

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

**RESPONSES OF THE PHILIPPINES TO THE TRIBUNAL'S
1 APRIL 2016 REQUEST FOR COMMENTS ON ADDITIONAL
MATERIALS REGARDING THE STATUS OF ITU ABA**

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1. In its letter no. PH-CN 166153 dated 1 April 2016, the Tribunal invited the Parties to comment on certain additional materials concerning the status of Itu Aba that have recently come to the Tribunal's attention. In particular, the Tribunal invited the Parties to comment on the following documents:

- "Position Paper on ROC South China Sea Policy Republic of China (Taiwan)" (21 March 2016);
- Remarks by President Ma Ying-jeou at an international press conference "regarding Taiping Island in Nansha Islands" (23 March 2016);
- "*Amicus Curiae* Submission by the Chinese (Taiwan) Society of International Law" (23 March 2016), accompanied by 39 exhibits; and
- Comments of the People's Republic of China Foreign Ministry Spokesperson Hua Chunying at Regular Press Conference (24 March 2016).

2. The Philippines is grateful for the opportunity to comment on these additional materials, and presents its observations in four sections below. **Section I** addresses the evidential standards applicable to the Tribunal's assessment of these new materials. **Section II** responds to Taiwan's claims about Itu Aba's capacity to sustain human habitation and economic life of its own. In so doing, the Philippines refutes Taiwan's contentions about the alleged "longstanding history of human habitation" on Itu Aba, and demonstrates that the feature plainly lacks the freshwater and soil resources necessary to sustain human habitation and economic life. **Section III** addresses the historical account of China's presence in the South China Sea presented in Taiwan's Position Paper, and shows that account to be entirely irrelevant to the issues in dispute in this case, except to the extent that it disproves China's claim to exclusive historical rights to the maritime areas located within the nine-dash line.

Finally, **Section IV** presents the observations of the Philippines on Ms. Hua Chunying's remarks.

I. Taiwan's New Materials Must Be Treated with Caution

3. In its 11 March 2016 submission responding to the Tribunal's previous invitation for comments on materials adduced by Taiwan, the Philippines stated its views concerning the evidential standards according to which those materials must be evaluated. The Philippines will not repeat itself here, but rather confines itself to the following three points.

4. First, those same standards apply equally to Taiwan's most recently produced materials. Taiwan's Position Paper, President Ma's most recent remarks and the Chinese (Taiwan) Society of International Law ("C(T)SIL") *Amicus Curiae* brief were all produced for purposes of making a legal case on behalf of an entity with a direct interest in the outcome of these proceedings. They must therefore be assessed with care.

5. This is particularly true with respect to would-be evidence included as exhibits to the C(T)SIL *amicus* brief that was specially created for purposes of making Taiwan's case in this litigation. This is the second point. As the Tribunal will be aware, only partial translations of some of those documents have been provided by the authors; other documents relied on in the *amicus* brief were not provided at all. As shown below, in too many cases the missing documents themselves, and the un-translated portions of those that were produced, flatly contradict the assertions made in the *amicus* brief. Apparently, the authors did not anticipate that the Philippines or its counsel would track down these documents in various Asian archives, or obtain full translations. We did. The consequence, as shown below, is that they undermine the assertions made in the *amicus* brief and Taiwanese position paper, and

support the Philippines' view that Itu Aba has neither the capacity to sustain human habitation nor economic life of its own.

6. Third, the Philippines is concerned about the late date at which Taiwan has come forward with these most recent materials. They were all introduced into the public domain (in the case of Taiwan's Position Paper and President Ma's remarks) or submitted to the Tribunal (in the case of the C(T)SIL *amicus* brief) nearly four months after the close of oral hearings in this case, at a time when the Tribunal's deliberations are already well-advanced.

7. Under the circumstances, the Philippines considers that it would be within its rights in requesting, and the Tribunal would be well-justified in finding, that these materials should be disregarded. Procedural fairness, and the Parties' interest in a prompt and final decision counsel in favour of keeping such belated submissions out of the record.

8. Nevertheless, the Philippines has always placed great emphasis on the transparency of these proceedings. It also recognizes the exceptional difficulties China's non-appearance has created for the Tribunal. For those reasons, the Philippines has chosen not to object to the Tribunal's consideration of Taiwan's most recent materials should the Tribunal itself find it appropriate to do so.

9. That said, the Philippines is of the view that the time for any further submissions, whether direct or indirect, is over. Accordingly, it respectfully requests that the Tribunal not entertain any further efforts by Taiwan to interfere with the sound administration of justice in this case.

II. Itu Aba Cannot Sustain Human Habitation or Economic Life of Its Own

10. In this Section, the Philippines responds to Taiwan’s effusive claims that Itu Aba has an extensive history of human habitation, possesses natural freshwater and productive soil in abundance. Because of the substantial overlap among Taiwan’s position paper, President Ma’s comments and the C(T)SIL *amicus* brief, the Philippines will not present its comments on each of the documents separately insofar as they relate to Itu Aba. Instead, because the C(T)SIL brief sets out Taiwan’s arguments most comprehensively, and because it cites to exhibits for would-be evidentiary support, the Philippines will focus in the first instance on the C(T)SIL brief. The Philippines will address the position paper and/or President Ma’s comments only to the extent that they express views different from those stated in the C(T)SIL *amicus*.

A. *There Is No History of Human Habitation or Economic Life on Itu Aba*

11. The C(T)SIL *amicus* attempts to buttress its argument that Itu Aba is capable of sustaining human habitation and economic life of its own by claiming in the first instance that it “has a longstanding history of human habitation”.¹ In making this claim, the authors of the brief reference various historical materials. Yet, none of that putative evidence—much of which was either not included as exhibits or was presented as incomplete translations of the original documents that omitted critical parts—comes close to showing that Itu Aba was ever genuinely inhabited. To the contrary, it demonstrates—exactly as counsel for the Philippines explained during the November 2015 hearings²—that Itu Aba has never hosted what could

¹ *Amicus Curiae* Submission by the Chinese (Taiwan) Society of International Law (23 March 2016) (Appendix C to the Tribunal’s Letter of 1 Apr. 2016, regarding the status of Itu Aba) (hereinafter “C(T)SIL *Amicus Curiae* Submission”), Section D(ii), p. 10.

² See Tr. (25 Nov. 2015), pp. 97:8-114:12 (Presentation by Mr. Reichler); Tr. (30 Nov. 2015), pp. 15:12-22:19 (Presentation by Mr. Reichler).

fairly be described as a sustained human community. It also shows that the rare attempts to carry out meaningful economic activity there all ended in failure.

12. To begin with, the C(T)SIL brief cites no support for its assertion that “human activity” on Itu Aba was “recorded in fishermen’s diaries” during the Sung and Qing Dynasties, much less does it provide any such sources as exhibits.³ Regardless, the historical materials alluded to could not possibly refer to Itu Aba since they are said to describe a “foothold” for sailors “beginning their voyage to the South China Sea”.⁴ Itu Aba, which is approximately 540 M from China, is located much too far away to serve as the journey’s starting point. The sources referenced almost certainly refer to the Pratas or the Paracels, which are located in the northern part of the South China Sea, hundreds of nautical miles closer to China.

13. The C(T)SIL’s claim that “various documents, studies and investigations worldwide” have recorded “numerous human habitation activities” on Itu Aba fares no better.⁵ The only alleged sources cited in this connection are the 1879 edition of the *China Sea Directory* and the 1925 edition of the *Asiatic Pilot*.⁶ Neither was annexed as an exhibit to the *amicus* brief, but the Philippines obtained copies itself. The Philippines notes first that these two publications are not distinct sources of evidence; the *Asiatic Pilot* simply repeats, nearly verbatim, the relevant part of the *China Sea Directory*.⁷ In any event, they disprove the claim that Itu Aba sustained an indigenous human settlement. The individuals who were

³ C(T)SIL *Amicus Curiae* Submission, para. 25.

⁴ *Id.*, para. 25 (emphasis added).

⁵ *Id.*, para. 26.

⁶ United Kingdom, Hydrographic Department, *The China Sea Directory*, Vol. II (1879). SWSP, Vol. IV, Annex 389; U.S. Hydrographic Office, *Asiatic Pilot: The Western Shores of the China Sea from Singapore Strait to and Including Hongkong*, Vol. IV (1925). RPRC (25 Apr. 2016), Annex 895.

⁷ Compare United Kingdom, Hydrographic Department, *The China Sea Directory*, Vol. II (1879), p. 66. SWSP, Vol. IV, Annex 389, with U.S. Hydrographic Office, *Asiatic Pilot: The Western Shores of the China Sea from Singapore Strait to and Including Hongkong*, Vol. IV (1925), p. 118. RPRC (25 Apr. 2016), Annex 895.

reportedly present on Itu Aba are described as “*Hainan fishermen*”, indicating they resided on Hainan, not Itu Aba.⁸ Even then, the publications indicate that the fishermen were dependent for their survival on regular deliveries of “*supplies of rice and other necessities*” that had to be transported “from Hainan”.⁹

14. Other evidence that the *amicus* brief cites for the alleged historic human habitation of Itu Aba is a gravestone said to date to the Qing Dynasty (1644-1911).¹⁰ It is ironic that the C(T)SIL was forced to resort to the fact that someone once died on Itu Aba (or at least was buried there) as evidence for the feature’s nominal capacity to sustain human life.

15. In any event, as the Philippines has repeatedly observed, sojourners have long made occasional use of Itu Aba.¹¹ It is therefore not surprising that some may have died there, particularly in light of Itu Aba’s remote location, and paucity of food and water. Had there been a continuous human presence on Itu Aba one would expect to find a graveyard, not a single headstone. The existence of a lone grave marker thus confirms what the documentary record reveals: Itu Aba was uninhabited.¹²

16. These records include even the exhibits attached to the C(T)SIL brief. One (Exhibit 23) describes a visit to Itu Aba in 1919. In a part *not* quoted in the text of the *amicus*,

⁸ United Kingdom, Hydrographic Department, *The China Sea Directory*, Vol. II (1879), p. 66 (emphasis added). SWSP, Vol. IV, Annex 389; U.S. Hydrographic Office, *Asiatic Pilot: The Western Shores of the China Sea from Singapore Strait to and Including Hongkong*, Vol. IV (1925), p. 118 (emphasis added). RPRC (25 Apr. 2016), Annex 895.

⁹ United Kingdom, Hydrographic Department, *The China Sea Directory*, Vol. II (1879), p. 66 (emphasis added). SWSP, Vol. IV, Annex 389; U.S. Hydrographic Office, *Asiatic Pilot: The Western Shores of the China Sea from Singapore Strait to and Including Hongkong*, Vol. IV (1925), p. 118 (emphasis added). RPRC (25 Apr. 2016), Annex 895.

¹⁰ C(T)SIL *Amicus Curiae* Submission, para. 25

¹¹ See, e.g., Atlas of Relevant Features, SWSP, Vol. II, pp. 74-75; Tr., 30 Nov. 2015, pp. 22:7-23:4 (Presentation by Mr. Reichler).

¹² See generally, e.g., “France’s Tiny New Island Empire”, *New York Times* (13 Aug. 1933). SWSP, Vol. IV, Annex 402.

the document reports “there were no humans”.¹³ Nor, according to the same report, were there any “other animals or birds on the island”, save a multitude of “wild mice” that “ran on trees everywhere”.¹⁴

17. The same exhibit reports that although the individuals who had previously visited Itu Aba had left traces of their stay, “there were no huts” or any other type of housing.¹⁵ This is telling: those who had visited Itu Aba had not constructed permanent, or even semi-permanent, dwellings.

18. The absence of human habitation on Itu Aba is confirmed by still another of the exhibits on which the C(T)SIL purports to rely (Exhibit 26, a 1939 report from the *Taiwan Times*). Since the *amicus* provided a translation only of excerpts of this report, the Philippines has taken the liberty of including herewith a more complete version. Part of the exhibit which the C(T)SIL did *not* translate states that although “Chinese fishermen have visited the islands”, there was “*no mistake when saying that they are deserted island[s]*”.¹⁶ This is corroborated by still another account, this one dating to 1928, which reported that “[t]hese waters are rarely frequented, except by Chinese fishing people from Hainan” who construct only “*small temporary dwellings*”.¹⁷

19. Equally self-defeating is the C(T)SIL’s attempt to rely upon the short-lived effort by the Japanese Rasa Phosphate Company to exploit whatever guano deposits might have

¹³ Unosuke Kokura, *The Islands of Storm* (1940). C(T)SIL *Amicus Curiae* Submission, Exhibit 23, p. 1.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ “Histories of New Southern Archipelago”, *Taiwan Times* (May 1939), p. 192 (emphasis added). C(T)SIL *Amicus Curiae* Submission, Exhibit 26.

¹⁷ Government of France, *Memorandum* regarding Japanese claims to islets in the China Sea (8 Mar. 1928), p. 86 (emphasis added). RPRC (25 Apr. 2016), Annex 896.

existed on Itu Aba.¹⁸ This does not support Taiwan’s argument that the feature is capable of sustaining either human habitation or economic life for the simple reason that the venture was a spectacular failure. One of the documents annexed to the C(T)SIL *amicus* (Exhibit 26) reports that the company, which reportedly began its efforts in 1921, was forced to “suspend[] the mining and withdrew in April 1929”.¹⁹ Taiwan’s Executive Yuan attributes the failure, in part, to the fact that “the island’s phosphorus mine was exhausted”.²⁰

20. Even if Itu Aba’s supply of guano had not been depleted, the venture’s failure is particularly compelling evidence of Itu Aba’s inability to sustain economic life because, as reported in Exhibit 26 of the C(T)SIL brief—again, in a part the C(T)SIL did not translate—the company had “invested a huge amount of capital”,²¹ and enjoyed the support of the Government of Japan. Exhibit 26 indicates that company’s “first exploration team” was “led” by a “reserve navy commander”.²² Still another exhibit (Exhibit 25) refers to the company’s association with the “Ministry of So[u]thern Ocean”.²³ Yet, even with significant investment and governmental support, guano exploitation proved unsustainable. As stated in yet another exhibit (Exhibit 33)—and once more in a part the C(T)SIL did not translate—“the Japanese had tried with all their might, but without success, to exploit a shallow layer of phosphates”.²⁴

¹⁸ C(T)SIL *Amicus Curiae* Submission, para. 27.

¹⁹ “Histories of New Southern Archipelago”, *Taiwan Times* (May 1939). C(T)SIL *Amicus Curiae* Submission, Exhibit 26, p. 196.

²⁰ Republic of China (Taiwan), Coast Guard Administration, “Historical Background”, p. 1, available at <http://www.cga.gov.tw/GipOpen/wSite/ct?xItem=10574&ctNode=1306&mp=999> (accessed 10 Apr. 2016). RPRC (25 Apr. 2016), Annex 910.

²¹ “Histories of New Southern Archipelago”, *Taiwan Times* (May 1939), p. 192. C(T)SIL *Amicus Curiae* Submission, Exhibit 26(*bis*) (supplemental translation by the Philippines).

²² *Id.*, p. 194.

²³ “Determination Regarding Jurisdiction of New Southern Archipelago will be Announced Today”, *Osaka Asahi Newspaper* (18 Apr. 1939), p. 1. C(T)SIL *Amicus Curiae* Submission, Exhibit 25.

²⁴ “French Flag over the Unoccupied Islets”, *The Illustration* (15 July 1933), p. 382. C(T)SIL *Amicus Curiae* Submission, Exhibit 33(*bis*) (supplemental translation by the Philippines).

(In any event, even if there had been greater quantities of guano than there were, it bears noting that guano is considered to be both an “exhaustible” and “non-renewable” resource.²⁵)

21. Nor is the *amicus* helped by the Japanese sources it cites in regard to the alleged scale of guano extraction on Itu Aba. Nearly all the exhibits it relies upon are from 1939-1940; that is, ten years *after* the failure of the Rasa Company’s efforts and contemporaneous with Japan’s annexation of the Spratlys on 30 March 1939. The nominal basis for Japan’s sovereignty claim at that time, which was vigorously contested by other States (including France, the United Kingdom and the United States), was precisely the activities that the Rasa Phosphate Company had allegedly undertaken there. Self-serving statements designed to advance Japan’s sovereignty claim by inflating its purported presence should thus be approached with caution.

22. For example, the C(T)SIL brief cites (twice) a source from June 1939 that claimed that before the venture’s collapse as many of 600 Japanese—an impossibly large number—had worked on Itu Aba.²⁶ The *amicus* neglects to mention, however, that another exhibit (Exhibit 26) gives a more plausible account: that there were “about tens of Japanese employees and coolie laborers”.²⁷

23. After the failure of Japan’s short-lived guano venture, Itu Aba reverted to its traditional uninhabited state. The French naval vessel *Astrolabe*, which visited the feature in

²⁵ See, e.g., Christian Bidard, *PRICES, REPRODUCTION, SCARCITY*, Cambridge University Press (1991), pp. 272-273. RPRC (25 Apr. 2016), Annex 899 (considering in an economic model that is guano exhaustible and non-renewable with a zero extraction cost, whose stock is progressively depleted); Charles Gide, *PRINCIPLES OF POLITICAL ECONOMY* (2nd Edition) (1904), p. 93. RPRC (25 Apr. 2016), Annex 894 (noting that the supply of natural fertilizers in soil, such as guano, is “small and easily exhaustible”).

²⁶ C(T)SIL *Amicus Curiae* Submission, paras. 27, 43 (citing Yun-ichi Yamamoto, “The Brief History of the Sinnan Islands”, *Science of Taiwan* Vol. 7, No. 3 (June 1939). C(T)SIL *Amicus Curiae* Submission, p. 1. Exhibit 24).

²⁷ “Histories of New Southern Archipelago”, *Taiwan Times* (May 1939), p. 196. C(T)SIL *Amicus Curiae* Submission, Exhibit 26.

April 1933, found that “[t]he island was deserted”.²⁸ The Japanese themselves encountered the same thing when they also visited that year; Itu Aba’s sole inhabitant was a cat that was described as “seemingly missing humans”.²⁹

24. Itu Aba did, as before, continue to receive sporadic visits from fishermen. When the French visited in 1933, they found a note that read: “I, Ti Mung, Chief of the Junk, come here in the full moon of March to bring you food. I found nobody, I left rice in the shelter of the rocks and I left.”³⁰ This is revealing. Not only was Itu Aba deserted when the junk arrived, its captain understood that any seafarers who might visit would need basic supplies to survive.

25. The Tribunal should not be misled by exhibits included with the C(T)SIL submission which mention the presence on Itu Aba during the late 1930s of an entity referred to as the “Kaiyo Kogyo Company”.³¹ This was not a commercial enterprise but a cover for the Japanese military. When the British naval vessel *HMS Herald* visited Itu Aba in 1937, its commander observed a Japanese vessel, which he concluded was likely using Itu Aba “as a base for operations further afield”.³²

²⁸ “French Flag over the Unoccupied Islets”, *The Illustration* (15 July 1933), p. 382. C(T)SIL *Amicus Curiae* Submission, Exhibit 33.

²⁹ Miyoshi, “Look, Japan Made Significant Marks Everywhere”, *Osaka Mainichi* (6 Sept. 1933), p. 1. C(T)SIL *Amicus Curiae* Submission, Exhibit 34.

³⁰ “French Flag over the Unoccupied Islets”, *The Illustration* (15 July 1933), p. 382. C(T)SIL *Amicus Curiae* Submission, Exhibit 33. *See also* P.J. Philip, “Barren Coral Isles in Pacific Cause International Dispute”, *New York Times* (27 Aug. 1933), p. 1. SWSP, Vol. IV, Annex 401.

³¹ *See, e.g.*, “Determination Regarding Jurisdiction of New Southern Archipelago will be Announced Today”, *Osaka Asahi Newspaper* (18 Apr. 1939), pp. 1-2. C(T)SIL *Amicus Curiae* Submission, Exhibit 25.

³² *Memorandum* from Commanding Officer, H.M.S. “Herald”, to Commander-in-Chief, China Station, British Royal Navy (3 May 1937), p. 3. SWSP, Vol. III, Annex 370.

26. He also observed what was claimed to be a “fishing company”.³³ That this was not actually a commercial enterprise became evident when the *HMS Herald* returned in 1938. Its Commander, upon talking to the alleged company’s “manager” and inspecting its encampment, which was equipped with a wireless transmitting and receiving set, and meteorological instruments, concluded that “fishing is a ‘blind’ only”.³⁴

27. The Commander reported to the British Navy:

I am of the opinion that this camp is commercial in name only. There was not apparent employment for the staff of eleven men, nor was there any sign of dumps of produce ready for export, or of stores other than those required for the camp itself. When asked how often a ship called to take away produce and bring supplies, I was told that the fishing boats did that when they had filled up but use Itu Aba as their base whilst fishing. Under those circumstances it is difficult to see for what purpose this elaborate camp is required.³⁵

28. These suspicions were well-founded. The Philippines has located in the Japanese archives a budget that covered, in addition to paraphernalia related to fishing, the wireless transmission equipment that the *HMS Herald* had observed, as well as other military materiel such as machine guns and rifles.³⁶

29. After Japan’s defeat in 1945, Itu Aba reverted once more to being a deserted island. This is borne out by the account provided by a Republic of China naval officer who participated in the Chinese expedition that “recovered” the feature in 1946. Although cited in

³³ *Id.*, p. 3.

³⁴ W.C. Jenk., H.M.S. Herald, United Kingdom, *Report on Suitability of Islands in China Sea for Landing Grounds* (18 Apr. 1938), p. 3 [PDF]. SWSP, Vol. III, Annex 374.

³⁵ *Id.*, p. 5 [PDF]. As an April 1938 British naval cypher put it, although the Japanese detachment on Itu Aba was “[o]stensibly” a “Fishing Station,” it “contain[ed] wireless transmitting and meteorological instruments with 12 men.” *Message from H.M.S. “Herald”, United Kingdom, to Commander-in-Chief, China Station, British Royal Navy* (25 Apr. 1938). SWSP, Vol. III, Annex 375.

³⁶ See generally “Spratly Islands Initial Stage Installation and Estimated Income & Expenditure Statement”, *Japanese Ministry of Foreign Affairs Archives*, A.4.1.0.2-1-1 Vol. 1, No. 8 (undated). RPRC (25 Apr. 2016), Annex 913.

the C(T)SIL brief, this fascinating account was not provided as an exhibit.³⁷ After diligent investigation, however, the Philippines was able to locate a copy. It reports that at the time of its recovery, Itu Aba had no human inhabitants.³⁸

30. Recognizing that Itu Aba lacked the essentials to sustain life, the ROC Navy was compelled to transport to the feature the “necessities that needed to be prepared for troops sent to station on the island”.³⁹ Indeed, Itu Aba’s scarce natural resources were understood to be so precious that the landing party was given orders that “no one was allowed to pick the flowers, plants and fruits” so these could be “saved as food supplies for the officers stationed on the island”.⁴⁰ Compliance with this order was considered so critical that even “high ranking officers” were instructed that “they were not allowed to pick the fruits on the island”.⁴¹

31. Nevertheless, the order was disregarded. The account tells how “the officers from the Tai Ping Ship had carried coconuts back”.⁴² Itu Aba’s meagre supply of coconuts was so small that “all of the coconuts on the island [were] picked” during their time ashore in the course of a single day.⁴³

32. Even after Taiwan “recovered” Itu Aba, its presence was short-lived. As the Philippines explained in its 11 March 2016 submission, Taiwan was forced to abandon the

³⁷ C(T)SIL *Amicus Curiae* Submission, p. 12, n. 44; p. 15, n. 55.

³⁸ Dunqian Li, “Chronicles of Stationing in the Spratly Islands”, *Shanghai Miscellany*, Vol. 4, No. 6 (1998), p. 9. RPRC (25 Apr. 2016), Annex 901.

³⁹ *Id.*, pp. 2-3.

⁴⁰ *Id.*, p. 9.

⁴¹ *Id.*, p. 10

⁴² *Id.*

⁴³ *Id.*

feature in 1950 because of the difficulties of supplying such a remote outpost.⁴⁴ In connection with its request to “recall” its forces from Itu Aba, the Taiwanese Navy informed the Ministry of Foreign Affairs that the “Nansha Islands are far away on the ocean; even though they occupy vanguard positions in terms of national defence, *they lack residents or production*, and long-term military operations here are difficult due to the necessity of vessel supplies”.⁴⁵ President Ma himself has acknowledged in his January 2016 remarks that Taiwan’s presence on Itu Aba had to be terminated “due to supply issues”.⁴⁶

33. When the *HMS Dampier* visited the feature in 1951 after Taiwan had left, it reported “a number of fishermen from Palawan and Hainan, *but no permanent inhabitants*”.⁴⁷ Two years later, the French Ministry of Foreign Affairs observed that the Spratlys were only “visited and temporarily inhabited by fishermen of various nationalities”, and that they had “more strategic than economic value”.⁴⁸

34. The Philippines has already addressed the actions undertaken by Taiwan on Itu Aba upon its return in 1956 in its written and oral pleadings⁴⁹ and in its Responses to the

⁴⁴ Responses of the Philippines to the Tribunal’s 5 February 2016 Request for Comments (11 Mar. 2016), para. 58.

⁴⁵ *Communication* from the Ministry of the Interior of the Republic of China (Navy Command Headquarters) to the Ministry of Foreign Affairs of the Republic of China (8 May 1950), reprinted in *Archival Compilation on South China Sea Islands by Ministry of Foreign Affairs*, Vol. 2, Doc. No. III(2):013 (Republic of China Ministry of Foreign Affairs Research & Planning Committee, ed.) (1995) (emphasis added). RTRC, Annex 873.

⁴⁶ Office of the President of the Taiwan Authority of China, “Remarks by President Ma on Taiping Island”, (28 Jan. 2016), available at <http://english.president.gov.tw/Default.aspx?tabid=491&itemid=36616&rmid=2355> (accessed 9 Mar. 2016). C(T)SIL *Amicus Curiae* Submission, Exhibit 2 (also submitted as RTRC, Annex 876).

⁴⁷ H2718/1951 HMS Dampier – Corrections to Sailing Directions for Itu Aba (Materials from the Voyages of HMS Dampier in 1951 and 1963, transmitted to The Republic of the Philippines on 1 Apr. 2016), p. 5 [PDF] (emphasis added).

⁴⁸ Government of France, Ministry of Foreign Affairs, Asia/Oceania Section, *Memorandum* (8 Sept. 1953), p. 112. RPRC (25 Apr. 2016), Annex 897.

⁴⁹ See Atlas of Relevant Features, SWSP, Vol. II, pp. 74-75; Tr. (25 Nov. 2015), pp. 99:16-100:8, 109:5-118:21 (Presentation by Mr. Reichler); Tr. (30 Nov. 2015), pp. 14:13-42:11 (Presentation by Mr. Reichler).

Tribunal's 5 February 2016 Request for Comments.⁵⁰ Little more need be said. The C(T)SIL *amicus* simply repeats Taiwan's self-serving statements and cites its putative "evidence" no fewer than 30 times.⁵¹ The *amicus* makes no attempt to respond to the incontrovertible fact that military forces (and auxiliary support personnel) stationed on a feature for defence purposes or for maintaining a sovereignty claim cannot be equated with a genuine human community, especially when (as here) history shows the feature to be utterly uninhabitable on the basis of its own (non-existent) resources.⁵²

35. Very recent reporting by journalists whom Taiwan invited to visit Itu Aba on 23 March 2016 as part of its campaign to convince the Tribunal that the feature is capable of sustaining human habitation only provides further confirmation of the fact that the people currently on Itu Aba are nothing like a normal human community. CNN reported that the feature "bristle[s] with concrete military bunkers, anti-aircraft guns and helmeted, uniformed guards".⁵³ Another report remarked on the vast expenditures that Taiwan must devote to maintain its presence, noting that it is spending more than US\$100 million on the feature's airstrip and wharf alone.⁵⁴

36. Still another report revealed that even the handful of individuals who are claimed to be civilians are actually there to support Taiwan's sovereignty claim. One such individual,

⁵⁰ See Responses of the Philippines to the Tribunal's 5 February 2016 Request for Comments (11 Mar. 2016), paras. 46-116.

⁵¹ See C(T)SIL *Amicus Curiae* Submission, pp. 6, 7, 8, 9, 10, 12, 13, 16, 17, 18, 19, 20.

⁵² See Atlas of Relevant Features, SWSP, Vol. II, pp. 74-75; Tr. (25 Nov. 2015), pp. 99:16-100:8, 109:5-118:21 (Presentation by Mr. Reichler); Tr. (30 Nov. 2015), pp. 14:13-42:11 (Presentation by Mr. Reichler); Responses of the Philippines to the Tribunal's 5 February 2016 Request for Comments (11 Mar. 2016), paras. 46-116.

⁵³ I. Watson & M. Philipps, "South China Sea: Taiwan enters power struggle", *CNN* (27 Mar. 2016), available at <http://www.cnn.com/2016/03/26/asia/taiwan-south-china-sea/index.html>, p. 8. RPRC (25 Apr. 2016), Annex 909.

⁵⁴ Johnson Lai, "Pushing territorial claim, Taiwan says 'rock' is an island", *Associated Press* (23 Mar. 2016), available at <http://bigstory.ap.org/article/0c82f35028a44621a3f0fd1cf7cc78ce/taiwan-takes-media-tour-south-china-sea-island-claim>, p. 2. RPRC (25 Apr. 2016), Annex 907.

a nurse at the medical facility that serves the garrison, said: “I’m really happy to play a part in upholding our nation’s sovereignty here”.⁵⁵

37. Even the C(T)SIL’s claim that Itu Aba might someday become a centre for “eco-tourism”⁵⁶ was undone by another target of Taiwan’s propaganda effort. An *al-Jazeera* journalist said of Itu Aba: “Actually it is more a runway than island”.⁵⁷

38. Contrary to the self-serving claims stated in the C(T)SIL *amicus* (and in Taiwan’s Position Paper and President Ma’s remarks), the truth is that there is no historical record of Itu Aba ever sustaining either human habitation or economic life of its own. Nor, as discussed in the next two subsections, could it possibly do so. It lacks the requisite freshwater and soil resources.

B. Itu Aba Lacks Sufficient Freshwater Resources

39. In addition to falsely asserting that Itu Aba has a long history of human habitation, Taiwan also contends that the feature is, in the words of President Ma, “blessed with an abundance of high-quality fresh water”.⁵⁸ Ironically, however, Taiwan’s new materials themselves disprove this claim and reaffirm what the Philippines has already demonstrated; namely, that Itu Aba does not have a sustainable supply of potable freshwater.

40. The Tribunal will recall that in its January 2016 press release, the Taiwanese Ministry of Foreign Affairs contended that “there are *four* operational groundwater wells”

⁵⁵ Debra Mao, “Tiny Island at Center of South China Sea Tussle Seeks Status”, *Bloomberg* (23 Mar. 2016), available at <http://www.bloomberg.com/news/articles/2016-03-24/tiny-island-at-center-of-south-china-sea-struggle-seeks-status>, p. 1. RPRC (25 Apr. 2016), Annex 905.

⁵⁶ C(T)SIL *Amicus Curiae* Submission, para. 45.

⁵⁷ Adrian Brown, “Taiwan shows off Taiping Island in the South China Sea”, *al-Jazeera* (24 Mar. 2016), available at <http://www.aljazeera.com/blogs/asia/2016/03/taiwan-taiping-island-south-china-sea-160324062533491.html>, p. 1. RPRC (25 Apr. 2016), Annex 908.

⁵⁸ Office of the President of the Taiwan Authority of China, “President Ma’s Remarks at International Press Conference Regarding Taiping Island in Nansha Islands” (23 Mar. 2016).

on Itu Aba that produce sufficient “*drinking water*”.⁵⁹ Yet, the evidence now included with the C(T)SIL *amicus* disproves even this most basic assertion.

41. According to the January 2016 “Groundwater Quality and Hydrology Survey Report” included as Exhibit 29 to the C(T)SIL brief, only one of the four wells on Itu Aba (well no. 5) actually produces any freshwater. The report acknowledges that the ground water from the remaining three wells is “affected by seawater” and thus cannot be used for drinking.⁶⁰

42. Whether even well no. 5 can actually produce water that is suitable for drinking is itself open to doubt. According to the Taiwanese “Groundwater Quality and Hydrology Survey Report”, water from well no. 5 has salt concentration between 418 and 427 mg/L.⁶¹ The Philippines included an expert report from Dr. Ryan T. Bailey, a specialist in the water resources of Pacific islands, with its 11 March 2016 submission. A supplemental report from Dr. Bailey is included with this submission. Dr. Bailey explains that “water with a chloride content greater than 250 mg/L, which corresponds to approximately 455 mg/L of total salt, is designated by the United States Environmental Protection Agency as having a ‘salty taste’”.⁶² Indeed, Taiwan itself admits that salt concentration in the water from well no. 5 is high. An

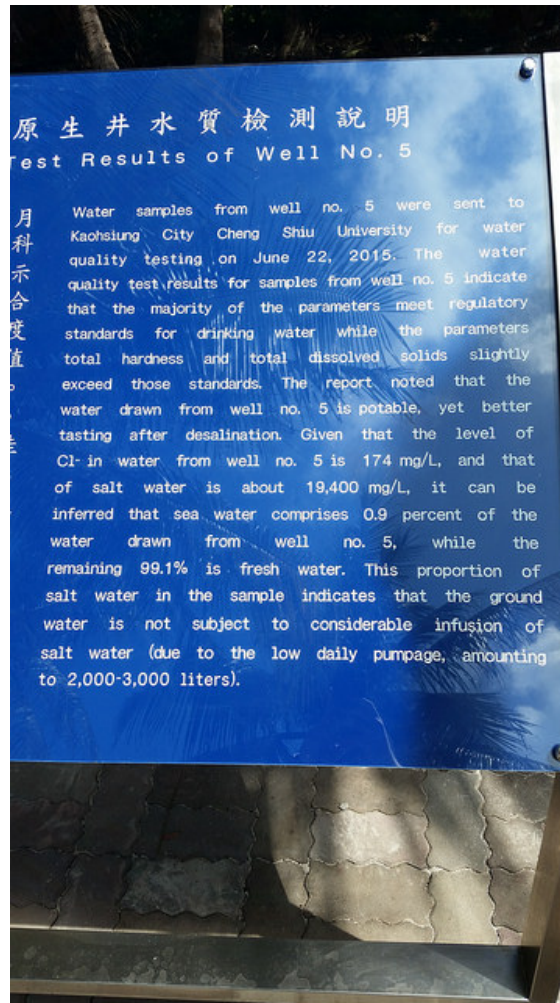
⁵⁹ See Ministry of Foreign Affairs of the Republic of China (Taiwan), “Taiping Island is an Island, Not a Rock, and the ROC Possesses Full Rights Associated with An Exclusive Economic Zone and Continental Shelf in accordance with UNCLOS” (23 Jan. 2016), p. 1 (emphasis added). C(T)SIL *Amicus Curiae* Submission, Exhibit 1 (also submitted as RTRC, Annex 875).

⁶⁰ Ta-Wei Chang, *Water Quality and Agricultural Environment Survey –Groundwater Quality and Hydrology Survey Report* (12 Mar. 2016), pp. 2-3. C(T)SIL *Amicus Curiae* Submission, Exhibit 29.

⁶¹ *Id.*, p. 2.

⁶² Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 4. RPRC (25 Apr. 2016), Annex 911.

official sign posted near well no. 5 states that “the water drawn from well no. 5 is potable, yet better tasting after desalination”.⁶³



43. Dr. Bailey also explains in his supplemental report that even this already high “measurement of the salt concentration of water drawn from Well No. 5 is methodologically flawed in at least two respects”.⁶⁴ One flaw relates to the timing of the testing that Taiwan performed. The tests were allegedly based on samples drawn on 22-23 January, *at the end of the local rainy season* (which the report itself states “occurs from June each year to next

⁶³ Asia Maritime Transparency Initiative, *Virtual Tour of Itu Aba*, Photo 20160123_132739 (23 Jan. 2016), available at <https://www.flickr.com/photos/139462176@N08/25863661766/> (emphasis added). RPRC (25 Apr. 2016), Annex 904.

⁶⁴ Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 4. RPRC (25 Apr. 2016), Annex 911.

January”).⁶⁵ This is important because the quality of the water drawn from the surface of the freshwater lens will be better at the end of the rainy season than during, or at the end of, the dry season.⁶⁶

44. Dr. Bailey explains: “For objective results, the testing should have been done *during the dry season*, when the salt concentration in the groundwater is certain to be higher (due to the absence of rainwater to replenish any freshwater lens). Measuring the salt concentration in the water drawn from Well No. 5 during, or at the end of, the dry season would provide a more meaningful indication of whether potable freshwater is available on Itu Aba year-round”.⁶⁷

45. The second methodological flaw relates to the manner in which the water quality tests were conducted. The “Groundwater Quality and Hydrology Survey Report” indicates that two samples of the water from well no. 5 were tested. One sample was taken after the water had been in the well “for some time”; the other was taken after some undetermined amount of water had been siphoned off and the freshwater allowed to “recharge” overnight.⁶⁸ Dr. Bailey explains that these tests thus “appear to have been performed on the ‘freshest’ water available on Itu Aba (and then at the end of the rainy season)”.⁶⁹ In Dr. Bailey’s opinion, “[a] more scientifically appropriate way to test water quality would have been to [do

⁶⁵ Ta-Wei Chang, *Water Quality and Agricultural Environment Survey —Groundwater Quality and Hydrology Survey Report* (12 Mar. 2016), pp. 1-3. C(T)SIL *Amicus Curiae* Submission, Exhibit 29.

⁶⁶ Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 4. RPRC (25 Apr. 2016), Annex 911.

⁶⁷ *Id.*

⁶⁸ Ta-Wei Chang, *Water Quality and Agricultural Environment Survey —Groundwater Quality and Hydrology Survey Report* (12 Mar. 2016), p. 1. C(T)SIL *Amicus Curiae* Submission, Exhibit 29.

⁶⁹ Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 4. RPRC (25 Apr. 2016), Annex 911.

so] immediately after extracting a designated amount of water, e.g. about 2,000 liters, which is the reported volume of water extracted daily from the well”.⁷⁰

46. But perhaps most damning of all are the results of water quality tests that Taiwan performed outside the context of litigation in 1994. At the oral hearings and in its 11 March submission, the Philippines cited to a 1994 study, “The Flora of Taipingtao (Itu Aba)”, prepared by Taiwanese botanists. That report stated that “the underground water [on Itu Aba] is salty and unusable for drinking”.⁷¹ In his recent comments, President Ma attacked the Philippines for relying on the botanists’ report instead of another 1994 report that dealt directly with water quality issues: “Water quality in the South China Sea and Waters Surrounding Taiping Island” by Professor Chen I-Ming. Indeed, President Ma went so far as to accuse the Philippines of “intentionally ignoring professional quality tests conducted on water drawn from [Itu Aba]’s wells by Professor Chen I-Ming” and “conceal[ing] the truth in an attempt to mislead the tribunal judges”.⁷²

47. The Philippines was not previously aware of Professor Chen’s 1994 study. Although President Ma provided no reference to it, nor was it included as an exhibit to the C(T)SIL amicus, the Philippines was nevertheless able to locate a copy of it. Having now carefully examined it, the Philippines wishes to express its gratitude to Taiwan for bringing this document to its attention. What Professor Chen’s report reveals is that the botanists were

⁷⁰ *Id.*

⁷¹ T-C Huang, et al., “The Flora of Taipingtao (Itu Aba Island)”, *Taiwania*, Vol. 39, No. 1-2 (1994), p. 1. MP, Vol. VII, Annex 254.

⁷² Remarks by President Ma Ying-jeou at an international press conference “regarding Taiping Island in Nansha Islands” (23 Mar. 2016), p. 3.

exactly right (as one would expect, since they were apparently part of the same 1994 expedition as Professor Chen).⁷³

48. According to his report, Professor Chen tested the salinity of Itu Aba's groundwater at two sites. The measured salinity "was 2.0 and 1.1 ppt, respectively".⁷⁴ As Dr. Bailey explains, "the highest limit of freshwater is a salt content equal to 850 mg/L, which is 0.85 ppt".⁷⁵ Thus, both sites Professor Chen tested in 1994 "were above the maximum allowable salt concentration for potable water, with the second site more than two times the limit".⁷⁶ In other words, "the underground water [on Itu Aba] is salty and unusable for drinking",⁷⁷ just as the Taiwanese botanists reported.

49. As stated, the three other wells have significantly higher salt concentrations than well no. 5, rendering them even more unsuitable for drinking. The recently produced "Groundwater Quality and Hydrology Survey Report" tries to downplay this uncomfortable fact by reporting that the "average" salinity of the four operational wells on Itu Aba is "lower than 3‰, far below the average salinity of 33‰ to 35‰ of seawater".⁷⁸

50. However, as Dr. Bailey again explains, "averaging the salinity of four wells is methodologically inappropriate" because it "has the effect of enhancing the apparent overall

⁷³ See generally Chen I-Ming, "Water Quality Survey in South China Sea and Taiping Island Sea Region", in *POLICY GUIDING PRINCIPLES: THE REPORT FOR THE ECOLOGICAL ENVIRONMENT SURVEY ON SOUTH SEA* (L. Fang & J. Li eds. 1994), pp. 187-217. RPRC (25 Apr. 2016), Annex 900.

⁷⁴ *Id.*, p. 193.

⁷⁵ Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 5. RPRC (25 Apr. 2016), Annex 911.

⁷⁶ *Id.*

⁷⁷ T-C Huang, et al., "The Flora of Taipingtao (Itu Aba Island)", *Taiwania*, Vol. 39, No. 1-2 (1994), p. 1. MP, Vol. VII, Annex 254.

⁷⁸ Ta-Wei Chang, *Water Quality and Agricultural Environment Survey —Groundwater Quality and Hydrology Survey Report* (12 Mar. 2016), p. 2. C(T)SIL *Amicus Curiae* Submission, Exhibit 29.

quality of the groundwater”.⁷⁹ This approach is also inconsistent with “[b]est scientific practice[, which] dictates that each site be measured and reported separately”.⁸⁰

51. Dr. Bailey further explains that “the way in which reported average is presented is also scientifically inappropriate” because “[s]alinity must be compared to allowable salt concentration in potable water, not to the salt concentration of seawater”.⁸¹ Taiwan thus sets an unreasonably low bar for itself; even if the water on Itu Aba has somewhat lower salinity than pure seawater, that does not make it drinkable. According to Dr. Bailey: “Salinity of about 10% that of seawater reflects significant salt content that renders water unpotable and unusable for most other purposes ... even for cooking, cleaning or irrigation”.⁸² Such high salt concentrations almost certainly explain why Taiwan has constructed desalination facilities and employs reverse osmosis and recycling at Itu Aba.⁸³

52. Quite apart from its wholesale failure to prove its case about the quality of Itu Aba’s alleged freshwater resources, Taiwan also fails to prove its claim that freshwater is present in “abundance”.⁸⁴ This claim rests in the first place on another recently produced report, “Preliminary Studies on the Holocene Geology of Taiping Island”, which states that

⁷⁹ Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 5. RPRC (25 Apr. 2016), Annex 911.

⁸⁰ *Id.*

⁸¹ *Id.*, p. 6.

⁸² *Id.*

⁸³ According to President Ma: “Aside from groundwater wells that provide water for daily use, water can also be obtained through seawater desalination, reverse osmosis, and recycling”. Office of the President of the Taiwan Authority of China, “Remarks by President Ma on Taiping Island”, (28 Jan. 2016), p. 8, *available at* <http://english.president.gov.tw/Default.aspx?tabid=491&itemid=36616&rmid=2355> (accessed 9 Mar. 2016). . C(T)SIL *Amicus Curiae* Submission, Exhibit 2 (also submitted as RTRC, Annex 876).

⁸⁴ Remarks by President Ma Ying-jeou at an international press conference “regarding Taiping Island in Nansha Islands” (23 Mar. 2016), p. 2. *See also* C(T)SIL *Amicus Curiae* Submission, para. 29.

Itu Aba has a “permanent” freshwater lens.⁸⁵ As Dr. Bailey observes, however, the report “provides no scientific basis for concluding that Itu Aba has a permanent freshwater lens”.⁸⁶

53. Dr. Bailey lists a number of scientific reasons to doubt that Itu Aba actually has a “permanent” freshwater lens. He explains that a number of important variables affect the size and permanence of freshwater lenses beneath small coral islands like Itu Aba.⁸⁷ One such variable is rainfall patterns. Taiwan admits that Itu Aba experiences distinct wet and dry seasons.⁸⁸ As stated, the “Groundwater Quality and Hydrology Survey Report” seasons that the rainy seasons lasts from June to January; the dry season lasts from February to May.⁸⁹ This is significant because, as Dr. Bailey explains, “periods of little or no rainfall can cause the rapid depletion of the lens as fresh groundwater that is not replenished by recharge discharges to the ocean”.⁹⁰ For islands like Itu Aba, complete lens depletion “can occur in as little as 2-3 months with little or no rainfall”.⁹¹

54. The fact that Itu Aba’s dry season lasts at least four months provides a reasonable basis to conclude “to a high degree of scientific certainty that even during normal climactic

⁸⁵ C(T)SIL *Amicus Curiae* Submission, para. 29; S. Gong & K. Wei, “Preliminary Studies on the Holocene Geology of Taiping Island”, p. 1. C(T)SIL *Amicus Curiae* Submission, Exhibit 28.

⁸⁶ Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 2. RPRC (25 Apr. 2016), Annex 911.

⁸⁷ Dr. Ryan T. Bailey, *Groundwater Resources Analysis of Itu Aba* (9 Mar. 2016), pp. 5-6. RTRC, Annex 878.

⁸⁸ *Id.*, p. 9; S. Gong & K. Wei, “Preliminary Studies on the Holocene Geology of Taiping Island”, pp. 2-3. C(T)SIL *Amicus Curiae* Submission, Exhibit 28.

⁸⁹ Ta-Wei Chang, *Water Quality and Agricultural Environment Survey —Groundwater Quality and Hydrology Survey Report* (12 Mar. 2016), p. 3. C(T)SIL *Amicus Curiae* Submission, Exhibit 29.

⁹⁰ Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 2. RPRC (25 Apr. 2016), Annex 911.

⁹¹ *Id.*; Dr. Ryan T. Bailey, *Groundwater Resources Analysis of Itu Aba* (9 Mar. 2016), p. 9. RTRC, Annex 878.

cycles Itu Aba will experience periods during which any freshwater lens beneath it is completely depleted”.⁹²

55. Moreover, Itu Aba is also subject to periodic El Niño/La Niña cycles. This means that the feature is likely to experience even more extended dry periods. Consequently, according to Dr. Bailey, “it is also reasonable to conclude to a high degree of certainty that Itu Aba experiences more prolonged periods during which the freshwater lens would be expected to disappear entirely”.⁹³

56. Relying on the *Groundwater Quality and Hydrology Survey Report*, the C(T)SIL brief asserts that well no. 5 “supplies 2 to 3 tons of drinking water per day”.⁹⁴ Yet, no evidence of any kind is provided to support this assertion, either in the report itself or elsewhere in the C(T)SIL submission. There are several factors which indicate that the stated amount would be unsustainable.

57. As explained above, the quality of the water from Well No. 5 was tested only after (1) the water had been in the well “for some time”, and (2) the freshwater was allowed to “recharge” overnight.⁹⁵ According to Dr. Bailey’s supplemental report:

A meaningful test of the well’s capacity would require testing only after the asserted amount (2-3,000 liters) had been pumped from the well. This would indicate whether the well “could sustain the pumping rate without rendering the water unpotable or otherwise unfit for human use. The test

⁹² Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 2. RPRC (25 Apr. 2016), Annex 911.

⁹³ *Id.*

⁹⁴ C(T)SIL *Amicus Curiae* Submission, para. 30; Ta-Wei Chang, *Water Quality and Agricultural Environment Survey —Groundwater Quality and Hydrology Survey Report* (12 Mar. 2016), p. 2. C(T)SIL *Amicus Curiae* Submission, Exhibit 29.

⁹⁵ Ta-Wei Chang, *Water Quality and Agricultural Environment Survey —Groundwater Quality and Hydrology Survey Report* (12 Mar. 2016), p. 1. C(T)SIL *Amicus Curiae* Submission, Exhibit 29.

should also be conducted during or at the end of the dry season, not the rainy season.⁹⁶

58. Moreover, well no. 5 is surrounded by nos. 7, 9 and 10,⁹⁷ which are admitted to contain only brackish/saline water.⁹⁸ According to Dr. Bailey, “this suggests that, at best, Itu Aba has only a small pocket of freshwater beneath the center of the island (near where Well No. 5 is located) that is surrounded by larger pockets of brackish/saline water”.⁹⁹

59. In this respect, Itu Aba appears to be different from other coral islands, which often have a freshwater lens that extends beneath most of the land surface. It also means that, if anything, Dr. Bailey *overstated* Itu Aba’s likely freshwater resources in his first report, in which he assumed that any freshwater lens extended across the whole area of Itu Aba.¹⁰⁰ Because that appears not to be the case, Dr. Bailey’s initial modelling results “were too optimistic, over-estimating the amount of available fresh groundwater on the island, and a more conservative estimate is warranted”.¹⁰¹ Even so, in his first report Dr. Bailey concluded that Itu Aba has “virtually non-existent freshwater”.¹⁰²

60. Having failed to show that Itu Aba provides sustainable supplies of potable freshwater today, the C(T)SIL submission turns to the past, stating that the existence of “quality freshwater on [Itu Aba] has been recorded and attested to by a great deal of historical

⁹⁶ Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 6. RPRC (25 Apr. 2016), Annex 911.

⁹⁷ See Chien-Fan Chen, “Water Quality and Agricultural Environment Survey of Taiping Island—The Flora and Vegetation Survey Report” (undated), Map 5. C(T)SIL *Amicus Curiae* Submission, Exhibit 32.

⁹⁸ Ta-Wei Chang, *Water Quality and Agricultural Environment Survey—Groundwater Quality and Hydrology Survey Report* (12 Mar. 2016), p. 2. C(T)SIL *Amicus Curiae* Submission, Exhibit 29.

⁹⁹ Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 6. RPRC (25 Apr. 2016), Annex 911.

¹⁰⁰ *Id.*, p. 7.

¹⁰¹ *Id.*, p. 7.

¹⁰² Dr. Ryan T. Bailey, *Groundwater Resources Analysis of Itu Aba* (9 Mar. 2016), p. 10. RTRC, Annex 878.

documentary evidence”.¹⁰³ The Philippines has never denied that some of the sojourners who took temporary refuge on the island dug wells that furnished them with enough drinkable water to survive for a short time. There are, indeed, historical materials that indicate this. The C(T)SIL brief refers, for example, to the 1879 edition of the *China Sea Directory* and the 1925 edition of the *Asiatic Pilot*, based on the former, which state that the water in the well on Itu Aba “was better than elsewhere”.¹⁰⁴ Quite apart from the fact, mentioned above, that these two publications are not distinct sources of evidence, these materials and others like them contain purely comparative statements that do not establish the extent or quality of any alleged freshwater resources.

61. Although there are some sources that suggest the presence of small amounts of freshwater, others, including Taiwan’s own scientists’ reports from 1994, state the opposite. These seemingly contradictory reports can perhaps be reconciled by Dr. Bailey’s findings in his reports. In his first report, Dr. Bailey modelled the likely thickness of any freshwater lens beneath Itu Aba and concluded that it was shallow and subject to total depletion during the yearly dry season and longer periods of drought. This led him to conclude that any freshwater lens is “virtually non-existent” on Itu Aba.¹⁰⁵ In his second report, having had the benefit of Taiwan’s new evidence, Dr. Bailey finds that his original modelling was, if anything, too optimistic. His essential conclusion nevertheless remains the same: “[A] sustainable quantity of fresh groundwater does not exist on Itu Aba”.¹⁰⁶

¹⁰³ C(T)SIL *Amicus Curiae* Submission, para. 32.

¹⁰⁴ See United Kingdom, Hydrographic Department, *The China Sea Directory*, Vol. II (1879), p. 66. SWSP, Vol. IV, Annex 389; U.S. Hydrographic Office, *Asiatic Pilot: The Western Shores of the China Sea from Singapore Strait to and Including Hongkong*, Vol. IV (1925), p. 118. RPRC (25 Apr. 2016), Annex 895.

¹⁰⁵ Dr. Ryan T. Bailey, *Groundwater Resources Analysis of Itu Aba* (9 Mar. 2016), p. 10. RTRC, Annex 878.

¹⁰⁶ Dr. Ryan T. Bailey, *Supplemental Report on Groundwater Resources Analysis of Itu Aba* (20 Apr. 2016), p. 7. RPRC (25 Apr. 2016), Annex 911.

62. Despite considerable effort, Taiwan and its supporters have not adduced any genuine evidence to contradict this conclusion.

C. *Itu Aba's Soil Cannot Support Meaningful Agricultural Production*

63. In its 11 March 2016 submission responding to the earlier materials adduced by Taiwan, the Philippines showed that, in addition to lacking water, Itu Aba also lacks the soil necessary to sustain agriculture on any meaningful scale.¹⁰⁷ The Philippines' submission was supported, *inter alia*, by the expert report of Dr. Peter Motavalli, a soil scientist specializing in the soil resources of Pacific Islands, who identified a large number of constraints for self-sustaining agricultural production on Itu Aba.¹⁰⁸

64. The C(T)SIL *amicus* brief nevertheless persists in arguing that Itu Aba's soil is "capable of supporting indigenous vegetation and agricultural crops",¹⁰⁹ such that it is "capable of sustaining human habitation".¹¹⁰ Indeed, C(T)SIL refers to "[e]stimates [that] show that the agricultural production ... can now supply food for hundreds of people".¹¹¹ In his 23 March 2016 remarks, President Ma similarly refers to Itu Aba's "fertile soil", which he says is "rich in organic material", and permits the cultivation of vegetables and fruits on a significant scale.¹¹²

¹⁰⁷ Responses of The Philippines to The Tribunal's 5 February 2016 Request For Comments (11 Mar. 2016), paras. 87-103.

¹⁰⁸ See Dr. Peter P. Motavalli, *Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (9 Mar. 2016). RTRC, Annex 879.

¹⁰⁹ C(T)SIL *Amicus Curiae* Submission, p. 15.

¹¹⁰ *Id.*, p. 17.

¹¹¹ *Id.*, para. 39. See also Remarks by President Ma Ying-jeou at an international press conference "regarding Taiping Island in Nansha Islands" (23 Mar. 2016), p. 3 (the "fertile soil" "underpin[s] the ability of [Itu Aba] to sustain human life.").

¹¹² Remarks by President Ma Ying-jeou at an international press conference "regarding Taiping Island in Nansha Islands" (23 Mar. 2016), p. 3.

65. These rosy assessments are not borne out by the evidence, including the exhibits referenced in the C(T)SIL brief. Indeed, Taiwan’s own evidence contradicts these assertions in a number of critical respects and proves that the assessment of Itu Aba’s soil resources Dr. Motavalli provided in his initial report is entirely correct.

66. This subsection first evaluates the evidence regarding the quality of Itu Aba’s soil and shows that, even on Taiwan’s evidence, the soil is too limited and too infertile to support meaningful agricultural production. It then addresses Taiwan’s other assertions and evidence regarding the nominal agricultural production on Itu Aba and demonstrates that the feature is, in fact, incapable of producing enough food to support human habitation.

1. The Information Available Regarding the Soil on Itu Aba Confirms That It Is of Poor Quality and Cannot Support Meaningful Agricultural Production

67. Although the C(T)SIL *amicus*, President Ma and Taiwan’s Position Paper boast about Itu Aba’s “fertile soil”,¹¹³ which is allegedly “rich in organic material”,¹¹⁴ the principal piece of evidence relied upon to support these contentions is a report entitled “Brief Report of Soil Resources Survey of Taiping Island” prepared by Professor Chen Zueng-Sang on the basis of a 22-23 January 2016 site visit to Itu Aba.¹¹⁵ Unfortunately for Taiwan, the contents of Professor Chen’s report do not support the conclusions C(T)SIL and President Ma seek to draw from it.

¹¹³ Republic of China (Taiwan), *Position Paper on ROC South China Sea Policy* (21 Mar. 2016), p. 29.

¹¹⁴ Republic of China (Taiwan), Office of the President, “President Ma’s remarks at international press conference regarding Taiping Island in Nansha Islands” (23 Mar. 2016), p. 3.

¹¹⁵ Zueng-Sang Chen, *Brief Report of Soil Resources Survey on Taiping Island* (14 Mar. 2016), p. 1. C(T)SIL *Amicus Curiae* Submission, Exhibit 31.

68. Professor Chen reported that “all the soil pedons” he examined “can be classified as Entisols”.¹¹⁶ Dr. Motavalli reached the same preliminary conclusion about the likely classification of Itu Aba’s soil in his first report.¹¹⁷ The fact that Itu Aba is comprised of Entisols is by itself very significant. As Dr. Motavalli explains in his supplemental report included herewith, Entisols are very young soils that show little soil development. Their distinguishing characteristic is “that they exhibit little or no evidence of development of pedogenic horizons, or formation of soil layers”. For that reason, they are “inhospitable soils for root and plant growth With fertilization and controlled water supply, some Entisols may be used for some types of agriculture, such as for rangeland or grazing, but their lack of depth, clay content, and water balance limit intensive use of these soils”.¹¹⁸

69. Moreover, “Entisols are typically dominated by characteristics of the parent material”,¹¹⁹ which, in the case of Itu Aba, Professor Chen himself describes as “debris materials of coral reefs or shell sand”.¹²⁰ This too is significant because, as Dr. Motavalli explained in his first report, soils composed primarily of coral reef “typically exhibit a high pH that poses a constraint for plant nutrition because of deficiencies in phosphorus and micronutrients”.¹²¹ (That Itu Aba’s soil does in fact have a high pH was confirmed in the

¹¹⁶ *Id.*, p. 1.

¹¹⁷ Dr. Peter P. Motavalli, *Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (9 Mar. 2016), p. 5. RTRC, Annex 879. *See also* Lianzhi Xi, “Summary of Land of Guangdong Nansha Islands”, *Soil Quarterly*, Vol. 6, No. 3 (1947), p. 78. RTRC, Annex 885.

¹¹⁸ Dr. Peter P. Motavalli, Ph.D., *Supplemental Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (24 Apr. 2016), p. 2. RPRC (25 Apr. 2016), Annex 912.

¹¹⁹ *Id.*

¹²⁰ Zueng-Sang Chen, *Brief Report of Soil Resources Survey on Taiping Island* (14 Mar. 2016), p. 1. C(T)SIL *Amicus Curiae* Submission, Exhibit 31.

¹²¹ Dr. Peter P. Motavalli, Ph.D., *Supplemental Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (24 Apr. 2016), p. 2. RPRC (25 Apr. 2016), Annex 912.

1947 report prepared by Chinese scientist Xi Lianzhi which the Philippines presented with its 11 March submission responding to Taiwan's earlier materials.¹²²)

70. The inhospitability of Itu Aba's soil to agriculture is further confirmed by Professor Chen's classification of it as belonging to the "Great Orders" known as *quartzipsammets* (samples 1, 2 and 3) or *udipsammets* (samples 2 and 3).¹²³ An Entisol that is classified as a *psammet* is "dominated by unconsolidated sand deposits", which "often have very poor water-holding capacity and low nutrient retention".¹²⁴ These characteristics "limit crop growth without supplemental water and nutrient amendments".¹²⁵

71. Still further, Professor Chen identified the soils' "diagnostic epipedon" (i.e., the layer of soil at the surface) as "ochric".¹²⁶ Dr. Motavalli explains in his supplemental report that this means that the soils are "too light, too thin, or too low in organic matter to be classified as any other type of epipedon".¹²⁷ In other words, far from being "rich in organic material" as President Ma claims, the soil on Itu Aba is exactly the opposite.

¹²² See Lianzhi Xi, "Summary of Land of Guangdong Nansha Islands", *Soil Quarterly*, Vol. 6, No. 3 (1947), p. 79. RTRC, Annex 885.

¹²³ Zueng-Sang Chen, *Brief Report of Soil Resources Survey on Taiping Island* (14 Mar. 2016), pp. 3, 6, 10. C(T)SIL *Amicus Curiae* Submission, Exhibit 31.

¹²⁴ Dr. Peter P. Motavalli, Ph.D., *Supplemental Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (24 Apr. 2016), p. 4. RPRC (25 Apr. 2016), Annex 912.

¹²⁵ *Id.*

¹²⁶ Zueng-Sang Chen, *Brief Report of Soil Resources Survey on Taiping Island* (14 Mar. 2016), pp. 3, 6, 10. C(T)SIL *amicus curiae* submission, Exhibit 31.

¹²⁷ Dr. Peter P. Motavalli, Ph.D., *Supplemental Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (24 Apr. 2016), p. 3. RPRC (25 Apr. 2016), Annex 912. Ochric epipedons are named after the Greek word *ochros*, which means pale. The field survey report's executive summary describes one type of soil's topsoil as "light black" and the other as "dark black," giving the impression of fertile soil. See Zueng-Sang Chen, *Brief Report of Soil Resources Survey on Taiping Island* (14 Mar. 2016), p. 1. C(T)SIL *Amicus Curiae* Submission, Exhibit 31. See also Ministry of Foreign Affairs of the Republic of China (Taiwan), "Taiping Island is an Island, Not a Rock, and the ROC Possesses Full Rights Associated with An Exclusive Economic Zone and Continental Shelf in accordance with UNCLOS" (23 Jan. 2016), p. 2. C(T)SIL *Amicus Curiae* Submission, Exhibit 1 (describing it "black topsoil") (also submitted as RTRC, Annex 875). However, this is not borne out by the technical report itself, where the O/A horizons (the topsoil) of the three different pedons are described as "brown" and "dark reddish brown".

72. In this respect, Professor Chen’s “Brief Report of Soil Resources” is as telling for what it does *not* report about Itu Aba’s “soil” as for what it does. In his supplemental report, Dr. Motavalli explains that “it is unusual to only perform visual inspection of soil samples [as Professor Chen appears to have done]. Standard procedure calls for laboratory tests that would include soil organic matter content, pH, exchangeable acidity, and cation exchange capacity, among others. These analyses are important for classification and critical to determine potential constraints for plant growth”.¹²⁸

73. The Philippines considers it revealing that Taiwan chose not to conduct these tests, or at least not to report their results. Surely if the results were deemed helpful to Taiwan’s case they would have been included, as “standard procedure” requires.

74. In an attempt to compensate for the lack of the meaningful scientific data of the nutrient content of Itu Aba’s soil that scientific procedure calls for, Taiwan suggests that the necessary organic material is delivered to the soil by “litterfall”. According to the C(T)SIL brief, the “surface soil is mainly sandy soil mixed with litterfall organic matter”, the “decomposition” of which “can naturally release nutrients that maintain the ecological balance” and therefore “sustain ... crop production”.¹²⁹ However, as Dr. Motavalli explains, the truth of this assertion can only be confirmed by testing of the sort described above to measure the actual organic matter content, exchangeable acidity and cation exchange capacity. In the absence of evidence to the contrary, “[l]itterfall decomposition” alone, particularly in the case of calcareous, high pH soils which limit the ability of nutrients in the

¹²⁸ Dr. Peter P. Motavalli, Ph.D., *Supplemental Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (24 Apr. 2016), p. 5. RPRC (25 Apr. 2016), Annex 912.

¹²⁹ C(T)SIL *Amicus Curiae* Submission, para. 34.

soil for uptake by plants,¹³⁰ “is not likely sufficient to sustain intensive agricultural production without external nutrient inputs”.¹³¹

75. In the same vein, President Ma (although interestingly *not* the C(T)SIL) attempts to highlight the existence of guano in at least some of the soil to further suggest that Itu Aba’s soil has sufficient nutrients for agricultural production. In his 23 March comments, for example, he asserts that the presence of guano “make[s] for fertile soil amenable to the growth of both indigenous plants and agricultural products”.¹³² Yet, the Philippines has already disproved this assertion. Even assuming there is actually guano in the soil—and no data is provided as to how, if any, there might be—that does not mean it makes for “fertile soil”. Dr. Motavalli explained in his first report that, because the soils on Itu Aba are calcareous and have a high pH, the “phosphorus from guano ... [is] precipitated as calcium phosphate, making it less available for plant uptake”.¹³³ Dr. Xi made substantially the same point in his 1947 assessment of Itu Aba’s soil, in which he reported that “due to the rinsing by rainwater and seawater, the soluble salt base and most of the organic matter in guano disappears”.¹³⁴ Dr. Xi’s overall conclusion was telling: “[s]trictly speaking ... the Nansha Islands do not have soil”.¹³⁵

76. Taiwan has therefore provided no scientific evidence to support its assertions that Itu Aba’s has any “fertile soil”, let alone that it is “capable of sustaining human

¹³⁰ Dr. Peter P. Motavalli, Ph.D., *Supplemental Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (24 Apr. 2016), pp. 2, 7. RPRC (25 Apr. 2016), Annex 912.

¹³¹ *Id.*

¹³² Republic of China (Taiwan), Office of the President, “President Ma’s remarks at international press conference regarding Taiping Island in Nansha Islands” (23 Mar. 2016), p. 3.

¹³³ Dr. Peter P. Motavalli, *Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (9 Mar. 2016), p. 7. RTRC, Annex 879.

¹³⁴ Lianzhi Xi, “Summary of Land of Guangdong Nansha Islands”, *Soil Quarterly*, Vol. 6, No. 3 (1947), p. 79. RTRC, Annex 885.

¹³⁵ *Id.*, p. 78.

habitation”.¹³⁶ Indeed, the evidence it has provided confirms that the *psamment* Entisols “formed mainly through the weathering of debris material from coral reefs or shell sand”¹³⁷ present precisely the multiple constraints to self-sufficient agriculture that Professor Motavalli identified in his first report.¹³⁸

2. Taiwan’s Assertions about Agricultural Production on Itu Aba Do Not Demonstrate That It Can Sustain Human Habitation

77. Given the absence of any scientific evidence that the soil on Itu Aba is capable of supporting agriculture on a meaningful scale, Taiwan resorts to general assertions about the quantity of agricultural and wild production on Itu Aba. These do nothing to show that Itu Aba can sustain human habitation. Indeed, they too prove the opposite.

78. As stated, the C(T)SIL brief asserts that “[e]stimates [that] show that the agricultural production ... can now supply food for hundreds of people”.¹³⁹ Yet, no information is provided about the amounts of crops allegedly produced on Itu Aba, even by way of assertion much less actual evidence.

79. What is interesting, however, is that the area of Itu Aba’s “[v]egetable garden” is depicted on a map included with Exhibit 32 to the C(T)SIL *amicus*, a report of the Taiwan Forestry Research Institute entitled “The Flora and Vegetation Survey Report”.¹⁴⁰ Measurements indicate that the size of the vegetable patch is approximately 0.107 hectares,

¹³⁶ C(T)SIL *Amicus Curiae* Submission, p. 17.

¹³⁷ *Id.*, para. 34.

¹³⁸ See Dr. Peter P. Motavalli, Ph.D., *Supplemental Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (24 Apr. 2016), p. 6. RPRC (25 Apr. 2016), Annex 912.

¹³⁹ C(T)SIL *Amicus Curiae* Submission, para. 39. See also Republic of China (Taiwan), Office of the President, “President Ma’s remarks at international press conference regarding Taiping Island in Nansha Islands” (23 Mar. 2016), p. 3 (the “fertile soil” “underpin[s] the ability of [Itu Aba] to sustain human life.”).

¹⁴⁰ Chien-Fan Chen, “Water Quality and Agricultural Environment Survey of Taiping Island—The Flora and Vegetation Survey Report” (undated), Map 5. C(T)SIL *Amicus Curiae* Submission, Exhibit 32.

or 0.22% (less than one-quarter of one percent) of the island's total surface area of approximately 47.5 hectares.

80. This is revealing because, as Dr. Motavalli explained in his first report, the U.N. Food and Agriculture Organization has estimated that 0.22 hectares of cultivated land are required to provide the food necessary to support one person for one year (and even this number assumes “a much higher native fertility level than soil resources” on Itu Aba).¹⁴¹ Even ignoring the natural infertility of its soil, Itu Aba's vegetable patch is capable, at best, of providing enough food to meet the annual needs of half a person.

81. Photographs included in the *Virtual Tour of Itu Aba* posted to the internet by the Asia Maritime Transparency Initiative following the January 2016 field visit to Itu Aba, notes that “Taiwanese experts say” that the soil native to the garden can be found only on “a few other parts of the island”.¹⁴² Thus, even if it wanted to, Taiwan could, on its own evidence, expand agricultural production on Itu Aba only modestly, if at all.

82. Unable to demonstrate that such agricultural production as takes place on Itu Aba is sufficient to support even a single person, Taiwan suggests that the feature's natural bounty of tropical fruits might do so. Thus, according to the C(T)SIL brief, Itu Aba's “50 wild papaya trees and 500 wild coconut trees” produce “approximately 200-300 kilos of papayas and numerous coconuts each year”, and “can sustain human habitation”.¹⁴³ President Ma also

¹⁴¹ Dr. Peter P. Motavalli, *Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (9 Mar. 2016), pp. 7-8. RTRC, Annex 879.

¹⁴² Asia Maritime Transparency Initiative, *Virtual Tour of Itu Aba*, Photo 20160123_123323 (23 Jan. 2016), available at <https://www.flickr.com/photos/139462176@N08/25863661766/>. RPRC (25 Apr. 2016), Annex 903.

¹⁴³ C(T)SIL *Amicus Curiae* Submission, para. 35. Dr. Motavalli notes that “[c]oconut grows well in shallow, sandy soil. Unlike most other food plants, it has adapted well to the suboptimal conditions common to limestone islands.” Their presence on Itu Aba cannot therefore mean that the feature's soil can support agricultural production sufficient to support a human community. Dr. Peter P. Motavalli, Ph.D., *Supplemental Expert Report*

alleged that “200-300 kilograms of ... plantains are produced each year”.¹⁴⁴ These unproven assertions do not mean that Itu Aba can, on its natural conditions, sustain human habitation.

83. First, there is reason to doubt the alleged production figures stated; they are glaringly inconsistent. The C(T)SIL brief suggests that Itu Aba might produce “20,000-30,000 [coconuts] per year”.¹⁴⁵ Yet, in his 23 March comments, President Ma stated that only 1,500 coconuts are produced.¹⁴⁶ This same 1,500 figure appears also in President Ma’s remarks in January 2016,¹⁴⁷ as well as the January press release from the Taiwan Ministry of Foreign Affairs.¹⁴⁸

84. The historical record further confirms that Itu Aba’s natural capacity is quite limited. As discussed in the previous subsection, a published account of Taiwan’s 1946 “repossession” of the feature (referred to in, but interestingly not attached to, the C(T)SIL submission¹⁴⁹), recounts that the crews of the *ROCS Taiping* and *Zhongye* were expressly prohibited from collecting food from Itu Aba in order to save them “as food supplies for the

on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba (24 Apr. 2016), p. 4. RPRC (25 Apr. 2016), Annex 912.

¹⁴⁴ Republic of China (Taiwan), Office of the President, “President Ma’s remarks at international press conference regarding Taiping Island in Nansha Islands” (23 Mar. 2016), p. 4.

¹⁴⁵ C(T)SIL *Amicus Curiae* Submission, para. 35.

¹⁴⁶ Republic of China (Taiwan), Office of the President, “President Ma’s remarks at international press conference regarding Taiping Island in Nansha Islands” (23 Mar. 2016), p. 4.

¹⁴⁷ Republic of China (Taiwan), Office of the President, “Remarks by President Ma on Taiping Island” (28 Jan. 2016), p. 8. C(T)SIL *Amicus Curiae* Submission, Exhibit 2 (also submitted as RTRC, Annex 876).

¹⁴⁸ Republic of China, Ministry of Foreign Affairs, “Taiping Island is an Island, Not a Rock, and the ROC Possesses Full Rights Associated with An Exclusive Economic Zone and Continental Shelf in accordance with UNCLOS” (23 Jan. 2016), p. 3. C(T)SIL *Amicus Curiae* Submission, Exhibit 1 (also submitted as RTRC, Annex 875).

¹⁴⁹ See C(T)SIL *Amicus Curiae* Submission, para. 32 n. 55.

officers stationed on the island”.¹⁵⁰ Those orders were evidently ignored and a crew of Taiwanese sailors picked “all of the coconuts” on the feature, apparently in just a day.¹⁵¹

85. Moreover, quite apart from how much there may be, that fact remains that fruit alone is inadequate to meet the nutritional needs of human beings.¹⁵² And even if it did, Chinese scientists have written that the “minimum living standard for food” is 400 kilograms of crops per person.¹⁵³ Thus, even accepting *quod non* Taiwan’s unsubstantiated figures at face value, the fruit on the island could not sustain more than two people per year.

86. As further support for the contention that “the original and natural vegetation” on Itu Aba “is capable of sustaining human habitation”, the C(T)SIL brief attempts to compare the feature to Orchid Island, the “indigenous vegetation” of which is said to be similar to Itu Aba.¹⁵⁴ Since Orchid Island “is home to nearly 5,000 residents”, C(T)SIL says, Itu Aba is equally capable of sustaining human habitation. The comparison is meaningless. Even if it were true that the flora on Orchid Island is similar to that of Itu Aba (a point on which there is no evidence), the fact is that Orchid Island is 45.5 km² in size, 100 times larger than Itu Aba. The two features simply cannot be compared.

87. Taiwan’s last gasp is to quote a small handful of historical materials that make passing reference to the presence of agricultural and naturally occurring food plants on Itu

¹⁵⁰ Dunqian Li, “Chronicles of Stationing in the Spratly Islands”, *Shanghai Miscellany*, Vol. 4, No. 6 (1998), p. 9. RPRC (25 Apr. 2016), Annex 901.

¹⁵¹ *Id.*, p. 10.

¹⁵² See Jacque Wilson, “What’s the danger of an all-fruit diet?”, *CNN* (30 Jan. 2013), available at <http://www.cnn.com/2013/01/29/health/steve-jobs-all-fruit-diet/>, p. 2. RPRC (25 Apr. 2016), Annex 902 (noting that “[w]hen you only eat fruit, you’re excluding a lot of valuable nutrients from your diet.”).

¹⁵³ Wenhua Li, “Research on Population and Sustainable Development in China”, in *MODELING FOR POPULATION AND SUSTAINABLE DEVELOPMENT* (A.J. Gilbert & L.C. Braat eds., 1990), p. 142 (estimating “400 kg of crops per person per year as the minimum living standard for food.”). RPRC (25 Apr. 2016), Annex 898.

¹⁵⁴ C(T)SIL *Amicus Curiae* Submission, para. 37. In support of this statement, the C(T)SIL cites T-C Huang, et. al., “The Flora of Taipingtao (Aba Itu Island)”, *Taiwania*, Vol. 39, No. 1-2, p. 1 (1994). MP, Vol. VII, Annex 254. Orchid Island is not mentioned at all in the 1994 study.

Aba. The C(T)SIL brief cites, for example, to a 1933 article from the French magazine *Illustration* entitled “The French Flag Over Unoccupied Islets”,¹⁵⁵ which was written at the time France was asserting a claim to sovereignty over the feature.¹⁵⁶ The article speaks of coconut trees and a “potato field” attached to a hut.¹⁵⁷ Another source referenced in but not annexed to the C(T)SIL submission is a 1933 *South China Morning Post* article¹⁵⁸ which states that there was a “small domain ... [with] coconut trees, bananas and sweet potatoes”.¹⁵⁹

88. Assuming *quod non* that these descriptions are accurate, they do not constitute evidence that Itu Aba is capable of generating the food production necessary to sustain human habitation. If anything, the existence of some coconut trees, bananas and a potato field for a single hut only underscores the feature’s limited productive capacity. Moreover, the fact that a vessel left food behind for absent sojourners confirms that any people staying temporarily on Itu Aba were dependent on outside supplies to survive.¹⁶⁰

89. The C(T)SIL submission also cites a 1933 Japanese newspaper article entitled “Look, Japan Made Significant Marks Everywhere”,¹⁶¹ which purports to report the existence of a “dense forest of papaya” and “fine palm fields, pineapple fields and sugar cane fields”¹⁶² on Itu Aba. The title of the article, which plainly shows that it was aimed at reinforcing

¹⁵⁵ “French Flag over the Unoccupied Islets”, *The Illustration* (15 July 1933). C(T)SIL *Amicus Curiae* Submission, Exhibit 33.

¹⁵⁶ *Id.* See also Atlas of Relevant Features, SWSP, Vol. II, p. 74.

¹⁵⁷ “French Flag over the Unoccupied Islets”, *The Illustration* (15 July 1933). C(T)SIL *Amicus Curiae* Submission, Exhibit 33.

¹⁵⁸ C(T)SIL *Amicus Curiae* Submission, para. 38 n. 69.

¹⁵⁹ *Id.*, para. 38.

¹⁶⁰ See “French Flag over the Unoccupied Islets”, *The Illustration* (15 July 1933), p. 382. C(T)SIL *Amicus Curiae* Submission, Exhibit 33 (recording that the French discovered a sign reading: “I, Ti Mung, Chief of the Junk, come here in the full moon of March to bring you food. I found nobody, I left rice in the shelter of the rocks and I left”).

¹⁶¹ Miyoshi, “Look, Japan Made Significant Marks Everywhere”, *Osaka Mainichi* (6 Sept. 1933). C(T)SIL *Amicus Curiae* Submission, Exhibit 34.

¹⁶² C(T)SIL *Amicus Curiae* Submission, para. 38.

Japan's claim to sovereignty over the feature, by itself gives strong reason to doubt its accuracy. This is all the more true given that the information about agricultural production is explicitly mentioned as a "valuable ... memorial of an island with inhabitants".¹⁶³ The information reported is therefore entitled to little weight, especially since there is no other mention in the record of pineapple and sugar cane fields. In this respect it is revealing that these two crops were not mentioned in the report of a 1937 Japanese field survey, which was also cited by the C(T)SIL.¹⁶⁴

90. Moreover, even if the alleged fields did exist, there is no quantitative information provided and therefore no basis for concluding that they contributed to Itu Aba's capacity to sustain human habitation in any way.

91. Finally, the C(T)SIL brief cites a 1939 article published in the *Taiwan Times* (when Taiwan was a protectorate of Japan), which contains a second-hand reference to "pepper, pumpkin and napa grow[ing] well".¹⁶⁵ Far more telling, however, is another part of that same article—which C(T)SIL did not translate—which states that "in terms of agriculture and forestry there is almost nothing worth looking at".¹⁶⁶

92. That is what the evidence, in its totality, shows. The alleged agriculture on Itu Aba and elsewhere in the Spratlys "is almost nothing worth looking at." It is fitting that this statement should come from one of the documents that Taiwanese lawyers themselves

¹⁶³ Miyoshi, "Look, Japan Made Significant Marks Everywhere", *Osaka Mainichi* (6 Sept. 1933). C(T)SIL *Amicus Curiae* Submission, Exhibit 34.

¹⁶⁴ See Hitoshi Hiratsuka, "The Extended Base for the Expansion of the Fishery Business to the Southern Area: New Southern Archipelago—On-site Survey Report", *Taiwan Times* (May 1939). C(T)SIL *Amicus Curiae* Submission, Exhibit 30.

¹⁶⁵ "Histories of New Southern Archipelago", *Taiwan Times* (May 1939). C(T)SIL *Amicus Curiae* Submission, Exhibit 26.

¹⁶⁶ "Histories of New Southern Archipelago", *Taiwan Times* (May 1939), p. 192. C(T)SIL *Amicus Curiae* Submission, Exhibit 26(*bis*) (supplemental translation by the Philippines).

provided to the Tribunal, in a part of the document that they chose not to translate. This confirms not only that Itu Aba lacks the soil and agricultural capacity necessary to sustain human habitation; it also constitutes one more demonstration of the misleading approach Taiwan’s spokespersons have adopted in regard to factual and historical matters.

III. Taiwan’s Position Paper Proves that China’s Nine-Dash Line Claim Has No Foundation

93. In this Section, the Philippines provides its comments on the “Position Paper on ROC South China Sea Policy” insofar as it relates to China’s alleged historical activities in the South China Sea.

94. *First*, the Philippines respectfully submits that the principal significance of this document lies in what Taiwan does *not* say. In particular, Taiwan does *not* endorse the claim made by the People’s Republic of China that China possesses exclusive rights, founded in history, in the maritime space enclosed by the nine-dash line. To the contrary, the Position Paper disclaims any such putative historical rights; instead, it accepts that China’s maritime rights are those to which it is allegedly entitled “in accordance with international law” in the “waters” that “surround[]” the various insular features in the South China Sea.¹⁶⁷

95. The Position Paper, in this regard, is consistent with prior statements by Taiwan. In 2014, President Ma accepted that maritime claims in the South China Sea are governed by the “basic principle” that he variously referred to as “land determines the sea” and “land dominates the sea”.¹⁶⁸ In other words, maritime rights in the South China Sea are

¹⁶⁷ Republic of China (Taiwan), *Position Paper on ROC South China Sea Policy* (21 Mar. 2016), p. 1.

¹⁶⁸ Transcript of Office of the President of the Taiwan Authority of China, President Ma Ying-jeou, “Excerpts from Remarks at Opening Ceremony for the Exhibition of Historical Archives on the Southern Territories of the Republic of China” (1 Sept. 2014), *available at* <http://www.president.gov.tw/Default.aspx?tabid=131&itemid=33125&rmid=514> (accessed 27 Jan. 2015). SWSP, Vol. VIII, Annex 495; “Transcript of New York Times Interview With President Ma Ying-jeou of Taiwan”, *New York Times* (31 Oct. 2014). SWSP, Vol. XI, Annex 566.

generated by a State's sovereignty over relevant land features, not by that State's alleged historical relationship to waters far removed from its coast. That position is correct for the reasons the Philippines has explained elsewhere; and it cannot be reconciled with China's claim to possess exclusive historic rights within the nine-dash line.¹⁶⁹

96. *Second*, the Position Paper makes clear Taiwan's view that the spatial extent of China's alleged maritime rights in the South China Sea is limited by the entitlements that UNCLOS establishes for coastal States. In discussing the Agreement Concerning Facilitation of Cooperation on Law Enforcement in Fisheries Matters, which the Taiwanese authorities concluded with the Philippines on 5 November 2015, Taiwan states that this Agreement established "an effective settlement mechanism concerning fishery disputes *in their overlapping exclusive economic zones (EEZ)* in accordance with international law, including the United Nations Convention on the Law of the Sea".¹⁷⁰ There is no suggestion that Taiwan claims maritime rights beyond the 200 M limit that UNCLOS establishes for an EEZ.

97. This too is consistent with the position that President Ma previously expressed on behalf of Taiwan. He explained that the first published map to depict a dashed line in the South China Sea, which the Republic of China published in 1947, was intended "to demarcate" China's claim to the "islands" enclosed therein,¹⁷¹ and that other than the three-mile territorial sea then allowed under international law, there was "no claim at all on other

¹⁶⁹ See Memorial of the Philippines (30 Mar. 2014), paras. 4.38-4.80; Supplemental Written Submission of the Philippines (16 Mar. 2015), Response to Question 3; Tr. (7 July 2015), pp. 29:18-51:14, 52:8-58:2 (Presentation by Mr. Reichler); Tr. (24 Nov. 2015), pp. 12:3-52:20 (Presentation by Mr. Reichler); Tr. (30 Nov. 2015), pp. 2:17-7:1 (Presentation by Mr. Reichler).

¹⁷⁰ Republic of China (Taiwan), *Position Paper on ROC South China Sea Policy* (21 Mar. 2016), p. 26 (emphasis added).

¹⁷¹ Taipei Economic and Cultural Office in Malaysia, "President Ma vows Taiwan will play important role in South China Sea talks" (2 Sept. 2014), p. 1. SWSP, Vol. VIII, Annex 497. See also Transcript of Office of the President of the Taiwan Authority of China, President Ma Ying-jeou, "Excerpts from Remarks at Opening Ceremony for the Exhibition of Historical Archives on the Southern Territories of the Republic of China" (1 Sept. 2014), available at <http://www.president.gov.tw/Default.aspx?tabid=131&itemid=33125&rmid=514> (accessed 27 Jan. 2015), pp. 4-6. SWSP, Vol. VIII, Annex 495.

so-called sea regions”.¹⁷² In making this statement, President Ma accepted that the extent of a coastal State’s maritime claim is limited in breadth by the relevant rules of international law. In 1947, this was a three-mile territorial sea; under modern international law, it is the 200 M EEZ that Taiwan references in its Position Paper.

98. *Third*, the Philippines observes that much of the Position Paper is devoted to attempting to substantiate Taiwan’s claim to possess territorial sovereignty over the South China Sea’s insular features. However, the claims that the Philippines has placed before the Tribunal do not require, or invite, the Tribunal to determine which State has sovereignty over any high-tide features. The 29 October 2015 Award on Jurisdiction and Admissibility made clear that the Tribunal need not, and does not intend to, make any determination in regard to territorial sovereignty.¹⁷³ Accordingly, the Position Paper’s recitation of the alleged historical basis for China’s sovereignty claims is not germane to these proceedings. For that reason, the Philippines will not address the historical errors and mischaracterizations that the Position Paper makes in attempting to justify Taiwan’s claim to possess sovereignty over the South China Sea’s insular features, beyond referring the Tribunal to its prior submissions that touch upon those matters.¹⁷⁴

99. That said, the Position Paper’s review of the historical evidence (which it describes, but does not annex) is significant because it demonstrates that China does not come anywhere close to satisfying the requirements under general international law for

¹⁷² Transcript of Office of the President of the Taiwan Authority of China, President Ma Ying-jeou, “Excerpts from Remarks at Opening Ceremony for the Exhibition of Historical Archives on the Southern Territories of the Republic of China” (1 Sept. 2014), *available at* <http://www.president.gov.tw/Default.aspx?tabid=131&itemid=33125&rmid=514> (accessed 27 Jan. 2015), p. 7. SWSP, Vol. VIII, Annex 495.

¹⁷³ Award on Jurisdiction (29 Oct. 2015), paras. 152-154, 180.

¹⁷⁴ *See* Memorial of the Philippines (30 Mar. 2014), paras. 2.36-2.42; Supplemental Written Submission of the Philippines (16 Mar. 2015), paras. 13.8-13.14, A13.33-A13.54; Tr. (24 Nov. 2015), pp. 90:18-98:5 (Presentation by Mr. Loewenstein); Tr. (25 Nov. 2015), pp. 1:15- 2:14 (Presentation by Mr. Loewenstein); Tr. (30 Nov. 2015), pp. 118:5-132:19 (Presentation by Mr. Loewenstein).

establishing historic rights (assuming *quod non* that such rights survive UNCLOS, which they do not). These require that China must have exercised authority over the South China Sea within the nine-dash line where it claims historic rights; that it exercised such authority continuously over a long period of time; and that other States either acquiesced or failed to oppose China's claim to possess those rights.¹⁷⁵

100. None of the historical materials described in the Position Paper purport to demonstrate that any of this occurred. Many are merely said to describe geographic features in the South China Sea. For example, the *Yiwu Zhi* is reported to record that the “Zhang Hai”, which the Position Paper translates as “Rising Sea” and equates—without explanation—with the South China Sea, had “shallow waters and many rocks”.¹⁷⁶ Similarly, the *History of the Later Han Dynasty* is said to tell of a “sandbank in the Rising Sea” that has trees the bark of which “turns black during spring and turns white when set on fire”;¹⁷⁷ the *History of Funan* is said to “describe[] the geological characteristics of the islands of the South China Sea”;¹⁷⁸ and the *Records of Qiongzhou* is reported to “explain[] the history and geographical location of the Hainan region”.¹⁷⁹ None alleges, much less proves, that China asserted sovereignty over any of the South China Sea's insular features, let alone that China's exercised exclusive jurisdiction over the waters around them, much less to the limits of the nine-dash line.

101. The other historical documents described in the Position Paper simply refer to the South China Sea as a navigation route. For instance, the *Book of Han* apparently recounts how “the South China Sea was the route for trade between the Eastern Han and the Roman

¹⁷⁵ See United Nations Secretary-General, *Juridical Regime of Historic Waters, Including Historic Bays*, UN Doc. No. A/CN.4/143 (9 Mar.1962), para. 80. MP, Vol. XI, Annex LA-89.

¹⁷⁶ Republic of China (Taiwan), *Position Paper on ROC South China Sea Policy* (21 Mar. 2016), p. 3.

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*, p. 7.

Empire in the first century BCE”.¹⁸⁰ The *History of the Later Han Dynasty* is said to “note[] that during the Western Han dynasty sea routes had been opened up between Indochina and ancient China through the South China Sea”.¹⁸¹

102. Such references to trade and navigation are unsurprising. As the Philippines has repeatedly noted, the South China Sea has been traversed for millennia by seafarers from its many littoral polities, including China.¹⁸² What is telling is that none of these sources indicates that China claimed sovereignty, or exclusive rights, over any insular features or waters.

103. Indeed, China’s modest relationship to much of the South China Sea is evident in the fact that many of the sources mentioned in the Position Paper are concerned exclusively with the Pratas (Dongsha) and/or the Paracels (Xisha), which are located in the northern part of the South China Sea, hundreds of nautical miles from the Spratlys. The *History of Guangzhou*, for example, is said to state that “[p]eople in the past used to fish and collect coral” at the “Coral Islands”, features that the Position Paper locates “roughly 250 kilometers, from southern Guangzhou”,¹⁸³ which corresponds to the location of the Pratas Islands. The Spratlys are some 550 M further south. Similarly, the *Records of Quanzhou* are said to memorialize an official Chinese tour that included “the Shisha [Xisha] Islands”, that is, the Paracels.¹⁸⁴

¹⁸⁰ *Id.*, p. 2.

¹⁸¹ *Id.*, p. 3.

¹⁸² See Memorial of the Philippines (30 Mar. 2014), paras. 2.18-2.42; Supplemental Written Submission of the Philippines (16 Mar. 2015), paras. 13.9-13.13, Appendix to Response to Question 13; Tr. (24 Nov. 2015), pp. 79:7-82:7 (Presentation by Mr. Loewenstein).

¹⁸³ Republic of China (Taiwan), *Position Paper on ROC South China Sea Policy* (21 Mar. 2016), p. 5.

¹⁸⁴ *Id.*, p. 7.

104. The evidence reviewed in the Position Paper demonstrates that China continued to confine its interest in the South China Sea to the Pratas and the Paracels into the twentieth century. It states that in 1909 Qing Dynasty officials dispatched naval forces to patrol the Shisha (Xisha) Islands [Paracels]¹⁸⁵ and that during “the early years of the ROC” China “placed the Tungsha [Pratas] and Shisha Islands under the naval zone administered by the coast guard, stationing personnel on and regularly delivering supplies to the islands”.¹⁸⁶ The Spratlys are not mentioned in these sources. The Position Paper thus shows that, to the extent China had any official involvement with the South China Sea, it extended no further south than the Paracels.

105. This is confirmed by the diplomatic note that China transmitted to France on 29 September 1932. That note, which the Position Paper does not mention, stated that the Paracels “form the southernmost part of Chinese territory”.¹⁸⁷

106. *Fourth*, the Position Paper makes clear that when China ultimately did assert a claim to the Spratlys, which it did for the first time in 1935, there was no accompanying claim to historic rights in the waters of the South China Sea. The Position Paper merely notes that China, at that time, “completed the *Comparison Table of the Names of the South China Sea Islands in Mandarin and English*, and issued the *Map of the South China Sea Islands and Maritime Features*”, which it says “divid[ed] the South China Sea Islands into four distinct groups”.¹⁸⁸ Indeed, the Position Paper emphasizes that this map “showed ROC *territory* in

¹⁸⁵ *Id.*, pp. 4-5.

¹⁸⁶ *Id.*, p. 9.

¹⁸⁷ *Note Verbale* from the Legation of the Republic of China in Paris to the Ministry of Foreign Affairs of France (29 Sept. 1932), *reprinted in* Monique Chemillier-Gendreau, *Sovereignty over the Paracel and Spratly Islands* (2000), p. 184. MP, Vol. VI, Annex 171.

¹⁸⁸ Republic of China (Taiwan), *Position Paper on ROC South China Sea Policy* (21 Mar. 2016), p. 5.

the South China Sea”.¹⁸⁹ The absence of any claim to historic rights in the South China Sea’s waters is conspicuous.

107. *Fifth* and finally, it is equally notable that when the Position Paper addresses the first official Chinese map to depict a dashed line in the South China Sea, which was published in 1947, it makes clear that the line was intended solely to indicate China’s claims to the insular features enclosed therein, not to claim historic rights to its waters. In particular, the Position Paper states that the map was prepared “to serve as a basis for recovering and stationing forces *on the Shisha and Nansha Islands*”, and that those features, as well as the Tungsha (Dongsha) and Chungha (Zhongsha) Islands were “included on this map and *designated as ROC territory*”.¹⁹⁰ This reflects a claim solely to land territory. No rights to maritime areas located beyond these features’ territorial seas are mentioned. Indeed, more than six decades would pass before, in 2009, the People’s Republic of China would first assert a claim to maritime rights lying beyond those accorded by the rules of international law.¹⁹¹

IV. The Recent Comments of the PRC Spokesperson Confirm That China Does Not Consider Itu Aba To Generate an EEZ or Continental Shelf

108. Finally, in this Section the Philippines comments on the remarks made by China’s Ministry of Foreign Affairs Spokesperson, Ms. Hua Chunying, on 24 March 2016.

109. On that occasion, the Spokesperson was asked:

¹⁸⁹ *Id.*, p. 8 (emphasis added).

¹⁹⁰ *Id.* (emphasis added).

¹⁹¹ See Memorial of the Philippines (30 Mar. 2014), paras. 3.13-3.21; Supplemental Written Submission of the Philippines (16 Mar. 2015), paras. 13.2-13.14; 17:9-17:17; Tr. (7 July 2015), pp. 32:10-42:19 (Presentation by Mr. Reichler); Tr. (24 Nov. 2015), pp. 35:16-36:6, (Presentation by Mr. Reichler); Tr. (24 Nov. 2015), pp. 77:22-78:18 (Presentation by Mr. Loewenstein).

According to media reports, Taiwan authorities published a position paper on its South China Sea policy on March 21. Besides on March 23 some academic institutions in Taiwan submitted a proposal to the arbitration tribunal in [T]he Hague, stressing that Taiping Dao [Itu Aba] meets the definition of island according to UNCLOS and is therefore eligible for possessing exclusive economic zone, continental shelf and other maritime rights and interests. What is your comment?¹⁹²

110. Ms. Hua responded as follows:

First of all I'd like to reiterate that China is consistent and clear on its non-acceptance and non-participation in the South China Sea arbitration case initiated by the Philippines.

The Nansha Islands including Taiping Dao have been China's territory since ancient times. Chinese people have long been living and working there continuously. China takes the Nansha Islands as a whole when claiming maritime rights and interests, and Chinese people across the Strait all have the responsibility to safeguard the property handed down from our ancestors. China is firmly against attempts of the Philippines to unilaterally deny China's territorial sovereignty and maritime rights and interests in the South China Sea through arbitration.¹⁹³

111. What is most significant about China's statement is that it declines to accept the questioner's invitation to endorse Taiwan's view that Itu Aba "meets the definition of island according to UNCLOS". That is not surprising: China has never asserted that Itu Aba—or any other individual insular feature in the Spratlys—meets the conditions of Article 121(3) or generates entitlement to an EEZ or continental shelf. Nor has China ever asserted that Itu Aba, in particular, can sustain human habitation or economic life of its own.¹⁹⁴ In contrast to China's silence on the subject, the other States that claim Itu Aba (Vietnam and the Philippines) have taken the position that Itu Aba does generate entitlement to any 200 M

¹⁹² Ministry of Foreign Affairs of the People's Republic of China, "Foreign Ministry Spokesperson Hua Chunying's Regular Press Conference on March 24, 2016", (24 Mar. 2016) (Appendix B to the Tribunal's Letter of 1 Apr. 2016, regarding the status of Itu Aba), p. 1.

¹⁹³ *Id.*

¹⁹⁴ China has taken no position on Itu Aba or any other Spratly feature in respect of Article 121(3). Rather, it insists on "tak[ing] the Nansha Islands as a whole" in regard to EEZ and continental shelf. But this position is entirely contrary to UNCLOS. Article 47 does not permit China to treat the Spratlys as an archipelago or claim a 200 M EEZ or continental shelf from purported archipelagic baselines. Assuming *quod non* that the Spratlys are under Chinese sovereignty, archipelagic baselines would only be in order if China were entitled to treat itself as a whole as an archipelago, which is plainly not the case. See Articles 47 and 48.

zones. Neither do Indonesia nor Malaysia support such a view. This leaves only Taiwan, a non-State and non-party to UNCLOS, as the only entity suggesting otherwise. And even that is the result of a very recent change of position. Prior to July 2015, Taiwan claimed only a 12 M territorial sea for Itu Aba; it had never claimed an EEZ or continental shelf.¹⁹⁵ That it waited until two and a half years *after* this arbitration commenced before adopting a new view, and asserting a 200 M claim, weighs heavily against it.

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112. For the foregoing reasons, the Philippines respectfully submits that;

- Taiwan's newest materials must be treated with caution, particularly insofar as they purport to rely on newly created evidence;
- No further attempts by Taiwan to influence the Tribunal's deliberations should be entertained;
- In any event, Taiwan's latest submissions only prove that Itu Aba has never supported genuine, sustained human habitation or economic life of its own;
- This is explained in part by the fact that Itu Aba lacks the freshwater and soil resources to do so;
- The historical account of China's alleged presence in the South China Sea provided in Taiwan's Position Paper only underscores the baseless nature of China's claim to exclusive historical rights to the maritime areas located within the nine-dash line; and the PRC's spokesperson's remarks make it clear that Taiwan is alone among the littoral authorities in the South China Sea in claiming that Itu Aba is capable of sustaining human habitation and economic life of its own.

¹⁹⁵ See Tr. (30 Nov. 2015), pp. 38:9-40:10 (Presentation by Mr. Reichler).

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C(T)SIL Exhibit 26(*bis*) “Histories of New Southern Archipelago”, *Taiwan Times* (May 1939)

C(T)SIL Exhibit 33(*bis*) “French Flag over the Unoccupied Islets”, *The Illustration* (15 July 1933)

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Annex 893 C. Mora et al., “Dredging in the Spratly Islands: Gaining Land but Losing Reefs”, *PLOS Biology* (31 Mar. 2016)

Annex 894 Charles Gide, *PRINCIPLES OF POLITICAL ECONOMY* (2nd Edition) (1904)

Annex 895 U.S. Hydrographic Office, *Asiatic Pilot: The Western Shores of the China Sea from Singapore Strait to and Including Hongkong*, Vol. IV (1925)

Annex 896 Government of France, *Memorandum* regarding Japanese claims to islets in the China Sea (8 Mar. 1928)

Annex 897 Government of France, Ministry of Foreign Affairs, Asia/Oceania Section, *Memorandum* (8 Sept. 1953)

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Annex 899 Christian Bidard, *PRICES, REPRODUCTION, SCARCITY*, Cambridge University Press (1991)

Annex 900 Chen I-Ming, “Water Quality Survey in South China Sea and Taiping Island Sea Region”, in *POLITY GUIDING PRINCIPLES: THE REPORT FOR THE ECOLOGICAL ENVIRONMENT SURVEY ON SOUTH SEA* (L. Fang & J. Li eds. 1994)

Annex 901 Dunqian Li, “Chronicles of Stationing in the Spratly Islands”, *Shanghai Miscellany*, Vol. 4, No. 6 (1998)

Annex 902 Jacque Wilson, “What’s the danger of an all-fruit diet?”, *CNN* (30 Jan. 2013), available at <http://www.cnn.com/2013/01/29/health/steve-jobs-all-fruit-diet/>

Annex 903 Asia Maritime Transparency Initiative, *Virtual Tour of Itu Aba*, Photo 20160123_123323 (23 Jan. 2016), available at <https://www.flickr.com/photos/139462176@N08/25863661766/>

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- Annex 905 Debra Mao, “Tiny Island at Center of South China Sea Tussle Seeks Status”, *Bloomberg* (23 Mar. 2016), *available at* <http://www.bloomberg.com/news/articles/2016-03-24/tiny-island-at-center-of-south-china-sea-struggle-seeks-status>
- Annex 906 Jeremy Page, “Taiwan Cultivates an Argument for China’s Spratly Claim”, *Wall Street Journal* (23 Mar. 2016)
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- Annex 908 Adrian Brown, “Taiwan shows off Taiping Island in the South China Sea”, *al-Jazeera* (24 Mar. 2016), *available at* <http://www.aljazeera.com/blogs/asia/2016/03/taiwan-taiping-island-south-china-sea-160324062533491.html>
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- Annex 911 Dr. Ryan T. Bailey, Supplemental Report on Groundwater Resources Analysis of Itu Aba (20 Apr. 2016)
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- Annex 913 “Spratly Islands Initial Stage Installation and Estimated Income & Expenditure Statement”, *Japanese Ministry of Foreign Affairs Archives*, A.4.1.0.2-1-1 Vol. 1, No. 8 (undated)

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