

# Evidence of China's sea boundary in the South China Sea<sup>†</sup>

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## Abstract

According to a series of important historical maps, i.e., the *Location Map of the South China Sea Islands*, the Nansha Islands, Zhongsha Islands, Xisha Islands, Yongxing Island and Shidao Island, and Taiping Island (archived by the Territorial Administration Division of the Ministry of Interior of Republic of China in 1946), and the *Administration District Map of the Republic of China* published in 1948, the dashed line surrounding the South China Sea Islands represents China's sea boundary in the South China Sea at that time. It was both connected with, and an extension of, the land boundary of China. At that time the dashed line was used to represent the waters boundaries while the solid line was used to represent the land boundary—a universal method used in maps that was then recognized internationally. The above observation provides historical and scientific evidence of China's sea boundary in the South China Sea that is useful for the international maritime delimitation over the South China Sea area.

**Key words:** China's sea boundary, historical maps, maritime sovereignty, South China Sea

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## 1 Introduction

Over the years, the boundary surrounding the South China Sea Islands has been called a dashed line on conventional maps. There are different understandings about this boundary. In fact, these different interpretations reflect the different understanding of the territorial ownership embodied in the history. Such inconsistent interpretations and understanding have resulted in great confusion in maritime delimitations. To explore the origins of this line usage and objectively clarify its position in maritime history, and also to understand the essence of its initial meaning, the authors have systematically studied historical maps and archives after World War II, with the expectation of clarifying the true meaning of this dashed line and providing a scientific basis for the delimitation of the South China Sea.

## 2 Materials

To explore the essential meaning of this boundary, the authors reviewed the original archives of the *Location Map of the South China Sea Islands* (six pieces) from the Republic of China era stored in Taipei and Nanjing<sup>①</sup> (Table 1). This series of maps was drawn by the Territorial Administration Division of the Ministry of Interior after the National Government sent troops to the South China Sea Islands to declare China's sovereignty following the victory of the Anti-Japanese War (World War II). They were completed in December of the 35th year of the Republic of China (1946). According to the archived document ((36) Ministry of Interior-IV 30844) of the Republic of China, they were approved on 7th August in the 36th year of the Republic of China (1947) by Zhang Qun, then the President of the National Executive Admin-

istration. In early November 1947, Ta Kung Newspaper reported *the Internal Names of the South China Sea Islands Verified*; on 1st December 1947, the Territorial Administration Division of the Ministry of Interior released *the Location Map of the South China Sea Islands*, and published the names of these islands in the Central Daily News. *The Location Map of the South China Sea Islands* was included in the book *Short Records of Geography of the South China Sea Islands* (Zheng, 1947) and was then published in February 1948 as an attached map of the *Administrative District Map of the Republic of China* (Fu, 1948).

## 3 Results and discussion

Boundaries with neighboring countries are clearly marked on the *Location Map of the South China Sea Islands*. The symbols are <■>-<■>-<■>-<■>- from the northwest end of the map, first denoting the boundaries between Guangxi Province of China and Vietnam, and then the boundaries between the Indo-China Peninsula and Xisha and Nansha Islands, between the Nansha Islands and Borneo, and the Philippines, and then through the Bashi Strait. The 1:4 000 000 map marks out the boundaries of China in ten segments (Fig. 1). Here, strict rules are established governing the delimitation, number and location of boundaries. This map draws lines in the middle of two countries and uses the symbol <■> between lines for the purposes of signification. Although the illustration in Fig. 1 is not accompanied by interpretations of all the legends, it clearly defines the country's land and sea boundary. The most convincing evidence is that, at the northwest end of the map, sea and land boundaries converge into one, thus defining the borders of the two adjacent countries. To the

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<sup>①</sup>Territorial Administration Division of the Ministry of Interior, the Republic of China. 1947. *Location Map of the South China Sea Islands* (six pieces) (in Chinese). The Nanjing Second Institute of Archives.

**Table 1.** Location maps of the South China Sea Islands (six pieces)

Map title	Scale	Department and date	Comments
Location Map of the South China Sea Islands	1:4 000 000	Territorial Administration Division of the Ministry of Interior, 1946	
The Nansha Islands	1:2 000 000	Territorial Administration Division of the Ministry of Interior, 1946	
The Zhongsha Islands	1:350 000	Territorial Administration Division of the Ministry of Interior, 1946	
The Xisha Islands	1:350 000	Territorial Administration Division of the Ministry of Interior, 1946	
The Yongxing Island and Shidao Island in the Xisha Islands	1:10 000	Territorial Administration Division of the Ministry of Interior, 1946	surveyed map
The Taiping Island in the Nansha Islands	1:5 000	Territorial Administration Division of the Ministry of Interior, 1946	surveyed map

northeastern part of the boundary is Guangxi Province of China, while to the south of the boundary is Tong Deng and Liangshan of Vietnam. The nature of this line with its symbols clearly identifies its status as a border between two countries (Fig. 2). Additional evidence for this is that, between the southern tip of the Palawan Islands of the Philippines and the Borneo of Malaysia, the same symbol that is used to demarcate the boundary between China and Vietnam is here used to delimit the two countries' boundaries (Fig. 3). It is worth noting that these two lines marking the boundaries between two adjacent countries still remain in service.

In addition to the above two parts, the other parts of the map also use such disconnected symbols to mark the boundaries between China and its surrounding countries; namely, the middle line between the east shore of Vietnam and China's Xisha Islands and the Nansha Islands. The middle line between islands, the middle line between sandbank and coastal land, and so forth, all follow the same and clear principle.

We saw the *Administrative District Map of the Republic of China* (Fu, 1948) published by the Commercial Press in 1948 in the library of School of Geographic and Oceanographic Sciences, Nanjing University (scaled at 1:4 200 000). It was compiled by the Territorial Administration Division of the Ministry of Interior, and Fu Jiaojin was the chief editor (Fig. 4). The bottom right corner of the map provides the *Location Map of the South China Sea Islands* (scaled at 1:9 100 000, Fig. 5). The border in the map is marked with  $\langle \blacksquare \rangle \langle \blacksquare \rangle$ , and is explicitly annotated in the legends as a national boundary (Fig. 6). It is also apparently differentiated from the undefined national boundary, represented by dotted lines. Therefore, it can be judged that the disconnected lines surrounding the South China Sea denoted China's national border. Likewise, it can be said that the sea boundary is both connected with and an extension of the land border. That is to say, it is the national boundary that separates the South China Sea Islands from neighboring Asian countries in the sea, demarcating both the boundaries and scope of China in South China Sea and those of other countries. And Chinese Character “中华民国” (The Republic of China) is clearly marked in the area of the South China Sea surrounded by the sea boundary, which indicates undisputedly the area belongs to China.

The Nansha Islands map among the six above, including all islands in Nansha, is scaled at 1:2 000 000. Its east, west and south boundaries also use the symbol  $\langle \blacksquare \rangle \langle \blacksquare \rangle$ , i.e., squares between brackets and within dashed lines; there are also ten segments (Fig. 7). In fact, in this set of maps, even though the scope may differ across maps of different scales, all sea borders are drawn with ten segmented lines (Figs 1 and 7). In the officially published *Sketch Location Map of the South China Sea Islands* in the scale of 1:6 500 000 (Zheng, 1947) and the *Location Map of the*

*South China Sea Islands* in the scale of 1:9 100 000 (Fu, 1948) (Fig. 5), the country's boundary, which adjoins the west of the Philippines, is divided into two sections, resulting in a total of 11 segments. Therefore, it can be argued that the South China Sea territorial boundaries should not be expressed in numbers. Currently, it seems to be inappropriate to refer to the boundaries around the South China Sea as “nine segmented lines” after taking out two segments of the boundary in the Beibu Gulf. It should be called China's sea boundary in the South China Sea.

We recognized that the sea boundaries in the South China Sea were marked with disconnected lines. These are arguably more realistic owing to the natural fluctuations of sea and tides, and the attribute that vessels can pass without harm. On international maps, sea border lines are also represented with such disconnected lines. For example, in the *New Canadian Oxford Atlas* (Oxford University Press, 1977), the boundaries between Italy and the islands in Spain, and between Turkey and Greece, are both represented with disconnected lines. Therefore, using disconnected lines to represent sea boundary between countries can be seen as an international standard practice.

The maps of Xisha and Zhongsha Islands are drawn to a scale of 1:350 000 (Figs 8 and 9). The legends in the map of Xisha Islands include coral reefs, sandy shores, broadleaved forests, contour lines, depth points and wreck sites. The Zhongsha Islands map uses 20 m bathymetric contour plots to outline the Zhongsha Islands, including measured depth points and the locations of various shoals and reefs on the map.

The measured maps of Yongxing Island and Shidao Island are drawn at a scale of 1:10 000, and marked “mapped on November 30 in the 35th year of the Republic of China” (Fig. 10). The islands and piers are clearly drawn. The maps also delineate that Yongxing Island and Shidao Island are located on the same reef, which is exposed at low tide, with waves forming during high tide (in the surf zone). The map clearly marks that, at the time, the Yongxing Island occupies an area of 1 851 000 m<sup>2</sup>, or 7.4 li<sup>2</sup> (Chinese measure, 1 li<sup>2</sup>=0.25 km<sup>2</sup>). It is flat, and there are dunes at the southwest shore, with the highest altitude reaching 8.3 m. In addition: “Shidao Island occupies an area of 78 000 m<sup>2</sup>, or a total of 0.312 li<sup>2</sup>. The highest point is 12.4 m in altitude”. When we visited the islands on May 20, 2013, the entire island was covered with forest and we were not able to see the original dunes. GPS positioning determined that the highest point was 15.9 m, while the most up to date literature reports 13.8 m. If there had been a highly accurate measurement in the past, we could have determined the change over the past 60 years. The fact that the original map pieces introduced “拔海” (meaning “pulling the sea”) to describe the height above sea level drew our attention; we deem it to be a more suitable term to the connotation here than “海拔” (a term presently used), although we are unsure as to why and how

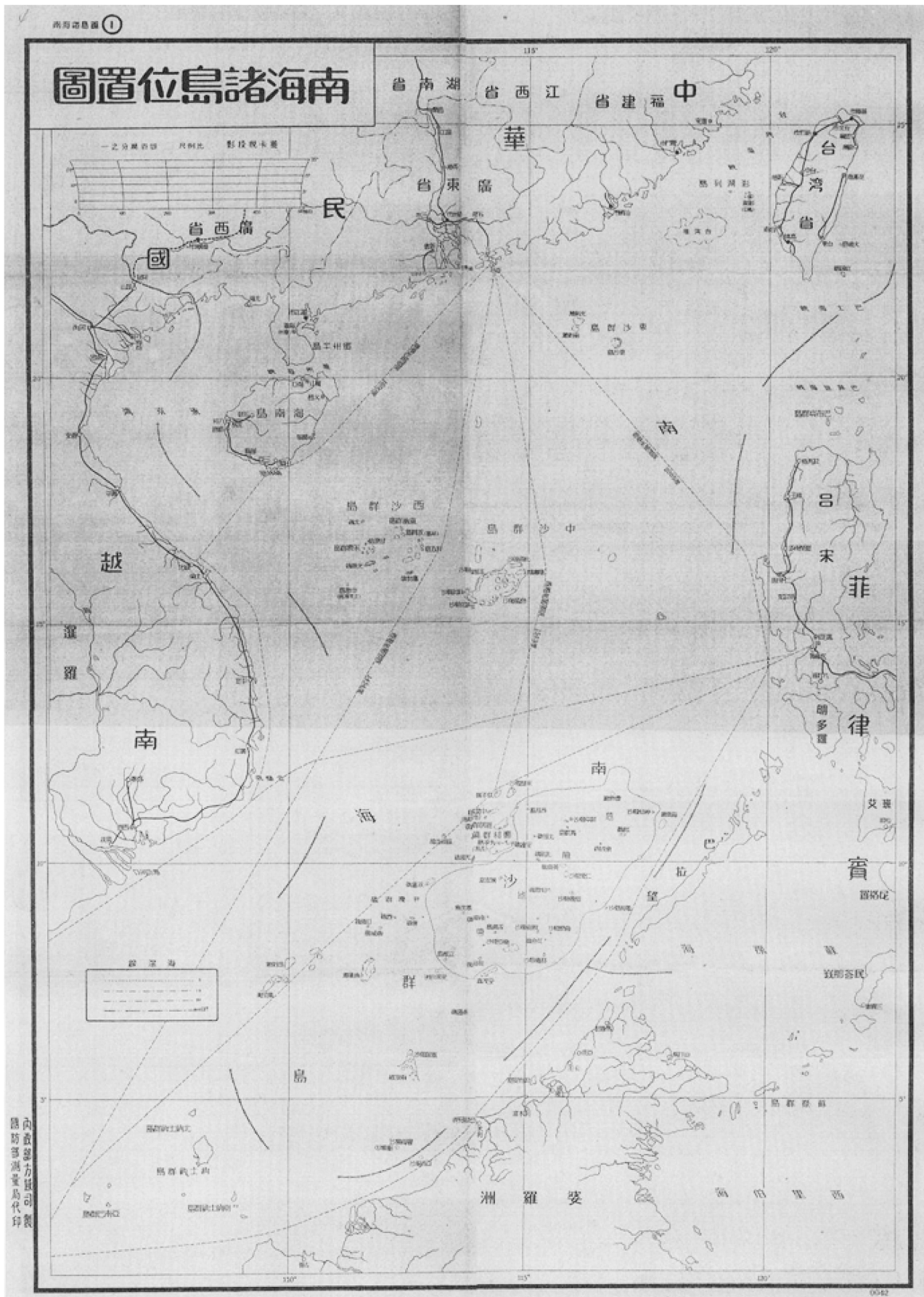


Fig. 1. Location Map of the South China Sea Islands drafted in 1946 (original scale is 1:4 000 000).

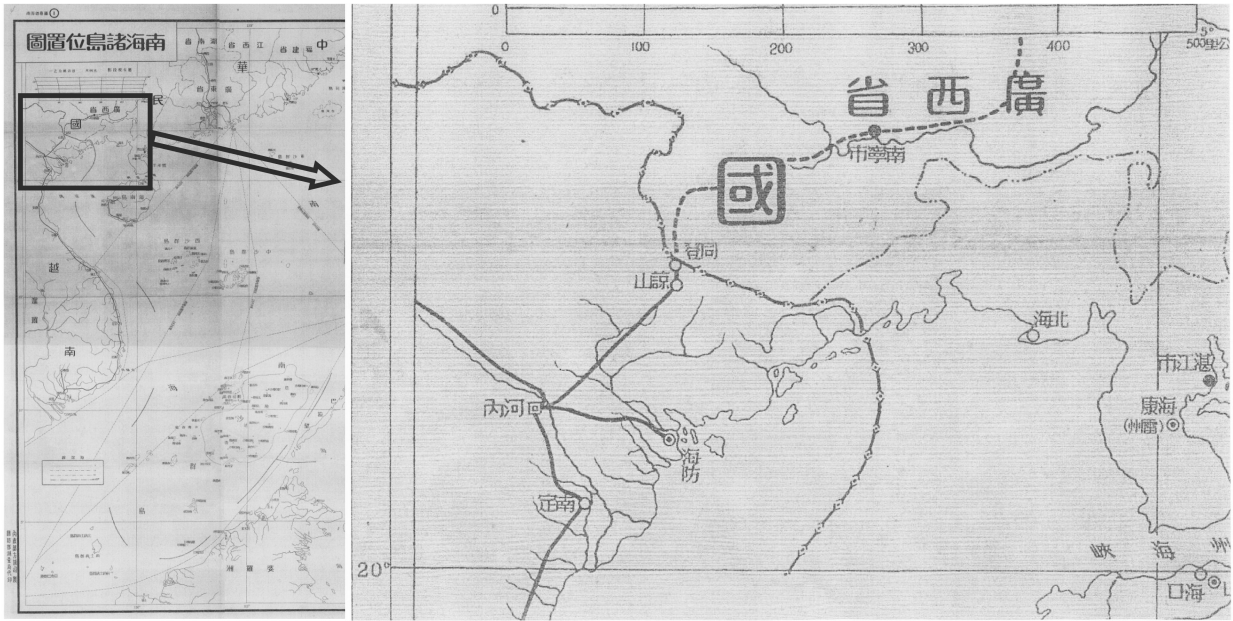


Fig. 2. The terrestrial boundary between China and Vietnam being extended as the Sea Boundary in the South China Sea.

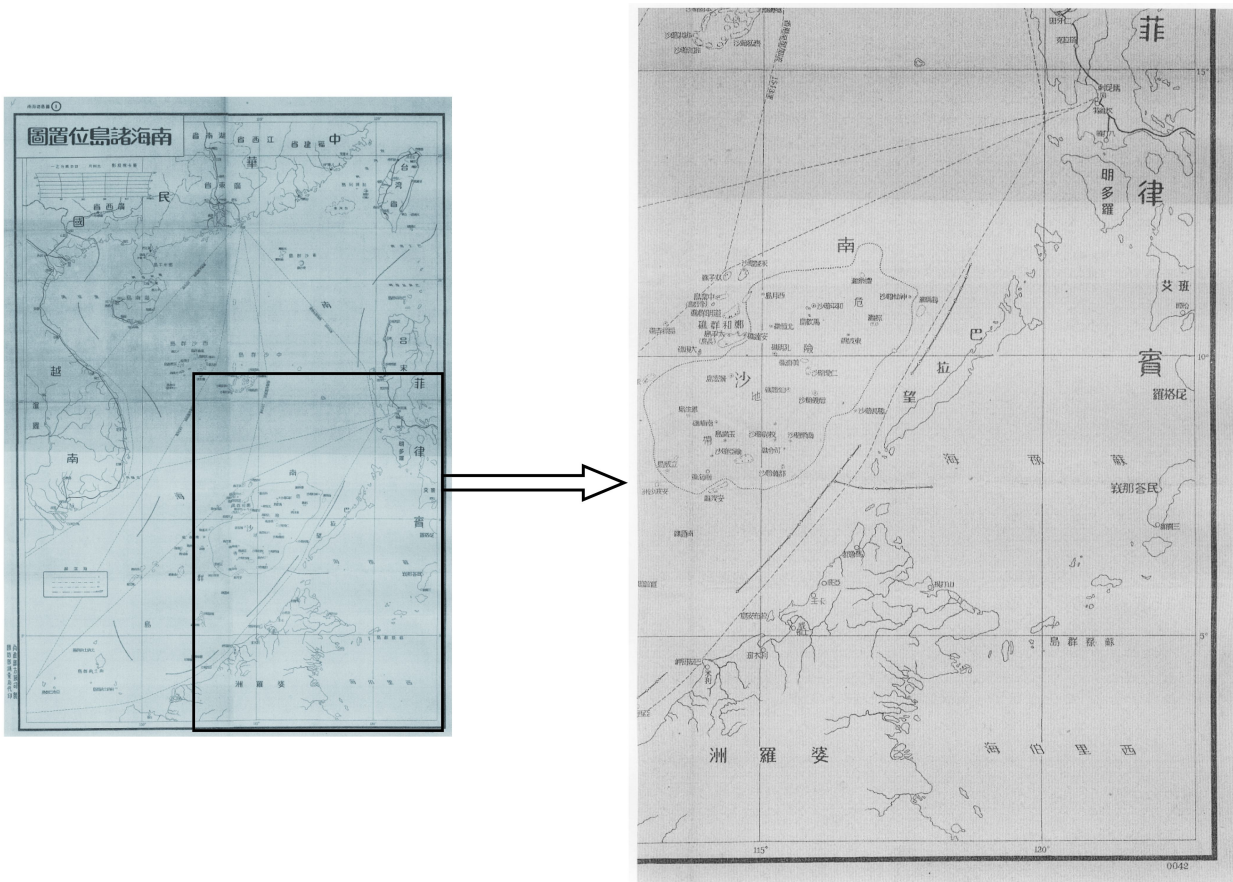


Fig. 3. The boundary between Palawan of Philippine and Borneo.

it has evolved historically.

The measured Taiping (meaning Peace) Island map is scaled at 1:5 000 (Fig. 11). There are notes on the map, describing the island as having an area of 432 000 m<sup>2</sup> or 173 li<sup>2</sup> (Chinese measure), and an elevation of 4 m; the structures on the island

are said to have been destroyed. The legends include “houses (reinforced concrete, wood house, house base), monument, radio, flagpoles, wells, reservoirs, graves, shelters, trees (coconut trees, broadleaved forests, independent trees), base stone circles, roads, trails, light rails, sand beaches, shipwrecks, rocks, coral

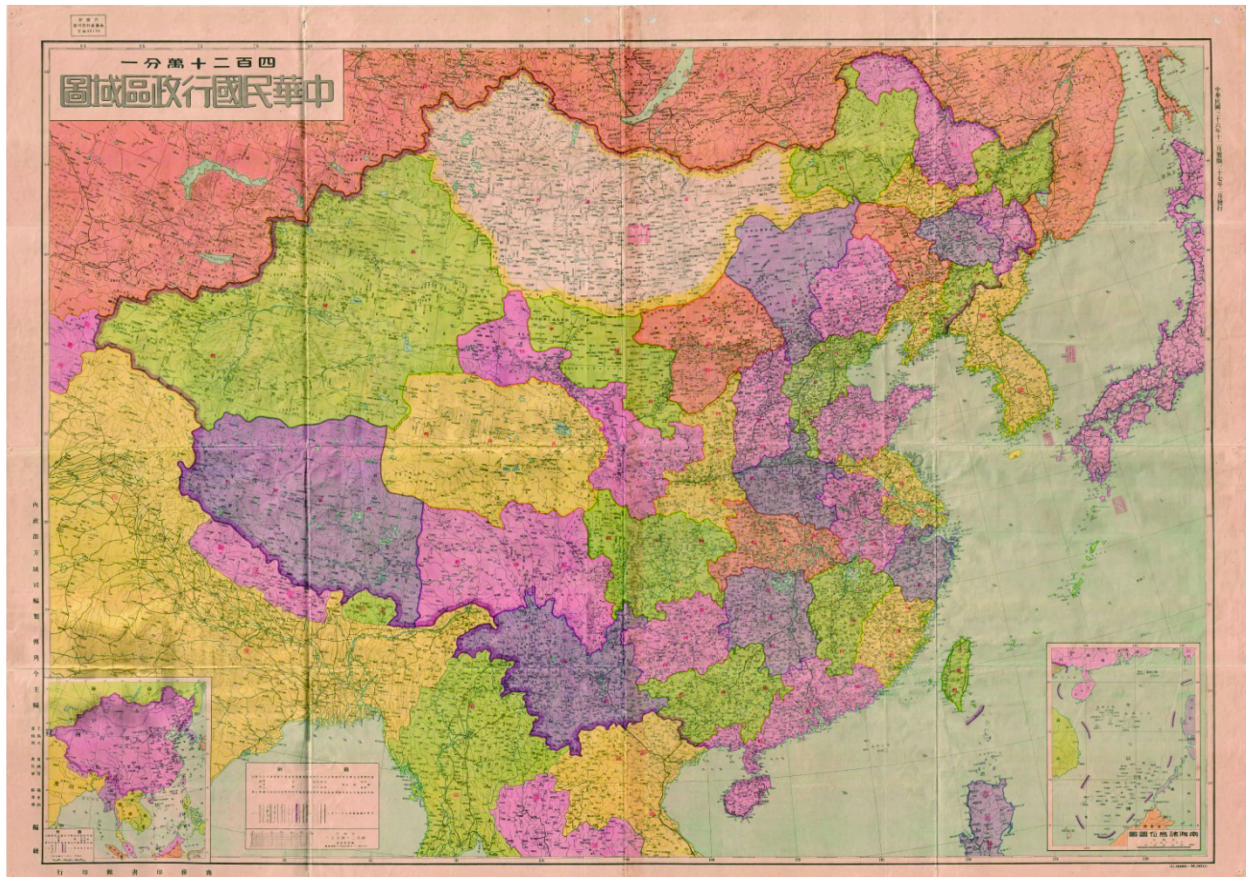


Fig. 4. Administration District Map of Republic of China published in 1948 (original scale is 1:4 200 000).

reefs”, and also indicate that there used to be military forces and residents; however, by the time of mapping, “all buildings were destroyed”. The notes also state that “coral reefs around the islands will emerge during low tides, while waves will splash up along the edge of coral reefs during high tides”. The upper left corner of the frame additionally states that the island was “mapped on December 12 in the 35th year of the Republic of China”.

After the People’s Republic of China was founded in 1949, China published a variety of maps relating to the sea boundary in the South China Sea. The drawing method followed the mapping conventions published by China’s government in 1948. These new maps of China were compiled by the Huaxia Society of History and Geoscience and published by Yaguang Geography Club in 1951 (Huaxia Society of History and Geoscience, 1951) (Fig. 12). The boundaries on the South China Sea islands map shown on its lower right corner are the same as those on the map published in 1948 (Fig. 13). In addition, they represent the national border, as indicated by the legends on the lower left corner (Fig. 14).

Symbols for national borders on the map published in 1948 (Fu, 1948) are similar to those on the *People’s Republic of China Atlas* (SinoMaps Press, 1979). The latter is similar to the *Esselte World Atlas* (in Chinese) (Esselte Map Service, 1991) translated and published by SinoMaps Press in 1991. However, on those maps, the symbols, -[■]-[■]-[■], a series of squares in parentheses connected by lines which represent China’s border, are slightly different from the 1946 map, although they are both parentheses.

The authors studied the locations and spatial details of the China’s sea boundary in the South China Sea on the original *Location Map of the South China Sea Islands*, compared it with the *Map of South China Sea Islands* published by SinoMaps Press in 1982, and found the defined sea boundary to be almost the same (Wang and Ma, 2006), implying that the boundary’s position came from a strict origin and had been carefully demarcated.

When looking into archives related to the South China Sea Islands from January of 1930 to October of 1931, we found that the government of the Republic of China, at that time had already drafted the *Provisions of Territorial Sea Boundary Draft*<sup>②</sup>. This document clearly points out that “territorial waters and territorial lands are both involved in a nation’s sovereignty and law. In many cases, it owns neutrality right in wartime and fishing right in peacetime in foreign relations, as well as relates to the division of its associated areas in naval districts in military affairs. To date, there has been no regulation in this area, and we should not hesitate in establishing it”. From this text, we can derive the principles of how the sea boundary in the South China Sea was designated.

The second part of the document contains examples of each country’s territorial sea. The extension of territorial waters is three nautical miles in Britain, USA, France, Germany, Japan, four nautical miles in Scandinavian countries (Sweden, Norway), six nautical miles in Portugal, and 12 nautical miles in Russia.

The third part of the file analyzes the importance of the size of the territorial sea (not discussed in this article).

The fourth part clearly proposes that China territorial sea

② The National Executive Administration, the Republic of China, 1931. Resolution No. 3606. Provisions of Territorial Sea Boundary Draft.

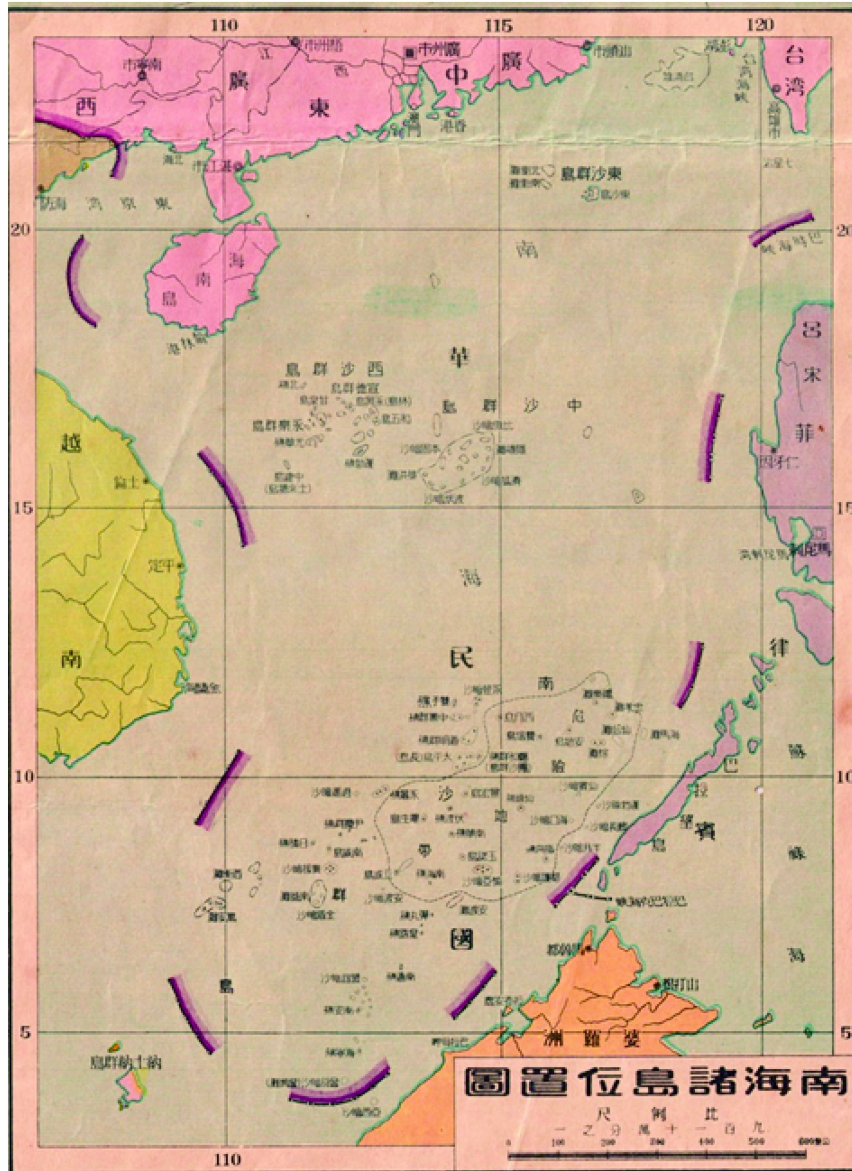


Fig. 5. Location Map of the South China Sea Islands attached to the Administration District Map of Republic of China (original scale is 1:9 100 000).

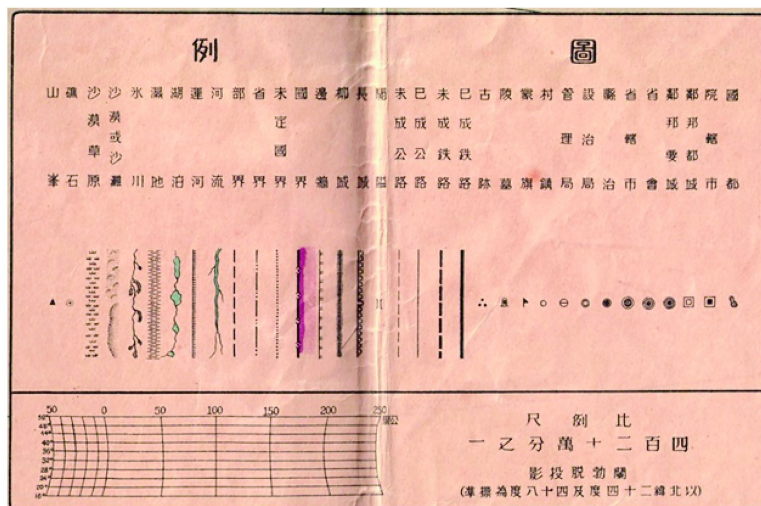


Fig. 6. Legends of the Administration District Map of Republic of China.



Fig. 7. The Nansha Islands (original scale is 1:2 000 000).

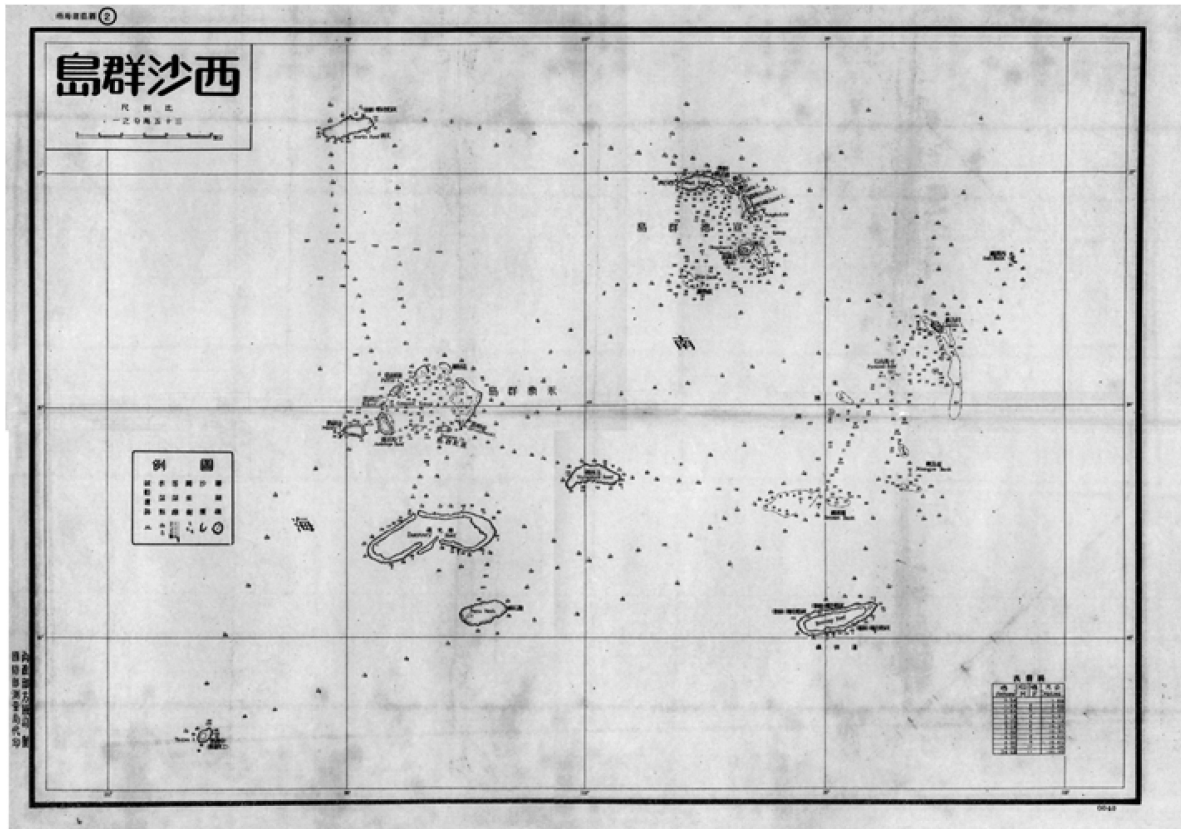


Fig. 8. The Xisha Islands (original scale is 1:350 000).

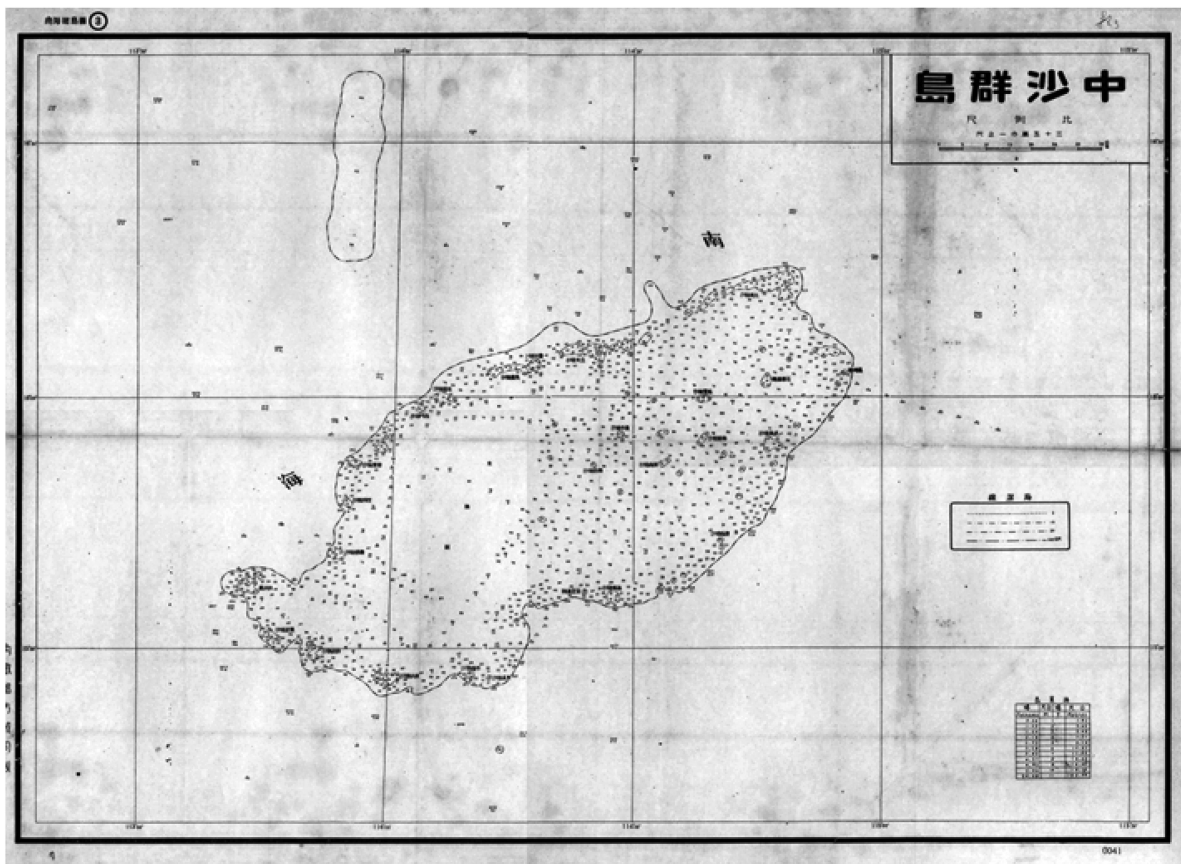


Fig. 9. The Zhongsha Islands (original scale is 1:350 000).

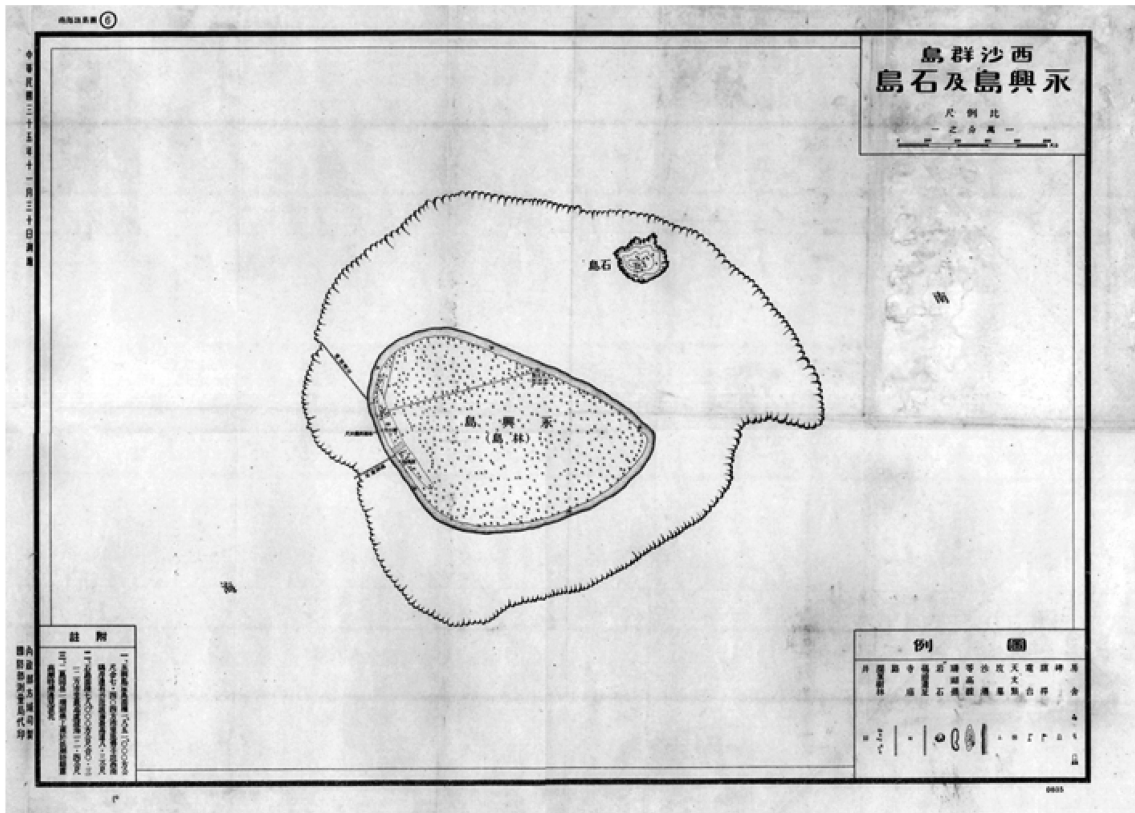


Fig. 10. The Yongxing Island and Shidao Island in the Xisha Islands (original scale is 1:10 000).

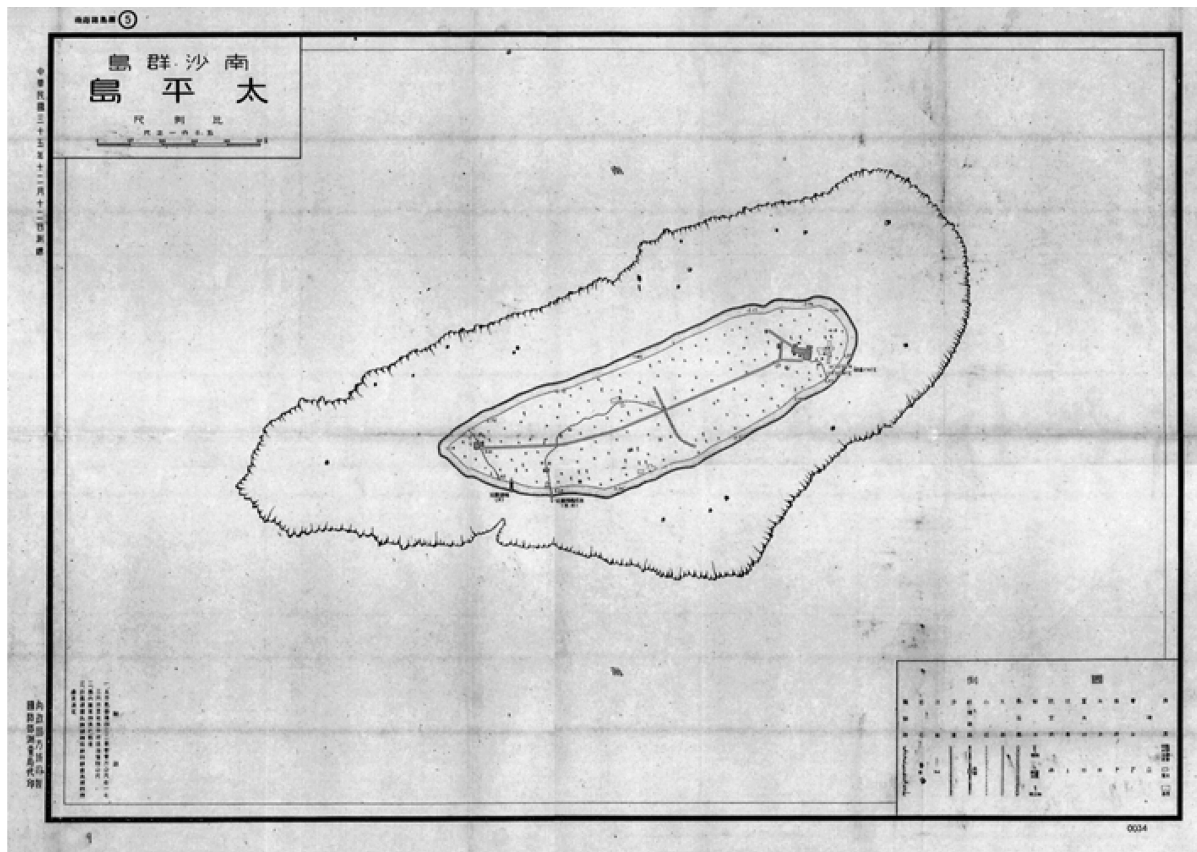


Fig. 11. The Taiping Island in the Nansha Islands (original scale is 1:5 000).

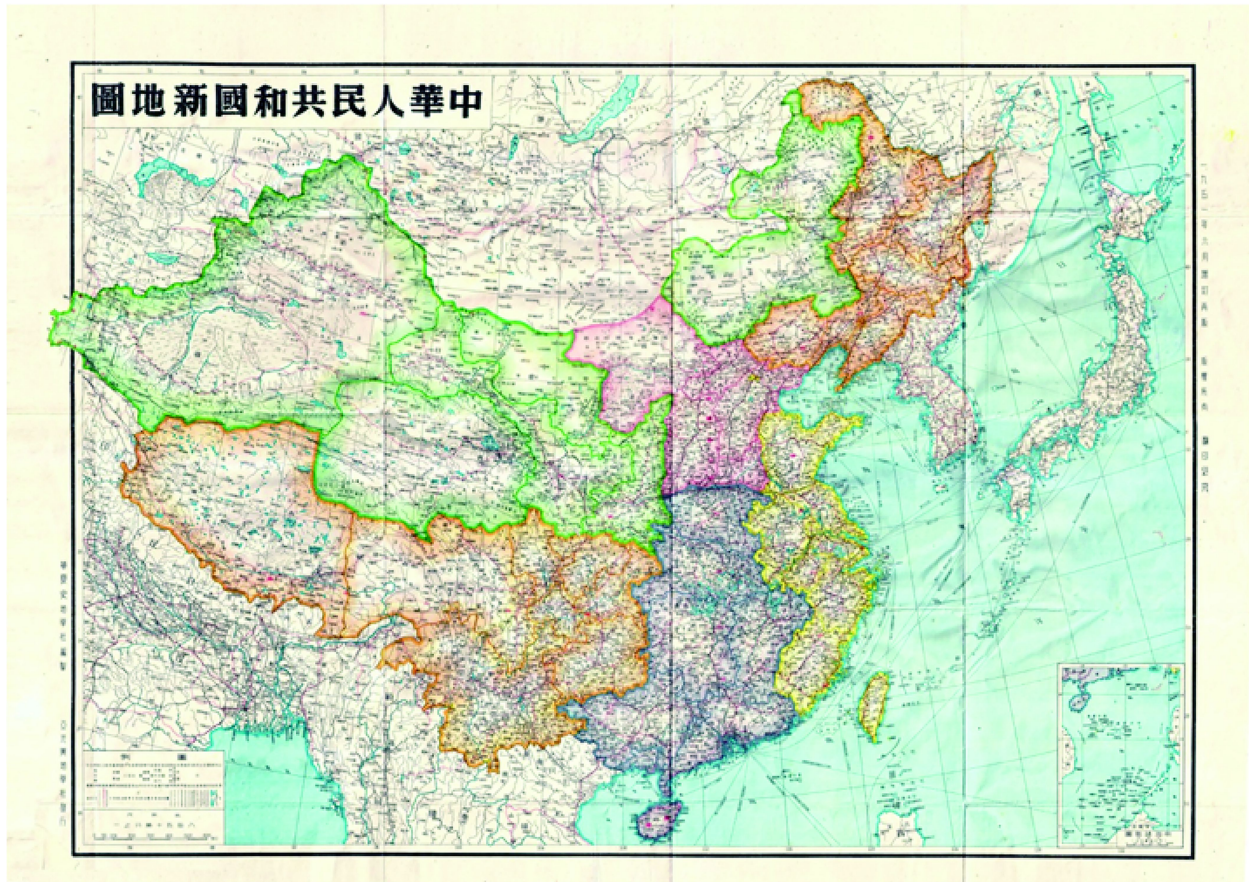


Fig. 12. The New Map of the People's Republic of China (1951, original scale is 1:8 500 000).

should be demarcated as 12 nautical miles.

The fifth part of the document contains the criteria for calculating the territorial sea:

(1) Calculate the territorial sea by 12 nautical miles, starting from the lowest low tide point, and then going forth.

(2) When the bay is completely within our sea water border line.

(a) If the mouth of the bay is no wider than 24 nautical miles, draw a straight line across the bay mouth, and calculate from that line.

(b) If the bay mouth is wider than 24 nautical miles, select a point where the mouth is less than 12 nautical miles and calculate from that line.

(c) If the bay belongs wholly to our nation, draw a straight line across the bay mouth and calculate from that line, without considering the width of the bay mouth.

(3) If the bay is not only inside our sea boundary but also inside another country's sea boundary, the territorial sea should be divided in half between our baseline and the other country's baseline.

(4) Bay: From the farthest point in the bay, draw a straight line to calculate the distance.

(5) Island: The coastal islands have their own territorial sea.

(a) If islands are included in our territory, but the distance between them and other islands is less than twice as much as that of our territorial sea region, the extension should be calculated from the farthest island of the islands group.

(b) Sea waters within the islands should be considered as our territorial sea.

(c) If the distance between the islands and continent, or between two terminal islands of the islands group and the coastal line is no more than twice the territorial waters, the waters included should be considered as territorial waters.

(6) Channels: If coasts of straits all belong to our nation, the channel entrance is less than twice as long as the extent of our territorial waters, the water within the channels should be considered our territorial waters. If the coast of the strait between our country and other countries is less than twice as long as the extent of our territorial waters, it should be divided down the midpoint of the owned area. Whenever a strait is connected with our inland water, the way to calculate the territorial waters should follow the aforementioned rules.

If the entrance points of rivers are terminal of their inner water, there is no need to consider the width of their inner water. The calculation of its territorial water should follow the aforementioned rules.

If the exit of a river is a Half (a Half system refers to a narrow and shallow-water bay, which has dyke outside and gap in the middle that connect the water in the bay with the sea waters beyond), the way to calculate the extent of the territorial water should follow the aforementioned rules.

*Provisions of Territorial Sea Boundary Draft* is attached to the resolution of the National Executive Administration (No. 3606), which states: "The National Executive Administration made its resolution on the national conference that the limit of the territorial sea should be set at 12 nautical miles, that the issue of boundary settlement should be handled by the Navy, and that a directive should be given to the nationalist government and the

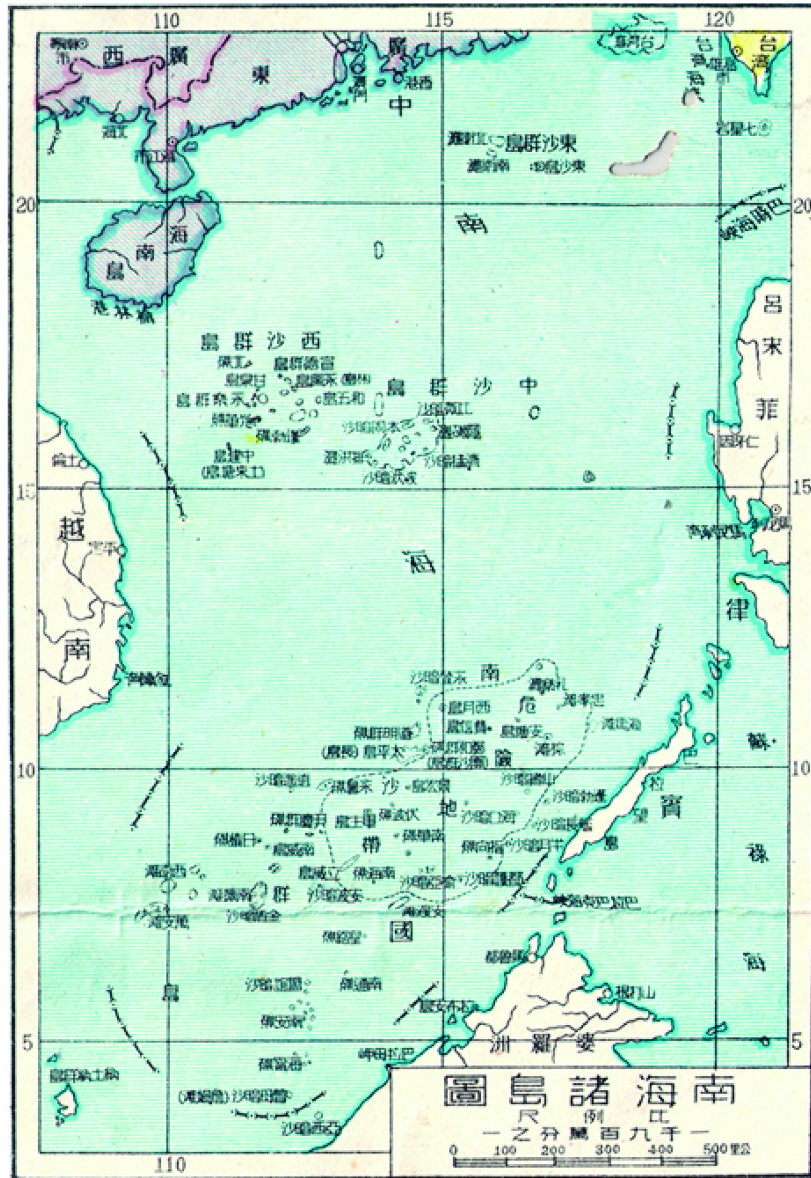


Fig. 13. Location Map of the South China Sea Islands attached to the New Map of the People's Republic of China (1951, original scale is 1:19 000 000).

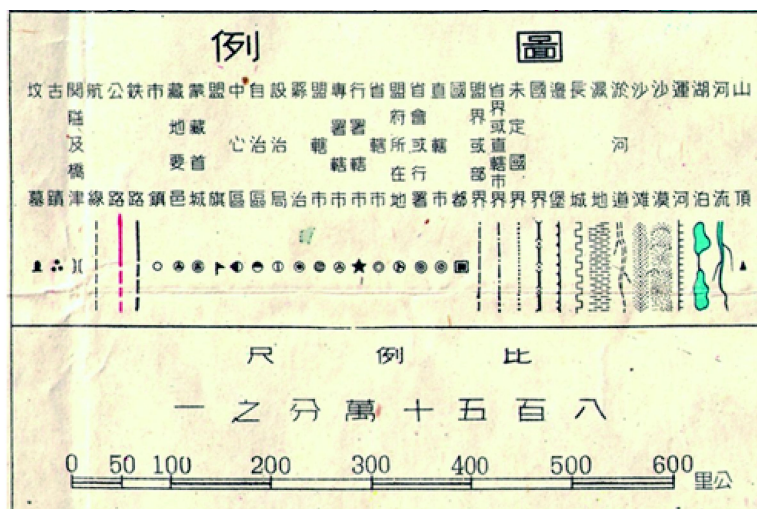


Fig. 14. Legends of the New Map of the People's Republic of China (1951).

Ministry of Interior, the Ministry of Foreign Affairs, the Ministry of Finance, the Navy and the Ministry of Industry (Directive 683)". The resolution was jointly signed and approved for release on February 26 in the 20th year of the Republic of China (1931) by Chiang Kai-shek, the President of the National Executive Administration, and Tsu-wen Soong, the Vice President of the National Executive Administration.

#### 4 Conclusions

The extension of Chinese territorial waters was discussed and proposed as early as 1930–1931, and was approved to proceed with measurement by the National Executive Administration of the government in February, 1931. The Japanese War of Aggression against China interrupted the exploration work. After World War II, the government of the Republic of China completed the reception of the South China Sea Islands and announced this to the world. The disconnected lines surrounding the South China Sea were China's sea boundary, which were connected with and an extension of the land border. In other words, this was the national boundary that separates the South China Sea Islands and neighboring Asian countries in the waters, and demarcated the boundaries and scope of China's territorial waters around the islands from those of other countries. These boundaries have been marked on the South China Sea as dashed lines in accordance with international practice, and have been approved by numer-

ous treaties, diplomatic talks, published atlases, and other official publications internationally. The boundary of the South China Sea is not suitable to be represented by using numbers and, as such, it is inappropriate at present to refer to the boundary as Nine Segmented Lines after taking out the boundary of Beibu Gulf. It should be called China's sea boundary in the South China Sea. To clarify the veracity of these lines is of great scientific significance to boundary demarcations in the South China Sea.

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