



PHOTO: TOMMY SCHULTZ

BUFFER ZONE MANAGEMENT PLAN

Tubbataha Reefs Natural Park & World Heritage Site



Tubbataha Protected Area
Management Board
Tubbataha Management Office

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Tubbataha Reefs
Natural Park
inscribed on the World
Heritage List in 1993

GLOSSARY OF TERMS

BFAR	Bureau of Fisheries and Aquatic Resources
DENR	Department of Environment and Natural Resources
DFA	Department of Foreign Affairs
DOE	Department of Energy
ECAN	Environmentally Critical Areas Network
FARMC	Fisheries and Aquatic Resource Management Council
IUCN	International Union for the Conservation of Nature
MAB	Man and Biosphere
MARINA	Marine Industry Authority
NAMRIA	National Mapping Resource Information Authority
OUV	Outstanding Universal Value
PAWB	Protected Areas and Wildlife Bureau
PCG	Philippine Coast Guard
PCSD	Palawan Council for Sustainable Development
PSSA	Particularly Sensitive Sea Area
TMO	Tubbataha Management Office
TPAMB	Tubbataha Protected Area Management Board
TRNP	Tubbataha Reefs Natural Park
UNESCO	United Nations Educational, Scientific, and Cultural Organization
WHS	World Heritage Site

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I. INTRODUCTION

In January 2013, a US Navy minesweeper slammed into the South Atoll of Tubbataha, destroying 2,345.67 square meters of corals. Three months after the USS Guardian mishap, on 8 April 2013, the Chinese vessel Min Ping Yu also ran aground in the reefs, this time on the North Atoll, causing 3,902 square meters of coral damage to the world-renowned diving destination.



Figure 1. The US minesweeper, USS Guardian (top), and the Chinese fishing vessel, Min Ping Yu (above), that ran aground in the TRNP in 2013.

Although uncommon, these are not isolated incidents. As early as 1925, the British steamship Egremont Castle was recorded as having struck the reef near the Lighthouse Islet. On 4 June 1949, the Flying Cloud, a large steel hulled cargo ship ran aground on the southwest corner of South Islet. And the continuing threat of major damage from ships plying the Sulu Sea demonstrate the need to put up a protective cordon around the Philippines' foremost marine park.

Established on 11 August 1988 as a protected area, the Tubbataha Reefs comprises two atolls – the North and South Atoll – and the Park's territory has since been expanded to include Jessie Beazley Reef. The area is uninhabited, but its remote location in the middle of the Sulu Sea and sizeable area of 97,030 hectares necessitate strict measures to maintain its integrity.

Buffer zones are designed to protect the primary conservation features of a protected area, while allowing for some uses. This Management Plan highlights the significance of the marine area surrounding the Tubbataha Reefs Natural Park (TRNP or the Park) and World Heritage Site in the maintenance of its outstanding universal value and integrity.

The Man and the Biosphere Programme of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) is credited with institutionalising the buffer zone concept. It is one of the three zones, along with the core area and the transition zone, that are designed to support the three basic functions of a biosphere reserve:

- Conservation – the preservation of landscapes, ecosystems, species and genetic variation;
- Development - economic and human development which is socio-culturally and ecologically sustainable;
- Logistical - research, monitoring, education and information exchange

In its Operational Guidelines for the Implementation of the World Heritage Convention, UNESCO defines a buffer zone as:

"... an area surrounding the nominated property which has complementary legal and/or customary restrictions placed on its use and development to give an added layer of protection to the property. This should include the immediate setting of the nominated property, important views and other areas or attributes that are functionally important as a support to the property and its protection." (Paragraph 104, January 2008).

Paragraph 103 of the Operational Guidelines further states:

"Wherever necessary for the proper conservation of the property, an adequate buffer zone should be provided."

At the "International Expert Meeting on World Heritage and Buffer Zones" in March 2008, it was generally agreed that the primary role of the buffer zone at a World Heritage Site is the protection of the site's Outstanding Universal Value (OUV).

In the papers presented at the meeting, among the issues discussed that are relevant to TRNP are as follows:

- (a) Absence of a buffer zone inhibits the ability of the management entity to protect the World Heritage Site from pressures originating from outside the inscribed property.
- (b) All threats to the inscribed property should be identified, and the role of the buffer zone in eliminating or minimizing those threats should be clearly articulated. In that respect, the buffer zone should be seen as an important part of the inscribed property.
- (c) When the buffer zone is devised as an important management tool to protect the World Heritage Site and surrounding areas, it brings benefits such as:
 - i) setting limits to protect views, settings, uses, and other site aspects,
 - ii) providing maps, regulations, and standards that guide the actions of managers, policy makers, and affected communities.
- (d) For a buffer zone to be effective in protecting an inscribed property, the following are needed:
 - i) a well- formulated Statement of Outstanding Universal Value
 - ii) identification of the site attributes that provide the OUV

- iii) the desired state of conservation of the attributes that contribute to the OUV and the site as a whole, and
- iv) a full understanding of the authenticity of the attributes and the integrity of the site.

II. RATIONALE

UNESCO cites the following criteria as part of the Statement of Outstanding Universal Value that enabled Tubbataha to qualify as a World Heritage Site in 1993:

Criterion (vii): Tubbataha Reefs Natural Park contains excellent examples of pristine reefs with a high diversity of marine life. The property includes extensive reef flats and perpendicular walls reaching over 100m depth, as well as large areas of deep sea.

Criterion (ix): Tubbataha Reefs Natural Park lies in a unique position in the middle of the Sulu Sea and is one of the Philippines' oldest ecosystems. It plays a key role in the process of reproduction, dispersal and colonization by marine organisms in the whole Sulu Sea system, and helps support fisheries outside its boundaries. The property is a natural laboratory for the study of ecological and biological processes. It also offers a demonstration site to study the responses of a natural reef system in relation to the impacts of climate change.

Criterion (x): Tubbataha Reefs Natural Park provides an important habitat for internationally threatened and endangered marine species. The reefs of the property support 374 species of corals, almost 90% of all coral species in the Philippines. Its reefs and seas also support 11 species of cetaceans, 11 species of sharks, and at least 479 species of fish. It is a very important nesting, resting and juvenile development area for two species of endangered marine turtles: green turtles and hawksbill turtles. There are seven breeding species of seabirds, and Bird Islet and South Islet are breeding grounds to seven resident and endangered species of seabirds.

However, UNESCO noted on the World Heritage website that the park faces many threats from shipping, marine pollution, fishing, and energy exploration. "Thus effective buffer zone arrangements are needed, and internationally supported legislation to protect the property from shipping threats, and greater enforcement of marine litter regulation on the High Seas by the appropriate international organisations would be a significant benefit to the property," according to the UN body.

The Tubbataha Management Office has reported that the park is continually at risk from the following threats:

1. Illegal fishers and shell collectors – From time to time, poachers are apprehended for violating the "no-take zone" policy of TRNP. The most recent arrest was made in April 2013 when the Chinese ship Min Ping Yu was caught with a cargo of endangered

species inside the park. Boats of local fishers seeking to collect commercially valuable topshells have also been seen entering the park at night.

2. International shipping – The increase in maritime activities in the Sulu Sea poses danger to the park from oil spills, alien invasive species, and marine pollution. Debris from boats have caused injury and death to animals in the park, and trash has been found in birds’ nests in Tubbataha’s islets.

Increased vessel traffic in the vicinity of Tubbataha is of particular concern, as data gathered by marine park rangers in the park shows the number of boats passing through the buffer zone and surrounding waters increasing by two-thirds in just three years. The number recorded is as follows: 2010 – 3,358; 2012 – 4,253; 2011 – 3,616; 2013 – 5,546.

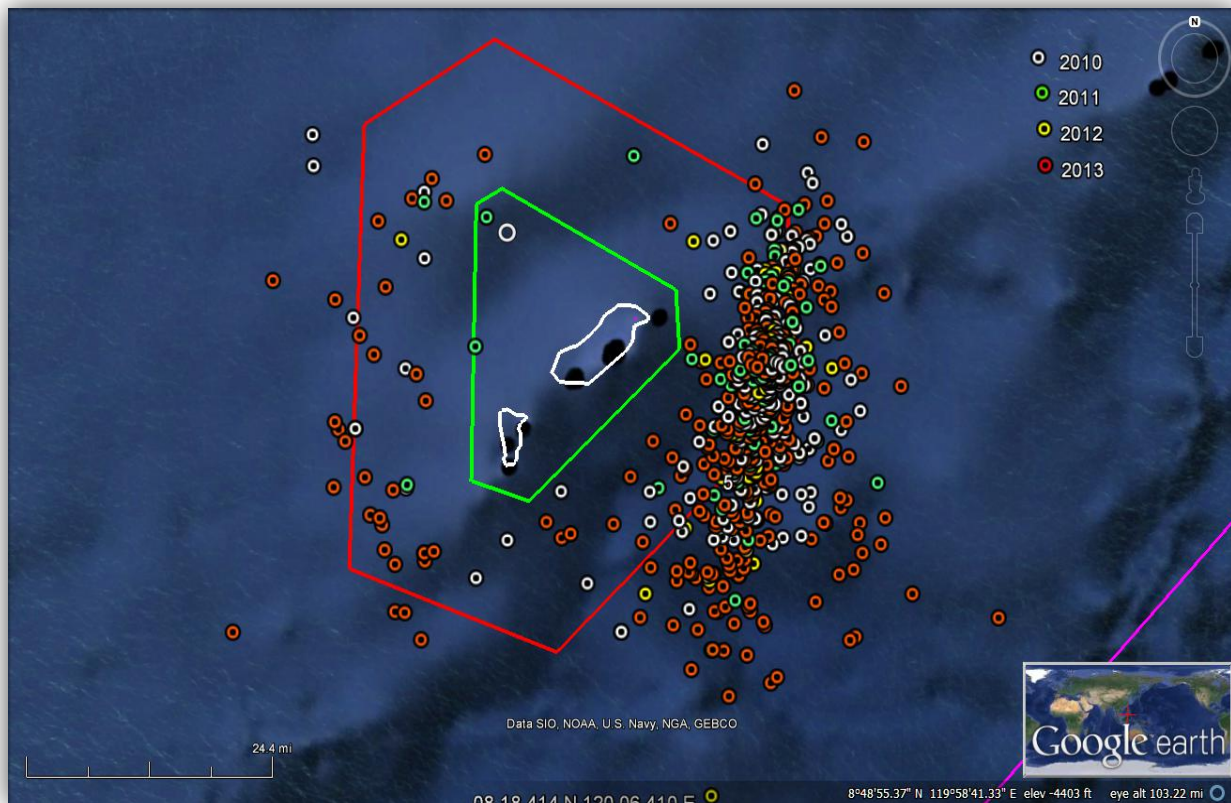


Figure 2. The map of Tubbataha with the plotted coordinates of the documented passing vessels within the park’s buffer zone.

Another general threat to the park is the increasing demand for energy exploration in the Sulu Sea. In 2007, the TMO had to make representations with the Department of Energy (DOE) to remove the overlapping section of Service Contract 61, issued to Burgundy Global Exploration Corporation for oil exploration, in order to protect the integrity of the park.

Taking these threats into consideration, the TRNP Management Plan of 2011 indicated the need for the Tubbataha buffer zone management plan under its Conservation Management program, as follows:

"The inclusion of the buffer zone in the TRNP means that a management program should be in place in that zone, too. A new management plan in consonance with the existing TRNP management plan will be developed for the buffer zone."

III. MANAGEMENT OBJECTIVES

In order to insulate the core zone of TRNP from the negative influence of activities in the marine area contiguous to the park, the following specific objectives have been identified for the buffer zone:

- To maximize the protection of Tubbataha Reefs from fishing pressures in the immediate vicinity of the Sulu Sea;
- To protect TRNP from threats that could emanate from outside park boundaries such as, but not limited to, alien invasive species and maritime pollution;
- To increase the resilience of TRNP to climate change impacts through the proper management of activities in the buffer zone.

IV. LEGAL MANDATE

Republic Act 10067, otherwise known as the Tubbataha Act of 2009, serves as the statutory foundation for the establishment of the buffer zone, which is defined in Section 3 (b) as 'the identified area outside the boundaries of and immediately adjacent to TRNP that needs special development control in order to avoid or minimize harm to the protected area.'

Section 5 of the law serves as the legal impetus for the preparation of this management plan, to wit:

"Establishment of a buffer zone. – There shall also be established a ten (10)-nautical mile buffer zone from the TRNP, with the following coordinates:

	<i>Latitude</i>	<i>Longitude</i>
<i>From Pt. 1</i>	<i>9° 04' 52" N</i>	<i>119° 46' 10" E</i>
<i>to Pt. 2</i>	<i>9° 06' 05" N</i>	<i>119° 48' 22" E</i>
<i>to Pt. 3</i>	<i>8° 58' 09" N</i>	<i>120° 03' 12" E</i>

to Pt. 4	8° 53' 29" N	120° 03' 30" E
to Pt. 5	8° 41' 33" N	119° 50' 41" E
to Pt. 6	8° 43' 09" N	119° 45' 46" E

to point 1, the point of beginning per the Philippine Reference System (PRS) 92 datum."

Section 7 (d) of the law further directs the Tubbataha Management Office (TMO), in collaboration with various sectors and agencies, to formulate a 'site management strategy including, but not limited to, the establishment of clear and simplified guidelines on the activities that can be allowed within the zones, including the buffer zone.'

Section 8 of the law pertaining to zoning further states:

'A zoning plan shall be adopted within the TRNP, giving primary consideration to the protection and conservation of all life forms in accordance with applicable laws, rules and regulations. Zoning shall also take into consideration the effective protection of habitats, fragile ecosystems and unique areas. The establishment and management of zones shall involve the concerned stakeholders by undertaking such steps as dialogue and community and resource-use mapping. The metes and bounds of each zone shall be indicated on maps and nautical charts.'

This management plan also takes cognizance of DENR Memorandum Circular 16 issued on May 13, 1993 that sets out the 'Guidelines on the Establishment and Management of Buffer Zones for Protected Areas.' Section 2 of the document states:

"It is the government policy to preserve the biodiversity and sustain the use of its components within the protected areas through the establishment of Buffer Zones outside their boundaries, thus giving an added layer of protection to the areas while at the same time providing regulated benefits and livelihood opportunities to the local communities."

One of the objectives for putting up buffer zones, according to the DENR circular, is 'to serve as protective layer of the resources of the protected areas against encroachment, destruction and other illegal activities detrimental to their integrity.'

Among the criteria for the selection of buffer zones in the circular that are relevant to TRNP are as follows:

- The need of a threatened wildlife species for additional habitat that extends beyond the protected area boundary;

- The need to protect marine and coastal protected areas that may be exposed to the effects of pollution and other forms of disturbances;
- The presence of habitats necessary for the survival of threatened species which inhabit the protected areas; and
- The availability of an area which can serve as a migratory route of wildlife during local or winter movements

V. SITE DESCRIPTION

The Plan applies to the marine area from the following coordinates indicating the boundaries of TRNP:

	Latitude	Longitude
From Pt. 1	9° 04' 52" N	119° 46' 10" E
to Pt. 2	9° 06' 05" N	119° 48' 22" E
to Pt. 3	8° 58' 09" N	120° 03' 12" E
to Pt. 4	8° 53' 29" N	120° 03' 30" E
to Pt. 5	8° 41' 33" N	119° 50' 41" E
to Pt. 6	8° 43' 09" N	119° 45' 46" E

to point 1, the point of beginning per the Philippine Reference System (PRS) 92 datum;

to the following coordinates indicating the ten-nautical mile perimeter surrounding TRNP:

	Latitude	Longitude
From Pt. 1	9° 17' 49" N	119° 47' 42" E
to Pt. 2	9° 04' 48" N	120° 12' 40" E
to Pt. 3	8° 49' 42" N	120° 13' 54" E
to Pt. 4	8° 29' 42" N	119° 53' 04" E
to Pt. 5	8° 36' 13" N	119° 35' 22" E
to Pt. 6	9° 11' 08" N	119° 36' 35" E

to Pt. 1, the point of beginning per the Philippine Reference System (PRS) 92 datum.

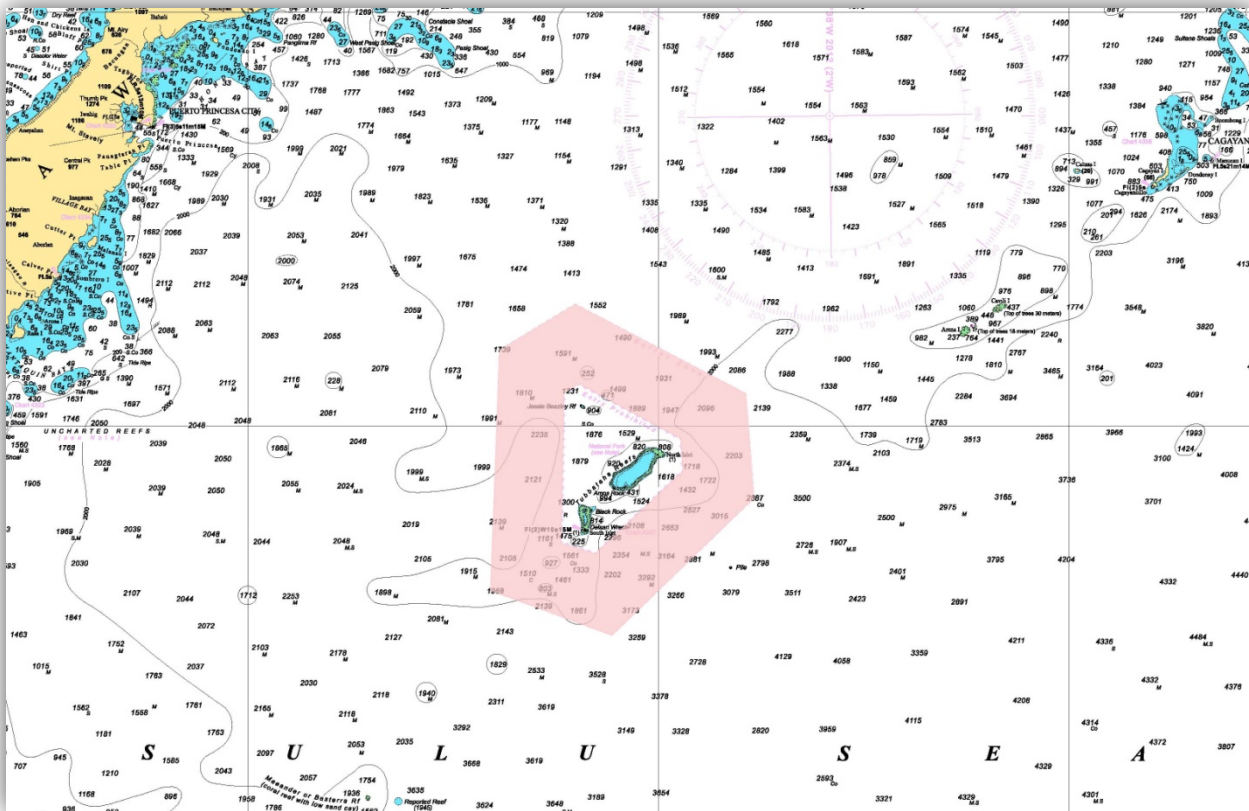


Figure 3. The TRNP buffer zone covers an area of about 356,500 has (3,565km²) surrounding the perimeter of the park.

VI. BUFFER ZONE REGULATIONS

Experts have noted that among the key functions of buffer zones in World Heritage Sites are the following:

- protection of the outstanding universal value of the World Heritage property;
- addressing specific threats that arise from wider use surrounding the property; and
- promoting activities within the buffer zone that enhance the World Heritage property

Currently, the buffer zone of TRNP is used mainly for two activities:

- (1) Navigation by both local and international watercraft
- (2) Fishing, particularly the establishment of fish aggregating devices by commercial fishing companies and small-scale fishers.

In the past, the TMO has expressed concern about the overlapping section of Service Contract (SC) 61, issued by the DOE to Burgundy Global Exploration Corporation, with the expanded

boundaries of the Park including Jessie Beazley Reef. Service contracts are awarded by the DOE to companies 'for the exploration, development, and production of the country's petroleum and coal resources.' The TRNP Act, however, categorically appended the intersection between the two areas to the park.

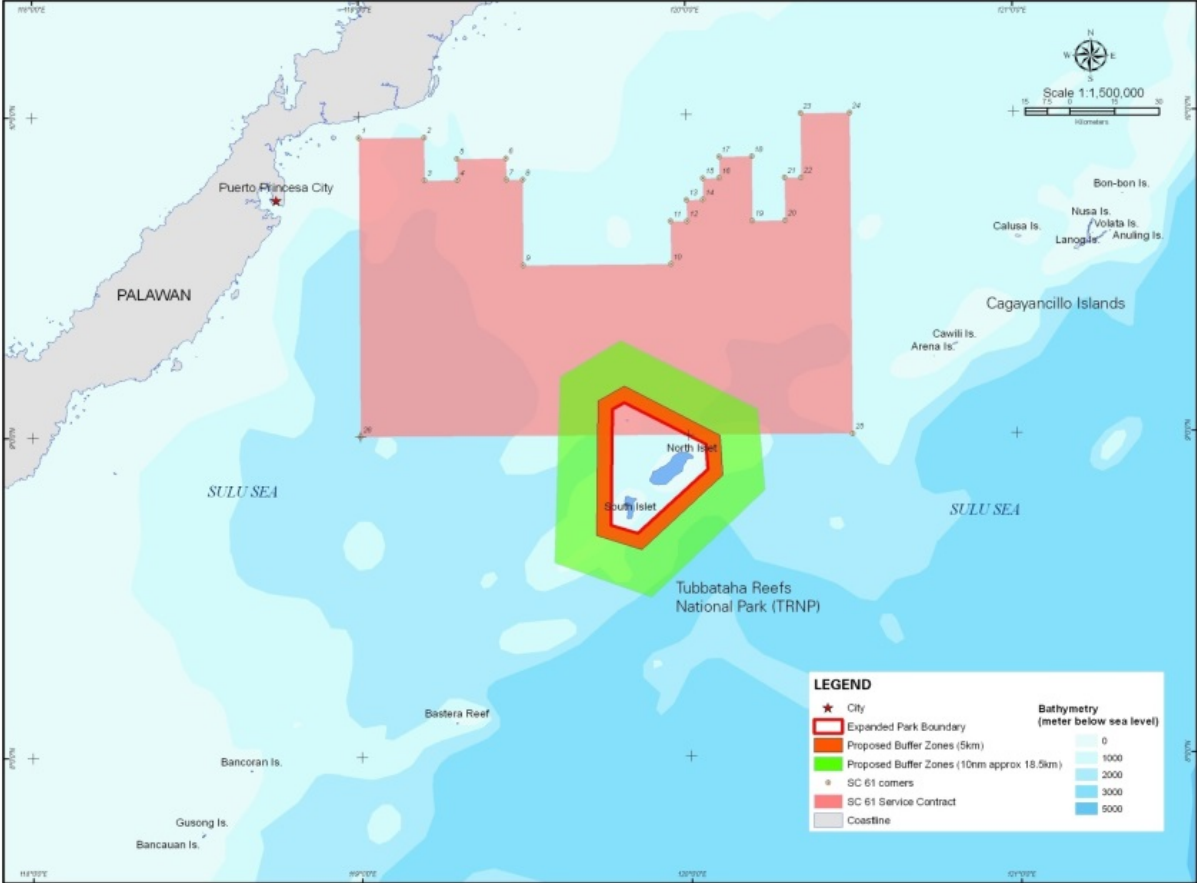


Figure 4. Figure 4. Map showing TRNP and SC61 overlap.

These activities have contributed to the threats facing Tubbataha, as mentioned earlier, and are not consistent with the functions of a buffer zone.

In response to these threats, the TPAMB and TMO have been advocating for the declaration of TRNP, including its buffer zone, as a Particularly Sensitive Area or PSSA. The application for the designation of TRNP as a PSSA requires the concerted effort of the various agencies, including those that serve as repository of maritime data. The plan is actively supported by the UNESCO World Heritage Centre, which has provided initial funding for exploratory studies. If approved, this will be the first PSSA in Southeast Asia.

Pending such a declaration, and in order to fulfill the objectives of this management plan, the following regulations and action points were agreed upon during a consultative workshop attended by various stakeholders in March 2014.

Uses (current and potential)	Regulations	Specific actions
Navigation by international vessels	<p>All international vessels shall be barred within the buffer zone.</p> <p>During exceptional circumstances (e.g. inclement weather), affected vessels shall notify the TMO to request exemption for humanitarian considerations.</p>	<ol style="list-style-type: none"> 1. TMO shall request NAMRIA to clearly indicate the buffer zone in nautical charts. 2. TMO shall request MARINA to disseminate pertinent information about these navigation regulations when the vessels renew licenses or get permits for passage in the Sulu Sea.
Navigation by fishing vessels and other local watercraft	<p>Fishing boats and other support vessels weighing 500 gross tons and below may be allowed safe passage within the buffer zone if these waters are part of their traditional routes to fishing grounds, or during inclement weather.</p> <p>Dive boats and other vessels with permits en route to Tubbataha shall be allowed safe passage within the buffer zone.</p> <p>However, all vessels are strictly prohibited from dumping waste or bilge water within the buffer zone.</p>	<ol style="list-style-type: none"> 3. TMO shall request the Coast Guard for assistance in the enforcement of these new navigation regulations. 4. TMO park rangers may apprehend any vessel caught dumping waste inside the buffer zone.
Commercial fishing, including the use of fish aggregating devices	<p>Fish aggregating devices (anchored) and other commercial fishing gear shall be removed and banned from the buffer zone.</p> <p>Commercial fishing boats shall be banned inside the buffer zone, and may operate only outside its perimeter.</p>	<ol style="list-style-type: none"> 1. TMO shall seek clarification from BFAR regarding regulations concerning FADs, and find out the number of permits granted near TRNP 2. Affected fishers shall be advised to coordinate with their Fisheries and Aquatic Resource Management Councils and local government units, for
Municipal or small-scale	All fishing activities are prohibited	

fisheries	inside the buffer zone except for simple hand line used by municipal fishers.	representations with the TPAMB as needed. 3. TMO shall study the impact of these regulations on small-scale fishers, and find out the extent of their operations within the buffer zone.
Energy exploration	The DOE shall exclude the buffer zone from service contracts awarded to energy companies engaged in the exploration of fossil fuel sources in the Sulu Sea. Only wind and solar energy exploration shall be allowed within the buffer zone.	1. The TPAMB shall officially inform DOE about regulations concerning energy exploration within the buffer zone.
Laying of pipelines, fiber optic cables, power cables etc	Affected companies shall be advised to detour and look for other passageways outside the buffer zone.	TMO shall inform energy and telecommunication companies and the PCSD about these rules, and monitor signs of such activities.
Oceanographic studies, deep-sea scientific expeditions, and other research projects	Non-extractive surveys and other research projects shall be allowed inside the buffer zone, subject to approval of methodologies used and prior permission from the PCSD and TMO. For research purposes, collection of samples may be allowed, subject to approval from TMO.	TMO shall enforce this regulation and collaborate with the academe, PCSD staff, BFAR, research institutions, and other relevant agencies
Military exercises	International agreements signed by the government of the Philippines shall be respected, provided that activities do not negatively impact the park's integrity.	TMO shall coordinate closely with the Western Command, Department of National Defense, and the Department of Foreign Affairs (DFA) when the need arises.
Recreational and educational activities	Tourism, photography, educational tours, guided boat sailing and similar non-extractive activities may be allowed, provided that the necessary	TMO to seek the assistance of MARINA and the Coast Guard in enforcing these regulations.

	permits are obtained from the TMO.	
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These strategies are consistent with Section 13 of DENR MC-16, S. 1993, which lists the following among the prohibited acts inside buffer zones of protected areas:

- 1) Introduction of exotic plant and animal species which may endanger the buffer zone and protected area
- 2) Commercial collection and hunting of wildlife species
- 3) Construction of structures which are not in accordance with the approved management plan of the Buffer Zone
- 4) Hunting, destroying, disturbing and/or possessing any protected plant and animal species
- 5) Commercial fishing and extraction of corals and other marine resources
- 6) Mineral prospecting and any other activity that would potentially destroy the integrity of the protected area

VII. MANAGEMENT FRAMEWORK

The management of the buffer zone is lodged with the Tubbataha Protected Area Management Board (TPAMB) as provided for in Rule 4, Administrative Order 01 Series of 2012, 'Revised Implementing Rules and Regulations of republic act 10067 Otherwise Known as an Act Establishing the Tubbataha Reefs Natural Park (TRNP) in the Province of Palawan as a Protected area Under the NIPAS Act (RA 7586) and the Strategic Environmental Plan (SEP) for Palawan Act (RA 7611), Providing for its Management and for Other Purposes.'

This is consistent with DENR MC-16 Series of 1993, as stated in Section 14:

"Responsibilities and Coordination – The Protected Area Management Board (PAMB) and Protected Area Superintendent shall administer the Buffer Zone."

The TMO shall work with the Palawan Council for Sustainable Development (PCSD) to designate the buffer zone as part of its Environmentally Critical Areas Network (ECAN). Section 12 in Chapter II of PCSD Resolution No. 05-250 that provides the revised guidelines for implementing the ECAN strategy carries the pertinent provisions on marine buffer zones, which are consistent with the regulations indicated in this management plan.

VIII. INSTITUTIONAL PARTNERSHIPS

For the effective implementation of this management plan, the TPAMB and TMO shall coordinate closely with the following government agencies for specific activities:

(1) Philippine Coast Guard and/or MARINA

- (i) Instructing vessels to mark the TRNP buffer zone in maps and nautical charts in accordance with section 8 of RA 10067 and avoid the area
- (ii) Ensuring compliance with navigation regulations
- (iii) Support the the application for the designation of TRNP as a PSSA by the IMO

(2) BFAR

- (i) Withdrawal of permits given to fishing operators for fish aggregating devices within the TRNP buffer zone
- (ii) Assist in enforcing compliance with park regulations

(3) DOE

- (i) Removal of existing overlapping claims within the boundaries of the park and its buffer zone
- (ii) Exclusion of the park's territory in future grants of service contracts for energy exploration within the Sulu Sea

(4) PCSD

- (i) Coordination in the granting of permits for research projects
- (ii) Inclusion of the Tubbataha buffer zone in the ECAN strategy for Palawan

(5) NAMRIA

- (i) Marking of the Tubbataha buffer zone in nautical charts.
- (ii) Assistance in the dissemination of information about the buffer zone

This management plan shall be implemented as soon as approval is obtained from the TPAMB.

In the future, some of the specific actions may be modified as new information comes to light and new mechanisms are proven more effective than the regulations specified herein.

REFERENCES

DENR Memorandum Circular No. 16, Series of 1993

[Great Barrier Reef Marine Protected Authority website](#)

Letter from Ma. Theresa R. Aquino, OIC/Deputy Park Manager for TRNP, to Secretary Jose Rene D. Almendras, Department of Energy dated 18 February 2011

PCSD Resolution No. 05-250: Revised guidelines in implementing the Environmentally Critical Areas Network, the main strategy of the Strategic Environmental Plan (SEP) for Palawan, amending PCSD Resolution Nos. 94-44 & 99-144

Report on the grounding of Egremont Castle, Board of Trade in London, October 21, 1925
Available from <http://www.plimsoll.org/resources/SCCLibraries/WreckReports2002/20581.asp>
[Accessed 4 February 2014]

Republic Act 10067, Tubbataha Reefs Natural Park Act of 2009

Tubbataha Reefs Natural Park and World Heritage Site Management Plan, 2011-2021

[UNESCO Man and Biosphere website](#) [Accessed 12 February 2014]

[UNESCO World Heritage Site website](#) [Accessed 12 February 2014]

World Heritage and Buffer Zones, UNESCO World Heritage Centre, March 2009