

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  
5 FEBRUARY 2016 REQUEST FOR COMMENTS**

11 MARCH 2016

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## **EVIDENCE RELEVANT TO SUBMISSIONS 11 AND 12(B) ON PROTECTION OF THE MARINE ENVIRONMENT.**

1. The Philippines' Submissions 11 and 12(b) address China's breaches of the 1982 Convention in regard to its obligations to protect and preserve the marine environment. In its written pleadings and at the November 2015 oral hearings, the Philippines demonstrated, *inter alia*, that China has breached those obligations by carrying out a massive programme to construct artificial islands, including at Mischief Reef, Cuarteron Reef, Fiery Cross Reef, Gaven Reef, Johnson Reef, Hughes Reef, and Subi Reef. As the evidence showed, to create these artificial islands China deployed massive dredgers to pulverize coral reefs and deposit the resulting debris atop sensitive reef ecosystems. According to the expert reports submitted by the Philippines and the testimony given by Professor Kent Carpenter at the oral hearings, these actions destroyed entire coral ecosystems, causing serious and extensive environmental harm throughout the South China Sea and beyond.

2. In its letter of 5 February 2016, the Tribunal invited comments in respect of certain materials that China has published concerning the environmental impacts of its artificial island-building activities. The Philippines has reviewed these materials and is grateful for the opportunity to present its views, which are set out below. In sum, nothing in the materials upon which the Tribunal has invited the Philippines to comment detracts from the conclusion that China's island building activities have caused serious and extensive environmental harm in violation of its obligations under the 1982 Convention.

### **I. Documents Published by China's Ministry of Foreign Affairs**

3. The Tribunal has asked the Philippines to comment on two documents published by China's Ministry of Foreign Affairs.

A. *Regular Press Conference of Foreign Ministry Spokesperson Hua Chunying, dated 9 April 2015 (Attachment A to the Tribunal's Letter of 5 February 2016)*

4. During this Regular Press Conference, Foreign Ministry Spokesperson Hua Chunying was asked:

Newly published satellite images shows that China is reclaiming land around the Meiji Reef [i.e., Mischief Reef] within an area the Philippines regards as its Exclusive Economic Zone. What is China's comment on the negative

remarks made by some countries on China's maintenance and construction work on islands and reefs in the South China Sea?<sup>1</sup>

5. The Philippines observes that the spokesperson's response emphasized the civilian nature of China's activities. She stated, in regard to what she referred to as China's "maintenance and construction work", that its "main purposes" consist of "optimizing their functions, improving the living and working conditions of personnel stationed there, better safeguarding territorial sovereignty and maritime rights and interests, as well as better performing China's international responsibility".<sup>2</sup> In regard to these responsibilities, she identified, in particular, China's "obligation in maritime search and rescue, disaster prevention and mitigation, marine science and research, meteorological observation, environmental protection, navigation safety, fishery production service and other areas".<sup>3</sup> She continued: "After the construction, the islands and reefs will be able to provide all-round and comprehensive services to meet various civilian demands besides satisfying the need of necessary military defense".<sup>4</sup> Specifically:

The maritime areas in the South China Sea, where shipping lanes criss-cross and fishing grounds scatter around, are far away from the landmass. These areas are prone to maritime accidents due to the influence of typhoon and monsoon. Civilian functions and facilities will be included in the construction for ships to take shelter, and for navigation aid, search and rescue, marine meteorological observation and forecast, fishery service and administration, so as to provide services to ships of China, neighboring countries and other countries that sail across the South China Sea.<sup>5</sup>

6. Accordingly, the Philippines considers that the official spokesperson's statements at the 9 April 2015 Regular Press Conference constitute further confirmation of the inapplicability of Article 298's jurisdictional exclusion for "military activities". The point was amply addressed by Professor Oxman at the oral hearings.<sup>6</sup> As Professor Oxman pointed

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<sup>1</sup> Ministry of Foreign Affairs of the People's Republic of China, *Foreign Ministry Spokesperson Hua Chunying's Regular Press Conference on April 9, 2015* (9 Apr. 2015), p. 1. Supplemental Documents, Vol. 1, Annex 624.

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

<sup>4</sup> *Id.* (emphasis added).

<sup>5</sup> *Id.*

<sup>6</sup> Tr., 8 July 2015, pp. 75:4-76:13 (Presentation by Professor Oxman); Tr., 13 July 2015, pp. 48:5-57:21 (Presentation by Professor Oxman); Tr., 26 Nov. 2015, pp. 85:1-90:9 (Presentation by Professor Oxman).

out, China has never contended that this exclusion applies to any of the Philippines' Submissions.<sup>7</sup> It plainly does not.

7. The Philippines further observes that, during the same Regular Press Conference, the Foreign Ministry spokesperson made various assertions concerning environmental impact assessments that China purportedly conducted for its artificial island-building programme. According to the statement:

China's construction projects on the islands and reefs have gone through scientific assessments and rigorous tests. We put equal emphasis on construction and protection by following a high standard of environmental protection and taking into full consideration the protection of ecological environment and fishing resources. The ecological environment of the South China Sea will not be damaged. We will take further steps in the future to monitor and protect the ecological environment of relevant waters, islands and reefs.<sup>8</sup>

8. Significantly, the official spokesperson neither provided nor cited to any evidence to support a single one of these assertions. There is no such evidence before the Tribunal; nor, despite diligent search, has the Philippines been able to find any. It appears that, assuming *quod non* that such "scientific assessments and rigorous tests" exist, China has chosen not to make them public or otherwise submit them to critical scrutiny. In this regard, the Philippines recalls that China bears the burden of demonstrating that it has carried out an environmental impact assessment, in fulfillment of its obligations under Article 206 of the 1982 Convention. Nonetheless, China has chosen not to present the putative assessments mentioned in its Foreign Ministry statement for consideration by the Tribunal (or anyone else).

9. Mere assertions that impact assessments have been carried out, or that they have demonstrated the absence of harm, are insufficient to discharge a party's burden of proof. The ICJ recently addressed the claim of Costa Rica that it had carried out a risk assessment even though, like China, Costa Rica had not presented any evidence that an

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<sup>7</sup> Tr., 8 July 2015, p. 77:1-6 (Presentation by Professor Oxman); Tr., 13 July 2015, pp. 55:2-57:21 (Presentation by Professor Oxman); Tr., 26 Nov. 2015, pp. 87:16-89:11 (Presentation by Professor Oxman).

<sup>8</sup> Ministry of Foreign Affairs of the People's Republic of China, *Foreign Ministry Spokesperson Hua Chunying's Regular Press Conference on April 9, 2015* (9 Apr. 2015), p. 1. Supplemental Documents, Vol. 1, Annex 624.

evaluation had in fact been conducted. As the Court observed in its December 2015 Judgment in the *Construction of a Road* case (*Nicaragua v. Costa Rica*):

In the oral proceedings, counsel for Costa Rica stated that a preliminary assessment of the risk posed by the road project was undertaken when the decision to build the road was made. According to Costa Rica, this assessment took into account the nature of the project and its likely impact on the river, and concluded that the road posed no risk of significant harm. In support of this claim, Costa Rica emphasized the modest scale of the works, that the road was clearly not a highway, that some of it was constructed on pre-existing tracks, and that the only possible risk was the contribution of sediment by the road to a river that already carried a heavy sediment load.

The Court observes that to conduct a preliminary assessment of the risk posed by an activity is one of the ways in which a State can ascertain whether the proposed activity carries a risk of significant transboundary harm. However, Costa Rica has not adduced any evidence that it actually carried out such a preliminary assessment.<sup>9</sup>

10. In light of Costa Rica's failure to produce evidence of its purported risk assessment, the Court held that Costa Rica had breached its obligation under general international law to carry out an EIA.<sup>10</sup> China should be held to no less of a standard, especially in light of its express treaty obligations under UNCLOS. Moreover, China's breaches of those obligations go far beyond Costa Rica's. In the *Construction of a Road* case, Costa Rica offered extensive scientific and technical evidence that the environmental harms caused to Nicaragua by its road-building activities were not significant. China, by contrast, has not produced any evidence – to the Tribunal or otherwise – to refute the Philippines' compelling demonstration of the serious and extensive environmental harms its island-building activities have caused to the South China Sea and its ecosystems.

B. *Embassy of the People's Republic of China, Interview with Mr. Ouyang Yujing, Director-General of the Department of Boundary and Ocean Affairs of the Ministry of Foreign Affairs of the People's Republic of China, dated 27 May 2015 (Attachment B to the Tribunal's letter of 5 February 2016)*

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<sup>9</sup> *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica v. Nicaragua; Construction of a Road in Costa Rica Along the San Juan River (Nicaragua v. Costa Rica)*, Merits, Judgment, I.C.J. Reports 2015, para. 154. Annex LA-335.

<sup>10</sup> *Id.*, para. 162.



11. This interview, which was conducted shortly after the Foreign Ministry Spokesperson gave her remarks (addressed above), largely recapitulates the statements that she had made.

12. In the interview, the Director-General was asked: “Why is China conducting construction activities on the Nansha islands and reefs? What are the purposes? Does China intend to increase military presence in the South China Sea as other parties have argued?” His response was: “[T]he facilities on relevant island and reefs are primarily for civilian purposes”.<sup>11</sup> He was further asked: “What civil and public facilities will China develop on the islands and reefs? What services will be provided to the region and the international community?” The answer:

The Nansha Islands is a distant sea area with busy shipping routes and vulnerable to marine perils. One of the most important purposes of China’s construction activities on the islands and reefs is to fulfill her relevant responsibilities and obligations, such as maritime search and rescue, disaster prevention and mitigation, marine scientific research, meteorological observation, ecological environment preservation, safety of navigation and fishery production, and to provide necessary services to vessels from China, her neighbors and other countries sailing in the South China Sea. To that end, it is necessary to build runway, pier, telecommunication, meteorological, navigation safety, and environmental observations facilities, etc.<sup>12</sup>

13. In follow-up, Director-General Ouyang was asked: “China has been emphasizing the civil and public nature of her construction activities. Will the facilities to be developed be open to the international community”? The response:

The primary purpose of China’s construction activities on the Nansha islands and reefs is to better fulfill her relevant international responsibilities and obligations. When conditions are ripe, China will invite relevant countries and international organizations to use relevant facilities for cooperation in maritime search and rescue as well as in other areas. China will make overall plans about what facilities to be open to the international community based on comprehensive planning after the completion of development.<sup>13</sup>

This is further confirmation that China’s island-building activities do not fall within the jurisdictional exclusion for “military activities” under Article 298(1)(b).

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<sup>11</sup> Embassy of the People’s Republic of China in Canada, *An Interview on China’s Construction Activities on the Nansha Islands and Reefs* (27 May 2015), p. 3. Hearing on the Merits, Annex 820.

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

14. In the same interview, Director-General Ouyang also addressed the environmental impacts of China’s island-building activities. He stated:

It needs to be pointed out that China’s relevant construction has gone through science-based evaluation and assessment, with equal importance given to construction and protection. We have taken into full account issues of ecological preservation and fishery protection, followed strict environmental protection standards and requirements in the construction process, and adopted many effective measures to preserve the ecological environment. We will further step up our efforts of ecological monitoring and preservation on the relevant islands, reefs and waters.<sup>14</sup>

15. No evidence was provided or cited in support of any of these assertions. In particular: (i) no evidence was provided to show a “science-based evaluation and assessment” was made, or of what it consisted; (ii) no evidence was provided that China has “taken into full account” — or taken into any account — ecological preservation or fishery protection; (iii) no evidence was provided that China “followed strict environmental protection standards and requirements”, or what those standards or requirements were; (iv) nor was any evidence provided that China “adopted many [or any] effective measures to preserve the ecological environment, or what those measures were; and (v) the Director General did not specify what “efforts of ecological monitoring and preservation” were being made, or whether they would be sufficient to prevent the environmental harms alleged by the Philippines in its Submissions. Despite diligent search, the Philippines has been unable to find any evidence to support any of these assertions.

## **II. Documents Published by China’s State Oceanic Administration on the Marine Environment**

16. The Tribunal has invited the Philippines to comment on seven publications of China’s State Oceanic Administration and its South China Sea branch.

- A. *State Oceanic Administration of the People’s Republic of China, Communiqués on the Marine Environment of China, Part 2, 2012-2014 (cited in footnote 2 of the Tribunal’s Letter of 5 February 2016)*

17. Three of the seven documents are Communiqués that bear the title *Communique on Marine Environment of China, Part 2*. These were published in Chinese by

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<sup>14</sup> *Id.*, p. 4.

the State Oceanic Administration for the years 2012, 2013 and 2014.<sup>15</sup> They concern general conditions of China's marine environment, and focus largely on the waters close to mainland China and Hainan Island. They do not address the ecological conditions of the maritime areas in the southern part of the South China Sea where China has been constructing artificial islands.

18. To the extent that the 2012 Communiqué (published in 2013) addresses China's "coral reef ecosystems", it is limited to a brief discussion that focuses solely on maritime areas other than where the artificial island-building has been taking place, specifically Leizhou Peninsula, Guangxi Behai, Hainan Island, and the Paracels Islands (which it refers to as the Xisha Islands):

The coral reef ecosystem has abundant biodiversity and very high productive levels; at the same time, it is an important ecotourism resource. In 2012, the southwest coast of Leizhou Peninsula and Beihai of Guangxi have healthy coral reef ecosystems; the eastern coast of Hainan Island and the Xisha Islands have healthy coral reef ecosystems.

The coverage of hermatypic coral on the eastern coast of Hainan Island and Xisha Islands are at lower levels, with lower supplemental quantity of hard coral; some monitored areas showed damage to coral by predators such as crown-of-thorns starfish and purple drupe.<sup>16</sup>

None of the features identified by the Philippines in its written pleadings and at the oral hearings where China has been engaged in artificial island-building is mentioned.

19. Neither does the 2013 Communiqué (published in 2014) address any of the relevant features. It states merely:

The southwest coast of Leizhou Peninsula and Beihai of Guangxi have healthy coral reef ecosystems; the eastern coast of Hainan Island and Xisha Islands have healthy coral reef ecosystems. The coverage of hermatypic coral has shown overall decline. In the monitored areas on the eastern coast of Hainan

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<sup>15</sup> These Communiqués bear the publication dates 1 April 2013, 25 March 2014, and 16 March 2015.

<sup>16</sup> China State Oceanic Administration, "2012 Communiqué on Marine Environment of China, Part 2. Marine Biodiversity and Ecological Conditions" (1 Apr. 2013), para. 2.2.4, *available at* [http://www.coi.gov.cn/gongbao/nrhuajing/nr2012/201304/t20130401\\_26418.html](http://www.coi.gov.cn/gongbao/nrhuajing/nr2012/201304/t20130401_26418.html) (accessed 9 Mar. 2016). Responses of The Philippines to the Tribunal's 5 February 2016 Request for Comments ("RTRC"), Annex 865.

Island and Xisha Islands, there is an elevation in supplemental quantity of hard coral. In some monitored areas, coral bleaching has been discovered.<sup>17</sup>

20. The 2014 Communique (published in 2015) goes no farther. It simply states, in regard to coral reef ecosystems:

The eastern coast of Hainan Island has a healthy coral reef ecosystem; the southwest coast of Leizhou Peninsula, Beihai of Guangxi, and the Xisha Islands have healthy coral reef ecosystems. The coverage of hermatypic coral continues the trend of overall decline, with decline in coverage of hermatypic coral being more significant on the southwest coast of Leizhou Peninsula and Weizhou Island of Beihai, Guangxi; coverage of hermatypic coral is low in the Xisha Islands.<sup>18</sup>

None of the three Communiques makes any reference to a risk assessment having been carried out to evaluate the possible impacts of China's artificial island-building programme; nor does the 2014 Communique present the results of any assessment of actual impacts, even though China's artificial island-building was well underway by that time.

*B. South China Sea Branch of the State Oceanic Administration of the People's Republic of China, Communiques on Marine Environment Conditions of South China Sea, 2013-2014 (cited in footnote 2 of the Tribunal's Letter of 5 February 2016)*

21. The Tribunal has invited the Philippines to comment on two additional Communiques that were published in Chinese by the South China Sea Branch of China's State Oceanic Administration. Unlike the three Communiques discussed above, the subject of these publications is the South China Sea specifically. They are both entitled *Communique on Marine Environment Conditions of South China Sea*, and cover the years 2013 and 2014. However, neither includes any evaluation of the ecological conditions in the areas where China is constructing artificial islands, and neither reports on the impacts of those activities.

22. The 2013 Communique's discussion of the South China Sea's "coral reef ecosystems" does not address any of the features in the Spratlys where China has been

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<sup>17</sup> China State Oceanic Administration, "2013 Communique on Marine Environment of China, Part 2: Conditions of Marine Ecology" (25 March 2014), para. 2.2.4, available at [http://www.coi.gov.cn/gongbao/nrhuanjing/nr2013/201403/t20140325\\_30714.html](http://www.coi.gov.cn/gongbao/nrhuanjing/nr2013/201403/t20140325_30714.html) (accessed 9 Mar. 2016). RTRC, Annex 867.

<sup>18</sup> China State Oceanic Administration, "2014 Communique on Marine Environment of China, Part 2: Conditions of Marine Ecology" (16 March 2015), para. 2.2.4, available at [http://www.coi.gov.cn/gongbao/nrhuanjing/nr2014/201503/t20150316\\_32224.html](http://www.coi.gov.cn/gongbao/nrhuanjing/nr2014/201503/t20150316_32224.html) (accessed 9 Mar. 2016). Annex 870.

engaged in artificial island-building. It refers specifically only to the coral reefs at Leizhou Peninsula, Guangxi Behai, Hainan Island, and the Paracel Islands:

In 2013, the southwest coast of Leizhou Peninsula and Weizhou Island of Beihai, Guangxi has healthy coral reef ecosystems; the eastern coast of Hainan Island and the northern region of Xisha Islands have healthy coral reef ecosystems. The coverage of hermatypic coral decreased compared to five years ago everywhere, with greater decrease on the eastern coast of Hainan Island. The northern region of Xisha Islands has greater influence of human activity, with more abundant types of hermatypic coral reefs, but the coverage is lower. In the last two years, the supplemental quantity of hard coral increased in Weizhou Island of Beihai, Guangxi; the eastern coast of Hainan Island; and the northern region of Xisha Islands.<sup>19</sup>

23. Beyond this, the 2013 Communique makes only a general reference to the “central and southern sea region of South China Sea”, where it reports (at a time prior to China’s extensive island-building activities) that “the condition of the seawater environment” in the area “is maintained at a good level, with elements including pH, inorganic nitrogen, active phosphate, petroleum, dissolved oxygen, and heavy metals all meeting the criteria for the first grade of seawater quality”.<sup>20</sup>

24. The 2014 Communique provides no additional information about the marine ecosystems where China has been carrying out its artificial island-building, or the environmental impacts of those activities. It simply reiterates that “The condition of the seawater environment in Zhongsha Islands at the central and southern sea region of South China Sea, as well as in sea regions surrounding Nansha [Spratly] Islands are maintained at a good level, with elements including pH, inorganic nitrogen, active phosphate, petroleum, chemical oxygen demand, dissolved oxygen, and heavy metals all meeting the criteria for the first grade of seawater quality”.<sup>21</sup> The section on “coral reef ecosystems” does not mention the Spratlys or any of the relevant features where the island-building activities have been taking place:

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<sup>19</sup> China State Oceanic Administration, South China Sea Branch, “Communique on the Oceanic Conditions of the South China Seas Region in 2013” (14 Aug. 2014), para. 2.2.3, *available at* <http://www.scsb.gov.cn/Html/2/13/article-1121.html> (accessed 9 Mar. 2016). Annex 869.

<sup>20</sup> *Id.*, p. 3.

<sup>21</sup> China State Oceanic Administration, South China Sea Branch, “Communique on the Oceanic Conditions of the South China Sea Region in 2014” (28 May 2015), p. 4 *available at* <http://www.scsb.gov.cn/Html/2/13/article-1267.html> (accessed 9 Mar. 2016). Annex 871.

In 2014, the eastern coast of Hainan Island has a healthy coral reef ecosystem; the southwest coast of Leizhou Peninsula in Guangdong, Beihai of Guangxi, and the Xisha Islands have healthy coral reef ecosystems. Compared to five years ago, the southwest coast of Leizhou Peninsula in Guangdong, Beihai of Guangxi, and the Xisha Islands have shown varying degrees of decline in terms of the number of coral types and the coverage of hermatypic coral. Of these areas, there was a 39.5% decline in coral types on the eastern shore of Hainan Island, 48.2% decline in coral coverage in the Xisha Islands; these declines are relatively significant. Fish density in coral reefs of Xisha Islands decreased by 22.3% compared to five years ago; there is a decline in the quantity of coral reef predators and the damaged surface area compared to in 2013.<sup>22</sup>

25. In short, there is nothing in either of these Communiques to indicate that China has satisfied its obligations under the 1982 Convention to protect and preserve the marine environment in regard to the artificial island-building activities that are the subject of the Philippines' Submissions.

C. *Article by Researcher Feng Aiping and Senior Engineer Wang Youngzhi from the First Ocean Research Institution of the State Oceanic Administration, 10 June 2015 (Attachment C to the Tribunal's Letter of 5 February 2016)*

26. The Tribunal has invited the Philippines to comment on an article authored by personnel affiliated with the State Oceanic Administration's First Ocean Research Institution, dated 10 June 2015, entitled *Construction Activities at Nansha Reefs Did Not Affect the Coral Reef Ecosystems*.

27. As a general comment, the Philippines notes that the authors' assertions regarding the environmental impacts of China's island-building activities are not supported by evidence; and, in many cases, their assertions are thoroughly contradicted by the evidence that the Philippines has already presented to the Tribunal in its written pleadings and at the oral hearings.

28. Turning to the authors' specific assertions, the Philippines observes that, significantly, they appear to accept the Philippines' Submissions that China's island-building activities have caused significant harm to the coral reef ecosystems of the South China Sea. They state that China will undertake "measures to restore and remedy *the harm done to the*

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<sup>22</sup> *Id.*, p. 10

coral reef ecosystems after the constructions”.<sup>23</sup> This is an important admission. Likewise is the admission that measures are required, after the construction is completed, to “remedy” the harm done to these coral reef ecosystems.

29. The authors, however, fail to identify any of the required measures, or to justify their confidence that China will undertake them. The satellite images presented by the Philippines at the oral hearings show no signs that any such remedial work has been — or will be — commenced.<sup>24</sup>

30. To the extent that the authors assert that China has already implemented various measures to reduce the environmental impact of its construction activities, the evidence adduced in the written pleadings and at the oral hearings flatly contradicts them. For example, the authors state that construction was timed to “avoid spawn periods” for red snapper, tuna, and bonito, which they say occur between March and August. However, satellite imagery presented during the oral hearings demonstrates this was not the case. Between 6 March and 13 April 2015, no fewer than 170 hectares of artificial land were created at Mischief Reef alone.<sup>25</sup> Similarly, satellite images capture significant land creation work being done at Subi Reef on 5 March 2015 and 5 June 2015.<sup>26</sup>

31. Also belied by the evidence is the authors’ contention that construction was scheduled so as to reduce its intensity during the period of “peak” coral growth. Putting aside

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<sup>23</sup> China State Ocean Administration, “Construction Activities at Nansha Reefs Did Not Affect the Coral Reef Ecosystem” (10 June 2015). Annex 872. (Attachment C to the Tribunal’s Letter of 5 February 2016) (emphasis added).

<sup>24</sup> Armed Forces of the Philippines, *Aerial Photographs of On-Going Reclamation at Gaven Reef* (2014). Hearing on the Merits, Annex 783; Armed Forces of the Philippines, *Aerial Photographs of Kennan Reef* (2014-2015). Hearing on the Merits, Annex 784; Armed Forces of the Philippines, *Aerial Photographs of On-Going Reclamation at Fiery Cross Reef* (2014-2015). Hearing on the Merits, Annex 785; Armed Forces of the Philippines, *Aerial Photographs of On-Going Reclamation at Subi Reef* (Feb. 2015-Mar. 2015). Hearing on the Merits, Annex 786; Compilation of Images of Cuarteron Reef (various sources) (compiled 13 Nov. 2015). Hearing on the Merits, Annex 787; Compilation of Images of Fiery Cross Reef (various sources) (compiled 13 Nov. 2015). Hearing on the Merits, Annex 788; Compilation of Images of Gaven Reef (various sources) (compiled 13 Nov. 2015). Hearing on the Merits, Annex 789; Compilation of Images of Johnson Reef (various sources) (compiled 13 Nov. 2015). Hearing on the Merits, Annex 790; Compilation of Images of McKennan (Hughes) Reef (various sources) (compiled 13 Nov. 2015). Hearing on the Merits, Annex 791; Compilation of Images of Mischief Reef (various sources) (compiled 13 Nov. 2015). Hearing on the Merits, Annex 792; Compilation of Images of Subi Reef (various sources) (compiled 13 Nov. 2015), pp. 7-8, 14-17, 24-25. Hearing on the Merits, Annex 795.

<sup>25</sup> Tr., 25 Nov. 2015, p. 202:10-12 (Presentation by Mr. Loewenstein).

<sup>26</sup> Compilation of Images of Subi Reef (various sources) (compiled 13 Nov. 2015). Hearing on the Merits, Annex 795.

the fact that coral grows throughout the year, with only a marginally higher rate from March to June when water temperature is higher, satellite imagery documents intense artificial island-building by China during that period.<sup>27</sup>

32. The authors are also mistaken to blithely suggest that the impact on the marine environment will be temporary and that it will easily recover. There is no scientific basis for their claim that “coral reefs that have been severely damaged by natural factors or human activities can be restored initially in 5-10 years provided that effective measures are taken, and complex and complete ecosystems can be fully restored in 50-100 years”.<sup>28</sup> To the contrary, as Professor Carpenter has testified, coral reef recovery for severely damaged reefs is highly variable and there is a great deal of scientific uncertainty surrounding the timeframe for recovery.<sup>29</sup>

33. Moreover, China’s artificial island building has not just damaged the reefs; large areas have been completely destroyed, by virtue of being pulverized by dredgers and then buried in debris and covered by concrete.<sup>30</sup> This makes recovery impossible.<sup>31</sup> At Mischief Reef alone, by October 2015, at least 598 hectares of new “land” had been created.<sup>32</sup> Collectively, China has created more than 1,300 hectares of artificial land.<sup>33</sup> As

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<sup>27</sup> Armed Forces of the Philippines, *Aerial Photographs of On-Going Reclamation at Gaven Reef* (2014), pp. 10-13. Hearing on the Merits, Annex 783; Armed Forces of the Philippines, *Aerial Photographs of Kennan Reef* (2014-2015), pp. 7-16. Hearing on the Merits, Annex 784; Armed Forces of the Philippines, *Aerial Photographs of On-Going Reclamation at Subi Reef* (Feb. 2015-Mar. 2015), pp. 3, 6-12. Hearing on the Merits, Annex 786; Compilation of Images of Fiery Cross Reef (various sources) (compiled 13 Nov. 2015), pp. 6, 13-14, 18. Hearing on the Merits, Annex 788; Compilation of Images of Gaven Reef (various sources) (compiled 13 Nov. 2015), pp. 12-13, 21-22. Hearing on the Merits, Annex 789; Compilation of Images of Johnson Reef (various sources) (compiled 13 Nov. 2015), pp. 14, 24-28. Hearing on the Merits, Annex 790; Compilation of Images of McKennan (Hughes) Reef (various sources) (compiled 13 Nov. 2015), pp. 6, 19-22. Hearing on the Merits, Annex 791; Compilation of Images of Mischief Reef (various sources) (compiled 13 Nov. 2015), pp. 6, 13-24. Hearing on the Merits, Annex 792.

<sup>28</sup> China State Ocean Administration, “Construction Activities at Nansha Reefs Did Not Affect the Coral Reef Ecosystem” (10 June 2015). RTRC, Annex 872.

<sup>29</sup> Tr., 26 Nov. 2015, p. 53:10-20 (Presentation by Professor Carpenter).

<sup>30</sup> Tr., 25 Nov. 2015, pp. 198:2-201:9 (Presentation by Mr. Loewenstein).

<sup>31</sup> Tr., 26 Nov. 2015, p. 53:10-20 (Presentation by Professor Carpenter).

<sup>32</sup> Tr., 25 Nov. 2015, p. 203:2-3 (Presentation by Mr. Loewenstein).

<sup>33</sup> Tr., 25 Nov. 2015, pp. 189:25-190:6 (Presentation by Mr. Loewenstein). Artificial island creation on such a vast scale is also impossible to square with the authors’ contention that China “has chosen the optimal plan while excluding the ones that would have a bigger impact on marine environment”, and that China has “minimiz[ed] the extent of the reclamation and dredging areas”. China State Ocean Administration, “Construction Activities at Nansha Reefs Did Not Affect the Coral Reef Ecosystem” (10 June 2015). RTRC, Annex 872.



Professor Carpenter testified, “[t]he reefs with extensive island-building activity will never be the same”.<sup>34</sup>

34. The Philippines agrees with the authors’ assertion that the “South China Sea is not a body of closed waters”.<sup>35</sup> This confirms the testimony of Professor Carpenter that the South China Sea is a highly interconnected ecosystem.<sup>36</sup> But the authors draw the wrong conclusion from this uncontested fact: they suggest that the impact on fishery resources will be minimized because “nutrients and food organisms can be replenished constantly from surrounding waters”.<sup>37</sup> This is simply erroneous. As Professor Carpenter has explained, the interconnectivity of the South China Sea in fact means that environmental damage is likely to spread widely, causing significant harm to marine life both within and beyond its limits.<sup>38</sup>

35. There is also no merit to the authors’ remarkable assertion that China’s artificial island-building activities are consistent with international practice, citing port construction projects that are not remotely comparable to what China has undertaken in the South China Sea, and by claiming that “In 2013, Australia dredged in the waters of the Great Barrier Reef to increase the berthing capacities of the coal terminal of Queensland”.<sup>39</sup> This is an inaccurate reference to Australia’s dredging activities at Abbot Point, some 20 km removed from the Great Barrier Reef. More importantly, in sharp contrast with China’s construction activities at the coral reefs in the South China Sea, Australia banned the dumping of sediment from the project (as well as from any other dredging project) onto the Great Barrier Reef.<sup>40</sup> Instead, the spoils must be placed in specially created containment pools on land so that none is deposited in the sea.<sup>41</sup> In contrast, China has dumped huge

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<sup>34</sup> Tr., 30 Nov. 2015, p. 157:8-9 (Presentation by Professor Carpenter).

<sup>35</sup> China State Ocean Administration, “Construction Activities at Nansha Reefs Did Not Affect the Coral Reef Ecosystem” (10 June 2015). RTRC, Annex 872.

<sup>36</sup> Tr., 26 Nov. 2015, p. 51:7-21 (Presentation by Professor Carpenter).

<sup>37</sup> China State Ocean Administration, “Construction Activities at Nansha Reefs Did Not Affect the Coral Reef Ecosystem” (10 June 2015). RTRC, Annex 872.

<sup>38</sup> Tr., 26 Nov. 2015, pp. 51:7-21; 54:8-13 (Presentation by Professor Carpenter).

<sup>39</sup> China State Ocean Administration, “Construction Activities at Nansha Reefs Did Not Affect the Coral Reef Ecosystem” (10 June 2015). RTRC, Annex 872.

<sup>40</sup> Oliver Milman, “Government bans dumping from new dredging projects into the Great Barrier Reef”, *The Guardian* (17 May 2015). RTRC, Annex 888.

<sup>41</sup> Commonwealth of Australia, Queensland Government, Department of State Development, *Final Environmental Impact Statement for the proposed Abbot Point Growth Gateway Project*, available at <http://www.statedevelopment.qld.gov.au/abbotpoint-eis> (accessed 9 Mar. 2016). RTRC, Annex 892.

quantities of pulverized coral on top of sensitive reefs, for the explicit purpose of creating artificial islands. Further, the Australian project underwent a comprehensive environmental impact assessment, which was published online in the form of a massive multi-volume study.<sup>42</sup>

D. *Statement of the State Oceanic Administration dated 18 June 2015  
(Attachment D to the Tribunal’s Letter of 5 February 2016)*

36. The final document by China’s State Oceanic Administration upon which the Philippines has been invited to comment is entitled *Construction Work at Nansha Reefs Will Not Harm Oceanic Ecosystems*, and dated 18 June 2015. Like the Foreign Ministry statements discussed above, this document asserts, without support, that “[i]n order to ascertain the effects of the construction work on oceanic ecosystems, scientific studies have been conducted by a team of experts and researchers from the fields of civil engineering, marine engineering, marine ecology, environment protection, and hydrology”.<sup>43</sup> Beyond mere assertion, there is no evidence of the existence of any such studies. None of them has been made available, either publicly or to the Tribunal. It is therefore impossible to determine whether they were carried out, let alone whether they were adequate. There is no way to assess — or even know — what these “studies” concluded about the environmental impacts of China’s island-building activities.

37. The same publication asserts, in an attempt to minimize the environmental harm that has occurred, that China’s artificial island-building uses what it calls a “‘nature simulation’ method” as the “comprehensive technical concept”. It claims that “[t]his method simulates the displacement of bioclasts such as corals and sands during wind storms and high waves”. The document further asserts that “[g]ood results have been obtained, and the ecological impact on the coral reefs is partial, temporary, controllable, and recoverable”.<sup>44</sup>

38. These claims, however, cannot be reconciled with the facts. As noted, satellite imagery analysis reveals that at least 1,300 hectares of new land has been created where

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<sup>42</sup> *Id.*

<sup>43</sup> China State Oceanic Administration, “Construction Work at Nansha Reefs Will Not Harm Oceanic Ecosystems” (18 June 2015), *available at* [http://www.soa.gov.cn/xw/hyyw\\_90/201506/t20150618\\_38598.html](http://www.soa.gov.cn/xw/hyyw_90/201506/t20150618_38598.html). Hearing on Merits, Annex 821.

<sup>44</sup> *Id.*

previously there had been only submerged coral reef. This has been accomplished by destroying the surrounding coral and using the debris to create artificial landmass, upon which concrete runways and other infrastructure have been constructed. It is pseudo-science, to say the least, to compare these massive demolition and construction activities to a natural process, as the document tries to suggest. Further, the destruction this has caused is likely to be permanent. As Dr. Carpenter testified, “The total destruction of a large swathe of reef structures through demolition and burying and landfill is a catastrophic disturbance of the reef”.<sup>45</sup> That is because:

[h]ere, demolition and burial and landfill has resulted in the total destruction of large swathes of reef structures that destabilize the reef substrate and negatively impact the potential for recovery. Reefs that have been smothered by sedimentation are unlikely to ever recover if unstable sediments remain in place, because reef building requires hard substrate -- that is, solid foundation -- to recruit and thrive.<sup>46</sup>

### **III. China’s Technical Guidelines**

39. The Tribunal has referred to three technical documents that have been published by China in Chinese for use in evaluating and monitoring marine ecosystems. The first, entitled *The Guidance for the Assessment of Coastal Marine Ecosystem Health (HY/T 087-2005)*, provides general guidance for evaluating the health of coastal marine ecosystems:

These standards stipulate the indicators, methods, and requirements for evaluation of the health of coastal marine ecosystems.

These standards are applicable to the evaluation of the health of ecosystems in domestic and territorial seas of the People’s Republic of China, as well as ecosystems in coral reefs, mangroves, seagrass beds, estuaries, and bays under the jurisdiction of the People’s Republic of China.<sup>47</sup>

40. The publication says nothing about whether an evaluation of the environmental impact of China’s artificial island-building was carried out, or whether the evaluation was adequate in light of the sensitivity of the South China Sea’s coral reefs and the scope of the artificial island-building project. Further, insofar as the guidelines may be considered to reflect the requirements under China’s environmental laws for carrying out an

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<sup>45</sup> Tr., 26 Nov. 2015, p. 52:5-7 (Presentation by Professor Carpenter).

<sup>46</sup> Tr., 26 Nov. 2015, p. 53:12-20 (Presentation by Professor Carpenter).

<sup>47</sup> China State Oceanic Administration, *The Guidance for the Assessment of Coastal Marine Ecosystem Health*, Marine Industry Standards of the People’s Republic of China, No. HY/T 087-2005 (2005), available at <http://www.doc88.com/p-6911995784788.html> (accessed 23 Feb. 2016). RTRC, Annex 864.

EIA, or for monitoring the impact of a project, there is no indication that any such impact assessments were carried out in accordance with them.

41. The same conclusions can be reached in regard to the *Code of Practice for Marine Monitoring Technology, Part 5 Marine Ecology*. This sets out technical guidance for monitoring the marine environment in relation to seawater; sediment; organisms; marine atmosphere; marine ecology; marine hydrology, meteorology, and sea ice; and satellite sensing methods.<sup>48</sup> There is no indication that China has followed any of the guidelines set out therein in regard to monitoring the marine environment in the areas where China's construction activities have been taking place, or measuring the actual impacts of these activities. Likewise, China's *Technical Guidelines for Environmental Impact Assessment of Marine Engineering (GB/T 19485 – 2014)*, published in 2014, provides no evidence that the guidelines have been followed, or that an EIA was carried out.<sup>49</sup>

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42. In conclusion, there is nothing in any of the twelve documents upon which the Tribunal has requested comment that provides any basis for concluding that China has fulfilled its obligations under the 1982 Convention to protect and preserve the marine environment, or that contradicts the claims made by the Philippines in its Submissions 11 and 12(b), or the evidence presented by the Philippines in support of such Submissions, that China has materially breached those obligations.

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<sup>48</sup> China State Oceanic Administration, *Code of Practice for Marine Monitoring Technology, Part.5 Marine Ecology*, No. HY/T 147.5-2013 (25 Apr. 2013), available at <http://www.doc88.com/p-9107173485754.html> (accessed 23 Feb. 2016). RTRC, Annex 866.

<sup>49</sup> China State Oceanic Administration, *Technical Guidelines for Environmental Impact Assessment of Marine Engineering*, National Standards of the People's Republic of China, No. GB/T 19485 -2014 (1 Apr. 2014). RTRC, Annex 868.

## **MATERIALS RELEVANT TO THE STATUS OF FEATURES THAT MAY GENERATE OVERLAPPING ENTITLEMENTS**

43. In its 5 February 2016 letter, the Tribunal invited the Parties to comment on certain additional materials concerning Itu Aba (“Taiping Island” in Chinese) that have recently been introduced into the public domain. These include a 23 January 2016 press release from the Taiwan Authority’s Ministry of Foreign Affairs (“TMFA”) and President Ma Ying-jeou’s public remarks dated 28 January 2016.

44. The Philippines is grateful for the opportunity to comment on these new materials, and presents its observations in five sections below. **Section I** briefly summarizes the record as it stood at the close of hearings on the merits in November 2015 for purposes of putting Taiwan’s recent materials in context. **Section II** reviews the applicable evidential standards and demonstrates that in accordance with international judicial and arbitral practise these new materials are entitled to no weight. **Section III** shows that Taiwan’s recent claims about Itu Aba contradict its own statements, including statements contained in its recently released materials. For the avoidance of doubt, **Section IV** confirms that Itu Aba in fact lacks both fresh water resources and tillable soil capable of sustaining human habitation or economic life. Finally, **Section V** responds to Taiwan’s arguments about the alleged consequences of finding Itu Aba a “rock”, and shows that those arguments are both wrong and irrelevant.

### **I. Taiwan’s New Materials Are Intended, in Effect, as a Legal Pleading**

45. The Philippines made its case about Itu Aba in its written pleadings and at the November 2015 hearings on the merits. The Philippines demonstrated that:

- Itu Aba does not have fresh water such as to sustain human habitation;<sup>50</sup>
- The feature’s sandy, infertile soil does not support agriculture;<sup>51</sup>
- There is no livestock naturally present on Itu Aba and the small number of animals that have been brought there survive on imported feed;<sup>52</sup>

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<sup>50</sup> See, e.g., Tr., 30 Nov. 2015, pp. 17:22-19:14; 23:19-35:20 (Presentation by Mr. Reichler).

<sup>51</sup> See, e.g., Tr., 30 Nov. 2015, pp. 18:8-22:6; 30:21-32:4; 35:15-20 (Presentation by Mr. Reichler).

- Itu Aba does not have, and never has had, a civilian population;<sup>53</sup>
- The only people who have ever lived on the feature are Taiwanese military personnel who are stationed there solely for the purpose of asserting and defending Taiwan’s sovereignty claim;<sup>54</sup>
- Those military personnel depend on supplies from the outside to survive;<sup>55</sup> and
- Itu Aba does not have, and never has had, any kind of economic life.<sup>56</sup>

46. No doubt it is for these reasons, as the Philippines also showed at the November hearings, that Taiwan never claimed maritime entitlement beyond 12 nautical miles (“M”) from Itu Aba until *after* the date upon which the Philippines initiated this case. In fact, the evidence shows that Taiwan made no such claim until July 2015, more than two years after this arbitration began.<sup>57</sup>

47. Taiwan’s recent public declarations appear to constitute an explicit attempt to rebut the Philippines’ case.<sup>58</sup> The very first paragraph of the MTFAs press release states that at the November 2015 hearings, “the Philippines distorted the facts and misinterpreted the law to argue that Taiping Island is a rock and not an island ...”.<sup>59</sup> The press release then proceeds to explain that it intends to set the record straight by showing that “the conditions on Taiping

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<sup>52</sup> See, e.g., Tr., 25 Nov. 2015, p. 113:7-13 (Presentation by Mr. Reichler).

<sup>53</sup> See, e.g., Tr., 25 Nov. 2015, pp. 99:24-100:3 (Presentation by Mr. Reichler).

<sup>54</sup> See, e.g., Tr., 25 Nov. 2015, pp. 99:24-100:3; 102:15-23; 109:5-13 (Presentation by Mr. Reichler).

<sup>55</sup> See, e.g., Tr., 25 Nov. 2015, pp. 100:1-8; 108:13-17; 112:1-114:4; Tr., 30 Nov. 2015, pp. 23:2-7; 35:15-20 (Presentation by Mr. Reichler).

<sup>56</sup> See, e.g., Tr., 25 Nov. 2015, pp. 110:3-113:18; 116:14-117:20 (Presentation by Mr. Reichler); Tr., 30 Nov. 2015, pp. 29:9-16 (Presentation by Mr. Reichler).

<sup>57</sup> See Tr., 30 Nov. 2015, pp. 38:9-40:10 (Presentation by Mr. Reichler).

<sup>58</sup> Taiwan had access to the transcripts of the hearings no later than 22 December 2015, the date that they were posted to the PCA website. One month later, on 22-23 January 2016, Taiwan’s Council of Agriculture dispatched an official delegation to Itu Aba. The press release and President Ma’s statement followed.

<sup>59</sup> 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. RTRC, Annex 875 (from Attachment G to the Tribunal’s Letter of 5 February 2016).

Island are such that it can sustain human habitation and economic life of its own”.<sup>60</sup> The new materials with which Taiwan has come forward should therefore be assessed as the *de facto* legal pleading that they are, but also against the record as it existed before the Philippines initiated these proceedings.

48. Taiwan has made far-reaching claims in making its case but has not put forward the kind of supporting evidence that would be treated as probative in international legal proceedings. It claims to have sent a team of “water, soil, vegetation, and legal experts to ... conduct an updated examination of its natural and agricultural environment” in January 2016, and even posted a carefully crafted video of that visit to YouTube.<sup>61</sup> It has, in short, put its best foot forward. Yet, Taiwan’s assertions about Itu Aba, particularly its fresh water and soil resources, are unsupported by actual evidence and do not withstand scrutiny. The conclusion remains unchanged: the feature *cannot* sustain human habitation or economic life. Itu Aba is therefore a rock that does not generate entitlement beyond 12 M.

## **II. The Treatment To Be Given to the New Materials from Taiwan**

49. Before evaluating the contents of Taiwan’s recent materials, it bears emphasis at the outset that they must be treated with great caution. As stated, they are intended, in effect, as a legal pleading, but they do not meet the requirements for the tendering of evidence in international legal proceedings. Viewing them through that lens, it is clear that they should be given no weight.

50. First, virtually all the “information” Taiwan has released constitutes nothing more than mere assertion unsupported by documentation or any other form of actual evidence. President Ma, for example, contends that Itu Aba has a “rich supply of groundwater”.<sup>62</sup> Yet, as discussed further below, no evidentiary source of any kind is cited to support this proposition (nor, interestingly, is the claim repeated in the TMFA press release).

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<sup>60</sup> *See id.*

<sup>61</sup> Ministry of Foreign Affairs of the Republic of China (Taiwan), “Taiping Island Survey”, YouTube Video (28 Jan. 2016), *available at* <https://www.youtube.com/watch?v=Ne8gmN-496o&feature=youtu.be> (accessed 8 Mar. 2016). RTRC, Annex 877.

<sup>62</sup> *See* 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). RTRC, Annex 876 (from Attachment G to the Tribunal’s Letter of 5 February 2016).

Taiwan may have recently said some interesting things but it has not offered any evidence to substantiate any of them.

51. Second, among the most basic rules of inter-State proceedings is that evidence created specifically for the purpose of litigation has little probative value. In the *DRC v. Uganda* case, for example, the International Court of Justice stated that it “will treat with caution evidentiary materials specially prepared for this case”.<sup>63</sup> Thus, even if they were treated as evidence (which they are not), this rule would require that Taiwan’s new materials be approached with care.

52. For these purposes it makes no difference that Taiwan is not a party to this case. It has the same interest as the People’s Republic of China in maximizing Itu Aba’s potential maritime entitlements. Both the Taiwan Authority and the PRC claim sovereignty over the feature on behalf of what they each consider to be one China.<sup>64</sup> Moreover, since Taiwan’s new materials appear to have been created specifically for the purpose of making a legal case, they must be evaluated as any other pleading would be.

53. Third, statements emanating from government officials warrant an even higher degree of caution than other forms of evidence specially prepared for purposes of litigation. As the ICJ observed in *Nicaragua v. United States*, a member of the government of a State engaged in litigation “will probably tend to identify himself with the interests of his country”.<sup>65</sup> And “while in no way impugning the honour or veracity” of such persons, evidence emanating from them should be treated “with great reserve”.<sup>66</sup>

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<sup>63</sup> *Armed Activities on the Territory of the Congo* (Democratic Republic of the Congo v. Uganda), Judgment, I.C.J. Reports 2005, para. 61. MP, Vol. XI, Annex LA-29. See also *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea* (Nicaragua v. Honduras), Merits, Judgment, I.C.J. Reports 2007, paras. 243-244. SWSP, Vol. XII, Annex LA-177; *Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal* (Bangladesh/Myanmar), Judgment of 14 March 2012, ITLOS Reports 2012, paras. 112-115. MP, Vol. XI, Annex LA-43 (dismissing affidavits prepared for litigation).

<sup>64</sup> The official position of the Philippines is clear and unequivocal: the Government of the PRC in Beijing is the lawful government of China in its entirety, including Taiwan.

<sup>65</sup> *Military and Paramilitary Activities in and against Nicaragua* (Nicaragua v. United States of America), Merits, Judgment, I.C.J. Reports 1986, para. 70. MP, Vol. XI, Annex LA-15.

<sup>66</sup> *Id.* See also *Armed Activities on the Territory of the Congo* (Democratic Republic of the Congo v. Uganda), Judgment, I.C.J. Reports 2005, paras. 61, 65, 78, 129. MP, Vol. XI, Annex LA-29; *Territorial and Maritime Dispute between Nicaragua and Honduras in the Caribbean Sea* (Nicaragua v. Honduras), Merits, Judgment, I.C.J. Reports 2007, paras. 243-244. SWSP, Vol. XII, Annex LA-177.



54. The International Tribunal for the Law of the Sea has adopted the same approach. In the *Bangladesh/Myanmar* case, ITLOS was presented with the affidavits of Bangladesh Navy officers relating to the alleged existence of an agreed boundary in the territorial sea that were prepared during the course of litigation. The Tribunal declined to give the affidavits any weight, precisely because they came “from officials who may have an interest in the outcome of the proceedings”.<sup>67</sup>

55. This settled international practice in relation to the treatment, admissibility and weight of material offered as evidence applies with even greater force to the recent materials Taiwan has injected into the public domain. In contrast to the cases cited above, they were not prepared in the context of an on-going exchange of pleadings but rather were made after the case had been fully pleaded, and after the close of hearings. They were thus prepared for the specific purpose of influencing this Tribunal’s on-going deliberations after the record had closed.

56. In contrast to self-serving evidence specially created for purposes of litigation, international courts and tribunals treat three other sources of evidence as inherently more probative: (1) contemporaneous evidence from persons with direct knowledge;<sup>68</sup> (2) evidence that has not, before litigation, been challenged by impartial persons for the correctness of what it contains;<sup>69</sup> and (3) admissions against interest in the form of statements from government officials or other knowledgeable sources that acknowledge unfavourable facts.<sup>70</sup> As shown below, all three of these preferred sources of evidence disprove Taiwan’s recent statements.

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<sup>67</sup> *Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)*, Judgment of 14 March 2012, ITLOS Reports 2012, para. 114. MP, Vol. XI, Annex LA-43.

<sup>68</sup> *Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda)*, Judgment, I.C.J. Reports 2005, para. 61. MP, Vol. XI, Annex LA-29.

<sup>69</sup> *Id.*

<sup>70</sup> *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*, Merits, Judgment, I.C.J. Reports 1986, para. 64. MP, Vol. XI, Annex LA-15 (finding that statements “emanating from high-ranking official political figures, sometimes indeed of the highest rank, are of particular probative value when they acknowledge facts or conduct unfavourable to the State represented by the person who made them”). See also *Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda)*, Judgment, I.C.J. Reports 2005, paras. 61, 65, 78, 129; MP, Vol. XI, Annex LA-29.

### III. Taiwan's Own Statements Show that Itu Aba Cannot Sustain Human Habitation or Economic Life of Its Own

57. The main thrust of Taiwan's recent propaganda campaign is, as stated, to show that Itu Aba has both the fresh water and the native soil "resources to be self-sufficient".<sup>71</sup> Yet these contentions are refuted by its own statements and those of others with direct knowledge made outside the context of litigation.

58. In his recent remarks, President Ma stated that in "December 1946, following World War II, our government dispatched the *ROCS Taiping* to recover Taiping Island". He then admitted, however, that "our forces were withdrawn from the island starting in June 1950 *due to supply issues*".<sup>72</sup> In other words, even as he was professing Itu Aba's self-sufficiency, President Ma admitted that the feature could not provide the supplies necessary to sustain Taiwan's troops.<sup>73</sup>

59. President Ma's comments echo those made in another TMFA press release from 2007, which stated: "Taiwan has long stationed troops on Taiping Island (known to Vietnam as Itu Aba), the largest among the Spratly Islands. Basic airport facilities were established on the island years ago to transport *essential supplies*, to safeguard marine resources and for emergency humanitarian rescue".<sup>74</sup> Again, the evidence from the Taiwan Authority itself confirms that Itu Aba itself cannot provide the "essential supplies" its small contingent of soldiers needed to survive.

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<sup>71</sup> See 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). RTRC, Annex 876.

<sup>72</sup> See *id.*, p. 6 (emphasis added).

<sup>73</sup> In the process of preparing its comments on Taiwan's new materials, the Philippines located an official 1950 communication from Taiwan's Navy Command Headquarters to the Ministry of Foreign Affairs confirming these supply problems. The communication requests permission to "recall" the troops stationed on Itu Aba, explaining that the "Nansha Islands are far away on the ocean; even though they occupy vanguard positions in terms of national defense, they lack residents or production, and long-term military operations here are difficult due to the necessity of vessel supplies". *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). RTRC, Annex 873.

<sup>74</sup> See Ministry of Foreign Affairs of the Republic of China (Taiwan), *The position of the Ministry of Foreign Affairs on Taiwan's sovereignty over islands in the South China Sea* (28 Nov. 2007). RTRC, Annex 874.

60. A 2010 article written by Dr. Wang Kuan-hsiung, one of the Taiwanese scholars who participated in the January 2016 site visit, quotes the 2007 TMFA press release and adds the further statement that “a Taiwanese garrison force of about 600 troops was sent to Tai-Ping-Dao (Itu Aba Island []), the largest island in the Spratly Islands, and has remained there ever since. The Taiwanese Navy has patrolled Itu Aba Island *and supplied the garrison there every 3 or 4 months ever since*”.<sup>75</sup>

61. Dr. Wang is not alone among the recent visitors to Itu Aba in making observations like this. Another Taiwanese scholar and consultant to the Taiwan Authority, Dr. Song Yann-huei, visited the feature with another group of governmental officials in December 2015. That trip was Dr. Song’s fourth to the island.<sup>76</sup> It is thus significant that in a 2009 article Dr. Song wrote: “Taiwan’s Navy and Coastal Guard send vessels regularly to the islands three to four times a year. Cargo vessels of private shipping companies also sail to Itu Aba once or two times a month *to supply the island’s daily needs*”.<sup>77</sup> Here again, a person familiar with the feature (and friendly to the interests of Taiwan) admitted before litigation that Itu Aba itself cannot meet the “daily needs” of the government personnel stationed there.

62. In an earlier 2008 article, Dr. Song went even further, writing that of “the 20 islands that protrude above sea level at the high tide, the largest is Taiping Island (Itu Aba), which is only 0.43 square kilometers ... The Spratly Islands *have no permanent inhabitants and are too small to sustain permanent, independent settlement*”.<sup>78</sup>

63. History confirms Dr. Song’s conclusion. The Philippines explained in its written pleadings and at the November 2015 hearings that Itu Aba had no population at any

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<sup>75</sup> See Kuan-Hsiung Wang, “The ROC’s Maritime Claims and Practices with Special Reference to the South China Sea”, *Ocean Development & International Law*, Vol. 41, No. 3 (2010), p. 243 (emphasis added). RTRC, Annex 880.

<sup>76</sup> See Ufficio di Rappresentanza di Taipei in Italia, “Is there drinkable water and topsoil on Taiping island?” (2 Feb. 2016), available at <http://www.roc-taiwan.org/IT/ct.asp?xItem=688229&ctNode=6333&mp=187> (accessed 9 Mar. 2016). RTRC, Annex 889.

<sup>77</sup> Yann-huei Song, “The Application of Article 121(3) of the Law of the Sea Convention to the Five Selected Disputed Islands in the South China Sea”, *Chinese (Taiwan) Yearbook of International Law and Affairs*, Vol. 27 (2009), p. 61 (emphasis added). RTRC, Annex 881.

<sup>78</sup> Yann-Huei Song, “The Potential Marine Pollution Threat from Oil and Gas Development Activities in the Disputed South China Sea/Spratly Area: A Role that Taiwan Can Play”, *Ocean Development & International Law*, Vol. 39, No. 2 (2008), p. 153 (emphasis added). RTRC, Annex 882.

time before 1956.<sup>79</sup> And since that date, the only occupants have been Taiwanese official personnel.<sup>80</sup> There is no record, at any time, of a civilian population ever having inhabited the place. This by itself is convincing evidence of the feature's lack of capacity to sustain human habitation and an economic life of its own, all the more since it lies in a semi-enclosed sea that is surrounded on all sides by densely populated landmasses from which it is readily accessible.

64. Taiwan now appears intent on changing this uncomfortable fact. According to a 31 January 2016 article in the *Taipei Times*, a nurse “stationed on Itu Aba ... on Thursday [January 28] became the first civilian to register their residency on the island, with two of her colleagues planning to follow suit”. According to the article, her decision “was praised by Ma when he visited the island”.<sup>81</sup>

65. The fact that Itu Aba gained its first registered resident only in the midst of Taiwan's public campaign to aggrandize the feature is itself indicative of this minuscule feature's inability to sustain authentic human habitation. Tellingly, the registrant is not a private civilian, at least in the usual sense of the word; she is, as the article states, a nurse officially “stationed” on Itu Aba. The feature remains, as it always has been, a lonely outpost occupied exclusively by official personnel for purposes of maintaining Taiwan's sovereignty claim.

66. The Philippines considers that the above statements and facts, taken individually and collectively, confirm that Itu Aba cannot provide the “essential supplies” to satisfy the “daily needs” of the personnel stationed there. From this evidence it is confirmed that Itu Aba is a “rock” that cannot sustain human habitation or economic life of its own within the meaning of Article 121(3).

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<sup>79</sup> Itu Aba was temporarily occupied by Taiwanese forces from 1946 until 1950. It was re-occupied in 1956. *See* Tr., 25 Nov. 2015, p. 99:16-22 (Presentation by Mr. Reichler).

<sup>80</sup> In his recent remarks, Mr. Ma stated that “in 2000, the Coast Guard Administration (CGA) took over defense of Taiping Island from the ROC Marine Corps”. *See* Office of the President of the Taiwan Authority of China, “Remarks by President Ma on Taiping Island” (28 Jan. 2016), p. 4, *available at* <http://english.president.gov.tw/Default.aspx?tabid=491&itemid=36616&rmid=2355> (accessed 9 Mar. 2016). RTRC, Annex 876. The Philippines accepts the truth of this statement but it does not change anything. The coast guard is comprised of official personnel just as much as the marines are.

<sup>81</sup> H. Chien-hua & J. Chung, “Taiping Island sees its first civilian register residency”, *Taipei Times* (31 Jan. 2016), *available at* <http://www.taipetimes.com/News/taiwan/archives/2016/01/31/2003638487> (accessed 9 Mar. 2016). RTRC, Annex 886.

#### **IV. Itu Aba Lacks Both the Fresh Water and Native Soil Required To Sustain Human Habitation and Economic Life of Its Own**

##### *A. Itu Aba Does Not Have Fresh Water To Sustain Human Habitation*

67. Taiwan’s press release asserts that “there are four operational groundwater wells on Taiping Island” that allegedly produce “freshwater that can be used as drinking water ...”<sup>82</sup> President Ma goes much further in his remarks and contends that “the island has a rich supply of groundwater”.<sup>83</sup> Indeed, he even claims that “[w]ater from the best well, the No. 5 well, has been tested by experts and found to be close to that marketed internationally under the brand name Evian ...”.<sup>84</sup> Taiwan’s YouTube video purports to support these assertions by showing a group of men standing around a table sipping water drawn from the well in a bucket.<sup>85</sup>

68. Taiwan’s new claims about Itu Aba’s alleged water resources are disproved in the first instance by contemporaneous evidence from persons with direct knowledge. In particular, they are disproven by the 1994 report, “The Flora of Taipingtao (Itu Aba Island)”, prepared by three Taiwanese botanists that the Philippines cited at the November 2015 hearings.<sup>86</sup> According to that report: “The underground water is salty and unusable for drinking”.<sup>87</sup>

69. This statement from scientists with direct knowledge is entitled to considerable weight. The authors visited the island for purposes of conducting an objective

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<sup>82</sup> 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. RTRC, Annex 875.

<sup>83</sup> See Office of the President of the Taiwan Authority of China, “Remarks by President Ma on Taiping Island”, (28 Jan. 2016), p. 6, *available at* <http://english.president.gov.tw/Default.aspx?tabid=491&itemid=36616&rmid=2355> (accessed 9 Mar. 2016). RTRC, Annex 876.

<sup>84</sup> *See id.*

<sup>85</sup> Ministry of Foreign Affairs of the Republic of China (Taiwan), “Taiping Island Survey”, YouTube Video, at 02:04 (28 Jan. 2016), *available at* <https://www.youtube.com/watch?v=Ne8gmN-496o&feature=youtu.be> (accessed 8 Mar. 2016). RTRC, Annex 877.

<sup>86</sup> See T-C Huang, et al., “The Flora of Taipingtao (Aba Itu Island)”, *Taiwania*, Vol. 39, No. 1-2 (1994). MP, Vol. VII, Annex 254; Tr., 25 Nov. 2015, pp. 110:17-111:1 (Presentation by Mr. Reichler); Tr., 30 Nov. 2015, pp. 16:7-18:7; 25:1-6; 27:3-6 (Presentation by Mr. Reichler).

<sup>87</sup> See T-C Huang, et al., “The Flora of Taipingtao (Aba Itu Island)”, *Taiwania*, Vol. 39, No. 1-2 (1994), p. 1. MP, Vol. VII, Annex 254.

survey of the flora on the feature, not for purposes of making a legal case. There is also no indication that its accuracy was challenged at any time, whether before, during or even now after litigation. Neither the TMFA press release nor President Ma make any effort to discredit the report or its conclusions. This omission is significant because Taiwan studied with great care every aspect of the Philippines' oral pleadings, in which the 1994 report featured prominently.<sup>88</sup> Taiwan's failure to address the report must therefore be taken to mean that Taiwan has no effective response.

70. Nor would any effort to impugn the report's truth be credible. The authors were three professors from Taiwan National University whose report was publicly funded by the Council of Agriculture of Taiwan's Executive Yuan. (Ironically, it was the Council of Agriculture that also organized the January 2016 visit to Itu Aba by the official delegation that came up with the information on which Taiwan now seeks to rely.<sup>89</sup>) Botanists can be presumed to know about water resources and their importance for sustaining life. Moreover, as of 1994, Taiwan had occupied Itu Aba continuously for almost 40 years. The authors visited the tiny feature over a period of five days<sup>90</sup> (as compared to the two days the recent delegation spent on the island<sup>91</sup>) living at close quarters with the troops stationed there. If there were truly "a rich supply of groundwater", they would have known it.

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<sup>88</sup> See, e.g., Tr., 25 Nov. 2015, pp. 110:19-111:1 (Presentation by Mr. Reichler); Tr., 30 Nov. 2015, pp. 16:12-21:22; 25:1-6; 27:3-6; 31:7-12; 32:16-20 (Presentation by Mr. Reichler).

<sup>89</sup> 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. RTRC, Annex 875. ("To provide further scientific evidence that Taiping Island qualifies as an island, the ROC Council of Agriculture invited a team consisting of water, soil, vegetation, and legal experts to survey Taiping Island from January 22 to 23, 2016, and conduct an updated examination of its natural and agricultural environment".)

<sup>90</sup> See T-C Huang, et al., "The Flora of Taipingtao (Aba Itu Island)", *Taiwania*, Vol. 39, No. 1-2, p. 2 (1994). MP, Vol. VII, Annex 254 ("The field collections were made by Tseng-Chieng Huang, Shing-Fan Huang and Kuo-Cheng Yang during April 19 to 23, 1994".)

<sup>91</sup> 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. RTRC, Annex 875 (noting that "the ROC Council of Agriculture invited a team consisting of water, soil, vegetation, and legal experts to survey Taiping Island from January 22 to 23, 2016, and conduct an updated examination of its natural and agricultural environment".)

71. As stated, Taiwan’s recent press release refers to “four operational groundwater wells”. All of these are skimming wells.<sup>92</sup> This is significant because, as the Philippines explained at the November 2015 hearings, a “[s]kimming well is a technique employed with an intention to extract relatively freshwater from the upper zone of the fresh-saline aquifer. The skimming wells are [a] low discharge ... cluster of wells drawing groundwater from relatively shallow depth”.<sup>93</sup>

72. The groundwater resources that skimming wells are used to extract on low coral islands (known scientifically as a “fresh water lens”) is extremely limited and delicate. According to a 2009 peer-reviewed article titled “Management of freshwater lenses on small Pacific islands” that appeared the *Hydrogeology Journal*:

Groundwater in small islands occurs as “fresh groundwater lenses”, relatively thin veneers of fresh groundwater overlying seawater in highly permeable, phreatic aquifers. These lenses, which are vital to small island communities, are extremely vulnerable to both natural variations and changes and human-caused perturbations and, because of this, require careful assessment, vigilant monitoring, and astute management.<sup>94</sup>

73. It would be wrong to treat a fresh water lens as a blanket of pure fresh water floating atop the underlying seawater. Rather:

The lower boundary between freshwater and underlying seawater in the thin lenticular groundwater body is not sharp.... Rather, the lower boundary occurs as a wide transition or mixing zone where groundwater salinity increases with

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<sup>92</sup> The website of Taiwan’s Representative Office in Italy quotes Dr. Song Yann-huei as referring to the “drinkable water that is available at the *four skimming wells*”. See Ufficio di Rappresentanza di Taipei in Italia, *Press Release: Is there drinkable water and topsoil on Taiping island?* (2 Feb. 2016), p. 2, available at <http://www.roc-taiwan.org/IT/ct.asp?xItem=688229&ctNode=6333&mp=187> (accessed 9 Mar. 2016) (emphasis added). Putting this statement together with the reference in the press release to “four operational groundwater wells”, it is clear that all four operational wells are, in fact, skimming wells. 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. RTRC, Annex 875.

<sup>93</sup> See Tr., 30 Nov. 2015, pp. 26:16-27:2 (Presentation by Mr. Reichler) (citing ICARDA/USDA, “Skimming Well Technologies for Sustainable Groundwater Management”, available at [http://uaf.edu.pk/directorates/water\\_management/brochures/Skimming%20Well%20\(English\)%20brochure.pdf](http://uaf.edu.pk/directorates/water_management/brochures/Skimming%20Well%20(English)%20brochure.pdf) (accessed 28 Nov. 2015). Hearing on Merits, Annex 854.

<sup>94</sup> I. White & T. Falkland, “Management of freshwater lenses on small Pacific islands”, *Hydrogeology Journal*, Vol. 18 (2010), p. 227. RTRC, Annex 883.

depth from freshwater to seawater ... due to mechanical mixing and dispersion.<sup>95</sup>

74. Other than general assertions about the “rich supply of groundwater”, Taiwan has provided no evidence concerning the existence or extent of any fresh water lens that may be beneath Itu Aba.<sup>96</sup> But there is every reason to think that assuming it exists at all—on which there is no real evidence before the tribunal—it would only be in minute quantities. First, the 1994 Taiwanese botanists’ report that the “water is salty and unusable for drinking” can only mean that if there is any fresh water underneath the feature, it is very limited in volume and not easily extracted.

75. Second, the fact that Taiwan purported to test (and taste) the water only from what it describes as the “best” well on the feature is revealing. If any of the other three operational wells produced truly potable water in amounts that could sustain human habitation Taiwan would surely have shown similar test results for those too. Its silence in that respect is revealing.

76. Third, even if they are believed, the reported test results from this best well are indicative of a very marginal resource. Taiwan reports the electrical conductivity of this nominally “Evian-quality” well as being 838  $\mu\text{mho/cm}$ . (Since salt conducts electricity, the electrical conductivity of water is a function of its salinity.) Eight hundred and thirty-eight  $\mu\text{mho/cm}$  reflects the existence of significant salt content. Potable water has a maximum electrical conductivity of 1055  $\mu\text{mho/cm}$ .<sup>97</sup> In contrast, distilled water has a conductivity of just 0.5  $\mu\text{mho/cm}$ .<sup>98</sup> The fact that Itu Aba’s best water carefully skimmed from the surface of

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<sup>95</sup> *Id.*, p. 228.

<sup>96</sup> In his remarks, President Ma mentions four historical sources that he claims attest to “the presence of freshwater on the island.” Office of the President of the Taiwan Authority of China, “Remarks by President Ma on Taiping Island”, (28 Jan. 2016), p. 7, *available at* <http://english.president.gov.tw/Default.aspx?tabid=491&itemid=36616&rmid=2355> (accessed 9 Mar. 2016). The Philippines has expended considerable effort attempting to locate the original sources nominally cited but with one exception has been unable to do so. The only exception is the 1879 British Royal Navy survey that says only that the water in the well on the island “was better than elsewhere.” *Id.* This, of course, is a purely comparative statement that does nothing to establish the existence or extent of any truly fresh water resources.

<sup>97</sup> Mark Heyda, MBH Engineering Systems, *A Practical Guide to Conductivity Measurement* (2006), p. 2, *available at* [http://www.mbhes.com/conductivity\\_measurement.htm](http://www.mbhes.com/conductivity_measurement.htm) (accessed 8 Mar. 2016). RTRC, Annex 890.

<sup>98</sup> *Id.*



the water table is approaching the limits of potability indicates, at best, a very thin lens the salinity of which increases quickly at lower levels of depth.

77. Appended to these comments is a brief expert report prepared by Dr. Ryan T. Bailey of Colorado State University in the United States of America. Dr. Bailey is a noted expert on the ground water resources of Pacific islands, a subject on which he has written extensively. He explains that the extent of any fresh water lens beneath coral islands is a function of a number of factors, including the size of the island (especially the width), its composition and the annual rainfall.<sup>99</sup> All three of these factors point decisively in the direction of a negligible, unreliable resource at Itu Aba.

78. As to size, Itu Aba's diminutive character imposes a hard constraint on the extent of any fresh water that may be beneath it. Perhaps aware of this fact, Taiwan even tries to portray Itu Aba as bigger than it really is. Its recent materials state that Itu Aba measures 0.51 km<sup>2</sup>.<sup>100</sup> Yet, other sources prove it even smaller. According to the 1994 report by the Taiwanese botanists, Itu Aba measures "0.48 square kilometers in area",<sup>101</sup> while Professor Song has referred to it as being just 0.43 km<sup>2</sup> in size.<sup>102</sup> In any event, whatever its exact size, Itu Aba is vanishingly small. So too is any groundwater resource that may be beneath it.

79. As to composition, Itu Aba is comprised primarily of sand and broken coral.<sup>103</sup> This means that any rain it receives passes quickly through the island and thence to the sea.<sup>104</sup>

80. As to annual rainfall, Itu Aba receives what is, by tropical standards, a comparatively modest amount. Moreover, what it does receive is highly variable. In his

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<sup>99</sup> See generally Dr. Ryan T. Bailey, *Groundwater Resources Analysis of Itu Aba* (9 Mar. 2016). RTRC, Annex 878.

<sup>100</sup> 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. RTRC, Annex 875.

<sup>101</sup> 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.

<sup>102</sup> Yann-Huei Song, "The Potential Marine Pollution Threat from Oil and Gas Development Activities in the Disputed South China Sea/Spratly Area: A Role that Taiwan Can Play", *Ocean Development & International Law*, Vol. 39, No. 2 (2008), p. 153. RTRC, Annex 882.

<sup>103</sup> See *infra*, pp. 32-3.

<sup>104</sup> Dr. Ryan T. Bailey, *Groundwater Resources Analysis of Itu Aba* (9 Mar. 2016), pp. 1-6. RTRC, Annex 878.

remarks, President Ma asserts that annual rainfall at Itu Aba “is roughly 3,000 mm”.<sup>105</sup> Here again, no source is provided. Moreover, the figure is belied by the 1994 botanists’ report, which reflects a number half that amount. According to that report: “The average annual precipitation is about 1,500 mm, but the range in precipitation is large in the past five years, from 669 mm to 2,144 mm”.<sup>106</sup>

81. There is no reason to doubt these 1994 figures. According to the authors of the 1994 report, the data came from the “Chinese Navy Weather Center”.<sup>107</sup> The military authority charged with manning the feature for nearly 70 years can be considered an authoritative and reliable source of this information.

82. According to Dr. Bailey’s report, the comparatively modest average precipitation, together with its wide annual variation, mean that any fresh water lens beneath Itu Aba would, in his words, be “almost non-existent”.<sup>108</sup> He explains that even beneath the centre of the island:

the freshwater lens is estimated to be very thin, ranging from only 0.35 m during the driest of the five years (0.67 m of total rainfall) reported [in the 1994 report] to about 1.6 m for the wettest of the five years reported (2.14 m of annual rainfall). It is important to note that these figures represent estimates of the *average* thickness of the freshwater lens over the course of the year, based on the total annual rainfall. The actual thickness will vary during the course of the year with periods of greater or lesser rain.

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Such a thin lens equates to an almost non-existent freshwater lens, as periods of little or no rainfall can result in rapid depletion of the lens as fresh groundwater, not replenished by recharge, discharges to the ocean.<sup>109</sup>

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<sup>105</sup> See Office of the President of the Taiwan Authority of China, “Remarks by President Ma on Taiping Island” (28 Jan. 2016), p. 6, *available at* <http://english.president.gov.tw/Default.aspx?tabid=491&itemid=36616&rmid=2355>. RTRC, Annex 876.

<sup>106</sup> 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.

<sup>107</sup> *Id.*

<sup>108</sup> Dr. Ryan T. Bailey, *Groundwater Resources Analysis of Itu Aba* (9 Mar. 2016), pp. 8-10. RTRC, Annex 878.

<sup>109</sup> *Id.*, p. 9.

83. According to Dr. Bailey, experience from other parts of the Pacific indicates that the complete depletion of a fresh water lens “can occur in as little as 2-3 months with little or no rainfall”.<sup>110</sup> This is significant because Itu Aba experiences distinct dry and wet seasons.<sup>111</sup> Dr. Bailey thus states that “[d]uring the driest of the five years reported (0.67 m of total rainfall) it is reasonable to conclude to a high degree of certainty that Itu Aba experienced periods during which any freshwater lens was completely depleted”.<sup>112</sup>

84. There is also every reason to believe that Itu Aba, like all places, experiences episodes of more prolonged drought during which rainfall levels fall below the lowest of the five years reported. According to Dr. Bailey:

Given that Itu Aba is subject to periodic El Niño, La Niña cycles during which even drier years are likely, it is also reasonable to conclude to a high degree of certainty that Itu Aba experiences more prolonged periods during which any freshwater lens would be expected to disappear entirely. By way of example, during the 1998 drought in eastern Micronesia (which has an average annual rainfall of 4.5 m, three times that of Itu Aba), the atoll island communities had to bring in water by ship from the large volcanic islands to meet their needs.<sup>113</sup>

85. Perhaps it is precisely for this reason that, as Taiwan itself acknowledges, it has constructed desalination facilities, and employs reverse osmosis and recycling to supplement the feature’s inadequate natural water resources. 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”.<sup>114</sup> This is a telling admission. If Itu Aba truly had “a rich supply of groundwater”, why would Taiwan need to rely also on these alternative methods of producing potable water? In the Philippines’ view, the question answers itself. Indeed, one commentator, a well-respected Taiwanese professor of public international law and law of the sea expert, Dr. Chiang Huang-chih, has written that even

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<sup>110</sup> *Id.*, p. 9.

<sup>111</sup> See, e.g., L. Xi, “Summary of Land of Guangdong Nansha Islands”, *Soil Quarterly*, Vol. 6, Issue 3 (1947), p. 78.

<sup>112</sup> Dr. Ryan T. Bailey, *Groundwater Resources Analysis of Itu Aba* (9 Mar. 2016), p. 9. RTRC, Annex 878.

<sup>113</sup> *Id.*, pp. 9-10.

<sup>114</sup> 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). RTRC, Annex 876.

these desalination and reverse osmosis facilities are not enough, and that “water must be imported from Taiwan”.<sup>115</sup>

86. It is therefore clear that even if Itu Aba does have a marginal fresh water lens beneath it, which is questionable and unsupported by any actual evidence tendered by Taiwan, it requires constant and substantial supplementation by artificial means just to keep Taiwan’s few troops alive.

*B. Itu Aba Also Does Not Have Soil Suitable for Agriculture*

87. Itu Aba not only lacks freshwater, it also lacks the soil necessary to sustain agriculture on any meaningful scale.

88. The recent TMFA press release contends that “[f]ield results revealed that soil on the island is naturally formed and supports indigenous vegetation as well as agricultural crops”.<sup>116</sup> President Ma asserts that Itu Aba’s soil “is lush with organic material. Guano has mixed with this, making for fertile soil amenable to the growth of both indigenous plants and agricultural products”.<sup>117</sup>

89. No data or other evidence is provided to support any of these assertions, only pictures (and the YouTube video). As is the case with Itu Aba’s supposedly “rich” supplies of fresh water, these new contentions are inconsistent with the 1994 Taiwanese botanists’ report. That report described Itu Aba as “an atoll consisting of a tropical reef covered with sandy coral and shell”.<sup>118</sup> This description is, moreover, entirely consistent with a 1938 dispatch

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<sup>115</sup> Chiang Huang-chih, “Itu Aba claim a distracting waste”, *Taipei Times* (27 Nov. 2015), available at <http://www.taipeitimes.com/News/editorials/archives/2015/04/02/2003614945>, p. 1. Hearing on Merits, Annex 839.

<sup>116</sup> 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. RTRC, Annex 875.

<sup>117</sup> See Office of the President of the Taiwan Authority of China, “Remarks by President Ma on Taiping Island”, (28 Jan. 2016), p. 7, available at <http://english.president.gov.tw/Default.aspx?tabid=491&itemid=36616&rmid=2355> (accessed 9 Mar. 2016). RTRC, Annex 876.

<sup>118</sup> 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.

from the *H.M.S. Herald*, which described the surface of the feature as comprised of “loose fine sand broken Coral and thin crust of conglomerate coral ...”.<sup>119</sup>

90. Hints of overstatement about Itu Aba’s “lush” soil can be found even in Taiwan’s own recent statements. According to the video of the recent site visit, there are two main types of soil on the island. The first is located around the periphery of the island. The first 20 cm are described as “calcareous” and consisting “primarily of coarse sand” below which are “eroded coral materials”.<sup>120</sup> The second is located more to the interior and is described with the statement that the “topsoil down to 40 centimeteres consists primarily of sand” and “is calcareous”.<sup>121</sup> Thus, in both cases, the soil is calcareous (meaning that it contains calcium carbonate) and comprised “primarily” of sand. This by itself is quite revealing. Sandy, calcareous soils are notoriously inhospitable to agriculture.<sup>122</sup>

91. Appended to these observations is a short expert report from Dr. Peter Motavalli, Professor of Soil Nutrient Management at the University of Missouri in the United States. Professor Motavalli formerly taught and conducted research on soil nutrient management in Pacific island soils at the University of Guam. According to Professor Motavalli: “Low limestone islands such as Itu Aba ... present multiple constraints for self-sustaining agricultural production”, including the presence of sandy soils:<sup>123</sup>

the dominance of sand in the soil profile reduces the capacity of the soil to retain plant-available water in the soil profile. Lack of plant-available water may cause water stress in-between rainfall events requiring use of irrigation to overcome moisture deficits. The dominance of sand in the soil profile also

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<sup>119</sup> *Message* from HMS “Herald”, United Kingdom, to British Admiralty (27 Apr. 1938). SWSP, Vol. III, Annex 377.

<sup>120</sup> Ministry of Foreign Affairs of the Republic of China (Taiwan), “Taiping Island Survey”, YouTube Video, at 02:36- 03:08 (28 Jan. 2016), *available at* <https://www.youtube.com/watch?v=Ne8gmN-496o&feature=youtu.be> (accessed 8 Mar. 2016). RTRC, Annex 877.

<sup>121</sup> *Id.*, at 03:29.

<sup>122</sup> *See generally* J. L. Deenik & R.S. Yost, “Chemical properties of atoll soils in the Marshall Islands and constraints to crop production”, *Geoderma*, Vol. 136 (2006). RTRC, Annex 884. *See also* U.N. Food and Agriculture Organization, “Management of calcareous soils”, *available at* <http://www.fao.org/soils-portal/soil-management/management-of-some-problem-soils/calcareous-soils/en/> (accessed 8 Mar. 2016). RTRC, Annex 891 (noting that “[c]alcareous soils generally have low organic matter content and lack nitrogen”, and that they “usually suffer from a lack of micronutrients, especially zinc and iron”) (emphasis omitted).

<sup>123</sup> Dr. Peter P. Motavalli, *Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (9 Mar. 2016), p. 6. RTRC, Annex 879.

reduces the capacity of the soil to retain plant nutrients in the soil profile. Nutrient retention in soils occurs when there is sufficient cation exchange capacity (i.e., charge on the soil surface that causes some nutrient ions to be held in the soil) due to the presence of clay and organic materials in the soil. Without sufficient organic matter or clay, application of fertilizer or organic soil amendments would be necessary. The rapid infiltration of water and the permeability of sandy soils may also promote nitrate leaching loss out of the rooting zone thereby requiring frequent applications of nitrogen fertilizer which is required in the largest amounts in most crop plants.<sup>124</sup>

With respect to the calcareous nature of the soil, Professor Motavalli states that

the high pH, calcareous nature of the soils also poses a challenge for plant nutrition. Morrison (1990) indicated that the high pH nature of low atoll soils causes severe micronutrient deficiencies, including copper, iron, manganese, and zinc. Therefore, external applications of these nutrients are required. Morrison (1990) also stated that most of these soils are very low in potassium often resulting in severe potassium deficiency. In addition, despite the presence of phosphorous from guano, the calcareous, high pH properties of these soils causes phosphorus to be precipitated as calcium phosphate, making it less available for plant uptake.<sup>125</sup>

92. Both the TMFA press release and Mr. Ma's statement inadvertently reveal the extent of the constraints Itu Aba's soil imposes on plant growth. Even as they proclaim the alleged bounty Itu Aba produces, they acknowledge that the feature has 147 trees "taller than chest height with girths greater than 100 centimeters".<sup>126</sup> "Chest height" is only approximately 1.5 m. Thus, many of the trees identified by Taiwan might more accurately be described as "shrubs". Moreover, the fact that even such diminutive plants can be individually counted says something about the growing conditions on the island.

93. In the course of researching Taiwan's new assertions about the quality of the soil on Itu Aba, the Philippines discovered a 1947 study entitled "Summary of Land of Guangdong Nansha Islands", which presents an analysis of the soil of Itu Aba prepared by a Dr. Xi Lianzhi (Hsi Lian-chih) based on a two-day visit to the island in February 1947.<sup>127</sup> Dr.

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<sup>124</sup> *Id.*

<sup>125</sup> *Id.*, p. 7.

<sup>126</sup> 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. 2. RTRC, Annex 875.

<sup>127</sup> See generally Lianzhi Xi, "Summary of Land of Guangdong Nansha Islands", *Soil Quarterly*, Vol. 6, No. 3 (1947). RTRC, Annex 885.

Xi breaks the soils on Itu Aba into three main types, which he labels the “Spratly Series”, the “Itu Aba Series” and the “Taiping Series”.<sup>128</sup> (The reasons for these different names are not known.) Perhaps the single most revealing part of Dr. Xi’s assessment is his conclusion: “As described above, the Nansha Islands do not have soil, but it is necessary to note that these islands are not devoid of vegetation”.<sup>129</sup> Dr. Xi repeats the same point elsewhere, writing: “Strictly speaking, if we consider the practical aspects, the Nansha Islands do not have soil; what they have is lithological [i.e., rocky] soils”.<sup>130</sup>

94. As noted, President Ma indicated the presence of guano in Itu Aba’s soil in his remarks and declared that it “mak[es] for fertile soil amenable to the growth of both indigenous plants and agricultural products”.<sup>131</sup> Dr. Xi’s 1947 report directly refutes this claim. He states that “due to the rinsing by rainwater and seawater, the soluble salt base and most of the organic matter in guano disappears”.<sup>132</sup> And in his report, Dr. Motavalli confirms Dr. Xi’s point by explaining that “the weathering of the guano reduces the fertilizer value of the guano due to the leaching of ammonia nitrogen from the material and the slowly soluble nature of the phosphorus in the material”.<sup>133</sup> Whatever guano that may be dropped on Itu Aba therefore does nothing to compensate for the nutrient poor character of the soil.

95. In addition to the sandy, calcareous nature of Itu Aba’s soil, other “constraints for self-sustaining agricultural production” that Professor Motavalli identifies include:

- “high winds [that] may result in physical damage to plants and salt damage from sea spray. This is particularly true during severe storm events, which can also lead to coastal inundation and thus increase soil salinity shortly after inundation.

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<sup>128</sup> See *id.*, pp. 78-80.

<sup>129</sup> *Id.*, p. 80.

<sup>130</sup> *Id.*, p. 78.

<sup>131</sup> See Office of the President of the Taiwan Authority of China, “Remarks by President Ma on Taiping Island”, (28 Jan. 2016), p. 7, available at <http://english.president.gov.tw/Default.aspx?tabid=491&itemid=36616&rmid=2355> (accessed 9 Mar. 2016). RTRC, Annex 876.

<sup>132</sup> Lianzhi Xi, “Summary of Land of Guangdong Nansha Islands”, *Soil Quarterly*, Vol. 6, No. 3 (1947), p. 79. RTRC, Annex 885.

<sup>133</sup> Dr. Peter P. Motavalli, *Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (9 Mar. 2016), p. 4. RTRC, Annex 879.

Intensive rainfall events common on many Pacific Islands can also cause physical plant injury of cultivated plants”.<sup>134</sup>

- the fact that “intensive cultivation of a small area for agricultural production can result in soil degradation due to destruction of soil structure, reduction of soil organic matter and soil nutrients, and possible short-term soil salinity problems if irrigation water quality is low. In the case of most intensive cultivation, which would be required to produce meaningful quantities of food on Itu Aba, frequent tillage and heavy use of soil amendments, such as fertilizer, would be required to produce multiple crops. A readily available source of fresh water for supplemental irrigation would also be necessary”.<sup>135</sup>

96. One of the aspects of Itu Aba on which Taiwan dwells longest is the vegetable garden it maintains there. It claims that “staple foods such as corn and sweet potato as well as 10 other types such as okra, pumpkin, loofah gourd, bitter melon, and cabbage ... grow well on the island”.<sup>136</sup> According to the TMFA press release, participants in the January 2016 site visit enjoyed a lunch consisting “of local natural ingredients, products from livestock raised on the island, as well as vegetables and fruits grown by personnel stationed there”.<sup>137</sup> Among the things Taiwan fails to mention is the fact that the lunch’s dominant ingredient—rice—was not local but was flown in from Taiwan.<sup>138</sup> (In his report, Dr. Xi wrote that “it would not be meaningful to grow grains for consumption” on Itu Aba.<sup>139</sup>)

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<sup>134</sup> *Id.*, p. 7.

<sup>135</sup> *Id.*

<sup>136</sup> Ministry of Foreign Affairs of the Republic of China (Taiwan), “Taiping Island Survey”, YouTube Video, at 00:30 (28 Jan. 2016), available at <https://www.youtube.com/watch?v=Ne8gmN-496o&feature=youtu.be> (accessed 8 Mar. 2016). RTRC, Annex 877.

<sup>137</sup> 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. RTRC, Annex 875.

<sup>138</sup> Jose Abeto Zaide, “Aba, Itu na ng aba?”, *Manila Bulletin* (26 Jan. 2016), available at <http://www.mb.com.ph/aba-itu-na-nga-ba/>. RTRC, Annex 887.

<sup>139</sup> Lianzhi Xi, “Summary of Land of Guangdong Nansha Islands”, *Soil Quarterly*, Vol. 6, No. 3 (1947), p. 80. RTRC, Annex 885.



97. In any event, “sustaining” human habitation and economic life involves more than providing the ingredients for a single meal for a visiting delegation dining under what appear to be stage-managed conditions. It entails providing the necessary sustenance day-after-day, month-after-month, year-after-year such as to sustain human habitation.

98. Taiwan also fails to explain how it is that the tiny vegetable garden’s soil is noticeably different than that found anywhere else on the island. The soil appears to be darker, as seen in Taiwan’s YouTube video.<sup>140</sup> Dr. Motavalli considers this indicative of the possibility “that this shade cloth covered site was land-formed and may contain introduced soil materials and amendments placed in small beds”.<sup>141</sup> In other words, the limited cultivation that there is appears to be based on non-natural soil imported from elsewhere.

99. In his 1947 report, Xi refers to a “small vegetable patch” existing even then, but observes that while fruits and vegetables “can grow”, they show “a great deal of pest damage”.<sup>142</sup> Professor Motavalli explains that this is still another constraint to agricultural production on islands like Itu Aba. He writes that “crop pests and disease ... are often a problem for agricultural production in humid tropical Pacific Islands”.<sup>143</sup>

100. Even setting all these fundamental constraints aside, Itu Aba’s diminutive size prevents it from being able to provide the food required to sustain human habitation or economic life. Professor Motavalli explains that the U.N. Food and Agriculture Organization (“FAO”) reported that, in 2006, the “average area of cultivated land worldwide needed to feed one person was 0.22 hectares”.<sup>144</sup> Thus, even if it were assumed that the entire area of Itu Aba were capable of being cultivated (which it is not), the result would be that Itu Aba could provide the food necessary to feed just two (2) people.

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<sup>140</sup> Ministry of Foreign Affairs of the Republic of China (Taiwan), “Taiping Island Survey”, YouTube Video, at 00:30 (28 Jan. 2016), available at <https://www.youtube.com/watch?v=Ne8gmN-496o&feature=youtu.be> (accessed 8 Mar. 2016). RTRC, Annex 877.

<sup>141</sup> 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.

<sup>142</sup> Lianzhi Xi, “Summary of Land of Guangdong Nansha Islands”, *Soil Quarterly*, Vol. 6, No. 3 (1947), pp. 79-80. RTRC, Annex 885.

<sup>143</sup> Dr. Peter P. Motavalli, *Expert Report on Soil Resources and Potential Self-Sustaining Agricultural Production on Itu Aba* (9 Mar. 2016), p. 8. RTRC, Annex 879.

<sup>144</sup> *Id.*, pp. 7-8.

101. But even this tiny figure is overstated. First, the land areas used to calculate the FAO’s average included soils which are much more naturally fertile than any found on Itu Aba.<sup>145</sup> Taking account of the infertility of Itu Aba’s sandy, calcareous “soil” would significantly reduce this figure (if it is possible to “significantly reduce” two).

102. Second, Dr. Xi’s 1947 report indicates that of the three types of soil he identified on the feature only one (the “Taiping Series”) could possibly be used to grow fruits and vegetables.<sup>146</sup> Yet, in a schematic diagram of Itu Aba, Dr. Xi shows the Taiping Series as covering only approximately 20% of its surface.<sup>147</sup>

103. There is no evidence before the Tribunal to show that Itu Aba has enough fertile soil to feed even a single person. On no view of the evidence could it be said that Taiwan has established that it is capable of sustaining human habitation or economic life of its own.

**V. Taiwan’s Arguments about the Alleged Consequences of Finding Itu Aba a “Rock” Are Both Wrong and Irrelevant**

104. The TMFA press release concludes with the argument that the Philippines’ interpretation of Article 121(3) “is not supported by any international legal precedent”,<sup>148</sup> and that if that interpretation were applied to Itu Aba

serious issues could arise, as several nations would no longer be able to claim EEZs of certain islands. These include the United States (Baker Island— uninhabited and without freshwater; Kingman Reef—land area above water during high tide only 0.012 square kilometer) and Japan (Okinotorishima— extremely small, with an area of roughly 8 square meters, uninhabited, and no fresh water or crops).<sup>149</sup>

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<sup>145</sup> *Id.*, p. 8.

<sup>146</sup> Lianzhi Xi, “Summary of Land of Guangdong Nansha Islands”, *Soil Quarterly*, Vol. 6, No. 3 (1947), p. 80. RTRC, Annex 885.

<sup>147</sup> *See id.*

<sup>148</sup> *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. 2. RTRC, Annex 875.

<sup>149</sup> *See id.*

105. Taiwan’s statement that the Philippines’ views are not supported by “any international legal precedent” is without merit. As the Philippines noted at the November 2015 hearings,<sup>150</sup> there is no judicial or arbitral precedent whatsoever on the interpretation and application of Article 121(3). It is therefore just as true to say that there is no international legal precedent contradicting the Philippines’ views. With only the exception of the ICJ’s decision concerning Quitasueño in *Nicaragua v. Colombia* (where the matter was not disputed),<sup>151</sup> the issue appears not to have been addressed in the jurisprudence. Courts and tribunals have always found a way to avoid coming to a view by finding, for delimitation purposes, that tiny and insignificant insular features like Itu Aba, whatever their technical status under Article 121(3), are not entitled to expanded maritime claims and should be enclaved within 12 M.<sup>152</sup>

106. That said, the Philippines considers its view of Article 121(3) and its application to Itu Aba amply supported by the most authoritative source of all: the plain text of Article 121(3). The Philippines will not repeat its arguments about the meaning of that text here; it refers the Tribunal to the relevant portions of the transcript from Day 2 of the November 2015 hearings.<sup>153</sup>

107. The Philippines considers Taiwan’s contention that “serious issues could arise” if the Philippines’ position were accepted to be without foundation. The Philippines expresses no views on the status of the three specific features mentioned in the TMFA press release, except to note that China itself has officially expressed the view that Japan’s

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<sup>150</sup> Tr., 25 Nov. 2015, pp. 58:10-18; 68:3-15 (Presentation by Mr. Martin).

<sup>151</sup> *Territorial and Maritime Dispute (Nicaragua v Colombia)*, Merits, Judgment, ICJ Reports 2012, para. 93. MP, Vol. XI, Annex LA-35.

<sup>152</sup> See, e.g., *id.*, para. 238 (enclaving Serrana Cay); *Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal* (Bangladesh/Myanmar), Judgment of 14 March 2012, ITLOS Reports 2012, paras. 318, 337. MP, Vol. XI, Annex LA-43 (enclaving St. Martin’s Island); *Maritime Delimitation in the Black Sea* (Romania v Ukraine), Merits, Judgment, ICJ Reports 2009, para. 188. MP, Vol. XI, Annex LA-33 (enclaving Serpents’ Island); *Dubai/Sharjah Border Arbitration*, Award (19 Oct. 1981), 91 I.L.R. 543 (1981), p. 677. PWRTQ, Vol. II, Annex LA-231 (enclaving Abu Musa); *Case Concerning the Delimitation of the Continental Shelf Between the United Kingdom of Great Britain and Northern Ireland, and the French Republic*, Decision (30 June 1977), XVIII R.I.A.A. 3, para. 202. Supplemental Documents, Vol. VI, Annex LA-246 (enclaving the Channel Islands).

<sup>153</sup> Tr., 25 Nov. 2015, pp. 57:13-95:13 (Presentation by Mr. Martin).

Okinotorishima is a “rock”.<sup>154</sup> The Philippines considers the interpretation and application of Article 121(3) to require case-by-case determinations on the basis of the available facts, including the particular geographical context in which the issue of status arises

108. As the Philippines noted at the November hearings, the object and purpose of Article 121(3) is “is to avoid perverse effects of the major extensions of coastal state jurisdiction beyond the territorial sea”.<sup>155</sup> The ICJ has observed in this regard:

By denying an exclusive economic zone and a continental shelf to rocks which cannot sustain human habitation or economic life of their own, paragraph 3 provides an essential link between the long-established principle that “islands, regardless of their size, ... enjoy the same status, and therefore generate the same maritime rights, as other land territory” ... and the more extensive maritime entitlements recognized in UNCLOS ....<sup>156</sup>

This understanding of paragraph 3 of Article 121 is confirmed by the text of paragraph 2 of the article. The words “[e]xcept as provided for in paragraph 3” not only qualify the elaboration of the entitlements of islands in paragraph 2; they precede it.

109. Article 121(3) must therefore be applied as written to give effect to its object and purpose. Failure to do so would violate the principle of effectiveness by depriving the provision of any normative content. The fact that the proper interpretation of Article 121(3) might potentially have the effect of limiting certain States’ claims should not be a concern. One of the key purposes of international law in this context is to restrain excessive State claims.

110. Taiwan’s argument is akin to suggesting that, in a case challenging a State’s exaggerated straight baseline claim, a court or tribunal should acquiesce to that claim because other States have notoriously excessive claims of their own. Adopting that approach would not be consistent with the Convention. As the Philippines explained at the November 2015 hearings, granting islands a 200 M EEZ and a continental shelf that, in some cases, may reach

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<sup>154</sup> See *Note Verbale* from the Permanent Mission of the People’s Republic of China to the United Nations to the Secretary-General of the United Nations, No. CML/2/2009 (6 Feb. 2009), p. 1. MP, Vol. VI, Annex 189.

<sup>155</sup> Tr., 26 Nov. 2015, pp. 92:23-93:1 (Presentation by Professor Oxman).

<sup>156</sup> *Territorial and Maritime Dispute* (Nicaragua v Colombia), Merits, Judgment, ICJ Reports 2012, p. 674, para. 139. MP, Vol. XI, Annex LA-35 (citing *Maritime Delimitation and Territorial Questions between Qatar and Bahrain* (*Qatar v. Bahrain*), Merits, Judgment, I.C.J. Reports 2001, para. 185. MP, Vol. XI, Annex LA-26).

beyond that distance represents what is already a significant extension of the “territorial temptation” into the Law of the Sea.<sup>157</sup> Article 121(3) was included as a bulwark against still further extensions of that temptation.

111. If caution is called for, it militates—contrary to Taiwan’s suggestion—in favour of finding that Itu Aba is *not* capable of generating potential entitlement beyond 12 M. As stated, features like Itu Aba, and even much larger ones, have always been enclaved within 12 M in the delimitation jurisprudence. Finding that Itu Aba might be capable of generating potential entitlement beyond that distance would therefore be to adopt a legal fiction, the result of which would be confusion and insecurity.

112. This is particularly true given China’s insistence on and exercise of its purported rights throughout the area of its claimed entitlements. At the same time, it contests, ignores, and interferes with the exercise of the Philippine’s rights under UNCLOS in the entire area China claims. Finding that Itu Aba might theoretically generate potential entitlement beyond 12 M would mean that, absent delimitation, development of the resources throughout the southern portion of the South China Sea could occur only on China’s terms. At the same time, and for the same reason, it would eliminate any incentive China might have to negotiate an equitable delimitation for the foreseeable future.

113. Because it is the dominant power in the region, China is the principal beneficiary of the prevailing uncertainty, and would undoubtedly invoke the “overlapping entitlements” of tiny Itu Aba and the much larger Philippine landmass at Palawan to continue to prevent the Philippines from attempting to exploit the potential oil and gas resources located off the Palawan coast. Because those resources are within 200 M of Itu Aba, China could be expected to assert a legal basis to stop the Philippines from exploiting them, except on China’s terms.

114. Finding that a tiny feature like Itu Aba could generate entitlement to a continental shelf and EEZ would intensify the already dangerous sovereignty disputes in the area (and potentially elsewhere in the world) and encourage further damage to the delicate natural environment of the South China Sea by encouraging States to undertake further efforts to solidify their claims. Such an outcome would be inconsistent with the core objects

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<sup>157</sup> Tr., 26 Nov. 2015, pp. 89:12-90:12 (Presentation by Mr. Martin).

and purposes of the Convention, namely to “promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment.”<sup>158</sup> It would be equally inconsistent with the central object of Part XV: the peaceful settlement of disputes.

115. As the Philippines explained at the November 2015 hearings, there are only two ways to avoid these difficulties.<sup>159</sup> The first, and best, is to give effect to the evidence and recognize that Itu Aba is not capable of generating potential entitlement beyond 12 M. The only other way to avoid such a manifest abuse of rights—indeed, not even “rights” as such, but only potential entitlements—would be to enjoin both Parties, pending agreement on delimitation, from exercising any rights in respect of any feature in the Spratly Islands beyond 12 M. The first is by far the more appropriate. It is the outcome dictated by a proper interpretation and application of Article 121(3). And it is also the result that is most likely to restore a semblance of clarity and order to the southern part of the South China Sea.

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116. For all the foregoing reasons, the Philippines respectfully submits that the Tribunal should reject Taiwan’s recent claims that “the conditions on Taiping Island are such that it can sustain human habitation and economic life of its own”. The evidence before the Tribunal points inevitably to the conclusion that the feature is a rock within the meaning of Article 121(3) of the Convention.

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<sup>158</sup> UNCLOS, Preamble, para. 4.

<sup>159</sup> *See, e.g.*, Tr., 26 Nov. 2015, pp. 99:13-100:24 (Presentation by Professor Oxman).