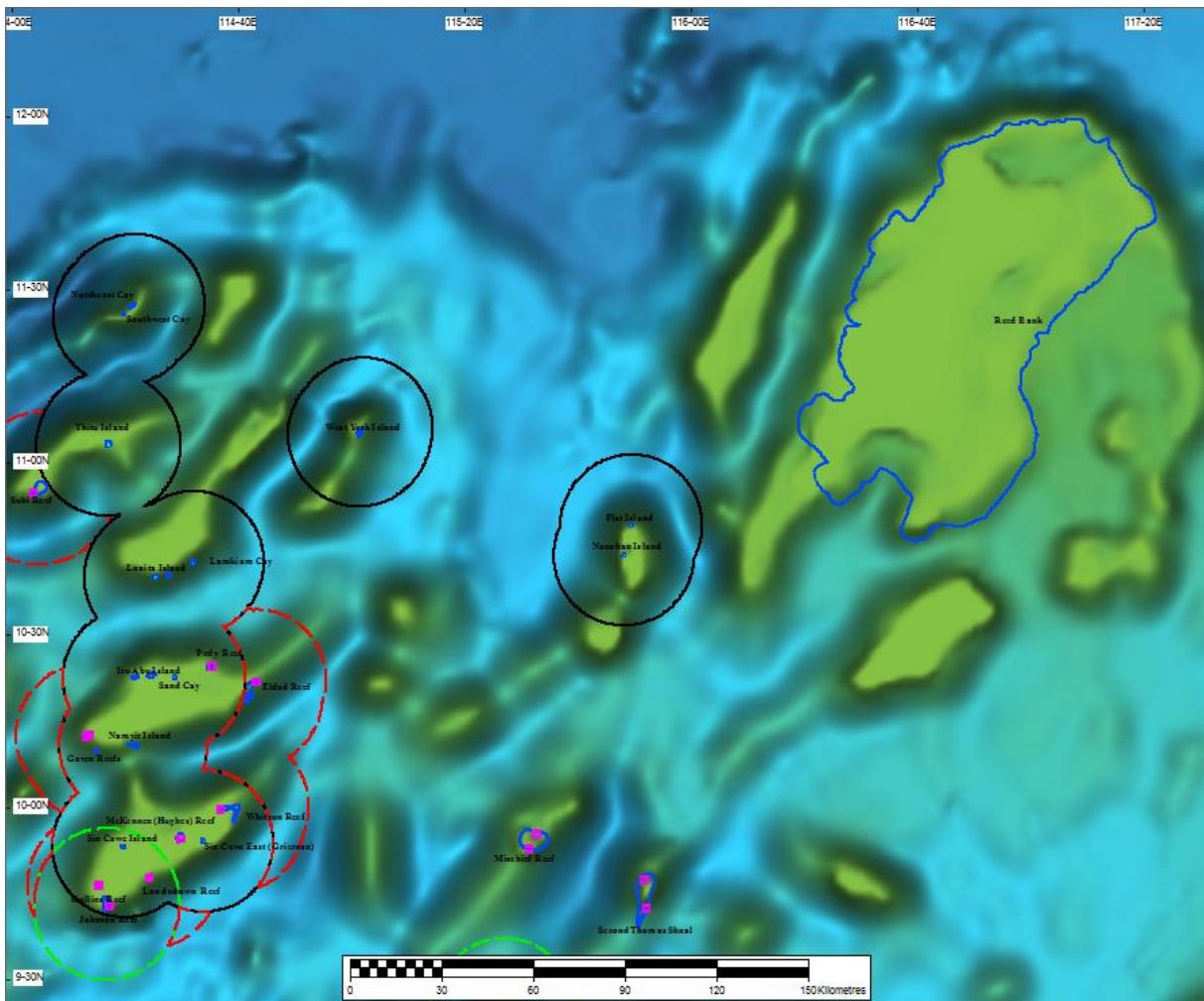
Map 1: Key map (1:1,250,000 scale)



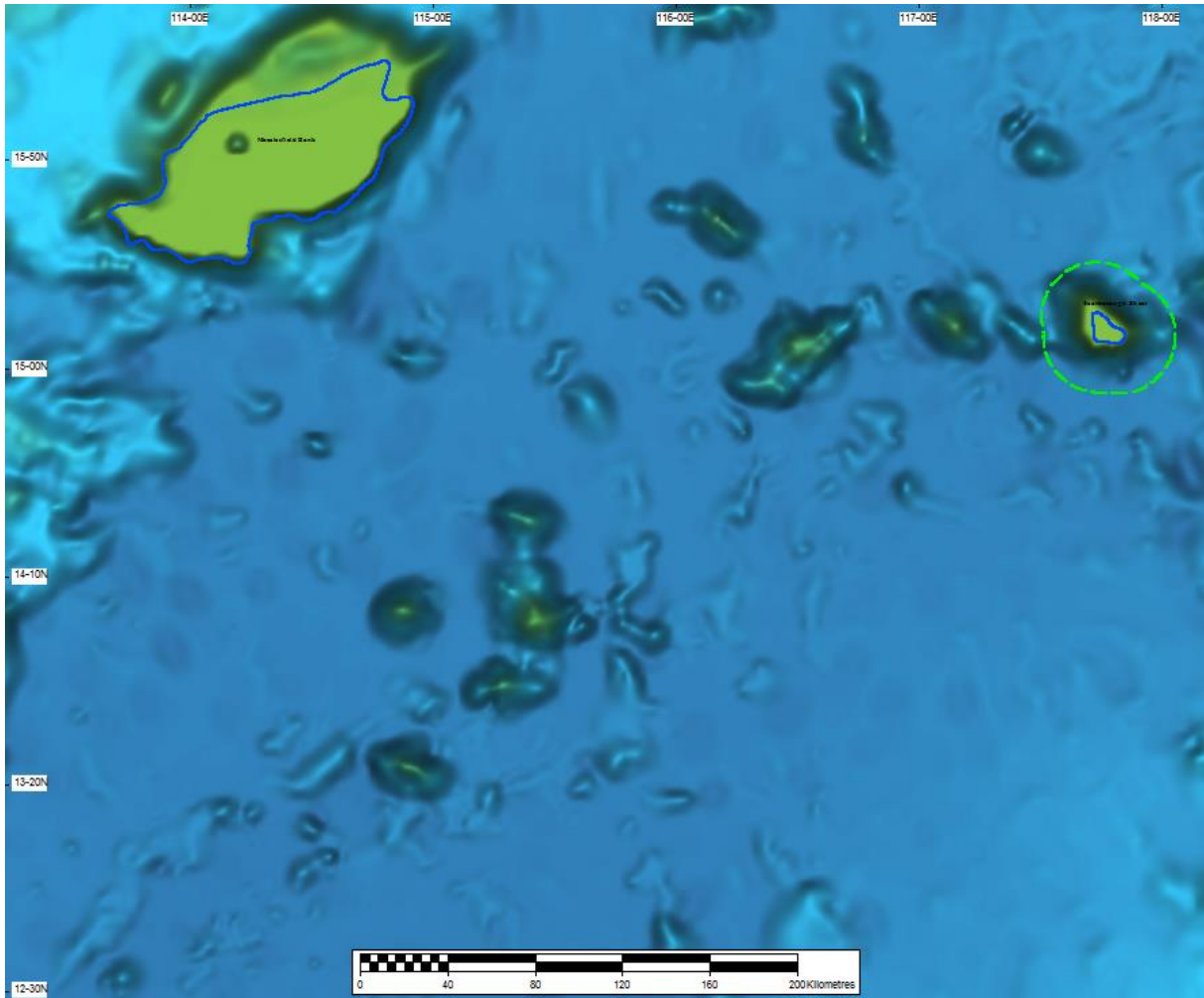
Map 2 (1:1,250,000 scale)



Map 3 (1:1,250,000 scale)



Map 4 (1:1,250,000 scale)



Map 5 (1:1,750,000 scale)

Biographical Notes

Clive Schofield is Professor and Director of Research at the Australian Centre for Ocean Resource and Security (ANCORS), University of Wollongong (UOW), Australia. He is also the Leader of the University's Sustaining Oceans and Coastal Communities research theme within the UOW Global Challenges Program. Clive joined ANCORS in 2004 following an 11-year association with the International Boundaries Research Unit (IBRU) at the University of Durham, UK where he served as Director of Research. Whilst at ANCORS he has been awarded an Australian Research Council (ARC) Future Fellowship and QEII Research Fellowship. He holds a PhD (geography) from the University of Durham, UK and an LLM from the University of British Columbia, Canada.

Clive's research interests relate to international boundaries and particularly maritime boundary delimitation and marine jurisdictional issues in the Asia-Pacific region, including disputes related to islands. He has published over 200 scholarly publications including 22 books and monographs (including edited works) on these issues as well as geo-technical aspects of the law of the sea and maritime security. Among these works, he is co-author, with Professor Victor Prescott, Emeritus Professor of Geography, University of Melbourne, of the book, *The Maritime Political Boundaries of the World* (2005). Clive serves as an International Hydrographic Office (IHO)-nominated Observer on the Advisory Board on the Law of the Sea (ABLOS). He has also been involved in the peaceful settlement of boundary and territory disputes, for example through the provision of technical advice and research support to governments engaged in boundary negotiations and in dispute settlement cases before the International Court of Justice (ICJ) and has been appointed as a Peacebuilding Adviser on behalf of the United Nations Development Program (UNDP) and World Bank.

Victor Prescott is Professor Emeritus in geography at the University of Melbourne. He holds a BSc, MA and DipEd from the University of Durham and a PhD from the University of London, UK, together with an MA from the University of Melbourne. Victor was appointed as a lecturer in the Department of Geography at The University of Melbourne in 1961, and became Head of Department in the early 1970s. He was awarded a Personal Chair in October 1986 and became pro-Vice-Chancellor from 1992 until his retirement in 1996.

International boundaries on land and sea have been the main focus of this research for over 40 years. He has written books and articles on these subjects and political geography in general and some have been translated into Arabic, Chinese, German and Italian. He has also served as an expert witness in cases decided in the International Court of Justice and the United States Supreme Court. He has also appeared in cases involving native title claims to seas and the seabed in hearings before a Land Rights Commissioner in Australia.

Books and monographs include:

The Geography of Frontiers and Boundaries (1967)

Our Fragmented World: an Introduction to Political Geography (1975), with William Gordon East

Einführung in die politische Geographie (1975)

The Maritime Political Boundaries of the World (1985)

The Maritime Political Boundaries of the World, 2nd ed. (with Clive Schofield) (2005)

Political Frontiers and Boundaries (1987)

Aboriginal Frontiers and Boundaries in Australia (with Stephen Davis) (1992)

Limits of National Claims in the South China Sea (1999)

Undelimited maritime boundaries of the Asian Rim in the Pacific Ocean (with Clive Schofield) (2001)

International Frontiers and Boundaries (with Gillian Triggs) (2008).

Robert van de Poll heads up all Global Law of the Sea activities for Fugro Group (Netherlands), one of the world's largest commercial surveying and engineering corporations, offering services for land, sea and air.

Robert holds a B.Sc. (Earth Sciences, 1991) and M.Sc.Eng (Geodesy and Geomatics, 2002). He has over 10 years practical experience working as a field geologist and over 15 years as a geographical information systems (GIS) specialist at CARIS, a leading developer of geospatial software for the hydrographic and maritime community. While at CARIS he designed, created and developed the CARIS LOTS (Law of the Sea) software for the United Nations.

In 2006, Robert joined Fugro Group Worldwide (FNV) reporting directly to the Director of Survey Division, positioned under Fugro's Headquarters (Leidschendam, Netherlands). Based in Canada, Robert heads up all Global operations as International Manager Law of the Sea, targeting 155 coastal countries (and now an additional seven African 'Land-locked Lake' countries) around the world. He has developed and continues to manage the unique Fugro Global Law of the Sea database (a comprehensive compilation of 75+ Terabytes of relevant digital Law of the Sea data), used for all Fugro Global Law of the Sea projects.

To date, Robert has worked on Law of the Sea Projects in 130 of the above-mentioned 155 coastal states and also in one of the seven land-locked African lake countries, all with relevance to the United Nations Convention on the Law of the Sea. These projects include all aspects of Law of the Sea, including definition of territorial sea baselines, legal limits, maritime boundary delimitation, and extended continental shelf delineation. This work includes directly advising and assisting Governments and the oil and gas industry. Robert has been involved in 75% of all extended continental shelf submissions made (to date) to the United Nations Commission on the Limits of the Continental Shelf (CLCS). Robert has delivered over 500 specialised Law of the Sea seminars, workshops and hands-on customized training courses to both Governments and industry corporations all over the world.

Robert holds the position of Honorary Lecturer at the Centre for Energy, Petroleum and Mineral Law and Policy (CEPMLP), University of Dundee, Scotland. Robert is also a reoccurring Visiting Fellow at the IMO (International Maritime Organization) Law Institute (IMLI), at the University of Malta.

Annex 514

Dr. Lindsay Parson, *The potential for China to develop a viable submission for continental shelf area beyond 200 nautical miles in the South China Sea* (Mar. 2015)

Assessment of continental shelf
potential beyond 200M in the South China Sea

**The potential for China to develop a viable submission for
continental shelf area beyond 200 nautical miles in the South
China Sea.**

Expert Report
prepared by

Dr Lindsay Parson,
Maritime Zone Solutions Ltd

March 2015

Assessment of continental shelf
potential beyond 200M in the South China Sea

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Assessment of continental shelf
potential beyond 200M in the South China Sea

**The potential for China to develop a viable submission for continental
shelf area beyond 200 nautical miles in the South China Sea.**

Introduction:

1.1 About the author: I am the Managing Director of a technical maritime consultancy (Maritime Zone Solutions Ltd) based in Romsey, Hampshire, UK. I started the company in May 2010 when I left the UK National Oceanography Centre (NOC), Southampton, where I had worked for the previous 15 years as Head of the Law of the Sea Group in the Marine Geology and Geophysics Department. Among other areas, the Group was responsible for UK maritime delineation with respect to the continental shelf beyond 200 nautical miles. Prior to my position at NOC, I was Principal Scientific Officer at the Institute of Oceanographic Sciences, (IOS) Wormley in Surrey, where I carried out two parallel marine research programmes; one investigating geological processes at continental margins and active plate boundaries, and the other the technical implementation of UNCLOS provisions. From 1980 onwards, when I joined IOS, I was involved in providing advice to the Department of Energy and the UK Foreign and Commonwealth Office. I have authored more than 100 peer-reviewed articles in the scientific literature and more recently a number of commentaries on the technical-legal interface and implementation of UNCLOS.

In 2003 I was asked by the UK Foreign and Commonwealth Office to assist them with the preparation of the four UK submissions to the Commission on the Limits of the Continental Shelf in accordance with Article 76 of UNCLOS. These were completed and submitted by 2009 and two have been defended in front of the Commission. I remain the Lead technical Advisor to the Legal Advisors Office on delimitation issues on the continental shelf. Over the 35 years of my career, both the Law of the Sea Group and Maritime Zone Solutions Ltd have been commissioned by many non-UK coastal states to assist them with their submissions. I developed a training programme for international experts to learn about article 76, which ran between 2000 and 2006, and since then I have managed and lectured at graduate and post-graduate level on the Law of the Sea modules offered in the 'Marine Science Policy and Law' Masters degree programme at the University of Southampton. I have supervised 7 PhD students and acted as national and international external examiner for many others.

My company retains a wide range of associate consultants, all expert practitioners in UNCLOS, and especially on continental shelf areas beyond 200 nautical miles. Two have been, or currently are, members of the Commission on the Limits of the Continental Shelf (CLCS), and we have worked with more than thirty coastal states on issues relevant to continental shelf delineation or delimitation. I have provided technical advisory services to



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counsel on a number of occasions, including for cases at the International Tribunal for the law of the Sea, the International Court of Justice and the Permanent Court of Arbitration. I was elected as the UK member of the Legal and technical Commission at the International Seabed Authority between 2000 and 2006. I have published widely on the geology and legislative context of ocean space. I am a member of the International Law Association's Committee on Maritime Delimitation, a Chartered UK and European Geologist, and a member of a number of international advisory boards world-wide.

1.2 At the request of counsel for the Government of the Republic of the Philippines, I have been asked to prepare a report assessing the potential submission, or submissions, China could potentially make in accordance with Article 76 of UNCLOS in respect of the South China Sea to the Commission on the Limits of the Continental Shelf with regards to shelf areas beyond 200 nautical miles (M). The evaluation is based on the theoretical implementation of Article 76 of the Convention guided by the Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf¹.

1.3 The findings of this report are organised in three parts. In the first, we provide a discussion on potential continental shelf area appurtenant to China's mainland, Hainan Island and the Paracel Islands. In the second, we include an evaluation of the potential continental shelf area appurtenant to Taiwan and Pratas Island. In the third section, we evaluate the potential continental shelf in respect of the Spratly Islands. Constructions of shelf areas, including those beyond 200M made in this assessment are based on the analysis of a combination of data recovered from archive data bases and well-supported data compilations.

1.3 The author has used extensive experience with analysing Article 76 submissions on behalf of many coastal states to deliver this analysis. This report, however, is not intended to suggest any likelihood of success with any of the various submission components, rather it provides some comments on the sustainability of each part, based on case examples of submissions already examined and reviewed by the CLCS.

1.4 By way of introduction, this report first provides summaries of key findings for each of the three sections of the South China Sea, highlighting the context and salient results in respect of any potential shelf areas beyond 200M.

¹ http://www.un.org/depts/los/clcs_new/commission_documents.htm#Guidelines



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Part 1: Continental Shelf beyond 200M appurtenant to Mainland China, Hainan Island and the Paracel Islands - Summary of results

2.1. Based on existing data and a conventional implementation of Article 76, China would be able to develop a sustainable submission for continental shelf area beyond 200M appurtenant to mainland China/Hainan Island (Figure 1). This conclusion has been reached following analyses of both bathymetric models and real data. The latter are open-file historical/archive materials, and of a quality and abundance that would nonetheless be acceptable to the Commission on the Limits of the Continental Shelf (CLCS) if a submission was deposited and subsequently examined at the Commission's Subcommission stage of procedures. Should it be prepared, China's submission would be implemented using a combination of both paragraphs 4 (a) (i) and 4 (a) (ii) of Article 76 - the Gardiner and Hedberg formulae (sediment thickness and distance constructions, respectively).

2.2 The Article 76 construction derived from the China mainland/Hainan Island falls within the constraints provided for in paragraph 5 of the article, and so in theory would be sustainable (if no other coastal state maritime territory was intersected/overlapped).

2.3 There are sufficient existing open file data within public access and of good enough quality/location to support a submission for these areas if China wished to proceed to this stage.

2.4 In addition to the part of the submission derived from mainland China (see 2.1, above), there is a natural prolongation argument from Hainan Island eastwards through the Paracel Island block (assuming the islands, irrespective of sovereignty, have no entitlement beyond 12M) extending to, and beyond, the Macclesfield Bank. This seafloor elevation is a natural component of the continental margin of Hainan Island, at the eastern edge of which China could readily establish a set of acceptable foot of slope (FOS) points.

2.5 FOS points identified on the eastern edge of the Macclesfield Bank lie more than 300M from the baseline of Hainan Island, but could be used to draft an OCS limit based on Article 76 paragraph 4 (a) (ii) beyond 200M.

2.6 The theoretical OCS construction derived from Hainan Island (See 2.7) lies within the 2500m plus 100M constraint as laid out in Article 76 paragraph 5, and so would be sustainable (if no other coastal state maritime territory was intersected/overlapped).

2.7 While statements of entitlement in 2.2 and 2.8 are sustainable, it is beyond the scope of this report to determine the precise position of the OCS outer limit. While sufficient data exist to prepare a submission, the use of extant survey information not located in, or of the optimum orientation, risks a



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reduction in maximum territorial delineation. In this respect, it is highly likely that to strengthen or optimise any submission it may prepare, China would consider the acquisition of additional data to support this work.

2.8 Together these two OCS constructions (from China mainland and Hainan Island) encompass a significant proportion of the northern South China Sea. The lateral extent of the potential OCS is only indicative, as any section of the margin bounded by neighbouring coastal states is likely to be contentious, particularly as they would likely also be considering preparation of a submission for their section of the margin.

2.9 For the purposes of this exercise, normal baselines (instead of China's straight baseline declaration) have been used to assess continental shelf definition. Notwithstanding this, there are no significant differences between the constructions and no difference in the conclusions.

2.10 In this part of the report, we also assesses the Chinese continental shelf area appurtenant to the Paracel Islands, should they be deemed capable of generating entitlement to maritime zones up to and beyond 200M. For this construction we have identified FOS points at the eastern edge of the Macclesfield Bank. We note that the outer limit line of the continental shelf derived from the FOS points approximately coincides with the 200M EEZ derived from the Paracel Islands, and so it appears unlikely that the implementation of Article 76 based on the Paracel Islands, would significantly extend Chinese maritime space in this region.



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Part 2: Continental Shelf beyond 200M appurtenant to Taiwan and Pratas Island - Summary of results

3.1 Based on existing data and a conventional implementation of Article 76, China would be able to develop a sustainable submission for continental shelf area beyond 200M appurtenant to Pratas Island (Figure 1). The construction of this area would be based on similar foot of slope positions as implemented in the construction derived from the China mainland (since the outer edge of the natural prolongation of the continental margin in this region is not dependent on the existence of Pratas Island - Section 2.1). Should it be prepared, China's submission from Pratas Island would be implemented using a combination of both paragraphs 4 (a) (i) and 4 (a) (ii) of Article 76 - the Gardiner and Hedberg formulae (sediment thickness and distance constructions, respectively).

3.2 In contrast to the analysis for Pratas Island, it is difficult to see how any realistic and sustainable Article 76 construction could be completed based on a natural prolongation from Taiwan. There is no doubt that a submarine prolongation can be observed continuing from the southern limit of the landmass to form the South Taiwan Ridge (Figure 1). This submarine elevation proceeds southwards for more than 150M, where it merges with the major tectonic ridge/trough system marking the active subduction line of the Philippine/Manila Trench immediately W of the Philippine main islands. The geographical location of the prolongation, however, within only 34M of some of the Philippine islands lying along the Luzon Ridge (a major submarine elevation appurtenant to the northern Luzon landmass), means that any continental shelf area would be presumably curtailed by a maritime boundary well before it reached 200M from its baseline. It does not appear feasible or rational to establish a claim on this basis.

3.3 The Article 76 constructions derived from Pratas Island fall within the constraints provided for in paragraph 5, and so in theory would be sustainable (if no other coastal state maritime territory/entitlement was intersected/overlapped).

3.4 The potential China OCS derived from Pratas also overlaps the Philippine's 200M EEZ.

3.5 For the purposes of this report, we assume Pratas Island to be capable of generating entitlements to a continental shelf up to and beyond 200M.

3.6 There are sufficient existing data within public access and of good enough quality/location to support a submission if China wished to draft a supporting text.

3.7 While we are able to make clear statements of entitlement in 3.1 and 3.3, it is beyond the scope of this report to determine the precise position of



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the OCS outer limit. While sufficient data exist to prepare a submission, the use of extant survey information not located in, or of the optimum orientation, risks a reduction in maximum territorial delineation. It is highly likely, therefore, that to strengthen or optimise its submission, China would consider the acquisition of additional data.

3.8 The lateral extent of the OCS is not discussed in this report, as the margin section is bounded by neighbouring coastal states that would likely be considering preparation of a submission for their section of the margin.

3.9 For the purposes of this exercise, normal baselines (instead of China's straight baseline declaration) have been used to assess continental shelf definition. There are no significant differences between the constructions and no difference in the conclusions.



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Part 3: Continental Shelf beyond 200M appurtenant to the Spratly Island Group - Summary of results.

4.1 Assuming that the Spratly Islands have full maritime zone entitlements, a continental shelf construction according to an application of Article 76 paragraph 4 (a) (ii) would fall well *within* 200M of baselines of the islands and their natural prolongation, including that of the Dangerous Ground submarine elevation to the E. No part of this shelf construction falls beyond 200M.

4.2 Sediment thickness data for the South China Sea to the north of the Spratly Islands/Dangerous Ground region is sparse and of insufficient quality/specification to allow an unequivocal assessment of the potential implementation of Article 76 paragraph 4 (a) (i), the sediment thickness formula. Our preliminary investigations, however, argue very much against the likelihood of sufficient sediment accumulation to extend any potential OCS beyond that derived from Hedberg construction in the area.

4.3 Data used to construct the OCS for the Spratly Islands have been recovered from archive academic sources and open file public geophysical databases. All of these would be accessible by China experts.



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Geomorphological and Geological context.

5.1 The bathymetry of the South China Sea (Figure 1) provides an overall regional context for the relative maritime entitlements.

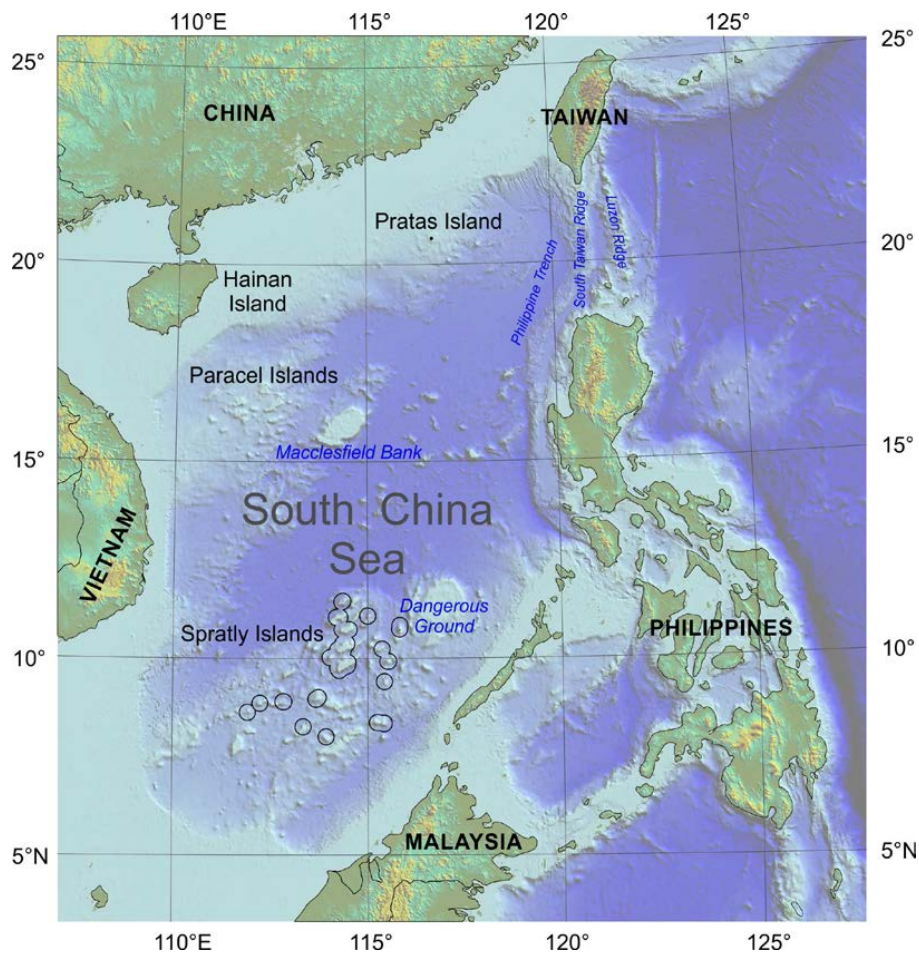


Figure 1 Seafloor relief of the South China Sea and principal seafloor features relevant to the assessment of continental shelf areas beyond 200M. Bathymetry taken from SRTM-30 grid², coastline from World Vector Shoreline³.

² http://topex.ucsd.edu/WWW_html/srtm30_plus.html

³ <http://www.ngdc.noaa.gov/mgg/shorelines/>

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5.2 The continental margins flanking much of the South China Sea are examples of non-volcanic rifted passive continental margins which have experienced modification over more than 30 million years of tectonics, plate motion, interaction and sedimentation (Figure 2). The shelf edge for the most part in the north, west and south lies at around 500m water depth, from which level the slope descends more than 3000m to the abyssal floor. To the east, the margin is one of tectonic plate convergence, part active and part passive, and elsewhere the central deep ocean seafloor is characterised by variable relief, hosting scattered seamounts, guyots and island blocks.

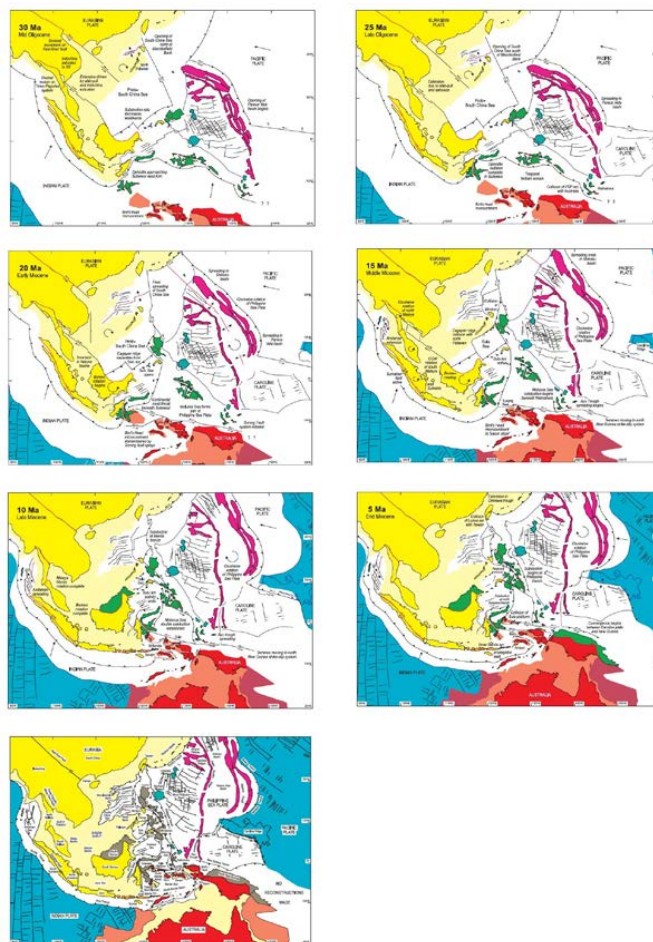


Figure 2 - Evolution of SE Asia through the Cenozoic (from Hall,1996)⁴. Yellow, Eurasia; pink, Philippine Sea plate; red, Australia; blue, Pacifica and Indian plates.

⁴ Hall, R. (1996). Reconstructing Cenozoic SE Asia. Tectonic Evolution of Southeast Asia. R. Hall & D. Blundell, Geological Society of London Special Publications. 106: 153-184.

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5.3 The bathymetry for the area of interest shows a 'wide-margin' context for China (Figure 1), with a highly variable morphology of the slope area, including sediment fans, partially dissociated shallow blocks and deep oceanic floor with local seamounts.

5.4 The complex rifting history, spreading ridge jump(s) and regionally active plate tectonic setting in the South China Sea have resulted in a complex and variable locus for a foot of slope, and this uncertainty is further complicated by the many, partially disassociated outlying rifted blocks along the margins. Examples such as Macclesfield Bank - the shoal elevation which extends from the Paracel Islands Group - and the island and rock group of features collectively referred to as the Spratly Islands, create complications to the margin, but also opportunities to extend territorial entitlement, provided natural prolongation can be proven to link them with coastal landmasses.

5.5 While largely beyond the scope of this report, we provide a brief summary of our understanding of the location of the continent-ocean transition.

5.6 The continent-ocean-transition (COT) of the South China Sea - which can be used as a proxy foot of slope where evidence to the contrary is invoked in the implementation of paragraph 4(b) of Article 76⁵ - has been mapped from both seismic and potential field data. The presence of oceanic crust underlying the deep water South China Sea has been postulated since the late 1960's (e.g. Hayes & Ludwig, 1967)⁶. Using single channel seismic reflection data and sonobuoys Ludwig et al. (1979)⁷ mark the "slope-basin boundary" around the South China Sea separating the central oceanic basin from its surrounding margins.

5.7 A distinction can be made between the terms Continent-Ocean Transition (COT) and Continent-Ocean Boundary (COB); the COT has a finite width, and indeed by its very nature it may be hard to pinpoint the exact end of thinned continental crust, or start of oceanic crust proper. COB implies more a defined boundary.

5.8 From wide-angle seismic profiles across the northern margin of the South China Sea it is possible to map the location, width and nature of the transition from continental to oceanic crust. Published papers place the COT/COB at a similar location but the width of the transition varies greatly according to different authors (Figure 3). Figure 3 shows that where authors have identified a COB, it typically lies at the oceanward side of the COT.

⁵ CLCS/11, Section 6.

⁶ Hayes, D. E. & Ludwig, W.J. 1967. The Manila Trench and West Luzon Trough-II. Gravity and magnetic measurements. *Deep Sea Research*, 14, 545-560.

⁷ Ludwig, W.J.; K. Kumar & R.E. Houtz, 1979. Profiler-sonobuoy measurements in the South China Sea Basin, *Journal of Geophysical Research*, 84 (B7), 3505-3518.



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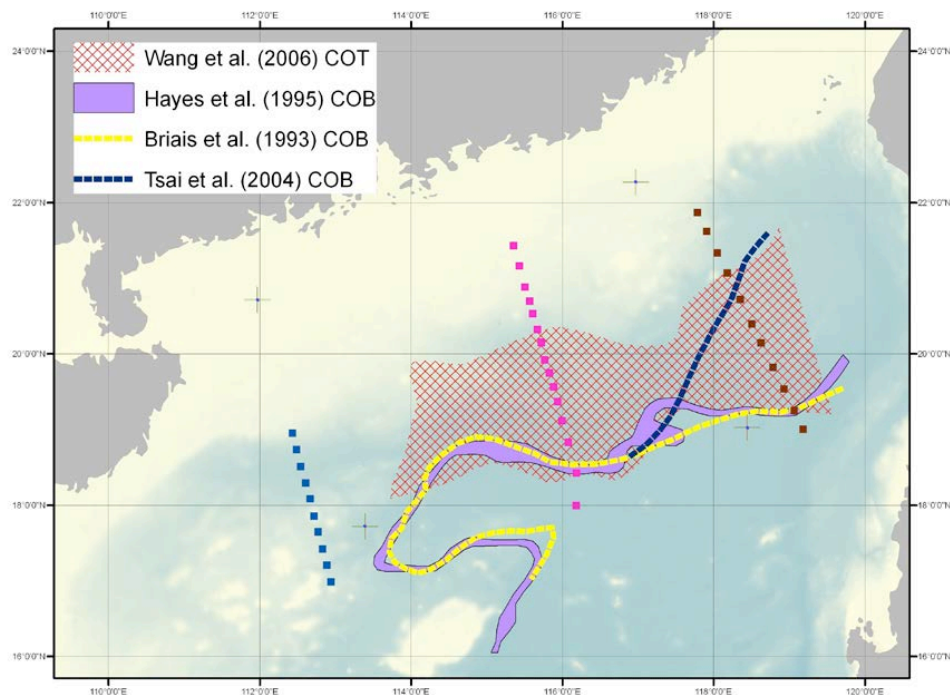


Figure 3 - The location of the COT or COB according to various authors⁸. Wide-angle seismic profiles OBH1996, OBS1993 and OBS2001 are shown to aid location (coloured squares).

⁸ Wang, T. K.; M.-K. Chen; C.-S. Lee & K. Xia (2006). "Seismic imaging of the transitional crust across the northeastern margin of the South China Sea." *Tectonophysics* 412: 237-254; Hayes, D. E.; S. S. Nissen; P. Buhl; J. Diebold; Y. Bochu; Z. Weijun & C. Yongqin (1995). "Throughgoing crustal faults along the northern margin of the South China Sea and their role in crustal extension." *Journal of Geophysical Research* 100(B11): 22435 - 22446; Briaux, A.; P. Patriat & P. Tapponnier (1993). "Updates interpretation of magnetic anomalies and seafloor spreading stages in the South China Sea: Implications for the Tertiary Tectonics of Southeast Asia." *Journal of Geophysical Research* 98(B4): 6299-6328; Tsai, C.-H.; S.-K. Hsu; Y.-C. Yeh; C.-S. Lee & K. Xia (2004). "Crustal thinning of the northern continental margin of the South China Sea." *Marine Geophysical Researches* 25: 63 - 78.

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Continental Shelf constructions

6.1 All constructions of maritime limits, implementation of article 76 criteria and CLCS guidelines have been carried out using the dedicated Geocap 'Shelf' software⁹. This suite of specialist algorithms has become the standard for use in this field and the preferred tool of the Commission on the Limits of the Continental Shelf in their examination of Article 76 submissions. If required, shape files for all of the features, analyses and results derived in this report can be supplied as a standard output from Geocap, for direct import to any ESRI/ArcGIS system.

A. Mainland China, Hainan Island and the Parcel Islands

6.2 The 200M limits have been constructed from China Mainland and Hainan (Figure 4), revealing that the Macclesfield Bank to the west and some deep water elevations to the north may support a construction of a continental shelf beyond this limit. We use the available bathymetric data from on-line sources to determine likely foot of slope (FOS) positions from which we can identify the outer edge of the continental margin, [Article 76 paragraph 4 (a)]

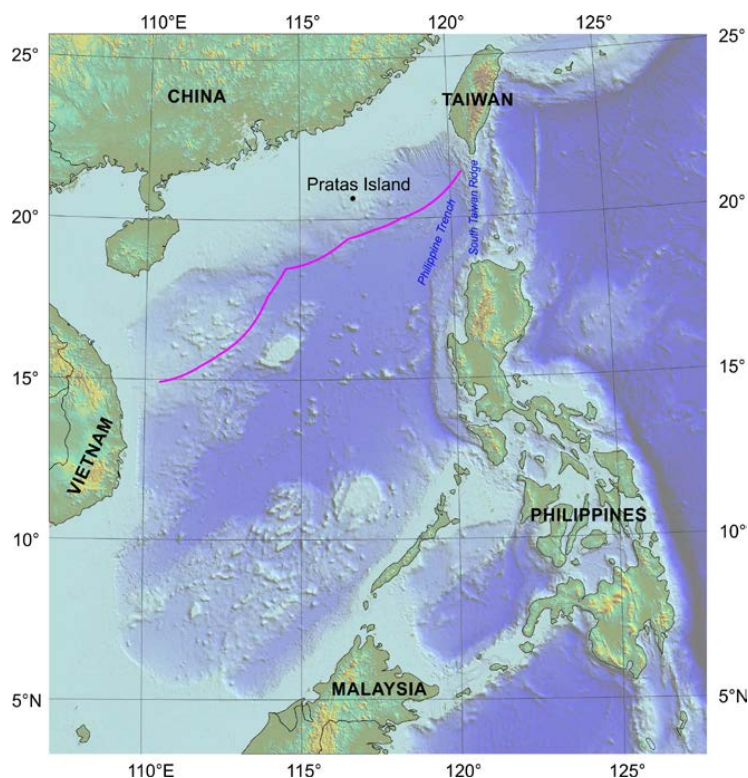


Figure 4 200M limits as constructed from China mainland and Hainan Island.

⁹ <http://www.geocap.no/content/shelf>

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6.3 Figure 5 illustrates the distribution of data retrieved from archive for foot of slope (FOS) analysis, and Figure 6 identifies selected bathymetric profiles which have been analysed using the Geocap "Profile Analysis Tool". One of the sample profiles is analysed in Figure 7, illustrating the location of the FOS using maximum change of gradient at the base of the slope.

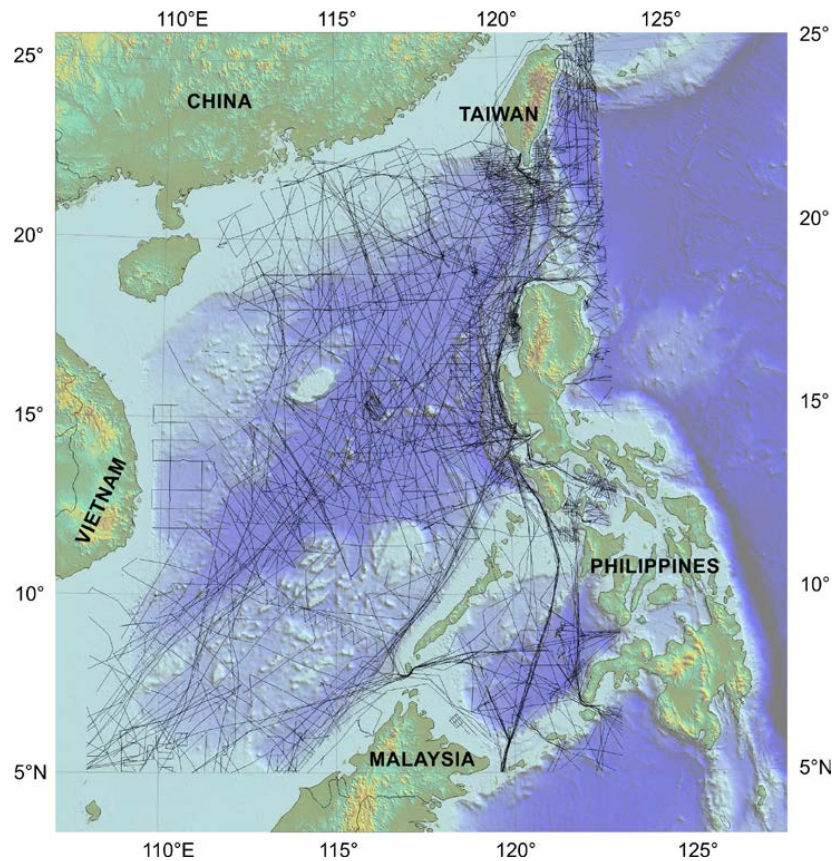


Figure 5 - Distribution of bathymetric data available to verify the FOS positions identified below.

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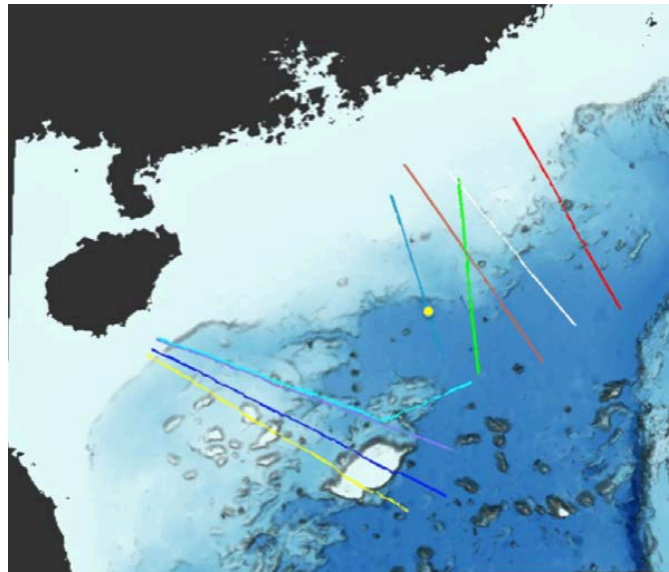


Figure 6 - Specimen bathymetric profiles analysed across the Chinese margin - data derived from GEODAS archive bathymetric database illustrated in Figure 5¹⁰. Mid-blue profile analysed in Figure 7, and foot of slope position located by yellow circle.

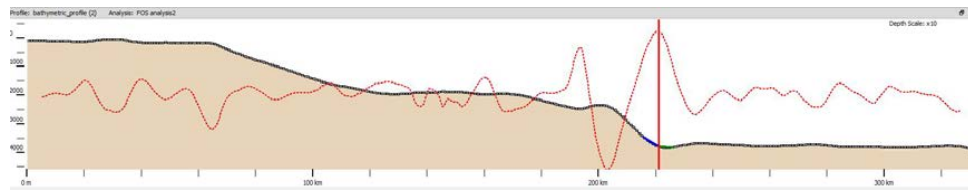


Figure 7 - Geocap analysis of specimen bathymetric profile identified in Figure 6. Change of gradient/second derivative profile in dotted red line. Foot of slope lies at the point of maximum change of gradient at the base of slope (vertical red line).

6.4 We have applied the Hedberg formula to the compiled set of foot of slope points for the China mainland/Hainan margin to derive a construction for the outer edge of the continental margin (Figure 8).

¹⁰ <http://www.ngdc.noaa.gov/mgg/geodas/geodas.html>

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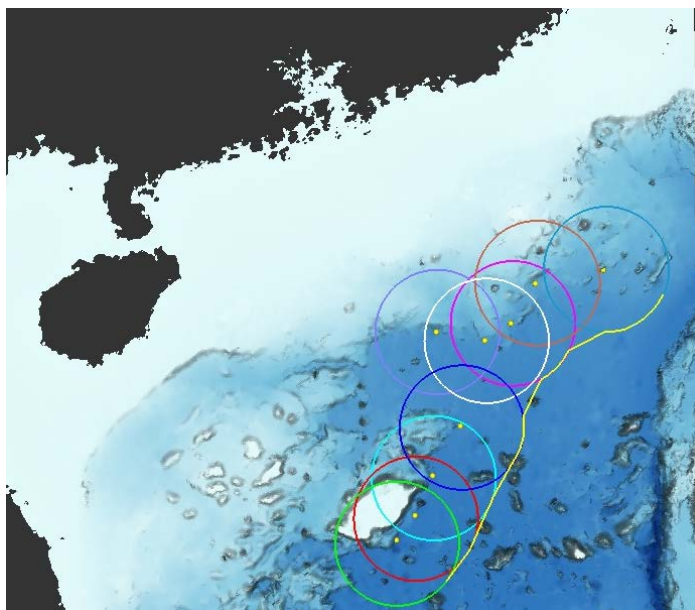


Figure 8 - Foot of slope positions (yellow dots) along the northern South China Sea and East of Macclesfield Bank. Series of multi-coloured 60M Hedberg arcs from the FOSs used to construct an outer edge for the continental margin (yellow line).

6.5 We further implement the Gardiner, or sediment thickness formula, in the North China Sea to provide a comparison of the two methods for establishing the outer edge of the continental margin.

6.6 MZSL used the foot of slope positions identified along the mainland China margin and the 0.5 minute grid of sediment thickness available on open file at NGDC (Divins 2010)¹¹. The grid provides an overview of sediment basin accumulations, which need to be verified by comparing analyses of open file seismic profiles to determine sediment thickness. Regional grids, such as that shown in Figure 9, can also be used for verification.

¹¹ <http://www.ngdc.noaa.gov/mgg/sedthick/sedthick.html>



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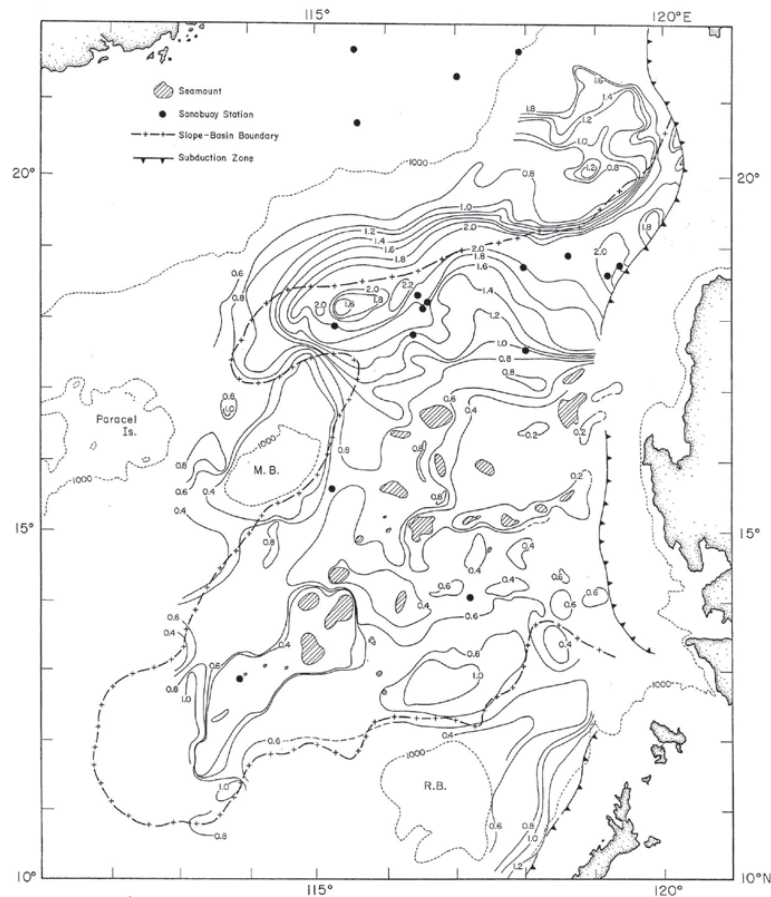


Figure 9 - Sediment thickness compilation of Ludwig et al. (1979)¹², providing overview of sediment thickness which is largely comparable with present day syntheses (NGDC)¹³

6.7 Figure10 illustrates the distribution of data retrieved from archive for 1% sediment thickness analysis/verification.

¹² Ludwig, W.J.; K. Kumar & R.E. Houtz, 1979. Profiler-sonobuoy measurements in the South China Sea Basin, *Journal of Geophysical Research*, 84 (B7), 3505-3518.

¹³ <http://www.ngdc.noaa.gov/mgg/sedthick/sedthick.html>

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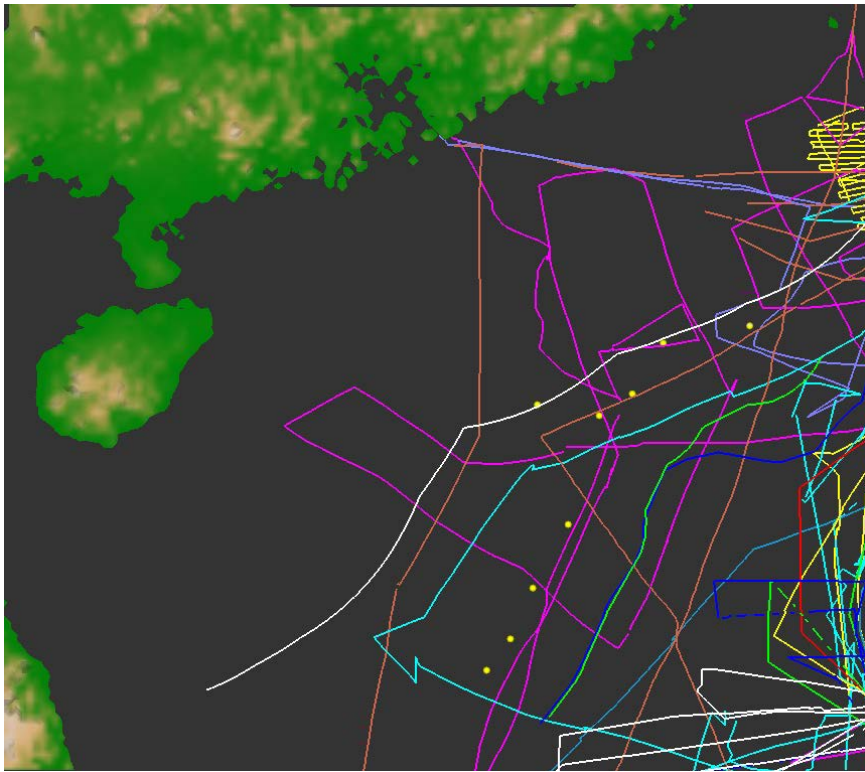


Figure 10 - Distribution of open-file seismic data available (track-lines in multicolours) to verify position of 1% sediment thickness line(s). 200M limit from mainland China and Hainan Island in white, for reference.

6.8 Data including those illustrated in Figure 10 are used to generate a series of 1% sediment thickness limits. Figure 11 shows a simplified pattern of several of these constructions as fine black outlines relating to the Central and Northern South China Sea.

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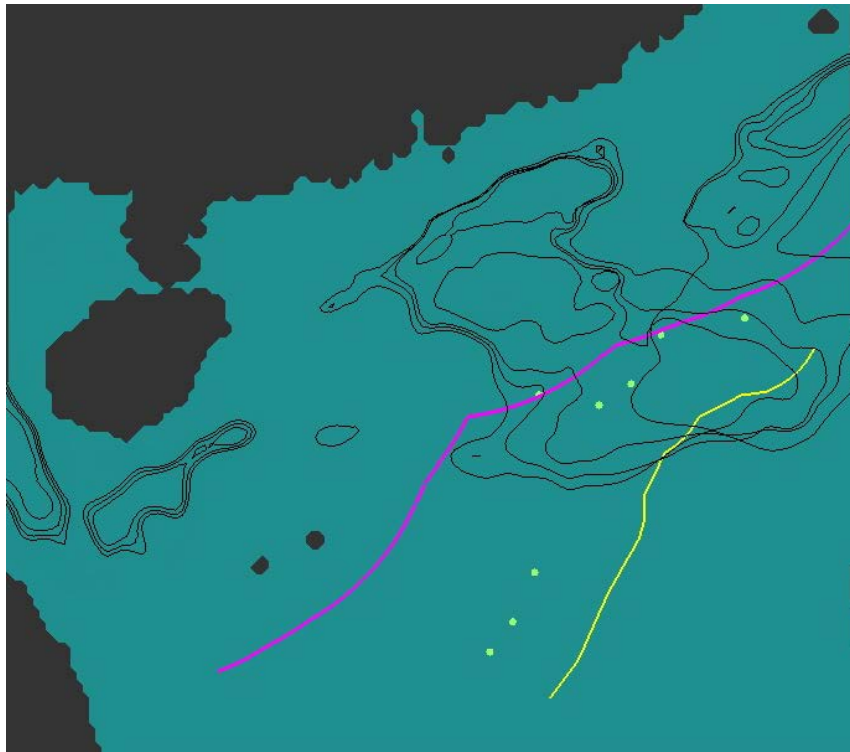


Figure 11 - 1% sediment thickness constructions for various selected FOS points are shown in fine black lines. 200M limit from the Chinese mainland is in magenta; FOS positions as yellow circles; yellow line is an outer limit based on Hedberg constructions referred to above for comparison.

6.9 We validated the modelled results using a number of seismic profiles selected from downloaded data¹⁴ illustrated in Figure 12.

¹⁴ <http://www.ngdc.noaa.gov/mgg>

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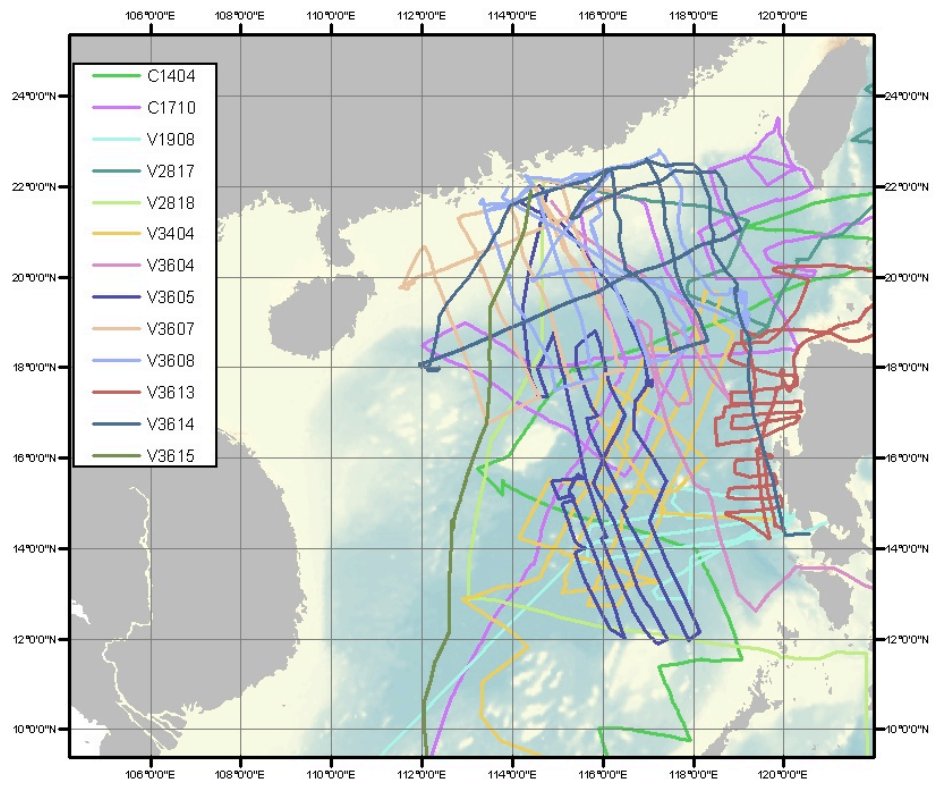


Figure 12 - Key academic single channel seismic reflection profile locations across the northern South China Sea. Profile C1710 was identified as example for evaluation of sediment thickness as input to Article 76, paragraph 4 (a) (i) calculation.

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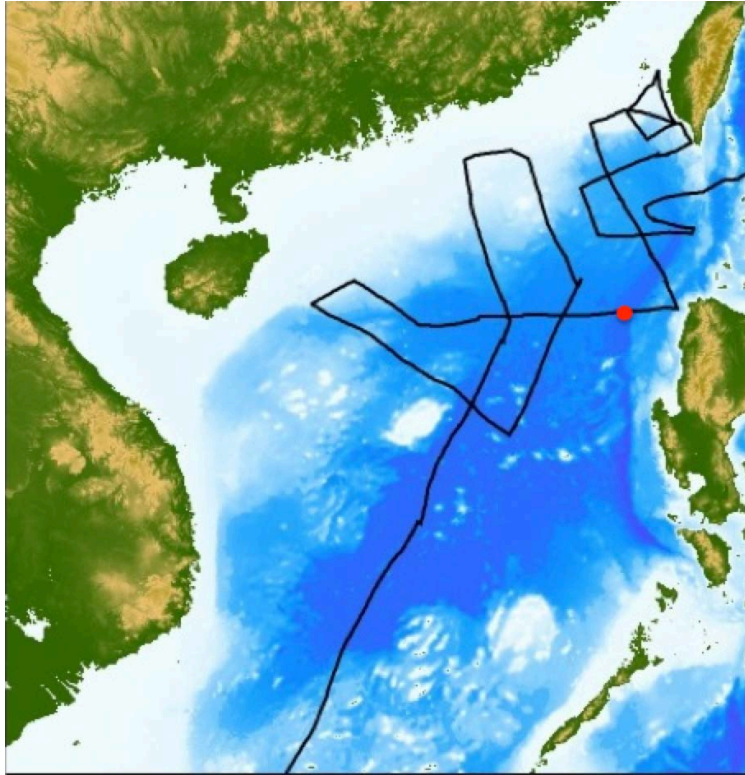


Figure 13 - Location map showing cruise C1710 trackline. Red dot locates sediment maximum.

6.10 Data to the west of the Philippines show in excess of 2 sec two-way travelttime (TWT) of sediment. Using sediment seismic velocities compiled for the South China Sea, we can convert this to sediment thickness in metres. Red dot locates sediment thickness maxima (Figure 13) - for discussion see text and Figures 13 and 14.

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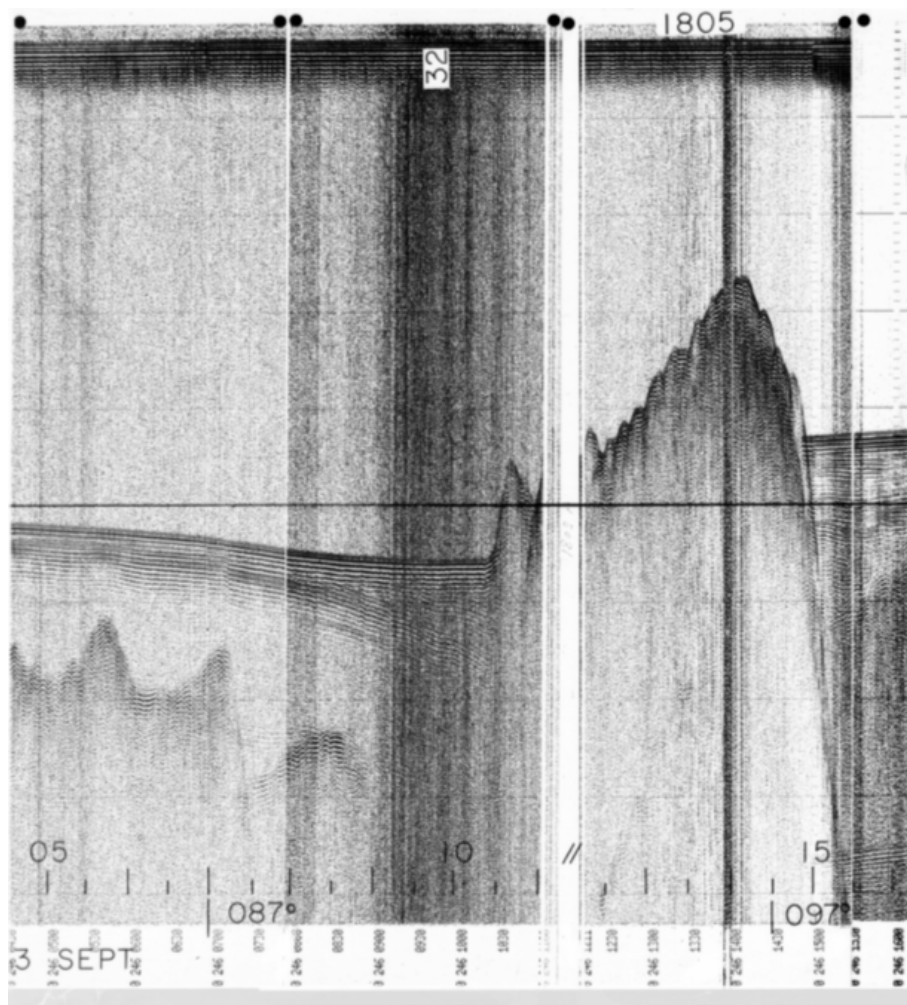


Figure 14 - Section of seismic data from cruise C1710. Profile is located to the west of Luzon. Horizontal lines correspond to 1 second TWT intervals. Bottom axis shows date and time, e.g. from 0500 to 1600 on the 3 September. At 0730 (location of red dot in Figure 13) and at 0900 more than 2 sec TWT of sediment can be seen.

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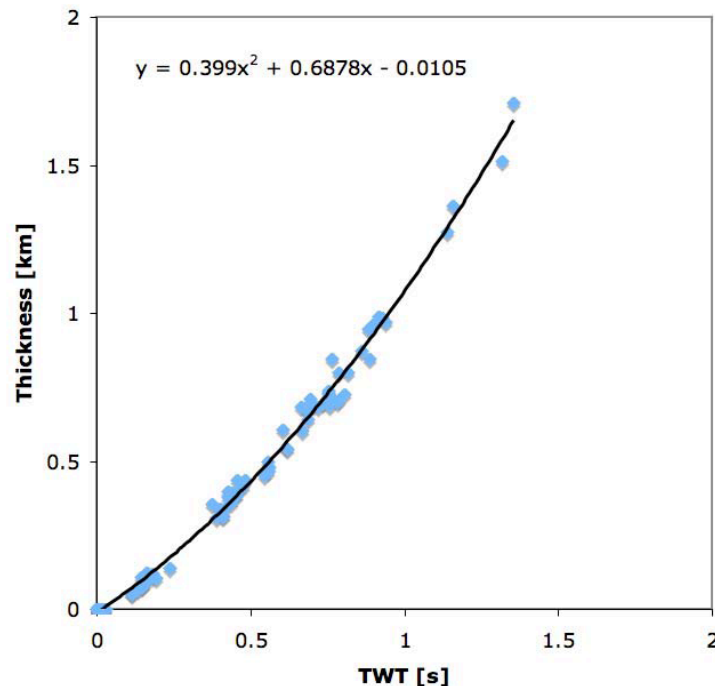


Figure 15 - Compilation of calculated sediment thickness against two way time in seconds, derived from regional compilation (unpublished, MZSL 2009).

6.11 Using the TWT – sediment thickness relationship shown in Figure 15, the 2 sec TWT of sediment identified at the maximum extent of the basin in Figure 14 gives a thickness of 2.96 km. The location at 18.3217° N, 118.9224° E is 260 km from the nearest foot of slope, and therefore is confirmed as qualifying as at least 1% of sediment thickness, and a valid outer edge of continental margin in accordance with Article 76.

6.12 Figure 16 compiles the two formulae constructions from the Article 76 to demonstrate that both criteria are useful in developing the edge of the continental margin. This image includes both the 350M limit as constructed from baselines of China mainland and Hainan, as well as the 2500m isobath plus 100M constraint. All parts of the continental margin as constructed lie within one of the constraints, and this validates the outer limits of the juridical continental shelf to lie at the same location as the outer edge of the continental margin (Figure 17).

6.12 In summary, we confirm that the potential continental shelf area for China extends beyond 200M in the northern South China Sea, from both the mainland and Hainan Island. Implementation of Article 76 using public domain geological and geophysical data defines the outer edge of the continental margin limits as constructed using Article 76 paragraphs 4 (a) (i) and (ii).

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6.13 These conclusions are derived after evaluating and analysing geological and geophysical data for the area of interest. We have validated any provisional results derived from compiled models or grids of data by selecting a number of specific profiles for analysis.

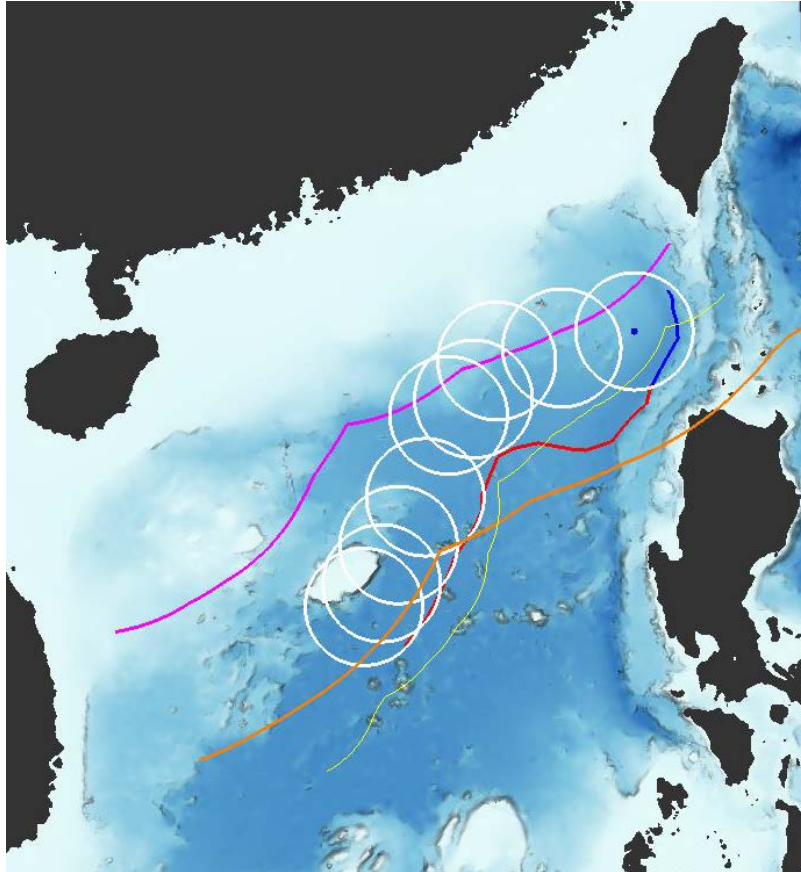


Figure 16 – Composite figure illustrating all potential shelf construction elements from mainland China and Hainan. 200M limit in magenta, Hedberg formula 60M arcs in white, 1% sediment thickness construction in blue and red line, 2500m plus 100M constraint in yellow, and 350M limit in orange.

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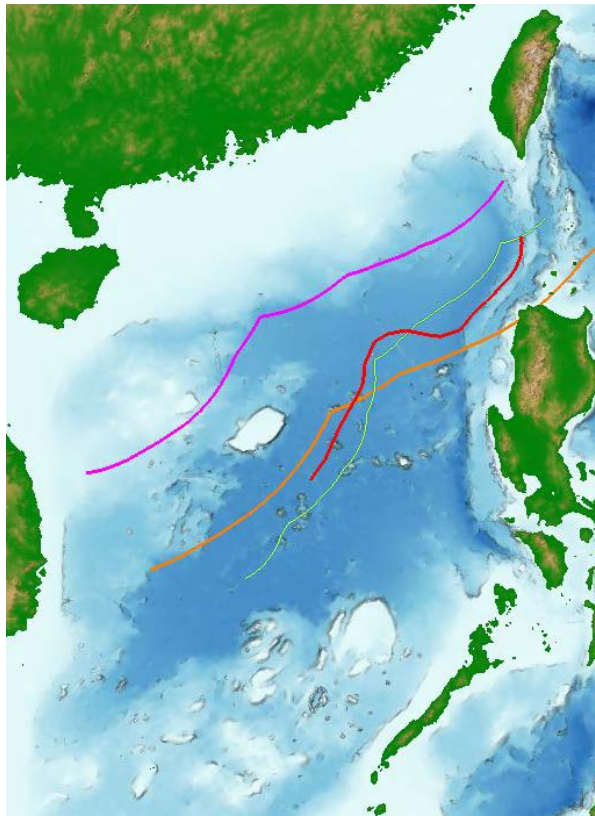


Figure 17 – Final construction of potential outer limit of the continental shelf as derived from China mainland and Hainan only illustrated as red line. For reference the 350M and 2500m plus 100M constraints are shown as orange and yellow lines, confirming that none of the points defining the limit of the continental shelf lie beyond these.

6.14 For comparative purposes we further assess the area of the Chinese continental shelf area appurtenant to the Paracel Islands up to and beyond 200M. This requires an assumption that the Paracel Islands are entitled to a continental shelf and that they are under Chinese sovereignty.

6.15 For this exercise we use the same FOS points identified as those identified for the Hainan Island. They are located at the eastern edge of the Macclesfield Bank.

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Figure 18 - Bathymetry of the N South China Sea from SRTM-30 grid, illustrating location of the 200M limit mainland China and the Paracel Islands (in magenta) Construction of the outer limit (adapted from Figure 17, and shown here as red line) of the potential continental shelf appurtenant to mainland China, including the Paracel Islands.

6.16 We note that the line of the 200M EEZ derived from the Paracel Islands approximately coincides with the outer limit line of a continental shelf derived using Hedberg constructions from the FOS points, and so it appears unlikely that the implementation of Article 76 based on the Paracel Islands, would extend the area of Chinese continental shelf in this region significantly.

6.17 A compilation of each of the formulae along with the outer limits of the continental shelf as constructed in accordance with paragraph 7 of Article 76 using fixed points no more than 60M apart, is included as Figure 19.

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B. Taiwan and Pratas Island

6.18 We examine the additional potential OCS with the inclusion of Pratas Island and Taiwan as landmasses from which a submission may be considered by China. The theoretical 200M limits constructed from these territories are superposed onto the mainland and Hainan Island 200M limits in Figure 19. Comments here are first addressed to an OCS from Pratas Island and subsequently from Taiwan.

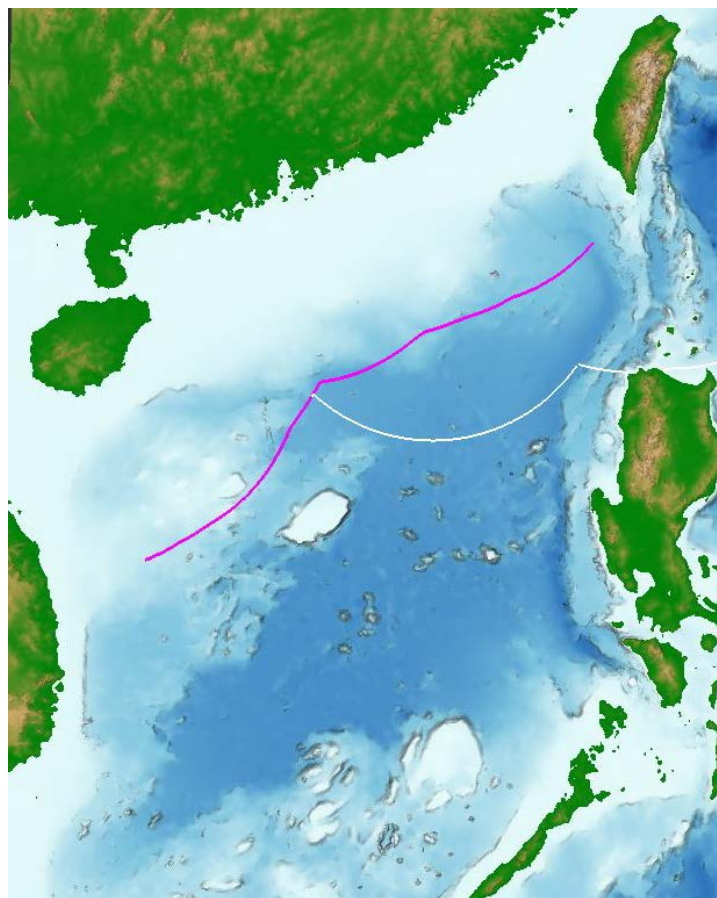


Figure 19 - 200M limits as constructed from China mainland and Hainan, with additional limits from Pratas Island and Taiwan

6.19 Based on existing data and a conventional implementation of Article 76, China would be able to develop a sustainable submission for continental shelf area beyond 200M appurtenant to Pratas Island. The construction of this

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area would be based on similar foot of slope positions as implemented in the construction derived from the China mainland.

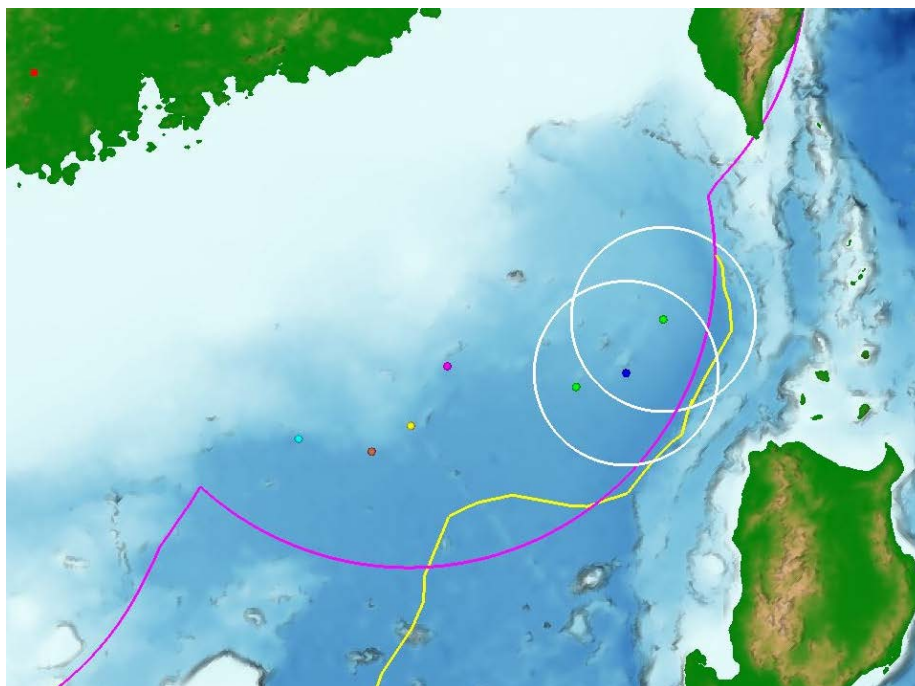


Figure 20 Draft construction of the edge of the continental margin based on provisional 60M Hedberg arcs (in white) constructed from FOS positions relevant to Pratas Island (note especially in green and blue). 200M limit from Pratas Island in magenta, provisional 1% sediment thickness line adapted from OCS construction from mainland China (for discussion see text).

6.20 The Provisional Hedberg constructions from FOS points associated with Pratas Island clearly provide an area of continental shelf beyond 200M (Figure 20). The possible implementation of the sediment thickness formula was examined with a view to extending the OCS beyond this provisional limit. Data on sediment distribution in the relevant area is sparse, but due to the known accumulations in the Philippine Trench, continuation of the OCS based on the Gardiner formula was expected to the E and N of the Hedberg construction.

6.21 Figure 21 illustrates the location of several seismic profiles which have been used to demonstrate the importance of sediments within the Philippine Trough in the development of the OCS based in Pratas Island and Article 76 paragraph 4 (a)(i). The data are further illustrated in Figures 22, 23, 24 and 25. Each confirms accumulations in excess of 2 seconds two-way travel time, approximately equivalent to 2km.

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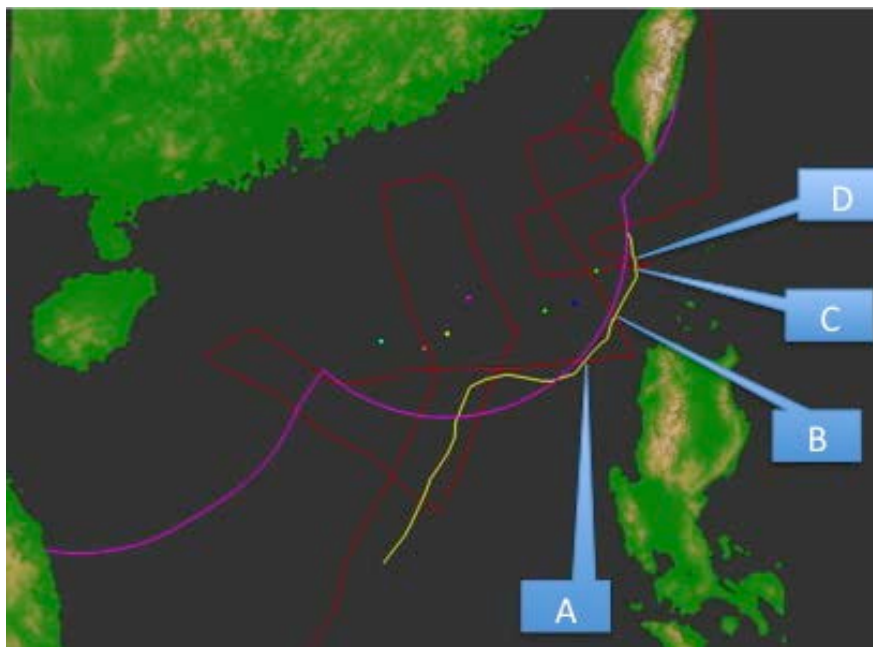


Figure 21 Location map showing trackline for cruise C1710 (see Figure 13). Foot of slope points already discussed are included for reference. The four sections of C1710 labelled A, B, C and D are illustrated below in Figures 22, 23, 24 and 25, to demonstrate the significant sediment thickness accumulations in the Philippine Trench immediately to the E of the 200M limit from Pratas Island. Additionally, the provisional 1% sediment thickness line resulting from the analysis of these data is shown in yellow.

6.22 Data within the Philippine Trench show in excess of 2 sec two-way traveltime (TWT) of sediment. Using sediment seismic velocities compiled for the South China Sea¹⁵, we can convert this two-way time travel to sediment thickness in metres. In each case we have examined in applying Article 76 paragraph 4 (a) (i) to the FOS points identified for the continental margin of Pratas Island, we have found substantial sediment accumulations in the Philippine Trench, validating 1% Gardiner solutions beyond 200M of the island.

¹⁵ REP_SCS_001, Section 4, and Figure 14.

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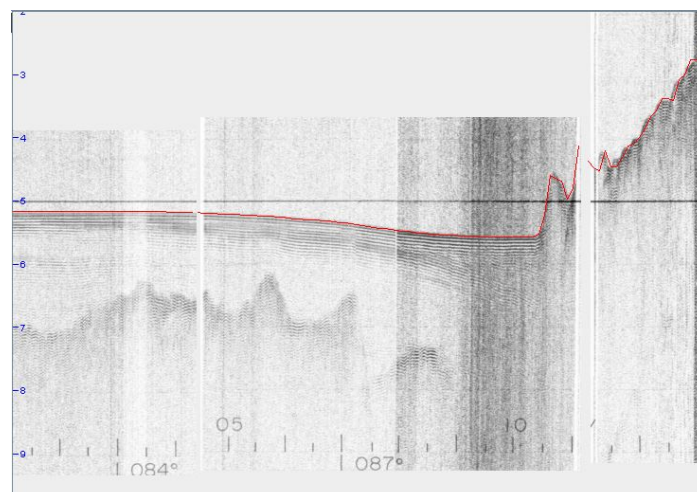


Figure 22 Section A of seismic data from cruise C1710, located in Figure 21. Profile is located to the west of Luzon, crossing the Philippine Trench bathymetric maximum, and revealing a maximum thickness well in excess of 2 seconds. Horizontal lines correspond to 1 second TWT intervals (axis on left). Bottom axis shows date and time, e.g. from 0500 to 1600 on the 3 September. At 0730 and at 0900 more than 2 sec TWT of sediment can be seen.

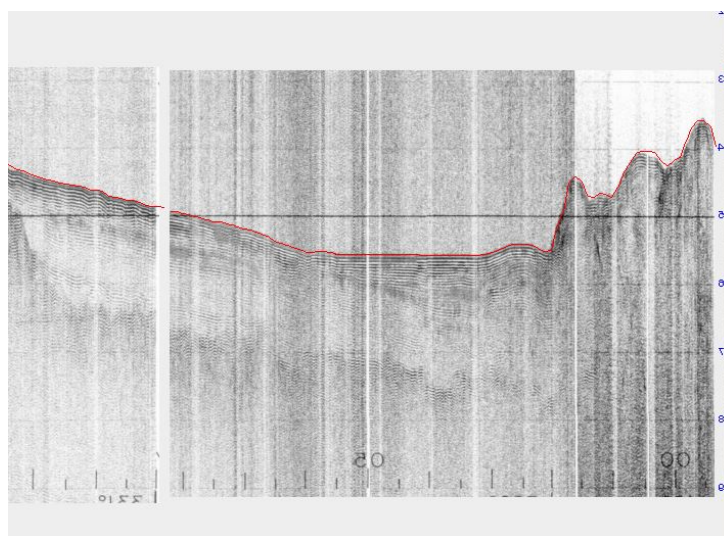


Figure 23 Section B of seismic data from cruise C1710, located in Figure 21. Profile is located to the west of Luzon, crossing the Philippine Trench, and revealing a maximum thickness in excess of 2 seconds. Horizontal lines correspond to 1 second TWT intervals. Profile reversed for comparison with Figures 22 and 24. Legend as for Figure 22.

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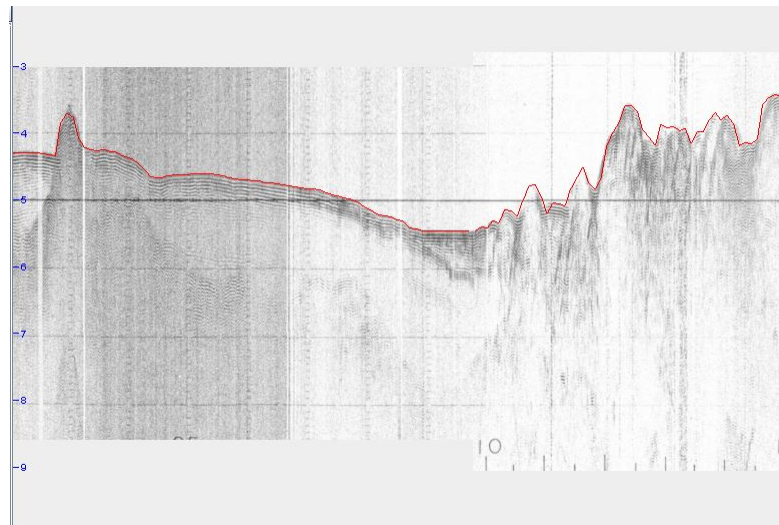


Figure 24 Section C of seismic data from cruise C1710, located in Figure 21. Profile is located to the west of Luzon, crossing the Philippine Trench, and revealing a maximum thickness in excess of 2 seconds. Horizontal lines correspond to 1 second TWT intervals (axis on left). Legend as for Figure 22.

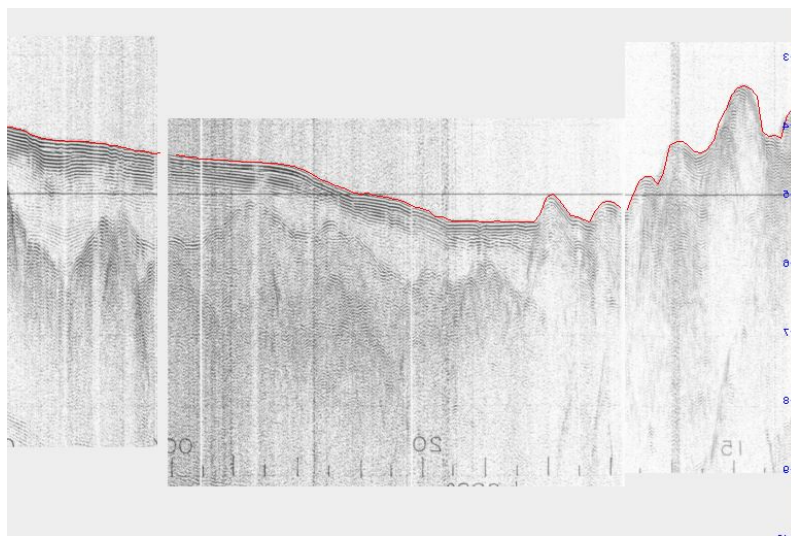


Figure 25 Section D of seismic data from cruise C1710, located in Figure 21. Profile is located to the west of Luzon, crossing the Philippine Trench, and revealing a maximum thickness in excess of 2 seconds. Horizontal lines correspond to 1 second TWT intervals. Profile reversed for comparison with Figures 22 and 24. Legend as for Figure 23.

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Figure 26 Final outer limit construction for the potential outer continent shelf associated with Pratas Island (in brown). This line comprises elements of 200M limit from Pratas Island, constructed from both sub-paragraphs 4 (a) (i) and 4 (a) (ii) of Article 76 and is completed in accordance with paragraph 7 of Article 76, involving bridging lines between fixed points spaced at intervals of less than 60M.

6.23 The comparison of the results China's submission from Pratas Island using paragraphs 4 (a) (i) and 4 (a) (ii) of Article 76 - the Gardiner and Hedberg formulae (sediment thickness and distance constructions, respectively) shows that the Hedberg solution is most advantageous in this location (Figure 20). The resulting outer edge continental margin as constructed by the two formula provided for in Article 76 paragraph 4(a) is illustrated in Figure 26. Hedberg solutions derived from FOS positions located at the most oceanward western limit of the physical shelf show an advantage over the sediment thickness points. The latter, due to their manner of calculation will only reach as far as the eastern flank of the Philippine Trench, where the sediment section thins rapidly.

6.24 The Gardiner/sediment thickness points do have the advantage over the Hedberg solutions, in that they remain in almost the same positions if the most advantageous locations for the FOS points is sustainable, or whether the more landward options are used (should there be a requirement by the CLCS to modify the submission, and adopt less favourable FOS positions).

6.25 In either case, each of the OCS constructions lie within 350M of the Pratas Island baseline (Figure 27) and are therefore acceptable as delineating the outer limit of the continental shelf beyond 200M.

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Figure 27 - Summary 350M limits for the China landmass options (in orange). 200M limits in magenta.

6.26 In contrast to the analysis for Pratas Island, it is difficult to see how any realistic and sustainable Article 76 construction could be completed based on a natural prolongation from Taiwan. An outer shelf submission regarding areas appurtenant to Taiwan would be extreme in that it would advance across land masses of the Philippines, both islands to the north of, and of Luzon itself. There is no doubt that a submarine prolongation can be observed continuing from the southern limit of the landmass southwards to form the South Taiwan Ridge (Figure 1). This submarine elevation proceeds southwards for more than 150M, where it merges with the major tectonic ridge/trough system marking the active subduction line of the Philippine/Manila Trench immediately W of the Philippine main islands. The geographical location of the prolongation, however, within only 34M of some of the Philippine islands lying along the Luzon Ridge (a major submarine elevation appurtenant to the northern Luzon landmass), means that any continental shelf area would be presumably curtailed by a maritime boundary

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well before it reached 200M from its baseline. It does not appear feasible or rational to establish a claim on this basis.

6.27 In summary, we confirm that the potential continental shelf area in respect of the Pratas Islands very likely extends beyond 200M in the northern South China Sea. Reasons for this are as follows:

- (a) The arguments for, and geological basis for, a natural prolongation from the island land mass to the outer edge of the continental margin are substantive and unequivocal;
- (b) Bathymetric models of the seafloor are corroborated/validated with data accessed from open-file geophysical data bases, and these in turn have been used to identify foot of slope positions which are compliant with the requirements of Article 76;
- (c) A provisional outer edge of the continental margin lying beyond the 200M limit of Pratas Island has been constructed based on sediment thickness calculations, derived from modelled sediment distribution, and verified using interpretations of relevant seismic reflection profiles and seismic velocities obtained from archive;
- (d) The outer edge of the continental margin lies within 350M of the baselines of Pratas Island and therefore can be regarded as a good approximation to the outer limit to the potential continental shelf (OCS)

6.28 It is not possible to establish the precise geometry of the outer limit without further data, but it would appear that an OCS exists for Pratas in the region, and the length of a section of the Philippine Trench, or eastwards of it, depending on the construction used.



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C. The Spratly Islands

6.30 We examine the additional potential OCS with the inclusion of the Spratly islands as landmasses from which a submission may be considered by China.

6.31 A series of FOS points have been identified along the northern edge of the Dangerous Ground, a submarine elevation to the E of the main island group (See Map 1), and one which is likely to be considered a natural prolongation of the Spratly Islands as a group. These positions would provide the most advantageous construction of the continental margin.

6.32 If it is assumed that the Spratly Islands have full maritime zone entitlements, a provisional continental shelf construction according to a combined application of Article 76 paragraphs 4 (a) (ii) is illustrated in Figure 28. At its most distant point from the islands, this construction is 181M to the east, significantly less than 200M.



Figure 29 Provisional foot of slope points for the Spratly Island group/Dangerous Ground continental margin section marked as blue dots. Hedberg constructions as white arcs, linked by OCS limit in black. 200M limits in magenta.

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6.33 Sediment thickness data for the South China Sea to the north of the Spratly Islands/Dangerous Ground region is sparse and of insufficient quality/specification to allow an unequivocal assessment of the potential implementation of Article 76 paragraph 4 (a) (i), the sediment thickness formula. Our investigations, however, argue very much against the likelihood of sufficient sediment accumulation to extend any potential OCS beyond that derived from Hedberg construction in the area.

6.34 In summary, whichever of the Article 76 paragraph 4(a) formulae constructions implemented for the Spratly Islands, they would almost certainly both fall within 200M of baselines of the islands and their natural prolongation.

6.35 Data used to construct the OCS for the Spratly Islands illustrated in Map 1 have been recovered from archive academic sources and open file public geophysical databases. All of these would be accessible by China experts.



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Summary and Conclusions

7.1 There is strong evidence from analyses of existing data that constructions of the outer limit of the continental shelf (OCS) in accordance with Article 76 of UNCLOS in the South China Sea could be successfully made by China from several of the coastal land territories.

7.2 This statement applies to mainland China, Hainan, and Pratas Island, separately and collectively, where the OCS areas potentially overlap EEZ and OCS of the Philippines. It does not apply to the Spratly Islands which according to data available at present, do not appear able to sustain a continental shelf area beyond 200M.

7.3 These conclusions have been reached following analyses of both bathymetric models and real data. The latter are open-file historical/archive materials, but of a quality and abundance that would nonetheless be acceptable to the Commission on the Limits of the Continental Shelf (CLCS) if a submission was deposited and subsequently examined at the Commission's Subcommission stage of procedures. China's submission(s) would be implemented using a combination of both paragraphs 4 (a) (i) and 4 (a) (ii) of Article 76 - the Gardiner and Hedberg formulae (sediment thickness and distance constructions, respectively).

Signed:

A handwritten signature in purple ink, appearing to read 'LMParson', with a long horizontal line extending to the right.

Dr Lindsay Parson
Maritime Zone Solutions Ltd

12th March 2015



Dr Lindsay Parson

Name: Lindsay Murray Parson

Professional qualifications: BSc (Geology), PhD (Geology), Fellow of the Geological Society of London, Chartered Geologist, European Chartered Geologist

Years of professional experience: 33 years

Nationality: British

Date of Birth: 30.08.54

Languages: English, modest French.

Employment History

2010 – present	Managing Director , Maritime Zone Solutions Ltd
2010 – present	Senior Research Visiting Fellow , National Oceanography Centre, Southampton UK
1999 – 2010	Managing Director , Zone Consultants Ltd, Romsey, UK
1980 – 2011	Principal Geologist , National Oceanography Centre, Southampton, UK (formerly IOS, Wormley, Surrey, UK)

Dr Lindsay Parson is a marine geologist of more than thirty years experience in deep sea surveying and sampling in the context of maritime legal regimes. He has been the technical lead of the UK delegation submitting and defending submissions to the Commission on the Limits of the Continental Shelf as provided for under the UNCLOS Article 76.

He was the UK member and Chair of the UN International Seabed Authority Legal and Technical Commission in Kingston Jamaica between 2001 and 2006, and has published widely on the geology and legislative context of ocean space.

He is also a member of the International Law Association's Committee on Maritime Delimitation, a Chartered UK and European Geologist, and a member of a number of international advisory boards world-wide.

He is now the Managing Director of Maritime Zone Solutions Ltd - a growing consultancy association which transformed the work he led in the public sector into a spin off company, and which has been providing advisory

services to coastal states governments and commercial organisations on maritime issues over the past five years. In 2012 Maritime Zone Solutions Ltd was awarded the prestigious ISO 9001:2008 international QC accreditation under the category of "*Provider of technical advice to coastal states worldwide, assistance in securing and managing maritime space & maritime resources. Training and capacity building*".

Dr Parson has more than 35 years of implementing Article 76 of UNCLOS on behalf of more than thirty states, and has represented its Clients at the International Court of Justice, the International Tribunal for the Law of the Sea, and the Permanent Court of Arbitration at the Hague - as well as defending outer continental shelf submissions before the Commission on the Limits of the Continental Shelf at the UN.

Relevant Experience in past 5 years

Project name: Kingdom of Morocco continental shelf programme
Project description: Article 76 UNCLOS case preparation
Specific role: Technical Advisor
Date: Current

Project name: Republic of Kiribati continental shelf programme
Project description: Republic of Kiribati UNCLOS case preparation
Specific role: Technical Advisor
Date: 2011 – 2013

Project name: Republic of Cameroon delimitation
Project description: Republic of Cameroon delimitation
Specific role: Technical Advisor
Date: Current

Project name: GabEX
Project description: Preparation of the continental shelf submission under Article 76 of UNCLOS for the Republic of Gabon. Seismic and bathymetric survey design and QC; data interpretation; all necessary technical work to determine the outer limit of the extended continental shelf; production of all figures and text for submission documents
Specific role: Project Manager and Lead Consultant
Date: 2009 - 2011

Project name: GabEX – Extension Contract
Project description: **Post-deposition and Article 76** Submission stewardship advice and maintenance
Specific role: Project Manager and Lead Consultant
Date: Current

Project name: People's Republic of Bangladesh Submission to the CLCS

Project description: Preparation of the continental shelf submission under Article 76 of UNCLOS for Bangladesh. Seismic and bathymetric data interpretation; submission preparation. Preparation and assistance with presentation to the CLCS.

Specific role: Project Manager and Lead Consultant

Date: 2010 - 2011

Project name: Republic of Yemen Submission to the CLCS

Project description: Preparation of the continental shelf submission under Article 76 of UNCLOS for the Republic of Yemen. Desk-top Study; bathymetric survey design and QC; data interpretation; determination of the outer limit of the extended continental shelf; preparation and production of submission documents. Preparation and assistance with presentation to the CLCS.

Specific role: Project Manager and Lead Consultant

Date: 2006 - 2010

Project name: Republic of Yemen – Defence of Submission

Project description: Preparation and production of submission defence presentations and documents. Advisory services throughout defence. Preparation and assistance with all presentations and discussion with the subcommission and the CLCS.

Specific role: Project Manager and Lead Consultant

Date: Current

Project name: Socialist Republic of Vietnam Submission to the CLCS

Project description: Preparation of the continental shelf submission under Article 76 of UNCLOS for Vietnam (North Area and Joint Submission with Malaysia in respect of the southern part of the South China Sea). Seismic and bathymetric data interpretation; submission preparation. Preparation and assistance with presentation to the CLCS.

Specific role: Project Manager and Lead Consultant

Date: 2008 – 2009

Project name: United Kingdom Submissions to the CLCS

Project description: Preparation and submission of 4 continental shelf submissions under Article 76 in respect of: the Bay of Biscay (joint submission with France, Ireland and Spain), Ascension Island, Hatton-Rockall Area and the Falkland Islands, South Georgia and the South Sandwich Islands. Bathymetric and seismic survey design and QC, data processing and interpretation; submission preparation and presentation to the CLCS. Defence of 2 submissions at the CLCS.

Specific role: Project Manager, Head of Technical Team

Date: 1999-2010

Project name: Barbados Article 76 continental shelf programme

Project description: Supervision and assistance with preparation of the continental shelf submission under Article 76 of UNCLOS for Barbados. Seismic and bathymetric data interpretation; submission preparation.

Preparation and assistance with presentation to the CLCS, and submission defence.

Specific role: Project Manager and Lead Consultant
Date:2006-2009

Project name: Bangladesh/Myanmar maritime delimitation case at the International Tribunal of the Law of the Sea (ITLOS)

Project description: Scientific advice to Bangladesh during the Bangladesh-Myanmar delimitation case at the ITLOS

Specific role: Member of Counsel; Scientific Advisor
Date: 2010-2012

Project name: Bangladesh/India maritime delimitation case at the International Court of Justice (ICJ)

Project description: Scientific advice to Bangladesh during the Bangladesh-India delimitation case under Annex VII of UNCLOS

Specific role: Scientific Advisor
Date: 2010-2012

Project name: Colombia/Nicaragua maritime delimitation case at the International Court of Justice (ICJ)

Project description: Scientific Advice to Colombia during the Nicaragua-Colombia delimitation case at the ICJ

Specific role: Scientific Advisor
Date: 2012

Project name: United Arab Emirates maritime risk

Project description: Provision of advice relating to shipping lanes and delineation of provisional maritime zone delimitation lines

Specific role: Project manager and technical advisor
Date: 2009

Project name: Establishment of the maritime zones of the State of Qatar

Project Description: Review of baselines, and establishment of final maritime zone limits.

Specific role: Project manager and technical advisor
Date: 2012-2013

Project name: BP maritime risk (1 – Regional studies)

Project description: Provision of advice regarding maritime risk to development of oil and gas exploration programmes

Specific role: Project manager and technical advisor
Date: 2011

Project name: BP maritime risk (2 – Detailed studies)

Project description: Provision of advice regarding maritime risk to development of oil and gas exploration programmes

Specific role: Project manager and technical advisor
Date: 2012

Project name: Somalia baseline generation and maritime zone definition
Project description: Definition of baseline in accordance with Part 2, Section 2 of UNCLOS and delineation of provisional maritime zone delimitation lines.
Specific role: Project manager and technical advisor
Date: 2011

Project name: Western Geco maritime survey options - East Africa
Project description: Assessment of maritime boundaries offshore East Africa with respect to uncertainty and dispute issues
Specific role: Project manager and technical advisor
Date: 2012

Project name: Liberia baseline generation and maritime zone definition
Project description: Definition of baseline in accordance with Part 2, Section 2 of UNCLOS and delineation of provisional maritime zone delimitation lines.
Specific role: Project manager and technical advisor
Date: 2011

Project name: Maritime Governance in the Arctic Ocean – Project "ACCESS", an European Union integrated programme
Project description: A review of the effects of long-term climate change on existing legislation and development of strategic policy options
Specific role: Work Project co-leader, Steering Committee member and technical/Legal input
Date: 2011-2015

Project name: Cote d'Ivoire vs Ghana maritime delimitation case at the International Tribunal of the Law of the Sea (ITLOS)
Project description: Scientific advice to Cote d'Ivoire during the Arbitral delimitation case at the ITLOS
Specific role: Scientific Advisor
Date: Current

Project name: Somalia vs Kenya maritime delimitation case at the International Court of Justice (ICJ)
Project description: Scientific Advice to Somalia during the delimitation case at the ICJ
Specific role: Scientific Advisor
Date: Current

Dr Lindsay Parson - Selected Recent Publications:

Martino S, Parson LM (2014) Spillovers between cobalt, copper and nickel prices: implications for deep sea bed mining (In press, Economic geology)

Martino S, Parson LM (2011) Nodules and crust economics: relationship between cobalt and nickel price. In: Chung JS (ed), Proceedings of the 9th (2011) ISOPe Ocean Mining Symposium MAUI 19-24 June 2011; pp. 213-220.

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Parson, L.M. 2012. La détermination des limites du plateau continental, les implications possibles pour les voisins et les voies de résolution des conflits liés au chevauchement des territoires. Présentation à la "*Seminaire Scientifique sur Les Ressources naturelles du plateau continental et des espaces maritimes de la République Démocratique du Congo*", Kinshasa, DRC 26-27 November 2012

Pandey, Anju, Parson, Lindsay and Milton, Andy (2010) Geochemistry of the Davis and Aurora Banks: Possible implications on evolution of the North Scotia Ridge. *Marine Geology*, 268, (1-4), 106-114.

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Annex 515

Compilation of Historical Materials on the South China Sea Islands of China (H. Zhenhua et al., eds.)

Compilation of Historical Materials on the Nanhai Islands of China

Chief editor Han Zhenhua, editors Lin Jinzhi, Wu Fengbin

The Oriental Press

[...]

(II) Changes to plotting the four archipelagos of Nanhai Islands in the maps published during the Era of the Republic of China

[...]

[...]

2. 58 maps of China showing Dongsha Island and the Xisha Islands

- (1) October 1914 edition of *Maps of Coastal Scenery of Seven Provinces* and
December 1914 edition of *New Geographical Maps of Republic of China*

Maps of Coastal Scenery of Seven Provinces, by Tong Shiheng, published by Shanghai Chinese and Foreign Cartographic Bureau, October 1914

first edition. In the fifth part of the map *From Sanjiakou to Bailongwei*, the map marked the names of over a dozen specific islands and reefs in the Xisha Islands. (For example, Shu Island, Shi Island, Lin Island, Linkang Island, Qiancai Island, and Lingyang Reef).

New Geographical Maps of Republic of China (one volume), printed in color, compiled by Hu Jinjie and Cheng Fukai, published by Shanghai Yadong Library, December 1914 edition. In the third map of the book, *Coastal Boundary of the Republic of China and Division Map*, it not only marked Dongsha Island, but also the Xisha Islands in an appended map.

[...]

[...]

(III) Changes to the drawings of the boundary lines in the Nanhai Islands in the maps published during the Era of the Republic of China

[...]

[...]

3. 12 Chinese maps with complete the four archipelagos of the Nanhai Islands, but the southernmost line is drawn in approximately 7°-9° north

[...]

(2) January 1936 edition *Historical Geographical Changes in the Maps of China*

Historical Geographical Changes in the Maps of China (one volume), printed in color, published by Shanghai Cartographical Society (Shanghai Yudi Xueshe),

April 1922 first edition, January 1936 amended fourth edition. In the 91st map of the book, *Map of Late Qing Dynasty Territories and the Neighboring Countries in the Four Directions*, Dongsha Island, the Xisha Islands, the Nansha Islands, and the Tunsha Islands were marked in the South China Sea region, and the national boundary lines were drawn around these islands. The islands were also the same color as mainland China, in beige. However, the map did not use longitudes or latitudes to mark the accurate locations of the Nanhai Islands.

(3) July 1936 edition *Map of the Changes in Chinese Territories*

Map of the Changes in Chinese Territories (single map), printed in color, compiled by Chen Duo, published by Shanghai Commercial Press, July 1936 edition. The map marked Dongsha Island, the Xisha Islands, the Nansha Islands, and the Tuansha Islands in the South China Sea region, and lines around the islands were drawn to incorporate them into Chinese territory. However, the southernmost scope of the lines was around 7° north.

(4) July 1936 edition *Map in Chinese Geography Subject for Middle School*

Map in Chinese Geography Subject for Middle School (one volume), printed in color, edited by Tan Lian, printed and distributed by Shanghai Chinese Cartographical Society, July 1936 first edition. The 44th map in the book, *Map on Contemporary Changes in the Territory*, marked Dongsha Island, the Xisha Islands, the Nansha Islands, and The Tuansha Islands, and lines around the islands were drawn to incorporate them into Chinese territory. The southernmost scope of the lines was around 7° north.

[...]

(6) August 1936 amended edition of *New Map of China*

New Map of China (single map), edited by Chen Duo, second printing by Commercial Press, November 1934 first edition, August 1936 amended edition. The book's appended map *Map on the Evolution of Chinese Territory* marked Dongsha Island, the Xisha Islands, the Nansha Islands (*i.e.* the present-day Zhongsha Islands), and the Tuansha Islands (*i.e.* present-day the Nansha Islands) in the South China Sea region, and lines around the islands were drawn to incorporate them into Chinese territory. However, the southernmost scope of the lines was around 8° north.

Editor's note: The appended map, *Map on Contemporary Changes in the Chinese Territory* in the December 1937 amended third edition *New Map of China*, shows the boundary lines of the Nanhai Islands in the same way as above.

(7) September 1936 edition *Kaiming Map of China*

Kaiming Map of China (one volume), printed in color, edited by Tan Lian and Chen Haoji, printed by Shanghai Meicheng Printing Co., distributed by Kaiming Bookstore, January 1934 first edition, September 1936 third edition. The seventh map of the book, *Map on the Evolution of Chinese Territory*, marked Dongsha Island, the Xisha Islands, the Nansha Islands, and The Tuansha Islands, and lines around the South China Sea islands were drawn to incorporate them into Chinese territory. The southernmost scope of the lines was around 7° north.

(8) January 1937 edition *Map of Modern China*

(Intended for secondary schools) *Map of Modern China* (one volume), edited by Tu Sicong and Wang Zhen, printed by World Cartographical Society (*shijie yudi xueshe*), January 1937 edition. On page 43 of the book, *Map of Changes in the Chinese Territory* marked Dongsha Island, the Xisha Islands, the Nansha Islands, and The Tuansha Islands, and lines around the islands were drawn to incorporate them into Chinese territory. The southernmost scope of the lines in the South China Seas was around 7° north.

(9) May 1939 edition *New Map of Chinese Provinces*

New Map of Chinese Provinces (one volume), edited by Tu Sicong and Wang Zhen, distributed by Shenghuo Bookstore, May 1939 edition. On page 45 of the book, *Map of Changes in the Chinese Territory* marked Dongsha Island, the Xisha Islands, the Nansha Islands, and the Tuansha Islands in the South China Sea region, and lines around the islands were drawn to incorporate them into Chinese territory. The southernmost scope of the lines in the South China Seas was around 7° north.

(10) October 1939 edition *Kaiming Map of China*

Kaiming Map of China (one volume), printed in color, edited by Tan Lian and Chen Haoji, printed by Kaiming Bookstore, January 1934 first edition, October 1939 amended edition. The seventh map of the book, *Map on the Evolution of Chinese Territory*, marked Dongsha Island, the Xisha Islands, the Nansha Islands, and The Tuansha Islands, and lines around the Nanhai Islands were drawn to incorporate them into Chinese territory. The southernmost scope of the lines was around 7° north.

(11) December 1939 edition *Newly Formulated Large Hanging Map of the Republic of China*

Newly Formulated Large Hanging Map of the Republic of China (single map), edited by Ge Suicheng, printed by Zhonghua Book Company, published in December 1939. The appended map, *Map on the Evolution of China's Territory*, marked Dongsha Island, the Xisha Islands, the Nansha Islands, and The Tuansha Islands, and lines around the islands were drawn to demonstrate that they belonged to Chinese territory. The southernmost scope of the lines in the South China Seas was around 8° north.

(12) 1945 edition *Large Map of New Circumstances in China*

Large Map of New Circumstances in China (single map), edited by Shao Yuechong, published by Shanghai Fuxing Cartographical Society (Shanghai Fuxing Yudi Xueshe), printed in 1945. The appended map, *the Nanhai Islands of China*, marked the names of the Nansha Islands

and some small isles in The Tuansha Islands. In the eastern part of the South China Sea region bordering the Philippines, there was a red line seeming like a boundary line, but this line was not marked as the demarcating line of Chinese territory.

4. 18 Chinese maps with completely marked four archipelagos in the Nanhai Islands, with the southernmost point at approximately 4° north

(1) 1936 edition *New Map of China's Development*

(Intended for secondary schools) *New Map of China's Development*, by Bai Meichu, distributed by Beiping Jianshe Library, printed in 1936. The second map in the book, *Complete Map of China after Southward Expansion of Sea Territories*, marked Dongsha Islands, the Xisha Islands, the Nansha Islands, and the Tuansha Islands in the South China Sea region, and lines around the Nanhai Islands were drawn to demonstrate that they belonged to Chinese territory. The southernmost scope of the lines in the South China Seas was around 4° north, and Zengmu Reef was within the boundary.

The author made the following annotation for the basis of the cartography of this map: “In July 1933, France occupied six islands in the South China Sea. Then, the Office of Hydrography of the Navy conducted surveys of the two archipelagos of Nansha and Tuansha, both islands are the places for the livelihoods of Chinese fishermen, thus naturally sovereignty over these islands belong to China. In April 1935, Central Water and Land Map Review Commission published a map of the Nanhai Islands of China, showing expanded sea territories as far south as Zengmu Reef in The Tuansha Islands, which fit with 4° north; thus was the process by which the sea territories were expanded southward.”

Editor's note: When the book was reprinted in September 1937, the first map in the book, *Complete Map of China after Southward Expansion of Sea Territories*, was drawn in completely the same manner as above.

[...]

Wo Kuo Nan-hai chu tao shih Miao
hui pien

我国南海诸岛史料汇编

韩振华主编 林金枝 吴凤斌编

東方出版社

② 1843年《一斑录》

1843年(清道光23年)郑光祖辑《一斑录》,卷一、天地、第5—6页《中国外夷总图》中,绘有“东沙”、“西沙”和“石塘”。“东沙”指东沙群岛。“西沙”指西沙群岛和中沙群岛,“石塘”指南沙群岛。

这里,作者第一次在中国地图上使用“西沙”之名来称西沙群岛。

道光23年秋鐫、30年校正,青玉山房藏板。

③ 1867年《康轺纪行》

1867年(清同治6年)姚莹展辑《康轺纪行》卷十六第45页下《李明彻地球图》中,绘有“长沙”、“石塘”和“七洲洋”,分别指中沙群岛、南沙群岛和西沙群岛及其附近一带的海洋。

道光丙午(1846年)成书,同治6年版。

④ 1883年《越南舆地全图》

1883年(清光绪9年)盛庆绂《越南舆地全图》,在琼州府崖县的南端与越南平顺省西北之间海洋中画有七个岛,即“七洲洋”,指今西沙群岛。

光绪9年(1883年)秋版。

(二) 民国时期出版的地图有关标绘南海诸岛四个岛群的变化情况资料

编者按: 民国时期(1911—1949年)我国私人 and 政府机构出版的地图,对于南海诸岛四个岛群的画法,有过几次变化。总的来说,在1933年7月法国殖民主义者占领我南沙群岛九小岛以前出版的地图,一般在南海海域中只标

有东沙岛和西沙群岛；从1933年7月至1935年4月，即在水陆地图审查委员会出版《中国南海各岛屿图》之前，一般的地图除标有东沙岛和西沙群岛外，还标有琼南九岛或南海九岛等名称；从1935年4月以后，中国出版的地图有关南海诸岛的画法，一般地说才算得比较完整，即在南海海域中，标有东沙岛、西沙群岛、中沙群岛和南沙群岛等四个岛群。现在将已搜集到的一百多种版本的地图，就南海诸岛的画法分四类简述如下：

1. 在南海海域中，只标有东沙岛。南海其他诸岛未标明的。共有六种版本，这种绘法出现在二十年代，但在三十年代甚至四十年代出版的地图也有这种情况。

2. 在南海海域中，标绘出东沙岛和西沙群岛。而其他南海诸岛未绘出的，共有五十八种版本。这种画法，在二十世纪一十年代就有所出现，但集中出现在二十年代和三十年代，个别的地图在1946年也有这种画法的。

3. 在南海海域中，标绘出东沙岛、西沙群岛、中沙群岛和南沙群岛九小岛。有八种版本，它集中出现在1933年7月法国殖民主义者宣布占领我南沙群岛的九小岛（即今太平岛、中业岛、费信岛、马欢岛等）以后一二年内出版的地图中。

4. 在南海海域中，完整地绘出东、西、中沙和南沙群岛的共有六十种版本，为数最多。第一份这样标绘的地图是1935年4月水陆地图审查委员会编印的《中国南海各岛屿图》，其后出版的地图一般都是根据这种画法作为蓝本。在三十年代，民国政府曾设立水陆地图审查委员会，由当时参谋本部、内政部、外交部、海军部、教育部和蒙藏委员会派员共同组成，负责审查全国各地出版的水陆地图。1934年12月21日该委员会举行第二十五次会议“审定中国南海各岛屿华英岛名”共一百三十二个，

...分属“东沙岛”、“西沙群岛”、“南沙群岛”和“团沙群岛”。
 ...1935年3月22日该委员会又举行第二十九次会议，决
 ...议政区疆域各图必须画明东沙岛、西沙群岛、南沙群岛和
 ...团沙群岛。1935年4月，该委员会出版《中国南海各岛
 ...屿图》。

应该指出的是《中国南海各岛屿图》是民国政府官方
 第一次出版的地图，它比较详细画明我国南海诸岛的岛
 屿、礁石、沙洲和暗礁的位置，但各岛屿的名称都采用帝
 国主义分子擅定的岛名的译音。在1935年4月以后至
 1947年年初出版的中国地图，凡图中所指出的南沙群岛
 即今中沙群岛，团沙群岛（或珊瑚群岛）即今南沙群
 岛。

1947年年初，内政部为调整南海诸岛各岛群名称，
 以符合诸岛在南海海域所处的地理位置，遂将团沙群岛
 正式改为南沙群岛，原日之南沙群岛正式改为中沙群岛。
 南海诸岛各小岛屿的具体名称，也由当时内政部方域司
 拟定，并正式核定公布，这些岛屿名称一直沿用至今。

1. 标绘东沙岛的五种中国地图

《南庚中(1)1913年5月版《中国新舆图》

《中国新舆图》(一册)色印 上海商务印书馆编译所编 陈
 基校 商务印书馆印行 1913年5月初版 在该书第一图《中
 华民国全图》中，只有标明布拉达斯岛(编者按，即东沙岛)，对其他南
 海诸岛未注明。

(2) 1914年9月版《中华民国分道新图》
 《中华民国分道新图》 (单幅) 色印 童世亨著 上海中外舆图局出版 1914年9月初版 该图在南海海域中, 标有东沙岛, 但未标绘出其他南海诸岛。

(3) 1920年5月版《中华全图》
 《中华全图》 (单幅) 中华书局印行 1920年5月初版 该图在南海海域中, 只有标明东沙岛, 对其他南海诸岛均未标绘。

(4) 1927年12月版《东沙岛图》
 《东沙岛图》 (单幅) 广东省陆军测量局编 1927年12月版 图中标明东沙岛、浅湖和暗礁等字样。

(5) 1934年4月版《中华形势讲授地图》
 (乙种) 《中华形势讲授地图》 (单幅) 色印 武昌亚新地学社发行 1934年4月出版 该图只标明东沙岛, 其他南海诸岛名称并未绘出。

2. 标绘东沙岛和西沙群岛的五十八种中国地图

(1) 1914年10月版《七省沿海形胜图》和
 1914年12月版《中华民国地理新图》

《七省沿海形胜图》 童世亨著 上海中外舆图局出版 1914

年10月初版 在该图其五《自三夹口至白龙尾》图中标有西沙群岛十几个具体岛礁名称。(如树岛、石岛、林岛、林康岛、钱财岛、羚羊礁等)。

《中华民国地理新图》(一册)色印,胡晋接、程敷错编纂,上海亚东图书馆印行 1914年12月版在该书第三图《中华民国边界海岸及面积区划图》中,除标出东沙岛外,还在附图中标出西沙群岛。

(2) 1915年11月版《中华民国新区域图》

《中华民国新区域图》(一册)色印 童世亨著 上海中外舆图局出版 中外舆图局印行 1915年11月增修再版 在该书第一图《中华民国全图》中,除标出东沙岛外,还有附图《西沙群岛》。

(3) 1916年版《中华民国新区域图》

《中华民国新区域图》(一册)色印 童世亨著 上海中外舆图局出版 商务印书馆发行 1916年印 在该书《中华民国全图》中,除标有东沙岛外,还在附图标出西沙群岛和特里屯岛等。

(4) 1917年10月版《中华民国新区域图》

《中华民国新区域图》(一册)色印 童世亨著 上海中外舆图局出版 商务印书馆发行 1915年6月初版 1917年10月订正四版 在该书《中华民国全图》中标有东沙岛并有附图《西沙群岛》。

(5) 1918年8月版《中国形势一览图》⁽¹⁾

《中国形势一览图》(一册) 色印 商务印书馆印行 1918年8月增修十二版 在该书第一图《中华民国全图》中, 标有东沙岛和西沙群岛。

(6) 1919年2月版《本国新地理图说》⁽²⁾

《本国新地理图说》(一册) 谢观编 商务印书馆印行 1919年2月版 该书第21图《广东省图》中, 有附图《西沙群岛之一部》。标出西沙群岛各岛屿具体岛礁名称, 并在图中注明“诸岛在琼州岛东南三百余里。”

(7) 1920年3月版《世界新形势图》⁽³⁾

《世界新形势图》(一册) 1920年3月初版 1923年10月修订版四版 董世亨著 商务印书馆发行兼印刷 在该书《中华民国》图中标有东沙岛, 附图标有西沙群岛, 在《南洋群岛》图和《大洋洲》图中都标有西沙群岛。

(8) 1920年5月版《世界改造分国地图》⁽⁴⁾

(乙种)《世界改造分国地图》(一册) 色印 丁善盒编 中华书局印行 1920年5月初版 在该书第四图《亚细亚洲》和第五图《中华民国》, 图中都标有东沙岛和西沙群岛。

(54) 1947年7月版《本外国地理教科图》

《本外国地理教科图》(一册) 1947年7月大中国图书局发行。中国史地图表编纂社陆先鉴、朱建霞编、金擎宇校订、亚光舆地学社出版。在该书第7页《中华民国政区》附图《南海各岛屿》中,标有东沙岛、西沙群岛、东沙群岛(编者按,应系中沙群岛之误)和南沙群岛,并标出各群岛的经纬度位置。

(55) 1947年7月版《世界地理教科图》

《世界地理教科图》(一册) 中国史地图表编纂社金擎宇编、陆先鉴等人绘。亚光舆地学社1947年7月再版。在该书第八图《亚细亚洲》和第十二图《南洋群岛》图中,都绘有东沙、西沙、中沙和南沙群岛,并分别注明属于中国。

(56) 1947年版《世界地理教科图》

《世界地理教科图》(一册) 色印 陈铎、葛浪编 商务印书馆发行。1947年出版。在该书《亚细亚洲》和《南洋群岛》图中,均标有东沙、西沙、中沙和南沙群岛。并分别注明属于中国。

(57) 1948年4月版《中国新地图》

《中国新地图》(一册) 色印 洪德照编 东方舆地学社出版 大东书局发行。1948年4月版。在该书第15页《广东省》图中附图,标有东沙岛、西沙群岛、中沙群岛和南沙群岛。

(58)1948年7月版《中国分省新图》

《中国分省新图》(战后修正第五版)(一册) 色印 丁文江 翁文灏 曾世英编 申报馆发行 1948年7月出版 在该书第3—4页《政治区域图》和第27—28页《广东》图中,标有东沙群岛、西沙群岛、中沙群岛外,还附有《南沙群岛》图。

(59)1948年版《最新中国分省地图》

(内政部审定)《最新中国分省地图》(一册) 色印 新史地研究社编 许仁生绘 中华书局印刷 1948年初版 在该书第4页《全国政区图》和第19页《广东省》图中均有附图《南海诸岛图》,图中各标有东沙群岛、西沙群岛、中沙群岛和南沙群岛。

(60)1948年版《中国分省图》

《中国分省图》(一册) 色印 大连大众书局印行 1948年出版 在该书第2页《本国政治形势》和第13页《广东省》图中,均有附图《南海诸岛》图,图中标有西沙群岛、中沙群岛和南沙群岛。

(三)民国时期出版的地图有关标绘南海诸岛范围线画法的变化情况资料

编者按: 民国时期南海诸岛范围线的画法问题,目前我们已经收集到的地图共有三十多种版本,在南海海域中的南海诸岛最早出现有范围线画法的是在1914年,但当时南海诸岛范围线只包括东沙岛和西沙群岛。其后随着时间

的推移,基于对南海诸岛范围认识的加深,对南海诸岛范围线的画法其范围不断扩大。概括起来,对南海诸岛范围线的画法大体分为四种类型:

(一)南海诸岛范围线仅包括东沙岛和西沙群岛的。这种画法出现在1914年到1933年之间,就目前能看到的地图,有1914年胡晋接编《中华民国地理新图》、1927年屠思聪编的《中华最新形势图》和1933年陈铎编的《中国模范地图》三种(共五个版本)。

(二)南海诸岛范围线仅包括东沙岛、西沙群岛和南沙九岛的(即南沙群岛中的一部分)。这种画法只有1934年陈铎编的《新制中国地图》一种,它出现在法国殖民主义者占领我南沙群岛九小岛之后。

(三)南海诸岛范围线虽包括了东沙、西沙、中沙和南沙群岛四个岛群,但范围线的最南端标绘在北纬 7° — 9° 左右。这种画法的地图共有十二种,它集中出现在三十年代和四十年代,具体说来,它出现在1935年4月国民党政府出版的《中国南海各岛屿图》之后至1946年之间,其共同点都未将我南沙群岛最南端的曾姆暗沙标出,一般都标在北纬 7° — 9° 左右。

(四)南海诸岛范围线既包括了东沙、西沙、中沙和南沙群岛四个岛群,而且将最南端标绘在北纬四度左右的。这种画法的地图最多,共有十八种。它开始出现在1936年白眉初编的《中华建设地图》一书上,但绝大多数都是在1947年以后出版的地图。因为1947年内政部方域司曾出版内部地图(1948年2月正式出版公开地图),该图所划的范围线,包括南海四个岛群,并且将最南端的曾姆暗沙明确标出,范围线标在北纬四度左右。这种画法一直沿用至今。

1. 南海诸岛范围线仅包括东沙岛和西沙群岛在内的三种中国地图

(1) 1914年12月版《中华民国地理新图》

《中华民国地理新图》 胡晋接 程敷借编纂 上海亚东图书馆印行 1914年12月版该书第一图《前清乾嘉以前中华领域图》中,在南海海域的东沙岛和西沙群岛的外围,用范围线标明,将东沙岛和西沙群岛划入我国领土范围内。

(2) 1927年5月版《中华最新形势图》

(表解说明) 《中华最新形势图》 屠思聪著 上海世界舆地学社发行 1927年5月出版 该书第七图《中华疆界变迁图》中,在南海海域的东沙群岛和西沙群岛的外围,用范围线标明,将东沙岛和西沙群岛划入我国版图之内,但南海海域最南范围线画在北纬十五度左右。

编者按: 1933年9月和1938年4月增订版的(表解说明)《中华最新形势图》有关南海诸岛范围线的划法,同上。

(3) 1933年7月版《中国模范地图》

(表解说明) 《中国模范地图》 陈铎编 上海舆地学社印行 1933年7月初版 该书第10页《中国疆域变迁图》中,在我南海海域的东沙岛和西沙群岛的外围,用范围线标明,将东沙岛和西沙群岛列入我国版图。但南海海域最南的范围线标在北纬十五度

左右。

2. 南海诸岛国范围仅包括东沙岛、西沙群岛和琼南九岛的中国地图

(1) 1934年8月版《新制中国地图》

《图(表)说明》《新制中国地图》陈铎编 上海商务印书馆印行 1934年8月初版该书第10页《中国疆域变迁图》中,在我南海海域标有东沙岛、西沙群岛和琼南九岛,其外围用范围线画明,以示属我国领土。但南海海域最南的范围线划在北纬九度左右。

3. 南海诸岛完整标明四个岛群但范围线最南端标绘在北纬7°—9°左右的十二种中国地图

(1) 1935年9月版《中华折类分省图》

《图(表)说明》《中华折类分省图》(一册) 欧阳纆著 武昌亚新地学社印行 1935年9月三版 该书第35页《国境变迁图》中,在我南海海域标有东沙、西沙、南沙(按即今中沙)、团沙(按即今南沙群岛)。其外围用范围线标明,以示属我国领土。但南海海域最南范围线标在北纬九度左右。

(2) 1936年1月版《中国地理沿革图》

《图(表)说明》《中国地理沿革图》(一册) 色印 上海舆地学社发行

1922年4月初版 1936年1月订正四版 该书第九十一图《清季疆域及四邻图》中,在南海海域标有东沙岛、西沙群岛、南沙群岛和团沙群岛。并在诸岛四周用国界线画出,颜色也与中国本土同用米黄色。但该图没有用经纬度标明南海诸岛的确切位置。

(3) 1936年7月版《中国疆域变迁图》

《中国疆域变迁图》(单幅) 色印 陈铎编 上海商务印书馆印行 1936年7月版 该图在南海海域标有东沙岛、西沙群岛、南沙群岛及团沙群岛,并在南海诸岛四周用范围线划入我国版土。但范围线的最南端标在北纬七度左右。

(4) 1936年7月版《初中本国地理教科图》

《初中本国地理教科图》(一册) 色印 谭廉编 上海中华舆地学社印刷兼发行 1936年7月初版 在该书第44图《近代疆域变迁图》中,标有东沙岛、西沙群岛、南沙群岛和团沙群岛,并在南海诸岛四周用范围线画入我国领土,范围线的最南端标在北纬七度左右。

(5) 1936年7月版《新制中国地图》

(表解说明) 《新制中国地图》(一册) 色印 陈铎编 上海商务印书馆印行 1934年8月初版 1936年7月修订再版 在该书第10图《中国疆域变迁图》中,标有东沙岛、西沙群岛、南沙群岛和团沙群岛等南海诸岛,并在诸岛四周用范围线标划出来,以示属中国领土,范围线最南端标在北纬八度左右。

(6) 1936年8月修正版《中国新地图》

《中国新地图》(单幅) 陈铎编 商务印书馆再版印行 1934年11月初版 1936年8月修正再版 该图附图《中国疆域变迁图》中,在南海海域标有东沙岛、西沙群岛、南沙群岛(即今中沙群岛)和团沙群岛(即今南沙群岛),其外围用范围线标明,以示属我国领土。但南海诸岛最南范围线标在北纬八度左右。

编者按: 1937年12月修正三版《中国新地图》中的附图《中国近代疆域变迁图》有关南海诸岛范围线的画法同上。

(7) 1936年9月版《开明本国地图》

《开明本国地图》(一册) 色印 谭廉 陈镐基编 上海美成印刷公司印刷开明书局发行 1934年1月初版 1936年9月三版 在该书第7图《中华疆域变迁图》中,标有东沙岛、西沙群岛、南沙群岛和团沙群岛,并在南海诸岛四周用范围线画入中国领土范围,范围线最南端标在北纬七度左右。

(8) 1937年1月版《现代本国地图》

(中等学校适用) 《现代本国地图》(一册) 屠思聪 王振编 世界舆地学社印行 1937年1月版 该书第43页《中国疆域变迁图》中,在南海海域标有东沙岛、西沙群岛、南沙群岛和团沙群岛,其周围也用范围线标明,以示将南海诸岛划入我国版图。该图在南海诸岛最南的范围线划在北纬七度左右。

(9) 1939年5月版《新中国分省图》

《新中国分省图》(一册) 屠思聪 王振编 生活书局发行
1939年5月版 该书第45页《中国疆域变迁图》中,在南海海域标有东沙岛、西沙群岛、南沙群岛和团沙群岛等名称,并在南海诸岛四周用范围线标明。南海诸岛最南的范围线标在北纬七度左右。

(10) 1939年10月版《开明本国地图》

《开明本国地图》(一册) 色印 谭廉 (陈镐基编) 开明书店印刷 1934年1月初版 1939年10月修正再版 该书在第7图《中华疆域变迁图》中,标有东沙岛、西沙群岛、南沙群岛和团沙群岛,并在南海诸岛四周用范围线标明属于中国版图。范围线最南端标在北纬七度左右。

(11) 1939年12月版《新制中华民国大挂图》

《新制中华民国大挂图》(单幅) 葛绥成编 中华书局印行 1939年12月出版 在该图的附图《中国疆域变迁图》中的南海海域标有东沙岛、西沙群岛、南沙群岛和团沙群岛等名称,并在四周用范围线标明,以示属我国版图,在南海诸岛范围线的最南部标在北纬八度左右。

(12) 1945年版《中华新形势大地图》

《中国新形势大地图》(单幅) 邵越崇编 上海复兴舆地学社出版 1945年印 该图的附图《中国南海诸岛》中,标有南沙群

岛和团沙群岛中一些小岛屿名称。在南海海域的东部和菲律宾交界的地方用红色画出一条类似范围线的红线来，但未标注这是我国的范围线。

4. 南海诸岛完整标明四个岛群，范围线最南端标绘在北纬 4° 左右的十八种中国地图

(1) 1936年版《中华建设新图》

（中等学校适用）《中华建设新图》白眉初著 北平建设图书馆发行 1936年印 该书的第2图《海疆南展后之中国全图》中，在南海海域标有东沙群岛、西沙群岛、南沙群岛和团沙群岛，其周围用范围线标明，以示南海诸岛同属我国版图。南海诸岛最南范围线标在北纬四度，并将曾姆滩标在范围线之内。

至于这种画法的根据，作者在图中作了这样的注释：“廿二年七月，法占南海六岛，继由海军部海道测量局实测得南沙团沙两部群岛，概系我国渔民生息之地，其主权当然归我。廿四年四月，中央水陆地图审查委员会会刊发表中国南海岛屿图，海疆南展至团沙群岛最南至曾姆滩，适履北纬四度，是为海疆南拓之经过。”

编者按：该书在1937年9月再版时，其中第一图《海疆南展后之中国全图》画法完全同上。

(2) 1947年7月版《新编中国地理教科图》

（中学适用）《新编中国地理教科图》上海舆地学社编 商务印书馆印行 1947年7月初版 在该书第4页《中国政区图》中的附图，标有东沙岛、西沙群岛、中沙群岛和南沙群岛等名称外，

还注有“中华民国领”等字样,以示属我国领土,并在南海诸岛四周用范围线标出,以示属我国版图。南海诸岛最南端的范围线标在北纬四度左右。

(3) 1947年7月版《世界地理教科图》

(中学适用)《世界地理教科图》(一册) 中国史地图表编纂社金擎宇编 陆先鉴等人绘 上海亚光舆地学社印 1947年7月再版 该书第九图《中华民国》图中,标有东沙、西沙、中沙和南沙群岛,并在南海诸岛四周用范围线画入我国版图。范围线的最南端标在北纬四度左右。

(4) 1947年7月版《中国分省新地图》

《中国分省新地图》(一册) 中国史地图表编纂社金擎宇编 亚光舆地学社出版大中国图书局发行 1947年7月初版 该书第5页《全国政区图》附图《南海各岛屿》图中,标有东沙岛、西沙群岛、中沙群岛和南沙群岛。并在南海诸岛的东南部与菲律宾巴拉望群岛之间画出一条范围线,把南海诸岛最南端的范围线标在北纬四度左右。该书第27页《广东省、海南省、广州市》图中附图《南海各岛屿图》,图中标有东沙岛、中沙群岛、西沙群岛和南沙群岛。并在南海诸岛中标明属中华民国,南海诸岛四周画有范围线,把范围线的最南端画在北纬四度左右。

(5) 1947年7月版《新编中国地理教科图》

(中学适用)《新编中国地理教科图》 中国舆地学社编 商务印书馆印行 1947年7月初版 在该书第4页《中国政区图》和第20页《广东省图》附图,标有东沙岛、西沙群岛、中沙群岛和南

沙群岛,并在南海诸岛中统一注明属“中华民国领”字样,在南海诸岛四周用范围线标画出来,范围线最南端标在北纬四度左右。

(6) 1947年版《本外国地理教科图》

《本外国地理教科图》(一册) 色印 陆先鉴 朱建霞编 金擎宇校 亚光舆地学社出版 在该书第12页《福建、台湾、广东、广西》图中的附图,标有东沙岛、西沙群岛、中沙群岛和南沙群岛,并用范围线标绘属于中国领土。

(7) 1947年8月版《中华形势讲授地图》

《中华形势讲授地图》(单幅) 武昌亚新地学社印行 1947年8月出版 在该图附图《南海诸岛详图》中,标有西沙群岛、中沙群岛和南沙群岛等名称,并在四周用范围线标明,南海诸岛最南端的范围线标在北纬四度左右。

(8) 1947年9月版《现代中国大地图》

《现代中国大地图》(单幅) 中国史地图表编纂社编 亚光舆地学社出版 1947年9月增订六版 该图附图《南海诸岛图》中,标有东沙群岛、西沙群岛、中沙群岛和南沙群岛,并在诸岛四周用范围线画入我国版图之内。

(9) 1947年12月版《中国新地图》

《中国新地图》(单幅) 色印 上海商务印书馆印行 1947年12月修正三版 该图附图《中国近代疆域变迁图》中,标有东沙群岛、西沙群岛、中沙群岛和南沙群岛,并在诸岛四周用范围线画

入我国版图。

(10) 1947年版《南海诸岛位置图》

《南海诸岛位置图》（单幅）内政部方域司制 国防部测量局代印 1947年版该图在南海海域中标有东沙群岛、西沙群岛、中沙群岛和南沙群岛，并在其四周画有范围线，以示属中国领土。范围线最南端标在北纬四度左右。

(11) 1948年2月版《中华民国行政区域图》

《中华民国行政区域图》（一册）内政部方域司傅角今主编 王锡光 黄镜澄 杨金钿 黄镜湖 虞佐华 顾海珊编绘 商务印书馆印行 1947年12月制版 1948年2月发行 该图及附图《南海诸岛位置图》中，在南海海域标有东沙群岛、西沙群岛、中沙群岛和南沙群岛等南海诸岛名称，并标明属中华民国领土。在南海诸岛四周画有范围线，其最南端的范围线划在北纬四度左右。

(12) 1948年3月版《现代中国大地图》

《现代中国大地图》（单幅）彩色印 中国史地图表编纂社编纂 亚光舆地学社出版 1948年3月增订十三版 该图附图《南海图》中，标有东沙群岛、西沙群岛、中沙群岛和南沙群岛，并在南海诸岛四周用范围线划入我国版图。

(13) 1948年4月版《中国新地图》

《中国新地图》（一册）彩色印 洪懋熙编 东方舆地学社出版 大东书局发行 1948年4月出版 该书第1页《中国政治区域图》中附图，在南海海域中标有西沙群岛、

中沙群岛和南沙群岛,并在四周画有范围线,以示属我国领土。南海诸岛范围线的最南端标在北纬四度左右。

〈图五时区图〉(1948年7月)

(14)1948年7月版《中国分省新图》

〈中国分省新图〉(战前修正第5版) (一册) 色印 丁文

江 翁文灏 曾世英编 申报馆发行 1948年7月出版 在该书第27页〈广东〉图中有〈东沙岛〉、〈西沙群岛、中沙群岛〉和〈南沙群岛〉等三个附图,并在〈南沙群岛〉附图四周用范围线标明,以示属中国领土,范围线最南端标在北纬四度左右。

(15)1948年9月版《世界分国新图》

〈世界分国新图〉(袖珍本) (一册) 内政部审定 张起文编 张泳如校 上海大陆舆地学社印行 1948年8月初版 1948年9月再版 在该书第二图〈亚细亚洲〉和第七图〈南洋群岛〉图中,不但标明出东沙岛、西沙群岛、中沙群岛和南沙群岛外,还标注属于中华民国,并用范围线画入中国版图。该书第三图〈中华民国〉图附有〈南海诸岛图〉,也标明东沙岛、西沙群岛、中沙群岛和南沙群岛,并用范围线画入中国版图。范围线最南端标在北纬四度左右。

(16)1949年1月版《中华民国新地图》

〈中华民国新地图〉(单幅) 色印 中国史地图表编纂社金擎宇编 亚光舆地学社印刷 1949年1月版 在该图附图〈南海各岛屿〉图中,标有东沙岛、西沙群岛、中沙群岛和南沙群岛,并在与菲律宾巴拉望群岛之间画有一条范围线,以示南海诸岛属中国领土,范围线最南端标在北纬四度左右。

(17)1949年4月版《最新中国大地图》

(内政部审定) 《最新中国大地图》 (单幅) 色印 中国制图社李承三主编 王锡光等编制 新亚舆地学社出版 上海新亚书局发行 1949年三版 在该图附图《南海岛屿》中,标有东沙群岛、西沙群岛、中沙群岛和南沙群岛。并在四周用范围线标绘出来,以示属中国领土。南海诸岛最南端标在北纬四度左右。

(18)1949年9月《新中国地图》

《新中国地图》 (单幅) 色印 马宗尧编 中国史地学社发行 1949年9月初版 在该图附图《南海诸岛图》中,标有东沙群岛、西沙群岛、中沙群岛和南沙群岛,并在四周用范围线标画出来,以示属中国领土。范围线的最南端标在北纬四度左右。

Annex 516

Charles Gutzlaff, "Geography of the Cochin-Chinese Empire", *Journal of the Royal Geographical Society of London*, Vol. 19 (1849)

XII.—*Geography of the Cochin-Chinese Empire.* By Dr. GUTZLAFF. Communicated by Sir G. Staunton, Bart.

[Read Nov. 27, 1848.]

It is the principle of the Chinese government to keep their subjects as much as possible from all contact with foreigners; and the neighbouring states have improved upon this policy. If there are no seas and deserts, the government on both sides requires a space between the two countries to be left a jungle and wilderness. If there are mountain defiles, they are guarded in order to prevent all intercourse. Frontier stations are established and garrisons are maintained at an immense expense, to prevent the subjects of the respective countries from trading with one another. In accordance with this system, the Chinese have left the whole space where Kuangtung province borders to the S.W. on Tunkin in the possession of straggling adventurers and native tribes. The last city in this region is Kinchoo, a mean place on an estuary, and about 14 miles from the frontiers. The two countries are separated by a stream, called the Nan-gan-keang, which flows with a winding course from the mountains of Kwangse into the gulf of Tunkin. The tract for about 20 miles to the west and south of the river is debatable ground, claimed by neither power, in many places an impenetrable jungle, frequented by wild beasts and criminals. On the Chinese side there are some poor fortifications: and at the mouth of the river a small garrison, with a custom-house. There are three ridges of mountains, which run in a parallel direction south-east to the shore of the gulf. The Tunkinese side of the frontiers is one continuous flat, with a very fertile soil. On the coast there are a few miserable fishermen.

In this part Tunkin extends to 22° N. lat. The Chinese frontier presents a complete contrast with that of the Tunkinese. A chain of mountains to the south-west of Kwangse separates the two states. On the Chinese side, along a frontier of above 100 English miles, there are eight flourishing cities and fortresses; on the Tunkinese side all is an unhealthy wilderness. The first place of importance in Tunkin is Lang-bak-tran, about 30 gr. m. inland. The Nan-gan river here likewise constitutes the actual boundary.

In the western extremity of Kwangse are situated the mountains which contain the precious metals, and extend along the Yun-nan frontiers. The two empires have never quarrelled about the mines, but have allowed a Laou tribe to work them, in consideration of paying a per-centage to the mandarins of both countries.

Nothing can be more dreary than the Yun-nan frontier for about 100 geographical miles: mountains rise above mountains, some of them capped with snow, and furnish only a very scanty subsistence to a few scattered tribes, who are the miners of the district. The only city of any note on the Yun-nan side is Kae-hwa-foo. The mountains render all fortifications on this frontier unnecessary. The Tunkinese frontier is more populous, and the land is cultivated. The most northern district, a large and fertile valley surrounded by lofty mountains, Kaou-bak-tron, once constituted an independent state. The most western district, Tuyen-kwang-tron, is richly watered, and produces rice.

General Aspect. — The Cochin-Chinese empire, Viet-nan An-nan, and under the present kings, the Great South, is naturally divided into three, if not four parts.

1. Tunkin (eastern capital), or Dang-gnoi (the outer region, when spoken of with reference to Cochin-China proper, —which is called Dang-trong, the central or inner), is mountainous on the north, and of the same general character as the adjacent Chinese provinces. On the west, the same chain which separates Cochin-China Proper from the interior of the peninsula, constitutes the boundary towards the Laos country. The east is nearly level, terminating towards the sea in an alluvial plain. On the southern frontier, towards Cochin-China, a wall extends from the mountains to the sea; but the wall is now useless, as both countries are under one sovereign. Next to Korea and Japan, Tunkin has most completely maintained its exclusive system against foreigners; and after all that has been written on the country, it is still almost unknown.

Towards the north, as far as the Song-ka river, Tunkin extends from 103° 50' E. long. to about 109° 48' E. long.; but from this latter point it is hemmed in by the great Yun-nan ridge, which runs parallel with the sea: 17° 36' is its southern limit, and the northern is in 22° 55'. It is generally fertile, and contains a large industrious population.

Most of the rivers flow in a south-easterly direction. The largest is the great river Song-ka, which is formed by the union of the Le-teën, a stream which constitutes the boundary between China and the Laos country, and the Song-shai, which rises in the latter country, and passes through a mountain defile not far from the principal city in Tuyen-kwang district. The sand of these rivers contains many particles of gold, and thousands of people are engaged in collecting it. The river then runs south-east, having the capital of Tunkin —Kecho or Hanoi—on its right bank; it makes a sudden bend at Heën, and then, turning northward, forms a delta, in which

Domea, the port for foreign shipping in former times, is situated. It has three mouths; the northernmost of which has the deepest water; the southern is nearly inaccessible to vessels drawing above 10 feet, on account of the banks and shallows. This river, by its periodical overflowing, fertilizes the rice-fields. In spring, after a severe winter in Yun-nan, it discharges a great volume of water. It is not much larger than the Oder; but it has numerous tributaries, and several branches are joined together by canals, both for irrigation and commerce. South-east of the mouth of the Song-ka there are seven streams, all of which flow into the sea. The intervening country consists of swamps and a few rice-fields, and is frequently under water. It is the residence of numerous fishermen, who also hunt the alligator, which is used as food, the flesh being sold in the shambles. It is by no means uncommon to see five or six of these monsters in the court-yard of a fisherman's hut with their mouths gagged. The produce of these fisheries is immense; it supplies the poorer classes in the interior, who seldom taste any meat, and still leaves a large surplus for exportation to China. This thrifty, hard-working race leads a wretched life. Living in their miserable boats, which are often not water-tight, or in huts made of leaves, dry sticks, and bamboo, when they are drying and salting fish, they have scarcely rags sufficient to cover their nakedness. Their skin is tanned by constant exposure to the weather; their customary diet is the refuse of the fish which they catch, with a little rice and salt. Their females are ugly and filthy, and very prolific. Yet these fishermen are a cheerful people, always laughing or singing; they endure hunger, heat, cold, and wet without grumbling; and when a thousand of their brother-fishermen are swept away by an unexpected typhoon, another thousand is ready to take their place.

2. Cochin-China Proper, or Dang-trong, a small strip of land, from 10 to 20 geographical miles in breadth, extends from the southern frontiers of Tunkin to about 12° S., where it borders on Tsiampa. This country is bounded on the west by naked mountains, which have only a scanty vegetation, and for ten miles inland it is a complete desert. The most important river is that on which the capital is situated; but the Songve and Songdalang are larger. Having traversed the regions inhabited by the Annam race, the traveller comes to lofty mountains, which present a dreary waste. No European has yet visited them.

3. Tsiampa (Champa) is a narrow strip of land extending to about 11° 35' N. lat. It is inhabited by a peculiar race, more resembling the Malay than the Annam. It has one

great river, the Song-luong. Since the incorporation of this country with Cochin-China, the aborigines, at one time bold navigators of the Indian Archipelago, have retired to the mountains, a forlorn and persecuted race, and a few thousand Cochin-Chinese have taken possession of the coast.

4. Kambodia, or Kamen: the former name is used in the sacred books, and adopted by Malays and other foreigners; the latter is applied to themselves by the natives. The part which belongs to Cochin-China presents a continued flat; a rich alluvial soil, full of navigable rivers, one of which, the Mekom, is among the largest rivers in southern Asia. This river, which flows through a rich and varied valley, takes its rise in Yun-nan, on the frontiers of Sefan, in $27^{\circ} 20'$ N. lat., where at first it has the name of Lan-tsan; but towards the south, and before it enters the Laos country, it is called Kew-lung-keang, or Nine-dragon river. The volume of water which it receives in its course from the stupendous mountains through which it makes its way, renders it a mighty stream. In the Chinese territory it runs a considerable distance through a magnificent valley. In 16° N. lat. it bends more to the east, and enters Kambodia, after having received a large tributary: it then drains the whole length of that country, and falls by three embouchures into the sea in about $9^{\circ} 34'$ N. lat. In many places the river is very deep; in others there are rocks and cataracts, shifting banks and shallows, all which impede the navigation. Like all great rivers, it has some outlets which are only accessible at high water. The river is navigable in Yun-nan, and there are many flourishing cities upon it. In Laos many thriving villages adorn the banks; and in Kambodia the principal population is near it. We may conceive what a mighty stream that must be which traverses 18 degrees of latitude, and forms at its mouth an alluvial deposit only second to that of the Yang-tsze and Hwangho.

North-east of Pe-nompeng (Kalumpé), the present capital of Kambodia, is a large lake, the Bienho, in Cochin-Chinese; in Kambodian, Tanle-sap (fresh-water lake); from which a broad stream flows into the Mekom. The Saigon river, which all our maps represent as only being about 20 miles long, is nevertheless a very deep river, easy of access for ships of the greatest burthen, being six fathoms over the bar at the principal entrance, and ten deep in mid-channel. It is joined to the Mekom near its mouth by two channels; and probably it is really one of the outlets of that mighty stream.

Kambodia is a land of rivers. The natural fertility of the soil is very great; but the inhabitants are still behind in

agriculture. Kambodia is nevertheless the granary of Cochin-China, and is rich in all kinds of productions.

There are numerous other rivers. On the frontier of Siam is the Kho river, an insignificant stream, but the boundary between the two countries. On the banks of the Pong-som (also called Com-pong-som or Vung-tom) there is a considerable trading place, Vin-tam-phù, principally inhabited by Chinese. The Hatien, or Kang-kao (in $10^{\circ} 14'$ N. lat., $104^{\circ} 55'$ E. long.), has a great depth of water; and on the bank there is a flourishing town of the same name, inhabited by many Chinese traders and navigators. This was once a great emporium for the whole Kambodian trade, and known to Europeans under the name of Pon-tea-mas (Potai-mat)—a name at present obliterated from the maps. While civil strife in the interior occupied the attention of the king, a man of Chinese descent availed himself of this opportunity to declare it a free port, and thousands of merchants established themselves there in a few years. Justice was administered, the place grew rich—for every man found there a safe depôt for his goods, and willingly became a subject of the liberal commercial chief. But the envy of the Siamese did not view with indifference so much happiness, and they destroyed the emporium in 1717. Kangkao, which took its place, is still a considerable trading-station for the exportation of rice and salt, principally to Singapore. The junks which belong to it are small, for the harbour is very shallow. In order to facilitate the intercourse the Cochin-Chinese have again opened the canal which joins this river to the Mekom.

The Karmunsa (by the Cochin-Chinese called Rachgea, and by the Chinese Teksea) is joined not far from its embouchure by a considerable tributary, and it falls into the gulf of Siam. It has only recently been joined by a canal to the great Kambodian river. However oppressive the Cochin-Chinese government may be, they wish to facilitate inland communication in imitation of the Chinese, and wherever it is practicable the mandarins effect it by forced labour.

The Tek-maou (Black-water river) is in connexion with the Mekom, and falls by three embouchures into the sea, in $8^{\circ} 40'$ N. lat., opposite to Poolo Ubi. It is a navigable river, and the water is largely used for irrigation. The soil on its banks is fertile; but fertility does not ensure good cultivation in a country where a little labour produces all that a man wants, and an industrious person is an object of extortion to the rapacious government.

Upper Kambodia extends beyond the 11° N. lat., and com-

prises nearly 5° of longitude in breadth (103° 10' to 108°). It is situated on both sides of the Mekom, extending eastward to the Cochin-Chinese range of mountains, and westward to Battambang, the province ceded to Siam, which formerly constituted an integral part of the kingdom: at which time the second mountain range, which issues from Yun-nan and traverses the whole peninsula in its length, was the natural western boundary. To the N. its confines are marked by the bend of the Mekom, the left bank of which belongs to the Laos tribes, who nominally acknowledge the Annam sway. The greater portion of this region is a plain, covered in many parts with magnificent forests, abounding in teak and dye-woods, the resort of tigers and elephants. There are very few cities. The Cochin-Chinese government, being determined upon retaining possession of this country, has made roads through these regions, and one may travel with ease on elephants to the Chan territory. Such is the kingdom of Kambodia, which contains so many natural advantages, and yet continued a paltry state until it was swallowed up by two more powerful neighbours. The only enterprise ever undertaken by this people was to the E. coast of Borneo, where a colony was founded; occasionally they also visited the Philippines.

5. The Moi territory. There are few races so low in the scale of civilization as the Moi mountaineers, who inhabit the regions between Kambodia and Cochin-China, from 10° 40' to 16° N. lat. The Annamese apply the term Moi to all the numerous tribes, which speak different dialects and have different customs. The natives live chiefly on wild fruits and on roots; some sleep in trees, and put a few branches together to make a shelter against the weather; others construct mean huts, and live in small communities, but there are no large villages. The poverty of these people is so great that it has never tempted the avarice of their neighbours to penetrate among the defiles, except for the sake of capturing the people and selling them as slaves. The only place of importance is Nuok-stieng, a Kambodian settlement in the S., on the Song-luong river, which flows through Kweinhon province into the sea. The Cochin-Chinese joined it to the Mekom by a canal, so that they are able to cross the whole country by water. Farther on, near Tay-son-thuong, there is a pass by which the intercourse between Binh-dinh and the Mekom is kept up; another pass, more to the N., which leads from the latter place through numerous valleys for a distance of more than 120 g. miles, to Than-laou-buthai, is a monument of the enterprise and perseverance of the Annamese. The forests abound in eagle-wood, an article much sought after.

6. Territory of the Laos tribes subject to Annam. The whole of the interior of the peninsula is inhabited by a quiet, hard-working race, whose harmless disposition has brought them in subjection to the sway of their neighbours, the Siamese, Birmahs, Chinese, and Annamese. The territory of those who acknowledge the Cochin-Chinese king is to the N. of Kambodia and of the Mekom, which assumes the name of Kewlung in 17° N. lat.; on the N. it borders on Tunkin; on the E. the great ridge of mountains above mentioned divides it from Annam; and on the W. it borders on the tribes which are under Siam and China. The breadth of the country varies from 20 to 25 g. miles; there are many cities in the S. and W., but the eastern part is desolate. Here is also a road, traversing the whole length of the country, to the first Chinese Chan station, Nin-beën-chaou, and there are two others in the S. which communicate with Tunkin. Two chains of mountains in the N. traverse the plain, another branches off towards the W.: there are few rivers, and these are but mountain streams. The north-western frontiers border closely upon the Birman dependencies in the Laos country. All accounts describe the country as being in a very flourishing condition, inhabited by thrifty people, who live happy under their patriarchal chiefs; they cultivate the ground, and have some silk and gold manufactures.

If we compute the whole Annam empire to contain 9800 g. sq. miles, we shall not be very far from the truth. The extent of Annam is about equal to that of France, and if we assign to it 12 or 15 millions of inhabitants (all tribes and nations included) we shall probably not exceed the truth.

Coasts and Islands.—1. Of Kambodia. Having left the Siamese island Kokong, and sailing along the very low coast of Gosatran (Pursat, in Kambodian), where mangrove-trees alone serve for landmarks, we reach the large island of Kothrol (Phukok, by the Cochin-Chinese), which is separated by navigable straits from the main, and has many islets to the N.W., of which the prevailing formation is sandstone. It is about 7 miles long and 3 broad; the harbour in $10^{\circ} 17'$ N. lat. and $104^{\circ} 16'$ long.; well wooded, producing the celebrated eagle-wood; and on the whole coast the *tripang* constitutes, for its value in China, the most important fishery. The natives spear this slug (*Holothuria*), instead of wading through the sea to catch it with the hands, as is done in other places.

To the E., close to the main, is a considerable archipelago (Nhieu-kulao or Nhieu-hon, in Cochin-Chinese) of islets, overgrown with trees, but uninhabited, among which are many fishing stations; and the *tripang*, as well as the seaweed (agar

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agar), an article much esteemed in China when boiled down to a jelly, constitute here the principal articles for exportation. Various islands, such as Hontre, in N. lat. $9^{\circ} 58'$, long. $104^{\circ} 37'$ E., Hondat, Hon-kon-ray, and Holon, stretch out towards the S. All these are along the W. coast of Kamaou, or Hateën. Next, Kang-kao harbour, N. lat. $10^{\circ} 5'$, is broad at its entrance, but shallow. Farther S. is the embouchure of the Rach-gea and the Kay-kwao harbour, a small inlet for fishing craft. The coast is here even lower than towards the W., and subject to frequent inundation.

Pulo Ubi False, about 5-6 leagues westward from Mui-ong-dok, the most southern promontory of Kambodia, whence a considerable sand-bank runs into the sea, has several islets around it, is thickly wooded, and contains some springs of pure water. Whenever the people of the main are visited by an inundation of the sea and destitute of rain water, they procure their supplies here.

Hon-kwae (Pulo Ubi), 5 leagues S. from that promontory, in N. lat. $8^{\circ} 25'$, long. $104^{\circ} 54'$ E., has high mountains, which may be seen from a great distance. The Kambodians call it Ka-tam-bung, the Siamese Ko-man: it has a scanty vegetation, and no production worthy of remark. There are a few inhabitants at present collecting the seaweed for the Chinese market, and acknowledging the king of Annam for their sovereign. The Chinese who sail to the Indian archipelago consider this as the principal landmark. Both islands bear the name of Ubi, on account of the immense yams, 40 lbs. to 100 lbs. in weight, that grow wild there.

Pulo Panjang, in N. lat. $9^{\circ} 5'$, is surrounded by six isles. The principal formation is sandstone. It is only inhabited accidentally when the pirates from the Solo islands resort there, or when Chinese sailors stay there to collect sea-weed. The Cochin-Chinese government claims the sovereignty, and calls it Tho-shan, without endeavouring to disperse the outlaws who trouble the Archipelago with their depredations, and often annihilate the whole trade carried on along the coast of Kambodia.

We mention here Pulo Way, in lat. $9^{\circ} 55'$, off Cape Liant, as debatable ground, without any inhabitants and any other importance, except as a landmark for navigators.

Far more celebrated is Konnon Condore (by the Chinese Kwan-lun), in N. lat. $8^{\circ} 40'$, $105^{\circ} 55'$ E. long. in the form of a crescent, with high peaks. It produces a variety of plants and trees which one seldom sees in other regions, such as the milk and tar-tree; it is now well inhabited, and furnishes many curious productions to the Annam court. It is the

largest island in this district, and greatly esteemed by the Cochin-Chinese; to the Chinese it is a principal landmark in their southern navigation. On account of its convenient situation the English founded, in the beginning of the last century, a colony, and built a fort there. This existed a very short time, and was ruined by the treachery of some Buginese mercenaries in the pay of the Company: the greater part of the Europeans having been assassinated, it was ultimately abandoned. Foreigners landing there were most friendly received and well treated. Many islets are situated all around, and form excellent harbours. Towards the E. we merely mention two rocks, Pulo Sapata and the Cutwick, to which the Cochin-Chinese have affixed no names, and which are remarkable for constituting the utmost extent of the typhoon range.

We should not mention here the *Paracels* (Katvang) which approach 15-20 leagues to the coast of Annam, and extend between 15°—17° N. lat. and 111° -113° E. longitude, if the King of Cochin-China did not claim these as his property, and many isles and reefs, so dangerous to navigators. Whether the coral animals or other causes contribute to the growth of these rocks we shall not determine; but merely state that the islets rise every year higher and higher, and some of them are now permanently inhabited, through which the waves, only a few years ago, broke with force. They would be of no value if the fisheries were not very productive, and did not remunerate all the perils of the adventurer. From time immemorial, junks in large number from Haenan, have annually visited all these shoals, and proceeded in their excursions as far as the coast of Borneo. Though more than ten per cent. are annually wrecked, the quantity of fish taken is so great as to ensure all loss, and still leave a very good profit. The Annam government, perceiving the advantages which it might derive if a toll were raised, keeps revenue cutters and a small garrison on the spot to collect the duty on all visitors, and to ensure protection to its own fishermen. A considerable intercourse has thus gradually been established, and promises to grow in importance on account of the abundance of fish which come to these banks to spawn. Some isles bear a stunted vegetation, but fresh water is wanting; and those sailors who neglect to take with them a good supply are often put to great straits.

Returning to the E. coast of *Kambodia*. Of the many embouchures and islets of the delta we have already spoken; the deep estuary Dinh-tuong is connected by a small stream with the Saigon river. This anchorage is entirely unknown

to foreign navigators, but of importance to the coasting trade.

The first highland is the Mui-vintau (*Cape James*), in $10^{\circ} 16' 41''$, long. $107^{\circ} 4' 15''$, and the whole coast assumes a different geological aspect, granite being of frequent occurrence. The bay formed by it on the S. and on the N. by the Mui-thuivan (*Cape Ti-woane*) is distant from the former about 13 *E. miles*. The river Lap falls into it, after having traversed a fertile and thickly inhabited country; vessels not drawing above 6 feet can ascend it for some distance. The Mui-ba-kek constitutes, with the former, another bay, at the bottom of which we find likewise the mouth of a still smaller river. Since the Cochin-Chinese have taken possession of the country these natural advantages have not been neglected, and a great number of small vessels are constantly sailing along the shore; docks have been established, and the principal junks and ships are built there on account of the cheapness of timber. If the people had any share in this it would be pleasing to dwell on the favourable change, and the benefits conferred by the new rulers. Government, however, monopolizes everything: the barks that are laden with rich produce carry it to the coast, the vessels launched are revenue cutters or men-of-war, and the natives, like aliens, are excluded from all the natural advantages. The invariable principles of this Government are to keep the subjects poor, that they may be more obedient, and to oppress the Kambodians in order to extinguish their nationality.

One continual tract of extreme sterility meets our eye the moment we approach the coast of Tsiampa. Sand-hills without any vegetation, peaks with stunted shrubs, granite formations of every description, and a reddish disintegrated mass of stones meet here the wanderer, who is seldom gratified by the sight of greensward. This desolation does not, however, confine itself to the coast alone, but extends over the whole breadth of Tsiampa to the Mekom, and over Kambodia. The mountains, which are here only 200 feet high, rise there to 8000, yet are not entirely naked.

As the coast is sterile in vegetation, so it is rich in harbours, and much resembles in both respects the south-western parts of Fokeën.

The Kamranh river separates the two countries, and falls into a bay formed by the Bakek and Kega promontories. At the entrance is the dangerous Britto shoal and the Honba (*Cow island*). A few poor wretches live here as fishermen, but far and wide not one large city or village exists.

Off this coast, in lat. $10^{\circ} 32\frac{1}{2}'$, long. $108^{\circ} 53'$, is Kulaou-

thu, an island much celebrated for its birds'-nests and abundance of tripang, and hence visited by the Annamese, under control of Government, which never allows a single article whereon a duty may be levied, or a monopoly contracted, to escape its vigilance.

Bay follows here on bay, exhibiting the same barren aspect, with sundry ridges of hills running N.E. and S.W. into the country.

The Phugiay Bay, between Kega and Vinay promontories, is conspicuous for a very high peak, at the foot of which two streams fall into it at Phantiet, a small town, and one of the stations established by Government. They descend from the Moi-vi mountains: whether or not they are navigable to any extent we have not been able to ascertain.

In the bay formed by the Muy-lagan Cape, 16 E. miles N.E. of Vinay, the largest river of these regions, which stands in connexion with the Mekom, called the Long-luong, falls into the sea. The country then assumes a more cheering aspect, and not far from its mouth is Binh-doan-dinh, the metropolis of Tsiampa, and present seat of government. The inhabitants are more numerous, and enabled to carry on agriculture by the neighbourhood of the river.

Koo-laou-kau (Hon-kau, or Pulo Ceicer de terre), in lat. $11^{\circ} 13'$, long. $108^{\circ} 48'$, is a famous fishing-station, which, with the Lagan and Muy-din (Pharang-Padaran) promontory, forms another harbour, at which Kana is situated. The latter is in lat. $11^{\circ} 21'$, long. 109° E., 5 leagues from the island: a bluff and high cape, about 3000 feet above the sea, joined by a low sandy isthmus to the main, so as to have the appearance of an island. As it is very difficult to double the promontory with a head-wind, it has received from our sailors the name of the Cape of Good Hope. We find here a small city, Vung-vang, at the bottom of the harbour, where Annamese industry is contending with an ungrateful soil. From Muy-din, N.N.E. $\frac{1}{2}$ E., $8\frac{1}{2}$ leagues, is the Davaeh Cape, of an oblong form, with steep cliffs; the whole region around presents a vast scene of desolation, and hence the name applied to the promontory (Davaeh, Sterility).

The deepest of all the bays is that of Kamraigne, and having Tayu, a high island, at the entrance, and being surrounded on all sides by land, it has rather the appearance of a lake. The mountains in the neighbourhood are said to be rich in silver. The river, which forms the northern boundary of the Tsiampa country, and which the hydrostatic skill of the Annamese has joined to the Mekom, falls here into the sea, after a course of 37 g. miles, reckoned in a straight line at the northern extre-

mity, near Thuy Trieu. For keeping up the inland communication it is of incalculable benefit to the country. The N.E. land which forms this spacious harbour becomes a peninsula by a small river, which at Khaou Kho rises in a marsh, and runs due S. into the bay, parallel to the coast among sand-hills for 5—6 leagues. This appears to be the most spacious and best harbour which Annam possesses; but there is no inducement either for foreigners or natives to visit it. The inhabitants all around are poor fishermen, earning a precarious subsistence, and, moreover, exposed to the extortions of the mandarins.

North of Kamraigne bay are the Hon-noi and Hongnoai islets (water islands) in $12^{\circ} 2'$ and $12^{\circ} 4'$, with several rocks around. There is a large sandy plain, extending to the southern entrance of Nhia-trang bay, about 3 leagues in extent, and forming with a bluff point the Lam-toan bay. The former receives its name from the province in which it is situated. The inhabitants are exclusively Cochin-Chinese; the land is well inhabited and cultivated, and the whole bears a far more cheerful aspect than the southern regions. The bay itself is very small, and sheltered towards the E. by the Hontre island, but there is very good anchorage at Binkung. A few miles W. is the largest city in these regions, and the metropolis of the province, Binhua, a thriving place, with an industrious population. Another river, which is likewise connected with the Mekom, falls here into the sea. We find everywhere traces of the calculating principles of the mandarins in facilitating intercourse by opening canals. There are a number of reefs and islets, of which we mention *Pyramid* island, in lat. $12^{\circ} 21'$, with a cone on it, from which it received its name; and another, called Shala. The region here presents a romantic aspect—the trees are shady and tall, and some of the valleys offer charming views, heightened by the contrast of the barrenness of other spots in the bay of Hong-khoe, 5 leagues N. of Pyramid island. Between the main and the island Hodinh, which runs out in the Kay-sung promontory, there is a passage several leagues in breadth, showing on both sides elevated hills and a very woody country. Here also, at the city of Thienphat, a river falls into the sea. This district has scarcely ever been visited by foreigners. E. of this are the Doi-moi islands. We have thus reached the easternmost point of Annam, viz., Mui-nai (Varela promontory). Here we still remark that a very deep bay runs in from Hon-khoi N.E., which bears the name of Ongro: at the bottom a high mountain of a picturesque form may be seen many miles off. The peninsula, of which this is the cape, is narrow and sandy, possessing nothing of the pleas-

ing nature of the mainland. Muynai mountain itself is about 2000 feet high, and one of its peaks has the appearance of a broken column. Here, according to report, silver is found; and in the middle a hot fountain bubbles out of the ground. The peak can be seen at an immense distance from the sea, and constitutes an excellent landmark: its situation is in N. lat. $12^{\circ} 53'$, long. $109^{\circ} 24\frac{1}{2}'$ E. A perforated rock (Da-khoan) is 4—5 N. $\frac{1}{2}$ W. from it.

The harbour Daran has in its neighbourhood the Maenha and Baimalieng islands not far from the mainland, and receives the Dalang river. The coast is not much elevated, and runs for 6 g. m. nearly due north.

We have now come to the richest part of Cochin-China, Phu-yen-tran, a well-cultivated productive district, both remarkable for its fertility and its beauty. The principal place, Phu-yen, situated on a land-locked harbour in lat. $13^{\circ} 23'$, has three different anchorages for vessels, viz., the Chuen-dae, Vung-lam, and Vung-chao. The country is seen to the greatest advantage—industry and a large population uniting to give to the scenery the highest effect.

Kalao-xanh (Pule Combir) in lat. $13^{\circ} 33'$, 4—5 m. westward of Muynai, has a sloping appearance, but, unlike the main, it is barren, and forms with it Vung-koo-mang bay, an anchorage of considerable depth. We next arrive in Chogia harbour (Combir bay), a spot little known, as well as the islands that are scattered about in this direction, with a safe passage between the main. Numerous fishermen resort to them, and however small the islets may be, they constitute useful appendages to the mainland.

Nouk-man (*Quinhon* harbour) presents a very spacious anchorage; though very shallow, and not admitting ships of a deep draught, it is much visited by native vessels. This harbour is formed by a peninsula running down S.E. into Cape Sanho, lat. $13^{\circ} 44'$, long. $109^{\circ} 14'$; and the principal place, *Bindinh*, the capital of the district, is situated close to it. The coast is bold, strewed with islands, such as Tuk-tan-chan, Honkon, Honko, and others, which are of interest only to fishermen. The northernmost is Hon-lang (*Buffalo* island), in lat. $14^{\circ} 11'$. A river falls into the sea in Vung-nuok-ngot (at fresh-water point); and northward 3—4 leagues is *Turtle* island, near which good anchorage is found.

Before reaching the coast of Kwang-gnaitran, of which the Sahuinh estuary and Song cape constitute the boundary, we arrive at the mouth of the Tan-kwan river, in lat. $14^{\circ} 39'$, and the harbour Saphu: a little farther northward is a deep islet, called Cua-kun-bong. Wherever one lands one meets bustle

and activity, and desolate loneliness has entirely disappeared; the inhabitants have changed, by their energy, the sandy spots into fertile fields. Farther northward, near Tracau, another small river falls into the sea, the coast is less indented, and the hills exhibit traces of cultivation, until we reach the estuary of Quang-ngai, on which stands a city of the same name. Between this spot and the promontory Saky (Batangan), Culoa Re (Pulo Canton, in lat. $15^{\circ} 23'$, long. $109^{\circ} 6' E.$), there is a large, sterile island, through which three ridges of hills run the whole length, with here and there some stunted trees growing in sandy soil.

The Thong-binh and Lam-cham capes are bold, and on having doubled them, we enter the haven of Vang-guit-quit (Aphoa) on the southern boundary of Quang-nam district, close to the foot of lofty mountains.

The coast hence extends N.W. b. N. 15 leagues, to Turan (Cua-han) bay. On the northern side of Aphoa a river falls into the sea, and the country around is either artificially or naturally watered. Various small islands, such as Hon-banthan and Hon-nan, lie scattered hereabout: Cu-laou-cham is in lat. $15^{\circ} 54'$, a very high island, about 3 leagues from the main, bold and barren, with huge masses of rock piled upon it. The coast is steep; grey granite, granulated, and embedding quartz and mica, are the prominent features of the formation.

Faifo, the largest emporium for the Chinese, and formerly for the Japan trade on this coast, is situated on an estuary, into which a river empties itself, and joined to Turan by a salt-water creek which runs parallel to the coast. It has a very extensive commerce, and is a flourishing emporium. A little farther up we find Quan-nan-dinh, the principal place of this region; it is at the bottom of the inlet, into which the Dai-cham river flows.

No place along this whole coast is so well known as *Turan Bay*: the eastern extremity of the island (Hon-san-sha), or peninsula which forms this harbour, is in lat. $15^{\circ} 5'$, long. $108^{\circ} 15' E.$, and Calao-cham in lat. $16^{\circ} 11'$. Approaching from the south, masses of marble rocks (dolomite)—grotesque in appearance, and at variance with the scenery around—appear as if they were insulated, because the sand around them is very low. There are three streams; the mouths of one river fall into this basin, which is surrounded by mountains on the main, like an amphitheatre, and only the south side in the direction of Faifo presents level ground. It is about 8 miles in breadth, but the landlocked anchorage is of a very moderate extent, at the N.E. and the S. angles. Even in fine weather a heavy swell breaks on the shore, which renders land-

ing dangerous. The neighbourhood of the capital, and the promise of Gialong, the former King of Annam, to cede the country around to the French if they afforded him the requisite assistance in suppressing the rebel Tysons, have rendered this bay famous to European navigators.

The island Hon-hanh is N.W. of Turan; and not far from it the harbour of Vungdam, which is about 5 miles across. The surf which breaks here on the rocks is quite terrible, and the anchorage during the N.E. monsoon dangerous.

On approaching the coast of Kwangduk, on which the capital is situated, we first espy the cape of Choumay, in lat. $16^{\circ} 21'$ N.W. b. W., 9 leagues from Turan, near to which are Moi, wherein a river flows, and Tudong, two small harbours.

The bay (Cua-thuan-an) into which the Hué river falls, is similarly protected by an island, as the Turan harbour, but very little known to our navigators; and the entrance of the small river is in lat. $16^{\circ} 35'$. At a distance of a few miles the capital is built on its banks. Over the bar there are about 12 feet of water at spring-tides, so that only vessels of a small draught can cross it. Here also is a heavy surf; and it is most difficult to leave the river during the N.E. monsoon. The entrance is well fortified, with European art, and it would be next to impossible to force the bar, if skilful and brave gunners served the cannon.

The part of the coast we have now traversed has been most carefully surveyed; beyond this our accounts are very scanty, and the gulf of Tunkin remains still, for the greater part, a mare incognitum. This is the more extraordinary, because the seas around have been so minutely examined, and the Annam government itself has neither spared expense nor labour to construct proper charts of them. This neglect arose no doubt from the wish to bury Tunkin in oblivion, and to screen it against the prying curiosity of Europeans. The little information we have been able to glean we shall state in a few words.

On arriving at the coast of Quang-tri-tran we perceive *Honco* (Tiger island), in $16^{\circ} 55'$. S.W. of this is Viet harbour, with the principal city of this region near it, and due W. from Honco, the Tung harbour. The coast is low and sandy, stretching N.W. The last maritime city in Cochin-China is *Kwan-binh*, on a deep islet of the sea (Cua-dong-hor), a flourishing place. On the other side of the wall that separates Tunkin, parallel to it, is a river that falls there into the sea. Andau, with a number of other small isles, lie a little further on, close in shore, which presents not the least variety, but is a continued flat, intersected by numerous streams that run through the

whole of the island. The first anchorage we meet with is called Gianh. The coast trends from hence N.W. b. N. for 10 leagues, and is scarcely visible to a vessel close in shore. In lat. $18^{\circ} 14'$ we find the large island Sorel, with Hongnu, and a number of others, near the coast of Nghéan-tran, which we believe to be alluvial deposits, at the mouths of several rivers that fall here into the sea. There is no doubt good anchorage between them, though it has never been ascertained by observation and research.

Sonthai-tran has several small harbours, such as Cua-thai and Han-hon, which are commodious for fishermen. The coast runs here nearly N. to the island of Tin Cay, an extensive well-inhabited spot, in lat. $18^{\circ} 18'$, and the well-sheltered bay it forms has two arms of a river falling into it. We mention the names of the harbours that follow each other in succession, though none of them is of any importance: such are Cua Bang, Bich Hon-ne, and Trieu, the latter the northernmost. No large city exists, and the region appears to be the property of fishermen and rice cultivators; whilst the merchant does not possess an inch of ground. *Cua-lac* is a spacious harbour, sheltered against all except southerly winds, and the abode of a few merchants. The large Thanphu river falls into this bay.

Nam-dinh-tran is the Sunderbund of this part of the world. The harbours formed by the various embouchures of the river, distant from one another only a few miles, commencing S., are the following:—Cua Thuoe, Xien, Bien, Lan, Traly, Ho, Dai-binh, the latter at the S. entrance to the Song-ca, Cua-uc (the northern, in $20^{\circ} 50'$); the nearest place to this is Domea, celebrated as a trading station in times of yore. For the southern, which is visited by Chinese junks, Fisher Island serves as a landmark. There are shoals and reefs hereabout in great number, which render the navigation very dangerous. Add to this the typhoons, which blow here with overwhelming force, and it is by no means surprising that so little commerce exists with a country which, in other respects, would invite by its industry foreign traders. The water over the bar of the southern branch of the river varies according to the freshes; and where one finds 12 feet at one time, one has at another 18—20. The navigation is very precarious, and exposed to great risks and danger, as long as no survey is made.

Now, little remains to remark. The two bays of Ke-keu and Ke-to, on the N. coast of the country, receive both rivers, and afford good anchorage. The latter is the most spacious of those of the whole empire, and has at least eighteen large islands in it, which are inhabited; but we have no further information as to their products.

The archipelago on the east coast is disputed ground between the Chinese and Annamese, and vagabonds of both nations find here a place of refuge. Both governments have from time to time sent squadrons of war-boats to destroy the settlements; but the impunity enjoyed here is too great, so a large number of lawless fellows is attracted and rendered sufficiently daring to resist the authorities. Amongst some islets pearl oysters are found, and many boats proceed thither in the fine seasons to dive for them.

Climate.—Kambodia enjoys a delightful temperature, although the weather throughout the rainy season (May—September) is often very sultry: the dry monsoon during the remaining part of the year is clear and the heat very moderate, seldom exceeding 90°, and ordinarily being only about 80°. Cochin-China presents the very reverse of the seasons to Tunkin and Kambodia, on account of the ridge of mountains which breaks the clouds. From October up to January the weather is very boisterous, and typhoons are by no means uncommon—where in the former the wet season reigns, the latter is dry, and *vice versâ*. The thermometer never rises there above 103°, nor sinks below 53°, and the climate throughout is healthy and agreeable. Tunkin in this respect resembles Bengal, but participates likewise in the oppressive heat and very disagreeable cold of China. Those who have never witnessed the *typhoons*, which sweep this country from one extremity to the other, will look upon a faithful description of this fearful visitation as overdrawn. Though earthquakes and the eruption of volcanoes may be far more terrific, still if one wishes to form an idea of the last moment when heaven and earth shall pass away, he may take the initiation of a *typhoon*. It is as if everything were devoted to destruction, and the world were again to return to a chaos. No words can convey an idea of such an awful moment, and the violence of the tempest in which man is scarcely an atom. Such is the scourge with which Tunkin is frequently visited, and in which northern Cochin-China occasionally participates.

Productions.—In this we merely point out what the country brings forth in greater perfection than other parts of the world. Loureiro, a Roman Catholic missionary, examined accurately in the last century the botany of Cochin-China,* and attached native names to all the plants. Several French naturalists have after him prosecuted the same researches, so that everything in this branch is well known.

The richest vegetation is found in Kambodia, which pos-

* Vide *Loureiro*, J. de, 'Flora Cochinchinensis,'—Ulyssiponis, 1790, 2 vols. 4to.—*Ed.*

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sesses the same soil and climate as Siam, and has similar productions. The *teak*-tree is still found along the western shore, and felled by the Hainamese to build junks. Both ebony and red dye-wood are met with in the northern parts; little, however, is exported, on account of the difficulty of transport and the small demand in the harbours. The *Nauclea orientalis* (Go), a hard, black, and heavy timber, admitting the finest polish, is extensively used for furniture. Another sort is the *choo*, which serves similar purposes. The great riches of the northern forests have never yet been rendered available, but a future government will some day understand how to draw advantages from them. Kambodia produces the largest quantity and best quality of *betel*-nuts of any country in Asia, of *three* different descriptions, the red, white, and small, and exports them in vast abundance. The *Areca Palm* is too well known to need here any description; but we may observe that it grows without much culture in extensive gardens. It is remarkable that neither the *mangoosteen* nor *durian* thrive here: the utmost eastern limit of their cultivation appears to be Siam, beyond this they are very seldom found. *Gamboge*, however, with a variety of sweet-smelling resins, are peculiar to this country. The former exudes from incisions being made in the stem of the *Garcinia cambogia*, a very high tree, the fruit of which is eatable. Equally valued in trade is *sticklac*, a substance used in dyeing *red*: it is the produce of an insect, and of very fine quality. The cardamoms of Kambodia are highly prized throughout China, as well as the aniseed (*Pimpinella anisum*). Other articles of the vegetable kingdom are likewise found here; amongst them pepper, which is grown in the west, but not paying the cultivator, it is therefore at present neglected. The mulberry-tree is in some regions extensively cultivated to furnish food for the silkworm. The natives understand the treatment of these insects, and their produce is sufficient for home consumption; the silk goods have even obtained a name in the trade of the interior of the peninsula. As the insects must die before the silk can be obtained, many of the strict Buddhists abstain, out of religious motives, from the rearing of them, in order to preserve animal life.

Tsiampa has one production which is valued all over Asia—the *eagle-wood*, or *alambuc* or *aloes* (*aloexylum agallochum*), on account of its pungent fragrancy and constant use in burning incense to the idols. There are at least *three* different kinds, yet not well known to botanists: the tree, when old, is throughout its lower parts and roots furnished with an aromatic oil, and hence the agreeable odour of the wood when burnt. It is generally reduced to powder, and then, being

mixed with gum, is smeared on small sticks, of which an immense quantity is used in China in the worship of the gods. As this article keeps up a steady price and is always in demand, it is considered a valuable monopoly, though the best pieces are never sold, but given as presents to princes and grandees.

The *cinnamon* (*Laurus cinnamomum*) of *Cochin-China* has always been celebrated in China, and especially in the south, where the *cassia*, a cheap and excellent substitute, grows in abundance. The sons of Han do the same with respect to this substance as with *camphor*. This they possess in the highest perfection, but they still buy another kind from Sumatra and Borneo for ten times the price: the tree grows in the light sandy soil northward of the city of *Faifo*, and even in the *Moi* country. It seems to be decidedly larger than that found in Ceylon. Ten varieties are known in the market, which differ much in price; the bark of some is thick, of others very thin, but it is never freed of the epidermis in trade: the price fluctuates between 30-1200 dollars per pecul, according to the quality, in the valuation of which the *Cochin-Chinese* doctors excel. The latter will by the mere touch ascertain the value of the nostrum amongst their medicines. They ascribe immense virtue to it in certain diseases, and as a token of the highest esteem make presents of it. The writer having once rendered some service to the *Annam* government, was rewarded by a piece of *cinnamon*, to which the donor affixed an incalculable value. If the king wishes to be very gracious, it is in this manner he shows his condescension, and the principal article of tribute to *Peking* is this bark. *Annam*, moreover, produces excellent *cotton* on the sea-coast (the most adapted to the growth of it) both for home consumption and also for exportation. A coarse *sugar* is grown both in *Kambodia* as well as *Annam*: it is chiefly used in home consumption. A species of *tea*-plant thrives in all the northern parts very luxuriantly: its leaves are coarse, and so the poorer classes only use it. The *Tunkinese* understand how to apply the valuable products of their country much better than the *Kambodians*. The *varnish-tree* produces a substance superior to the *Japanese*, and furnishes a large supply, not only for home manufacture, but also for exportation, of great beauty and durability. The *chao kwo*, a sort of *cardamoms*, with a variety of other drugs, likewise occurs here: so also the *chuleang* (*Dioscorea alata*), a kind of *yam*, which growing wild contains a brown dye, and is for that purpose very generally bought by the *Chinese*.

The general food of the people is, as in all southern Asia, *rice*. Of this *Kambodia* is the storehouse, which moreover

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has a great deal for exportation. *Tunkin*, though producing much more, has, on account of its dense population, less to spare.

We may remark, in conclusion, that the *sweet potato* is the common food of the poorest classes, mixed with a little *rice*. Another article for the consumption of the great mass is the *earth-nut* (*arachis hypogæa*), which grows in a sandy unproductive soil with little care, and is eaten fresh, roasted, or salted, whilst the oil it furnishes is mixed with their dishes as well as burnt in their lamps. The farinaceous root of the *nebulum* (*arrow-root*) is likewise generally consumed: the inhabitants of the more favoured districts use *rice* exclusively, but where this does not thrive, *maize* is partly substituted. There is a great want of pot-herbs and vegetables, and little variety is observed, because the inhabitants never introduce any from foreign parts. The vegetable kingdom of *Annam* more resembles that of southern China, with its rocky mountains and scanty vegetation; but it entirely differs from that of the tropics. *Kambodia*, on the contrary, exhibits the luxurious growth of Java and Sumatra, and in many respects the same botanical features.

In *Kambodia* the *buffalo* lives amongst mud and ditches, and is a very powerful animal: farther north its fierceness much decreases. The *bullock* is of a very small breed; the *horses*, except in Laos, are also diminutive. In the latter country they have spirited ponies, well adapted to warfare and other purposes. There, as well as in *Kambodia*, the *elephant* is domesticated, and used by the Annamese in war, though with no effect. This enormous creature inhabits the immense wastes in large herds, and is very easily tamed. The Cochin-Chinese do not absurdly venerate the white ones, which are worshipped by the Siamese and Birman: not so the *Kambodians*. In the north of the latter country and in Laos the *rhinoceros* (of which several species exist) is found wilder and higher than in any other part of Asia. The number of *horns* that are annually exported, and to which a superior medical quality is ascribed and a higher price demanded, would lead us to suppose that this animal must be common. The *tiger* is not inferior to his congener in Bengal, and the *leopard* likewise occurs. The *monkeys* of *Annam* are fine creatures, and seen in the forests in multitudes, but the wildest and strongest species are natives of *Kambodia*: the *pig*, as in China, is here the principal domestic animal. All that comes from the *cow* is held in abhorrence, and the antipathy which the Chinese also show to it seems to be more natural than religious. Little attention is paid to the *breed* of this useful animal: *sheep* are small, and only found in the south, whilst *goats* are frequently seen browsing in the mountains. In all parts our *barn-door fowl*

thrives, and the *pheasant* has spread over the whole country: *ducks* are in the marshy districts reared with great advantage; *geese* are few and not indigenous; both the latter, in a wild state, visit the country in immense flocks in winter. The poverty of the inhabitants prevents their rearing a great quantity of domestic animals—meat, moreover, is not a usual portion of their food. The coasts, as well as the rivers, are rich in *fishes* remarkable for their splendid colours: the *Annamese* are first-rate fishermen, but the *Tunkinese* surpass them. There is no art which is carried to so great a perfection as *fishing*, nor on which, comparatively, so large a number of persons is employed: they proceed to the capture with nets, hooks, harpoons, wicker-baskets, bamboos, in all kinds of vessels, and adapt their contrivances to the fishing-ground. By far the larger part of the population subsists on *fish* and *rice*; hence the enormous demand. Government has, however, so managed its taxes that the hardworking fishermen scarcely earn a subsistence.

Of the *alligators* we have already spoken; it seems to be the largest kind that is found on the coast. The *shark* is caught and eaten; so also is the *Boa Constrictor*, of which the writer was an eye-witness, for the *Annamese* are gross feeders, and their stomach refuses nothing but *beef*; dogs, rats, and several species of *lizards* are even eaten. The *Tunkinese* excel in rearing the *silkworm*, though the silk is far inferior to the Chinese in staple and gloss, on account of the bad management of the skein; still, formerly, it fetched a very fair price in the markets of Japan and Europe.

The *Geological formation* of *Cochin-China* is *primitive*; the mountains are composed of *granite* and *syenite*. A small quantity of *limestone* here and there occurs; whilst several hills consist of *quartz*. Of the *white marble* with *blue streaks*, near *Tinan*, we have before spoken. *Tunkin*, however, possesses this rock in higher perfection and beauty; great masses of it are found near *Chutham*, with extensive subterraneous caverns, some filled with water, and communicating with each other, so that boats can traverse them. *Tunkin* is the only part of the empire which affords the precious metal.

The richest *gold mines* are in the direction of *Yunnan*, on the same ridge of hills as those of *Makoo* and *Mauso*, which are worked under the influence of the Chinese government. The prevailing population here consists of *Laos*, but there are also a few *Tunkinese*. *Gold* is found amongst sterile and almost inaccessible mountains, but in large quantities, so as to remunerate the labour. Were the Government not too rapacious and ignorant, the amount of it might be increased ten times. At the present day the *Laos* export the greater part to *China*

clandestinely, to avoid the heavy tax. The silver-mines near Shih-la and Nunganchow (both Chinese frontier towns, the latter in lat. $24^{\circ} 58'$, long. $101^{\circ} 41'$), as well as those in the neighbourhood of Malung, are very rich, and are worked with much spirit. We are not able to give the details of the mining carried on there, but more than one hundred thousand labourers are daily employed in the bowels of the earth. The mountaineer Laos also engage here most extensively in these pursuits; and being very hardy, no better men could possibly be found for this purpose. The region itself is very barren and devoid of interest. The annual quantity of bullion derived by Government from these works is not much below one million of taels. Of the *iron-works*, which are likewise met with here, we could not collect any information; the produce, however, is scarcely sufficient to supply the native smiths. Cochin-China, as well as Kambodia, are nearly destitute of all metals, and if any exist there, they have not yet been brought to light.

History.—The history of Kambodia of which native records exist, commences with the introduction of Buddhism about two centuries after our era, though the date is erroneously placed much anterior. Before this, the inhabitants seem to have led a roving life, like some Laos tribes of the present day, and not united in forming a state. The propagation of this superstition took place previous to its acceptance in Siam, and the Kambodians glory in having given civilization to that country. At a very early period they invented a beautiful alphabet in imitation of the Pali, and composed many books. Amongst these there are historical legends, mere transcripts of those received from India, repeating the same stories of giants and hobgoblins, genii and spirits, which disfigure those Eastern tales. The commencement of their annals is founded upon these absurdities; and celestial beings, as in Japan, are said to have first obtained the sway over their country.

The invasion of the *Chinese* during the time of the Han dynasty was also felt here, and many adventurers of that army reached this remote spot. Both the language, which received several technical words from the Chinese, as well as the government and manners, were most essentially affected by this event; yet, long before a soldier had reached this country, the Chinese merchant had visited its coast. The great veneration we feel for the Tyrians, we may safely extend to the Chinese of remote antiquity, who were just as adventurous, and sailed along the shores of southern Asia, until they reached Ceylon, and even the gulf of Persia. In Kambodia they found productions much valued in their own country, and established

there a profitable market, as the rude inhabitants knew not how to prepare manufactures, with which their own country abounded; and they handsomely paid for the raw produce. We should wish to have some particulars of this early commercial intercourse, but though the Chinese annals are very bulky, they love to dwell on the most trivial actions of princes, and the fortunes of worthless favourites, considering national development and resources far below their notice. The history of the Kambodians themselves is too much taken up with the puerile acts of the king, and the capture of a white monkey or elephant, and consequently finds no place for indicating the state of commerce.

The name of this country (Chen-la) officially occurs in Chinese history for the first time in A.D. 618. Under the Tsin and Han dynasties the power of the Chinese was successfully exerted over all south-eastern Asia. Hence, the desire of the smaller states to pay tribute to the Great Emperor, and to avert, by this homage, the crushing influence of China's vast power. All the princes who did so, shared in the Imperial benevolence, and the tribute-bearers obtained exemption from all duties; so that they appeared at the capital as mercantile diplomatists, who often realized much money by their show of fealty. These voyages being profitable, became frequent, and even distant Sumatra and various other islands of the Archipelago sent envoys to prostrate themselves before the dragon's throne. Kambodia did so most particularly under the Tang dynasty, another race of powerful rulers, who for long ruled eastern Asia. It was at that time a very flourishing state, with a large capital, wherein all the riches of the country were squandered in order to make it a fairy-land, and confer on the king the appearance of a superhuman being. Ivory and gold were most profusely applied to walls, seats, and gates, to enhance the beauty of magnificent buildings, where the court gave audience. The royal residence was situated on one of the branches of the river, and contained above 20,000 houses; and there were 30 cities more, each having 1000. This proves that the country was then more thickly inhabited and in a more flourishing condition than even at present. It appears, however, to have been tributary to Tunkin, the more civilized neighbour, in the eighth century; and it was divided into *Low* and *High Kambodia*—a very natural partition. The connexion with China was continued. About this time occur several wars with the Siamese and Laos, too uninteresting to be related, in which the former, according to their own account, gained the advantage. Kambodia was at that time by far the most civilized portion of the southern peninsula. The natives had

acquired considerable skill in working metals, leaving, however, trade and navigation to foreigners. The kingdom reached in the twelfth century the highest state of civilization and wealth; so that its riches became quite a proverb. The capital had increased to a very great extent, being then the largest city in all these regions. "The walls," as the native historian says, "were built by *angels*, for no mortal could ever produce any thing similar." They still stand a monument of the skill and architecture of ages long passed away.

Such a country naturally attracted the attention of the Monguls, and *Kublai* entertained the intention of subjecting it, with the whole peninsula, to his sway. Death, however, prevented the execution of his design; and his successor, *Ching-tsung*, sent in 1295 an ambassador to feel his way. This grandee appears to have been fond of observation, and he carefully noted down what he saw and heard. He gives to the country the name of *Kamphuche*, which is analogous to the native term, and speaks of the royal residence, *Pontaipret*, its five double gates, immense numbers of idols, and vast display of gold. The king seems to have covered himself with gold, pearls, and diamonds, to astonish the Celestial ambassador. But this functionary speaks by no means highly of the natives, whose dark-brown tint, coarse manners, early marriages, and low condition disgusted him. He found many of the most fertile spots on the river entirely uncultivated, and overgrown with a thick jungle, frequently liable to inundation, so that even the trees were covered; the very state in which we see them up to this moment. The productions were the same at that time as they are now; but the country was then far more extensive, 90 districts belonging to it. It had proved victorious in its wars with Siam and Cochin-China, and spread its dominion over the Laos to the frontiers of Tunkin. The immigration of the Chinese appears at that time to have been considerable; in addition to merchants, many colonists possessed tracts of ground, and numerous vagabonds found there an asylum. Whether many returned home, we are not told. It is, indeed, remarkable, that the marriages entered into with native women by the Chinese in the first generation were fruitful, but they gradually became unprolific, and in the fifth generation barren. Of this the writer has seen many instances, but is not able to account for such degeneration between nations in other respects so similar both in their physical conformation and habits of life. Were it otherwise, the Chinese race would become the predominant one, and in a few centuries supersede the aborigines. Such has, however, not been the case, and the numberless immigrants, who con-

stantly pour into these countries, gradually disappear amongst a scattered population.

Siam about this time acknowledged the ascendancy of Kambodia, and became tributary. The country continued successful towards its neighbours even until the middle of the sixteenth century. The Ming dynasty cultivated friendship with this power, and sent rich presents by the Kambodian tribute-bearer, who had laid down the produce of his country before the imperial throne. All Chinese emigrants were henceforth to be furnished with passes by the home government, and none without them were allowed to settle in Kambodia. At a later period, this land owned the Cochin-Chinese sway, was unsuccessful against the Siamese, and reduced to its natural boundaries. It kept up some connexion with Manila, and received an embassy from the early Spanish settlers. The Portuguese found their way likewise to these regions, and traded uninterruptedly for several centuries, principally from Macao. The Dutch maintained for some time a factory at *Pontaipret*, and penetrated from hence into the Laos country; and also the English commenced a trade, which was but of short duration. The inhabitants did not improve by so much foreign intercourse. The kings were too fond of war, and had constant quarrels with the Siamese, which are most minutely detailed in their annals. The forced labour to which every male was doomed, if not for six months at least for four, greatly hindered industry and enterprise; also national wealth and prosperity being concentrated in the person of the king, sank with him, when any unforeseen calamity occurred. In 1750 the Annamese took permanent possession of all the territory round Saigon (Ghiadingh). The greatest misfortune, indeed, which could have befallen the country, was the death of king Ongtong in 1785. Throughout Cochin-China anarchy reigned at that time, and to preserve the heir of the throne, a mere child, he was sent with his brother to Bangkok, in charge of the king of Siam, whilst the son-in-law of the late sovereign became regent. In the meanwhile the Siamese tried with all their might to possess themselves of the country, over which their prince had assumed the guardianship. The presumptive heir did therefore not return, after having reached maturity. His cousin conceived it on that account expedient to assume the sceptre and proclaim himself sovereign in 1809. The Annamese espoused his cause, whilst the Siamese defended the legitimate successor. Both parties met near a ridge of mountains which form the boundary of Siam. The Siamese considered it by no means prudent to fight against an enemy drilled in the European manner and far superior in

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numbers, with the greater part of the country in his possession. The Annamese, on their part, thought it absurd to enter into a contest for what was really their own already, and thus the diplomatists of both realms deemed it wise to conclude a treaty, according to which each retained what he had conquered. The western province, Batabang, fell to the share of the Siamese, the remainder of the kingdom to Annam, and both established an iron rule over the natives. Whilst the Cochin-Chinese kept nominally the king on the throne, they seized upon all the branches of administration, treating the natives as inferior beings; and the court of Bangkok kept the two princes in honourable exile. The writer has often seen and conversed with them. The youngest possesses an intelligent mind, is fond of painting and mechanics; the eldest, who ought to have been king, speaks very little, and exhibits no great talent. The Siamese often tried to stir up rebellion, and expel the Annamese by means of these pledges, but have never succeeded; the latter always adopting a defensive line of policy and never becoming aggressive. Kambodia, in fact, remains an object of animosity between the two nations, and the Siamese invade it periodically, to kidnap the natives beyond the mountains, and make them slaves, or entice them to abandon their own government and settle in their territory. Kambodia is now virtually blotted from the map of Asia, and the inhabitants suffer from twofold slavery, being the slaves of slaves.

Tunkin.—The first Chinese settlers seem to have reached this country about 250 B.C., when the powerful Chehwangte rendered the Chinese arms formidable throughout eastern Asia. Of the gradual progress of their settlements, and of the aborigines who previously occupied the country, history records nothing; but the progress must have been rapid, for a century had scarcely elapsed when the celebrated Woote, of the Han dynasty, divided the country (called by him *Keaouche*, giving rise perhaps to the term *Cochin-China*, from a custom prevalent amongst the natives of putting their toes one on another) into three parts; the one embracing the present Tunkin, the other part of the coast and northern Cochin-China, and the third the southern districts to lat. 15°, incorporating the whole with the Chinese Empire.

About three centuries thus elapsed, during which the national resources were developed, and the people grew in wealth and civilization, the Chinese immigrants increasing tenfold. At the fall of the Han line of princes, and the subsequent anarchy in China, Tunkin seems to have had its own rulers, sharing in the same revolutions and great changes of that time, and be-

coming eventually subject to the kings of Yunnan. This part of the history is, however, very uncertain, and the annals are confused. Some connexion with China was again commenced during the vigorous administration of the Tang princes; when they became extinct Tunkin chose its own king (in 907) in Ting, a usurper. To pacify the Chinese court for his daring, he acknowledged himself a humble vassal, and received the title of *Keun-wang* (a king of the second degree). One of his successors, seeing the Sung emperors fully employed on the northern frontiers against the Tartars, invaded Kwang-se in 1075, and laid waste the Chinese territory with fire and sword. A general of the latter revenged this insult, and penetrated to the *Sung-ka* (Füh-leang in the annals), spreading devastation everywhere. Both parties, therefore, deemed it most advantageous to conclude peace, and Lekeëtso was confirmed king of *Annam* (in Chinese *Gannan*, the pacified south). In these wars, of which several Chinese writers have preserved interesting accounts, young females, not unlike the Maid of Orleans, distinguished themselves by their heroic conduct, and were, consequently, considered by the Chinese as sorceresses.

The *Monguls*, an otherwise very barbarous tribe, seem to have cultivated geography, on purpose to extend their conquests. Scarcely had Kublai ascended the throne of China (1279), when, on hearing of the fertile regions of the south, he resolved to conquer them. To facilitate this enterprise, ambassadors had first to gain information and to pave the way. He himself had previously made a campaign into Yunnan, and thence attacked Birmah. His companions in arms could well endure the cold and fatigues of a Russian winter, but were unable to resist the effects of a tropical heat; scarcely a hundredth part returned to tell the tale of the enervating effects of the climate upon their frames. In nowise daunted by ill success, a new army, easily procured in the extensive steppes of central Asia, poured forth, and took possession of the capital of Tunkin. Their objects at this time appeared only plunder and destruction; and after having obliterated the industry of ages, and slaughtered with unexampled cruelty the inoffensive natives, they were forced to retrace their steps, on account of the epidemical diseases which thinned their ranks. Kublai seems then to have resolved upon the subjugation of the country by means of diplomacy. A distinguished and astute agent appeared at the court of the Tunkin king, laid an enormous tribute of gold, ivory, &c. on the country, stipulated the sending of distinguished doctors, mathematicians, and merchants to the Chinese capital—a circumstance which proves indirectly the flourishing and somewhat advanced state of the country—

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and appointed a permanent resident to take care of the interests of the conqueror. The poor king on hearing of these conditions died of fear. His son, Chinge-heuen, perceived that nothing could be gained by submission, and resolved to oppose the enemy. Whilst Kublai considered all southern Asia in his grasp, and his power secured by the above-mentioned treaty, he sent a well-appointed army to take possession of Cochin-China, and thence proceed further south along the coast. Chinge-heuen waited until they were enfeebled by a disastrous march through jungles and swamps, and then successfully attacked them from an ambush. They fled with consternation, and the whole army was nearly annihilated in piecemeal. Such a disgrace could only be wiped out with blood. The bravest troops assembled in Yun-nan to exterminate the resisting Tunkinese. Certain of victory, they neglected all precautions, and when issuing out of the mountain defiles, they were cut up in detail; and the rest of the army, approaching the plains of Tunkin, the cholera made dreadful havoc with it. The Tunkinese perceiving that the Monguls were not invincible, fell upon them with all their might. The few who found their way back, related their misfortunes to the Emperor, and irritated him to such a degree, that he instantly sent a more numerous host. These men fared worse, and the valour of the Tunkinese greatly increased every day. A third campaign convinced the unbending Kublai that his bounds of conquest were restricted by the climate; he was grateful for the humanity shown towards the Tartar prisoners; and, on these being sent back, he granted peace under the promise of a small annual tribute and nominal subjection.

The Tunkinese national spirit was by this effectual resistance greatly raised; the most powerful kingdoms had submitted to the unconquerable Tartar invaders, and this insignificant state successfully repelled their encroachments. The independence of the country therefore lasted till the reign of *Yung-lo* of the Ming dynasty (1403-1424). Then, indeed, a civil war arose; the meritorious Chin, in whose hands the administration had for a long time flourished, was dethroned by an usurper. *Yung-lo* was requested to restore the rightful heir; a numerous Chinese army thereupon invaded the country, and was gladly received by the adherents of the old reign. The rebel was defeated and slain, but the nation had to pay dearly for assistance. Under the plea that none of the rightful princes could be found, *Yung-lo* changed the whole country into a Chinese province, under the rule of a Governor. In many respects this proved advantageous to the people, who were thereby brought into closer contact with Chinese civilization, and its systematical

government. The result of a census gave 3,120,000 families, which, allowing five persons for each, give a population of 15,600,000, a number too large, unless Cochin-China and the adjacent Laos were included. From that time the construction of a map, on the principles and plan of Mongul surveyors also dates, with many other useful institutions; and the Tunkinese youths visited Peking to improve their manners and learning.

The people, however, could not brook foreign dominion, and the rule of Chinese mandarins did not conciliate the affections of the subjugated. Le, a bold partisan, roused the patriotism of his countrymen, and supported by the Laos and Cochin-Chinese, who dreaded a similar yoke, he overthrew, after a long struggle, the Chinese government. His measures were so effective, that no effort was subsequently made to hurl him from the throne. His son and successor, *Le-haou*, tried his ambitious spirit in an attack upon the peaceful Laos. Their king was defeated, the capital ravaged, and the country rendered a desert. This predatory excursion was indeed repulsed by a prince whose family had been sufferers, and *Le-haou* returned to maintain his ascendancy over Cochin-China, which the Chinese attacked. On this occasion a large fleet from Malacca, in the heydays of Malayan influence, came to the assistance of the former, and forced the sons of Han from the shores of Annam.

We know nothing of the foreign intercourse during this time, but the very fact that a fleet of Malay prows, sufficient in number to cope with the Imperial navy, lay in the harbours, proves some connexion with the Archipelago. There was no doubt all along a regular trade to the straits, but the Tunkinese do not appear to have themselves gone to sea; leaving this to the more enterprising nations of Asia, they were satisfied to sell their goods to their countrymen, in which their women took an active part.

The Portuguese — the pioneers of Eastern navigation — reached this country at a very early period. They established a factory at the capital, and endeavoured to influence the government; but they never gained any territorial acquisition. In 1550 new troubles arose, and violent parties divided the country. *Kea-tsing* reigned then over China; he was by no means slow to avail himself of this favourable opportunity to render Tunkin tributary to his sway. Though the Chinese were successful in the commencement, the inhabitants bore too great a hatred against them, and very soon expelled the invaders.

An enterprising Minister guided at that time the helm of state; his merits were great, and he therefore received the title of lord (*Chua*), which became with the office hereditary in

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his family, whilst the king was called Vua (*Dova Bova*). The former, uniting intrigue with real power, kept for many generations the *Vua* in thralldom; and the actual ruler retained the mere shadow of his power. As the country remained tranquil, the nation increased in riches, and the Dutch found it advantageous to establish a factory near the capital. At this time falls the flourishing trade with Japan, then the most enterprising maritime nation in all Asia; and the frequent intercourse with Macao by means of the numerous ships of the Portuguese is arrested.

We have now reached the period when the Vua recovered his legitimate authority (1748), and for ever expelled the domineering major domo. The Tunkin government as much as possible discouraged, from motives of a paltry policy, all intercourse with foreigners. It was impossible to drive them away by main force, but easy to destroy their trade by heavy duties and burthens. In this their mandarins fully succeeded; and since the middle of last century not a single foreign ship has entered. The trade had never been very profitable; but as long as China refused commercial dealings on a large scale, Tunkin offered raw silk on advantageous terms for the Japan market. That advantage was finally merged by opening Canton; and none complained of the lost intercourse with Tunkin. The few Chinese junks which continued to visit the river were rendered harmless by fiscal regulations, and the nation turned its whole attention to internal broils. The history of this country becomes henceforth blended with that of *Annam*, and we must therefore retrace our steps to relate the events that took place in that country.

Cochin-China, comprising only a narrow strip of land along the sea-coast, could never become a powerful state if it did not take advantage of its maritime position. Here civilization was subsequent to that of Tunkin, and partly commenced by the sword, during the time of the *Han* dynasty. *Mayuen*, the celebrated conqueror of the South, not satisfied with having planted those brass pillars which were for ever to form the boundary, marched in the full career of victory farther south. There he met with thick forests, and almost insurmountable obstacles. Not regarding these, he caused the axe and fire to smooth the way, and all the country to lat. 15° was thus rendered tributary to China. Its manners, literature, principles, government, &c., were thus faithfully grafted on *Annam*. So distant a possession, being frequently under the influence of grasping mandarins, did not long remain loyal; for in A.D. 263, *Kooleên*, a daring chief, declared his country free. The *Han* had ceased to reign, and China was just then in a state of anarchy.

We may therefore consider *Kooleën* as the founder of the kingdom. After him rose a number of petty chiefs, mere vassals of China, who regularly paid their tribute. Thus they might have remained undisturbed from the north, if China had not produced an Emperor in many respects resembling Louis XIV. of France, in *Yangte*, of the Suy race, A.D. 605—617. He was fond of splendour, luxury, and martial glory, and soon exhausted his treasury, which, notwithstanding the use of every expedient, could not be replenished. Now he had heard of golden mountains in the south, of India's treasures, and forthwith resolved to possess himself of them. The Chinese intruders reached the country, stripped the ancestral temples of the little gold they contained, destroyed the capital, and returned disappointed with their booty. The country, which had hitherto bore the name of *Liné*, was henceforth called, from its new capital, *Chenching*. From this time until 1166 we know little of the events which occurred; a very intelligent sovereign then ascended the throne, and his first endeavour was to open a commercial intercourse with *Haenan*. His merchants finding there very little favour, were expelled from the harbours under the ignominious accusation of having been pirates. No doubt can therefore exist but the *Annamese* were then engaged in navigation, and very probably brought from the south the productions so much desired in China. They had access to the harbours on the main, for allusion is made to their ships periodically visiting the port of Amoy. The king thus frustrated in his benevolent intentions, all at once endeavoured to obtain glory by war, and for that purpose attacked Kambodia by water and land. A very disastrous struggle ensued, in which the Cochin-Chinese, after heavy losses, proved ultimately the victors.

The accession of *Kublai* to the Chinese throne was greeted by the Annam king with assurances of entire submission. The Khan understood the compliment literally, and forthwith dispatched a grandee with a very strong guard to maintain his authority. The officer arrived by sea, and endeavoured to exterminate the last adherents of the Sung princes. These being everywhere hunted down, sought finally refuge in these remote regions. The retinue of the officer was too small to realize all the expectations of his sovereign, and he preferred leaving a country to becoming an object of public violence. The Mongul army about to invade Cochin-China by land was defeated by the Tunkinese. *Kublai* therefore fitted out a splendid fleet, which reached its destination, and laid waste the capital. But the inhabitants, no wise daunted, fled to the mountains, and thence maintained a party warfare, which re-

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duced the Monguls in number, and rendered large reinforcements necessary. Kublai's death put an end to those enterprises, and the Cochin-Chinese gloried in their strength, of which they had for the first time made a trial.

The accession of the Ming dynasty was hailed with joy, and rich presents of odoriferous woods accompanied the tribute-bearer, the servant of a tyrannical king. He had a considerable navy, and professed to have taken twenty piratical junks, which no doubt were traders that had approached too near his ports.

The feuds with Tunkin had been of a long standing. Both countries preferred their complaints to China, and many a high mandarin enriched himself on being appointed umpire. Still the causes of jealousy were never removed, and a border war was from time to time waged with great ferocity between two nations so similar in every respect. The Tunkinese had in these struggles the advantage of numbers; the Cochin-Chinese, of daring. But the former being in possession of many resources, finally gained a complete victory (1471), and Cochin-China from that moment became tributary. The attention of the king was henceforth directed to internal improvements, and wars with the Kambodians. The strife of parties and the intrigues of the court form no edifying part of their history. Their name was scarcely known beyond the confines of their own territory. During short intervals their independence was asserted, and again lost.

In the middle of the last century *Voo-tsoi* (the name of his reign was Kaung-shung) sat on the throne. He was an effeminate prince, who, priding himself on the eastern part of Kambodia being permanently attached to his empire, indulged in all the debaucheries of an Eastern court, and appointed eunuchs as rulers. The imposts levied on the nation were very heavy, and the tyranny of the officers exceeded all bounds. The immediate consequences were general poverty and wretchedness, which led to subsequent resistance; and the people, driven to despair, joyfully rallied around three brothers, known under the name of *Ty-son* (western mountaineers) at Quinhon. What profession these men had at first is not known: but some record them to have been merchants and priests; others artisans and agriculturists: they followed perhaps more than one calling. Small was their band when they first became known as robbers, and were proclaimed outlaws. Despair, however, drove the boldest to their standards, and in a short time they ventured to face the royal army. The Tunkin king had in the meanwhile been called upon as liege-lord to settle matters, and appeared in full array on the frontiers.

Voo-tsoi by this time had already suffered a total defeat by the rebels, and lost his crown and life; his army dispersed, or enlisted under the Ty-sons, and only his consort escaped with his second son (the eldest being killed in battle), to regain at a more fortunate day the royal diadem. Nhak, the leading man of the trio, instantly resolved to push the victory; and routing the Tunkinese, took possession of the country. The king, driven to the greatest straits, applied to Keenlung, Emperor of China, a warlike monarch, who from his palace dictated orders and sent behests, and without ever entering upon a single campaign, had proved victorious in Turkestan and Sungaria. To increase the splendour of his reign, he took up the case of the defeated Tunkinese king in full earnest, probably with some desire of conquest, and dispatched a large army to the south. Chinese soldiers are excellent as an armed police, but in war worse than useless. It is said that 100,000 men—a number greatly overrated—marched into Tunkin, and falling into marshes and jungle, they were attacked by epidemic diseases, and then on all sides beaten by *Nhak*. Small was the number of those who escaped the slaughter. Up to this day the inhabitants glory in this feat of valour, though the victory was gained by a rebel, for their countrymen overcame the proud Chinese. The Great Emperor, at first so desirous to interfere, hesitated not a moment in acknowledging the victor as king, who forthwith took the name of *Lung-neang* for his reign, and considered himself the rightful possessor of the realm. An attempt upon Saigon proved equally successful; so that the new usurper believed himself permanently established in his dominions. The cruelty exercised by the army under his command in every excursion beggars all description.

The widow-queen in the meanwhile fled to the south. Her son, even as a boy, betraying precocious talent, took the most lively interest in all her proceedings. Meeting at Saigon several Portuguese and one French vessel, she engaged these in her cause, and attacked the Ty-sons in their stronghold at Quinhon (1781). Her foreign auxiliaries appear not to have been faithful in her behalf, and previous to having effected anything, they retired before a barbarian enemy. The young king now took refuge in the island *Phu-kok*, where a number of his faithful servants flocked around him. But apprehending an unexpected descent of the Ty-sons, he went to Siam, and serving there for several years in the army against the Birmans, performed many heroic actions. The assistance craved was not accorded; the King of Siam offended the Cochinese prince by disgraceful demands; and so this

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spirited adventurer left the court to seek again his fortune in the island of Phu-kok.

Gea-long—the name which his reign subsequently bore—was a man of a strong mind, well aware of the great superiority of Europeans, and the sincere admirer of their ascendancy. Amongst the missionaries was at that time Bishop Adran, a Frenchman (some say a Belgian), called Behaim Pigneaux, a man of a great mind in worldly matters, and sincerely desirous to assist the exiled family. To him *Gea-long* intrusted his son to proceed directly to France, and procure assistance there. Adran, quick in obeying these directions, concluded a most favourable treaty for his nation, involving the cession of the territory near Turan Bay, (with many other political advantages, which would have made the French masters of the country,) on condition that they should furnish an effective naval and land force for reconquering the lost kingdom for its sovereign. The Governor of Pondicherry, intrusted with part of the execution of the plan, was by no means zealous; the revolution intervened, and all the fruits obtained were confined to the enlistment of some adventurous French officers, who served the king with great fidelity.

Adran remained the guide of the prince for several years, and in joy or sufferings never left him. The first attempt being made on Saigon, the city was recaptured in a short time. The rebel who had obtained from the Chinese the recognition as Emperor died in 1792. His son was only 12 years old; and the uncles, who had done so much for establishing the kingdom, were anxious to seize themselves upon the government,—a circumstance which operated most advantageously for the plans of *Gea-long*. In the same year the latter met *Nhak's* fleet, and obtained a complete victory, reconquering *Quinhon*. In all the enterprises he showed himself the foremost, but nevertheless patiently listened to the advice of his foreign companions. His victories now constantly increased; in 1802 he overcame the third brother of the *Ty-sons*; and the heir of the crown being still young, *Tunkin* bowed likewise to his sway. To heal the wounds which a disastrous war and anarchy of 28 years' duration had inflicted upon the country was no easy matter. Few kings, however, had so great a minister as Adran, both in the camp and cabinet. The army and navy were organized by Europeans; the fortresses laid out according to the most scientific plans; the whole system of government modelled according to that of France; manufactures and plantations promoted, and other benefits created. *Gea-long* refused not only to acknowledge fealty to the Chinese throne, but even threatened the empire with an invasion. Feared

and revered by his people, he was the first great prince that reigned over Cochin-China.

Affairs would probably have taken quite a different course if the French Revolution had not intervened. This Gea-long fortunately escaped, and he annexed, as already related, in 1809, Kambodia to his country. On the pinnacle of glory, however, when he had lost his Mentor, he changed for the worse, and with undeviating rigour pursued the system of concentrating everything in the Government. The nation was to him nothing: he even went so far as to acknowledge that by impoverishing the people the State was most secure against rebellion. With all this civilization, such as no other Asiatic country could show, the people remained in absolute want, and industry was strangled in its very cradle.

The heir of the crown had embraced Romanism, and died; and Gea-long's successor was Mingh-mang (the name of the reign, *illustrious destiny*), in 1819. He never understood the institutions of his father, yet was by no means willing to break all at once with the French. To show his desire of maintaining the previous good understanding, he sent a number of presents and a florid letter to Lewis XVIII. Although he let the improvements continue, he wished to impress on his officers that he intended to revert to Chinese forms, and entirely to tread in the steps of his ancestors. For this purpose he proceeded to the northern frontiers, to undergo the humiliating ceremony of receiving the investiture of his kingdom from a Chinese mandarin in the name of the Emperor, and sent from time to time tribute-bearers to the capital. When the French, in his father's time, dispatched an envoy to insist upon the performance of the treaty concluded through Adran, he most politely refused such a request, would not even see the negotiator, and thus dropped the matter altogether. Mingh-mang went farther, and dismissed one officer after the other, belonging to that nation. The French trade was gradually likewise very much reduced by most obnoxious measures, and French influence a few years after his accession finally ceased. The presence of the British envoy *Crawford*, in 1823, to whom we owe the best description of the country, effected no change. The most liberal promises of trade were never realized; a ship, which wanted to buy a cargo of sugar, could not procure a single pecul; and some Americans who made a similar attempt fared worse, and had to suffer many extortions. The king, on the contrary, did everything in his power to monopolize the principal articles; his men-of-war, either built entirely on a European model, or half-junk and half-ship, were turned into traders, and visited as such

periodically Singapore, Canton, and even Calcutta. The naval mandarins became merchants, and Mingh-mang, whilst reaping gain from these voyages (for sugar and other articles cost him nothing, being produced by forced labour), realized much money. Amongst the orders sent were steamboats and some scientific works, which showed that the spirit of research and improvement was not yet entirely extinct, though languishing. The king had only one idea, which was egotism; and the most crying extortions were exercised to fill his coffers and satisfy his whims. Most serious rebellions therefore arose in various parts of the country, in Kambodia and Tunkin, which were put down with great cruelty; he did not, under such circumstances, consider it advisable to punish the Siamese, who most wantonly provoked a war. When the King of Birmah sent a messenger to suggest joint operations against the Siamese and the opening of intercourse through the Laos country, Mingh-mang refused both, and was glad to have done so, because the former power was soon engaged in a destructive war with England. Foreign trade being nearly annihilated, with the exception of the Chinese, the anti-national system, formerly upheld by Tunkin, was re-introduced.

Mingh-mang died in 1841, in the 21st year of his reign, and 50 years of age, and Thieu-tree succeeded him. This monarch has carried the desire of realizing the Chinese system to the fullest extent into effect; his installation, his humble submission to the Celestial dynasty, and his magnificent embassy to the court of Peking, sufficiently prove that he has reverted to ancient custom. The royal monopoly is in all its vigour; and some mandarins, who were sent to Canton to make purchases, not succeeding in accomplishing the wishes of their sovereign, have received most severe corporal punishment.

For a long while some coolness existed between the French and Cochin-Chinese; the former expected that the favourable change in foreign relations which had occurred in China would produce something similar in Annam. They at least insisted upon the free exercise of Romanism, which had hitherto been most cruelly persecuted. The answer was delayed, and two frigates sailed to Turan Bay in the spring of 1847, to obtain a decisive reply; this appears to have been refused, and some preparations were likewise made on the part of the Annamese to repel the foreigners. The French, however, did not wait for this, but, having received some intimation of a sinister design against them, they attacked the Cochin-Chinese war-vessels in the bay: one was sunk, another blown up, a third burnt, and two others which had hoisted a flag of truce were, after the

engagement, set on fire. The loss of the Annamese appears to have been above 1000 men. This is the first instance of hostility between this country and foreigners from the west; the attack on the British agent in Huë River during the disturbances in 1776 not deserving that name. The king, indignant at this untoward event, gave immediate orders for surrounding the anchorage with fortifications, and hundreds of labourers proceeded to the spot to carry on the work; yet the enterprise was not finished when Sir John Davis arrived in October, 1847, as British Envoy, to conclude a treaty of peace and commerce. His reception was cordial and hospitable, but the king refused to give an audience. Here we conclude the historical sketch of this country, and now turn our attention to the *inhabitants*.

The *Cochin-Chinese*, as well as the *Tunkinese*, are a race of small stature, with great agility of frame, not very dark, and forming in their features the link between the Malays and Chinese. The women excel in the symmetry of their form, fine eyes, and beautiful jet-black hair; the men in their muscular strength, so disproportionate to their diminutive frames. The dress of both sexes is becoming, and nearly alike: consisting of trowsers and a coat reaching to the ankles with women; with workmen only to the knees; but ceremonial costume is always long. Those who can afford it wear several dresses over each other, and it is a mark of distinction and wealth to do so; the uppermost is invariably of silk, black being the favourite colour, the underclothes are generally filthy and shabby. The men do not shave or cut the hair frequently, but tie it together in a knot, and wear a turban on the head of black and blue crape, the latter most frequently by the women, and in rainy weather sugar-loaf broad-brimmed hats. Those who lay a claim to gentility wear long sleeves and nails; most people go barefoot; the higher orders use slippers, fishermen and the lowest working classes are not unfrequently seen naked in hot weather, as in Japan. Ornaments, such as bracelets, &c., are sparingly worn by the women.

Their principal food is fish and rice; they are very gross feeders, their stomach refusing nothing—not even putrid meat or vermin. To all the produce of the cow they have a settled aversion; their meals are generally sparing, consisting of the cheapest condiments, with balachary and similar preparations to season the rice; at festivals they indulge in many dishes, the most delicious of which are hatched chickens in the egg, and are fond of presenting the meat on the table in the forms of animals. They are a nation that with little sustenance can bear great fatigue, and are fond of liquor of every description,

drunkenness not being considered a vice. Their dwellings much resemble the Chinese, but are inferior: a great part of the nation living in mud or bamboo huts, with straw roofs, low and uncomfortable; these remain in a state of filth, without either sweeping or cleaning.

The *Annamese* are a cheerful race of people. The author has lived amongst various tribes of Asiatics, but he has never found such friendly companions as they are: so free and unsophisticated, so ready to oblige, so open and kind; yet they are fickle and restless in their disposition, subject to sudden impulses, and not faithful to their promises. The higher classes, and especially the *mandarins*, imitate the Chinese in their grave behaviour, and with them mirth is a crime.

The females predominate in number; they do not live secluded, but carry on all crafts and professions, enter on commerce, plough the ground, and perform all the labour of the men, whose services belong to the king. A Cochin-Chinese wife is a helpmate indeed, and often maintains her husband. Marriages amongst the mass of the people are not entered upon before twenty years of age, amongst the higher classes earlier; the wife is a slave to her husband, and has scarcely any privileges. Though there are very severe laws against the breach of matrimonial fidelity, the *Annamese* are nevertheless in this respect very loose in their manners, and it is by no means a disgrace to a girl to have lost her virginity. It is an honour to have children, and in a country where they can be so easily fed families that have many consider themselves rich. All classes chew the *betel-nut*, and smoke incessantly; two bags that contain these necessaries of life, with the money, are thrown, tied on strings, over the shoulder, and denote a certain degree of respectability, only that they cannot be worn in the presence of higher personages.

The system of slavery which the Government has enforced on the nation has much debased the character. Every male belongs to the king, and must either enlist in the army or work one-third, if not one-half, of the year for the sovereign without pay; this produces a spirit of listless indifference in regard to property, and the heavy and inhuman punishments inflicted often for the most trivial faults, renders the heart callous and the character cringing. The nation is debased by a consistent system of tyranny, which incessantly grinds it down, and reduces the people to poverty and wretchedness.

The doctrines of Buddha are *pro formâ* professed by a very few; the mass does not care for supernatural worship, and is subject to the most abject superstition. The *Annamese* may be said to be far more irreligious than even the Chinese:

with few temples, still fewer priests, mendicants by profession, and differing little from the Bonzes of China; the mandarins naturally profess a deep veneration for the doctrines of Kung-foot-sze, and thus despise religion altogether as gross superstition. The veneration for the departed dead is general, and the temples containing their tablets are the most sacred spots of worship.

The *language* of Annam shows a great mass of monosyllabic words, originally used by the aborigines, on which the Chinese was grafted and so thoroughly amalgamated as to constitute one whole. There are sounds which are not met with in any of the numerous dialects of the Celestial Empire, and which the Chinese cannot even pronounce: such as ra, roi, rum, trang, krang, &c.; truong, *glory*; doam phuok, *fortune*; rauri, *anger*; &c. The language is by no means mellifluous, and is spoken with extraordinary rapidity by the natives. For many ideas there are Chinese and aboriginal words, as with us Latin and Saxon; the Chinese is more in use with the higher classes, who pride themselves on their learning in that tongue. For abstract subjects the Chinese alone stands, but all ordinary things in life have names originally derived from the language of the aborigines.

The language has no inflection whatsoever, for the genitive not even a particle: this is indicated by position merely,—*sach konnit*, the child's book. All grammatical niceties are conveyed by particles, in which the language abounds, and which constitute the skeleton of the whole. The construction is natural and simple: inversion producing a change of the sense, whilst the once-constituted order leaves not the least ambiguity; the tones being so full that they can be distinctly conveyed by our letters, although the intonation can never be expressed, the Annamese adopted from their teachers the Chinese characters to write their ideas. Not yet satisfied with 30,000 symbols, for the acquisition of which a whole life scarcely proves sufficient, they moreover framed from these materials many others of their own, unintelligible to the Chinese, and confounded the meanings with each other. Thus the written medium became more difficult than even in China, and the acmé of perfection was sought in being able to draw and explain the greatest possible number of ideological signs. How much this retards the acquisition of real knowledge, when so many years are necessary merely to learn to read, need not to be stated; and the nation, as a whole, can only then rise in the scale of nations when a syllabary or *alphabet* is adopted; the lower classes have been forced to use this expedient, employing a small number of characters as a syllabary to convey sound,

not meaning, and thus express their ideas according to the ear. The attempt, however, is exceedingly clumsy, and the people are not agreed in the various provinces; so that this written medium presents a real Babel, whilst the professional *literati* look down upon it with the utmost contempt.

Annam has no literature of its own: whatever it possesses is Chinese, with its small range of ideas and stereotyped thoughts. The Annamese possess all the agricultural skill of the Chinese, their industry and perseverance, but are impeded in following out their desires by incessant calls on the part of Government for their gratuitous labour. There remain every year more than 100,000 peculs of *rice* for exportation; the cultivation of the sugar-cane, as well as the preparation of *sugar*, has of late years much improved, because this commodity furnished the best article for the royal monopoly; the Chinese at present engage, as also in Kambodia, in planting it, and the sugar vies now in goodness of quality with what comes from Siam. We do not think that the present exportations are below 70,000 peculs, a great part of which finds its way to the northern ports of China, but sells below the Formosa sugar. Cotton is of the best quality; and if we assign 60,000 peculs for exportation, principally to Canton, we shall not be very wrong. There is much *raw-silk*, principally for home consumption, produced; the Tunkinese are the best silk-cultivators, but have not yet learnt to adapt their staple to the foreign market. We do not believe that the whole exportation exceeds 1500 peculs per annum; much of this is resold at Canton to Parsee merchants, for the consumption of India. Amongst the staple articles cinnamon ranks very high, being universally used throughout China as an excellent specific in medicine. Including the coarser kinds the whole exportation amounts perhaps annually to 4000 peculs. In the southern parts the *cocoa-nut* grows very luxuriantly, and hence large exportation of the oil takes place. *Cardamoms* are another article, of which China takes perhaps 1000 peculs per annum. Of *betel-nut* the junks take to the same country perhaps 30,000 peculs. The royal monopoly in *eagle-wood* is considerable, and an annual exportation of 300,000 dl. is not much under the mark; this must first be carefully pounded and prepared, and the quality is determined by the amount of *aromatic oil* it contains. The exportation of dye-woods is limited, owing to the want of enterprise on the part of the Kambodians.

Of *sticklac*, the product of an insect like the cochineal, and of gamboge, perhaps 50,000 dollars' worth are annually sold. Of the *Dioscorea alata*, spoken of before, the Tunkinese export at least 50,000 peculs. If the fisheries yield

100,000 dollars for exportation, after supplying the large consumption of the people at home, we may form some idea of this branch of industry. Annam and Kambodia export chiefly to China a larger quantity of ivory, elephants' hides and bones, as well as of rhinoceros' bones, than any other country.

The above is the raw produce prepared for the foreign market. The Annamese have not sufficient manufacturing skill to prepare any articles for foreign consumption; they weave their own cloth, which is homely enough, using also the stuffs of China, as well as, to a small extent, our woollens and calicoes, with the silks of the former country. Tunkin manufactures a kind of light summer cloth, which is so cheap that even the Chinese can export it thence at an advantageous rate. In all other articles for the convenience of life the Annamese are still children; the Tunkinese rank next to their masters the Chinese, and excel only in the preparation of lacquer-ware. There is a kind of durable silk stuff which the Kambodians prepare and also sell to the neighbouring nations. Whilst the mass of the nation still remains ignorant of manufacturing skill, the king has surrounded himself with the best artisans that can be procured. The men solely work as slaves for their master, often without the least remuneration; and hence it is very common that individuals who excel in their profession hide their superiority as much as possible, lest their art might be made tributary to the court.

Since the supreme government has monopolized all the branches of production and industry, the amount of trade on account of the king has very much increased, both to Canton as well as to Singapore: the establishment of this latter settlement has given great development to the Annam commerce in general, and the only manufacture of the south, viz., *salt*, has always found there a ready sale.

The principal foreign trade of Cochin-China is with the Chinese, the junks of whom repair to Saigon, Faifo, Hué, Kacho, and several of the minor harbours: the average number has been roughly rated at 300 small and large vessels, carrying from 150 to 6000 peculs. The general exports are those before mentioned; the imports are silk piece-goods of various descriptions, the coarser kinds of teas, and coarse china-ware, besides a great variety of Chinese manufacture, such as paper, cotton stuffs, &c., which are pretty generally consumed, whilst the junks from Singapore and other ports bring iron, opium, cotton manufactures, woollens, cutlery, &c.

The principal trade exists with the various emporiums of Haenan: the junks are very small that start from thence to Tunkin and Hué, as well as Faifo; they exchange home pro-

duce and export a great deal of rice: their number is never under 200, some of which make three voyages per annum, principally to Tunkin: the adjacent districts of Kwangtung likewise carry on a small coasting trade. The junks which have most valuable cargoes come from Canton both to Tunkin as well as to Cochin-China and Kambodia, but those of Teocheo (Chaouchoo) are more numerous, and their countrymen being the principal merchants, the trade is very profitable: there are a few from Amoy, and now and then a straggler from Shanghae. The Fokeën Chinese have, however, never been able to extend their trade materially: a number of vessels which load at Saigon annually visit Teëntsin, principally with *betel-nut*.

Of the internal trade to Kwangtung, Kwangse, and Yunnan, we know little, though mutual wants have created a considerable intercourse. In looking over the imports given in the Chinese custom-house book, we find a variety of provisions, such as rice, dried venison, stag-antlers, and especially salt-fish, drugs of various descriptions, incense, aromatic woods, betel-nut, the Chooleang, metals, and alum, verdigris, wax, varnish, timber, &c., which are imported from Tunkin, whilst China sends fans, caps, umbrellas, clothing, and a few piece-goods in exchange. Many of the goods thus obtained from Tunkin are again exported from Canton.

There is a little trade with the Laos in horses, elephants, ivory, rhinoceros'-horns, drugs, aromatics, silver and gold. Manufactures for clothing and domestic use are given in exchange by the Tunkinese, who realize often large profits with these simple people. The coasting trade with Siam in small miserable vessels, carried on by Kang Cao and Saigon, is very insignificant.

The internal trade is facilitated by canals and roads constructed, with an immense expense of human life, at the suggestion of the celebrated Adran. The oppressive measures of Government much hamper the native trader, for every vessel must take a quantity of public stores for nothing, and the extortions through a canal and sea-voyage are numerous.

Vessels trading to the Cochin-Chinese harbours pay a moderate measurement duty, which is lowest at Hué and highest at Saigon. Junks that come from Teochoo pay least of all, craft on imports nothing; on exports of luxuries 5 per cent., on timber, &c., 10 per cent. The state does not wish to profit by trade or to encourage it, being persuaded that it will prove ruinous in the end to the country.

Government casts cash in imitation of the Chinese, but of baser metal—*zink*, with the name of the reign on it, of which

600 pieces subdivided into decimals are put on a string called a *kwan*, which circulate at the rate of 5-6 times the actual value of the original cost. They are called dong (copper), and form the most objectionable monetary medium possible. The gold and silver pieces issued by Government are mostly of an oblong form, like Chinese ink: the largest piece of silver is named nen bak, and of gold nen vang, the gold one valuing 488 Company's rupees, the silver one 32, with 5 per cent. alloy. Gold pieces of one half the weight are more frequently met with; single ounces of gold (*dinh vang, golden nail*), and of silver (*dinh bak, silver nail*), as well as half and quarter ounces, are issued in far greater quantities than the above: all have the name of the reign during which they were cast upon them. Lately the king coined pieces in imitation of our dollar (*Tambak tran or Bakchien phe*), in weight 420 grains troy; but the adulteration of the metal is so great that the real value only amounts to 1-6 rupee. The relative value of the *silver* compared with the *zink* currency fluctuates very much—ordinarily two *kwan* are exchanged for one *Tambak tran*. The mass of the people is seldom in possession of silver and gold: there is only one rich man in the country, the *king*, and he takes a pleasure in hoarding bullion; the measures of length and capacity are nearly the same as in China.

We have hitherto only spoken of the *Annam* race, and it will now be necessary to remark briefly on the *other tribes* who inhabit the country.

The most numerous are the *Kambodians*, a race at present below the Siamese in point of civilization, with coarse features and dark complexion, and less of the Tartar countenance than any other *Indo-Chinese* nation. The men go half naked and the women also dress very sparingly, the higher orders only wearing sandals and the majority of the people going barefoot. They are moderate in their diet—a basin of rice and some salt-fish are all they desire for their daily food; they can even with this endure much fatigue and hard work. They are slavish in their veneration to their superiors, and willingly endure the most brutal treatment without murmuring. Laziness is a national defect, which is considerably increased by the Government robbing the people of the fruits of their labour. The *Kambodians* are patient in enduring cruelty, and always ready to sacrifice themselves for their mandarins: they have ancient laws, enforced with great strictness, and are trained from their youth to obedience. Polygamy is generally permitted, but only the nobility avail themselves of it, the concubine or second wife being indeed not far above the level of a slave. Pride and falsehood are not their besetting sins; a

Kambodian is rather rude than deceitful : they are much given to the worship of *Buddha*; their priesthood is numerous, embracing a great part of the adult males. The monasteries contain the little learning possessed by the nation, which consists in a trifling knowledge of the *Palee*, the language of their sacred books. Though their own literature is considerable, a priest considers it beneath him to know the works of his countrymen. The art of printing has never been introduced, and the books which now circulate are mostly written on palm-leaves, and are the productions of earlier ages. The language is harsh, more polysyllabic than any of the neighbouring ones, without inflexion, but comparatively rich : it contains many Siamese and Annamese words, yet differs materially from both tongues, having retained little of the system of intonation. The *Kambodians* are persevering agriculturists, loth to leave their own country and visit foreign parts : they possess no manufacturing skill, nor do they show any ambition to improve in civilization. Being enthralled by the priesthood and devoted to Buddhism, the nation stands as a mere blank, without a prospect of amelioration unless awakened by Christianity.

The inhabitants of *Tsiampa* (*Loi* or *Kwan loi* in Annamese) had a sterile soil for their inheritance : perhaps therefore they engaged in navigation to supply their wants. One of the rajahs having married in the fifteenth century a *Javanese* princess, would indicate some connexion with that island. Little is known of the country, nor does any celebrity attach to the natives, who being strict followers of *Buddha*, by turns became subject to the Kambodians and Annamese, but have remained vassals to the latter for a century. The oppression of their new masters has forced the people into mountain fastnesses, and the Cochin-Chinese, to control them, have erected many fortifications and keep up large garrisons.

The numerous *Moi* (mountaineers) tribes have yet escaped the knowledge of every traveller : they appear to be a hardy race, with a muscular frame, and hence well fitted for slaves. Of their religion, customs, and manners we yet know nothing, and the Annamese take a pleasure in describing them as *wild beasts*, though they are probably their ancestors, from whom, by a mixture with the Chinese, the present race sprang, and in fact the same here as the *Meaoutsze* are in China.

We may here speak of the *Christians* in *Annam*. The Portuguese having established their trade, considered it their sacred duty as true Romanists to promulgate their faith. The chaplains of their vessels were at first considered the proper men for effecting this purpose, but they did not show much zeal until Ruiz, a Spanish Franciscan, with some companions, in 1583,

commenced his labours. After him two Jesuits set sail for this country in 1615: though one of them fell a sacrifice to his zeal, Rhodes resumed the work with his companions and penetrated into *Tunkin* in 1627, where he converted many to popery. The congregations, notwithstanding all vicissitudes, increased; other orders likewise laboured, and there were in the seventeenth century about 400,000 individuals (not including the convents in *Kambodia*) numbered to the Romish church. The conversions were easy; a man accepted the Romish rosary for that which the Buddhists used, substituted for his household gods some images of saints, kept the festivals, repeated prayers, and he thus became a Christian. Priests and friars from *Manila* laboured hard in this matter, and under persecution and sacrifice of human life, most cruelly effected the shrine of idols in conformity with the laws laid down by the Inquisition. In *Adran* they found an enlightened advocate, a man both worldly wise and anxious to promote *Romanism*. The converts rapidly increased, as the supreme government made no opposition. On the restoration of the pope the missions were renewed with full vigour, and the French took a leading part. Bishops and simple missionaries flocked to the country: the old king remained neutral, without making any difficulty. Subsequently *Minghmang*, fearing the too great ascendancy of foreigners, instituted a persecution of the most horrible nature, in which the foreign missionary and native convert shared together. Of the 425,000 Christians said to have lived in the country, many had to seal their confession of the *Virgin Mary* and firm belief in the saints with their blood, and the foreign missionaries were in nowise behind in this respect. Notwithstanding all this, new attempts have been made to supply the place of those who died in wretched prisons or on the scaffold, and a host of French priests* have from time to time penetrated into the country. On a recent visit of some British naval officers the Roman Catholics believed them to be sent for religious purposes, and came out in crowds to salute them, begging to be confessed. The present king acts with great severity against this religion, and a Chinese captain of a junk was beheaded because he had brought with him a French bishop, whilst the crew was sent into banishment. Most of the *Chinese* colonists are from *Teo-choo*, a district on the east of *Kwangtung* province: they are merchants, artisans, and common workmen, and as they are not subject to the oppressive law of gratuitous labour

* Since 1666 there have been of that nation 16 bishops and 80 French missionaries in *Cochin-China*; in *Tunkin* 17 bishops and 47 missionaries. There are at present 40 priests, and in *Tunkin* alone 80 native preachers, besides Spanish Dominicans. In *Cochin-China* Proper there are about 8000 Christians, in *Tunkin* about 360,000.

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to the State, they have great advantages over the natives. Who-soever is lawfully married to a native woman becomes *bonâ fide* a citizen, and his children are not allowed to leave the country, and are treated as if they were actually *Annamese*.

The few descendants of Portuguese settled in *Kambodia* we need not mention, or some thousand *Malays*, who have also been domesticated there. There reside other rude tribes, whose names we do not even know; being few, they are scattered, and remain in a savage state.

Political Divisions.—*Kambodia* was originally divided into six provinces, viz., *Dong-nai*, *Quiduk*, *Sadek*, *Metho*, *Kamao*, and *Teksea*—names, though politically extinct, still, in the mouths of the people, are far more in use than the new ones applied by the Cochin-Chinese. These are *Go-sat-tran*, *Hateen*, *Nam-vang*, *An-giang*, *Vinh-than*, *Dinh-tuong*, *Phan-yen*, *Bien-hoa*. *Go-sat-tran* comprises the N.W.; the southern port is not unfrequently named *Gea-dinh*, and the northern mountainous division *Nocor Khamer* (the native term attached to it), without any subdivision. Our former general geographical remarks have given the outline of the country; we now add that *Laopheên-paou* is the northernmost city on the *Mekom*, a place of some trade, where the Kambodians mix with the Laos. About 20 g. m. farther to the S.E. on the same river is *Ban-chan*, *Koolatheên*. In lat. 16° is the N.W. frontier town towards Siam, placed in a wilderness. *Lak-khon* is on the left bank of the river, and principally inhabited by Laos, this being one of their most flourishing establishments. *Than-lao-thak* is in 15° 20' N. lat., and *Muong-hong* in 14° 20', both on the right side of the river; *Kaba-than* is lower down; *Tinh-suong* amongst the mountains in the *Moi* country; *Suk-la* and *Suk-xoi*, with *Kamon*, are frontier towns on the boundaries of the *Bat-tambang* province. Of all the above-mentioned places none contains more than 20,000 inhabitants, who either live in small bamboo huts, or, if wealthy, in dwellings made of planks. Some have been fortified by the sagacious Annamese; and if it were not for this circumstance they would not deserve the title of *towns*. The inhabitants, accustomed to poverty, have never had any intercourse with foreigners to feel the want of their commodities. Amongst them are many excellent hunters, bold enough to meet the elephant and tiger in deadly combat: the latter animal is frequently tamed here and exported, to be sold for even less than a buffalo. With the hides and dried flesh of *stags*, which are frequently met with, a considerable trade is transacted in the towns on the coast, and the meat principally sent to China. The antlers and sinews furnish there a delicacy which only the rich can afford, and are sold at very high prices. All the parts of a

tiger, from the skin to the very bones, are exported to China: the gall, in particular, is in much request amongst military officers, who make a mixture of it, and drink it to inspire them with courage: they also sleep on the skin, so that the inhabitants find hunting a very profitable employment. The chase is, indeed, the only profession they carry on to perfection; their fields are indifferently cultivated, and they have no manufactures.

Of the ancient capital *Pompaipret* (Vinh-lung) on the *Bien-ho* (Great Lake) we have already spoken. The walls are still standing, and fully prove that it must have been a very large city, with an immense number of inhabitants. There are the ruins of magnificent and extensive temples, the substructions of palaces and antique sculptures, all in heaps of rubbish, without attracting the slightest attention from the existing generation.

The present capital, which does not contain much above 30,000 inhabitants, and these in the most abject poverty, is *Columpé* (Nam-vang-than, in Annamese), on a branch of the river flowing out of the lake, and joining the *Mekom*. It is admirably situated for trade, and a few Chinese have availed themselves of these natural advantages to carry on their traffic. The present king lives under the oppressive hand of the Annamese, in a humble manner, with inadequate revenues, and almost forsaken by his own subjects. Strictly watched by the conquerors, and treated with contempt by the Kambodians themselves, his lot is by no means enviable.

Of all the cities of lower Kambodia *Laigon* stands foremost. The depth of the river on which it is placed, its vicinity to the sea, and its extensive inland communication, constitute it an important emporium. The entrance is at *Kangeo*, a miserable fishing village amidst jungle, and surrounded by a wilderness that swarms with tigers and serpents.

The country, however, soon afterwards improves; large rice-fields are observed through the thick foliage; the river continues very deep, and the ascent leads to two of its branches, both of which fall, at a short distance, E. and W. into the sea. The population is here considerable, and several manufactures of coarse silk stuffs are said to exist not far from this spot. *Saigon* is about 30 English miles from the sea: but before reaching that place the traveller arrives at *Pingeh*, the residence of the provincial governor; a city with many new fortifications built after European principles, with arsenals and docks for the building of war-vessels, and a large population with a considerable trade. *Saigon* is situated about 3 miles farther, upon an insignificant branch of the river; and though the principal trading town, it does not admit any but small vessels. Both are intersected by

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many canals full of boats, like Chinese towns; for many people live here continually on the water. One may see here the very large *Kambodia* timber, of which a single plank will sometimes measure 100 feet; and the largest boats are hollowed out of a single trunk. It is also so cheap that nowhere can vessels be built at so low a rate; and the king paying nothing either for materials or workmen, his navy is the cheapest in the world. The streets are broad and lined with bamboo shops, the Chinese alone having respectable houses. Provisions being very cheap, one scarcely ever meets a pauper; but the mass of the people possess little beyond the necessaries of life, as they are kept in a state of poverty by the Government. At the commencement of this century the foreign trade was considerable, especially with Portuguese vessels; now, indeed, not a single ship enters the harbour, which, by its deep river and variety of natural productions, is superior to any other in *Annam*.

Dong-nai lies two days N.E. of this city, to which it is joined by an excellent canal. Being the ancient capital, under the *Kambodian* reign, of the province to which it gave its name, it is, up to this day, visited by Chinese merchants for the sake of trade. The betel-nut obtained here is of the best description. The city itself is far below *Saigon* in extent, which some estimate to have 180,000 inhabitants. The left bank of the river is thickly inhabited. We find the large city *Bien-hoä*, towards the N., a very thriving place, on the same canal as the former: *Lai-thu* and *Go-kong* are placed on the very banks of the river; farther inland, *Dahan*, *Dongmon*, *Rach-choai*, *Kamro*, and other places, with a numerous population. On the right bank are *Phun-yen-tran*, the chief town of a district, *Tanan*, and others. The Delta, by reason of the frequent inundations and impenetrable forests, is far less inhabited.

We now approach the northern branch of the *Mekom*, a country teeming with the fruits of the earth like Egypt. Not far from the entrance is *Dinh-tuong* city, a place of some importance. We find, on pursuing a north-westerly course, *Becan*, *Bach-san*, *Canto*, and *Bai-cham*. The rice-fields are here of the most luxurious description, and the crops seldom fail; yet there exists still greater fertility in the country between the two branches, where we find *Tra-on*, near the mouth of the southern branch; then *Vung-lim*, *Kaudong*, *Tham-buon*, and other places. The whole presents here one level of rice-fields, similar to the plain in the neighbourhood of *Bong-kok*. The natives, notwithstanding this great abundance, are very poor, and reside in wretched hovels.

On the right shore of the southern branch (also called *Onbequaeme*) we perceive the same luxuriant vegetation and exten-

sive cultivation : the principal place is *Trandidao*. There are other cities, such as *Ba-hat*, *Rach-rit*, *Chaudok-don*, and *Pak-kam*.

The south-western part of *Lower Kambodia* is far less inhabited. On the coast we find a few inhabitants ; but farther inland immense, and, in most places, impenetrable jungles present themselves, which render cultivation difficult. *Hateën* (Kangkaou) we have already mentioned ; it is a thriving city on account of Chinese industry. *Giang-than* and *Rach-vaok* are likewise towns of some extent. To the N. of *Kang-kaou* the country becomes very mountainous, and total solitude reigns there amongst the forests and the most exuberant foliage—the abode of monkeys and tigers.

Looking at *Kambodia* we find that, although never esteemed highly by Europeans, it is nevertheless a region of importance—with many cities, abundant resources, natural beauties, and scenery well worth exploration.

Cochin-China is divided into the following districts, beginning with the S. :—*Bin-thuan*, *Nha-trang*, *Phu-yen*, *Qui-nhon*, *Hoängai*, *Quang-nam*, *Quang-duk*, *Quang-tri*, *Quang-bin*, *Ngne-an*.

Of the sterility of the southern part, which embraces *Tsiampa*, we have spoken before ; yet its sandy soil bears productions peculiar to this region, and nowhere else is the *eagle-wood* superior. The country has not lost by being made a province of *Annam* ; for though the nationality of the inhabitants may be merged in that of the Annamese, more industry than ever prevails now in this sterile district. There are, however, fertile spots, amongst crags and rocks, on which many cities are built ; such as *Phu-giai*, *Bin-thuan-denh*, the seat of government ; *Kana-oai-mat*, *Tamhung*, *Chornai*, *Song-lung*, *Maé-nuong*. The former capital, near the *Cam-ranh* bay, has scarcely any ruins to testify that it was once the residence of an independent prince.

The province of *Nha-trang* is superior to the former in cultivation, though frequently exposed to the inroads of the mountaineers (*Moi*), and now likewise of the *Tsiampese*, a nation disgusted with the new rulers, and possessing the fastnesses amongst the mountains. A number of small places are situated towards the coast : the principal are—*Bin-hoa-thanh*, *Thuy-trieu*, *Bathap*, *Nung-gang*, *Cau-kheo*, *Binh-kang*, *Haduk*, *Thien-pak*, *Daian*, *Hodin*, *Bong-nai*, and *Kung-da-bid*. Towards the mountains exist only insignificant villages, inhabited by mixed races, of *Annamese*, *Tsiampese*, and *Mois*. The *Cochin-Chinese* call this and the former region *Thuon-thieng*. Immense labour has been bestowed by the present Government in fortifying the country against all attacks. Millions have been expended, and thousands of soldiers are requisite to keep a scattered population in sub-

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jection, with no corresponding advantages derived from these precautionary measures.

If *Nha-trang* be the largest, *Phu-yen* is the most fertile of all Cochin-Chinese provinces: it abounds in grain, leguminous plants, and all the articles of sustenance used by man. On both sides of the ridge of mountains which intersects it are numerous cities—such as the capital, *Phu-yen-dinh*; also *Vung-mu*, *Kung-binh-phu*, *Vin-cu-mong*, *Hoa-vong*, *Trieu-tuy*, *Chan-thach*, and others; and to the W. of the mountains, *Deo-koo-mung*, *Kung-kwang-de*, *Ben-ngua*, *Bang-tre*, *Hoa-chaou*, and several more. The land seems to be quite a paradise; and were it not for the oppressions of Government it would be one of the most charming spots on the globe.

Qui-nhon is, in cultivation and civilization, very little behind the former. As the seat of rebellion, whence the *Tysons* issued, its fame has never been buried in oblivion. The productions are various in a varied soil, and high mountains are only found towards the *Moi* country. There is seen *Tyson-thuong*, a city whence the rebels, who proved such a scourge to the country, came. The eastern part is also known under the name of *Bin-dinh-tran*. Most of the cities are towards the sea, as *Bin-dinh-than*, a strongly fortified town, *Mekung*, *Guthe*, *Nuok-man*, *Chomoi*, *Nhadoi*, *Govang*, *Song-kan*, *Muonglo*, *Suoi-lam*, *Tan-kwang*, *Ansan Benda*, *Dong-hau*, and other places of note. The inhabitants exert themselves to the utmost to improve their lands, but in so doing they render them tributary to the rapacity of Government.

Quang-ngai is a small mountainous country which grows a considerable quantity of sugar: its capital is *Ding-quanh-ngai*. The inhabitants are many; and there is no want of cities and villages, such as *Laoi-ca*, *Dong-ngo*, *Hoa-song*, *Ho-vom*, and *Trung-son*.

The celebrated harbour of *Turan* is situated in *Quan-nan* province: sugar and cinnamon are here the principal productions. It is far less inhabited than the former; and besides the capital, *Quang-nam-dinh*, we merely mention *Faefo* (Hueian), *Kung-ngai-kho*, *Chondön*, *Tra-dinh*, *Phu-thuong*, and *Bunghe*. The people are enterprising in their fisheries and well adapted for sailors. Their industry has to force a sterile soil to be productive. To the celebrated marble mountains, not far from the above bay, we have already alluded. The caverns they contain resemble natural domes. The most remarkable circumstance is, that they rise in a plain near the sea, without any connexion with other mountains.

Quang-duk, also called *Hué-phu*, is now approached; there the capital is situated. Being a small district, and considered

as the royal domain, it appears to be barren, but, on nearer examination, fertile spots are seen interchanged with romantic hills.

The capital, about 6 miles from the sea, on the bank of a river—called by the natives *Phu-thua-thien*, by foreigners *Hué*, or *Sun-Hué*—proves the foresight of *Gia-long*. Aware of the miseries of a civil war, he wished to establish a stronghold for the royal family; consequently a regular fortification was raised, about 6 miles in circumference, in the form of a square with a deep ditch, and a canal to communicate with the adjoining country. Cannon after the best models were cast, as well as shot and shells. A large garrison in barracks surrounding the palace was appointed, and extensive granaries were filled with corn. On examining these works, one is forced to acknowledge that there does not exist a single town in all Asia possessing such admirable fortifications; but the palace itself exhibits nothing extraordinary. The suburbs are broad enough, yet the houses indicate poverty: neither the bustle of a capital nor the trade of manufactures exists. With the exception of a few Chinese, the people are poor; the soldiers and their officers have barely sufficient for their subsistence; the mandarins, who bask in the sunshine of the court, have a tolerable income, though the king alone can be called wealthy. In the neighbourhood are several palaces, summer residences, and royal retreats: the city itself with the suburbs, including the military, has perhaps not above 50,000 inhabitants. Its central position and romantic environs may have led the rulers to settle there, whilst other places presented far greater natural advantages.

A few smaller places lie here around; such as *Long-truoy*, *Cau-hai*, *Bnong-lam*, *Dahan*, and others, none of which however are of any importance. A few miles W. of *Hué* a high range of mountains runs nearly N. and S.; dense forests succeed, and behind a second ridge, of more difficult approach than the former, the country of the *Laos* commences.

Proceeding farther north-west, we arrive in *Quang-tri*, a well cultivated and thickly inhabited province. The cities are numerous; for, besides the flourishing metropolis of the same name, we find *Kambo*, *Xu-yen-lam*, *Hu-yen*, *Minhling*, *Thuy-ba*, *Saou-kat*, *Bagnoat*, &c., and towards the wall of separation, a strong fortification in the direction of the sea, called *Quang-bin-dinh*. There are few spots in the whole empire so adroitly rendered tributary to the use of man. On the south-western extremity there is a valley surrounded by the very high mountains, called *Ailao-don*, a place of banishment, on account of the insalubrity of the climate. It is a dreary spot, from whence the thick jungles of *Quang-bin* extend in unbroken succession.

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The latter district has only recently been added to the Empire, and was in times of yore looked upon as belonging to the Laos country.

On the other side of the wall we enter *Boshinh-trong*. The eastern part of this district is well inhabited; *Da-mai*, *Kebung*, *Dinh-ngoi*, *Kehoe*, and *Hunh-trung* were formerly frontier fortresses; at present they are cities, and the abodes of industry.

The largest of all the provinces is the northernmost, *Nghe-an*, an extensive champaign country, possessing rice-fields, a vast agricultural population, and a few cities, as *Loodong*, *Kon-nam*, *Hatiah*, *Anlae*, and *Vinh*. Towards the west, the country grows very mountainous, and improves in grandeur the nearer it approaches the Laos territory. There is a considerable trading town, *Nga-ba-song*. The two latter provinces formerly belonged to *Tunkin*, and are now permanently added to *Cochin-China*, for the security of the frontier.

Tunkin itself is divided into the following provinces:—*Thanh-noi*, *Thanh-ngoai*, *Hung-hoa*, *Nam-thuong*, *Nam-ha*, *Hae-dong*, *Kinh-bak*, *Son-tay*, *Kao-lang*, *Lang-bak*, *Thae-nguyen*, *Tuyen-kwang*, and *Quang-yen*. This country is so little known to foreigners, that our observations will necessarily be very brief.

The two southernmost, *Thanh-noi* and *Thanh-ngoai*, exhibit the same features as the conterminous province of *Cochin-China*; viz. continual plains with a rising ground towards the west, where a ridge of high mountains forms the frontier towards the Laos territory. We do not know of a single city in these regions. The latter district is situated on the sea-coast; the former on a fertile river; both are very productive, with a thriving peasantry.

Son-tay is behind a ridge of mountains, and towards the Laos frontier a country of hills and dales intervenes, with a rural and quiet population.

Ning-binh and *Lon-nam* are small territories, which derive their names from large cities, and are situated to the south of the great river, belonging to *Tay-son*. They are, strictly speaking, royal domains, for the capital of the country, *Kecho* or *Hanoi*, is on the right bank of the river, not far from the Laos frontier. Being the largest town in the whole empire, with no less than 200,000 inhabitants, it is more advanced in arts and industry than that of Hué. Weavers are numerous, and manufacture a kind of cotton-stuff, cheaper than any of the same description in China, with which no foreign manufacture could possibly compete. There are many fine buildings amidst hovels, and likewise wealthy natives employing considerable sums in trade. A very ancient place, and the abode of kings

through many generations, it has only lately become a mere metropolis. The national antipathy of the Tunkinese to the Cochin-Chinese is, however, always alive; and the slightest provocation may lead to an insurrection, like in days of yore. As a nation in general, the Tunkinese are far more civilized than their neighbours, and possess more of the Chinese character. By the latter they are considered as honest. Their industrious habits are prominent, being early and late at their work; and as husbandmen, lackers, weavers, and fishermen they have few equals. *Heën*, farther down the river, on its southern bend, has a large trade, in which the Chinese share considerably. To the north, on the left bank, is the city *Namdinh*, which gives its name to a district. Strong currents and irregular tides prevent the concourse of junks from being greater, and many are annually lost.

Hae-dong includes the northern shore of the river. The capital of the same name is a very large place. Not far from it are extensive forests. The cultivation of rice is here also the principal branch whence the inhabitants derive their subsistence. The north-eastern ports of *Tunkin* are known under the name of *Kwang-yen*, including the peninsula of *Vinh-van-ninh*, to which the pirate isles nominally belong. The metropolis of the same name is the only place of importance for many miles around; *Macao* has attained some celebrity as a marine port; *Hoa-phen* and *Kiken*, however, are insignificant towns. On the north-eastern frontiers towards *Kwang-tung* lie those marshes and jungles, whose pestiferous exhalations have proved so very destructive to the Chinese armies, which at times invaded the country.

One of the largest districts is the northern *Lang-bak* (*Lang-son*); its ground is well watered by the *Tuk-duk* river. Farther north, the country rises into mountains, whilst the southern frontiers are very flat. Besides the capital, there are no cities, the inhabitants preferring to live in villages and hamlets.

Westward of this is *Kao-lung*, a very extensive valley, difficult of access, and once a state in itself, with gold and silver mines in the surrounding mountains. The inhabitants have little intercourse with their neighbours, and enjoy a shadow of independence. *Tuyen-Kwang* is a rich district in every respect. All kinds of grain thrive there to a great extent. No less than five rivers traverse the land, and the richest mines exist there; from thence the silver, which circulates in considerable quantities throughout *Tunkin*, is brought. The inhabitants are a hardy race; toiling throughout their lives, they are most eager in the pursuit of gain.

Hong-hoa-tran is situated to the north of the Laos country,

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which is a dependency of Cochin-China. Here are also some rich metallic veins, and the people are much engaged in mining operations. The western portion is a plain, and a grain country.

Thoi-nguen, the central province, is a champaign country, full of rivers, and well adapted to rice cultivation; the other districts are very insignificant, and, consequently, we shall omit them.

The *Annam* territory of the *Laos* country (*Laktho*) is equal in extent to Cochin-China Proper; with the *Mekom* for its southern frontier, *Tunkin* to the north, and both to the east and west mountain chains, separating it on the one side from *Tunkin*, and on the other from the country of the same tribes, who are tributary to *Birmah*; it has strong natural boundaries. The south is a large plain, cultivated in patches and interspersed with jungle. From thence different raw productions are at times imported into *Annam*, through mountain passes. The present *Annam* government has constructed roads throughout the district, so that it can maintain some ascendancy over the vassals. Every village and city have its chiefs, and a nominal Leader assumes the government of the whole. This feudal tenure being little enforced, the tribes are therefore divided amongst themselves. They nevertheless speak the same language, have the same customs, religion, and literature, so that the head of a conqueror is only wanting to rescue this interesting race from their thralldom under many masters. Such an event once took place in the sixteenth century. The various leaders who lived along the *Mekom*, from the frontiers of China to *Kambodia*, united under one leader, the mountaineers joined them, and then proclaimed themselves a free people, being able to defy their neighbours. But instead of being satisfied with their independence, and laying the foundation of a lasting empire, so rich in natural resources, they of one accord felled a number of trees, made large rafts, and floated down the river, in order to subject the southern part of the peninsula to their sway. Acting without plan, they were quickly scattered, and lost amidst jungle and swamps. Their neighbours being made aware of their dispersion, regained their country, and the nation returned into bondage, from whence it has not yet been emancipated.

The principal states near the banks of the *Mekom*, along the frontiers of Upper *Kambodia*, are *Muong-thin*, *Muong-phong*, *Lak-khon*, *Lao-cheda*, *Bandon*, *Muong-khuk*, and *Vanluong-kwok*. The inhabitants are here far from inconsiderable, and the champaign country is thickly studded with agricultural houses and villages.

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One of the central states is *Muonglong-phaban*. It comprises a large territory, remarkable for the many rhinoceroses and elephants that live in the stately forests.

North-west of this is *Keeson*, which keeps up a lively intercourse with *Tunkin*, of which many natives have removed thither, so that it has the aspect of an Annamese settlement.

Due north from *Muonglong-phaban*, occur *Ninh-kuong* and *Lak-ruong*, the residences of powerful chiefs, who rule over a large valley, and are nearly independent.

The whole northern part, consisting of two distinct valleys, has mere villages. All nature here possesses a certain grandeur, and the habitations of men are often found where we expect eagles' nests. There are nevertheless large plains, filled with a contented and thriving people.

The Annamese despise the Laos, as a nation ignorant of the Chinese character, and entirely uncivilized. The Laos having much to endure from tax-gatherers, merchants, and pedlars, submit cheerfully to their oppressors.

The *Government*.—The king is supreme and uncircumscribed in his power. He can decide according to or against the laws; the life and property of his subjects being his, he disposes of them as he likes. Usage prescribes that he should speak of himself as the Father of his people, and calling his government paternal, that he should inflict even cruel punishment as a chastisement for the improvement of his children. Yet he considers the Emperor of China as his supreme lord, who may judge his conduct, blame or degrade him. Though the acknowledgment is merely nominal, it constitutes a fundamental law, and as such is registered in the archives.

His courtiers and eunuchs are many, possessing great power. The harem, however, is not large, nor need the monarch be jealous of his wives, for females are not here, as in other Asiatic countries, put under restraint. Every luxury may be found in the palace, with many objects of art and ingenuity from Europe; amongst which, an extensive collection of precious stones, gems, and pearls is seen. The three last sovereigns have emulated each other who should amass most, and the markets of China and India have been ransacked to satisfy the kings, whilst the French have imported large stores of Parisian trinkets. The present sovereign seldom appears abroad, and always with a strong guard.

The principal officers of state are, the Governors of *Tunkin* and *Kambodia*, and Minister of Trade; the latter also controls the foreign department. The supreme Government much resembles that of China, being formed on its model. The six tribunals therefore, with small modifications, exist, and at the

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head of each a minister of state. These, with the above, and a few persons chosen by the king, constitute the council of state, which the sovereign convokes at pleasure. All the officers are dressed in the Chinese fashion, under the *Ming* dynasty, and divided, as their prototypes, into ten orders. But the military mandarins are considered higher than the literary authorities, which is the very reverse in China. A military Governor is at the head of each province, and he has two deputies who are his assistants. The same form prevails in the districts called *Tran*; these are subdivided into *Huyen*, or counties, and *Too*, or townships. There is, moreover, a well-organized municipal government in the cities and villages, carried on by the older and more respectable persons.

The principle, that there should be only *one man* invested with authority, is consistently carried through all departments. The nobility is created at the king's pleasure, and no one has any power except derived from him. The nation, consequently, is one whole, and the few who enjoy the royal favour are the sole possessors of privileges. It is a democracy on a large scale, on broader principles than even in China; examinations for degrees also take place in Annam, as well as China, but they are not carried on with such vigour.

Every third male must serve the Government from the age of 18 to 60 years for the space of three years, either as sailor, soldier, or common workman. After this he may go home; but when another three years have elapsed, he is again called upon to perform the same service. Such is the constant routine of unrequited labour to which this nation is subject in ordinary times. In war, however, or on an emergency, the requisitions are far more extensive, and the whole male population is often turned out to construct a road or dig a canal. As the supplies furnished to the workmen are very scanty, and no attention is paid to them in sickness, many then die from sheer want in a country teeming with fertility. In Kambodia these corvées are more severe; whilst Tunkin enjoys some exemption, and only the seventh man there is in the service of the state.

The guards consisted of 36,000 men, divided into 40 regiments of 10 companies of 60 men each, and these are classed in five brigades. There are, moreover, 25 regiments which form five legions, and both constitute the actual force of the Empire. As the horses are very indifferent, there is no cavalry, but 800 elephants are substituted, some being attached to every regiment. The provincial troops are on a smaller scale; and the whole army, which numbered during the time of the warlike *Gia-long* 150,000 to 200,000 men, is now only 60,000 strong. The entire military establishment has lately been much reduced.

For the protection of the coast marine regiments are formed, to act as sailors and soldiers on board the men-of-war. These consist of rowing boats, which sail with the utmost rapidity, and are admirably worked with 40 to 100 oars. They have also galleys that sail and row, carrying from 4 to 16 cannon; vessels half-junk and half-ship, from 10 to 24 cannon; and sloops of war according to our model. Whether any larger craft has been added to the navy we are not aware, nor can we state the number of vessels at present in commission. The former kinds of boats are the most useful and numerous, and Gia-long had no less than 500 of them in his service.

The discipline of the navy as well as army is according to European principles; still this cannot inspire courage, as the bamboo is always used, and servility most barbarously inculcated. The ease with which the French, on a recent occasion, destroyed their men-of-war, proves that though the form of tactics with the Annamese is not different, still the same spirit does not animate them, and they are feeble when opposed to Europeans, notwithstanding their vast superiority over all other southern Asiatics. The soldiers all wear uniforms—a red tunic; not so the officers, who dress like common gentlemen. The muskets and spears of the soldiers are excellent, the guns admirable, and the manœuvres of the army very scientific, and executed with great precision. No native prince in these parts of the world can show anything like them. But the men are badly paid (about half-a-dollar per month), and receive besides a ration of rice. A lieutenant gets only double, and so on in proportion in the higher grades—nowhere, however, above a bare subsistence. As the soldiers, on having served three years, are sent home, the officers alone can be said to constitute the standing army. There is thus much weakness, notwithstanding the apparent strength, in the military department; yet the Annamese are strong enough to be a match against any power on the peninsula, as well as China.

The law is here, as in China, everything; but the dispenser of the same bends it to his own purposes, so that it materially strengthens the administration. The bamboo is the invariable instrument of castigation, inflicted on all classes, and even the prime minister himself is liable to it. Other punishments are very similar to those of China, and are bestowed with a recklessness scarcely credible. The prisons are fearful abodes, full of misery and filth; and mercy forms no part of a judge's character, for which unbending severity is the best recommendation.

The revenue is principally derived, as in China, from the land. There is also a poll-tax of a little more than half-a-dollar for

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each adult male subject not employed in the king's service, with sundry other contributions from the industry or consumption of the inhabitants. The land-tax is partly paid in kind, and the produce hoarded up in the granaries of the capital. The king is as anxious to receive the money into his treasury as he is tardy in issuing it from his hoards. The consequence is an immense accumulation of bullion in the exchequer. Crawford was told that there was at one time gold to the amount of seven millions of dollars in the treasury lying dormant, without the slightest use to the country.

In the imposition of taxes, the Cochin-Chinese government need not study the system of Western nations, for the mandarins are quite able to levy any amount. The limit prescribed is the wretchedness of the nation, destitute of all resources. If the government falls, its treasury is plundered, its resources are cut off, no appeal to the people can be made, and it must be ruined, or replenish its coffers by some desperate act.

The Annamese are thus shown not to rank low in the scale of Asiatic nations. The government, with all its defects, is superior to the Persian, to the native administration in Hindostan, and to that in Siam. As no inveterate prejudices exist, great improvements will take place with the spread of Christianity.

BIBLIOGRAPHY.—The books for the knowledge of these countries are by no means numerous. Foremost stands *Crawford's* 'Embassy,' a work of the highest value, being full of correct information. *Finlayson's* 'Journal' is interesting. *White's* 'Voyage to Cochin-China' shows a prejudiced mind soured by ill success. *Barrow's* 'Voyage,' like all the works of that author, is able. *Bissachere*, dealing in generalities, presents not a true picture of either Tunkin or Cochin-China: some of the old relations are amusing, but not instructive. The 'Lettres Édifiantes' give here and there valuable hints. *Valentyn's* 'Beschoring van Kambodia,' in his great work on the East Indies, furnishes little information. From *Dampier's* 'Voyages' we receive sound instruction. *Gaubil's* 'Lettre' has a few important remarks. *Paulo Condore Purefuy's* 'Cursory Observations on Cochin-China' have some value. *Alex. de Rhodes* presents the best account of Tunkin we yet possess. The description of the Chinese ambassadors of *Chen la Founghouki*, as given by *Abel Remusat*, has some interest. *Dayot's* Charts are excellent. The 'Researches' of *Abel Remusat* are the best of that country. The most superior and accurate map we possess of the entire Annamese Empire is the "Annam quoe hōa do," published by *Taberd*. His dictionary, Latin and Annamese, and Annamese and Latin, is a very valuable work. The 'Gan-nan kwotung-che' is a diffuse compilation;

throughout the whole of Chinese history there are various hints about *Tunkin* and *Cochin-China*. *Mailla*, in the 'Histoire générale de la China,' furnishes some notices, as well as *Abel Remusat's* 'Du Royaume de Camboge,' in the 'Nouvelles Mélanges Asiatiques,' *Berghaus's* 'Karte von Hinter Indien,' and 'Memoirs,' evince the diligent geographer; and *Ritter* is a laborious and very careful compiler.

XIII.—*Geographical Notes on the Nile.* By Professor PAUL CHAIX, Corresponding Member of the Royal Geographical Society, Geneva.

[Read March 12, 1849.]

CLOT BEY says, in his 'Tableau de l'Égypte,' that the level of the Nile at Cairo is 40 French feet above the Mediterranean, 287 feet at Syout, 357 feet at Thebes, and 543 feet five leagues lower down than Assouan. According to the Duke of Ragusa ('Voyage en Orient') the fall of the river is 6 metres between Benisouef and Abou-Girgé. Unfortunately neither of these authors has informed us by whom and by what means their levels have been measured. I am inclined to think the fall of the river has been much exaggerated, excepting the height at Cairo, which was actually measured by MM. Lepère and Jacotin during the flood of 1798. The Duke of Ragusa was provided with an apparatus for thermometric levels, but was deterred from publishing the results he had obtained by seeing that they led him to absurd conclusions.

Mr. Lambert, the present director of the Polytechnic School at Boulak, broke his barometer while he followed Mohammed Ali in his journey to Nubia—an accident of common occurrence. I am only indebted for having preserved mine entire to my never allowing it to be out of my hand. In order to compare my own measurements with the regular observations kept at the observatory at Boulak, I applied to the director, Mr. Lambert, who kindly forwarded me a translation of those observations. The building of the observatory has for its nucleus the old fort Donzelot, which the French had built close to the burial-ground at the northern extremity of the suburb of Boulak during their occupation of Cairo. It is well provided with astronomical and meteorological instruments, and hourly observations are made with the barometer and thermometer, which implies a degree of accuracy certainly not surpassed in any other observatory. Mr. Lambert intends to publish them both in Arabic and French, and they may be rendered very useful to travellers. Mr. Lambert told me that none before me had ever applied for them.

Annex 517

J.F. Baddeley, "Matteo Ricci's Chinese World-Maps, 1584-1608", *The Geographical Journal*, Vol. 50, No. 4 (Oct. 1917)

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on Ecuador from one who was a member of the American Legation in that country, Mr. Stabler. He knows it well, and can tell us a great deal which I am sure will be fresh to everybody here with regard to that region. I will ask Mr. Stabler to read his paper.

(Mr. Stabler then read the paper printed above and a discussion followed.)

Sir WILLIAM HAGGARD, who was twenty-five years ago Her Majesty's minister at Quito, contributed an interesting and amusing account of his experiences in Ecuador, and of the manners and customs of the people at that time. He has requested that it should not be printed, as he does not consider it as a serious contribution to the geography of the country.

The PRESIDENT: I am afraid I must wind up the discussion without contributing to it anything of much value. Ecuador is only familiar to me through the work of a very old friend of mine, one of our Gold Medallists, who will always be associated with the mountains of Ecuador, of which we have seen photographs this evening—Edward Whymper. His book on Ecuador is quite a classic of travel, and if any of you, after coming here to-night, are seized with a desire to know more about the country I strongly recommend you to get it. Whymper was not only a mountaineer, but an ardent naturalist, and he also paid a great deal of attention to the primitive antiquities of Ecuador.

I was struck to-night by the fact that we heard very little of the commercial products of Ecuador, and I am sure if there had been much to say Mr. Stabler would have told us, because, I think, nothing has been more conspicuous in his lecture than the admirable use he made of his opportunities during the two years he was in the country. Very few people sent on a diplomatic mission would have wandered about so much and at so great a profit as our lecturer. I am sure you will wish me to express our thanks to Mr. Stabler for his paper, and our hope that it may not be the last paper he will give us, for he has been in many different lands in his country's service, and I am sure has other recollections from the Far East as well as from the Far West which would be of value.

FATHER MATTEO RICCI'S CHINESE WORLD-MAPS,
1584-1608

J. F. Baddeley

HAVING occasion to look through the Chinese maps in the collection of the Society, I found among them a map of the world, about 12 feet by 6, presented by Dr. W. Lockhart in 1858 and labelled and catalogued "Ricci Map." This seemed curious, inasmuch as Col. Yule had in 1874 published in the *Geographical Magazine* a short account of Ricci's map with a small-scale hypothetical reconstruction of it, in the belief, evidently, that no copy of the original survived. A first reference to written authorities showed that Dr. Ettore Ricci in 1904 had stated that no copy of the Peking edition was known to exist. In 1911, however, Father Tacchi Venturi, in publishing for the first time the original account by Father Ricci of his life and work in China, reproduced a twelfth part

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of a copy found in the Barberini collection at the Vatican, and there believed to be unique in Europe.

A brief examination by Mr. C. W. Campbell showed that the Society's map, which is entirely in Chinese, bore the name of Ricci, the monogram of the Society of Jesus, and the date 1602. Its identity with the Vatican map was fairly obvious, but its relationship to a Chinese map attributed to Ricci in the Ambrosiana Library at Milan, and assumed to be of the original Shao-king edition of 1584, called for further examination. I turned, therefore, again to the published accounts of Ricci's life and to other Jesuit works to see what light they might throw on the history of the map, and inversely what light the map itself might cast upon them. Also, through my brother, Mr. St. Clair Baddeley, I communicated with the Librarians at the Vatican and the Ambrosiana, both of whom evinced a keen interest in the map; and, finally, with a view to gauging its rarity, I wrote, at the suggestion of our President, to Dr. Morrison in Peking, who not only made inquiries himself, but most kindly put me in communication with Father Kennelly, S.J., in Sikawei. From these gentlemen I learn that though copies of the map may and probably do exist in China none is at present known to them. Provisionally, therefore, one is justified in regarding the Society's copy of the map as a rarity, though, when once attention has been called to it, other copies of one or more of the numerous editions it went through may turn up, even in Europe.

The map (of which a small reproduction is given herewith) is printed from wood blocks on thin Chinese paper, backed with several thicknesses of coarse paper, and mounted (probably after it came into our possession) on linen in one sheet, folded into twelve. The surface has suffered in some places from rubbing, and in others, where green paint was used, from corrosion; and the whole was in a delicate condition requiring immediate attention. On the advice of Mr. Chubb, of the Map Department, British Museum, and of Mr. Sabin, of the Department of Prints, Victoria and Albert Museum, it was decided to remount the map on a flat sheet of linen, and to cover it with the very fine silk gauze used to preserve tender manuscripts. By the kindness of the British Museum authorities this work has been carried out under their supervision; and the map is now rolled in a large case, pending the time when it may be framed and hung. For the purposes of study and editing it has been photographed in six sections, half-size, by Mr. Robert Macbeth, as well as on the smaller scale of the present reproduction.

The map is covered with names, descriptions, and explanations in Chinese. It is hoped that some Chinese scholar will in course of time examine these minutely; and that some day the Society may be willing to publish the whole map in facsimile, with a critical translation of the Chinese text. Meanwhile we must be content with a general examination of the map and an account of the way in which it was made. Its history

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I shall try to elucidate in what follows; with its sources Mr. Heawood deals in a separate article.

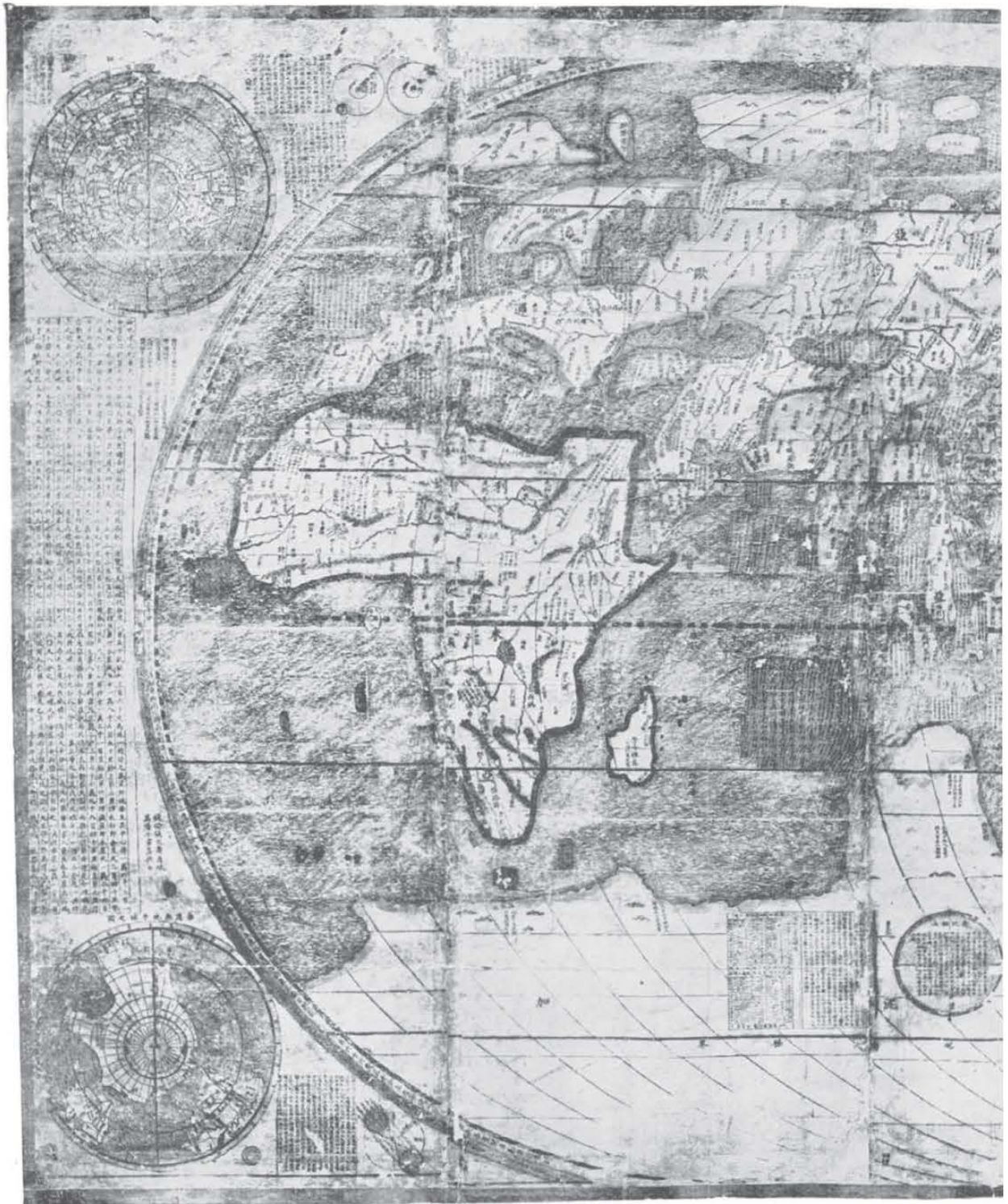
To the Chinese Ricci's map had once a geographical value beyond computation, but for us in Europe its interest is mainly historical. For the first edition was merely a Chinese version of a current European world-map, and though modifications were introduced then and subsequently it is improbable that any original geographical work was either contemplated or achieved. This, however, is a matter I leave to the more competent judgment of Mr. Heawood. Meantime we must bear in mind that Father Ricci's immediate object was not to make additions to European knowledge, but to convey that knowledge to the Chinese; his real aim being the conversion of the latter to Christianity.

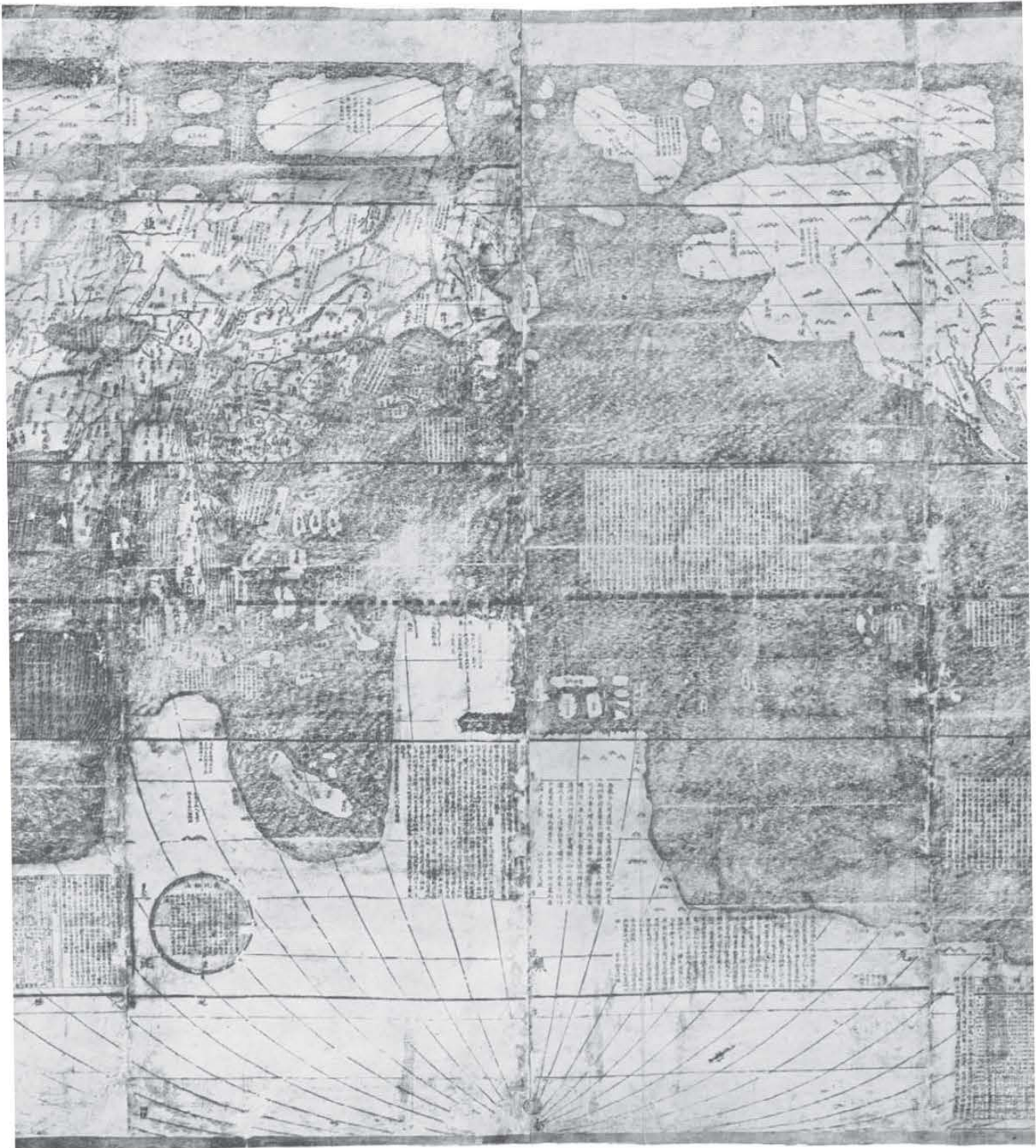
It was the Jesuits who first understood—and the merit is largely Ricci's—that to preach the Word in China with any chance of success a start must be made by winning over men in authority, and that to attain this result the best, indeed the only way, was to make appeal to their love of learning. Respect for European science might lead to acceptance of Christian beliefs, or so it seemed. In any case the attempt was worth making. It was as learned men, then, but above all as cosmographers, mathematicians, and astronomers, that Ricci, his colleagues, and successors made their appeal in China; and no single work of theirs gained them so quickly and so surely the suffrages of the more enlightened Chinamen as the map under consideration. It is even possible that the wonderful interest it excited first gave Ricci, and through him the Jesuit authorities at home, an inkling of the above truth and shaped the policy to which their success in China was so largely due.

The map had long been forgotten, in England at least, when in 1874 Colonel Yule called attention to it once more. In the paper printed in the *Geographical Magazine* for July of that year he wrote that Ricci, "seeing the dissatisfaction of the Chinese with European maps, in which China held an insignificant place, set about constructing a map of the world on a great scale, so adjusted that China with its subject states filled the central space of the hemisphere, and, without deviation from truth of projection, occupied a large space in proportion to the other kingdoms gathered round it. . . . This map obtained immense favour."

By way of illustration Yule gave a small map, being "a perspective projection of the hemisphere from a point at the distance of one diameter from the surface, and situated on the production of the radius which passes through the intersection of 115° E. long. (from Greenwich), with 30° N. lat. Something pretty near this must have been Matteo Ricci's projection." Evidently Yule knew nothing of any existing copy of the map, which is the more remarkable as he was a friend of Dr. Lockhart and elsewhere gratefully acknowledges his help.

The legend upon which Yule based his deduction had, as we shall see,





THE WORLD MAP BY FATHER MATTEO RICCI
in the Collection of the Royal Geographical Society



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but a modicum of truth in it, and, even as he wrote, a contemporary example of Ricci's map, a glance at which would have revealed the truth, lay ready to hand in Savile Row. This map differs about as widely as possible from the one imagined and drawn by the illustrious author of 'Cathay' and 'Marco Polo'; and one cannot but regret that he should have died without ever knowing that Ricci's work survived, much less that one copy of it was in the possession of the Society of which he was so distinguished a member, another safely housed in the Vatican.

Ricci's autobiography was, unfortunately, not published until after Yule's death; otherwise, undoubtedly, he would have corrected his mistake and dealt with the whole subject in his own masterly fashion. As it is, this recent publication of Ricci's own account of his life and work in China* enables me to give, for the first time, a connected story, if not yet a complete one, of the genesis and growth of a work for which the least that can be claimed is that it played a large part in securing for the members of the Order of Jesus a favourable reception on their first entry into the Middle Kingdom.

Matteo Ricci, called the Apostle of China, as St. Francis Xavier was of the Indies, first saw light at Macerata in Central Italy on 6 October 1552, the year of Xavier's death at Sancian—by express design of Providence to replace that grievous loss, as F. Michel Boym declared publicly in church at Smyrna a century later. He was received into the Society of Jesus in 1571, a few weeks before the battle of Lepanto, and sailed for Goa from Lisbon in 1578, in company with Father Michele Ruggieri (often spelt Ruggiero), a compatriot, who in 1579 reached Macao, where Ricci joined him three years later.†

When once they had established themselves at Macao, the Jesuits at certain seasons, when fairs were held, were allowed to visit Canton with the Portuguese traders, but, like them, were not suffered to pass even

* 'Opere storiche del P. Matteo Ricci S.I.,' *edite a cura del Comitato per le onoranze Nazionali, con prolegomeni, note e tavole dal P. Pietro Tacchi Venturi S.J.* Volume primo. *I commentarj della Cina.* Macerata, 1911. This is the original work of Ricci printed for the first time from his own manuscript in Italian, which Trigault brought home with him from China and published in a Latin paraphrase, 'De Christiana Expeditione,' etc., Lugduni, in 1616, with, it seems, considerable omissions but also some valuable additions.

† The successes of the Minorite friars in China under the Yuens came to an end with the fall of that dynasty. The Cape having been doubled the Portuguese reached China by sea in 1514, and in 1556 the Dominican Order made its entry into that country in the person of Gaspar de la Croix, who in 1556 preached the Faith, but attacked the "idolatry" of the Chinese so zealously that he was promptly deported. In 1575 an Augustin friar, Martin Rada, met a like fate. The enemies of the Jesuits are apt to vaunt the fact that they were not the first in the field, but the point is that where others failed they succeeded. See 'Anecdotes sur l'état de la religion dans la Chine,' 7 vols. Paris, 1733. Vol. I, p. v. : a defence of Cardinal de Tournon and scurrilous attack on the Jesuits. Of Ricci it is written, "the Devil in him found a faithful minister, who so far from destroying his reign amongst the infidels confirmed it; and even extended it amongst the Christians themselves."

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one night on shore. Ruggieri, however, succeeded in gaining the favour of the *Hai-tao* (commander of naval forces) at Canton, who made an exception in his case, permitting him to reside, while the fair lasted—two months and more—in the house of the Siamese ambassadors, where he set up a chapel and celebrated Mass for the benefit of the Portuguese.* During this period, moreover, Ruggieri twice visited Shao-king,† the residence of the Viceroy of Quantung, the second time remaining there five months; and in 1584 he and Ricci established themselves there, this being the earliest Jesuit foundation in China save that on the patch of land leased to the Portuguese at the extremity of the Hiang-shang peninsula (Macao). At Shao-king certain Chinese men-of-letters, seeing a World-map on the wall of the Mission-room, and being informed as to its purport and contents, were sufficiently open-minded to accept as true the—to them—astonishing revelations it contained—the world a sphere; the major part of it covered by water; and, above all, a small area only occupied by the Chinese Empire, which till then, in common with all their countrymen, they had believed to cover the main of the habitable Earth.

“Wherefore,” Ricci tells us—he speaks of himself throughout in the third person—“the Governor ordered F. Matteo, who already had some understanding of their characters, to translate the World-map, with all the legends inscribed upon it, as he wished to have it printed and made known throughout China; wherewith the Chinese would be very grateful to him.” Ricci accordingly prepared a Chinese version of the map, larger than the original—to make room for the Chinese characters as Trigault tells us—which, when ready, he presented to the Governor. The latter, on receiving it, “immediately gave orders to have it engraved, with all the notes and legends on it, and began to give copies away as presents to all his friends in that province, and to send copies to other provinces.” This was at Shao-king, in 1584. The notes and legends, Ricci tells us, were altered to suit the circumstances, and this map, he declares, was “the best and most useful work that could be done, at that time, in order to dispose China to belief in matters appertaining to our Holy Faith. For the Chinese up till then had printed many maps bearing the title “Description of the Whole World,” in which nearly the whole space was taken up by the fifteen provinces of China, with only a fringe of sea round them, in which were islands bearing the names of such foreign

* ‘Avvisi del Giaponé de gli anni 1582, 3, 4. Con alcuni altri della Cina dell 1583 and 1584.’ In Roma, 1586. See p. 169. Letter of Ruggieri of 7 February 1583, from ‘Sciauchino.’

† *Shao* (or *Shau*)-*king-fu* of modern English maps; Italian *Schiaochin*; in Trigault Sciauquin (Latin, 1615), Xau-kin (Span., 1621): in Dr. Ricci’s ‘Per un Centenario,’ wrongly, Xanchin throughout, probably owing to the same mistake in the article in *Razón y Fe* referred to presently. Father Kennelly writes: “In English (that is considering the value of vowels and consonants in the English language) the correct equivalent of Schiao-kin is Chaok’ing-fu.”

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kingdoms as the Chinese had heard of, all these together not equalling in size a single small Chinese province." The majority, it is true, laughed when they first saw this European "Description of all the Known World," "but the more intelligent and educated men grasped the truth when they perceived the good order of the parallels and meridians, the equinoctial and tropical lines, and the five zones, with the various customs of the countries*), and the whole Earth full of different names transcribed from the original map, and engraved, which latter fact gave credibility to so much novelty and convinced them that it was all true."

In the 'Avvisi' already quoted we have a letter of Ricci's giving a rather different account of the matter: "The Warden (*Conservatore*) made me make a map after the European fashion, but with the measurements and names of countries in the Chinese language; and he caused it to be printed offhand, without letting me see it again, I not dreaming that it was to be printed. And he valued it so highly that he kept the block by him and would not allow any copies to be printed save those that he wanted to give to the principal persons in China." A few days later (8 December 1584) F. Francisco Cabrale, who had been on a visit to Ricci at Shao-king, writes that the "Lancitano" (the "Conservatore," but just promoted) had made him a present of a piece of white silk, six fans, and four maps, "of those of F. Matteo, which he (the giver) reserved for his friends." He made the same present to F. Ruggieri, a fact that impressed the population of Shao-king very favourably. Father Cabrale tells us that people visited the Jesuits' house and took great delight in the European novelties there, especially the glass prisms and "the map with Chinese lettering" ('Avvisi,' etc., *loc. cit.*).

"Moreover" ('Commentarij,' p. 142) "the fathers, in all the following years, whether at the courts [capitals] or in other parts of China, worked continuously at improving and revising this work, and it was printed again and again. So that all China was filled with it, much to our credit and to the renown of European letters." One good result was that, seeing the vast spaces of land and ocean that lay between Europe and China, the Chinese lost that fear of European invasion which till then, we are told, had been a chief hindrance to their conversion.

Trigault, who often speaks out plainly where Ricci's modesty keeps him in restraint, says: "This bait undoubtedly drew many Chinese into the net of the Church. He [Ricci] extended, then, the surface of that map so as to give ample room for the Chinese characters, which are larger than ours; and he put in, not the same legends but others, suited to the mind of the Chinese and to his own design; for in convenient places he mixed up with the various customs of the nations sacred matters appertaining to our most Holy Law, never before heard of by the Chinese, in order that

* "Le cinque zone con varij costumi" (*costumi* in the original MS.) "de paesi," *op. cit.*, p. 142. On p. 578, again, of the 3rd (Peking) edition, we have it said, "con tanti regni e varij loro costumi strani." Trigault, p. 180, has "lectis tot gentium ritibus."

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the fame thereof might quickly penetrate throughout the Chinese empire."*

It will be asked, of course, which of the many World-maps of that day did the Jesuits, in 1584, hang up in their room at Shao-king? Father Tacchi Venturi thinks, and perhaps with reason, that the indications given by Ricci are too vague to allow of identification, but mentions as possibilities the *mappæ-mondi* of Waldseemüller, Mercator, and Ortelius.

The indications are contained in Ricci's statement, already quoted, as to the parallels and meridians, equinoctial and tropical lines, the five zones, and the various customs of the countries, and it seemed that a glance at the Ambrosiana example would enable one to answer this question with little or no hesitation. Such is not the case. But the following passage in Ricci's 'Commentarij' (vol. 1, p. 358) seems to throw some light on the subject. The eunuch Mathan, we are told, who treated Ricci very badly, made him deliver up all the articles intended for the present to the Emperor Van-li, and insisted on something more being added. "Thus to the two large pictures (*ancone* †) of the Madonna and a small one of the Saviour, two clocks, one large with weights, the other small with springs, two triangular glasses [prisms, which excited great wonder and admiration, the Chinese, who had never seen them before, calling them 'the precious stones beyond all price'], and a Breviary, gilt and bound in cloth of gold; there was added the clavicorde, which the eunuch thought would do well, and also a 'Theatrum Orbis,' admirably bound in gilded covers," upon which Father Venturi makes this comment: "That is to say, an example of the 'Theatrum Orbis Terrarum' of the celebrated Abraham Ortelius, published at Antwerp in 1570. The name of the author, not mentioned here by Ricci, or indeed by Pantoja, may be found in Trigault, p. 391" ('Addidit clavicordium, et orbis Theatrum Ortelij'). However, Mr. Heawood will tell us the results of his inquiry.

Simultaneously with the first edition of the map, Ricci published in Chinese a Christian catechism, followed at intervals by other works, both religious and secular, in that language. He constructed, moreover, globes

* *Op. cit.*, p. 179. It is possible that here Trigault is mixing up the maps of 1584 and 1599. Semedo adds his testimony: "Nor did our people, especially F. Matteo Ricci, cease to gain credit for Europe and make friends with persons of note, through the mathematical sciences, but chiefly by a description of the world in a new World-map" ('Relatione della grande monarchia della Cina,' del P. Alvaro Semedo, Portuguese, della compagnia di Giesu. Romæ MDCXXXIII.).

† *Ancona* is used more properly for the niche containing a sacred picture, over an altar; but in this case we have Father Pantoja's statement, in a letter quoted by Father Tacchi Venturi, p. 348 n., that the present included "tre imagini fatte a oglio et molte belle; due grandi, d'Altezza poco più di mezza canna, [ell] et una piccola. Delle due grandi l'una era la figura, et ritratto di Nostra Signora del Popolo, fatto da S. Luca: la seconda era pur di Nostra Signora col Bambino Giesu et s. Giovanni. La terza era un Salvatore più piccolo; tutte tre fatte da mano eccellente." Evidently then those *imagine* are the *ancone* of Ricci. Semedo calls them "bellissime imagine dipinti in tela."



FATHER RICCI AND HIS GREAT CONVERT LI PAUL

From Kircher's 'China Illustrata'

of brass and of iron, terrestrial and celestial, and solar time-pieces. All this, he says, was absolutely new to China; the utmost curiosity was excited; the mission-house became the meeting-place of intelligent men from near and far; and, on Ricci's own evidence, confirmed by that of his translator and, to some extent, biographer, Trigault, it seems evident that the European conception of the world and of the material and moral universe, now for the first time opened to their view, came upon the Chinese with the force of revelation. The map, then, must assuredly mark an epoch in the history of Chinese world-knowledge if not of Chinese thought.

The map in the Ambrosiana Library is there attributed to Ricci, and assumed to be of the original issue of 1584. With this attribution and assumption I was at first disposed to agree; but further examination shows that the latter, at least, is untenable. The map is in Chinese characters on Chinese paper, and has the same elliptical projection as the map of 1602. Its derivation from one or more of the Gastaldi-Ortelius series of world-maps is obvious; and it is undoubtedly the outcome of Ricci's labours. But (*a*) it has only names, not a single legend inscribed upon it; and (*b*) it is of the same size as the Ortelius map of 1570, or slightly smaller (the difference may possibly be due to photography). It cannot, therefore, be the map of 1584; a conclusion confirmed by Mr. Heawood from purely geographical considerations.

We know that the Viceroy of Kwei-chow made a reduced version of the map of 1699, to be considered presently, and put it in a book containing descriptions of all the kingdoms it contained and annotations of his own (*op. cit.*, p. 317). In this case the legends must have been transferred from map to book, and I suggest that this may account for the Ambrosiana copy, here reproduced.* Mr. Heawood's alternative may, however, be the correct solution.

Ricci had left Shao-king in 1589 to establish himself further north, but still in Kwan-tung Province, at Shao-chou-fu on the Pekiang. In 1595 he made another and ampler stride towards the goal of his longing, namely, to *Fan-chang*, in Kiang-si, just south of the Poyang Lake.† Here he had

* Father Grammatica, S.J., the librarian, has most kindly sent me a photograph of the Ambrosiana map, "the exact size of the original." The dimensions (within the inner border) prove to be 48.5 × 24.3 cm., or 19.1 × 9.6 inches. The Ortelius world-map of 1570 measures, on the same basis, 49.8 × 25 cm., or 19.6 × 9.8 inches, whilst the new edition drawn in 1587 is practically identical in size with the Ambrosiana map, measuring 18.9 × 9.7 inches.

Father Grammatica writes that the map is thought to have been acquired by Cardinal Federigo Borromeo, Archbishop of Milan (made Cardinal 1587, founded the Ambrosiana Library 1587, died 1609). If so, evidently it has belonged to the library from the beginning, and came to it during Ricci's lifetime. There is nothing on it to show its provenance, nor any definite information concerning it in the Library Archives.

† Father Kennelly writes: "Nancian is Nanch'ang-fu, the provincial capital of Kiang-si. It was originally built on the brink of the P'oyang Lake, but [the latter] is nowadays about 30 miles northward, the alluvial deposits of centuries having gradually filled up the shallow bottom of [this part of] the lake, and transformed into 'terra firma.'

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the good fortune to conciliate the Viceroy, whom he calls "King of Chiengan." Of him he says ('Commentarj,' p. 265): "But that which he valued most was two books bound with plates after our fashion, with a map of Japan very fine and firm. One of them contained the "Description of the Whole World," with other maps of Europe, Asia, Africa, America, and Magalhaenica, together with diagrams of the nine spheres and the four elements and other things mathematical, never before seen in their country, and all with explanation in their writing." *

Father Venturi, editor, as stated, of Ricci's 'Commentarj,' thinks the work referred to is the map published by Ricci at Shao-king; but this is surely a mistake. It may have been the Atlas of Ortelius with MS. translations of the titles, principal names, etc., added in Chinese. But this does not entirely agree with the description, and Mr. Heawood suggests that it may have been an independent MS. work put together by Ricci from various sources, and that this supposition gives all the more force to the expression "bound with plates after our fashion." Ricci transferred the nine spheres and other features to the third edition of his own map, if not to the first and second.

Thanks to the Viceroy's protection Ricci in 1598 succeeded in reaching Peking, but the visit proved abortive. Disregarding friendly advice he remained there a month, striving in vain to obtain recognition by Van-li. He then retired, but, the waterways being frozen, the journey by road proved long and arduous. At Su-chow, we read, he gave a glass prism to a friendly mandarin, Quitaizo, who set it in silver and gold, and sold it for five hundred crowns.

In February 1599 Ricci, again, reached Nanking, the penultimate stage in his steady progress towards the northern capital. Here, on arrival, he was confronted by the governor with a Chinese map, lithographed and printed at Su-chow, of much the same content as his own, the intention being to show that native cartographers were by no means so ignorant of the world outside China as these foreigners chose to think. But Ricci had no difficulty in proving that the map was a mere copy of his own, thereby increasing the estimation in which he was already held. This lithographed sheet was, as we shall see, the first of several surreptitious versions, all bearing testimony to the avidity with which the Chinese

The lake is actually 90 miles long by 20 broad. In the flood season (July-August) the water rises 30 feet over the ordinary level and overflows the neighbouring country, causing great damage to property and crops."

* "Ma quello che egli piu stimo furno doi libri ligati con tavole al nostro modo, con carta di Giappone che è molto dura e bella. Nell'uno stava la *Descrizione di tutto il mondo universale* con altre tavole di Europa, Asia, Africa, America e Magaglianica, et insieme la figura de' nove cieli con i quatro elementi et altre cose di matematica, mai viste in sua terra, e tutto con la dichiarazione in loro lettera." Father Venturi says that by Magalhaenica we must understand the Philippines. But, on the Ambrosiana map we have the word written right across the (imaginary) Antarctic continent of the Straits of Magellan.

Mr. Heawood tells me that "the suggestion of the name for the southern continent

seized upon this new and surprising evidence of a knowledge greater than their own.

At Nanking, at the request of a friendly mandarin, Huzohai, Ricci produced an enlarged and very much improved second edition of the world-map, which was promptly engraved and distributed far and wide, copies being sent by the Jesuits themselves even to Japan. Moreover, plagiarists were again to the fore and, as Ricci himself tells us, "per questo, altri ne retagliarno altre tavole."*

Semedo † writes: "While there" [at Nanking in 1599] "F. Ricci gained great renown for himself and for European science, especially mathematics. He made a new map of Cosmography with the explanations in Chinese language and characters, by which he obtained much credit not only for himself but for Europe, thanks to the splendour of the Cities and great number of Kingdoms: wherefore Quitai po [? Quitaizo] himself and others became with solemn ceremonies the disciples of F. Ricci."

I have not dwelt upon the trials and sufferings—alternating with much kindness and appreciation—endured by Ricci and his fellow-labourers at the hands of the Chinese during all this time, especially at first; nor does he do so himself. But that they would have broken the constancy and endurance of men less brave and devoted may be gathered from the pages of Father Semedo. ‡

In May 1600 Ricci left Nanking, and on 24 January 1601, an ever-memorable date, entered the capital for the second time, and, there after two months or more—the term is variously stated—of strict confinement, succeeded in gaining, not access to, as sometimes said, but the favour of the Emperor Van-li, § and laying, firmly, the foundations of that Jesuit

seems to have come from *Plancius*, who uses it in most of his maps, together with the designation *Mexicana* for North America, and *Peruana* for South America. *Ortelius* and *Mercator* refer to the use of *Magellanica* (or *Magellanica regio*) by some, but give no prominence to the name on their maps. All three names reappear, however, on the engraved title-page of later editions of *Mercator's Atlas*, as extended by *Hondius*, and *Magellanica* is used throughout for *Tierra del Fuego* in *De Brosse's* collection of voyages to the Pacific."

* This map of 1599 was entitled 'Uen kue in t'u-mappa decem millium regnorum,' *Sommervogel*, VI. 1793, n. 16, where, however, the date is erroneously given as 1598. *Father Kennelly* writes: "Wan means ten thousand, a myriad; *kwoh*, kingdoms. *T'u* means a plan, drawing or chart; *yu*, foundation, a basis, the earth, because it bears up its inhabitants. The literal rendering would be 'map of ten thousand kingdoms,' *i.e.* of the world."

† *Op. cit.*, p. 224.

‡ *Op. cit.*, p. 219.

§ The Emperor, we read, "was very desirous of seeing the fathers; but, being unable to depart from the established custom which made him invisible, he caused them to be painted life-size, from nature, contenting himself with the portraits only of those by whom he could not be seen" (*Semedo, op. cit.*, p. 230). This custom of having portraits painted of distinguished foreigners was continued by the Manchus, as in the case of the Russian ambassador *Spathary* in 1676.

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Mission in Peking the annals of which are so full of suffering and of glory.

At Shao-king and at Nanking the interest excited by the map and the friendships that ensued had been of vital worth; nor was it otherwise in Peking. Hardly were Ricci and his companions at liberty when a mandarin named Lingo zuon undertook the engraving and printing of yet another version of the map, making the third edition if we leave out of account the surreptitious versions and native imitations already mentioned. The scale this time was large. The map was engraved on six blocks of wood, measuring each (when printed), according to the R.G.S. specimen, 24.3 inches broad by 71.2 inches high, equivalent in metric measurement to c. 64.2 cm. broad by 179.9 cm. high, the dimensions of the whole map being roughly 12 feet by 6 feet.*

Thanks to this enlarged size Ricci was able to gratify his Chinese friends by adding much and varied information to his map, in the form of new names and legends, which are lavishly scattered over it; but also graphically, that is to say by two hemispheres with the north and south poles, respectively, as centres; a representation of an armillary sphere; diagrams illustrating the cause of eclipses of the nine spheres, etc., etc. So that, as Ricci himself tells us, "this work was even better received throughout China, being so fine an engraving." He adds—

"And while Lingo zuon was engraving his version, the engravers surreptitiously produced another of the same form, so that two editions were published at one time; nor did even these suffice to satisfy the demand. Wherefore a certain Christian,† aided by our people, made another version; larger still, in eight sheets, and, having engraved it, sold it to the printers, making thus three editions in this capital."‡

This last version, in eight sheets, makes the fourth legitimate edition. § Ricci adds that the map took more than a year to engrave, and as he is, evidently, referring to his own, third, version it could not have been published earlier than 1602. This agrees with the date on the R.G.S. map, which Mr. C. W. Campbell tells us is the month 17 August—16 September 1602.

In 1904 Dr. Ettore Ricci published a memoir of his illustrious

* Father Tacchi Venturi gives 69 cm. by 179 cm. for the Vatican map. The difference in height is insignificant, absolute accuracy of measurement being difficult to ensure in the R.G.S. example at least, owing to the binding. The difference in breadth, on the other hand, is very considerable, equalling 4.8 cm. or 1.9 inches for each sheet, if we divide it up; but as there is nothing missing at the joins or at the outside edges the whole difference, amounting to 28.8 cm. or 11.2 inches, must be a matter of margins only.

† The celebrated convert Li Paul, as we learn later on (*op. cit.*, p. 578), who is figured with Ricci in an engraving in Kircher's 'China Illustrata.'

‡ *Op. cit.*, p. 395.

§ Nothing seems to be known of its existence in Europe; it may, of course, survive in China.

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namesake * in which he called attention to a letter of Father Ricci's, then recently published in Madrid,† addressed to Juan Battista Roman, factor at Macao for the Philippines in 1584, in which a brief but highly interesting account is given of contemporary China, the first we have from the hand of a Jesuit. The state of things therein described goes far to explain the ease and rapidity of the Manchu conquest sixty years later.

This letter, never before printed, was discovered by Father Pablo Pastello, S.J., in the 'General Archives of the Indies,' and with it a map of China, in Chinese, which is reproduced photographically with the letter, apparently in the belief that the two are related. The map may well be of the sixteenth century—or earlier—but it appears to be in no way remarkable, ‡ and its connection with Ricci's world-map of 1584 is problematical. The letter however throws fresh light on his cartographical labours in the following passage: "I cannot, this time, send you the whole of China drawn in plane maps, in our fashion, and then each province separately in its own map, because I have not yet put them in order: but I trust in God to be able to send them you soon, wherever you may be, and therein you will see all these provinces and cities most beautifully portrayed."

It will be noticed that Ricci in this letter speaks only of maps he could not send. Yet this map of China bears an inscription stating that it accompanied Ricci's letter above mentioned, dated 28 September 1584. The contradiction, however, is in appearance only, as this is merely a Chinese map, and not one of his making. Judging from the reproduction there is European writing on the margin, which might possibly furnish a clue to its provenance. Of a world-map there is not the ghost of a hint in the letter.

Of the Peking edition Dr. Ettore Ricci wrote § that not one copy was known. But in 1911 Father Tacchi Venturi, in the 'Comentarj,' gave a facsimile reproduction (reduced to one-third) of one section of an example in the Barberini collection at the Vatican (fondo orientale 150), the area chosen being the upper (northern) half of the sheet containing China proper. He dates it 1601, but this I venture to think is a mistake. As

* 'Per un Centenario, xxv. Gennaio MDCL.-MDCCCL. ; Macerata MDCCCL.-IV.' This little book is dedicated after a charming fashion prevalent in Italy, "alla cara bambina Giulietta Cavanna, in ricordo del lieto giorno della prima Comunione, 21 Augusto 1901." Marriages especial'y are celebrated in this way, and of the "Nozze" issued on such occasions the London Library, thanks to Dr. Hagberg Wright, has a valuable collection.

† In Tomo IV., Num. 4, December 1902 of the Spanish Jesuits' monthly review, *Razón y Fe*.

‡ Mr. C. W. Campbell and Prof. E. H. Parker have, in turn, most kindly looked it over for me. Letter and map were, I believe, again reproduced by the well-known scientific writer, Father Pietro Gribaudi in the *Rivista di Fisica, Mat. e Sc. Nat.* [Pavia], anno IV., Ott. 1903, No. 46, pp. 321-355, but this review I have been unable to find in London.

§ 'Per un Centenario,' p. 253, n.

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far as can be judged from this reproduction (one-twelfth of the whole) the Vatican map is of the same edition as that at the Society's house, but better preserved.

That the map is rare even in China would appear from what Dr. Morrison wrote me from Peking under date, 8 November 1916: "I have made inquiries, but I cannot ascertain the existence of any copy of the Chinese map referred to," *i.e.* Ricci's. Father Kennelly, who most kindly sent me (through Dr. Morrison) extracts from a lithographed biography of Matteo Ricci in the Sikawei Library, near Shanghai, has likewise no knowledge of any existing copy in China, but thinks that of the Nanking edition (of which, not having seen the 'Comentarj,' he takes the Peking editions to be merely copies) examples may still be found in private Chinese libraries; "I say private, for public or national libraries (in our sense) do not exist in China."

Father Ricci had been established in Peking just seven years when, in January 1608 ('Comentarj,' p. 577):—

"One day we [the Jesuits] were sent for in great haste because the King wanted to demand from us a certain thing. When Fathers Ricci and Pantoja * reached the residence of the eunuchs of the Mathematical Board they found the rector and others who were there greatly disturbed, the King having sent a message from inside the palace demanding twelve copies of the World-map printed on silk, of six sheets each, examples, that is to say, of the map that Lingozuon had caused to be engraved in former time in that capital. This was Father Matthew's map in six sheets, each sheet a cubit in width and two more in height, which, when engraved, were pasted on to other sheets, as paper windows are, and fastened together along the edges with ribbons so that they could be rolled up or spread out" ("Per potersi raccogliere e stendere") "in rooms, without any difficulty. The eunuchs of the inner apartments had shown the King F. Matthew Ricci's name on the map, whereupon His Majesty had told them to ask him for copies of it.

"One of the eunuchs—I do not know which—to whom the Fathers had made presents of many of these maps, variously coloured, had presented a copy to the King himself, who was so gratified with the sight of such a fine work, with so many kingdoms and their various strange customs" (see note, p. 260, *ante*), "a thing never seen in this country before, that he desired to have more copies—to give, it seems, to the prince and to other of his relations to put up in their rooms.†

"Now, the Fathers had never given a copy of the map to the King, nor proffered to do so, lest he, seeing China—which according to the Chinese included the greater part of the world—so small, should be offended, thinking that our people had shown it thus in contempt, such, indeed, being the belief of

* Pantoja, Diego de, born 1571, in Spain; embarked for China, 1596; suffered much; died Macao, January 1618. There is an important letter of his in Purchas, 1625, vol. 3, book II., ch. 6.

† The World-map was presented to the Emperor Van-li in January 1608. On the 22nd of that month Ricci wrote thus to Acquaviva, General of his Order (Claudius Acquaviva, born 1543, died 1615): "At the beginning of this year the King was presented with a World-map, one of those large ones, and wanted many others to be printed" (Note by F. Tacchi Venturi).

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many Chinese men of letters, who made plaint against us, saying that *we had enlarged our foreign kingdoms, but made China appear small*" [my italics]. "Herein, however, was made evident the good sense of this King, who of himself understood that the map of the world was properly drawn to scale, and that no insult had been intended to China.

"This map had been engraved in Peking twice in the same form, *i.e.* by Lingozuon, who on his return to his own part of the country had taken the plates with him, and by the engravers themselves, to print and sell, as they did, disposing of a great many copies at a good price. But the year of the great rainfall in Peking, the house they were in fell down during the night; two of the engravers were killed, and the wood-blocks were broken. The eunuchs, hearing this, and realizing that they would be unable to fulfil the commands of the King, thought that, for one reason or other, we had spoken falsely; so four of them came to our house to make further inquiries; after which they caused to be brought to them, from the house of the engravers, such pieces of the wood-blocks as still remained.

"Our people then sent for the blocks [of the other edition] that our Christian Li Paulo had caused to be engraved on eight tables of considerably larger size; but the eunuchs did not dare to present to the King a different edition to that for which he had asked, the more so that the legends of the two to some extent differed. In this way they remained two or three days in great perplexity, considering what to do. At last we offered to engrave for them a new map a good deal better than the former ones, intending to add many things of greater advantage to Christianity, and to do all this, at our own expense, within a month. The eunuchs were very well pleased with this offer, and wrote a memorial to the King, telling him that the old blocks were broken, and what we had suggested. The King, however, was unwilling to give us so much trouble; and instead ordered that, in addition to what was already available, we should be told to engrave for the use of the palace other blocks, to make up again, exactly, the 6-sheet map. So said, so done, in great haste; after which they printed off as many maps as they wanted, inside the precincts." This may be reckoned the fifth and last legitimate edition.

"It was no small favour that the King thus showed to this work of ours, at a time when many still abused the map, and either did not or would not believe the truth of its contents, the more so that in it are exposed various matters concerning the truth of Christianity and the falsities set forth by other religions. And as the map remains always in the King's apartments it is to be hoped that either he himself or his son, or other of his family, may some day wish to know or ask questions as to our Holy Laws, there being no other opening for us to speak to them, we being so confined, having speech of none [of them]; besides which, seeing their kingdom so small in comparison with so many others, it may be that they will somewhat abate their pride and condescend more readily to enter into relations with foreign kingdoms."*

There remains a question of special interest to our Society. The origin, namely, and validity of the legend by which Yule was led astray.

As Father Tacchi Venturi tells us ('Commentarij,' p. 143 n.), "Daniele Bartolo" (*op. cit.*, lib. ii. cap. vi., p. 15) "wrote that Ricci, in

* Bartoli, 'Dell' Istoria della Compagnia di Gesu. L'Asia,' Terza parte (Torino, 1825), Lib. ii., cap. ccxlix, pp. 475-477. Father Tacchi Venturi gives authority for saying that the map bore the stamp of the Company of Jesus "in our writing." The R.G.S. map bears the IHS clearly stamped upon it in more than one place.

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distributing the parts of the terraqueous globe, placed China in the middle;" and in a paper called "Idée Générale de la Chine et des premières Relations avec l'Europe," we find "on a dit que ce missionnaire disposa la carte de la Chine de façon que cet Empire se trouvoit placé au milieu du monde à fin de plaire à l'Empereur *ce qui est contraire à la vérité suivant le temoignage de tous les auteurs*" ('Mémoires Concernant,' etc., vol. 16).

The erroneous notion as to Ricci's reprehensible conduct in this matter gained credit from a passage in a very celebrated work. M. Henri Cordier in 'L'Imprimerie Sino-Européenne en Chine' (Paris, 1901) (*sub nom.* Ricci), quoting Riccioli's 'Almagestum,' p. xl., writes: "*Wan Kouo yu l'ou.* Grande 'Carte de l'Univers' de forme elliptique. Cette mappemonde fut imprimée sur soie, en douze grandes tables, par les soins du mandarin Ligotzum" (a curious jumble of errors). "Ricci la fit pour les Chinois; il s'y conforma à leurs habitudes, en placant la Chine dans le centre de la carte et en déposant les autres pays autour du Royaume du Milieu. Riccioli ajoute que, pour se conformer encore d'avantage aux idées des Chinois, Ricci, au lieu de suivre la projection stéréographique ordinaire, selon laquelle la partie centrale est vue plus en petit qu'aucune autre, y representa au contraire la Chine plus en grand. . . . Le continuateur de Léon Pinelo croit que cette mappemonde de Ricci est la même que Gemelli-Careri dit avoir vue dans la Bibliothèque de Peking."

If the first part of this story of Riccioli's misled Yule, the last statement did as much for Léon Pinelo's 'Continuateur,' Torre Nueva; for, had he either seen Ricci's map, or not read Riccioli, he could never have supposed that the map described by Gemelli-Careri was Ricci's.*

What Gemelli-Careri says is: "The [Jesuit] missionaries have a fine library in Peking of Chinese and European books; I saw there a map of the world in Chinese characters, but it is square, because this nation thinks the world has that shape, with China in the middle and all the other kingdoms round it, like islands."† This description fits various Chinese maps, notably one five-foot square, block-printed, shown me by Dr. Dahlgren, in the King's Library, Stockholm, and thought to be of 1700,

* Riccioli, Giov. Batta, Italian astronomer, born at Ferrara, 17 April 1598; died at Bologna, 25 June 1671. Entered the S.J. 6 October 1614. His most celebrated work, here quoted, is 'Almagestum novum, astronomiam veterem novamque complectens' (2 vols. Bologna, 1651), in which he demolishes the Copernican system—to his own entire satisfaction.

Léon Pinelo (Antonio de), a Spaniard, wrote 'Epitome de la Biblioteca oriental i Occidental, Nautica i Geographica,' etc. Madrid, 1629. A new edition was published at Madrid, 1737-1738, by A. Gonzalez de Barcia Carballido y Zuniga, in 3 vols., "añadido y enmendado . . . por mano del marques de Torre Nueva." Of this edition Brunet says, "malheureusement les titres des livres y sont tous exprimés en Espagnol et avec peu d'exactitude."

† 'Voyage du Tour du Monde,' vol. 4, p. 195. Ed. Paris, 1719. Churchill's Collect., vol. 4, p. 336. Original edition 'Giro del mondo,' part iv. fol. 198 (Napoli, 1699-1700), 6 vol. in 12°.

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but possibly the very map seen by Gemelli-Careri. In any case a map such as he describes can by no possibility have been the world-map of Ricci. This, however, by the way.

Reverting to the accusations brought against Ricci, he has Peking on the meridian 129° E. of Ferro, whereas the central (vertical) meridian of his map is 170° E., well out in the Pacific Ocean. China therefore is by no means literally "in the middle." Incidentally I may remark that this determination of the position of Peking, though some five degrees out, is far nearer the truth than the majority of European cartographers attained to for nearly a century after the date of Ricci's work, Peking being placed, in maps of the end of the seventeenth century, and even later, as far east as 150° and even 160° from Ferro. What Ricci did was merely to copy the European map he had with him, shifting the surface of the globe along the equatorial line until China was brought reasonably into view. Trigault indeed says, "He changed our projection somewhat and rejecting the prime meridian of the Fortunate Islands made the margins at the right and left parts of the map in such a way that the Chinese Empire might be seen in the centre of the map, not without applause and approval of the Chinese themselves." But this, as far as concerns the projection, is incorrect.

Riccioli declares that Ricci purposely exaggerated the magnitude of the Chinese Empire; but the native charge against him was, as we have seen, exactly the opposite—that he had made China too small! As to currying favour with the Emperor it is evident that Van-li never set eyes on Ricci's work until 1608, and that the Jesuits, so far from attempting anything of the sort, deliberately abstained from all endeavour to bring the map to his notice, for fear of the consequences.

To conclude: the fact that, in the Peking edition Ricci makes 170° not 180° the central meridian, coupled with what has already been said as to the position he gives China, constitutes, apparently, the sole basis of the legend accepted in all good faith by Yule; and, that being so, we must acquit Father Ricci, in this connection at least, of all charge of undue subservience. As to Chinese prejudice, there is nothing in the whole story, as revealed in the authentic pages of the 'Commentary' and of Trigault's 'De Christiana Expeditione,' at once so well attested and so honourable to China's *litterati* as the ready way in which large numbers of them accepted a view of the world by which all their cherished ideas as to the distribution of land and water and the relative importance of their own country were for ever demolished—ideas intimately bound up with that extra dose of racial vanity with which the inhabitants of the Celestial Empire are not unjustly credited.

NOTE I.

There is a curious echo of all this in a passage wherein De Mailla's editor, quoting another Jesuit at doubtful second-hand, attributes to Kang-hi the

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attitude falsely ascribed already to Van-li, an emperor of another century and different dynasty:

“Le père Laureati raconta à la Barbinais le Gentil [*sic*] dont on a un Voyage autour du Monde, & qui étoit à la Chine en 1716. . . . Sa vanité [Kang-hi's] ne pouvoit souffrir disoit-il, que dans les cartes géographiques on ne plaçât pas son empire au centre du Monde; & quelques Jésuites furent obligés pour lui plaire, de renverser l'ordre dans une carte Chinoise qu'il leur fit faire à Pe-king. Il rejetta deux globes d'une rare beauté, qu'un négociant Anglois lui avoit offerts, par la seule raison que la Chine n'y étoit pas située comme il le désiroit” (De Mailla, *II*, p. 366 n.; and see L. G. de la Barbinais, 'Nouveau Voyage autour du Monde.' Paris, 1728).

In the Amsterdam edition of 1731 this author's name appears as Le Gentil and De la Barbinais Le Gentil.

NOTE II.

Ricci's was not the only World-map made by the Jesuits in China. Verbiest made a large one in two hemispheres in 1672 (?), of which there are copies in the British Museum and elsewhere. From that preserved in the Upsala University Library a reduced facsimile was made in 1903 and published with text by K. Ahlenius, in 'Skrita K. Humanistiska Vetenskaps-Samfundet i Uppsala, 8, 4. In De Mailla (*II*, 580) I find the following:—

“L'année 1761 fut remarquable par de grandes rejoissances qu'on fit à la cour & dans les provinces pour célébrer la 50^e année de l'âge de Kien-long. Un Européen * profita de cette circonstance pour présenter à ce prince une mappemonde conforme aux expériences & aux découvertes les plus récentes. Cette carte, tracée sur de la gaze, occupoit dans les deux hemisphères, y compris la bordure, 13 à 14 pieds de longueur sur sept de hauteur. L'empereur fut si satisfait de cette mappemonde, que, trois ans après, il chargea le même Européen de tracer les deux globes terrestres & celestes, destinés à être placés à côté du trône dans la grande salle d'audience de son palais de Pé-king.”

A SHORT CHRONOLOGY OF FATHER RICCI.

6 Oct.	1552.	Born at Macerata.
24 March	1578.	Sets sail for the Indies.
13 Sept.	„	Reaches Goa.
7 Aug.	1582.	„ Macao.
10 Sept.	1583.	Settles in Shao-king.
Autumn	1584.	First edition of World-map.
28 Aug.	1589.	Settles in Shao-chow.
28 June	1595.	„ Nancian.
Sept.-Nov.	1598.	Abortive visit to Peking.
6 Feb.	1599.	Settles in Nanking.
	„	Second edition of World-map.
18 May	1600.	Leaves Nanking.
24 Jan.	1601.	Reaches Peking the second time and settles there.
Autumn	1602.	Third and fourth editions of World-map.
Jan.	1608.	The Emperor sees the map for the first time and orders twelve copies on silk. Consequent fifth edition or re-issue of fourth, with new blocks in place of some that had been broken.
18 May	1610.	Death of Father Ricci.

* “Le P. Benoit. Ce trait est tiré d'une Lettre écrite de Pé-king, le douze Septembre 1764; elle m'a été communiquée par M. l'Abbé Brotier.”

Annex 518

Nobuo Muroga, "The Philippines in Old Chinese Maps", *Philippine Historical Review*, Vol. 2 (1969)

THE PHILIPPINES IN OLD CHINESE MAPS

Nobuo Muroga *

The Chinese have had a fairly good knowledge of the western part of the South Seas since antiquity. But it was much later that the eastern half, including the Philippines, came to their cognizance.

According to *Sung-shih* (History of the Sung dynasty), chiefs of the P'i-sho-yé near Liu-kiu (or Ryukyu, but in this case it meant Formosa) made a raid on the coast of Chunchow, southern China, some time between 1174 and 1190 A.D. Evidently this account was derived from the *Chu-fan-chi* of Chau Ju-kua written in 1225. Probably this is the first reliable mention of the Philippines in Chinese historical literature, for the P'i-sho-yé has been identified with the Visayas.¹ Some scholars like Hirth and Rockhill considered the P'i-sho-yé as a tribe of Formosa.² But Prof. Toyochachi Fujita refuted their thesis and asserted that the P'isho-yé was no other than the Visayas.³ To-day, a majority of Orientalists concur with this view.⁴

This "invasion", however, was an accidental rather than a lasting contact between Chinese and Filipinos. Not until the middle of the thirteenth century did commercial relations begin and not until then did the Chinese come to know better the

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1. Térrien de Lacouperie was the first to propound this view. See this *The Language of China before the Chinese*, London, 1887, p. 127.

2. F. Hirth and W. W. Rockhill (tr.), *Chau Ju-kua: His Work on the Chinese and Arab Trade in the twelfth and thirteenth Centuries*, entitled *Chu-fan-chi*, St. Petersburg, 1912, p. 160, note 1.

3. T. Fujita, *Nanban Shurai ni truite* (On the Invasion of the Southern Barbarians) in his *Tozai Koshosi no Kenkyu* (Researches on the History of the Intercourse between East and West), volume for the South Seas, Tokyo, 1932, pp. 399-405. Fujita also states that according to Yeh Shih's *Sui-sin-wen-tsi* (Collection of his Works) the natives of Pai-p'u-yen (Babuyan Islands, cf. Hirth-Rockhill, op. cit., p. 160) invaded the coast of Fukien at about the same time as the Visayan invasion.

4. Sei Wada, *Mindai izen no Shinajin ni shiraretaru Philippine Shoto* (The Philippine Islands as known by the Chinese before the Ming period) in his *Toashi Ronso* (Collection of Essays on the History of Eastern Asia), Tokyo, 1942, pp. 507-544.

Filipinos. It was at the end of the Southern Sung period (1127-1278 A.D.) that Chau Ju-kua made mention of Ma-i (Mindoro) and other areas in the archipelago; and in the time of the Yuan dynasty (1279-1368 A.D.) Wang T'ai-yuan described the same places in his *Tao-i-chih-luo* written in 1350.

The Chinese used to divide the countries of the South Seas in two groups; that is, the Oriental and Occidental Seas, after the sea-routes, as we gather from *Tung-si-yang-k'ao* (On the Countries of the Oriental and Occidental Seas) written by Chang Shih in 1618. The Oriental group includes northern Borneo, the Philippines, Moluccas, etc., while the Occidental group covers Indo-China, the Malay peninsula, Sumatra, Java, the west coast of Borneo, etc. Such a grouping can be found in the *Tao-i-chih-luo* above mentioned, while Chau Ju-kua makes no mention of it. Several scholars, therefore, including Prof. Wada, are inclined to believe that the Oriental sea-route to the Philippines and the Moluccas from China was not fully developed until the Yuan period.⁵ Thus the Philippines appeared for the first time in a Chinese map at the time of the Yuan dynasty.⁶

Under the reign of the Yuan dynasty, Chu Ssu-pen, an eminent geographer, drew a large and exact map of China, the original of which has unfortunately been lost. In the following reign of the Ming emperors, another geographer named Lo Hung-hsien compiled an atlas titled *Kuang-yu-t'u* based on Chu's earlier map.⁷ The atlas was probably completed in circa 1554. Since the countries in the South Seas had not been represented in Chu's map, Lo Hung-hsien added to his atlas a map of these countries called *Tung-nan hai-i tsung-t'u* (General map of the Barbarians in the Southeast Seas).

This map, according to Prof. Aoyama, was taken from Li Che-min's *Sheng-chiao kuang-pi t'u* (Map of the World covered with Chinese culture) which is presumed to have been made around 1330 A.D.⁸ To our regret, Li's map is not extant, but that part about the South Seas was adapted in a later map

5. S. Wada, *op. cit.*, pp. 513-514.

6. Chinese cartography had been developed from very early times. The map of China made in the Tang (618-906 A.D.) and Sung (960-1127) periods do not include the Philippines.

7. Lo's work was really an atlas because he divided Chu's large map into many smaller maps and compiled into a generic whole.

8. Sadao Aoyama, *Gendai no Chizu ni tsuite* (On the Maps in the Yuan period) in *Tohogakuho*, Tokyo-8, 1938.

titled *Hun-i Chiang-li li-tai kuo-tu chih t'u* (Map of the United Territories and the Capitals of the Successive Dynasties) prepared in Korea in 1402.⁹ An examination of this map will show that the islands of the South Seas are almost identical with that of the *Tung-nan hai-i tsung-t'u* in the *Kuang-yu-t'u*.

The Philippines are represented in both maps as Ma-i etc., which are the names found in Chau Ju-kua's *Chu-fan-chi* and Wang T'ai-yuan's *Tao-i-chih-luo*, despite the fact that these two maps were made during the Ming period; it is curious to know that the South Seas represented therein were derived from knowledge gathered during the preceding or Yuan period. By the end of the Yuan dynasty, Ma-i (or Mindoro) had fallen into disuse and Lu-sung (or Luzon) had become better known to the Chinese.

An envoy from Luzon came to Nanking in 1372, according to the *Lu-sung ch'uan* (Description of Luzon) in the *Ming-shih* (History of the Ming dynasty) to pay tribute to the Chinese emperor.¹⁰ This is the first time that the name Luzon has appeared in Chinese historical literature. In 1405 the Chinese emperor dispatched a mission to Luzon and five years later, in 1410, messengers from Luzon, accompanied by those from P'ing-chia-shih-lan (Pangasinan), came to China on another visit.¹¹ But after these visits no envoys came from either Luzon or Pangasinan, and direct intercourse between China and the Philippines lapsed until the Spanish conquest of the archipelago in the 1570's.

Under these circumstances, Chinese maps prepared in the Ming period, specially during its first half, were content with out-of-date knowledge about the Philippines, drawing them still as Ma-i, etc.

As for the appearance of Luzon on Chinese maps, we cannot fix a definite date. The *Tung-nan pin-hai chui-t'u* (Map of the Barbarians in the Southeast Seas) may have been the

9. This map is preserved by Ryukoku University in Kyoto, Japan. Two other similar maps are to be found in Japan: the *Chugoku Zenzu* (Map of China) in the Tenri Library, and the *Daiminkoku-zu* (Map of the Ming Empire) in the Honmyoji Temple in Kumamoto. Regarding these maps, see Kazutaka Unno, *Tenri Toshokan shozo Daiminkoku-zu ni tsuite* (On the Anonymous Map of China owned by the Tenri Library) in the *Osaka Gakugei Daigaku Kiyo* (Bulletin of Osaka University of Liberal Arts), VI, 1957.

10. Chinese used to consider foreign traders as messenger bringing tribute to their emperor.

11. Envoys from Pangasinan also came to China in 1406 and 1408, according to the *Ming-shih*.

first to represent Luzon. This is one of the maps added to the *Huang-yu-k'ao* (On the Territory under the Rule of the Emperor) by Chang T'ien-fu compiled in 1557. *Huang-yu-k'ao* is also an atlas based upon the *Kuang-yu-t'u*, but the *Tung-nan pin-hai chu-i t'u* was a new work of the author and done in a rough manner.

Another atlas titled *Huang-ming chih-fang ti-t'u* (Atlas of the World under the Ming Empire) was published in 1634-35 by Ch'en Tsu-shou. This work also depended mostly on the *Kuang-yu-t'u*; but it contained a new map called *Huang-ming chao-kung tao-i t'u* (Map of the Barbarous islanders paying Tribute to the Ming Empire) which is similar to the *Tung-nan pin-chai chu-i t'u*. These are the earliest Chinese maps wherein Luzon has been included.

Towards the end of the Ming period, Europeans began to visit China, and European maps of the world, such as the works of Matteo Ricci and Ferdinand Verbiest, were published in China. Thus from the seventeenth century and on western knowledge about the South Seas as well as the Philippines became known in China and Chinese cartographers began including them regularly in their maps.

Annex 519

Leigh R. Wright, *The Origins of British Borneo* (1970)

CHAPTER II

BRITISH REACTION TO RIVAL POWERS
IN THE SOUTH CHINA SEA
DURING THE 1860s

IT WAS characteristic of British policy during much of the 19th century that questions of the security of the lines of empire were more often the subject of dispatches and petitions from the field than of government memoranda and decisions.¹ Officials in London were usually occupied with affairs in Europe and the day to day operations of the government departments. They were seldom found in the forefront of those groups demanding firm action on colonial or defence problems in the South China Sea much before the 1870s. Consuls, colonial officials, and merchants in the East were the prodders. They were more and more aided during the latter part of the century by individuals and groups in Britain with interests in the East, chambers of commerce, trade associations and retired officials and merchants. But the Government could, and did, act decisively. During the 1860s Britain's reaction to foreign activities in the South China Sea resulted in a more effective and clearer policy in Borneo than is usually ascribed to that period. Most narratives describe British neglect of the northwest coast and ignore the fact that during these years Britain initiated her forward movement in Borneo and established the necessary policy which led to British dominion. This reaction to foreign threats and its effects in Borneo is discussed here in detail. Before discussing the form and nature of the forward movement in Borneo, it will be worthwhile to describe the activities of the powers in the South China Sea and Britain's reaction to them during the decade of the 1860s.

In 1860 Britain took firm steps toward making the northwest coast of Borneo a British sphere of interest for strategic reasons. The Spanish and Dutch pressures from north and south respectively

¹ Thornton, *op. cit.*, ch. I, discusses this point with some thoroughness.

were for the first time treated in the light of French moves in Cochin China. France was recognized as the greater potential threat to Britain in the South China Sea. As we have seen, France had invaded Annam at Tourane in 1858 and in the following year at Saigon. Although she had withdrawn from the former place, there was every indication that she intended to stay in Saigon. In 1860 the small garrison at Saigon was besieged by an Annamite army.² France withdrew some 3,000 troops from her forces which had been committed to the Anglo-French effort in China and in 1861 succeeded in relieving the Saigon garrison and scattering the Annamite forces. As a result of the French moves in Cochin China, Britain renewed her interest in Borneo.

British reaction to Spain in Sulu

The Foreign Office, under Lord John Russell,³ gave its attention to the Spanish pressure on Borneo. The diplomatic exchange between London and Madrid over the Sulu question was resumed in the summer of 1860. On July 2, Spain officially proclaimed Sulu her vassal and reiterated her intention to exclude foreign trade from the Sulu territory.⁴ Later the same month, the Spanish Minister in London, Señor Isturitz, complained that British vessels were trading illegally in munitions with the island of Sulu in violation of the Spanish closure of that area to foreign commerce.⁵ In answering, Lord Russell reminded Spain of the 1852 correspondence on the question and of Britain's refusal to recognize Spanish claims to Sulu.⁶ His note continued, 'Her Majesty's Government see no reason for disturbing the decisions of their predecessors upon the question of independence of the Sultan of Sulu.' And, said Lord Russell, Spain had no right to obstruct British trade with Sulu. The Spanish Government now restated its claim to Sulu⁷ on the basis of the treaties of 1836 and 1851. But, Señor Isturitz assured Lord Russell that the prohibition against foreign commerce

² Cady, *op. cit.*, pp. 268-70.

³ Lord John Russell (1792-1878), 1st Earl Russell, Colonial Secretary 1839, May to July 1855, Foreign Secretary 1852-1853, 1859-1865, Prime Minister 1846-1852, and 1865-1866.

⁴ A copy of the proclamation is in FO 71/1. See also India Office to FO, 15 Feb. 1862.

⁵ Isturitz to Russell, 17 July 1860, FO 71/1.

⁶ Russell to Isturitz, 2 Aug. 1860, FO 71/1.

⁷ Isturitz to Russell, 9 April 1861, FO 71/1. (See also memo by Alfred Green, July 1873 in Conf. Print number 2262).

applied only to traffic in munitions and that Spain welcomed bona fide trade. That Spain's definition of bona fide trade was that trade which was confined to the four ports specified in the 1860 declaration was to become apparent during the next decade, when Britain came to grips with the commercial question. Lord Russell's policy in 1860 was basically a continuation of the 1852 policy of non-recognition but with important differences. Lord Malmesbury had not withdrawn from his non-recognition stand but he had weakened it by not pursuing the question. Upon the private request of the Under-Secretary of the Spanish Foreign Ministry to Lord Howden, the British Minister in Madrid, the question had been dropped. This was Lord Malmesbury's last word to Spain on the subject. The Foreign Office under Lord Russell was not only firm on the subject of non-recognition, but the 1860 correspondence set in motion an inquiry into Spanish claims.⁸ Lord Wodehouse wrote:

The bad use which Spain makes of her colonial supremacy as a means of shutting out other nations from trade is an argument in favour of not acknowledging her intentions. On the other hand, we have, I should think, very little interest in the independence of Sulu. But if we admit the right of Spain, we ought to know how far those rights extend and on what they are based.⁹

The British Consul in Manila, J. W. Farren, was asked for a report on the Spanish-Sulu treaty of 1851, the extent of the Spanish claims, and the 'inclination of Sulu'.¹⁰ Early in 1862 the India Office queried the Foreign Office on the status of Sulu. The Governor of Penang had received a letter from the Sultan appealing to Britain because Spain had not fulfilled the treaty of 1851.¹¹ After a long delay,¹² Acting-Consul W. N. Webb reported from Manila in 1864 that the Sultan was 'a paid military and political

⁸ Hammond minute on the Spanish note, 26 July 1860, FO 71/1.

⁹ Wodehouse minute on the Spanish note, 27 July 1860, FO 71/1. John Wodehouse (1826-1902), 3rd Lord Wodehouse, 1st Earl of Kimberley, Parliamentary Under-Secretary at the Foreign Office 1852-1854 and 1859-1861, Colonial Secretary 1870-1874, Secretary of State for India 1882-1885, 1886 and 1894, Foreign Secretary 1894-1895.

¹⁰ FO memo on Sulu, 22 March 1867, FO 12/33B.

¹¹ India Office to FO, 15 Feb. 1862, FO 71/1, with enclosure, Sultan of Sulu to Governor of Penang, 18 Oct. 1861.

¹² No reason seems to have been given for a 3 to 4 year delay. In March 1864, the Consul was reminded that the FO was still awaiting information on the Spanish position in Sulu. See FO to Farren, 21 March 1864, FO 71/1.

governor of a Spanish province', that the 'old Dattos [sic] are dead and salaries have not been paid to their successors'. He added, 'the new Sultan and chiefs, though naturally discontented under the Spanish yoke, seem quietly to submit to their fate'.¹³

Although Spain had never been able to subjugate the Sulu people but only to chastise them from time to time, there was some feeling in the East that Britain recognized the validity of the Spanish-Sulu treaty of 1851. London had instructed the admiral on the station to suspend steps with regard to Sir James Brooke's treaty with Sulu of 1849.¹⁴ The Navy had previously been asked to provide a ship, when convenient, to convey the Consul General to Sulu for the exchange of ratifications of the treaty. A ship was never thus provided. This feeling of tacit British recognition was not allayed by the government ministers in London. In the face of the Spanish-Sulu treaty and consular reports that the Sulu rajas were resigned to 'the Spanish yoke', and in the absence of any clear assertion of their independence by Sulu, there seemed nothing further that Britain could do at this time short of a complete recognition of Spanish sovereignty over the archipelago. This they were not willing to do. For as long as Spain had designs on the Borneo territory claimed by Sulu, Britain would not recognize Spain's claims in Sulu. Lord Clarendon, at the Foreign Office late in 1865, noted that nothing could be done except to rest on the decisions of previous Foreign Ministers.¹⁵

Meanwhile, British commerce with Sulu was decreasing. It looked as though the prediction of St. John in 1851 was to come true. In October 1863 Governor Cavenagh of the Straits Settlements wrote to the Government of India at Fort William that trade between the Straits and the Sulu Islands had almost ceased. The following year Acting-Consul Webb reported substantially the same, that the trade with Sulu 'which before 1851 had been considerable', was now an insignificant traffic with Zamboanga only.¹⁶ Despite the loss of trade, much of which had been the result of the depredations of the Illanun and Balanini pirates, and not the direct

¹³ Webb to Murray, summer 1864, 7 Oct. 1864; Webb to Russell 24 Oct. 1864, FO 71/1.

¹⁴ Webb to Russell, 24 Oct. 1864, FO 71/1. See also Malmesbury's 1852 decision that the matter should 'sleep', p. 22, note 70.

¹⁵ FO memo, 22 March 1867, FO 12/33B.

¹⁶ Cavenagh to Fort William, 23 Oct. 1863, and Webb to FO, summer 1864, FO 71/1.

result of the Spanish restrictions, there were Englishmen in the East who were sympathetic toward Spain's attempts to conquer Sulu. It must be remembered that the Philippine southern islands were habitually attacked and devastated by pirates. These pirates found a ready welcome in the Sulu Islands and they respected no nationality when choosing their victims. Some comfort must have been taken when the Spaniards began successfully ferreting out the pirates from their strongholds in the islands. If the Spaniards merely meant to subjugate the Sulu, suppressing piracy and lawlessness on the way and no more, they would have been applauded in many quarters. This may have been the view of officers in the Government of India when they wrote that the Spaniards in Sulu were not harmful to British interests and that 'control of the Spanish Government over Sulu, as far as it may prove effective, is likely to prove beneficial'.¹⁷

Despite the fears and suspicions of British traders and officials in the East, the Spanish hold over the area was tenuous. Their command of the waters around Sulu and northern Borneo was ineffective. The 1858 expedition succeeded in establishing small military and naval stations at Balabac, Basilan, and Jolo Islands. Although ravaged by disease and by sporadic raids of the Sulu people these bases were maintained and intact in the mid-1860s. Webb was able to report in 1864 that in his opinion, however, Spanish sovereignty was only nominal.¹⁸

Conflicting claims in northern Borneo

As we have seen, Spain's ambitions in Sulu were only mildly irritating to Britain. The real concern lay in the Spanish attitude toward the northern part of Borneo to which she might have some legitimate claim were her suzerainty over Sulu recognized. The Sultans of Sulu had a claim to that area dating from the early 18th century. Sometime during the 17th century, two rivals for the throne of Brunei, Abdul Mobin and Muaddin, both grandsons of Hasan the ninth Sultan of Brunei and reportedly the 'most arbitrary, powerful, and magnificent of the sovereigns of Borneo'¹⁹ who ruled around 1600, were involved in a civil war. After twelve years of

¹⁷ India Government to India Office, 31 Aug. 1865, FO 71/1.

¹⁸ Webb to Russell, 24 Oct. 1864, FO 71/1.

¹⁹ Hugh Low, 'Selesilah (The Book of the Descent)', *JRASSB*, 5, June 1880, p. 26.

sporadic fighting the Batara of Sulu arrived on the scene with five war prahus filled with warriors.²⁰ Both cousins sought the aid of the Sulu. But Muaddin, who apparently had the more legitimate claim, was successful in bargaining with the Batara. He received his help by offering him Brunei territory in northeast Borneo from Pulau Sebatik on the east coast to Kimanis on the west coast.²¹ Muaddin, with the aid of the Sulu—some say the Brunei people looked on while the Sulu people did the fighting—suppressed his rival and established his rule, without, however, the royal regalia which Abdul Mobin, as a last defiant act, stuffed into cannon and fired out to sea. Sulu had little success in claiming northeast Borneo.²²

Indeed, the legitimacy of the Sulu claim to the territory is in considerable doubt partly because of the unreliability of *tarsilas* such as 'Selesilah', which in many cases are nothing more than written-down legends to enhance the status of the royal house which produced them. Succeeding Sultans of Brunei have denied that northern Borneo was given to Sulu, and only the weight of Sulu tradition supports the claim. The weight of Brunei tradition challenges it.²³

This was the state of things when Alexander Dalrymple, representing the British East India Company arrived in Sulu late in 1760. He was charged by the Madras government with the establishment of a factory in the Sulu Seas in an attempt to exploit the trade of that area and to attract the junk traders from northern China who frequented the islands.²⁴ In 1761 Dalrymple entered into an understanding with the Sultan of Sulu for the grant of a site for a station and he negotiated a treaty of friendship and commerce.²⁵ He selected Balembangan Island as the proper

²⁰ Batara is the Sanskrit title for a great ruler. This may have been the Sultan but more likely one of his Rajas.

²¹ See Low, *op. cit.*, p. 15, and H. R. Hughes-Hallet, *op. cit.*, p. 33. Hughes-Hallet says it is not clear whether the area was granted or seized.

²² Alexander Dalrymple, *A Full and Clear Proof that the Spaniards can have no Claim to Balambangan*, London, 1774. Dalrymple puts the date of the Brunei 'cession' to Sulu as 1704, p. 31.

²³ See the author's paper 'Historical Notes on the North Borneo Dispute', *Journal of Asian Studies*, xxv, May 1966, pp. 471-84.

²⁴ V. Harlow, *The Founding of the Second British Empire*, London, 1952, pp. 70-97, gives a clear account of the East India Company's Borneo adventure.

²⁵ *Ibid.*, copy in *P.P.*, 1882, LXXXI, pp. 530-31. See also India Board to Granville, 11 Feb. 1852, FO 71/1. Dalrymple, *op. cit.*, p. 32, gives the date of the treaty as 28 Jan. 1761.

location for a Company establishment. The island was ceded to Britain in September of the following year. When Britain occupied Manila soon after, Dalrymple was instrumental in freeing the legitimate Sultan of Sulu, Alimuddin, from his exile in Manila and re-establishing him in the islands in succession to the usurper with whom Dalrymple had treated.²⁶ By Sulu-British treaties in 1763 and 1764, not only were the former agreements confirmed but the Sultan awarded to the East India Company his territorial claim in northern Borneo, from Kimanis River on the northwest coast to Trusan on the northeast side. The British also were granted the islands of Balembangan, Palawan, Banggi, Balabac, and Manak.²⁷ This large cession was confirmed and further defined by the Sultan in 1769 when Captain Savage Trotter of the East India Company visited Sulu. According to Captain Trotter, the Sultan was 'extremely solicitous to have a settlement of English absolutely effected in some part of his domain as a balance against the power of the Dutch or Spaniards'.²⁸

The Company formed a factory on Balembangan in 1773. It was destroyed by Sulus early in 1775. In 1805, after Company officials in the east re-established a settlement, the island was abandoned on orders from the Court of Directors in London.²⁹ In 1845 Balembangan was recommended by Captain Bethune as a location for a British naval and coaling station. But partly because

²⁶ Saleeby, *The History of Sulu*, pp. 72-79.

²⁷ *Ibid.*, grant of 2 July 1764; treaties of 23 Feb. 1763 and 28 Sept. 1764. See also India Board to Granville, 11 Feb. 1852, FO 71/1. But see Dalrymple, *op. cit.*, pp. 29 and 33. Most accounts follow Saleeby. Dalrymple was not clear himself whether Sultan Alimuddin I was in Manila 'under restraint'. He noted that the Sultan was a professed Christian and thus could not hold the 'regal dignity' in Sulu, a Muslim state. He further said that Alimuddin had 'abdicated' but it is unclear whether this was a wilful act or an automatic result of his profession of Christianity. In any event a usurper, albeit of the royal line, Bantilan (called Mohammad Muizzud Din), had ruled and granted Balembangan to the Company. Later, according to Dalrymple, his son, as Sultan Alimuddin II, granted northern Borneo as well. In June 1764 Alimuddin I was reinstated 'by the natives' and confirmed the grants on the condition that his son Datu Saraphudin should govern the territories in Borneo on behalf of the Company. Recent studies by the Philippine historian Horacio de la Costa give a clearer picture of Alimuddin I and confirm much of Saleeby's account. See his 'Muhammad Alimuddin I, Sultan of Sulu, 1735-1773', *Philippine Historical Review*, vol. I, no. 1, p. 95.

²⁸ Copy of Capt. Trotter to Court of Directors, 24 Dec. 1769, FO 71/1. The Sultan then confirmed the cession 'from Kiminas on the west side, in a direct line to Towson Abai on the east side thereof with all the lands, places, and people within those limits and also all the islands to the northward of the said island of Borneo as Balambangan, Palawan . . .'.

²⁹ Hall, *op. cit.*, pp. 427 and 431.

of the failure of the East India Company to establish a permanent factory there, Labuan was chosen instead.³⁰ At the time of the Spanish expedition of 1858, which established a garrison on Balabac Island, there were indications that Spain was about to move upon the mainland of northern Borneo. Consul St. John wrote in January 1858 that Spain was determined to extend her territory and was anxious to appropriate the north of Borneo. He noted, 'a fine seam of coal and a tin mine have lately been discovered in Marudu Bay, which partly explains this movement from Manila'.³¹ Later in May, he reported to Lord Malmesbury the Spanish landing on Balabac and their 'meddling with the mainland'.³² The following summer he wrote,

Señor Cuarteron (a Spanish missionary priest in Borneo) assures me that Spain fully intends to take possession of the east coast of Borneo. I know not what authority he has for this statement, though the governor-general appears to be in correspondence with him and the priest may be indiscreet.³³

At one point St. John suggested the formation of a convict settlement on the northwest coast to implement British rights there. St. John, a careful observer, continued his warnings in this vein until his appointment to Haiti in 1861.³⁴ He urged Lord Malmesbury and later Lord Russell, to state to the Spaniards in definite terms that the entire northwest coast of Borneo could be considered under British protection as a result of the Sulu cession in the previous century. 'Were Spain informed that this were the only view of the question that Britain could allow, it would probably check her designs', he wrote in 1859.³⁵ He continued,

It should not be forgotten that the French are occupying the western shores of the China Sea, and that should Spain be allowed to seize the north of Borneo, she will possess the eastern shore, besides commanding all the important eastern straits.

Later in the year, St. John predicted the gradual extinction of British interests in Borneo unless Britain took a firm stand.

³⁰ Bethune to Adm., 1 Oct. 1845, FO 12/3; FO memo of 25 June 1845, FO 12/4.

³¹ St. John to Clarendon, 8 Jan. 1858, FO 12/25.

³² St. John to Malmesbury, 21 May 1858, FO 12/25.

³³ St. John to Malmesbury, 17 Aug. 1858, FO 12/25.

³⁴ See especially St. John's memo to FO, 9 Aug. 1860, FO 12/27.

³⁵ St. John to Malmesbury, 4 Feb. 1859, FO 12/26.

Lord Russell's note to Spain in August 1860 precluded a discussion of Borneo claims at this time by focussing upon the Sulu Islands themselves and stating firmly that Britain continued to recognize the independence of the Sultan.³⁶ Although this note was in answer to the Spanish announcement of the restriction of Sulu commerce and had the desired result of forcing the Spaniards to back down on this issue,³⁷ it reserved the settlement of the northern Borneo question for a later date. There is little doubt that Britain at this time considered northern Borneo to be within her sphere of predominance. At any rate, the fact is that Spain had her hands full in maintaining her small gains in the Sulu Archipelago. She made no moves onto the mainland at this time, with the exception of a single foray on the shore of Marudu Bay.

The priest Cuarteron, of whom St. John speaks, was himself a subject of some speculation, and seemed to the British in Labuan to be but another indication of Spanish ambitions in northern Borneo. He had been a trader in the islands and had reportedly salvaged a fortune from a wrecked Spanish vessel—one of the many ships which plied between Mexico and the Philippines carrying silver dollars. In 1857, after some time spent in Rome, Father Cuarteron established himself in Borneo as Apostolic Prefect and the leader of a handful of Italian missionary-priests. Cuarteron became an agent for the Spanish Philippine Government.³⁸ The same year he is said to have surveyed the island of Balabac for the Spaniards, preparatory to their garrisoning that place in 1858. In the role of Spanish agent, Cuarteron appears to have provided rumours and misinformation for the British officials in Labuan. In June 1859, he was in Manila and took the effort to write to St. John that the threatened occupation of northern Borneo by Spain was 'simply a boast of the ministers at Madrid'. He said, 'it is even in contemplation to withdraw their settlement from Balabac on account of the great sickness; five hundred troops and others having died in six months'.³⁹ Cuarteron established a mission at Gaya Bay and according to St. John, did not conceal his intention

³⁶ See above, pp. 31–32.

³⁷ Madrid informed the British Government in April 1861 that their closure of Sulu territory only applied to munitions and arms and not to general commerce, which they would encourage. See memo. by Alfred Green, July 1873, FO 71/5.

³⁸ Spencer St. John, *Life in the Forests of the Far East*, i, 370; Callaghan to FO, 7 May 1866, FO 12/33A; Usher to FO, 26 May 1876, FO 71/7.

³⁹ St. John to Fitzgerald, 18 June 1859, FO 12/25.

of fortifying his village, collecting all the Manila men scattered in the country, defying the local authorities, and gradually making it the commercial depot of the coast.⁴⁰ Owen Rutter states that Father Cuarteron's main purpose was to free Christian slaves of whom there were apparently great numbers along the northern coast of Borneo.⁴¹ His most valuable service to the Spanish authorities, however, was in furnishing intelligence on the movements of British and German trading vessels which in the late 1860s and 1870s ran the Spanish blockade and traded with the Sulu Islands. Several of these ships were intercepted by Spanish gunboats as a result of Father Cuarteron's timely intelligence.

In the mid-1860s, therefore, two European powers and two East Indian governments each had some claim to the northern part of Borneo—north and east of Brunei and north of the Dutch east coast possessions. As for the sovereignty claims of Sulu and Brunei, neither was able to wield anything approaching effective control of the area. Datus and river chiefs owing nominal allegiance held some areas along the northwest coast between Kimanis and Pandasan. For example, Muda Damit son of James Brooke's good friend Muda Hassim, held the Putatan River districts. But most of these local chiefs considered themselves independent and were so recognized later on when the British North Borneo Company commenced buying these enclaves and granting pensions to the rulers. From Pandasan around the northern tip and eastward to opposite the Sulu Islands, Sulu datu and independent chiefs controlled many rivers. Owen Rutter maintained that the Sultan of Sulu was actually in possession of these lands.⁴² Although Illanun pirates who were in alliance with Sulu had occupied several locations in this area, such as Marudu Bay and Tunku, presumably with the consent of or despite Sulu, and could dominate the coast at will, there is little evidence to support a notion that Sulu ruled the territories. The possibility that Britain might claim northern Borneo on the strength of the Dalrymple treaties was doubtful. The area was officially ignored after the East India Company finally abandoned Balembangan in 1805. As a matter of record, British officials were even ignorant of the existence of the Dalrymple treaties until 1852 when they were produced after much

⁴⁰ St. John to Clarendon, 8 Jan. 1858, FO 12/25.

⁴¹ Rutter, *op. cit.*, p. 339.

⁴² Rutter, *op. cit.*, p. 120.

searching at the India Office and in the archives of the Government of India at Bombay.⁴³ Any pretension to the area may have been forfeited by the apparent abandonment or lack of continuous implementation of the 1764 Sulu cession to the Company, although Consul St. John reported that as late as 1849 the Sultan of Sulu considered the Dalrymple treaties in force.⁴⁴ In 1852, said a Foreign Office memo, 'it would appear that the British Government were of the same opinion'.⁴⁵ The Sultan himself reminded the Foreign Office of the 1764 treaty early in 1859.⁴⁶ Yet, in 1866 Sulu conveniently set aside any recognition of British ownership of northern Borneo when the Sultan protested against the Brunei grant of northern Borneo territory to Americans.⁴⁷

Both the Foreign Office and the India Board had been unwilling to admit the Spanish claim of sovereignty over Sulu in 1852 because of the undefined status of Sulu's relationship to northern Borneo. Lord Russell continued this policy in 1860. By 1865 both privately admitted that Spain's claims to the Sulu Archipelago were strong from the standpoint of propinquity and the apparent submission of the Sultan.⁴⁸ For more than a decade after 1865 no attempt was made to settle the status of Sulu. Then the question was taken up only after the entrance of Germany and the United States upon the scene required that British preponderance in northern Borneo be further established. The Foreign Office correspondence on Sulu ends abruptly in August 1865 and there are no further entries until 1871.

British policy toward Dutch Borneo

In 1858 Consul St. John had warned the Foreign Office of the increasing Dutch pressure on the northwest coast of Borneo.⁴⁹

⁴³ FO memo, 10 Feb. 1852; India Board to Granville, 11 Feb. 1852; Government of Bombay to Secret Committee, 3 Jan. 1852, FO 71/1. Bombay attested to the treaties of 20 Nov. 1761 and 28 Sept. 1764, between Dalrymple and the Sultan of Sulu.

⁴⁴ St. John to Palmerston, 18 July 1851, FO 71/1.

⁴⁵ FO memo of 19 Dec. 1865, FO 12/32B.

⁴⁶ Sultan of Sulu to FO, 24 Feb. 1859, FO 12/26. See also FO memo of 19 Dec. 1865, FO 12/32B.

⁴⁷ Callaghan to Clarendon, 29 Jan. 1866, FO 12/33A; Low to FO, 11 Jan. 1867, FO 12/33B.

⁴⁸ India Government to Indian Office, 31 Aug. 1865, FO 71/1; see above, pp. 32-33.

⁴⁹ St. John to Clarendon, 8 Jan. 1858 and to Malmesbury, 21 May 1858, FO 12/25.

The same year Sir James Brooke in England expressed his fear of Dutch intentions with respect to Sarawak. He believed that the Dutch looked forward to the acquisition of Sarawak after his death. He so warned Lord Clarendon at the Foreign Office.⁵⁰ He urged Britain to prevent any Dutch encroachment beyond the limit of the territory they controlled. This move was the beginning of what became a five-year campaign to gain British support for his Borneo venture and will be discussed in a subsequent chapter. Here it is only necessary to note that Brooke offered Sarawak to Britain and received a cool reception at the Foreign Office. Lord Clarendon had assumed an attitude of aloofness toward Sarawak in 1855 and 1856.⁵¹ Two years had not changed that attitude. Brooke received little sympathy, but Parliamentary Under-Secretary Shelburne⁵² thought the matter worth some attention. He wrote,

I do not see any reason for being jealous of Raja Brooke, and if British interests as a whole are better forwarded by backing him up . . . he might be a better channel than any other we could find for carrying out some scheme which would virtually put at our disposal the advantages in question.⁵³

The advantages in question referred to the strategic position of Sarawak and its coal resources, which were reportedly extensive.⁵⁴ But two years later a new Foreign Secretary, Lord Russell, and the French advance in Cochin China, became new elements in the situation and influenced the mood of the Foreign Office. The subject was brought to the fore by Brooke's friend and former secretary, Consul St. John. At home on leave, St. John submitted a memorandum to the Foreign Office.⁵⁵ He pointed out that Sarawak was exposed to Dutch interference. He added,

A glance at the map will show the great value of the northwest coast of Borneo; it commands the China Seas. It must be remembered that the French are strongly fortifying Saigon in the southern portion of the

⁵⁰ FO memo of a conversation with Brooke, 14 Jan. 1858, FO 12/25. Paradoxically, Brooke approached Holland with an offer of Sarawak the following year. See below, p. 66.

⁵¹ See above, pp. 26-27.

⁵² Henry Petty Fitzmorris, Earl of Shelburne, Parliamentary Under-Secretary, July 1856 to Feb. 1858.

⁵³ FO memo. . . . 14 Jan. 1858, FO 12/25.

⁵⁴ St. John to FO, 31 May and 28 Nov. 1856, FO 12/23. See also Borneo Company to Malmesbury, 22 Dec. 1858, FO 12/25.

⁵⁵ Memo. by St. John, 9 Aug. 1860, FO 12/27.

Cambodian peninsula . . . a glance at their probable future would be interesting . . . the Spaniards have all the Philippines and have lately extended their power to Balabac off the north of Borneo; with the French on one side, and the Spaniards on the other, the China Sea will be closed against us if we lose the northwest coast of Borneo.

According to St. John, dependence upon naval superiority was a mistake. Britain should take possession of the northwest coast, 'commencing with Sarawak and gradually acquiring by purchase the districts of the north'.

While St. John's memo was aimed at supporting Raja Brooke's campaign, it had the effect of alerting the government to the strategic position of Borneo, *vis-à-vis* the French in Cochin China. The Foreign Office was inclined to take a less alarming view of Dutch capabilities than Brooke or St. John. Dutch colonial rule was an evil, wrote Lord Wodehouse, the Parliamentary Under-Secretary, in commenting upon St. John's memo.⁵⁶ But the evil had been much reduced. 'The Dutch are and must remain too weak to cause us any alarm', he added. But not so the French. Any extension of French rule to the archipelago would be a threat to India and Australia and to British interests in the South China Sea. Lord Russell agreed with Wodehouse's analysis.⁵⁷ The Foreign Office clearly favoured a weak Holland in the archipelago, including southern Borneo, rather than a strong France. But while the Foreign Office could not pursue St. John's suggestion⁵⁸ to take over Sarawak, it was decided to keep a close watch over the Borneo coast because of the growth of commerce and the probability that its strategic importance was increasing.⁵⁹

In 1866 when the Foreign Office considered negotiating a new treaty with Holland covering possessions and trade, it decided not to include any change in the status of Borneo that would interfere with complete liberty of action with respect to Sarawak. The Colonial Office concurred.⁶⁰ Nicholas Tarling has suggested that the Admiralty's declaration of the strategic importance of the

⁵⁶ Memo. by Wodehouse, 18 Aug. 1860, FO 12/28.

⁵⁷ Minute by Lord Russell on the Wodehouse memo, 18 Aug. 1860, FO 12/28.

⁵⁸ 'The disadvantages greatly predominate', wrote Lord Wodehouse in his memo of 9 Aug. 1860.

⁵⁹ FO to St. John, 17 Nov. 1860, FO 12/27; FO to Callaghan, 27 May 1861, FO 12/29.

⁶⁰ FO to CO, 20 Feb. 1866, and CO memo of 21 Feb. 1866, CO 273/7.

northwest coast was the decisive factor.⁶¹ A close reading of the Admiralty report reveals that the Lords of the Admiralty, while acknowledging the importance of the coast, felt that Britain could not reasonably oppose the formation of a French, Dutch or American naval station in Borneo. They were adamant in feeling, however, that Britain in any agreement with Holland should not be precluded from acquiring possession while other powers were free to do so. The Colonial Office advice was perhaps more to the point than the Admiralty's. Sir Frederick Rogers, the Permanent Under-Secretary, urged the Foreign Office not to 'fetter the future policy' of Britain as to steps to be pursued in 'unknown circumstances'.⁶² The Foreign Office then informed Holland, in the same phrases used by Rogers, that Borneo was not to be included in any settlement.⁶³ The Anglo-Dutch treaty of November 1871, the so-called Sumatran Treaty, omitted any mention of Borneo.

As for Raja Brooke's fears, Consul Ricketts wrote in 1864 from Sarawak,

Notwithstanding the jealousy which is said to exist on the part of the Dutch government toward English influence in these parts, the Dutch authorities at Sambas appear to always have manifested a spirit of friendship and cordiality toward the Raja's government. It has often been asserted that on the death of the Raja, the Dutch would take possession of Sarawak; but I do not imagine such a line of conduct, however much it may be desired by some, would meet with any chance of success.⁶⁴

The following year, Ricketts recorded that the Netherlands Indies Government and Sarawak had cooperated in settling a dispute between people on the border of Sambas and Sarawak. He suggested that thus the Dutch tacitly recognized Sarawak.⁶⁵

Sarawak did not fall into Dutch hands following Sir James' death in 1868. Apparently all was peaceful there for, when the Governor of Labuan visited Sambas and Pontianak in 1869, he reported no evidence of an impending move toward Sarawak.⁶⁶

⁶¹ N. Tarling, 'British Policy . . .'. He cites Admiralty to FO, 13 Jan. 1866, FO 37/450 (also in Conf. Print 1737).

⁶² Rogers to Hammond, 5 Feb. 1866, FO 37/450 (Conf. Print 1737).

⁶³ Clarendon to Milbanke, 30 March 1866, FO 37/450 (Conf. Print 1737).

⁶⁴ Ricketts to FO, 25 Sept. 1864, FO 12/32A.

⁶⁵ Ricketts to FO, 15 May 1865, FO 12/32B.

⁶⁶ Pope-Hennessy to FO, 6 July 1869, FO 12/34B. Governor Pope-Hennessy was impressed by the active and intelligent administration of the Netherlands government in Borneo.

French Expansion in Cochin China and Cambodia

While Britain would undoubtedly resist any French move to acquire a footing in the archipelago she was not prepared to obstruct France in Indo-China.⁶⁷ The French Government's attitude towards expansion in Indo-China was one of indifference from about 1861 to 1873. It depended upon the vicissitudes of French affairs in European politics. Emperor Napoleon III was involved in his Mexican adventure during the early years of this period. War with Prussia took up the latter years. Finally, the disruption and prostration brought on by defeat in war allowed very little time for the pursuit of a more vigorous Far Eastern policy before the mid-70s. After 1867, however, French commercial circles began to take a new interest in the economic prospects of Indo-China and to dream of an outlet for trade with western China. Doudart de Lagrée, Francis Garnier and Jean Dupuis explored the Mekong and Red rivers between 1866 and 1872 seeking a route to Yunnan. As often happens, it was from the officials in the field that the stimulus for the forward movement in Indo-China came. Enthusiasm for furtherance of French influence in the Far East was centred in the Navy. We have already noted the prominent role which the French Navy took in earlier ventures in Annam. It was the Navy which wanted to recoup French prestige after the withdrawal from Tourane and a poor showing in China. It was an admiral who recommended the retention of Saigon.⁶⁸ Henceforth, the admirals ruled at Saigon with strong support from the Ministry of Marine in Paris—the one branch of the French state which continued a fairly consistent interest in Indo-China.⁶⁹ The attitude of the Emperor was inconsistent and his interest was elsewhere. His Ministry of Foreign Affairs was unwilling to take the lead in a strong forward policy in Indo-China. Indeed when Lord Russell inquired about the French intentions in Saigon, the Foreign Minister, Thouvenel, not an enthusiastic

⁶⁷ B. L. Evans, 'The Attitudes and Policies of Great Britain and China toward French expansion in Cochin China, Cambodia, Annam and Tonking 1858-1883', (unpublished Ph.D. thesis, University of London 1961), p. 41. Evans cites an 1858 memo.

⁶⁸ Cady, *The Roots of French Imperialism . . .*, p. 268, report of Adm. Page.

⁶⁹ Cady, pp. 269, 279. In 1860 Chasseloup-Laubat was appointed to the Ministry of Marine. It was he who pressed incessantly for action in Indo-China until he was succeeded in 1867 by the equally enthusiastic Rigault de Genouilly. Admirals Charner and Bonard and later La Grandière ruled successively in Saigon.

imperialist, answered that it was contemplated to withdraw from Saigon.⁷⁰ The Navy then was inspired to spread the glory of France and French culture and they were especially eager for some practical achievements to help redress the imbalance when compared to the standing of the British in the East. Too often, thought naval officers, French forces had to suffer the ignominy of operating under British naval dominance.

King Tu-Duc of Annam was finally forced to treat with France in 1862. In the meantime French officials were pushing hard toward Cambodia and Siam. Lord Clarendon in the Foreign Office raised a mild protest with Paris against the exclusive nature of France's protectorate treaty with Cambodia, but did not pursue the subject when reassured by the French Foreign Minister Drouyn de Lhuys.⁷¹ Evans notes that British protests died with Clarendon.⁷²

French approaches to Siam were of much interest to the British. During the 1860s, France succeeded in obtaining a treaty with King Mongkut confirming the French protectorate over Cambodia and granting to Siam the northwestern provinces of her alleged vassal, Battambang, and Angkor (Siemriap). The treaty was obtained, however, only after two stormy French missions had wrangled with the Siamese and after Siam had attempted to draw Britain into the negotiating arena.⁷³ Britain in fact had been the silent member at the treaty negotiations. While Siam tried to attract her to a participating role, the French role was to increase their prestige in Siam to an equal basis with the British. Britain was fortunate in having able Consuls in Bangkok in the persons of Sir Robert Schomburgk in 1861 and his successor, Thomas G. Knox, in 1866. These officials while closely watching the Franco-Siamese proceedings refused under instructions to become involved and repeatedly announced Britain's neutrality in the relations.

While Britain did not relish the French advance in Indo-China, her protests were half-hearted. At the time, to be sure, Britain was much occupied by affairs in China and India. Reaction to the Cambodian treaty has already been noted. Plenty of warning of the

⁷⁰ Cady, *op. cit.*, p. 263; Evans, *op. cit.*, p. 43.

⁷¹ Clarendon to Grey, 25 Nov. 1865, FO 69/39, as cited by Evans.

⁷² Evans, pp. 74-78.

⁷³ FO 69/39, *passim*; and B. S. N. Murti, 'Anglo-French Relations with Siam 1876-1904' (unpublished Ph.D. thesis, University of London 1952), pp. 127-9. Murti deals extensively with the Anglo-French rivalry on mainland Southeast Asia.

danger to British interests inherent in the French advance had been sent to London by officials in the East. Before the French capture of Saigon, while they were yet bogged down in Tourane, the India Office urged Britain to open up trade with Cambodia from Saigon and Pulau Condore.⁷⁴ This would prevent the closure of the area to British commerce and perhaps forestall any French move in that direction. There was a tendency to tolerate French domination over parts of Annam as long as it was within limits. That is, not in the direction of Laos and Siam. In 1861, on the arrival of a French mission in Bangkok, Consul Schomburgk wrote to the Foreign Office

. . . with the sea coast of Cochin China, and Cambodia in her possession, the trade between the British East Indies and the China Sea may be sadly embarrassed should differences unfortunately arise between Great Britain and France.⁷⁵

Later, Consul Knox kept London informed of the Franco-Siamese proceedings and was able to interpret the implication to Britain of the French moves. The British government approved the neutral, but observant, attitude of both Schomburgk and Knox. It can safely be inferred that Britain was not adamant in her opposition to France to the extent of challenging her in Cambodia as long as the independence of Siam remained intact.⁷⁶

From the other side of the South China Sea, in northwest Borneo, more warnings were addressed to London concerning the adverse effects which the French gains in Indo-China would have on British interests in the South China Sea. Consul Ricketts in Sarawak and St. John in Brunei wrote of the French menace. St. John returned to London in 1860 and in August submitted the memorandum to the Foreign Office which we have already noted. While St. John's main purpose in the memorandum was to urge a protectorate over Sarawak, yet his warning of the French movement represented the most respected and reliable opinion among British officials in Borneo. From no less an official in the East than Governor-General Elgin in India, who had recently dispatched Governor Cavenagh of Singapore to carry out a mission of investigation at Sarawak, came a similar warning.⁷⁷

⁷⁴ Evans, p. 41. Evans cites an India Office memo of August 1859.

⁷⁵ Schomburgk to Russell, 26 Sept. 1861, FO 69/39.

⁷⁶ Evans, pp. 94-98. Both Lord Russell and later Lord Stanley commended Consul Knox for ably representing the British position.

⁷⁷ Lord Elgin to Lord Russell, 8 Jan. 1863, FO 12/35.

I am disposed to think that the acquisition of Saigon by the French and the persistent endeavour of the Dutch authorities to cripple British trade . . . give increased importance to the preservation of the independence of Sarawak as a matter affecting British interests. I may observe on the former point, that in the event of war with France, the possession of this territory by a hostile power would tend to obstruct the Palawan passage and thus add to the embarrassment to which British trade with China would inevitably in such a case be subjected.

After 1860 no responsible official suggested challenging France in Indo-China, and her position of predominance there was considered a *fait accompli*. Yet the threat of the French footing in Indo-China was not lost on the Foreign Office. Always after this time, any suggestion of a diminution of British influence in the South China Sea was countered by the query, 'what would the French do?'. To obstruct the French advance in Indo-China was not practicable, for could Britain deny to France what she herself was doing in India. Lord Wodehouse in commenting upon Consul St. John's memorandum wrote,

The jealousy of the French seems to be excessive—can we pretend to occupy the whole of southern Asia except Persia, Arabia and China; yet that is what we must do if we are to keep out French, Dutch, and Spaniards.⁷⁸

The Admiralty freely admitted that France in Indo-China commanded one of the great routes to China. But it noted that Borneo commanded the other.⁷⁹ The India Office for its part viewed the French moves without anxiety or concern so long as Siam remained independent.⁸⁰ The new French position had to be lived with but watched closely. G. F. Hudson contends that the Anglo-French alliance in the Crimea and China in the 1850s moderated what might otherwise have been a more vigorous opposition to France. He wrote,

England was no longer in a mood to obstruct all French expansion in the east, and was prepared to allow France to acquire a new colonial possession provided that it was neither too close to India nor on the far side of Hong Kong.⁸¹

Evans, in his study, went so far as to say that the British reaction to France in Cochin China and Cambodia was almost non-existent.⁸²

⁷⁸ Wodehouse memo 18 Aug. 1860, FO 12/28.

⁷⁹ Admiralty to CO, 4 Jan. 1867, FO 12/35.

⁸⁰ Merivale to Hammond, 29 Sept. 1865, FO 69/39.

⁸¹ G. F. Hudson, *The Far East in World Politics*, London, 1939, p. 67.

⁸² Evans, *op. cit.*, p. 105.

Thus, British policy toward France on this issue stood. But the British position in Borneo was more important than ever before and the following years, as we shall see, saw an increase in British interests and commitments there due in no small measure to the presence of the French on the opposite side of the South China Sea.

American Activities in Borneo

We must now look at American activities in Borneo, during the 1860s. While the United States never challenged Britain in the area, the movements of some of her citizens in Borneo gave rise to anxiety among British officials both on the spot and in London.⁸³ The ill feeling which existed between the United States and Britain as a result of the latter's southern sympathies during the American Civil War, plus the harbouring of Confederate agents in Canada, caused Britain to view with suspicion any American moves in the South China Sea. Indeed, the action of American privateers during the war years did nothing to allay British anxiety.

It will be remembered that Joseph Balestier on behalf of the United States negotiated a commercial treaty with the Sultan of Brunei in 1850 which provided for the appointment of a Consul. In July 1864, President Lincoln upon the advice of the expansionist-minded Secretary of State, William Seward, appointed C. L. Moses, a New England yankee from Maine, to be United States Consul at Brunei.⁸⁴ Moses arrived in Brunei from Singapore in July 1865 aboard a British merchant vessel. He called at Labuan to apprise Governor Callaghan of his arrival. The timing of Moses' arrival in Brunei was propitious. The China Steamship and Labuan

⁸³ K. G. Tregonning, 'American Activity in North Borneo, 1865 to 1881', *Pacific Historical Review*, xxiii, iv, Nov. 1954, pp. 357-72, gives perhaps the best-known account of this brief episode.

⁸⁴ Moses to Seward, 4 July 1864, Department of State Consular Archives (DS) Brunei, vol. I. Earlier in 1862, it had been decided to appoint a Consul and one Anson Francis was chosen. As the post was not salaried and Francis had no funds, he begged off. Moses had some experience as a trader in the Far East and as was common practice in those days, took on the unsalaried post in addition to his own private business ventures. Seward was a recognized exponent of the doctrine of manifest destiny. His opponents claimed that he was even in favour of annexing a part of China. Frederick Bancroft's *The Life of William H. Seward*, New York, 1900, is an excellent study of the Secretary. He refers to an interesting letter (vol. II, p. 471) written by Seward to Cassius Clay, American Minister to St. Petersburg. He wrote in 1861, 'Russia and the United States may remain good friends until, each having made a circuit of half the globe in opposite directions, they shall meet and greet each other in the region where civilization first began, and where, after so many ages, it has become now lethargic and helpless.'

Coal Company, which had the lease of the coal fields of Muara at the mouth of the Brunei river, had been in arrears in payments to the Sultan for some time. He had been trying to collect, sending innumerable reminders and complaints to the British Consul. The American Consul thus made his appearance at a time when the Sultan had lost all hope of having his claim settled. Consul Callaghan wrote later, 'I have no doubt that this was one of the chief reasons which induced the government of Brunei to accede so readily to the proposals of the American.'⁸⁵

Moses proceeded to ingratiate himself with the receptive Sultan, Abdul Mumin, and arranged for the cession for ten years of a large tract of territory in northern Borneo. In return, Moses agreed to pay the Sultan \$4200 annually and to pay his chief minister the Temenggong \$4000.⁸⁶ Moses further sought the rights to work coal at Muara as the coal company had ceased operations there and had no plans to return. To this the Sultan would not agree. The American left Brunei for Hong Kong almost immediately upon receiving the grant to raise capital and arrange for the settlement of his territory. There was much enthusiasm for the American venture at the court of Brunei. No doubt the Sultan and rajahs, always short of money and feeling themselves the victims of the British coal company, saw in the American proposals a new source of funds. Consul Callaghan wrote, 'I have heard that Mr. Moses intends returning very soon to embark extensively in trade.' He added, 'Considerable hopes are entertained by the government of Brunei that he will do a great deal to develop the resources of the country.'⁸⁷

In the meantime, the Sultan erected a large wooden consulate building for Moses. The latter noted in a dispatch to Washington that the building was to be forty feet square and to contain four rooms and an audience hall.⁸⁸ It is quite clear that Moses viewed the British as his chief rivals in Borneo for he considered that the Sultan's gesture of friendship was 'being done to the reverse of English influence.' He noted that the British Consulate was built at the expense of its own government. Moses was well satisfied

⁸⁵ Callaghan to FO, 7 May 1866, FO 12/33A.

⁸⁶ Ricketts to Russell, 12 Oct. 1865, FO 12/32B. Copies of the grant are in BNBCoP, and in FO 12/32B.

⁸⁷ Callaghan to FO, 20 Oct. 1865, FO 12/32B.

⁸⁸ Moses to Seward, 10 Aug. 1865, DS-Brunei.

with what he must have considered a clever yankee trick, played under the eyes of the British officials.

Moses mission to Hong Kong was successful. In November 1865 he transferred the territory and cession in northern Borneo to an American merchant, Joseph W. Torrey, and that gentleman with his associate, Thomas B. Harris, formed the American Trading Company of Borneo with financial backing from Chinese merchants in Hong Kong.⁸⁹ Torrey was confirmed by the Sultan and appointed 'supreme ruler and governor' with the title of Raja of Ambong and Marudu and with 'all other powers and rights usually exercised by and belonging to, Sovereign rulers'. Torrey's successors in the Company were to succeed to the titles in case of his death. According to the document of cession, the area transferred to the Americans comprised the 'entire northern portion of the island of Borneo from Sulaman on the west to the river Pietan on the east and the states of Patan, Sugat, Bang-gayan, Labok, Sandakan, China Bantangan, Gagayan, Mumiang, Benomi, and Kimanis, together with the islands of Banguay, Palawan and Balabac'. In effect, the area covered almost precisely the territory ceded to the Sultan of Sulu in 1704 by the Brunei Sultan Muaddin.⁹⁰ In January 1866, Callaghan wrote to Lord Clarendon at the Foreign Office, 'by this paper Mr. Torrey would seem to be constituted supreme ruler of these places and in virtue of this he has lately established a colony at Kimanis'.⁹¹

With capital furnished by the Chinese merchants, the settlement of Ellena on the Kimanis River commenced operations. A Hong Kong trader, Joseph Wheelwright, became Lieutenant Governor and Thomas Harris was Chief Secretary, while Torrey spent most of his time in Hong Kong trying to raise funds and interest in the new project. Tregonning has told in some detail the story of this colony and here I need only say that Ellena did not prosper. Some dozen Americans and threescore Chinese comprised the original settlement. The colony built a stockade and started some experimental plantings of rice, sugar-cane, and tobacco. Some trading operations were carried on with other rivers along the coast but sickness took its toll and there was much discontent among the

⁸⁹ Moses to Seward, 30 Nov. 1865, DS-Brunei. Moses enclosed a copy of the transfer document dated 27 November 1865 and attested to by Moses as Consul.

⁹⁰ The spellings of these place names are as they appear in the document.

⁹¹ Callaghan to FO, 9 Jan. 1866, FO 12/33A.

Chinese from not being paid regular wages. There was also some friction between the Chinese financial backers and the company administrators. When one of the Chinese merchants demanded repayment of his loan he was turned out of the colony. Chief Secretary Harris became a victim of fever and died in May 1866. The whole establishment was withdrawn the following November and the Americans returned to Hong Kong.⁹²

British officials in Borneo viewed the intrusion of the Americans with some alarm. Consul Ricketts in Sarawak, who was a warm advocate of British protection of that country,⁹³ thought that while there might be certain beneficial results from the presence of an American settlement in Borneo, the danger to British interests was probably greater.⁹⁴ He noted that this was all the more reason why Britain should stabilize her position on the northwest coast and especially in Sarawak. In reporting the arrival of Consul Moses he wrote that because the Brunei government was 'weak and bickering' it was likely to attract the attention of other European governments because of its beneficial location commercially with regard to the eastern archipelago and China. He noted, 'there would appear to be no little scope for the intrigue of foreign agency'. He reminded the Foreign Office that an American resident agent in Brunei would be in a favourable position to damage British influence and that the Sultan of Brunei was subject to bribes and financial pressure. Later when Ricketts learned of the Sultan's grant to the Americans, and their proposed establishment of Kimanis Bay, he suggested the necessity for forestalling further encroachments by maintaining Brunei as a weak native power, 'more or less subject to the control of Her Majesty's Government' between Sarawak and the American territory. Thus, either alone or with the United States, Britain should guarantee the Sultan's territories.⁹⁵ Ricketts noted that while the cession to Moses and Torrey was only for ten years 'once in the hands of a power like America, it is almost tantamount to perpetual occupation'.

The great danger to British interests in the area from an American establishment was in time of war, said Ricketts. At the same time

⁹² Hugh Low to Lord Stanley, 1 Dec. 1866, FO 12/33A.

⁹³ See Ricketts first long consular report from Sarawak, 25 Sept. 1864, FO 12/34B.

⁹⁴ Ricketts to Russell, 30 July 1865, FO 12/32B.

⁹⁵ Ricketts to Russell, 12 Oct. 1865, FO 12/32B.

he recognized that in peacetime, 'the opening out of fresh sources of commerce can be but productive of general good'. He wrote that the Americans held territory with 300 miles of coastline, many fine harbours, and extensive coal-fields as large and possibly superior to Labuan's. The situation was ideal for a naval depot in the heart of the China Seas commanding the commencement of the Palawan Passage and the Sulu Sea. If, he argued, 'under United States policy we may expect to see the American fleet in the China Seas considerably augmented', they could either alone or in company with France dispute the passage of our China fleet to India and Europe.⁹⁶ Moreover, the American fleet and naval depot could be reinforced via the north Pacific much easier than the British fleet could be sustained via the Cape of Good Hope. San Francisco to China, he noted, was a distance of 7,500 miles, while from London to China was almost twice that distance.

Governor Callaghan of Labuan regarded the Americans with less alarm than did Ricketts. Being closer to the scene of the American activities, he was better able to judge the significance and prospects of the American Trading Company. As it happened, he seemed not unduly distressed by their prospects. He was even more dubious of their legal claim to northern Borneo considering the restrictions imposed upon the Sultan by his treaty with Great Britain and the fact that the cession was made without the sanction of Britain. Callaghan had many interviews with Moses and Torrey. He considered the former an adventurer of boastful and swaggering manner whose demeanor to the Sultan was now threatening, now ingratiating, while 'holding out extravagant hopes to him of United States Government support'.⁹⁷ In Torrey, Callaghan found 'rather a good specimen' of a Yankee who spoke sensibly and moderately. Torrey expressed his desire for the good wishes of the government of Labuan upon the American settlement and he hoped that the enterprise would be viewed favourably by Britain. Torrey said he was aware of the British restriction on the Sultan with respect to cessions of territory. But as the cession of northern Borneo was for

⁹⁶ *Ibid.* See also 'Report of the Secretary of the Navy' in *Messages of the President of the United States to the Two Houses of Congress*, Washington, 1867. The Navy Dept. contemplated increasing the Asiatic squadron with several small war vessels for pirate warfare. The squadron, based at Hong Kong, consisted of the flagship *Hartford* of 23 guns, three 10 gun vessels, and four lesser ships.

⁹⁷ Callaghan to Clarendon, 9 and 29 Jan. 1866, FO 12/33A. It is clear that the Sultan thought he was treating with the United States Government and Moses did little to allay that impression.

ten years and not in perpetuity, as was Labuan, it was not likely that the consent of Britain would be requested by the United States Government. Despite this, Callaghan had misgivings. He wrote to Lord Russell,

It is probable, though some of the surrounding circumstances are ludicrous enough, that Mr. Torrey may get up some company and get something for surrendering his rights. What is more certain is that he and his belongings are sure to give us trouble here.⁹⁸

Although the British Government was disturbed by the American activities, it clearly felt that it need not fear them to the degree that Ricketts' alarming dispatches urged. Russell noted that both Ricketts and John Abel Smith, Member of Parliament for Chichester, a close friend of Raja Brooke of Sarawak, who had also written a letter full of alarms and forebodings concerning the American project,⁹⁹ were using the incident as an excuse for a renewed appeal for a protectorate over Sarawak. Such a proposal had recently been rejected.¹⁰⁰ While the Foreign Office sought more information from Callaghan on the activities of all the foreign powers in the area, a message was despatched to the Minister in Washington, Sir Frederick Bruce. Clarendon asked Bruce to ascertain 'without putting any questions to the United States Government' whether Moses was acting in Borneo under instructions from Washington and what designs were entertained by the Americans in that quarter.¹⁰¹ If need be, the London Government was prepared to rely on two points in their favour. The Foreign Office in a dispatch to Consul Callaghan noted the restrictions imposed by treaty on the Sultan with regard to making land grants, and it was noted that as late as 1852 Lord Derby's government had considered that the British claim to northern Borneo on the basis of the Dalrymple treaties was still viable.¹⁰² When Sir Frederick Bruce informed the Foreign Office that the United States had not authorized any attempts to form settlements in Borneo, and that Moses' grant was on his own responsibility, they so informed Consul Callaghan.

⁹⁸ Callaghan to FO, 9 Jan. 1866, FO 12/33A.

⁹⁹ Smith to Murray, 13 Nov. 1865, FO 12/32B. Smith's letter contained so many inaccuracies and displayed such ignorance of the situation that it is probable that it had the opposite effect upon the Foreign Office from the one intended.

¹⁰⁰ Russell to Ricketts, 18 Jan. 1865; FO memo. of 16 Nov. 1865, FO 12/32B.

¹⁰¹ FO memo. of 16 Nov. 1865, FO 12/32B; Clarendon to Bruce, 18 Nov. 1865, FO 5/1012.

¹⁰² FO to Callaghan, 18 Nov. 1865; FO memo. of 19 Dec. 1865, FO 12/32B.

Later when the settlement at Kimanis failed the British Government quietly dropped the whole matter.¹⁰³

In the east the visit of the United States war vessel, *Wachusett*, to Ambong Bay in the spring of 1866 aroused some speculation that the American Government might support the struggling colony. A British trader reported to Callaghan that American merchants in Manila viewed Torrey's company with ridicule. He felt, however, that the visit of the warship to northern Borneo indicated that the United States thought the matter worth looking into. The United States was interested in having its own coal supply in the area. When Moses reported that coal at Kimanis was superior to Labuan coal and would render American ships independent of British coaling stations, the State Department took note.¹⁰⁴ But in 1867 Bruce's information was confirmed when Captain Carter of the visiting American warship *Monocacy* informed Acting Governor Low of Labuan that he did not think the United States contemplated the formation of a settlement on the coast.¹⁰⁵

The end of this American adventure was as intriguing as its beginning. Torrey, apparently failed to make any payments to Moses for his rights to the grant. Moses asked the Sultan to withdraw the grant from Torrey and sought to form a new company. Moses at one point aroused the interest of some Americans and Germans from Macao in a gold mining venture. When their ship grounded at the entrance to the Brunei River, the adventurers became disenchanted. They were even more disappointed in the colony at Kimanis and soon returned to Macao.¹⁰⁶ The American Consulate in Brunei burned down under circumstances which pointed to Moses having set it afire. He invented a story about an attack upon his Consulate and himself by Brunei people. His claims against the Sultan were investigated after the Sultan had complained of Moses to the admiral of the American Asiatic squadron. The Sultan had sent a letter to President Johnson requesting him to 'put a good consul in the city of Brunei.'¹⁰⁷ Admiral Bell sent Captain Carter of the USS *Monocacy* once again and the latter

¹⁰³ FO to Low, 2 April 1867, FO 12/33B.

¹⁰⁴ Moses to Seward, 31 Dec. 1865, and comment thereon, DS-Brunei.

¹⁰⁵ Low to Stanley, 23 March 1867, FO 12/33B.

¹⁰⁶ Torrey to Callaghan, 8 May 1866, FO 12/33A.

¹⁰⁷ Sultan of Brunei to Rear Adm. H. H. Bell, 21 March 1867; Sultan of Brunei to Pres. Johnson, Aug. 1866. FO 12/33A; Low to FO, 11 May 1867, FO 12/33B.

absolved the Sultan of any responsibility for the consulate fire.¹⁰⁸ Soon after, Consul Moses was suspended from duty by Secretary of State Seward. His successor, O. F. Bradford, made peace with the Sultan and assured him that the consulate fire was the work of Moses and that the United States wanted to be on good terms with the Sultan.¹⁰⁹ Consul Bradford discontinued the consulate at Brunei on March 5th, 1868.¹¹⁰

While the American adventure in Borneo did not succeed and was at no time apparently a serious threat to British interests on the island, yet it did indicate the danger to Britain of her unstable position in Borneo. Coming at the same time as the increasing pressure of Spanish claims in the north and the Dutch pressure in the south, it proved significant when in the next decade the clamour for British control of northern Borneo became intense. In the 1870s Torrey's claim to northern Borneo formed the basis for the possession of that area by the British North Borneo Company.

We have now traced Britain's reaction to the foreign threats to her position in the South China Sea during the middle decades of the 19th century. This reaction motivated the forward movement which in turn led to the complete domination of northern Borneo by Great Britain. The following chapters analyse the form and nature of that forward movement.

¹⁰⁸ See 'Report of the Sec. of the Navy 1867', p. 7. Hugh Low contributed considerably to a peaceful settlement of the Moses affair. In transmitting the Sultan's protest to Admiral Bell the Acting Governor requested Admiral Keppel, commander of the British China squadron, to advise his American counterpart to conduct an inquiry before any hasty action was taken. Low shared the Sultan's fear that American naval forces would seek reprisal against Brunei for the destruction of the consulate. See Low to CO, 11 May 1867, CO 144/26.

¹⁰⁹ Inche Mahomet, British consular writer, Brunei, to Hennessy, 4 March 1868, FO 12/34A.

¹¹⁰ Bradford to Hennessy, 5 March 1868, FO 12/34A; Bradford to Seward, 16 March 1868, DS-Brunei; Bruce to FO, 13 May 1867, CO 144/26. Although Secretary Seward assured Bruce that the United States had decided to have nothing to do with Moses' grant in Borneo, and in fact that Moses was to be recalled, Bruce noted that Moses' name still appeared some time later on the diplomatic list as Consul in Borneo. See also Moses to Seward, 13 Nov. 1867; DS-Brunei.

Annex 520

Dieter Heinzig, *Disputed Islands in the South China Sea: Paracels - Spratlys - Pratas - Macclesfield Bank* (1976)

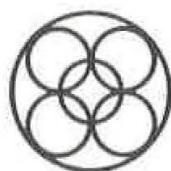
DISPUTED ISLANDS IN THE SOUTH CHINA SEA

Paracels — Spratlys — Pratas — Macclesfield Bank

by

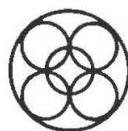
DIETER HEINZIG

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CHAPTER II

OCCUPATION OF ISLANDS PRIOR TO WORLD WAR II AND THE CLAIMS INVOLVED

1. *Developments up to the End of the 19th Century*

In connection with the conflict of January 1974 in the area of the Paracels, the countries involved attempted in many different ways to assert historical claims to islands in the South China Sea. Thus, Peking declared that all of the four contested archipelagos had “always” (li-lai)²⁹ belonged to China. A few years before, it had claimed that the islands had belonged to China since the 15th century.³⁰ Saigon argued that the Spratlys had been under Vietnamese sovereignty “for centuries”.³¹ Neither party, however, had claimed permanent occupation of any one of the islands. Actually it seems impossible to supply proof of permanent sovereignty. In fact, the historical claims — generally implicit ones — rely on the discovery, temporary or repeated occupation, or the maintenance of relations of any kind to the islands.

Peking, Taipei, and the Republic of Vietnam are the only parties to have endeavoured to establish a comprehensive historical argumentation going back to before the 20th century. There cannot be any doubt that in this respect the Chinese are in a more favourable position than the others.

China's Relations to the Islands

Traces of the discovery of islands in the South China Sea by Chinese mariners seem to go back to the Han period. Chinese coins, the oldest dating back to the rule of the Emperor Wang Mang (3 B.C. to 23 A.D.), are said to have been found on the

²⁹ Statement by the Spokesman of the Chinese Foreign Ministry of Jan 11, 1974, as published in *JMJP* Jan 12, 1974.

³⁰ *JMJP* Feb 28, 1959, as cited in *Peking Review*, 1959, No. 9, p. 21.

³¹ Statement by the government of the Republic of Vietnam, dated Jan 12, 1974, as cited in *SWB FE/4499/A3/1* (Jan 14, 1974). — The documentation published by the Republic of Vietnam's Foreign Ministry under the title of *White Paper on the Hoang Sa (Paracel) and Truong Sa (Spratly) Islands*, Saigon 1975, was not available to the author at the time of writing.

Paracels.³² This does not seem too far-fetched, because the *Han Shu*, which was written about 100 A.D., carries reports of long voyages of up to 5 months made by Chinese mariners.³³ A chronicle which appeared in the Eastern Han period (25 to 220 A.D.) mentions the existence of islands in the South China Sea.³⁴ It is reported that the monk Fa Hsien, when returning from India in 414, sailed via the Paracels (ch'i chou yang).³⁵ It is a fact that during the fourth and fifth centuries A.D., Chinese coastal and maritime shipping was flourishing in the South China Sea region and the Chinese fleet was beginning to approach the level of the Arab, Persian, and Indian fleets.³⁶

Chao Ju-shih, in a chronicle written during the Sung period, mentioned for the year 789 A.D. the existence, in a position east of Hainan, of "ch'ien-li ch'ang-sha" (literally "sands a thousand li long") and "wan-li shih-ch'uang" (literally "a ten thousand li rock bed"). It is generally believed that these names cover what is now the Paracels (and Macclesfield Bank?).³⁷ In one of the Sung chronicles, the author refers to the emperor's intention to escape from the advancing Mongols by sea, sailing via "ch'i li yang" (the Paracel archipelago) to "chan ch'eng" (Cochinchina).³⁸ The conclusion we can draw from those reports, i. e. that the Chinese were familiar with the Paracel archipelago in the Sung period or even earlier, is verified by local finds of coins. During World War II and in 1947, Chinese currency dating from the K'ai-yüan title of reign of the Tang Emperor Hsüan Tsung was discovered under the coral reefs of Rocky Island (Chin.: Shih tao), one of the Paracel group.³⁹

We may be sure that General Shih Pi, under orders from Khublai Khan, touched upon the Paracel archipelago and Macclesfield Bank when sailing to Java with an

³² Yeh Han-ming and Wu Jui-ch'ing, Ts'ung li-shih tsai-chi chi yü-t'u k'an nan-hai chu-tao ti chu-ch'üan kwei-shu wen-t'i, in: *Ming pao (yüeh-k'an)*, No. 101, May 1974, p. 19; cf. *Hsing-chou jih-pao* of Feb 10, 1974.

³³ *Han Shu*, Chapter 28 (ti-li chih), Section 2, as reprinted by Chung-hua shu-chü, Peking 1962, p. 1671. — Cf. Feng Ch'eng-ch'ün, *Nan-yang chiao-t'ung shih*, Shanghai 1937, p. 1, as cited by V. Purcell, *The Chinese in Southeast Asia*, London, Kuala Lumpur, Hong Kong 1965, p. 8.

³⁴ *I wu chih* by Yang Fu, in: *Pai-pu ts'ung-shu*, Sect. 93 (Ling-nan i-shu), Book 9, I wu chih, p. 2 a—b.

³⁵ Teng Szu-yü, Nan Chung-kuo hai chu tao-hsü ti chu-ch'üan wen-t'i, in: *Ming pao (yüeh-k'an)*, No. 101, May 1974, p. 3. The relevant passage reads "Chang hai chi t'ou", i. e. "In the South Sea there are uneven elevations".

³⁶ V. Purcell, *loc. cit.* (see Note 33 above), p. 12.

³⁷ *Chu fan chih* by Chao Ju-shih, in: *Pai-pu ts'ung-shu*, Sect. 46 (Hsüeh-ching t'ao-yüan), Book 11, *Chu fan chih*, pp. 16 a—b, 17 a. — Cf. F. Hirth and W. W. Rockhill, *Chau Ju-kua: His Works on the Chinese and Arab Trade in the Twelfth and Thirteenth Centuries, Entitled Chu-fan-chi*, St. Petersburg 1911, pp. 176, 185 (Note 4). In Hirth's and Rockhill's opinion, "ch'uang" (bed) was mistaken for "t'ang" (dyke, dam).

³⁸ *Sung shih chi-shih pen-mo*, Chapter 180, reprinted by San-min shu-chü publishers, Taipei 1956, p. 437.

³⁹ Yeh Han-ming and Wu Jui-ch'ing, *loc. cit.* (see Note 32 above).

army in 1293.⁴⁰ As is evident from travellers' reports, the eunuch Cheng Ho also sailed via the Paracels in the course of several voyages he made through the South China Sea between 1405 and 1433.⁴¹ It is to this period that the names of Yung Lo and Hsüan Teh date back. These names, which are still in use for the two groups of islands forming the Paracel archipelago, both refer to titles of reign of the Ming Emperors Ch'eng Tsu (1403—1424) and Hsüan Tsung (1426—1435). On a Chinese chart which was published about the middle of the 16th century and depicts the region as known by about 1430, the Paracels archipelago appears as "wan sheng shih-t'ang hsü" or "shih-t'ang" and Macclesfield Bank as "shih-hsing shih-t'ang".⁴² Since then, the Paracels have been mentioned regularly in the works of Chinese geographers (the name employed being usually "ch'i chou yang" = sea of the seven islands), as have the Pratas, which are referred to as "ta tung-sha" (great east sand) or "ch'ien-li shih-t'ang" (1,000 li long stone dam).⁴³ The Chinese had apparently gained a fairly firm footing on the Paracels no later than by the middle of the 19th century. This may be concluded from the fact that in the course of surveying work on Woody Island (Chin.: Yung-hsing tao or Lin tao) in 1947, a Chinese temple, estimated by experts to be more than one hundred years old, was discovered.⁴⁴

No such ancient sources have been found for the Spratlys. The earliest reference to a Chinese presence in this region dates back to 1867, when the crew of a British surveying ship met Chinese fishermen from Hainan on the largest of the Spratly Islands. In accordance with what those fishermen had said (in their Hainan dialect), the British mariners (allegedly) called the island "Itu Aba", a name which is still in use on Western charts.⁴⁵ In Chinese usage, the Spratlys were referred to as "t'uan-sha ch'ün-tao" until shortly after World War I.⁴⁶

In view of these ample references, there cannot be any doubt that the Chinese — both on the mainland and on Taiwan — regard the four disputed archipelagos as

⁴⁰ Here the islands appear under the name of "ch'i chou yang" and "wan-li shih-t'ang", see *Yüan shih*, Vol. 3, Chapter 162, as reprinted by National War College in cooperation with the College of Chinese Culture, Taipei 1967, p. 1731. Cf. O. Franke, *Geschichte des chinesischen Reiches*, Vol. 4, Berlin 1948, p. 463; V. Purcell, *loc. cit.* (see Note 33 above), p. 15; Hirth/Rockhill, *loc. cit.* (see Note 37 above), p. 185 (Note 4).

⁴¹ *Wu-pei chih* by Mao Yüan-i (he uses the name "wan-li shih-t'ang"), as cited by Ch'i Hsin, Nan-hai chu-tao ti chu-ch'üan yü hsi-sha ch'ün-tao chih chan, in: *Ch'i-shih nien-tai*, March 1974, p. 38; *Hsing-ch'a sheng-lan* by Fei Hsin, as cited by Yu-hsi Nieh, Die Rechtsfrage der Archipele im Südhinesischen Meer, in: *China aktuell*, February 1974, p. 26; Hsun-cheng Shao, Chinese Islands in the South China Seas, in: *People's China*, 1956, No. 13, p. 26.

⁴² The chart referred to is the one contained in Mao Yüan-i's *Wu-pei chih*, cf. J. V. G. Mills, *Ma Huan, Ying-yai sheng-lan*, Cambridge 1970, pp. 216 f., 225, 239, 241 f.

⁴³ For the individual sources, cf. Yu-hsi Nieh, *loc. cit.* (see Note 41 above), p. 26, and Teng Szu-yü, *loc. cit.* (see Note 35 above).

⁴⁴ Yeh Han-min and Wu Jui-ch'ing, *loc. cit.* (see Note 32 above), with further sources.

⁴⁵ Ch'i Hsin, *loc. cit.* (see Note 41 above), with further sources.

⁴⁶ Cf. e.g. *Tz'u hai*, 2nd Edn., Shanghai 1948, p. 309. The author already uses the new name of "Nan-sha ch'ün-tao", *loc. cit.*, p. 221.

having been, and still being under Chinese sovereignty or at least part of the Chinese sphere of influence. This is particularly true of the Paracels, of which Kuo Sung-tao, the first Chinese envoy in London, stated succinctly in 1876: "They are Chinese islands (chung-kuo shu tao yeh)",⁴⁷ and least true of the Spratlys.

Vietnam's Relations to the Islands

From an historical point of view, the Vietnamese are in a weaker position than the Chinese. To start with, they have difficulty in proving the continuity of their own state and territory from its beginning as the pre-Christian Nam Viet via a status as the Chinese provinces of Chiao-chih, Chiao-chou, and Annam (between 211 B.C. and 939 A.D.), later the Chinese tributary states of Dai Viet (with a short period of independence lasting until 1804) and Vietnam (until 1884), as the component states of French Indochina, to the Vietnam of our day.⁴⁸ On the other hand, the historical events which the Vietnamese side cites to prove the existence of relations with the islands are of a much more recent date than the links on which the Chinese case is based. Moreover, the Vietnamese argumentation, covering the period until the end of the 19th century, refers exclusively to the Paracels. The mere fact that in the early days of the January 1974 conflict the official Saigon media used the wrong names⁴⁹ when trying to support their claims by reference to historical events makes the Vietnamese assertions appear somewhat dubious.

The earliest event on which the Republic of Vietnam officially based a claim is the foundation of the "Doi Hoang Sa" society, reportedly in 1700 with the object of exploiting the Paracel archipelago for commercial purposes.⁵⁰ According to official sources in Saigon, the first Nguyễn emperor, Gia-Long, reactivated this society in 1802 and had the Vietnamese flag hoisted on the Paracels in 1816. His successor Minh Mang is said to have built a pagoda on the rock of Ban Na (which probably formed part of the Paracels) in 1834. According to the same source, the chart issued

⁴⁷ Teng Szu-yü, *loc. cit.* (see Note 35 above), with further sources.

⁴⁸ Cf. Lê Thành Khôi, *3000 Jahre Vietnam*, München 1969, p. 85; H. B. Morse, *The International Relations of the Chinese Empire*, Vol. II, London 1910, pp. 341 f.; J. Buttinger, *Vietnam: A Political History*, New York, Washington 1968, pp. 5, 38 f.; K. C. Chen, *Vietnam and China, 1938—1945*, Princeton, N. J., 1969, pp. 6 ff.

⁴⁹ Statement by the Spokesman of the Foreign Ministry in Saigon on Jan 12, 1974, *Vietnam Press* in Vietnamese, as cited in *SWB FE/4499/A3/1—2* (Jan 14, 1974); *Saigon Radio* (home service) on Jan 14, 1974, as cited in *SWB FE/4501/A3/4* (Jan 16, 1974); Statement by the Foreign Ministry in Saigon on Jan 16, 1974, as cited in *SWB FE/4503/A3/1* (Jan 18, 1974); Military Spokesman in Saigon on Jan 17, 1974, *Vietnam Press* in Vietnamese on Jan 17, 1974, as cited in *SWB FE/4504/A3/4* (Jan 19, 1974).

⁵⁰ The details contained in this paragraph have been taken from: *Summary on the Paracels Islands*, as published by the Embassy of the Republic of Vietnam at Bonn-Bad Godesberg in February, 1974, pp. 1 f.; Spokesman of the Foreign Ministry in Saigon on Jan 12, 1974, *Vietnam Press* in Vietnamese, as cited in *SWB FE/4499/A3/1* (Jan 14, 1974).

by the imperial court of Huê in 1834 shows the Paracel Islands as Vietnamese territory. It was also argued that a geographical standard work compiled between 1865 and 1882 had revealed that the Paracels and Spratlys belonged to Vietnam.

The oldest of the sources cited by the then Saigon government to support their claims⁵¹ dates back to about 1800. These sources were not available to the author. Despite the somewhat scanty material, the existence of relations between Vietnam and the region in dispute, or at least the Paracel Islands, during the first decades of the 19th century may be considered probable. This is confirmed by a French publication of 1843 which flatly states “Le Paracel est un archipel qui dépend de l’Annam”.⁵² Provided that the historical information given by Saigon is correct, we may accept that, *as a state*, Vietnam apparently was showing a definite interest in the Paracels somewhat earlier than did China.

2. *Developments Between the End of the 19th Century and World War II*

While during the period considered in the preceding paragraphs no clashes had been reported between the parties interested in the islands, the following period was characterized by a great number of conflicts, and these have continued into our own time. In addition to the parties to the 1974 conflict, France, Japan, and — apparently in just one instance — the German Reich were all involved at some time or other.

Whereas traditionally the islands had served primarily as bases and navigational aids to Chinese mariners, in particular fishermen from Kuangtung province, the appearance of foreign powers in the South China Sea caused China during the last decades of the Manchu period to engage herself *as a state* in defence of national interests.

First Chinese Attempts at Acquiring Sovereignty

The German government reportedly sent a military detachment to the Spratlys in 1883 to carry out survey work. Apparently this work was discontinued under

⁵¹ The sources are the following: J. B. Chaigneau, *Mémoires sur la Cochinchine*, n.p. or d. (Chaigneau lived from 1769 to 1825, according to contemporary information); *Hoang Viet Dia Du* (Geography of the Annamite Empire), n.p. 1835; Mgr. Raberd, *History and Description of the Religion, Customs and Morals of All Peoples*, n.p. 1838; *Dai-nam Nhat-thong-chi* (according to Lê Thành Khôi, see Note 48 above, the best geographical publication of all, compiled between 1865 and 1882). The sources are given in the list published by the Vietnamese Embassy in Bonn (see Note 50 above).

⁵² *Lettres édifiantes et curieuses*, edited by Panthéon Littéraire, Vol. 3, n. p. 1843, p. 38, as cited in C. Madrolle, *La question de Hai-nan et de Paracels*, in: *Politique Étrangère*, 1939 (Paris), p. 311.

Chinese pressure after negotiations had taken place.⁵³ Following the Franco-Chinese war of 1884/85, France and China concluded a special border agreement on June 26, 1887, whereby the title to the archipelagos of the South China Sea was implicitly adjudged to China. The agreement contains a statement to this effect: "Les îles qui sont à l'est du méridien de Paris 105°43' de longitude est . . . sont également attribuées à la Chine."⁵⁴

The first clear case of a Chinese government taking possession of parts of this region was in 1902 when the Manchu government, believing it had discovered signs that France intended to occupy the Paracels by mounting an attack from her base in Indochina, dispatched Vice-General Wu Ching-yung and Admiral Li Chun, with the warships "Fu po", "Ch'en hang" and "Kuang chin" in April 1902, to carry out a local inspection of the islands. The expedition hoisted Chinese national flags on several islands and erected a stone monument on North Island (Chin.: Pei tao). This stone, which bore an inscription referring to the inspection together with the year 1902 (28th year of Kuang Hsü), was found in a well preserved state prior to World War II.⁵⁵

In 1907/08 China successfully defended her sovereign rights to the Pratas archipelago. In 1907 a Japanese merchant named Nishizawa Yoshiji, accompanied by more than 100 compatriots, had settled on Pratas, giving the island his name.⁵⁶ On hearing this, the Foreign Ministry in Peking dispatched the governor Jui Fang, Wu Ching-yung, and Li Chun to the island at the head of a military detachment, with orders to explore the island and enter into talks with the Japanese occupants. In addition, the governors of Kuangsi and Kuangtung negotiated with the Japanese consul in Canton. The outcome of these negotiations was that China paid Nishizawa an indemnity of 130,000 silver dollars and Japan, in her turn, recognized the Pratas archipelago as Chinese territory.

Worried by these events, the governor of Kuangtung province had an expeditionary corps, including engineers, chemists, and surveyors, sent to the Paracels under the

⁵³ Yeh Han-ming and Wu Jui-ch'ing, *loc. cit.* (see Note 32 above), p. 18; Hsun-cheng Shao, *loc. cit.* (see Note 41 above). — The author has not made any attempt to substantiate this on the basis of documents from German Record offices. However, according to British sources, a German surveying operation, covering at least the Paracels, was carried out in 1883, cf. *Admiralty Chart* No. 94.

⁵⁴ Text of the agreement as cited in Teng Szu-yü, *loc. cit.* (see Note 35 above); cf. the text, in Chinese, as published in Yeh Han-min and Wu Jui-ch'ing, *loc. cit.* (see Note 32 above), p. 18 f.

⁵⁵ For details of the inspection tour made in 1902, see Ch'i Hsin, *loc. cit.* (see Note 41 above); Yeh Han-min and Wu Jui-ch'ing, *loc. cit.* (see Note 32 above), p. 19; *Hsing-chou chou-k'an* on Feb 10, 1974 (with some further sources).

⁵⁶ For the Pratas incident, cf. Yeh Han-min and Wu Jui-ch'ing, *loc. cit.* (see Note 32 above), p. 19 (with further sources); Yu-hsi Nieh, *loc. cit.* (see Note 41 above), p. 26 (with further sources); Hsun-cheng Shao, *loc. cit.* (see Note 41 above).

command of Wu Ching-yung and Li Chun.⁵⁷ The results of three weeks of exploratory work were summarized in an investigation report (*k'an-ch'a hsi-sha ch'ün-tao pao-kao*) and supplemented by a development plan. In 1908, too, the Pratas and Paracels appeared for the first time in an atlas published by the Kuangtung provincial government, the names of "tung-sha" and "hsi-sha" used in that atlas being still in use today.

In 1917 a Japanese company began to fish the waters around the Spratlys and to exploit the guano deposits for their phosphate content.⁵⁸ A British Admiralty publication dated 1923 says, on the other hand, that Chinese fishermen, regularly supplied with provisions by fishing boats from Hainan, had been living on many of the Spratlys for years.⁵⁹

The first practical steps towards developing and exploiting the Paracels on a large scale were taken by the "Paracel Archipelago Company for Industry and Commerce" (*hsi-sha ch'ün-tao shih-yeh kung-szu*) starting in 1921.⁶⁰ The Chinese government gave the licence for the exploitation of the natural resources and marine products in this region to the head of the company, a Canton merchant named Ho Jui-nien. However, when it was discovered that Ho was no more than a figurehead for the director of the Formosa Monopolies Authority, a Japanese called Ikeda, and that a sizeable proportion of the natural resources of the islands was being shipped to Japan without the Chinese authorities being aware of this, Tai Chi-t'ao, a member of the Chinese National Government, ordered a commission to be set up to investigate the case. As a result of the commission's activity the licence was withdrawn from Ho Jui-nien in 1927/8 and the Japanese had to leave the archipelago. The Kuangtung provincial government then had new development plans drawn up for the Paracels.

Acquisition of the Spratlys and Paracels by France and Japan

Up to the late twenties, the Chinese government had still been capable of consolidating its claim to the archipelagos by several acts of sovereignty, but in the period between 1930 and 1946 it was, with regard to foreign policy, so weak that, apart from raising ineffective protests, China could do nothing but stand by helplessly while the Spratlys and Paracels were occupied by France and later by Japan.

⁵⁷ For this paragraph, cf. Teng Szu-yü, *loc. cit.* (see Note 35 above), p. 3; Yeh Han-ming and Wu Jui-ch'ing, *loc. cit.* (see Note 32 above); *Hsing-chou chou-k'an* of Feb 10, 1974 (where the expedition is erroneously set in the year 1913).

⁵⁸ *Keesing* of Apr 7, 1939, p. 4017 A; Hsun-cheng Shao, *loc. cit.* (see Note 41 above).

⁵⁹ *China Sea Pilot*, 2nd Edn., Vol. 3, London 1923, as cited in Hsun-cheng Shao, *loc. cit.* (see Note 41 above).

⁶⁰ Teng Szu-yü, *loc. cit.* (see Note 35 above), p. 3; Hsun-cheng Shao, *loc. cit.* (see Note 41 above).

France made her first appearance in this region in April 1930 when she sent the gunboat "Le Malicieuse" to reconnoitre the waters surrounding the Spratlys and apparently had one island occupied.⁶¹ In the same year, the Indochinese press published demands for the occupation of the Paracels as a preparatory step towards installing a navigation light and a base for sea planes.⁶² According to recent Saigon sources, Pierre Pasquier, then governor of Indochina, asserted Vietnamese claims to the Paracels in 1931, raising an official protest in 1932 against the exploitation by China of the local guano deposits. This protest was dismissed by the Chinese.⁶³

In the spring of 1933, France occupied the two principal islands, Itu Aba (Chin.: T'ai-p'ing) and Spratly (Chin.: Nan-wei), and seven other islands of the Spratly archipelago.⁶⁴ On July 26, 1933, Paris publicly announced the annexation of those islands.⁶⁵ The text of the declaration of annexation reportedly pointed out that the Spratlys had a resident population of Chinese fishermen of Hainan origin.⁶⁶ The same statement may be found in a contemporary article by a French author.⁶⁷

The Japanese chargé d'affaires in Paris reacted to the annexation of the Spratly archipelago by raising objections with the French government. He said that Japan was unable to approve of the occupation, despite France's assurance that she would fully respect Japanese economic interests.⁶⁸ According to Peking and Taipei sources, the Chinese government also made a démarche in protest against the French action.⁶⁹ This, however, is officially denied by Saigon.⁷⁰ Nanking is further said to have rejected the French assertion that the Paracels belonged to Annam. France had made this claim in a memorandum sent to the Chinese embassy in Paris in connection with the occupation of the Spratlys.⁷¹

⁶¹ C. Madrolle, *loc. cit.* (see Note 52 above); Teng Szu-yü, *loc. cit.* (see Note 35 above). — According to recent South Vietnamese sources, Japan applied to France as early as 1920 for a license to exploit the guano deposits on the Paracels. Saigon argued on these grounds that the Paracel archipelago had been under French administration between 1920 and 1939, cf. *Summary on the Paracels Islands, loc. cit.* (see Note 50 above), p. 2 (without sources).

⁶² C. Madrolle, *loc. cit.* (see Note 52 above), p. 310.

⁶³ *Summary on the Paracels Islands, loc. cit.* (see Note 50 above), p. 2 (without sources).

⁶⁴ *Keesing* of July 27, 1933, p. 952 A; C. Madrolle, *loc. cit.* (see Note 52 above); Teng Szu-yü, *loc. cit.* (see Note 35 above); Yu-hsi Nieh, *loc. cit.* (see Note 41 above), p. 27, with further sources.

⁶⁵ *Journal officiel de la République française* of July 26, 1933, as cited in C. Madrolle, *loc. cit.* (see Note 52 above).

⁶⁶ Thus Ch'i Hsin, *loc. cit.* (see Note 41 above), p. 39.

⁶⁷ *South China Morning Post* of Aug 28, 1933, as cited in Ch'i Hsin, *loc. cit.* (see Note 41), p. 39.

⁶⁸ *Keesing* of Aug 22, 1933, p. 993 H.

⁶⁹ Hsun-cheng Shao, *loc. cit.* (see Note 41 above), p. 27; Wang Szu-you in: *CYJP* of Feb 2, 1974.

⁷⁰ Statement by the Saigon Foreign Ministry of Jan 12, 1974, as cited in *SWB FE/4499/A3/1*.

⁷¹ *Ibid.*

After having installed an intermittent flash-light on the Paracel island of Pattle and a light and meteorological station on the island of Boisée (apparently identical with Woody I.) as early as October 1937, France announced the occupation of the whole archipelago on July 3, 1938.⁷² Contemporary press reports confirm that the islands were actually occupied by French or Annamese troops.⁷³ According to a recent Saigon statement, the occupation had been preceded by an offer from France to China in 1937 to settle the issue peacefully or to subject the case to arbitration.⁷⁴ It appears that the French decision to occupy the islands was the negative outcome of negotiations between Paris and London on the one hand and Japan on the other, with the object of dissuading Japan from occupying Hainan.⁷⁵

China apparently protested through her ambassador Ku Wei-chün,⁷⁶ while the Japanese government contented itself with an indirect protest: On July 4, 1938, the Spokesman of the Japanese Foreign Ministry announced that, though Japan had no knowledge of the occupation of the Paracels, she emphatically denied the right of third parties to occupy, or otherwise claim, any island under Chinese sovereignty.⁷⁷

After the conquest of Hainan in February 1939, Japan occupied the Spratlys, the Paracels, and evidently also the Pratas. The occupation of the Spratlys was completed by the end of March 1939.⁷⁸ The Paracels, too, were occupied in 1939.⁷⁹ No concrete information is available as to the occupation of the Pratas, though all Chinese authors implicitly assume that all the archipelagos of the South China Sea were occupied by the Japanese.⁸⁰ The author has not been able to ascertain whether, or not, there was any fighting between the Japanese invaders and the French garrison troops. According to Taiwanese sources, Tokyo renamed the Spratlys "Shinnan" (New South), placing them, along with the Paracels and Pratas, under the jurisdiction of the authorities of the port of Kaohsiung (Taiwan).⁸¹ The Japanese stationed some troops on Spratly I. while they converted Itu Aba into a submarine base.⁸²

⁷² C. Madrolle, *loc. cit.* (see Note 52 above), p. 310.

⁷³ *Keesing* of July 4, 1938, p. 3624 A.

⁷⁴ *Summary on the Paracels Islands, loc. cit.* (see Note 50 above), p. 2.

⁷⁵ *Keesing* of June 27, 1938, p. 3616 A; *ibid.*, July 4, 1938, p. 3624 A.

⁷⁶ Teng Szu-yü, *loc. cit.* (see Note 35 above), p. 7 (with further sources).

⁷⁷ *Keesing* of July 4, 1938, p. 2634 A.

⁷⁸ *Keesing* of Mar 31, 1939, p. 4007 B.

⁷⁹ *Summary on the Paracels Islands, loc. cit.* (see Note 50 above), p. 2; Wang Szu-you, *loc. cit.* (see Note 69 above).

⁸⁰ Cf. Teng Szu-yü, *loc. cit.* (see Note 35 above), p. 4.; Yu-hsi Nieh, *loc. cit.* (see Note 41 above), p. 27 (implicitly).

⁸¹ Wang Szu-you, *loc. cit.* (see Note 69 above).

⁸² *Ibid.*

In a letter dated April 1939, Paris protested against the Japanese occupation of the Spratlys, referring to the fact that France had annexed the archipelago in 1933.⁸³ Tokyo rejected the protest and argued that the Spratlys had been economically in Japanese hands without interruption since 1917 (for the winning of phosphates and fisheries).⁸⁴ There is, however, no indication of a French *démarche* against the occupation of the Paracels by the Japanese.

⁸³ *Keesing* of Apr 7, 1939, p. 4017 A.

⁸⁴ *Ibid.* — For details of Japanese arguments and actions see Yu-hsi Nieh, *loc. cit.* (see Note 41 above), p. 27 (with further sources).

Annex 521

Zhang Xie, *Compilation of Historical Books on the History of Chinese-Foreign Exchange: Investigation of Eastern and Western Oceans* (1981, modern edition)

Compilation of Historical Books on the History of Chinese-Foreign Communication

Investigation of Eastern and Western Oceans

By Zhang Xie [Ming]

Chung Hua Book Co.

1981, Beijing

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Investigation of Eastern and Western Oceans

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By Zhang Xie [Ming]

Edited by Xie Fang

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[...]

Dingjiyi [Terengganu] currently Ingdelaqili (Indragiri), Sumatra, Indonesia. pp. 80, 82, 177.

[...]

[...]

Sanfoqi [Samboja] currently Jugang (Palembang), Sumatra, Indonesia. pp. 32, 43, 44, 59, 61, 62, 65, 178, 213, 217, 219, 247.

[...]

[...]

Pengheng, Pengkeng [Pahang] currently Pengheng (Pahang) in Malaysia. The harbor is currently known as Beigan (Pekan). p. 77.

[...]

[...]

Manlajia [Malacca] Malacca (Malacca), the current capital city of the autonomous region of Malacca in Malaysia. pp. 33, 40, 44, 66, 67, 68, 69, 70, 88, 93, 177, 179, 216, 220, 248.

[...]

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[...]

Zhanghai [South China Sea] A general term for South China Sea. pp. 240.

[...]

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