



# Tubbataha Reefs Natural Park and World Heritage Site **2014 MANAGEMENT EFFECTIVENESS EVALUATION**



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# MANAGEMENT EFFECTIVENESS EVALUATION 2014

Management effectiveness (ME) is the degree to which management actions are achieving the goals and objectives of a protected area (Pomeroy et al 2004:3). WWF-Philippines initiated the development of a management effectiveness evaluation program for Tubbataha in November 2003. Using the IUCN guidebook 'How is Your MPA Doing?', a multi-stakeholder group *identified indicators in three categories: biophysical, socio-economic and governance*. Table 1 below shows the efforts of park authorities to institutionalize MEE in the management of Tubbataha. The results of the MEE generally showed good management practices save in indicators that were not yet being measured, such as top predators and water quality. In 2014, MEE was conducted by GIZ using the Marine Protected Area Management Effectiveness Assessment Tool (MPA MEAT) which is used by the DENR throughout out the Philippines.

Year	
2002	Participation in the Management Effectiveness Initiative that resulted to the How is your MPA doing? guidebook
2003	Introduction of the MEE framework, process and methods to the TPAMB and TMO- visioning, goal & objective setting, identification of indicators
2004	1 <sup>st</sup> MEE, integration into the Mgt Plan
2005	2 <sup>nd</sup> MEE, introduction of the simplified evaluation tool (+, -, 0, ?)
2006	3 <sup>rd</sup> MEE, indicators reduced from 35 to 22
2009	4 <sup>th</sup> MEE, based on 2007 and 2008 data/information, fgd, interview
2010	5 <sup>th</sup> MEE, 3 new indicators added, results served as input to the review of Management Plan
2011 & 2014	Tubbataha was evaluated using MPAG, MEAT and METT

**Table 1. MPAG = Marine Protected Area Governance, MEAT = Management Effectiveness Assessment Tool, METT = Management Effectiveness Tracking Tool**

In December 2014, another MEE was conducted, this time employing the tool used by the Great Barrier Reef Marine Park Authority in its 2013 MEE which was developed by Hockings, et al (2002). The tool followed the MEE framework used around the world and focused on six management elements: context, planning, inputs, processes, outputs and outcomes. The tool considered park management in more detail and captured its nuances, thereby diagnosing weakness better than the previous tools employed.

In the GBRMPA case, external auditors conducted the assessment. For TMO, a multi-sectoral workshop was organized in observance of the practice of conducting MEE using participatory mechanisms. The workshop was held on 9 and 10 December 2014; in attendance were representatives of the Tubbataha Protected Area Management Board (TPAMB), which is composed of 21 agencies/organizations. The results of the workshop, which first tackled MEE based on the maintenance of the Outstanding Universal Value of Tubbataha. After breaking down TRNP's Statement of Universal Value down to excerpts, and assessing each excerpt's or value's current condition vis-à-vis its 1993 condition, workshop participants concluded that TRNP's management programs and actions have preserved, protected and properly-managed the protected area's outstanding universal values. The TRNP SOUV's "synthesis", values under criterion (vii), (ix), (x), as well as its "management and protection" components, were mostly rated to be "very good", a few to be in "good" condition, and their trends, "stable" but mostly "improving". The assessment method and final result is shown in Annex A.

While the Great Barrier Reef Marine Park Authority (GBRMPA) had 15 priority management topics (Hockings et al 2013), only nine (9) were determined to be relevant and applicable to TRNP. The management topics assessed fell under the category of values: biodiversity, community benefits; impacts: water quality, shipping, illegal fishing, marine pollution, climate change and extreme weather; and uses: research and marine tourism.

## ASSESSMENT METHODS

After reviewing the assessment questions, 43 out of the 48 questions from the MEE proforma tool of GBRMPA (Hockings et al, 2013) were deemed applicable for TRNP. This meant 43 questions for each of the management topics or 387 questions in all.

Each assessment question was rated with the following:

N/A	Not applicable	
1	Relevant but rarely true	~1-20% of optimum condition
2	Relevant and sometimes true	~21-50% of optimum condition
3	Relevant and often true	~51-80% of optimum condition
4	Relevant and generally true	~81-100% of optimum condition

The scores for each of the six elements of the framework were then scaled to provide a total score out of 40. The following system was used to describe the performance of the management for each element in the framework.

Effective	Mostly effective	Partially effective	Ineffective
35-40	27-34	16-26	0-15

The six management elements are explained as follows:

CONTEXT	PLANNING	INPUT	PROCESSES	OUTPUT	OUTCOMES
<i>Where are we now?</i>	<i>Where do we want to be?</i>	<i>What do we need to do it?</i>	<i>How do we go about it?</i>	<i>What were the results?</i>	<i>What did we achieve?</i>
Significance / values Threats Vulnerability Stakeholders National context	Protected area (PA) legislation and policy PA system design PA design Management Planning	Resources available to the agency Resources available to the protected area	Suitability of management processes and the extent to which established or accepted processes are being implemented	Results of management actions Services and products	Impacts: effects of management in relation to objectives

## SUMMARY BY ASSESSMENT TOPIC

Below is the summary of the assessment for all the topics, followed by a brief explanation of the results across each topic and across each management element.

### BIODIVERSITY PROTECTION

Effective		Mostly effective	Partially effective	Ineffective		
Context	Planning	Inputs	Processes	Outputs	Outcomes	
Effective	Effective	Effective	Effective	Effective	Effective	Overall
					Effective	Biodiversity

Biodiversity protection and conservation is the main objective for managing TRNP. A special law, Republic Act 10067 or the Tubbataha Reefs Natural Park Act of 2009, was ratified in 2010 to ensure the protection of the values of TRNP. The Park is managed under a no-take policy; only research and tourism activities are allowed. All management actions, e.g., compliance and enforcement, tourism management, information and education activities, research, are directed towards biodiversity protection. Among all these management actions, compliance, enforcement, and administration are prioritized in allocating scarce internal financial resources. However, the managers ensure that all other programs are implemented, and these are undertaken through partnerships and collaboration.

### CONTEXT

TRNP is featured in the highest monetary denomination of the country, demonstrating the appreciation of the national government of TRNP's importance and value. Managers are aware of the Park's values and condition. Biophysical monitoring is regularly conducted and informs decision-making. The current condition and trend of biodiversity are known by managers as a result of regular monitoring and research. TMO regularly reports and updates the TPAMB on the biophysical trends and conditions in the park. However, managers also recognize that there are research gaps for many groups of species and habitats as current monitoring is focused only on benthos, fish, seabirds and marine turtles.

The relevant stakeholders, e.g., the tourism industry, fisherfolk, enforcers, the public sector, NGOs, and the academe are well known by managers and are involved in planning. The tourism sector (dive operators and tourists) also contributes to research and monitoring through community science.

The managers understand broader level influences on the Park's biodiversity, such as climate change and increasing maritime traffic and have taken steps to mitigate their impacts.



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## PLANNING

A planning system is in place that effectively address risks and threats to the values of the Park, especially its biodiversity. The planning process is participatory, involving agencies from the TPAMB, partners and relevant stakeholders. The multi-stakeholder TPAMB formulates and approves plans for biodiversity conservation. The tourism industry participates in rule-making. With the involvement of relevant agencies, potential risks to TRNP are assessed and responses identified.

All plans address biodiversity conservation and threat mitigation. Management strategies for biodiversity conservation are stipulated in the TRNP Management Plan, while specific actions are indicated in Annual Work and Financial Plan (AWFP). However, objectives are not clearly stated in the Management Plan; these are stated as 'Desired Outcomes'. The managers also acknowledge its high dependence on partners in the implementation of programs, e.g. Navy, PCG and Cagayancillo for compliance and enforcement, dive operators for tourism, and academe for research.

A monitoring program for compliance and tourism management are in place since the establishment of TMO in 2001. Biophysical conditions were first monitored in 1982. Regular monitoring of biophysical conditions has been maintained since 1997 with the assistance of NGO and academic partners.

The TRNP Management Plan also dictate the assessment of management effectiveness. Management effectiveness evaluation (MEE) is conducted by various stakeholders, e.g., national and local government agencies, NGOs, POs, and academe. Sufficient policies are in place, e.g., TRNP Management Plan, Ecosystem Research and Monitoring Plan. TRNP plans are consistent with national and international policies.

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## INPUTS

The average revenues for the last three years was approximately Five Million Pesos a year. This covered 30% of the annual operational costs for management. The remaining 70% was sourced from government agencies and the private sector in the form of grants and donations.

The current human resources are adequate to meet specific management objectives, but skill sets need to be improved to meet emerging challenges, e.g., government financial procedures, research, and tourism. The absence of documentation of skills and expertise needed was also noted (TNA). The managers also encourage the involvement/participation of volunteers to compensate for limited manpower, especially in research, tourism and IEC through its Volunteer Management Program and Youth Ambassador Program.

The annual biophysical monitoring (fish, benthos, seabirds and turtles) is done in collaboration with academe and other partners (WWF, CI, PSFI, GIZ). The conduct of research and monitoring is highly dependent on financial support from partners, due to insufficient internal funds. Gaps in biophysical information (other taxa and ecological processes) are augmented by research institutions, e.g., UP-MSI, DLSU, WPU, and volunteers. Socio-economic data for Cagayancillo is gathered through TPAMB member, WWF-Phils.

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## PROCESSES

The multi-sectoral management board of TRNP ensures the involvement of relevant stakeholders in implementing its management programs. The local community of Cagayancillo is involved through membership in the TPAMB and the deployment of local law enforcers to function as marine park rangers. IEC activities regularly involve volunteers.

Managers allocate a budget for trainings in the Annual Work and Financial Plan (AWFP), i.e., Comprehensive MPR Training, Training of Trainers for staff and partners. Entry-level training for staff and volunteers are in place. External research institutions are tapped to train researchers and MPRs. Managers also participate in trainings provided by partner agencies.

RA 10067 is consistent with relevant laws. There is sound governance system in place and this is recognized by several national and international organizations through awards and recognitions, e.g., Silver Future Policy Award for RA 10067, highest rating the Coral Triangle Marine Protected Areas System Evaluation, Para El Mar Award for Outstanding MPA. Management of TRNP has been assessed through a set of indicators for management effectiveness following the IUCN tool *How is your MPA doing?*.

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## OUTPUTS

Activities in the AWFP are implemented in accordance with timeframes and corresponding budget allocations. The management maximizes opportunities to conduct additional activities, where needed, if funds are available. Reports and other information materials are disseminated through website, social media and outreach activities. Biodiversity values are maintained, as manifested by improved live coral cover and seabird population, and high fish biomass, the highest in the Philippines. The IEC volunteer program to develop future conservation leaders and advocates is continuing.

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## OUTCOMES

Biodiversity condition and trends are improving as evidenced by the increasing live coral cover and seabird populations, stable fish biomass and increased sightings of top predators. Data also shows that TRNP is resilient against bleaching events. Additionally, the healthy supply of larvae and abundance of herbivores in TRNP made the assisted regeneration of corals in grounding sites unnecessary.

The effective protection of biodiversity contributes to the continued delivery of economic benefits, such as tourism (direct) and fisheries through larval dispersal (indirect). These values are communicated to the community and stakeholders through public outreach. Thus, there is significant increase in public understanding on the value of TRNP and support for its conservation. This improved understanding translates to compliance to regulations and/or financial contributions. The decreasing number of illegal activities in TRNP reduces risks and threats to biodiversity.

The healthy condition of biodiversity resulted in quality visitor experience. Ninety-one percent (91%) of respondents scored the overall quality of visit to TRNP as eight and above, on a scale of 1-10. These positive feedbacks from tourists attract more visitors and researchers. Regulated research and tourism provide opportunity for managers to generate revenues to fund TRNP's conservation. However,



managers recognized that there is limited understanding and measurement of the impacts of these two activities.

Partnerships with research institutions, private and government agencies are enhanced. TRNP serves as an example of an effectively managed MPA in the Coral Triangle and has received national and international MPA Management awards for governance.

## COMMUNITY BENEFITS

Effective						
Effective		Mostly effective		Partially effective		Ineffective
Context	Planning	Inputs	Processes	Outputs	Outcomes	
Mostly Effective	Mostly Effective	Mostly Effective	Mostly Effective	Mostly Effective	Effective	Overall
					Effective	Biodiversity

The 'community' discussed in this section pertains to the Municipality of Cagayancillo and to the tourism industry in Tubbataha.

### CONTEXT

The managers understand the benefits that the community derives from TRNP. Cagayancillo receives 10% share from tourism revenues that is used to fund alternative livelihood projects in the community. The tourism industry relies on the healthy biodiversity and ecosystems of TRNP to sustain its business operation in TRNP. Moreover, the park's recognition as one of the top dive sites in the world supports the Philippine economy through tourism. Fishing communities in the surrounding areas of the Sulu Sea indirectly benefit from TRNP's protection. Studies on connectivity and larval dispersal suggest that TRNP seeds the Sulu Sea with fish and coral larvae, contributing to the food security of the country.

The community of Cagayancillo is represented in the TPAMB and relevant stakeholders participate in the formulation of plans. However, variables, e.g., foreign exchange, security issues, epidemics, that influence tourism impinge on the amount of share of Cagayancillo in tourism revenues. Emergent threats to the values of the park such as energy exploration in the Sulu Sea and the escalating maritime traffic are also known to the managers, thus mitigating measures are in place.

### PLANNING

The local stakeholders, e.g., Cagayancillo LGU, PO, etc., are actively involved in the management of the park through membership in the TPAMB. The tourism industry is effectively engaged in planning through annual consultations and open lines of communication. Communities (Antique, Panay Islands) and relevant industries (commercial fishing, gas and oil) were consulted in the planning process.

The TPAMB serves as a venue for interagency collaboration due to the nature of its membership. Consistency across agencies when planning for community benefits is therefore achieved. Managers believe that sufficient policy is in place. They also acknowledge that RA 10067 is not explicit about delivering community benefits and well-being that relate to employment or income.

Sustainable resource management objectives are not clearly identified in the management plan, thus, there is no effective monitoring to gauge progress towards the objectives for community benefits. Clear, measurable, and appropriate objectives are set for biophysical research. But research outputs are not directly translated to community benefits.

The 2014 Comprehensive Tourism Management Plan identifies actions to be implemented to ensure that values are protected. However, not all objectives for tourism are measurable, clear, and

appropriate, e.g., ‘to increase appreciation towards TRNP as a tourist destination and conservation area’; although some objectives e.g., ‘to provide high-quality visitor experience’, have been measured through exit surveys.

Managers recognize that monitoring community benefits as a gap. The previous MEE tool covers socio-economic indicators but these are not sufficient to measure community benefits. The assessment of fish catch in surrounding communities, which may be used as a proxy to measure improved fisheries as a community benefit, is not identified in the plan.

There are existing planning systems to reduce risks and threats, such as the Compliance and Enforcement Plan, Emergency and Risk Reduction Plan and IEC Plan.

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## INPUTS

TMO has not directly implemented community development (CD) projects in Cagayancillo, except for the occasional public outreach activities. WWF-Phil implements community development projects in Cagayancillo and in other municipalities in Palawan, in behalf of the TPAMB. Its presence in Cagayancillo since 2000, although discontinuous, helps to maximize tourism and fisheries related benefits from TRNP. Another TPAMB member, CI-Phils., implemented community projects in the past focused on MPA establishment and management.

There are some limitations on the human resources and skill sets to develop strategies and programs to ensure that the socio-economic benefits of conserving TRNP are communicated.

There are some limitations on internal financial resources. Tourism infrastructure and public outreach are not internally funded. Other partner government agencies, e.g. DENR, TIEZA, PGP, GIZ, and private sector such as PSFI, that allocate funds for tourism and public outreach address this gap.

The managers acknowledge that the in-house expertise on sustainable resource management has to be enhanced to address gaps in the community development programs, socio-economic and biophysical research and monitoring. Currently, no personnel is focused on community development in Cagayancillo.

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## PROCESSES

The Outstanding Universal Value (OUV) of TRNP is maintained to ensure continued delivery of community benefits. Annual consultations and open lines of communication with dive operators and tourists are maintained to encourage compliance to rules and support for conservation. Best diving practices are encouraged. The multi-stakeholder management board ensures that governance is participatory and that relevant agencies and sectors are consulted and involved in planning.

Managers ensure rules and regulations are established, disseminated, and strictly enforced to avoid conflicts in use of resources. Multi-stakeholder consultations are also organized to provide a venue for the resolution of differing views and of conflicts. Available biophysical and socio-economic information are applied in the formulation of decision and policies, e.g., penalties for coral damage, establishment of microcredit facility in Cagayancillo by WWF.

The existing monitoring system needs to be enhanced to comprehensively quantify community benefits from TRNP. A baseline survey to gauge the tourists' appreciation of the park was established in 2014. Few trainings have been made available to Cagayancillo in the past, e.g., microfinance, tourism, MPA management, seaweed farming. Managers need to aggressively explore opportunities and participate in capacity building programs to address community benefits.

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## OUTPUTS

Public outreach activities were conducted and information materials were disseminated to the tourism sector to increase public appreciation on the values of TRNP, thereby, encouraging compliance to regulations. Mooring and marker buoys were established in Cagayancillo to curtail resource destruction from anchorage. Farm to market roads in the municipality have been constructed using the 10% share from tourism revenues. A comprehensive database is maintained and policy on data sharing is established to manage knowledge on community benefits. Processed data is shared through information materials, social media, outreach, participation in symposia, workshop.

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## OUTCOMES

Partners, such as CI and WWF, conducted livelihood and capacity building projects in Cagayancillo, in behalf of the TPAMB. Targeted outputs, e.g., mooring and marker buoys, public outreach activities in Cagayancillo were delivered through the support of other partners. The 10% share of Cagayancillo from tourism revenues was effectively disbursed. The results of the surveys on tourism showed that 91% of tourists who visited Tubbataha in 2014 were very satisfied with their experience and 87.5% signified their intent to return. It denotes that the use of the park is socially, environmentally and economically sustainable.

Managers engaged the tourism industry, local communities and fishers through public outreach and participatory planning activities which resulted in increased appreciation of the values of TRNP and compliance with rules and regulations. TRNP values are well protected as evidenced by the increasing population of top predators which indicates that the marine environment is stable. It helps that less than 30% of the park is utilized for tourism activities and that the limited window for tourism operations allows for the natural recovery of the marine environment.

## WATER QUALITY

Effective	Mostly effective	Partially effective	Ineffective
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Context	Planning	Inputs	Processes	Outputs	Outcomes	
Mostly Effective	Mostly Effective	Mostly Effective	Mostly Effective	Mostly Effective	Mostly Effective	Overall
					Mostly Effective	Biodiversity

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### CONTEXT

Managers have understanding of the values and threats to water quality and its national and international influences. Measure to protect water quality were instituted in 2004 and the topic was again expressed as an emerging threat in the management plan of 2011-2021. It was recognized that broader influences like shipping can greatly affect water quality. In 2014, a baseline study on water quality was conducted. The TRNP Research and Monitoring Plan 2015-2020 includes water quality as a regular study. The TPAMB and TMO have entered into agreements with various stakeholders in the implementation of policies to maintain good water quality.

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### PLANNING

In order to maintain good water quality, policies have been put in place and are reflected in the Management Plan 2011-2021, Administrative Order 01-12, and the Comprehensive Tourism Management Plan 2014. Tourism activities concerning water quality are regulated e.g., graywater discharge, holding tanks, no changing of engine oil. To address the further increasing threats of shipping to water quality, the managers applied for the designation of TRNP as a Particularly Sensitive Sea Area (PSSA) by the International Maritime Organization. Management aspires to pass the highest water quality standards indicated in DENR DAO 34 and 35.

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### INPUTS

No internal funds were allocated for the conduct of water quality studies but it was prioritized in the 2014 AWFP. External grants were sourced for the 2014 baseline study. Expertise on water quality is available to the management board through the PCSDS. Trends on water quality are not yet established, baseline data is the only biophysical information available. There is no relevant socio-economic information available to the TPAMB which addresses water quality.

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## PROCESSES

Various stakeholders and the local community are engaged in the planning and implementation of water quality management strategies. Protocols for water quality monitoring have been established in 2014 and are contained in the PCSDS-TMO-KKP MOA. The water quality standards for TRNP is lifted from DENR DAO 34 and 35. The diving industry is generally compliant with regulations governing water quality. In-house expertise is being developed with the help of PCSDS. Impacts of shipping is being addressed by the application of TRNP as a PSSA.

Water quality information have not yet been used to formulate management decisions. There is no socio-economic information that could be applied to make management decisions on water quality.

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## OUTPUTS

The low rating of outputs relevant to water quality (20/40) is due to the delay in monitoring water quality and therefore in the implementation of management programs and achievement of objectives. Because of these delays, knowledge regarding water quality has not been effectively managed and shared with the community. Water quality was identified as a biophysical indicator of ME in 2004 but actual water quality monitoring was only conducted in 2014. However, water quality protection was incorporated in planning and implementation, e.g., requirement of holding tanks, gray water discharge, and no change oil policy, were implemented since 2004.

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## OUTCOMES

Management interventions to maintain water quality in TRNP started in 2004 while baseline information was gathered in 2014. The effectiveness of management actions in reducing risk and threats cannot be measured. Since TRNP is a no-take zone and only research and tourism are allowed, its use relating to water quality is environmentally, economically, and socially sustainable, therefore enhancing understanding and enjoyment. Economic sustainability was determined from the standpoint of management and of the private sector. Partnerships with various agencies and stakeholders are effective in addressing water quality, e.g., PCSDS support in water quality monitoring, tour operator compliance with regulations.



## FISHING

Effective						
Effective		Mostly effective	Partially effective	Ineffective		
Context	Planning	Inputs	Processes	Outputs	Outcomes	
Effective	Effective	Effective	Effective	Effective	Effective	Overall
					Effective	Biodiversity

Declared a no-take zone, fishing in Tubbataha is illegal. However, fishing is a constant threat to the park, becoming even more so as fisheries elsewhere deteriorate. Guarding against fishing is considered as a means to conserve biodiversity, hence, the scores of these two topics are linked.

## CONTEXT

The TRNP Management and Enforcement Plan show that the values of TRNP relevant to fishing and its impacts to these values are well understood by managers. The current condition and trends in fish populations are known through annual monitoring. Indicator and commercially important fish species are monitored annually for changes in biomass and density. *Trochus niloticus* were targeted by fishers from 2006 to 2010. Its status, last assessed in 2010, need to be updated. Effective enforcement has since led to the abatement of illegal fishing in the Park.

The value to TRNP to fisheries is recognized by the Philippine government through the passage of RA 10067. Declining stocks in most fishing grounds and increasing international demand for marine products make the park vulnerable to intrusions by illegal fishers. Although no illegal fishing incidents have been reported in TRNP since 2013, the threat remains constant and requires continued vigilance.

The stakeholders relevant to fishing are well known by the managers. The LGU of Cagayancillo has expressed appreciation for the value of the no-take policy in TRNP and its contribution to increased fish stocks. Representatives of commercial fishing companies have expressed support for the no-take policy in TRNP during a national conference on TRNP held in 2006.

During the Provincial Parole and Probation Office Restorative Justice meetings in 2014, fishers in Roxas, Palawan formerly arrested in TRNP profess their support by advocating for compliance with RA 10067. Dive operators report the presence of suspicious fishing boats within the park.

## PLANNING

The framework for the management of TRNP is articulated in RA 10067, which provides that mechanisms for consultative and participatory decision-making processes must be ensured. The enforcement of the no-take policy is a priority. The Compliance and Enforcement Plan addresses threats to TRNP and prescribes responses to them. Outreach and education activities are designed to increase compliance with park regulations.

Management ensures that all cases filed result in conviction to serve as a disincentive to fishers. The results of annual research and monitoring of fish and benthos are used as a proxy for determining

occurrence of fishing in TRNP. A surveillance system is in place to detect intrusions. This comprise of a radar system that is used every three hours (to save on energy), regular seaborne patrols, a communication system to report incidents promptly, and trained law enforcers.

The main stakeholders are engaged in planning and implementation. The LGU of Cagayancillo, representatives of the commercial fishing sector, dive operators, and relevant governmental agencies are engaged in planning and enforcement to address fishing.

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## INPUTS

Financial resources for compliance and enforcement, which is considered a core management activity, are prioritized. The composite team of MPRs are trained to conduct both law enforcement and biophysical monitoring activities, although the current complement is inadequate in number. The TPAMB is a multi-sectoral body, which includes representatives from law enforcement, fisheries management agencies, and research institutions which are capable to respond to fishing.

Annual monitoring generates biophysical information, e.g., fish population and density to serve as basis for policy making. However, there is a need to update population and density status of commercially important species such as *Trochus niloticus* and elasmobranchs.

The private sector, NGOs and academe provide significant contributions in the implementation of public outreach and education program, law enforcement and research activities that contribute to addressing fishing.

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## PROCESSES

Various stakeholders are engaged in the management of TRNP. The LGU of Cagayancillo and a local people's organization is part of the TPAMB. Dive operators report the presence of suspicious fishing boats within the park. RA 10067 established the multi-sectoral TPAMB, ensuring that governance is participatory. It also serves as the legal framework for the no-take policy in TRNP and for its implementation by various agencies.

Annual research and monitoring is conducted to generate information in relation to fish population and density, which are used as a proxy for determining occurrence of fishing activities. Training and exposure in research and enforcement is continuously provided and necessary equipment provided.

The no-fishing policy is consistently applied, except for MPRs, who are allowed to fish for subsistence, although the impacts of fishing by MPRs have not been studied. The law bans fishing and articulates the manner for resolving conflicts regarding fishing.

The impacts of fishing contiguous to park boundaries have not been investigated. The maintenance of population trends of fish is ensured through a vigilant compliance and enforcement system, and active education and outreach.

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## OUTPUTS

Activities to ensure compliance with no-take policy, e.g., compliance and enforcement system and education and outreach, have progressed in accordance with planned work program and timeframe. The activities significantly contributed to the achievement of no-take policy objectives

Information gleaned from annual monitoring and compliance activities are provided to schools, fishing villages, tourists, and the general public in the form of primers, brochures, videos, radio plugs, pre-departure briefings and outreach activities. Data on illegal fishing is maintained and is shared with relevant agencies and target audiences.

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## OUTCOMES

Partner agencies are effectively engaged in law enforcement and other management activities to ensure no-take policy is implemented. The desired outcome, compliance with the no-take policy in the park, has been attained. Biophysical monitoring is regularly conducted to ensure that values are protected. Outputs are reducing major risks and threats to TRNP.

Effective partnerships exist with relevant agencies and communities. Regular meetings with stakeholders help identify and address issues regarding fishing. Some fishers provide intelligence on illegal fishing and help disseminate information. Public outreach activities in fishing villages have resulted in better understanding of RA 10067.

## MARINE POLLUTION

Effective	Mostly effective	Partially effective	Ineffective
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Context	Planning	Inputs	Processes	Outputs	Outcomes	
Mostly Effective	Mostly Effective	Partially Effective	Mostly Effective	Mostly Effective	Mostly Effective	Overall
					Mostly Effective	Biodiversity

### CONTEXT

Managers' understanding of the values of TRNP, including biodiversity, socio-economic, and educational or scientific significance and ecological goods and services, in relation to marine pollution is adequately reflected in the TRNP Management Plan 2011-2021. Relevant stakeholders are also well known to the managers. The Management Plan and the Emergency and Risk Reduction Plan 2012 have identified and recognized the major sources of marine pollution, e.g., shipping and surrounding islands. However, the direct correlation of these sources as well as the magnitude of their impacts have not been fully established.

Measures have been undertaken to mitigate the impacts relevant to marine pollution. As part of their routine duties in the Park, MPRs collect data on volume and type of marine debris and these are reported to the managers through their Daily Accomplishment Reports (DAR). The TRNP Law provides penalties to safeguard against marine pollution within the park. The Comprehensive Tourism Management Plan 2013 further requires dive boats to discharge graywater at least 1 nm from the reef edge, provided it is not within the channel. Public outreach and education are conducted by the TMO to highlight impacts and encourage awareness and compliance among surrounding communities (even beyond the province of Palawan) that contribute to marine pollution.

On a broader scale, TRNP is currently applying for PSSA status to mitigate impacts of marine pollution related to marine traffic. Presentations in international and national venues have highlighted marine pollution impacts on the conservation of the park.

### PLANNING

The RA 10067 and the TPAMB AO 01-12 (IRR) provide sufficient policies that form the foundation for TRNP plans. TRNP general management plan (TRNP Management Plan 2011-2021) has given rise to specific action plans, such as the Buffer Zone Management Plan, the Emergency and Risk Reduction Plan, the IEC Plan, to name a few. Actions effectively addressing MARINE POLLUTION, e.g., solid waste management, PSSA application, regulation on graywater discharge, are articulated in these plans.

Although there are no clear, measurable and appropriate objectives specifically for management of marine pollution, activities outlined in the aforementioned plans address these issues to a certain extent. These plans and concurrent systems ensure that appropriate and adequate monitoring

information is gathered, for example, data on volume and type of marine debris, volume of passing vessels. These help to profile the sources of marine pollution as well as provide input to these plans.

There is consistency planning-wise across agencies. Relevant stakeholders, i.e., PCG, dive operators, IMO, oil companies and the local community were actively consulted and/or engaged in the formulation of these plans. Every effort has been made to ensure that specific plans are aligned with the general management plan. TRNP concerns have been brought to the attention of relevant agencies at the national and international levels for conflict resolution, e.g., potential impacts of proposed Senate Bill on Archipelagic Sea Lanes, overlapping boundaries of oil exploration contracts and TRNP.

Among the plans, the Emergency and Risk Reduction Plan and the Compliance and Enforcement Plan have established specific protocols to mitigate impacts related to marine pollution, i.e., response protocols to risks. These plans also dictate the routine collection of trash on the islets and those encountered during patrols, as well as the regular recording of data on volume and type of marine debris.

However, actions taken by managers are localized to the park while the sources of marine pollution are mostly from outside of its jurisdiction. Although the IEC Plan provides support by extending the public outreach and education program to communities outside of Palawan, it only covers one of the many sources of marine pollution. Ships that traverse the Sulu Sea with increasing marine traffic is believed to be another source of pollution. The PSSA application of TRNP is an attempt to address this problem by regulating marine traffic adjacent to park boundaries.

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## INPUTS

No internal funds are allotted to specifically address marine pollution. However, the Annual Work and Financial Plan funds core activities, e.g., patrols, enforcement, that are expanded to address marine pollution impacts. Significant contributions from the private sector, academe and NGOs in related activities, e.g., public outreach and education program, law enforcement and research activities, augment the funds.

Human resources are currently inadequate due to limited funds and resources despite the counterpart provided by the PCG, Philippine Navy and Cagayancillo LGU in terms of personnel deployment and equipment. The inadequacy refers to quantity and not quality since MPRs possess the appropriate skill sets and expertise. Further training has yet to be identified.

Baseline data on water quality has been established in 2014 with regular monitoring planned for the future. Annual research and monitoring activities also provide information on the current conditions of various marine organisms. Results of these are used as proxy standards for determining impacts of marine pollution, e.g., 71% live coral cover (2014) indicates good conditions. Data on volume and type of marine debris have been collected although information on source can only be inferred. Socio-economic information on the Cagayancillo community and its marine resources and the diving industry have provided input on several policies addressing marine pollution.

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## PROCESSES

Targets for management performance have been established and incorporated in the core activities. Thus, activities to address marine pollution, e.g., regular conduct of coastal clean-up, monitoring of

passing vessels, and dive boat graywater discharge, have been amalgamated into core management programs.

In general, the existing governance system is participatory as dictated by RA 10067 and reflected in the various plans of TRNP. The local communities in Cagayancillo, which has political jurisdiction over the TRNP, hold three seats in the TPAMB as required by the TRNP Act. Its LGU regularly provides additional MPRs as stated in the Compliance and Enforcement Plan and the Cagayancillo LGU-TPAMB MOA (2008). The public outreach and education program of TMO encourages communities to exercise proper solid waste management.

Consultations are also held to resolve differing views on marine pollution, e.g., Dive Operators' Consultation and Buffer Zone Planning Workshop. TMO likewise participated in national and international workshops and meetings on marine traffic such as the PSSA consultation and the IMO meetings to promote the interest of the Park.

Effective monitoring is conducted through biophysical researches, with one specific study on marine debris. Available socio-economic information on Cagayancillo and the dive industry are applied in decision-making. Not all impacts of marine pollution in the park have been identified. Only those known to managers are being addressed.

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## OUTPUTS

Activities have progressed in accordance with the planned work program and within the set timeframes. However, current management actions identified in the TRNP Management Plan 2011-2021 are limited to within the boundaries of the park.

Baseline data on marine debris and traffic have been established and trends are slowly being developed. Database on marine traffic and volume and type of marine debris is currently being updated. Results of the study on marine debris was presented at the 12<sup>th</sup> National Symposium on Marine Science in Tacloban City in 2013. MPRs provided data used to develop a simulation on oil and chemical spills by UP-MSI. These simulations are incorporated in the AVP to be presented at the IMO meetings. All relevant data feed the on-going PSSA application and designation expected in 2017.

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## OUTPUTS

Biodiversity protection is the main goal of all policies and plans. Actions addressing marine pollution are believed to lessen the impacts to the marine organisms based on proxy standards established, i.e., biophysical research results. Mitigating measures, e.g., contingency protocols for oil and chemical spills, regular clean-up, have been mainstreamed into the regular duties of MPRs.

The Annual Tourism Reports indicate an increase in compliance among dive operators. Thus the use of the TRNP relating to marine pollution has been deemed environmentally sustainable.

The relevant managing agencies have developed effective partnerships with local communities and/or stakeholders to address marine pollution. Partnerships with stakeholders, e.g., PCG, PN, DOE, NAMRIA, PGP, academe, dive operators and local shipping companies, have been developed through consultations and meetings regarding marine traffic and pollution. However, relevant agencies have yet to determine the exact source of pollution in TRNP and the Sulu Sea.



## SHIPPING

Effective		Mostly effective		Partially effective		Ineffective
Context	Planning	Inputs	Processes	Outputs	Outcomes	
Partially Effective	Partially Effective	Partially Effective	Partially Effective	Partially Effective	Partially Effective	Overall
					Partially Effective	Biodiversity

Shipping in this context is international shipping and does not consider permitted shipping within the Park. This topic garnered the lowest score of all the management topics because park authorities have no jurisdiction over shipping as an international regime governs the industry.

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## CONTEXT

The knowledge of managers of the current conditions, trends, risks, and impacts of intensifying shipping activities to the values (e.g., biodiversity) of TRNP needs to be improved. They also have limited capacity to respond to impacts of shipping (e.g., oil and chemical spills) as resources, such as equipment, is not readily available to address the threats that shipping pose, e.g., oil or chemical spill, alien invasive species, marine debris.

Although the TPAMB have little knowledge of the international regime of shipping, the PCG is aware of the national and international level influences. The managers recognized the potential negative impacts of the proposed Archipelagic Sea Lanes Bills (SBN-2738 and HBN-159) on the values of TRNP. They accordingly submitted a position paper (2013) to the Philippine Senate to resolve this particular problem. They believe that similar conflicts may be avoided in the future with the designation of TRNP as PSSA. Thus, efforts have been made to collaborate with the national agencies/stakeholders (e.g., PCG, NAMRIA) for the application. Furthermore, the need for linkage to the national agencies recognized by IMO (international agency) has been identified.

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## PLANNING

Several plans show that shipping-related risks are known to the managers. TRNP plans recognize the need to apply for PSSA designation to address these risks. The enforcement plan identified the need to ensure availability of monitoring information by collecting shipping data regularly. The IMO and other relevant agencies (e.g., NAMRIA and PCG) also have data.

There is a Buffer Zone Management Plan that identified actions /policy related to shipping. However, there is no documentation of clear, measurable, and appropriate objectives. Also, the TRNP Management Plan (2015-2021) made no mention of the management of shipping. To address

shipping, several consultations and workshop (e.g., PSSA consultations 2013 and 2014) engaging main stakeholders and local community were conducted.

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## INPUTS

No internal funds are allocated to respond to shipping incidents. The available skill sets and expertise of the TPAMB and MPRs to respond to incidents are also very limited. However, external sources (e.g., UNESCO, academe, NGOs and private sectors) provide funding and expertise contributing in addressing shipping issues. A five-year grant agreement with Pilipinas Shell Foundation provide funds for supporting activities. For now, the only human resource within the TRNP are the marine park rangers tasked to monitor shipping activities around the park.

There was a monitoring study on cetacean population (Aquino and Alarcon, 2010) available, but more information on species distribution and habitat of some taxa affected by shipping activities (i.e., migratory species) is needed. Presently, information/study on socio-economic benefits of shipping is not available.

The National Coast Watch Council (NCWC) plans to provide state-of-the-art radar system to increase the monitoring capacity alongside with provision of expertise to man the equipment.

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## PROCESSES

Various consultations addressing ongoing management issues were conducted, engaging the main stakeholders and local community. However, the involvement of the local community is limited to membership of LGU and a Cagayanen people's organization in the TPAMB.

Available biophysical research and monitoring information feed into the decision-making process. There are no studies conducted on the socio-economic factors relevant to the management decisions. Consultative processes were also used to resolve conflicts/differing views on the matter (e.g., proposed Archipelagic Sea Lanes). The national government has its own processes for conflict resolution at the international level (e.g., UNCLOS).

The TPAMB/TMO has no authority to regulate shipping outside TRNP. Therefore, targets have not been established to gauge performance towards this end. Of the TPAMB members, only the PCG is directly involved in the management of the shipping industry and has the appropriate skill sets to address related incidents as detailed in the R.A. 9993 (PCG Act). The ongoing application for PSSA designation, which is expected to be concluded by 2017, is projected to institute standards for shipping activities around the park.

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## OUTPUTS

At present, PSSA application is the main work action for the mitigation of the threats of shipping on TRNP. This has progressed in accordance with the set timeframe. The PSSA information paper is ready for submission to the IMO-MEPC 68 meeting on May 2015. Records of vessel traffic and simulation of oil and chemical spill scenarios are also available. The analyzed vessel traffic information

is shared with other agencies while national shipping data can be accessed through the concerned agencies (e.g., NAMRIA and PCG).

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## OUTCOMES

The designation as PSSA is expected to reduce the shipping's major risks and threats in the park. The collected and analyzed information on vessel traffic serves as input to the decision making. The outputs such as the PSSA information paper, the data on the collected vessel traffic, and the produced simulations of oil and chemical spill scenarios are on track. Effective partnership with relevant agencies (e.g., IMO, PCG, NAMRIA) was also developed, concentrating on the PSSA application and on the Buffer Zone Management Plan implementation.

Currently, no method is available to monitor the shipping impacts (e.g., ballast water discharge, marine debris, and alien invasive species). Thus, the environmentally sustainable use of the TRNP relating to shipping cannot be determined. The increase in shipping activities in the Sulu Sea is expected to pose greater risks to the values of TRNP. The use of TRNP by the shipping industry did not demonstrate positive social impacts.

## CLIMATE CHANGE

Effective	Mostly effective	Partially effective	Ineffective
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Context	Planning	Inputs	Processes	Outputs	Outcomes	
Mostly Effective	Mostly Effective	Mostly Effective	Mostly Effective	Mostly Effective	Mostly Effective	Overall
					Mostly Effective	Biodiversity

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### CONTEXT

The cumulative impacts of climate change to the values of TRNP are not fully understood by all managers. Vulnerability assessment of climate change impacts was carried out but the tool used failed to provide a clear picture of current trends and conditions. To further gain knowledge on the impacts of climate change to TRNP's values, collaborations with stakeholders (academe and other research institutions) were established to monitor for its effects. Results of studies revealed that Tubbataha is resilient as it was able to withstand extreme climate-related events (1998 El Niño) and recovered naturally. TRNP was considered by various research institutions as a pilot site for climate change monitoring. Climate change education was incorporated in TMO's public outreach and education which targets to communicate with relevant stakeholders.

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### PLANNING

Climate change related risks and threats are identified and addressed in planning systems and conservation actions which help strengthen TRNP's resilience to climate change. These systems and actions are focused on climate change adaptation rather than on mitigation. The Emergency and Risk Reduction Plan specifically targets climate change but measurable objectives were not clearly expressed in this plan. Other plans contain targets that pertain to climate change, e.g., TRNP Comprehensive Management Plan 2011-2021, Ecosystem Research and Monitoring Plan. Adequate monitoring information regarding climate change are gathered by data loggers installed in Tubbataha. Some research activities also include monitoring of climate change impacts.

Generally, stakeholders from the local community, private sector, academe, and government units are involved in planning as provided by RA 10067. The law however does not make any mention of climate change. Managers believe that increasing the resilience of the park by focusing on biodiversity protection is the best strategy to mitigate climate change impacts.

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### INPUTS

Compliance and enforcement is a core activity of TMO for which internal financial resources are allocated and prioritized to ensure a healthy ecosystem that is resilient to effects of climate change.

There are adequate human resources to conduct compliance and enforcement activities. Annual monitoring activities require help of external researchers. There are adequate skill sets and expertise to protect the park. External expertise is available when in-house monitoring expertise is inadequate.

Available biophysical information is limited to major indicator taxa, e.g., fish, corals, seabirds, turtles, and are not enough to address the impacts of climate change to the park as a whole. Non-government inputs are available in the form of technical support, e.g., academe, and grants, e.g., PSFI. The link between tourism and climate change is yet to be determined.

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## PROCESSES

Climate change is addressed through sound governance mechanisms by effectively engaging stakeholders at all levels in the management of TRNP. Stakeholders, e.g., tourism industry, are also engaged in the monitoring of climate change impacts apart from the regular monitoring of MPRs and annual biophysical monitoring of TMO. Management of climate change is reactive and event-based.

Tourism impacts which can affect TRNP's resilience and vulnerability to climate change are greatly minimized through strict implementation of park rules and regulations. Enforcement activities are also vigilantly conducted. Relevant management decisions are also put in place from information provided by the biophysical monitoring of TRNP. Network of relevant experts, e.g., UP-MSI, DLSU, provides advice to guide management decisions. Because the management has no direct control over the effects of climate change, management actions are focused on the strict implementation of the no-take policy which are believed to maintain TRNP's resilience. The maintenance of the OUV of TRNP is an indicator of effective management

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## OUTPUTS

Objectives relating to climate change are addressed and achieved through compliance and enforcement programs. Insights are also provided by results of research and monitoring activities and vulnerability assessments. Therefore, work plans have progressed in accordance with time frames.

Data on climate change, although very limited, are collected and stored. These data are transformed into knowledge which are embodied in ecosystem research and monitoring reports. These reports are annually produced and published in TRNP's website. Products and services related to climate change are also embodied in the core activities of TMO.

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## OUTCOMES

TRNP's biodiversity is maintained and protected by minimizing anthropogenic impacts of allowed activities (research and tourism), therefore resilience to climate change is also strengthened. However, there is a need to increase research efforts, e.g., coverage on more taxa, ecological processes, diver impact and carrying capacity. Information relating to climate change are shared with stakeholders. Managers have strong collaboration with academe and government agencies. The tourism industry and researchers adhere to park rules and regulations.

## RESEARCH

Effective	Mostly effective	Partially effective	Ineffective
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Context	Planning	Inputs	Processes	Outputs	Outcomes	
Mostly Effective	Mostly Effective	Partially Effective	Mostly Effective	Mostly Effective	Mostly Effective	Overall
					Mostly Effective	Biodiversity

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## CONTEXT

The managers have a fair understanding of the values of biophysical research in managing TRNP. Monitoring of fish populations, benthic cover and seabirds provide an overview of the status of the reefs. However, there is a need to update information on other taxa (e.g., seagrass, gastropods, cetaceans), ecological processes (e.g., climate change, connectivity) and socio-economic research.

Research results are documented in technical reports. There is a need to translate these scientific results into popular form to be better understood by managers and other stakeholders. The impacts of research activities are regulated through a review of proposals prior to the issuance of research permits, as stipulated in the IRR of RA10067. Collection of specimens are subject to the approval of the TPAMB and issuance of permit by the Palawan Council for Sustainable Development.

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## PLANNING

There is an effective planning system and monitoring protocol in place for priority taxa e.g., fish, corals, seabirds, turtles. Planning of research activities outside of the regular monitoring involves other research institutions and the academe. The tourism industry is also involved in designing and collecting data for the Reef Watch program for the park. The research methods used are consistent with national standards implemented by the DENR.

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## INPUTS

From 1997 to 2013, fish and benthos monitoring was conducted by WWF-Philippines and other partners. The internal financial resources allotted for research is mostly for personnel and is not sufficient to fully fund the biophysical monitoring in the park. However, the regular monitoring activities, e.g., fish, benthos and seabirds, were co-funded by WWF-Philippines. The in-house research capacity of TMO and TPAMB is limited, thus, TMO secures the assistance of research institutions and the academe.

While more biophysical information is available upon which to address management of scientific research, there is limited socio-economic information, specifically in the Municipality of Cagayancillo. What socio-economic information is available is provided by WWF-Philippines and the LGU.



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## PROCESSES

The two local universities in the province are represented in the TPAMB, while other universities are being consulted in research planning and design. These institutions also play a significant role in the actual conduct of researches in the park.

The engagement of the local community in the management of research is limited to its membership in the TPAMB. The results of research and monitoring activities serve as a means of measuring biophysical indicators of management effectiveness. It is also used by the TPAMB in formulating science-based management decisions.

Prior to 2014, there is no protocol on data ownership, sharing, and authorship. The research policy formulated in 2014 addresses these concerns to minimize differing views/conflicts regarding research.

Socio-economic research is a weakness of TMO, however, this is augmented by efforts of WWF-Philippines.

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## OUTPUTS

Research activities targeted in the Annual Work and Financial Plan have been mostly implemented in accordance with timeframes. The results provided reliable information on ecosystem health and served as input for decision making. Other targeted studies, e.g., connectivity and carrying capacity, were not conducted due to absence of funds and house expertise. The results of research and monitoring activities in the park are being shared with the community through different platforms. Research papers were presented in scientific conferences. These were also presented to dive operators and to the general public during IEC activities. The TRNP website and other social media serve as platforms to share information on the status of the reefs. However, the use of social media is not maximized in the sense that posts are intermittent. A database for raw data, species, and reports is being managed by TMO and is available for dissemination to some extent. There is a limited number of studies on TRNP published in scientific journals.

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## OUTCOMES

TMO has developed strong partnerships with research institutions and the academe in the conduct of research. This is evident in the partnerships developed with PCSDS on water quality, University of the Philippines - Marine Science Institute and the De La Salle University in the fish and coral monitoring, and University of Queensland Catlin Seaview Survey on coral assessment and mapping. A permitting process and research protocol was established to regulate research activities in the park and minimize its impacts.

Less than 10 percent of the reef area is being regularly monitored, thus a huge part of the reef could present new data and information on the marine ecosystem and its processes. The use of TRNP for research activities is not economically sustainable due to lack of regular financial allocation. Funds allocated for research is only 4% of the core funds.

## TOURISM

Effective	Mostly effective	Partially effective	Ineffective
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Context	Planning	Inputs	Processes	Outputs	Outcomes	
Effective	Effective	Mostly effective	Effective	Effective	Effective	Overall
					Effective	Biodiversity

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### CONTEXT

The managers understand the value of tourism as the main source of revenue in the park. Tourism revenue supports the implementation of core management activities. Thus, strong collaboration with the diving industry is maintained through their involvement in formulation of rules and regulations and in tourism planning.

The impacts of tourism are understood by managers. Regulatory measures are in place to minimize impacts, e.g. park rules and regulations, mooring and permitting system. However, there is no information on diving impacts and carrying capacity.

The dependence of tourism on a healthy reef is understood by managers and the diving industry. Broader level influences, e.g., peace and order, and international markets, are understood, however, management actions to address these issues are limited. Stakeholders play an important role in managing tourism in the park. Compliance to park rules and regulations is ensured through the conduct of annual dive operators' consultation, dive master training, boat crew and visitors' pre-departure briefings. Open lines of communication are maintained to encourage feedback and to gain support from the tourism industry. Dive masters and boat crew are encouraged to report unusual incidents, including sightings of species, through direct communication with park authorities and through the Reef Watch program.

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### PLANNING

Zoning and allowable tourism activities are specified in RA10067, TRNP Management Plan and the Comprehensive Tourism Management Plan. Objectives and actions for implementation are also stated in the Comprehensive Tourism Management Plan. Regular tourism-related activities are stated in the annual Work and Financial Plan.

The Comprehensive Tourism Management Plan is consistent with the goals of the National Tourism Development Plan and Tourism Act of 2009. However, it is not consistent with Philippine Commission on Sports SCUBA Diving (PCSSD) Guidelines on dive boat and diving professional accreditation. Risks of tourism to the park's values e.g., diver impacts, water quality, grounding, are addressed through park rules, permitting and dive masters' training. In addition, a framework for coordination with other agencies to respond to environmental incidents, e.g., groundings, oil spills, is stated in the Emergency and Risk Reduction Plan 2014.

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## INPUTS

Tourism is a major contributor to park management through conservation fees. All revenues are used to fund management activities. Tourism is partially funded through these revenues. Strategies, e.g., merchandising and increased conservation fee, to increase revenue from tourism are in place.

There is only one dedicated staff position for tourism management, but this is augmented by marine park rangers and volunteers. TMO staff are also trained to use appropriate technology to facilitate permitting and generation of tourism data. In-house skill sets need to be enhanced to improve tourism management and identify its impacts. As of the moment, this inadequacy is supplemented by the expertise of volunteers.

Inputs from grants and volunteers greatly contribute to the improvement of the mooring system, information materials, and design of merchandise. Likewise, contributions in the form of promotions, images, videos, and ad space are received from individuals and companies. Information on the economic benefits of tourism is available. However, socio-economic data to address tourism is limited.

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## PROCESSES

The multi-stakeholder management board ensures that governance is participatory. Likewise, dive operators are involved in consultations and planning to ensure compliance. The local community is involved in on-going management through provision of law enforcement personnel and membership in the TPAMB.

Annual consultations with dive operators serve as a venue to inform the industry of the relevant research results and its implications on tourism operations in the park, e.g. graywater discharge location. It is also a platform where conflicts are resolved and discussions are held. The results of annual biophysical monitoring provide information on the potential impacts of tourism to biodiversity. While socio-economic information on park use by tourists and dive operators contribute to the formulation of regulations and policy.

Performance monitoring is reported in the annual tourism report. Best dive practices are published in the website and tourist brochures, and included in pre-departure briefings and videos.

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## OUTPUTS

Targeted tourism-related activities, e.g., maintenance of mooring system, permitting system, marketing and promotion, have progressed in accordance with the AWP and with timeframes. These were achieved through partnerships and grants from Digichive, PSFI and GIZ. Tourism-related products, e.g. primer, promotional and tourist brochures, and tokens, were developed and distributed. A user-friendly online permitting system was established and is currently in use to facilitate issuance of permits. Tourism facilities, e.g., communication, and mooring systems, are being upgraded and maintained. Likewise, a tourism database is in place and is regularly updated.

Important information on the tourism operations in TRNP is available in the TRNP website. Other information deemed relevant to tourism are disseminated through pre-departure briefings, website and social media accounts. Ten percent of the annual tourism revenue is given to the Municipality of Cagayancillo as part of the sustainable resource management strategy of TRNP.

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## OUTCOMES

Active partnership with the dive industry is maintained and cultivated through formal and informal platforms. There is minimal incidence of non-compliance due to regular consultation with stakeholders, effective implementation of plans and policies, and application of adaptive management measures. Best practices are also emphasized during boat crew and visitors' pre-departure briefing as an attempt to minimize tourism impact on the park's values.

The use of the park pertaining to tourism is environmentally sustainable. Only 30% of the reef is utilized for tourism activities. Furthermore, impacts are minimized through permitting system, improved mooring system, and implementation of rules and regulations. Tourists find the rules and regulations to be adequate to protect the values of TRNP. Also, results from the exit survey show that tourists were very satisfied with their experience and signified their intent to return to the park.

TRNP is highly reliant on tourism revenues, and cessation of operations of dive boats will impact significantly on management financing. Management interventions to augment this limitation includes increasing of conservation fees, applying for external grants, and exploring other options to generate more funds.

## SUMMARY BY ELEMENT OF EFFECTIVENESS

### CONTEXT

Understanding of values, direct and indirect threats and stakeholders is strong for most management issues assessed, but strongest for biodiversity protection, fishing, and tourism. This reflects that there is mature understanding and adequate information of the values of TRNP and the threats to those values. Biodiversity is the foundation of TRNP's OUV and its protection is the main objective of its management, thereby, it is well-understood by managers. The impacts of and response to fishing is well understood because of the no-take policy of TRNP pursuant to RA 10067. Being one of the only two activities allowed in the park, tourism and the risks associated with it is understood by managers. It is also the most consistent source of funds for management.

On the other hand, understanding of shipping is low because international shipping is beyond the purview of most members of the TPAMB. The TPAMB is only beginning to recognize the risks of shipping to the values of TRNP as increasing maritime traffic recently emerged as a global concern.

### PLANNING

TRNP has undergone several cycles of updating the management plan. It has given rise to specific actions plans that target special concerns, e.g., tourism, research, etc. Again, biodiversity protection, fishing, and tourism garnered the highest ratings demonstrating the focus of management. Managers have to rely on the national and international maritime agencies and organizations for intervention. Nevertheless, the TPAMB has exerted some efforts to support these interventions.

### INPUTS

Of the six management elements, Inputs got the lowest score across all management topics. This element covers internal funds, human resources, expertise, external support, and socio-economic and biophysical information to address the topics. Internal funds for most topics except biodiversity protection and fishing were low, skill sets and human resources also got a low rating, indicating a need to improve in-house skill sets and expertise to respond to management needs.

Tubbataha generates limited revenues and is highly-dependent on external resources to supplement its budget to achieve management targets. Being the core function of the TPAMB, biodiversity protection is given priority in the allocation of resources. Resource allocation for fishing is also high because preventing fishing in the park is equivalent to protecting biodiversity. There is inadequate internal allocation for tourism and there is heavy reliance in external support to meet tourism requirements.

Inputs for marine pollution and shipping garnered a low score because these are beyond the jurisdiction of the TPAMB. The magnitude of the resources needed to address these are beyond the capacity of the managers. Research also got a low rating because internal allocation is inadequate to fully fund it. Further, human resources and skill sets are inadequate to address research needs, hence, reliance to external support.

## PROCESSES

Management processes are particularly strong for biodiversity protection, fishing, and tourism. These areas garnered a high score because of strong conflict resolution, application of biophysical information, effective monitoring, and establishment of targets to gauge performance.

Processes in shipping are weakest because the TPAMB has no control over international shipping. The areas that influenced this low rating are absence of socio-economic data relevant to international shipping, insufficient information on impacts, and absence of standards and targets.

## OUTPUTS

It follows that outputs for biodiversity protection, fishing, and tourism are rated high because of the priority given to these topics coupled with a mature understanding of these issues. Outputs for shipping is lowest because targeted results hinge on the designation of TRNP as PSSA which is expected in 2017.

## OUTCOMES

Achievement of desired outcomes is high for majority of the issues, resulting to the maintenance of TRNP's OUV. The outcomes for biodiversity protection, fishing, and tourism are strongest. Development of effective partnerships with stakeholders is achieved. The use of Tubbataha is sustainable and enhances understanding and enjoyment. Outcomes for community benefits are also high because effective biodiversity protection contributes to the achievement of desired results. Tubbataha's effective biodiversity protection encourages strong support from partners and compliance by the general public. Its effectiveness challenges other MPAs to achieve similar results. Shipping garnered the lowest score because there are currently no outputs to reduce major risks and threats to the park.



## RECOMMENDATIONS

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### BIODIVERSITY PROTECTION

1. Fill research gaps on groups of species and on habitats;
2. Clearly state objectives for biodiversity protection in the Management Plan;
3. Conduct training needs assessment for TMO and TPAMB;

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### COMMUNITY BENEFITS

1. Sustainable resource management objectives are not clearly identified in the management plan, hence, monitoring to gauge progress towards the objectives for community benefits is non-existent.
2. Translate research outputs to community benefits.
3. Not all objectives for tourism are measurable, clear, and appropriate, e.g., 'to increase appreciation towards TRNP as a tourist destination and conservation area';
4. Monitoring and document community benefits;
5. Develop capacity to communicate community benefits from TRNP
6. Allocate internal financial resources for the above activities;
7. Enhance capacity for planning and implementation of community development programs and socio-economic monitoring.

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### FISHING

1. The status of *Tectus niloticus*, last assessed in 2010, need to be updated.
2. The impacts of fishing contiguous to park boundaries need to be investigated.

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### MARINE POLLUTION

1. the direct correlation of sources of pollution as well as the magnitude of their impacts have to be fully established;
2. there are no clear, measurable and appropriate objectives specifically for management of marine pollution;
3. Not all impacts of marine pollution in the park have been identified. Only those known to managers are being addressed;
4. Determine the exact source of pollution in TRNP and the Sulu Sea.

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## SHIPPING

1. Conduct a study on species distribution and habitat of taxa affected by shipping activities (i.e., migratory species).

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## RESEARCH

1. Update information on other taxa (e.g., seagrass, gastropods, cetaceans) and ecological processes (e.g., climate change, connectivity);
2. Conduct socio-economic research;
3. Conduct connectivity and carrying capacity studies.

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## TOURISM

1. Conduct studies on diver impacts and carrying capacity;
2. Enhance in-house skills to improve tourism management and identify its impacts.

## REFERENCES

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## ANNEX A. ASSESSMENT OF TRNP OUTSTANDING UNIVERSAL VALUE

With technical support from the UNESCO WHC, the OUV of Tubbataha was used to guide the assessment of the condition and trends in the park. The summary of the result of the assessment is presented below:

Averaged assessment for overall criteria	Very good	Good	Poor	Very poor	Confidence	
					Condition	Trend
Criterion VII	↑				1	1
Criterion IX	↑				1	1
Criterion X	↑				1	1
Integrity	↑				1	1
Management and protection requirements	↑				1	1
Other management requests following recent WHC Decisions	↑				1	1

Half of the values articulated in the excerpts from Criterion 7 (*'contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance'*) were rated to be in 'very good' condition with an increasing trend. The other half describes the physical features of the park, which were rated as 'stable' and in 'very good' condition.

Criterion 9 (*'outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals'*) was rated to be generally 'very good' with an increasing trend. Dispersal and oceanographic models show the importance of TRNP to fisheries, being a source and sink of fish and coral larvae in the Sulu Sea. The park is considered as a 'reference reef' for the Sulu Sea. According to experts, TRNP is a model of an effectively managed off-shore reef in Sulu Sea and in the whole of the Philippines (Drs. Licuanan and Aliño, pers. comm.). Because of its natural state, it is used as a control site for the study of responses to climate change.

Criterion 10 (*'contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation'*) is also generally 'very good' and increasing in trend. A study on the population of marine turtles in TRNP in 2010 and 2013 suggests that the park is a very

important nesting, resting and juvenile development area for the endangered Green Sea and the critically endangered Hawksbill turtles. However, this was not known in 1993, when TRNP was inscribed in the WH list, hence, the assessors were not able to determine the trend of this value. There were previously seven resident breeding species of seabirds in the park. However, in 1996, before the current management body assumed responsibility for TRNP, the population of the Masked Booby *Sula dactylatra* was extirpated, decreasing the count of the breeding seabird species to six. The population of these six species continues to increase.

The integrity ('a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes') of TRNP was rated to be in 'very good' condition with generally increasing trend. The vigilant enforcement of RA 10067 (TRNP Act of 2009), information and education efforts and other management initiatives have ensured that the integrity of the park is well preserved. A high confidence level was given to the responses provided.

As to management and protection requirements, participants to the workshop rated TRNP as mostly 'very good' with increasing trend particularly in the area of legislation, tourism planning, curtailment of illegal fishing, and response to the threats of oil exploration and shipping. A positive trend with a rating of 'good' was given to 'staff training and provision of equipment' and 'marine litter'. Despite the lack of financial security, TRNP is able to allocate operating budget to ensure a strong and responsive presence in the water. However, threats from shipping continue to increase whilst the PSSA designation of TRNP is still in the works. There is limited capacity to respond to marine pollution even as marine traffic in the area is increasing. This was rated as 'poor' with the trend considered as stable. A high confidence level was given to all the factors considered under this topic.

A rating of 'very good' was accorded to seven of the 10 items under 'Other management requests following recent WHC Decisions'. This decision was made during the 31st session of the World Heritage Committee held in 2007 in New Zealand (31COM 7B.20). TRNP was rated as 'poor' in the areas of sustainable financing and potential risk to the values and integrity of the property from pollution. Aside from tourism revenues, there is no other consistent source of financing for the park. There is also imminent threat from pollution but managers do not have the capacity to respond should the threat be actualized. These last two issues are area of concern for the park.

Excerpt from Statement of OUV	Comments on <u>current</u> condition c.f. SoOUV excerpt	Very good	Good	Poor	Very poor	Confidence		REMARKS
						Condition	Trend	
SYNTHESIS								
<i>an area of almost 100,000 hectares of high quality marine habitats ...</i>	Park area increased from 33,200 hectares in 1988 to 97,030 hectares in 2010.	↑				1	1	
<i>one of the few remaining colonies of breeding seabirds in the region</i>	Annual seabirds monitoring since 2004 shows generally increasing population of the six resident breeding species.	↑				1	0.5	
Criterion vii: '... contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance'								
<i>excellent examples of pristine reefs with a high diversity of marine life</i>	The park is free from human intervention. Live coral cover shows increasing trend. Species diversity is high with documented increase in population of top predators in the park.	↑				1	1	Increase in population of top predators' based on observations (MPRs, tourists)
<i>extensive reef flats and perpendicular walls reaching over 100m depth</i>	Perpendicular walls of the reefs is one of the best features of the park.	↔				1	1	
<i>large areas of deep sea</i>	90% of the park area is deep sea.	↔				1	1	

<b><i>presence of large marine fauna such as tiger sharks, cetaceans and turtles</i></b>	Marine park rangers (MPRs) report regular sightings of cetaceans and turtles. New species of cetacean documented in 2010 (Aquino and Alarcon, unpublished). Ten sightings of tiger sharks reported by MPRs in 2014.	↑				1	1	Cetacean and tiger shark sightings based on MPR Daily Accomplishment Report 2014
<b><i>big schools of pelagic fishes such as barracuda and trevallies</i></b>	Anecdotal accounts of tourists, MPR and TMO staff show frequent encounters with schools of barracuda and trevallies. (Trevally encounters more common)	↑				1	1	
<b><i>aesthetic qualities of the property</i></b>	Trend in live coral cover increasing and fish biomass stable. 91% average increase in tourists from 2002-2014.	↔				0.5	0.5	
Criterion ix: '... outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals'								
<b><i>a unique position in the middle of the Sulu Sea and is one of the Philippines' oldest ecosystems</i></b>	Like all atolls, TRNP was formed through millennia of coral growth and therefore remains one of the Philippines' oldest ecosystems.	↔				1	1	







<b><i>key role in the process of reproduction, dispersal and colonization by marine organisms in the whole Sulu Sea system</i></b>	TRNP continues to play a key role in ecological processes in the Sulu Sea as shown by scientific research.	↑				1	1	Campos et al. 2008. Using Ichthyoplankton Distribution in Selecting Sites for an MPA Network in the Sulu Sea, Philippines
<b><i>helps support fisheries outside its boundaries</i></b>	Dispersal and oceanographic models show spill over effect of TRNP.	↑				1	1	Campos et al. 2008. Using Ichthyoplankton Distribution in Selecting Sites for an MPA Network in the Sulu Sea, Philippines Villanoy et al. 2003. Tubbataha Reefs and Sulu Sea Oceanographic Study
<b><i>a natural laboratory for the study of ecological and biological processes</i></b>	Used as control site for the study of climate change and ecological processes, e.g., ICE CREAM, CRTR and Catlin. Considered as reference reef for the Philippines.	↑				1	1	'reference reef' Drs. Licuanan and Aliño, pers. comm.
<b><i>ongoing process of coral reef formation</i></b>	Live coral cover shows increasing trend. Rapid coral recruitment observed.	↑				1	1	Rapid coral recruitment observed' Quibilan 2014, pers. comm.

<b><i>supporting a large number of marine species dependant on reef ecosystems</i></b>	Large numbers of threatened and near-threatened reef-associated species such as 11 bony fishes, 13 sharks and rays, 5 seabirds, 2 marine turtles and giant clam.	↑				1	1	
<b><i>presence of top predator species, such as tiger and hammerhead sharks</i></b>	TRNP was reported to support one of the highest population densities of Whitetip reef sharks <i>Triaenodon obesus</i> recorded (Walker and Palomar-Abesamis 2005, unpublished). Tourists report presence of hammerhead and tiger shark.  Tawny nurse shark, previously undocumented in TRNP, was recorded in 2006.	↑				1	1	
<b><i>a demonstration site to study the responses of a natural reef system in relation to the impacts of climate change</i></b>	Used as demonstration site by academic research institutions for the study of climate change, e.g., UP-MSI, DLSU and NOAA.	↑				1	1	
Criterion x: "... contain the most important and significant natural habitats for <i>in-situ</i> conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation"								



<b><i>important habitat for internationally threatened and endangered marine species</i></b>	Habitat of 183 threatened and near threatened species of corals, bony fishes, sharks and rays, molluscs, seabirds and marine turtles.					1	1	
<b><i>located within the Coral Triangle, a global focus for coral biological diversity</i></b>	Situated in the apex of the Coral Triangle.					1	1	
<b><i>reefs of the property support 374 species of corals, almost 90% of all coral species in the Philippines</i></b>	Current count 360 sp of corals (Doug Fenner and IUCN); 77% of 468 coral species in the Philippines (Licuanan and Capili 2004)					1	1	From 374 to 360 species of corals: due to duplication in species count New record of stony corals from the Philippines previously known from the peripheral areas of the Indo-Pacific (Licuanan and Capili 2004)
<b><i>supports eleven species of cetaceans</i></b>	Current count 13 species (Aquino and Alarcon 2010, unpublished)					1	1	
<b><i>eleven species of sharks</i></b>	Current count 13 species (Alava 2010, unpublished)					1	1	

<b><i>an estimated 479 species of fish, including the iconic and threatened Napoleon wrasse</i></b>	Current count 600 species. Constant sighting of Napoleon wrasse	↑				1	1	
<b><i>the highest population densities known in the world for white tip reef sharks</i></b>	Highest population density of White tip sharks with 7.32 individuals/hectare compared to 2.8 ind/hectare in GBRMP and 2.2 ind/hectare in Cocos Island	↑				1	1	7.32 individuals/hectare (Alava 2010, unpublished) 2.8 ind/hectare in GBRMP and 2.2 ind/hectare in Cocos Island (A. M. Ayling and J. H. Choat. 2008. Abundance patterns of reef sharks and predatory fishes on differently zoned reefs in the offshore Townsville region: Final report to the Great Barrier Reef Marine Park Authority.)
<b><i>Pelagic species such as jacks, tuna, barracuda, manta rays, whale sharks and different species of sharks also are common here</i></b>	Anecdotal accounts of tourists, MPR and TMO staff show frequent encounters with schools of jacks, tuna, barracuda, trevallies and sharks.	↑				1	1	

<b><i>... very important nesting, resting and juvenile development area for two species of endangered marine turtles: green turtles and hawksbill turtles</i></b>	TRNP is very important nesting, resting and juvenile development area for endangered green sea turtles and Critically endangered hawksbill turtles (Pilcher 2010, unpublished).					0.5	0.5	
<b><i>... seven breeding species of seabirds</i></b>	Current count 6 resident breeding species; Masked booby extirpated in 1996.					1	1	
<b><i>Bird Islet and South Islet are breeding grounds to seven resident and endangered breeding species of seabirds.</i></b>	The two islets still serves as breeding site for 6 resident breeding species. Masked booby extirpated in 1996.					1	1	
<b><i>...critically endangered Christmas Island Frigatebird is a regular visitor</i></b>	Christmas Island Frigatebird last documented in 2012.					1	1	
<b>INTEGRITY - as 'a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes'</b>								
<b><i>comprises two atolls (North and South Atoll) and an emergent coral cay, Jessie Beazley Reef.</i></b>	Two atolls and Jessie Beazley Reef still remain intact and protected.					1	1	
<b><i>includes open sea with an average depth of 750 m</i></b>	Park area includes open sea.					1	1	

<b><i>... still displays a well preserved marine ecosystem with top predators..</i></b>	Marine park rangers (MPRs) report regular sightings of cetaceans and turtles. New species of cetacean documented in 2010 (Aquino and Alarcon, unpublished). Nine sightings of tiger sharks reported by MPRs in 2014. Seabird population continues to increase.	↑				1	1	
<b><i>... large number and diversity of coral reef and pelagic species</i></b>	360 species of corals in 81 genera recorded in TRNP; 70% of all coral genera in the world and 77% of 468 coral species in the Philippines. Experts believe presence of unrecorded species of corals in the park. Pelagic species continue to be sighted in the park.	↑				0.5	0.5	
<b><i>important population of resident, nesting and feeding seabirds.</i></b>	Annual seabirds monitoring since 2004 show generally increasing population of breeding species. Monthly and quarterly monitoring of seabirds in place.	↑				1	1	
<b><i>...free of human habitation and activities</i></b>	TRNP is free of human habitation. Responsible tourism and research are the only allowed activities inside the park.	↑				1	1	

<b><i>.. of a sufficient size to maintain associated biological and ecological processes</i></b>	The area of the park was increased three-fold in 2006. RA 10067 established a 10-nautical mile buffer zone to increase protection. The park is of sufficient size to support biological and ecological processes: e.g., feeding area for cetaceans; juvenile developmental area for marine turtles; breeding and roosting area for seabirds; source and sink of fish and coral larvae.	↑				1	1	
<b><i>an adequate size to ensure the complete representation of the key features and processes of the reef systems within it</i></b>	The park is of adequate size to ensure the complete representation of the key features and processes of the reef systems within it; e.g., the island ecosystem supports seabird populations; seagrass beds sufficient to support marine turtle population and associated species; coral reefs support a vast diversity of marine life.	↑				1	1	
<b><i>requires measures to be taken outside the boundaries of the property in relation to some migratory species and the buffering of the property from</i></b>	Application with East-Asian Australation Flyway Partnership currently under process. On-going Particularly Sensitive Sea Area (PSSA) application with the International	↑				1	1	

<b>threats to the marine environment</b>	Maritime Organization. Buffer zone management plan crafted.							
<b>the low level of fishing pressure, due to the no-take policies which are in place throughout its area</b>	Level of fishing pressure decreased from 39 enforcement incidents (2006-2010) to 1 incident during the period 2011-2014. Decrease may be associated with intensified information and education activities for fisherfolks and students in the province since 2007.	↑				1	1	
<b>Management and protection requirements</b>								
<b>legally protected through national protected areas legislation and a range of other environmental legislation</b>	National legislations include RA 7586, RA 7611, RA 7160, RA 8550, and RA 10067.	↑				1	1	
<b>significant logistical challenge, requiring a well-equipped team with operational boats</b>	Composite team of MPRs (PN, PCG, LGU, TMO) are equipped with radar, radios, and patrol boats.	↑				1	1	
<b>well trained and well equipped staff</b>	Continuous capacity development of staff and provision of equipment.		↑			1	1	
<b>a sufficient operating budget for fuel, maintenance and accommodation to ensure a</b>	Strong and responsive presence despite uncertain source of funds.		↑			1	1	

<b><i>strong and responsive presence on the water</i></b>								
<b><i>Tourism visitation requires careful planning and management</i></b>	Sustainable Tourism Plan was formulated and implemented in 2013. Dive operators' meeting conducted annually.	↑				1	1	
<b><i>...threats to the property from shipping....</i></b>	On-going Particularly Sensitive Sea Area (PSSA) application with the International Maritime Organization. Buffer zone management plan crafted.		↓			1	1	Threats from shipping and potential impacts expected to increase
<b><i>...threats to the property from ... marine litter</i></b>	MPRs regularly conduct surface and underwater cleanups.		↑			1	1	
<b><i>...threats to the property from ....fishing</i></b>	No-take policy strictly enforced.	↑				1	1	
<b><i>...threats to the property from ... marine pollution</i></b>	Volume of maritime traffic increases the likelihood of marine pollution. However, capacity to respond is limited.			↔		1	1	
<b><i>...threats to the property from ... oil exploration</i></b>	Any form of energy exploration within park boundaries is not allowed per section 18 of RA 10067.	↑				1	1	

<b><i>internationally supported legislation to protect the property from shipping threats</i></b>	On-going Particularly Sensitive Sea Area (PSSA) application with the International Maritime Organization.	↑				1	1	
<b><i>greater enforcement of marine litter regulation on the High Seas</i></b>	Not applicable.							
Other management requests following recent WHC Decisions								
<b><i>improving enforcement</i></b>	Logistical challenges in the conduct of enforcement are continuously addressed and improved, e.g., radar, satellite phone, additional patrol boats.	↑				1	1	
<b><i>halting illegal fishing activities</i></b>	Vigilant patrols and improved presence led to zero illegal fishing incidents from 2012 to 2014.	↑				1	1	
<b><i>designation of Particularly Sensitive Sea Areas (PSSA)</i></b>	On-going Particularly Sensitive Sea Area (PSSA) application with the International Maritime Organization.	↑				1	1	
<b><i>sustainable financing of the management of the property</i></b>	Aside from tourism revenues, no regular allotment for management.			↔		1	1	



<b><i>boundary changes to oil concession areas near to the extended property</i></b>	Any form of energy exploration within park boundaries is not allowed per section 18 of RA 10067.	↑				1	1	
<b><i>sensitivity of marine mammals to acoustic research methods</i></b>	A 10-nm buffer zone established as extra layer of protection from negative effects of oil exploration.		↑			1	1	
<b><i>the potential risk to the values and integrity of the property from pollution</i></b>	Threat is imminent. However, current capacity to respond is limited. PSSA designation as a means of response against chemical and oil pollution.			↔		1	1	
<b><i>increase compliance with the no-take policies</i></b>	Zero illegal fishing incidents from 2012 to 2014. Increased compliance through public outreach in fishing villages, dive operators'/dive masters' consultation, and tourist pre-departure briefings.	↑				1	1	
<b><i>A programme of ecological monitoring</i></b>	Research and monitoring program in place.	↑				1	1	
<b><i>the effect of climatic events on sea surface temperature and coral bleaching, storm frequency and other factors</i></b>	Regular research and monitoring capture incidence of coral bleaching.	↑				1	1	

<b><i>a sustainable tourism strategy/comprehensive tourism management plan</i></b>	Sustainable Tourism Plan formulated and implemented in 2013.	↑				1	1	
<b><i>resolve jurisdictional ambiguities within the newly declared buffer zone</i></b>	Ambiguities resolved, Provincial Government of Palawan uphold TPAMB jurisdiction over buffer zone.	↑				1	1	

## ANNEX B. MANAGEMENT EFFECTIVENESS GRADING STATEMENTS

### BIODIVERSITY PROTECTION

	CONTEXT	Score	Justification	Evidence/ Sources	Confidence
CO1	The values <sup>1</sup> in TRNP relevant to BIODIVERSITY are understood by managers.	4	<ul style="list-style-type: none"> <li>Managers understand the value of TRNP and biodiversity protection is the main goal of management</li> <li>TRNP is featured in the highest monetary denomination of the country, demonstrating the appreciation of the national government of TRNP's importance and value</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>1,000 Philippine Peso bill</li> </ul>	Adequate
CO2	The current condition and trend of values relevant to BIODIVERSITY are known by managers	3	<ul style="list-style-type: none"> <li>There is regular reporting of MPR and tourist observations, including research results to the TPAMB</li> <li>Research gaps remain for many groups of species and habitats, as monitoring is focused on benthos, fish, seabirds and marine turtles</li> </ul>	<ul style="list-style-type: none"> <li>Monthly, quarterly and annual report</li> </ul>	
CO3	The impacts (direct, indirect and cumulative) associated with BIODIVERSITY are understood by managers.	4	<ul style="list-style-type: none"> <li>Threats to biodiversity recognized</li> <li>Management strategies and plans in place</li> <li>Responsible tourism and research practices</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021, Comprehensive Tourism Management Plan 2014</li> </ul>	Adequate
CO4	The broader (national/international) level influences relevant to	4	<ul style="list-style-type: none"> <li>Climate change understood</li> <li>Research collaborations to study and monitor effects of climate change</li> </ul>	<ul style="list-style-type: none"> <li>Vulnerability Assessments 2011, Emergency and Risk Reduction Plan 2014, PSSA Application</li> </ul>	Adequate

<sup>1</sup> Values include biological (biodiversity), socio-economic, and educational or scientific significance and ecological goods and services

	BIODIVERSITY are understood by managers.		<ul style="list-style-type: none"> <li>• Threats from shipping acknowledged and initial measures taken</li> <li>• Increasing maritime activities due to globalization, increase potential for negative impacts of shipping on TRNP</li> <li>• Plans and policies coherent with national laws</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067 and Implementing Rules and Regulations</li> </ul>	
CO5	The stakeholders relevant to BIODIVERSITY are well known by managers.	4	<ul style="list-style-type: none"> <li>• The relevant stakeholders e.g., fisherfolk, enforcers, government employees and students are identified in plans</li> <li>• Participatory planning in most aspects of park management</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021, Comprehensive Tourism Management Plan 2014, IEC Plan 2015-2020,</li> <li>• Emergency and Risk Reduction Plan 2014, Research and Monitoring Plan 2015-2020</li> </ul>	Adequate

	PLANNING	Score	Justification	Evidence/ Sources	Confidence
PL1	There is a planning system in place that effectively addresses BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• All planning is participatory</li> <li>• Main goal of management is biodiversity protection and conservation</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021, Annual Work and Financial Plan (AWFP)</li> </ul>	Adequate
PL2	The planning system for BIODIVERSITY addresses the major risks/threats to the TRNP's values.	4	<ul style="list-style-type: none"> <li>• Potential risks assessed and responses identified with relevant agencies e.g. PCG, PN, Cagayancillo LGU</li> </ul>	<ul style="list-style-type: none"> <li>• Vulnerability Assessments 2011, Emergency and Risk Reduction Plan 2014</li> </ul>	Adequate
PL3	The actions for implementation regarding BIODIVERSITY are clearly identified within the plan.	4	<ul style="list-style-type: none"> <li>• TRNP Management Plan stipulates strategies for biodiversity conservation, while AWFP indicates actions</li> <li>• No-take policy</li> <li>• Research priorities identified</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021, Annual Work and Financial Plan</li> <li>• Republic Act 10067</li> </ul>	Adequate

			<ul style="list-style-type: none"> <li>• Dependence on other agencies for implementation of some aspects of plans</li> </ul>		
PL4	Clear, measurable, and appropriate objectives for management of BIODIVERSITY have been documented.	4	<ul style="list-style-type: none"> <li>• Biodiversity conservation is the main goal of management programs</li> <li>• All plans address biodiversity conservation and minimizing threats</li> <li>• Objectives are not clearly stated in the Management Plan</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021, Comprehensive Tourism Management Plan 2014, IEC Plan 2015-2020,</li> <li>• Emergency and Risk Reduction Plan 2014, Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
PL5	There are plans and systems in place to ensure that appropriate and adequate monitoring information is gathered in relation to BIODIVERSITY	4	<ul style="list-style-type: none"> <li>• Monitoring program for compliance and tourism management in place since the establishment of TMO in 2001</li> <li>• Monitoring program for tourism in place since 2001</li> <li>• Biophysical conditions were first monitored in 1982</li> <li>• Regular monitoring program maintained with assistance of NGO and academic partners since 1997</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance and Enforcement Plan 2012</li> <li>• Comprehensive Tourism Management Plan 2014</li> <li>• Research and monitoring reports</li> <li>• Saving Philippine Reefs reports, CCEF</li> </ul>	Adequate
PL6	The main stakeholders &/or the local community are effectively engaged in planning to address BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• Multi-stakeholder management board formulates and approves plan for biodiversity conservation</li> <li>• Tourism industry participates in rule-making to ensure protection of biodiversity</li> <li>• MEE conducted by various stakeholders, eg., national and local government agencies, NGOs, POs, and academe</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067, Management Effectiveness Evaluation (MEE) Workshop</li> </ul>	Adequate
PL7	Sufficient policy currently exists to effectively address BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• TRNP Management Plan, Ecosystem Research and Monitoring Plan</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067, RA 7586, RA 7611, RA 7160, and RA 8550</li> </ul>	Adequate

PL8	There is consistency across agencies when planning for BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• TRNP plans consistent with national and international policies</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067, RA 7586, RA 7611, RA 7160, and RA 8550</li> </ul>	Adequate
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	INPUTS	Score	Justification	Evidence/ Sources	Confidence
IN1	The internal financial resources are adequate and prioritised to meet specific management objectives (refer to PL4) to address BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• Current financial resources not adequate but prioritized to meet specific management objectives</li> </ul>	<ul style="list-style-type: none"> <li>• Financial records of tourism collections</li> <li>• Annual Work and Financial Plan (AWFP)</li> <li>• MEAT Result 2014</li> </ul>	Adequate
IN2	The human resources within the managing organisations are <u>adequate</u> to meet specific management objectives (refer to PL4) to address BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• Current human resources within the organization are adequate to meet specific management objectives</li> <li>• Organization able to mobilize external expertise, when necessary</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Accomplishment Report 2014</li> <li>• MEAT Result 2014</li> </ul>	Adequate
IN3	The right skill sets and expertise are currently available to the managing organisations to address BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• There is a need to improve skill sets and expertise to meet emerging challenges, e.g. government financial procedures, and research</li> <li>• Collaboration with academic institutions in research</li> </ul>	<ul style="list-style-type: none"> <li>• Research reports</li> </ul>	Limited <sup>2</sup>

<sup>2</sup> Absence of documentation of skills and expertise needed

IN4	The necessary biophysical information is currently available to address BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• Biophysical information currently available but with gaps (e.g. acidification, population dynamics of some species, species identification, etc)</li> </ul>	<ul style="list-style-type: none"> <li>• Unpublished reports</li> </ul>	Adequate
IN5	The necessary socio-economic <sup>3</sup> information is currently available to address BIODIVERSITY.	3	<ul style="list-style-type: none"> <li>• Socio-economic data collected in Cagayancillo in 2014</li> </ul>	<ul style="list-style-type: none"> <li>• 2014 socio-economic data of Cagayancillo by WWF</li> </ul>	Limited <sup>4</sup>
IN6	There are additional sources of non-government input (e.g. volunteers) contributing to address BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• Private sector financial contributions</li> <li>• Technical support from academic institutions</li> <li>• Volunteers mobilised: <ul style="list-style-type: none"> <li>- Research consultants and assistants</li> <li>- Tubbataha Reef Watch</li> <li>- Reef check</li> <li>- Tubbataha Youth Ambassadors</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Pilipinas Shell Foundation, Inc. 5-year grant (MOA)</li> <li>• Volunteer Management Plan</li> </ul>	Adequate

	PROCESSES	Score	Justification	Evidence/ Sources	Confidence
PR1	The main stakeholders &/or industry(ies) are effectively	4	<ul style="list-style-type: none"> <li>• Direct stakeholder groups comprise the management board</li> <li>• Public outreach conducted to engender stewardship and compliance</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• IEC Reports</li> <li>• Reef Watch Forms</li> <li>• <a href="http://www.tubbatahareef.org">www.tubbatahareef.org</a></li> </ul>	Adequate

<sup>3</sup> Scope of socio-economic refers, but not limited, to Cagayancillo, tourism and fishing

<sup>4</sup> Scope of study limited

	engaged in the ongoing management of BIODIVERSITY.		<ul style="list-style-type: none"> <li>• Tubbataha Youth Ambassadors engaged in IEC activities</li> <li>• Tourists engaged through Reef Watch</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="http://www.facebook.com/OfficialTubbataha">www.facebook.com/OfficialTubbataha</a></li> </ul>	
PR2	The local community <sup>5</sup> is effectively engaged in the ongoing management of BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• LGU and POs in Cagayancillo are members of the management board</li> <li>• Law enforcers from local communities</li> <li>• Volunteers involved in research and IEC but not representative</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• MOA between TMO and Cagayancillo LGU 2008 and ExeCom Resolution 08-01</li> <li>• AWWP 2015</li> <li>• In practice, local community is prioritized in hiring, volunteer selection and other opportunities</li> </ul>	Adequate
PR3	There is a sound governance system in place to address BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• Presence of active management board</li> <li>• 1 international and 8 national MPA Management awards for governance</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• 2014 MEAT and METT Reports</li> <li>• Dygico M, et al. (2013) Achieving MPA effectiveness through application of responsive governance incentives in the Tubbataha Reefs. Mar. Policy</li> <li>• Silver Future Policy Award for RA 10067</li> <li>• Para El Mar Award for Outstanding MPA</li> <li>• Protected Area Award for exemplary work on engaging other government agencies in total effectiveness of enforcement</li> <li>• Plaques of Recognition from partner agencies</li> </ul>	Adequate
PR4	There is effective monitoring, including regular appraisal of assessment tools to gauge	4	<ul style="list-style-type: none"> <li>• Management effectiveness evaluations (following <i>How is your MPA doing?</i>)</li> <li>• IEC evaluation conducted in 2014</li> </ul>	<ul style="list-style-type: none"> <li>• 2014 MEAT and METT Reports</li> <li>• 2014 MEE</li> <li>• IEC evaluation report</li> </ul>	Adequate

<sup>5</sup> Municipality of Cagayancillo



	progress towards the objective(s) for BIODIVERSITY				
PR5	Appropriate training is available to the managing agencies to address BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• Comprehensive MPR Training conducted annually</li> <li>• Entry-level training for staff and volunteers</li> <li>• Researchers and MPRs trained by external research institutions</li> <li>• Training of Trainers for staff and partners</li> <li>• Budgetary allocation for trainings</li> <li>• Participation in trainings provided by partner agencies</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive MPR Training Report</li> <li>• MPR training module</li> <li>• Training reports</li> <li>• AWWP</li> </ul>	Adequate
PR6	Management of BIODIVERSITY is consistently implemented	4	<ul style="list-style-type: none"> <li>• RA 10067 with other relevant laws</li> <li>• Consistent with PCSDS and DENR</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067, RA 7611</li> </ul>	Adequate
PR7	There are effective processes applied to resolve differing views/conflicts regarding BIODIVERSITY.	3	<ul style="list-style-type: none"> <li>• Annual dive operators consultation</li> <li>• Participatory planning, e.g. Management Plan review; IEC, ERRM, ERM, buffer zone, tourism planning workshops</li> </ul>	<ul style="list-style-type: none"> <li>• Dive operators consultation reports</li> <li>• Workshop reports</li> <li>• TRNP Management Plan 2011-2021, Comprehensive Tourism Management Plan 2014, IEC Plan 2015-2020, Emergency and Risk Reduction Plan 2014, Research and Monitoring Plan 2015-2020, Buffer Zone Management Plan 2014</li> </ul>	Adequate
PR8	Impacts (direct, indirect and cumulative) of activities associated with BIODIVERSITY are appropriately considered.	4	<ul style="list-style-type: none"> <li>• Direct impacts considered, e.g. tourism, research, etc.</li> <li>• Impacts of activities outside boundaries, e.g. international shipping, seismic surveys, are considered and mitigating measures put in place</li> </ul>	<ul style="list-style-type: none"> <li>• IRR of RA 10067</li> <li>• PSSA application</li> <li>• Presentation by survey proponents to TPAMB</li> <li>• Seismic survey report</li> </ul>	Adequate

PR9	The best available <u>biophysical</u> research and/or monitoring information is applied appropriately to make relevant management decisions regarding BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• Science-based decision making</li> <li>• Zoning based on scientific findings, e.g. buffer zone, no-go areas</li> <li>• Reef watch results considered in decision making</li> </ul>	<ul style="list-style-type: none"> <li>• Research and monitoring reports</li> <li>• Buffer Zone Management Plan 2014</li> <li>• Tubbataha Reef Watch</li> <li>• www.tubbatahareef.org</li> </ul>	Adequate
PR10	The best available <u>socio-economic</u> <sup>6</sup> research and/or monitoring information is applied appropriately to make relevant management decisions regarding BIODIVERSITY.	3	<ul style="list-style-type: none"> <li>• No recent socio-economic research in Cagayancillo on the impacts of illegal fishing to conservation, last one in 2004</li> <li>• Socioeconomic information is available and applies to make relevant decisions</li> </ul>	<ul style="list-style-type: none"> <li>• Subade, R. (2004) Socio-economic impacts of illegal fishing in the conservation of Tubbataha Reefs National Marine Park and UNESCO WHS, Cagayancillo, Palawan</li> <li>• Subade, R. (2006) Mechanisms to capture economic values of marine biodiversity: The case of Tubbataha Reefs UNESCO World Heritage Site, Philippines. Mar Policy</li> </ul>	Adequate
PR11	Relevant standards are identified and being met regarding BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• National standards for protected areas are met</li> <li>• World Heritage, RAMSAR and ASEAN Heritage criteria met and maintained</li> <li>• Highest rating in Coral Triangle Marine Protected Areas System (CTMPAS) Evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• 2014 MEAT and METT results</li> <li>• Inscription in the World Heritage List, RAMSAR and AHP</li> <li>• Awards and recognitions for management</li> <li>• Coral Triangle Marine Protected Areas System (CTMPAS) Evaluation</li> </ul>	Adequate
PR12	Targets have been established to gauge management performance for BIODIVERSITY	4	<ul style="list-style-type: none"> <li>• AWFP sets targets for compliance management, IEC, research and tourism</li> </ul>	<ul style="list-style-type: none"> <li>• AWFP</li> </ul>	Adequate

<sup>6</sup> Socio-economic research refers to research in local communities, e.g., Cagayancillo, tourism and fishing

	OUTPUTS	Score	Justification	Evidence/ Sources	Confidence
OP1	To date, the actual management program (or activities) have progressed in accordance with the planned work program for BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>Annual work and financial plan largely implemented</li> <li>Connectivity and carrying capacity studies not conducted due to absence of funds and expertise</li> </ul>	<ul style="list-style-type: none"> <li>2014 MEAT and METT Reports</li> <li>Annual accomplishment report</li> </ul>	Adequate
OP2	Implementation of management documents and/or programs relevant to BIODIVERSITY have progressed in accordance with timeframes specified in those documents.	4	<ul style="list-style-type: none"> <li>Programs with allocated budget implemented in accordance with timeframes, e.g. tourism management, research, water quality</li> <li>Some unplanned activities conducted when opportunities arise, e.g. research workshop 2014, OUV and MEE workshop on new tool,</li> </ul>	<ul style="list-style-type: none"> <li>Annual accomplishment report</li> <li>Workshop reports</li> </ul>	Adequate
OP3	The results (in OP1 above) have achieved their stated management objectives for BIODIVERSITY	4	<ul style="list-style-type: none"> <li>Condition of biodiversity is maintained</li> <li>Evidence of improved live coral cover and seabird populations</li> <li>Highest fish biomass in the Philippines</li> <li>Highest rating in Coral Triangle Marine Protected Areas System (CTMPAS) Evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Research and monitoring report 2014</li> <li>Tourist exit survey</li> <li>Wells, S. and White, A. (2014) Tubbataha Reefs Natural Park – a beacon of hope for coral reefs. Reef Encounter</li> <li>Awards and recognitions for management Coral Triangle Marine Protected Areas System (CTMPAS) Evaluation</li> </ul>	Adequate
OP4	To date, products or services have been produced in accordance with the stated	4	<ul style="list-style-type: none"> <li>Policies and guidelines relevant to protecting biodiversity published</li> <li>Eco-guide trainings for dive masters</li> <li>Information materials produced for tourists and general public</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067 and its IRR</li> <li>TRNP Management Plan 2011-2021, Comprehensive Tourism Management Plan 2014, IEC Plan 2015-2020, Emergency and Risk Reduction Plan 2014,</li> </ul>	Adequate

	management objectives for BIODIVERSITY.		<ul style="list-style-type: none"> <li>• Paper presentations in scientific conferences</li> <li>• There is a need to prepare and publish a comprehensive annual report</li> </ul>	Research and Monitoring Plan 2015-2020, Buffer Zone Management Plan 2014 <ul style="list-style-type: none"> <li>• Eco-guide module</li> <li>• Primer, tourist brochures, maps, videos</li> <li>• Philippine Association of Marine Scientists workshop proceedings</li> <li>• Annual ERM reports</li> </ul>	
OP5	Knowledge regarding BIODIVERSITY is effectively managed and shared with the community	3	<ul style="list-style-type: none"> <li>• Internal database maintained</li> <li>• Most reports and plans published online</li> <li>• Public outreach conducted and information materials produced and distributed</li> <li>• USS Guardian grounding increased public interest about TRNP</li> </ul>	<ul style="list-style-type: none"> <li>• Information system</li> <li>• <a href="http://www.tubbatahareef.org">www.tubbatahareef.org</a></li> <li>• IEC report</li> <li>• News in all forms of media</li> </ul>	Adequate

	OUTCOMES	Score	Justification	Evidence/ Sources	Confidence
OC1	The relevant managing agencies are to date effectively addressing BIODIVERSITY and moving towards the attainment of the desired outcomes.	4	<ul style="list-style-type: none"> <li>• Biodiversity condition and trends improving</li> <li>• Significant increase in public understanding and support for TRNP which translates to compliance to regulations and/or financial contributions</li> <li>• Tourism Exit Survey reveal that positive feedback from other tourists attract visitors and researchers</li> <li>• TRNP serves as an example of an effectively managed MPA in the Coral Triangle</li> <li>• National and international MPA Management awards for governance</li> </ul>	<ul style="list-style-type: none"> <li>• 2014 MEAT and METT Reports</li> <li>• Scientific papers and monitoring reports</li> <li>• IEC report and CCEF IEC Evaluation 2014</li> <li>• Tourism Exit Survey Report 2014</li> <li>• Catlin Seaview Survey, volunteer researchers</li> <li>• Dygico M, et al. (2013) Achieving MPA effectiveness through application of responsive governance incentives in the Tubbataha Reefs. Mar. Policy</li> <li>• Silver Future Policy Award for RA 10067</li> <li>• Para El Mar Award for Outstanding MPA Protected Area Award for exemplary work on engaging other government</li> </ul>	Adequate

			<ul style="list-style-type: none"> <li>Vulnerability studies for species, carrying capacity, diver impact, modelling and connectivity studies need to be undertaken</li> </ul>	agencies in total effectiveness of enforcement <ul style="list-style-type: none"> <li>Awards and recognitions for management Coral Triangle Marine Protected Areas System (CTMPAS) Evaluation</li> <li>Plaques of Recognition from partner agencies</li> </ul>	
OC2	The outputs relating to BIODIVERSITY are on track to ensure the values of TRNP are protected (refer to CO1).	4	<ul style="list-style-type: none"> <li>Live coral cover and seabird populations increasing</li> <li>Fish biomass stable</li> <li>Increased sightings of top predators</li> </ul>	<ul style="list-style-type: none"> <li>Research and Monitoring Reports</li> <li>DAR and Reef Watch results</li> </ul>	Adequate
OC3	The outputs (refer to OP1 & 3) for BIODIVERSITY are reducing the major risks and the threats to the TRNP.	4	<ul style="list-style-type: none"> <li>Decrease in illegal activities are reducing risks and threats to biodiversity</li> <li>Data shows that TRNP is more resilient against bleaching events than other sites in the Philippines</li> <li>Assisted regeneration of corals in grounding sites not advised due to healthy supply of larvae and abundance of herbivores in TRNP</li> </ul>	<ul style="list-style-type: none"> <li>DAR</li> <li>Arceo et al. (2001) Coral bleaching in Philippine Reefs: Coincident Evidence with Mesoscale Thermal Anomalies. Bulletin of Marine Science, 69(2): 579-963</li> <li>Assessment Report to TPAMB by scientists</li> </ul>	Adequate
OC4	Use of the TRNP relating to BIODIVERSITY is demonstrably <u>environmentally</u> sustainable.	4	<ul style="list-style-type: none"> <li>Regulated research and tourism are the only activities allowed in TRNP</li> <li>Limited understanding and measure of impacts of research and tourism</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> </ul>	Adequate
OC5	Use of the TRNP relating to BIODIVERSITY is demonstrably <u>economically</u> sustainable.	3	<ul style="list-style-type: none"> <li>Opportunity to generate revenues is limited to 3-month tourist season</li> <li>Tourism and research are the only activities allowed</li> <li>Sustainable tourism revenues support 30% of annual core management costs</li> </ul>	<ul style="list-style-type: none"> <li>Tourism Report, Annual Accomplishment Report, Comprehensive Tourism Management Plan</li> <li>Subade, R. (2006) Mechanisms to capture economic values of marine biodiversity: The case of Tubbataha Reefs UNESCO</li> </ul>	Adequate

			<p>(16M annual operating cost, collection: 5M), other operating funds are from external sources</p> <ul style="list-style-type: none"> <li>• TRNP's economic values include fisheries and tourism (direct uses) and plankton larvae (indirect uses)</li> </ul>	World Heritage Site, Philippines. Mar Policy	
OC6	Use of the TRNP relating to BIODIVERSITY is demonstrably <u>socially sustainable</u> enhancing understanding and/or enjoyment.	4	<ul style="list-style-type: none"> <li>• 91% of respondents scored the overall quality of visit to TRNP 8 and above, on a scale of 1-10</li> <li>• Public outreach increased awareness of the general public on the conservation of TRNP</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism Exit Survey Report 2014</li> <li>• CCEF IEC Evaluation 2014</li> </ul>	Adequate
OC7	The relevant managing agencies have developed effective partnerships with local communities and/or stakeholders to address BIODIVERSITY.	4	<ul style="list-style-type: none"> <li>• Partnerships with academe and research institutions developed</li> <li>• Private and government partnerships enhanced</li> <li>• Capacity building activities include partner agencies, e.g. PCSDS, DENR, PCG, PN</li> </ul>	<ul style="list-style-type: none"> <li>• Research and Monitoring Plan 2015-2020, Pilipinas Shell Foundation, Inc. 5-year grant (MOA), GIZ Grant, TIEZA</li> <li>• Training reports</li> </ul>	Adequate

## COMMUNITY BENEFITS

	CONTEXT	Score	Justification	Evidence/ Sources	Confidence
CO1	the values <sup>7</sup> in TRNP relevant to COMMUNITY BENEFITS are understood by managers.	4	<ul style="list-style-type: none"> <li>Managers understand community benefits derived from TRNP through results of scientific studies that demonstrate larval dispersal from the park to surrounding areas</li> <li>Cagayancillo receives 10% share from tourism revenues</li> <li>TRNP's recognition as one of the top dives sites in the world contributes to Philippine economy</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Campos et al. 2008. Using Ichthyoplankton Distribution in Selecting Sites for an MPA Network in the Sulu Sea, Philippines. Proceedings of the 11<sup>th</sup> ICRS Symposium, Florida</li> <li>Rosales, R. 2006. Estimating appropriate fines for ship grounding violations in Tubbataha Reefs National Marine Park. Report submitted to Conservation International</li> </ul>	Adequate
CO2	The current condition and trend of values relevant to COMMUNITY BENEFITS are known by managers	4	<ul style="list-style-type: none"> <li>Condition and trend of values relevant to community benefits are known by managers</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystem and Monitoring Reports</li> <li>Annual Tourism Reports</li> <li>Annual Operational Report</li> </ul>	Adequate
CO3	The impacts (direct, indirect and cumulative) associated with COMMUNITY BENEFITS are understood by managers.	3	<ul style="list-style-type: none"> <li>The 10% share from tourism revenues given to Cagayancillo has supported the alternative livelihood projects of the municipality</li> <li>Protection of the park contributes to food security</li> </ul>	<ul style="list-style-type: none"> <li>Cagayancillo Fund Liquidation Report 2011, Work and Financial Plan 2012</li> <li>Arquiza and White. 1999. Tales from Tubbataha. 2<sup>nd</sup> Edition. The Bookmark: Philippines.</li> </ul>	Adequate
CO4	The broader (national/international) level influences relevant to	3	<ul style="list-style-type: none"> <li>Variables e.g., foreign exchange, security issues, epidemics that influence tourism</li> </ul>	<ul style="list-style-type: none"> <li>Comprehensive Tourism Management Plan</li> </ul>	Adequate

<sup>7</sup> Values include biological (biodiversity), socio-economic, and educational or scientific significance and ecological goods and services

	COMMUNITY BENEFITS are understood by managers.		impinge on the amount of share of Cagayancillo in tourism revenues <ul style="list-style-type: none"> <li>• Energy exploration in the Sulu Sea could impact larvae emanating from TRNP</li> <li>• Increased maritime traffic has the potential to damage the values of TRNP</li> </ul>	<ul style="list-style-type: none"> <li>• Position papers on ASL submitted to the Philippine Senate (TPAMB, 2013, 2015)</li> </ul>	
CO5	The stakeholders relevant to COMMUNITY BENEFITS are well known by managers.	3	<ul style="list-style-type: none"> <li>• The community of Cagayancillo is represented in the TPAMB</li> <li>• Stakeholders are well-known and have been consulted in the formulation of plans</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• TRNP Management Plan 2011-2021</li> </ul>	Adequate

	PLANNING	Score	Justification	Evidence/ Sources	Confidence
PL1	There is a planning system in place that effectively addresses COMMUNITY BENEFITS.	3	<ul style="list-style-type: none"> <li>• Local stakeholders, e.g., Cagayancillo LGU, PO, etc., are well represented in the TPAMB</li> <li>• Sustainable resource management strategy is a major component of conservation program of TRNP</li> <li>• Cagayancillo share from tourism revenues increased from 7% to 10% and made available to the community annually</li> <li>• Establishment of marine protected areas and fish sanctuaries in Cagayancillo was inspired by the success of Tubbataha</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• TRNP Management Plan 2011-2021</li> <li>• Cagayancillo Fund Liquidation Report 2011, Work and Financial Plan 2012</li> <li>• Comprehensive Tourism Management Plan</li> <li>• Cagayancillo Coastal Resource Management Plan</li> </ul>	Adequate
PL2	The planning system for COMMUNITY BENEFITS addresses the major	3	<ul style="list-style-type: none"> <li>• Compliance and enforcement system are in place to ensure that values are protected</li> <li>• Emergency and Risk Reduction Plan in place to address risks and threats to TRNP values</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance and Enforcement Plan 2012</li> <li>• Emergency and Risk Reduction Plan 2014</li> <li>• TPAMB Administrative Order 01-12</li> <li>• TRNP Information, Education, and Communication Plan 2014-2019</li> </ul>	Adequate



	risks/threats to the TRNP's values.		<ul style="list-style-type: none"> <li>Public outreach and education program increases appreciation on the values and encourages compliance to the rules</li> </ul>		
PL3	The actions for implementation regarding COMMUNITY BENEFITS are clearly identified within the plan.	3	<ul style="list-style-type: none"> <li>Provision of 10% share of Cagayancillo clearly stipulated in the Management Plan</li> <li>Protection of biodiversity in Tubbataha is clearly identified within the plan</li> <li>Assessment of fish catch in surrounding communities not identified in the plan</li> <li>Comprehensive Tourism Management Plan identifies actions to be implemented</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Cagayancillo Fund Liquidation Report 2011</li> <li>TPAMB Administrative Order 01-12</li> <li>Compliance and Enforcement Plan 2012</li> <li>MPR Daily Accomplishment Reports</li> <li>Subade, R. (2006) Mechanisms to capture economic values of marine biodiversity: The case of Tubbataha Reefs UNESCO World Heritage Site, Philippines. Mar Policy Comprehensive Tourism Management Plan</li> </ul>	Adequate
PL4	Clear, measurable, and appropriate objectives for management of COMMUNITY BENEFITS have been documented.	2	<ul style="list-style-type: none"> <li>Tourism objectives are documented but not all are measurable, clear, and appropriate (e.g., 'to increase appreciation towards TRNP as a tourist destination and conservation area')</li> <li>Some objectives (e.g., 'to provide high-quality visitor experience') have been measured</li> <li>Sustainable resource management objectives not clearly identified in the management plan</li> <li>Biophysical research objectives are clear, measurable, and appropriate but not directly translated to community benefits</li> </ul>	<ul style="list-style-type: none"> <li>Comprehensive Tourism Management Plan</li> <li>Tourism Exit Survey results</li> <li>Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
PL5	There are plans and systems in place to ensure that appropriate and adequate monitoring	2	<ul style="list-style-type: none"> <li>Monitoring is in effect but not comprehensive; Previous MEE tool covers socio-economic indicators but these are</li> </ul>	<ul style="list-style-type: none"> <li>2010 MEE Report</li> <li>Cola et al. (2005) First Participatory Evaluation of TRNP</li> </ul>	Adequate

	information is gathered in relation to COMMUNITY BENEFITS.		<ul style="list-style-type: none"> <li>not enough to quantify community benefits</li> <li>Monitoring is recognized as a gap</li> </ul>	<ul style="list-style-type: none"> <li>Subade, R. (2006) Mechanisms to capture economic values of marine biodiversity: The case of Tubbataha Reefs UNESCO World Heritage Site, Philippines. Mar Policy</li> </ul>	
PL6	The main stakeholders &/or the local community are effectively engaged in planning to address COMMUNITY BENEFITS.	3	<ul style="list-style-type: none"> <li>Communities (Antique, Panay Islands) and relevant industries (commercial fishing, gas and oil) were consulted in the planning process</li> <li>National agencies and Cagayancillo are represented in the management board</li> <li>The tourism industry is effectively engaged in planning</li> </ul>	<ul style="list-style-type: none"> <li>Subade, R. (2006) Mechanisms to capture economic values of marine biodiversity: The case of Tubbataha Reefs UNESCO World Heritage Site, Philippines. Mar Policy</li> <li>RA 10067</li> <li>Comprehensive Tourism Management Plan</li> <li>Annual Dive Operators' Consultation</li> </ul>	Adequate
PL7	Sufficient policy currently exists to effectively address COMMUNITY BENEFITS.	3	<ul style="list-style-type: none"> <li>Sufficient policy exists</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>TPAMB Administrative Order 01-12</li> </ul>	Adequate
PL8	There is consistency across agencies when planning for COMMUNITY BENEFITS.	3	<ul style="list-style-type: none"> <li>The TPAMB serves as a venue for interagency collaboration due to the nature of its membership, e.g., PCSO, BFAR, DENR, DOT, Navy, Coast Guard, who are involved in planning</li> <li>RA 10067 is not explicit about community benefits and well-being that relate to employment or income</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> </ul>	Adequate

	INPUTS	Score	Justification	Evidence/ Sources	Confidence
IN1	The internal financial resources are adequate and prioritised to meet specific management objectives (refer to PL4) to address COMMUNITY BENEFITS.	2	<ul style="list-style-type: none"> <li>• TMO has not directly implemented community development (CD) projects in Cagayancillo and in other municipalities in Palawan, in behalf of the TPAMB</li> <li>• Occasional public outreach activities are conducted by TMO</li> <li>• Cagayancillo share of 10% is prioritized</li> <li>• Tourism infrastructure and public outreach are not internally funded</li> <li>• Internal financial resources are prioritized to ensure that communities benefit from a healthy and stable marine ecosystem</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Work and Financial Plan</li> <li>• TRNP Management Plan 2011-2021</li> </ul>	Adequate
IN2	The human resources within the TPAMB are <u>adequate</u> to meet specific management objectives (refer to PL4) to address COMMUNITY BENEFITS.	2	<ul style="list-style-type: none"> <li>• Adequate human resources to meet management objectives for tourism and fisheries-related benefits</li> <li>• There is inadequate manpower to ensure that the benefits of Cagayancillo from TRNP are maximized</li> </ul>	<ul style="list-style-type: none"> <li>• TMO roster</li> </ul>	Adequate
IN3	The right skill sets and expertise are currently available to the TPAMB to address COMMUNITY BENEFITS.	2	<ul style="list-style-type: none"> <li>• There is some expertise and skill sets to address tourism and fisheries-related benefits but these need to be enhanced</li> <li>• The right skill sets and expertise to address community benefits to Cagayancillo need to be developed</li> <li>• No personnel is focused on community development in Cagayancillo</li> </ul>	<ul style="list-style-type: none"> <li>• TMO roster</li> <li>• TMO organizational structure</li> </ul>	Adequate
IN4	The necessary biophysical information is currently	3	<ul style="list-style-type: none"> <li>• There is some biophysical information but these needs to be enhanced (i.e., CPUE, other taxa)</li> </ul>	<ul style="list-style-type: none"> <li>• Ecosystem Research and Monitoring Reports</li> </ul>	Adequate

	available to address COMMUNITY BENEFITS.				
IN5	The necessary socio-economic information is currently available to address COMMUNITY BENEFITS.	3	<ul style="list-style-type: none"> <li>• There is adequate socio-economic information on tourists</li> <li>• Socio-economic information available to address community benefits in Cagayancillo</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive Tourism Management Plan</li> <li>• TRNP Business Plan</li> <li>• Subade, R. (2006) Mechanisms to capture economic values of marine biodiversity: The case of Tubbataha Reefs UNESCO World Heritage Site, Philippines. Mar Policy</li> </ul>	Adequate
IN6	There are additional sources of non-government input (e.g. volunteers) contributing to address COMMUNITY BENEFITS.	4	<ul style="list-style-type: none"> <li>• WWF implemented community development (CD) projects in Cagayancillo from 2000-2009 in behalf of the TPAMB</li> <li>• From 2006-2011, Conservation International (CI), another member of the TPAMB, implemented projects in the municipality</li> <li>• The private sector, e.g., PSFI, provides funds for tourism and public outreach activities</li> <li>• There are occasional allocations received from government agencies, e.g., DENR, TIEZA, PGP, GIZ, for tourism and public outreach</li> </ul>	<ul style="list-style-type: none"> <li>• Minutes of TPAMB meetings</li> <li>• Socio-Economic Report 2014, WWF-Phils</li> <li>• MOA with TIEZA, PSFI</li> </ul>	Adequate

	PROCESSES	Score	Justification	Evidence/ Sources	Confidence
PR1	The main stakeholders &/or industry(ies) are effectively engaged in the ongoing management of COMMUNITY BENEFITS.	4	<ul style="list-style-type: none"> <li>• Cagayancillo LGU, DOT, DENR and BFAR are represented in the TPAMB</li> <li>• The 10% share of Cagayancillo from tourism revenues is directly managed by its LGU</li> <li>• Annual consultation and open lines of communication with dive operators and tourists to encourage compliance to rules and support to conservation</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• Cagayancillo Fund Liquidation Report 2011</li> <li>• Annual Dive Operators' Consultation</li> </ul>	Adequate
PR2	The local community <sup>8</sup> is effectively engaged in the ongoing management of COMMUNITY BENEFITS.	3	<ul style="list-style-type: none"> <li>• The 10% share of Cagayancillo from tourism revenues is directly managed by its LGU</li> <li>• Education and outreach activities increase tourist, fisher folk and students' appreciation of TRNP values</li> <li>• Cagayancillo LGU and PO are members of the TPAMB</li> </ul>	<ul style="list-style-type: none"> <li>• Cagayancillo Fund Liquidation Report 2011</li> <li>• TRNP Information, Education, and Communication Plan 2014-2019</li> <li>• RA 10067</li> </ul>	Adequate
PR3	There is a sound governance system in place to address COMMUNITY BENEFITS.	4	<ul style="list-style-type: none"> <li>• Multi-stakeholder management board ensures that governance is participatory</li> <li>• Management ensures that relevant agencies and sectors are consulted and involved in planning</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> </ul>	Adequate
PR4	There is effective monitoring, including regular appraisal of assessment tools to gauge progress towards the	2	<ul style="list-style-type: none"> <li>• Baseline survey for tourists' appreciation of the park conducted in 2014</li> <li>• Previous monitoring system is not comprehensive to quantify community benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism Exit Survey results</li> <li>• 2010 MEE results</li> </ul>	Adequate

<sup>8</sup> Municipality of Cagayancillo

	objective(s) for COMMUNITY BENEFITS.				
PR5	Appropriate training is available to the managing agencies to address COMMUNITY BENEFITS.	2	<ul style="list-style-type: none"> <li>• A few trainings have been made available to Cagayancillo in the past, e.g., microfinance, tourism, MPA management, seaweed farming</li> <li>• There is need for managers to aggressively explore opportunities and participate in trainings/workshops</li> </ul>	<ul style="list-style-type: none"> <li>• Training reports</li> </ul>	Adequate
PR6	Management of COMMUNITY BENEFITS is consistently implemented	4	<ul style="list-style-type: none"> <li>• Management of community benefits from tourism is consistently implemented</li> <li>• Management programs are in place to protect fisheries</li> <li>• Cagayancillo receives 10% share in tourism revenues and this is managed by the LGU</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• Comprehensive Tourism Management Plan</li> <li>• Research and Monitoring Plan</li> <li>• Cagayancillo Fund Liquidation Report 2011</li> </ul>	Adequate
PR7	There are effective processes applied to resolve differing views/conflicts regarding COMMUNITY BENEFITS.	4	<ul style="list-style-type: none"> <li>• Multi-stakeholder consultations are organized to provide the venue for the resolution of differing views/conflicts</li> <li>• To avoid conflicts in use of resources, rules and regulations are established, disseminated, and strictly enforced</li> <li>• Judicial means of resolving conflict is a tool of last resort</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Dive Operators' Consultation</li> <li>• Management Plan Review</li> <li>• Buffer zone Planning Workshop</li> <li>• RA 10067</li> </ul>	Adequate
PR8	Impacts (direct, indirect and cumulative) of activities associated with COMMUNITY BENEFITS are appropriately considered.	3	<ul style="list-style-type: none"> <li>• The 10% Cagayancillo share in tourism revenues was instituted to recompense local communities for the loss of fishing access to TRNP</li> <li>• TRNP's no-take policy resulted in a healthy marine environment thereby encouraging tourism, which in turn contributes funds for management</li> </ul>	<ul style="list-style-type: none"> <li>• TPAMB Resolution 07-12</li> <li>• TRNP Management Plan 2011-2021</li> <li>• Campos et al. 2008. Using Ichthyoplankton Distribution in Selecting Sites for an MPA Network in the Sulu Sea, Philippines. Proceedings of the 11<sup>th</sup> ICRS Symposium, Florida</li> </ul>	Adequate

			<ul style="list-style-type: none"> <li>Fishers benefit from the spillover effect and larval dispersal from TRNP</li> </ul>		
PR9	The best available <u>biophysical</u> research and/or monitoring information is applied appropriately to make relevant management decisions regarding COMMUNITY BENEFITS.	3	<ul style="list-style-type: none"> <li>Biophysical research and monitoring are used in decision making about community benefits</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystem Research and Monitoring Report</li> </ul>	Adequate
PR10	The best available <u>socio-economic</u> <sup>9</sup> research and/or monitoring information is applied appropriately to make relevant management decisions regarding COMMUNITY BENEFITS.	3	<ul style="list-style-type: none"> <li>Socio-economic research and monitoring is a gap</li> <li>Available socio-economic information is applied to make relevant decisions, e.g., penalties for coral damage, establishment of microcredit facility in Cagayancillo by WWF</li> </ul>	<ul style="list-style-type: none"> <li>Rosales, R. 2006. Estimating appropriate fines for ship grounding violations in Tubbataha Reefs National Marine Park. Report submitted to Conservation International</li> <li>Subade, R. (2006) Mechanisms to capture economic values of marine biodiversity: The case of Tubbataha Reefs UNESCO World Heritage Site, Philippines. Mar Policy</li> </ul>	Adequate
PR11	Relevant standards are identified and being met regarding COMMUNITY BENEFITS.	2	<ul style="list-style-type: none"> <li>Best diving practices encouraged through trainings for diving professionals, consultations with private sector, and information materials</li> </ul>	<ul style="list-style-type: none"> <li>Dive Masters' Orientation</li> <li>Dive Operators' Consultation</li> <li><a href="http://tubbatahareef.org/wordpress/?p=712">http://tubbatahareef.org/wordpress/?p=712</a></li> <li><a href="http://tubbatahareef.org/wp/education_outreach">http://tubbatahareef.org/wp/education_outreach</a></li> </ul>	Adequate
PR12	Targets have been	4	<ul style="list-style-type: none"> <li>Targets for tourism, e.g., permitting system, visitor compliance, have been</li> </ul>	<ul style="list-style-type: none"> <li>Comprehensive Tourism Management Plan 2014</li> </ul>	Adequate

<sup>9</sup> Socio-economic research relevant to tourism refers to dive industry

	established to gauge management performance for COMMUNITY BENEFITS.		<p>established and demonstrate average management performance</p> <ul style="list-style-type: none"> <li>Outstanding Universal Value (OUV) is maintained to ensure continued delivery of community benefits</li> </ul>	<ul style="list-style-type: none"> <li>2014 Management Planning and MEE Workshop Report</li> </ul>	
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	OUTPUTS	Score	Justification	Evidence/ Sources	Confidence
OP1	To date, the actual management program (or activities) have progressed in accordance with the planned work program for COMMUNITY BENEFITS.	3	<ul style="list-style-type: none"> <li>Management programs and activities have progressed according to plans, e.g., research and monitoring, tourism management activities, compliance and enforcement, outreach</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> <li>TRNP IEC Plan</li> <li>Tubbataha Youth Ambassador Program</li> </ul>	Adequate
OP2	Implementation of management documents and/or programs relevant to COMMUNITY BENEFITS have progressed in accordance with timeframes specified in those documents.	3	<ul style="list-style-type: none"> <li>Management programs have progressed according to time frames specified in management documents</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> </ul>	Adequate
OP3	The results (in OP1 above) have achieved their stated management objectives for COMMUNITY BENEFITS.	3	<ul style="list-style-type: none"> <li>Management objective have been achieved for programs mentioned in OP1</li> </ul>	<ul style="list-style-type: none"> <li>Annual Operational Report</li> </ul>	Adequate
OP4	To date, products or services have been produced in	3	<ul style="list-style-type: none"> <li>Farm to market roads in Cagayancillo have been constructed using the 10% share from tourism revenues from TRNP</li> </ul>	<ul style="list-style-type: none"> <li>Cagayancillo Fund Liquidation Report 2011</li> <li>Mooring buoy trip report 2013</li> </ul>	Adequate



	accordance with the stated management objectives for COMMUNITY BENEFITS.		<ul style="list-style-type: none"> <li>Establishment of mooring and marker buoys in Cagayancillo to curtail resource destruction from anchorage</li> <li>Public outreach activities were conducted and information materials disseminated to increase appreciation on the values of TRNP and encourage compliance to regulations</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Information Education and Communications Plan</li> </ul>	
OP5	Knowledge regarding COMMUNITY BENEFITS is effectively managed and shared with the community	3	<ul style="list-style-type: none"> <li>A comprehensive database is in place and updated</li> <li>Processed data is shared through information materials, social media, outreach, participation in symposia, workshops</li> <li>Policy on data sharing was established</li> </ul>	<ul style="list-style-type: none"> <li>TMO database</li> <li>Research and Monitoring Plan</li> </ul>	Adequate

	OUTCOMES	Score	Justification	Evidence/ Sources	Confidence
OC1	The relevant managing agencies are to date effectively addressing COMMUNITY BENEFITS and moving towards the attainment of the desired outcomes.	3	<ul style="list-style-type: none"> <li>CI and WWF on behalf of TPAMB conduct livelihood and capacity building projects in Cagayancillo</li> <li>Laws and policies are strictly enforced by TMO and its marine park rangers to enhance TRNP's marine biodiversity and aesthetic values</li> <li>Management of fisheries is only limited to within park boundaries</li> </ul>	<ul style="list-style-type: none"> <li>Minutes of TPAMB meetings</li> <li>MPR DAR</li> <li>RA 10067</li> </ul>	Adequate
OC2	The outputs relating to COMMUNITY BENEFITS are on track to ensure the values of	4	<ul style="list-style-type: none"> <li>Targeted outputs achieved, e.g., mooring and marker buoys, public outreach activities in Cagayancillo, 10% share from tourism revenues successfully disbursed</li> </ul>	<ul style="list-style-type: none"> <li>Cagayancillo Fund Liquidation Report 2011</li> <li>Mooring buoy trip report 2013</li> <li>Annual Operational Report</li> </ul>	Adequate

	TRNP are protected (refer to CO1).				
OC3	The outputs (refer to OP1 & 3) for COMMUNITY BENEFITS are reducing the major risks and the threats to the TRNP.	4	<ul style="list-style-type: none"> <li>• Successful partnerships with tourism industry and engagement of local community and fishers result in increased compliance to rules and regulations which lead to reduction of major risks and threats to TRNP</li> </ul>	<ul style="list-style-type: none"> <li>• MEE 2010 results</li> <li>• Enforcement database (lower number of violations)</li> <li>• TRNP Tourism Report (lower number of violations)</li> </ul>	Adequate
OC4	Use of the TRNP relating to COMMUNITY BENEFITS is demonstrably <u>environmentally</u> sustainable.	4	<ul style="list-style-type: none"> <li>• Increasing population of top predators in TRNP demonstrates the stability of its marine environment</li> <li>• Less than 10% of the park is utilized for tourism activities</li> <li>• The limited window for tourism operations allows for the natural recovery of the marine environment</li> </ul>	<ul style="list-style-type: none"> <li>• Ecosystem Research and Monitoring Report</li> <li>• TRNP Comprehensive Management Plan 2011-2021</li> <li>• TRNP Tourism Report</li> <li>• TRNP dive map</li> </ul>	Adequate
OC5	Use of the TRNP relating to COMMUNITY BENEFITS is demonstrably <u>economically</u> sustainable.	2	<ul style="list-style-type: none"> <li>• Revenue generated from tourism operations only covers 30% of the total annual core management costs for TRNP</li> </ul>	<ul style="list-style-type: none"> <li>• Annual work and Financial Plan</li> <li>• TRNP Tourism Report</li> </ul>	Adequate
OC6	Use of the TRNP relating to COMMUNITY BENEFITS is demonstrably socially sustainable enhancing understanding and/or enjoyment.	4	<ul style="list-style-type: none"> <li>• 91% of tourists who visited Tubbataha in 2014 were very satisfied with the experience and 87.5% signified their intent to return</li> </ul>	<ul style="list-style-type: none"> <li>• 2014 Tourism Exit Survey Results</li> </ul>	Adequate
OC7	The relevant managing agencies have developed effective	4	<ul style="list-style-type: none"> <li>• Management of TRNP is a multi-sectoral approach</li> </ul>		Adequate

	<p>partnerships with local communities and/or stakeholders to address COMMUNITY BENEFITS.</p>		<ul style="list-style-type: none"> <li>Managers have developed successful partnerships with tourism industry, local community and fishers which resulted to increased appreciation of values of TRNP and compliance with rules and regulations</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>Enforcement database (lower number of violations)</li> <li>TRNP Tourism Report (lower number of violations)</li> <li>Aked, J. (2014) Riding the Waves of Change: The challenges of volunteering in highly complex poverty contexts. VSO International</li> <li>CCEF. (2014) An Evaluation of the Tubbataha Management Office's (TMO) Information, Education and Communications (IEC) School Visits in Schools and Coastal Villages in Palawan, Philippines. A report submitted by the Coastal Conservation and Education Foundation, Inc.</li> </ul>	
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## WATER QUALITY

	CONTEXT	Score	Justification	Evidence/ Sources	Confidence
CO1	The values <sup>10</sup> in TRNP relevant to WATER QUALITY are understood by managers.	3	<ul style="list-style-type: none"> <li>Values relevant to water quality are understood by most of the managers but knowledge needs to be enhanced</li> <li>Baseline water quality assessment conducted in 2014</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> </ul>	Adequate
CO2	The current condition and trend of values relevant to WATER QUALITY are known by managers	2	<ul style="list-style-type: none"> <li>Baseline water quality assessment conducted in 2014; trends not yet determined</li> </ul>	<ul style="list-style-type: none"> <li>Water Quality report 2014</li> </ul>	Adequate
CO3	The impacts (direct, indirect and cumulative) associated with WATER QUALITY are understood by managers.	4	<ul style="list-style-type: none"> <li>Managers have some understanding of the impacts of poor water quality to the reefs</li> <li>Management attempts to lessen the impacts of allowed activities to water quality, e.g., dive boats are required to discharge graywater at least 1 nm from reef edge, provided it is not within the channel restriction</li> <li>Meeting with DOE to resolve oil exploration claim overlapping with TRNP boundaries</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067 Sec 23</li> <li>IRR Rule 18 Sec (j)</li> <li>TRNP Management Plan 2011-2021</li> <li>Research and Monitoring Plan 2015-2020</li> <li>Minutes of meeting</li> <li>Travel report</li> </ul>	Adequate
CO4	The broader (national/international) level influences relevant to WATER	3	<ul style="list-style-type: none"> <li>Collaboration with PCG on oil spill response, with national government on delineation of sea lanes in the Sulu Sea</li> <li>Managers understand that Increase in marine traffic could have potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>Travel report</li> <li>Position Paper on ASL Bill (2011 and 2013)</li> <li>Buffer Zone Management Plan 2014</li> </ul>	Adequate

<sup>10</sup> Values include biological (biodiversity), socio-economic, and educational or scientific significance and ecological goods and services

	QUALITY are understood by managers.		on water quality, e.g., accumulation of solid waste, oil and chemical spill, hence, application for PSSA		
CO5	The stakeholders relevant to WATER QUALITY are well known by managers.	4	<ul style="list-style-type: none"> <li>Discussions with relevant national agencies and stakeholders to discuss impacts of national initiatives on water quality in TRNP</li> <li>Collaboration with PCSDS, DENR and WWF-Philippines to conduct water quality analysis</li> <li>Private sector and other government agencies support through financial grants</li> <li>Dive industry abide with park rules</li> </ul>	<ul style="list-style-type: none"> <li>Travel reports, e.g., ASL, DOE SC61</li> <li>National conference on PSSA</li> <li>MOA</li> <li>PSFI-TPAMB MOA</li> <li>Comprehensive Tourism Plan</li> </ul>	Adequate

	PLANNING	Score	Justification	Evidence/ Sources	Confidence
PL1	There is a planning system in place that effectively addresses WATER QUALITY.	3	<ul style="list-style-type: none"> <li>Annual planning articulate activities to monitor and protect water quality</li> <li>Water quality monitoring protocol was established in 2014 for annual implementation</li> <li>Dive boats are required to have holding tanks and to discharge graywater at least 1 nm from reef edge, provided it is not within the channel</li> </ul>	<ul style="list-style-type: none"> <li>AWFP, Management Plan 2011-2021, ERM Plan</li> <li>PCSDS-TMO-KKP MOA</li> <li>TPAMB AO 01-12</li> <li>Comprehensive Tourism Management Plan 2013</li> </ul>	Adequate
PL2	The planning system for WATER QUALITY addresses the major risks/threats to the TRNP's values.	3	<ul style="list-style-type: none"> <li>Planning with relevant national agencies and stakeholders to discuss impacts of sea lanes and oil exploration contracts on the water quality of TRNP</li> <li>Management actions, e.g., holding tanks, protocols for graywater discharge and</li> </ul>	<ul style="list-style-type: none"> <li>Travel reports, e.g., ASL, DOE SC61</li> <li>TPAMB AO 01-12</li> <li>Comprehensive Tourism Management Plan 2013</li> <li>Water Quality Report 2014</li> </ul>	Adequate

			<p>changing of engine oil, are established to minimize threats to the park's values from poor water quality</p> <ul style="list-style-type: none"> <li>Results of baseline water quality analysis informed of high oil and grease levels in most monitoring sites</li> </ul>		
PL3	The actions for implementation regarding WATER QUALITY are clearly identified within the plan.	3	<ul style="list-style-type: none"> <li>Annual monitoring of water quality is identified within the plan</li> <li>Regulation on holding tanks, changing of engine oil and discharge of graywater are in place</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>TRNP Management Plan 2015-2020</li> <li>TPAMB AO 01-12</li> <li>Research and Monitoring Plan 2015-2020</li> <li>Comprehensive Tourism Management Plan 2014</li> </ul>	Adequate
PL4	Clear, measurable, and appropriate objectives for management of WATER QUALITY have been documented.	3	<ul style="list-style-type: none"> <li>Water quality objectives are contained in the RA 10067 and IRR, management plan, and research plan</li> <li>TRNP follows the standards for water quality as imposed by DENR DAO 34 and 35</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067, IRR, TRNP Management Plan, ERM Plan</li> <li>DENR DAO 34 and 35</li> <li>Verbal agreement between PCSD and TMO</li> </ul>	Adequate
PL5	There are plans and systems in place to ensure that appropriate and adequate monitoring information is gathered in relation to WATER QUALITY.	4	<ul style="list-style-type: none"> <li>Water quality monitoring is identified in the research plan</li> <li>Planned annual water quality analysis began in 2014 in partnership with PCSDS</li> <li>Proper disposal of graywater are reported by dive boats and duly noted by MPRs</li> </ul>	<ul style="list-style-type: none"> <li>Research and Monitoring Plan 2015-2020</li> <li>PCSDS-TMO-KKP MOA (Water Quality)</li> <li>TPAMB AO 01-12</li> </ul>	Adequate
PL6	The main stakeholders &/or the local community are effectively engaged in planning to address WATER QUALITY.	3	<ul style="list-style-type: none"> <li>Local communities and other stakeholders were consulted in formulating the management plan which identified the need for water quality protection and monitoring</li> <li>Local and national researchers were engaged in the research planning which</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Research and Monitoring Plan 2015-2020</li> </ul>	Adequate

			include water quality protection and monitoring		
PL7	Sufficient policy currently exists to effectively address WATER QUALITY.	4	<ul style="list-style-type: none"> <li>Water quality protection is stipulated in RA 10067 and its IRR</li> <li>Policies on graywater discharge and change oil ban exist but additional policies are still needed to strengthen mitigating measures</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067, TPAMB AO 01-12</li> <li>TPAMB AO 01-12</li> </ul>	Adequate
PL8	There is consistency across agencies when planning for WATER QUALITY.	3	<ul style="list-style-type: none"> <li>Increase in marine traffic is believed to be directly correlated to marine pollution therefore resulting in poor water quality</li> <li>Application as PSSA attempts to regulate marine traffic adjacent to park boundaries</li> <li>There were some issues pertaining to the ASL Bill as proposed sea lanes overlapped TRNP boundaries</li> </ul>	<ul style="list-style-type: none"> <li>Position paper on Senate Bill no. 159 (2013)</li> <li>PSSA Application</li> </ul>	Adequate

	INPUTS	Score	Justification	Evidence/ Sources	Confidence
IN1	The internal financial resources are adequate and prioritized to meet specific management objectives (refer to PL4) to address WATER QUALITY.	3	<ul style="list-style-type: none"> <li>Water quality protection is incorporated in the core activities which are prioritized in the AWFP</li> <li>Water quality monitoring in 2014 was carried out through an external grant</li> <li>Responds to threats to water quality, e.g., oil spills, cannot be fully covered by internal funds</li> <li>There are no internal funds specifically allocated for water quality monitoring</li> </ul>	<ul style="list-style-type: none"> <li>AWFP</li> <li>TIEZA grant</li> </ul>	Adequate

IN2	The human resources within the TPAMB are <u>adequate</u> to meet specific management objectives (refer to PL4) to address WATER QUALITY.	3	<ul style="list-style-type: none"> <li>Inherent in MPR functions is the protection of water quality</li> <li>TMO functions as coordinator between agencies and MPRs in the incidence of threats to water quality</li> <li>The PCG, a TPAMB member, is the national agency mandated to respond to marine pollution</li> <li>Technical assistance is being provided by PCSDS to TMO in water quality monitoring</li> </ul>	<ul style="list-style-type: none"> <li>ERRP, MPR DAR</li> <li>MPR training module</li> <li>National Oil Spill Response (PCG)</li> <li>PCSDS-TMO-KKP MOA (Water Quality)</li> </ul>	Adequate
IN3	The right skill sets and expertise are currently available to the TPAMB to address WATER QUALITY.	3	<ul style="list-style-type: none"> <li>Skill sets and expertise are available to the TPAMB through its members, e.g., PCSDS, PCG, PN</li> <li>Skill sets are available but inadequate</li> </ul>	<ul style="list-style-type: none"> <li>Water Quality Monitoring Report (to follow)</li> </ul>	Adequate
IN4	The necessary biophysical information is currently available to address WATER QUALITY.	3	<ul style="list-style-type: none"> <li>Baseline data on water quality was established recently in 2014</li> <li>Oceanographic studies in TRNP identified current and wave patterns and directions which served as basis for policies</li> <li>Future plans include regular sampling and monitoring of water quality</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Research and Monitoring Plan 2015-2020</li> <li>Water Quality Monitoring Report (to follow)</li> </ul>	Adequate
IN5	The necessary socio-economic information is currently available to address WATER QUALITY.	3	<ul style="list-style-type: none"> <li>There is socio-economic information available on Cagayancillo and the diving industry related to marine resources which includes water quality</li> </ul>	<ul style="list-style-type: none"> <li>Tourism report</li> <li>WWF report</li> </ul>	Adequate
IN6	There are additional sources of non-government input (e.g.	3	<ul style="list-style-type: none"> <li>Private sector, academe and NGOs provide significant contributions in the implementation of public outreach and</li> </ul>	<ul style="list-style-type: none"> <li>Annual Operational Report</li> <li>PSFI-TMO MOA</li> <li>Ecosystem Research and Monitoring Report</li> </ul>	Adequate



	volunteers) contributing to address WATER QUALITY.		education program, law enforcement, and research activities		
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	PROCESSES	Score	Justification	Evidence/ Sources	Confidence
PR1	The main stakeholders &/or industry(ies) are effectively engaged in the ongoing management of WATER QUALITY.	3	<ul style="list-style-type: none"> <li>• TRNP is managed through a series of consultative and participatory processes</li> <li>• Management of TRNP is achieved through partnerships with stakeholders and relevant industries</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• RA 10067</li> </ul>	Adequate
PR2	The local community <sup>11</sup> is effectively engaged in the ongoing management of WATER QUALITY.	3	<ul style="list-style-type: none"> <li>• Cagayancillo is represented in the TPAMB</li> <li>• The tourism sector is engaged in water quality protection</li> <li>• MPRs, some of whom come from the local communities, take part in the monitoring of water quality</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• TMO Manual of Operations (MPR TOR)</li> </ul>	Adequate
PR3	There is a sound governance system in place to address WATER QUALITY.	3	<ul style="list-style-type: none"> <li>• Water quality monitoring is incorporated in the relevant conservation plans</li> <li>• Method for monitoring still in the process of refinement</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
PR4	There is effective monitoring, including regular appraisal of assessment tools to gauge progress towards the	2	<ul style="list-style-type: none"> <li>• Water quality monitoring was only initiated in 2014</li> <li>• Method for monitoring still in the process of refinement</li> </ul>	<ul style="list-style-type: none"> <li>• Water Quality Monitoring Report</li> <li>• PCSDS results of analyses</li> </ul>	Adequate

<sup>11</sup> Municipality of Cagayancillo

	objective(s) for WATER QUALITY.				
PR5	Appropriate training is available to the managing agencies to address WATER QUALITY.	3	<ul style="list-style-type: none"> <li>PCSDS employs trained personnel as well as appropriate equipment for water quality monitoring; they also provided training for TMO staff and MPRs</li> <li>The need for further training for TMO staff has been identified</li> </ul>	<ul style="list-style-type: none"> <li>PCSDS-TMO-KKP MOA (Water Quality)</li> </ul>	Adequate
PR6	Management of WATER QUALITY is consistently implemented	3	<ul style="list-style-type: none"> <li>RA 10067 and the IRR mandate water quality protection</li> <li>Water quality protection is an organic function of TMO</li> <li>To date, sampling has only been conducted once (2014)</li> </ul>	<ul style="list-style-type: none"> <li>Water Quality Monitoring Results</li> </ul>	Adequate
PR7	There are effective processes applied to resolve differing views/conflicts regarding WATER QUALITY.	3	<ul style="list-style-type: none"> <li>Consultations are held by TMO to resolve differing views on water quality issues</li> </ul>	<ul style="list-style-type: none"> <li>Dive Operators Consultation 2010, 2012</li> <li>Position Paper on ASL 2010, 2013</li> <li>Travel report DOE</li> <li>Minutes of meeting with PCSDS on water quality monitoring</li> </ul>	Adequate
PR8	Impacts (direct, indirect and cumulative) of activities associated with WATER QUALITY are appropriately considered.	3	<ul style="list-style-type: none"> <li>Impacts have been considered, hence, policies have been implemented to protect water quality</li> <li>Activities within the park that affect water quality are strictly monitored</li> <li>Activities outside of the park that impact water quality are expected to be mitigated with the designation of TRNP as PSSA</li> </ul>	<ul style="list-style-type: none"> <li>TPAMB AO 01-12</li> <li>PSSA application</li> </ul>	Adequate
PR9	The best available <u>biophysical</u> research and/or monitoring information is applied	3	<ul style="list-style-type: none"> <li>Results of oceanographic studies were used to institute regulations that affect water quality</li> </ul>	<ul style="list-style-type: none"> <li>Oceanographic studies</li> <li>Water Quality Monitoring Results</li> </ul>	Adequate

	appropriately to make relevant management decisions regarding WATER QUALITY.		<ul style="list-style-type: none"> <li>Water quality monitoring results have not yet been interpreted thereby have not been used for management decisions</li> </ul>		
PR10	The best available <u>socio-economic</u> <sup>12</sup> research and/or monitoring information is applied appropriately to make relevant management decisions regarding WATER QUALITY.	3	<ul style="list-style-type: none"> <li>Socio-economic information on Cagayancillo and the dive industry were applied in decision making on water quality protection</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067, TPAMB AO 01-12</li> <li>WWF socio-economic report 2014</li> </ul>	Adequate
PR11	Relevant standards are identified and being met regarding WATER QUALITY.	3	<ul style="list-style-type: none"> <li>TRNP follows the standards for water quality as imposed by DENR DAO 34 and 35</li> </ul>	<ul style="list-style-type: none"> <li>DENR DAO 34</li> <li>Verbal agreement between PCSD and TMO</li> </ul>	Adequate
PR12	Targets have been established to gauge management performance for WATER QUALITY.	3	<ul style="list-style-type: none"> <li>TRNP follows national standards for water quality</li> </ul>	<ul style="list-style-type: none"> <li>DENR DAO 34</li> <li>Verbal agreement between PCSD and TMO</li> </ul>	Adequate

	OUTPUTS	Score	Justification	Evidence/ Sources	Confidence
OP1	To date, the actual management program (or activities) have progressed in accordance with	3	<ul style="list-style-type: none"> <li>The strategies to protect water quality were incorporated in core activities of TMO and progressed according to AWFP</li> <li>Management actions, e.g., holding tanks, protocols for graywater discharge, and</li> </ul>	<ul style="list-style-type: none"> <li>AWFP</li> <li>MEE Report 2004</li> <li>Water Quality Report 2014</li> <li>TPAMB AO 01-12</li> <li>Annual Tourism Report</li> </ul>	Adequate

<sup>12</sup> Socio-economic research relevant to tourism refers to dive industry

	the planned work program for WATER QUALITY.		<p>changing of engine oil are implemented in accordance with the work program</p> <ul style="list-style-type: none"> <li>• Implementation of water quality monitoring activities were delayed due to limited funds, i.e., need for monitoring identified in 2004 but was only implemented starting 2014</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Dive Operators' Consultation Report</li> </ul>	
OP2	Implementation of management documents and/or programs relevant to WATER QUALITY have progressed in accordance with timeframes specified in those documents.	3	<ul style="list-style-type: none"> <li>• The strategies to protect water quality were incorporated in core activities of TMO and progressed according to timeframe set in the AWFP</li> <li>• Management actions, e.g., holding tanks, protocols for graywater discharge, and changing of engine oil are implemented in accordance with the timeframe</li> </ul>	<ul style="list-style-type: none"> <li>• MEE Reports 2004, 2006, 2009, and 2010</li> <li>• TPAMB AO 01-12</li> <li>• AWFP</li> <li>• Annual Tourism Report</li> <li>• Annual Dive Operators' Consultation Report</li> </ul>	Adequate
OP3	The results (in OP1 above) have achieved their stated management objectives for WATER QUALITY.	3	<ul style="list-style-type: none"> <li>• Management actions, e.g., holding tanks, protocols for graywater discharge, and changing of engine oil, are implemented but its effectiveness has yet to be determined</li> <li>• To date, only baseline information on water quality is available and not enough to determine the success of management objectives for water quality</li> </ul>	<ul style="list-style-type: none"> <li>• TPAMB AO 01-12</li> <li>• Annual Tourism Report</li> <li>• Annual Dive Operators' Consultation Report</li> <li>• Water Quality Report 2014</li> </ul>	Adequate
OP4	To date, products or services have been produced in accordance with the stated management objectives for WATER QUALITY.	3	<ul style="list-style-type: none"> <li>• Implementation of IRR on gray water discharge</li> <li>• Management actions to address water quality issues have been integrated into conservation plans to ensure continuity of implementation</li> </ul>	<ul style="list-style-type: none"> <li>• TPAMB AO 01-12 Rule 18 (j)</li> <li>• Comprehensive Tourism Management Plan 2013</li> <li>• TPAMB AO 01-12</li> <li>• RA 10067</li> <li>• Water Quality Report 2014</li> </ul>	Adequate

			<ul style="list-style-type: none"> <li>Results of laboratory analysis have provided a baseline for water quality; report being finalized</li> </ul>		
OP5	Knowledge regarding WATER QUALITY is effectively managed and shared with the community	3	<ul style="list-style-type: none"> <li>Baseline data on water quality reported to dive operators in 2015 prior to dive season</li> <li>Other management actions relevant to water quality, e.g., holding tanks, protocols for graywater discharge, and changing of engine oil, have been properly communicated to stakeholders as evidenced by their compliance</li> </ul>	<ul style="list-style-type: none"> <li>Water Quality Report 2014</li> <li>MPR logbook on graywater discharge</li> </ul>	Adequate

	OUTCOMES	Score	Justification	Evidence/ Sources	Confidence
OC1	The relevant managing agencies are to date effectively addressing WATER QUALITY and moving towards the attainment of the desired outcomes.	3	<ul style="list-style-type: none"> <li>The TPAMB is making good progress in achieving the desired outcomes</li> <li>Diving industry complies with park rules and regulations relevant to water quality, e.g., holding tanks, protocols for graywater discharge, and changing of engine oil</li> </ul>	<ul style="list-style-type: none"> <li>PCSDS-KKP-TMO MOA</li> <li>Comprehensive Tourism Management Plan 2013</li> <li>TPAMB AO 01-12</li> <li>RA 10067</li> </ul>	Adequate

OC2	The outputs relating to WATER QUALITY are on track to ensure the values of TRNP are protected (refer to CO1).	3	<ul style="list-style-type: none"> <li>• Management actions, e.g., holding tanks, protocols for graywater discharge, and changing of engine oil, are implemented but its effectiveness has yet to be determined</li> <li>• Policies on water quality protection is on track</li> <li>• Baseline for water quality parameters were established in 2014</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive Tourism Management Plan 2013</li> <li>• TPAMB AO 01-12</li> <li>• RA 10067</li> <li>• Water Quality Report 2014</li> <li>• PCSDS-KKP-TMO MOA</li> </ul>	Adequate
OC3	The outputs (refer to OP1 & 3) for WATER QUALITY are reducing the major risks and the threats to the TRNP.	3	<ul style="list-style-type: none"> <li>• Policies pertaining to water quality are being implemented and are reducing the risks and threats to TRNP</li> <li>• To date, effectiveness of management actions in reducing risk and threats cannot be determined</li> </ul>		Adequate
OC4	Use of the TRNP relating to WATER QUALITY is demonstrably <u>environmentally</u> sustainable.	3	<ul style="list-style-type: none"> <li>• TRNP is managed under a no-take policy</li> <li>• Tourism and research are the only allowed activities inside the park, thus ensuring that the use of TRNP is environmentally sustainable</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> </ul>	Adequate
OC5	Use of the TRNP relating to WATER QUALITY is demonstrably <u>economically</u> sustainable.	3	<ul style="list-style-type: none"> <li>• From the private sector standpoint, water quality (clarity) is one of the reasons for high visitor satisfaction</li> <li>• From the management standpoint, good water quality encourages tourism which generates 30% of the funds to manage TRNP</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Tourism Report</li> <li>• Annual Operational Report</li> <li>• 2014 Exit Survey Results</li> </ul>	Adequate
OC6	Use of the TRNP relating to WATER QUALITY is demonstrably socially	4	<ul style="list-style-type: none"> <li>• Survey show that 91% of visitors were very satisfied with their experience in TRNP; high quality visitor experience translates</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism Exit Survey 2014</li> </ul>	Adequate

	sustainable enhancing understanding and/or enjoyment.		<p>to enhanced understanding and enjoyment</p> <ul style="list-style-type: none"> <li>• Ten percent return visitors in 2014</li> </ul>		
OC7	The relevant managing agencies have developed effective partnerships with local communities and/or stakeholders to address WATER QUALITY.	3	<ul style="list-style-type: none"> <li>• TPAMB relies on dive operators' support and compliance in addressing water quality</li> <li>• Partnership with academe and other research institutions, e.g., PCSDS, allow for monitoring of water quality in TRNP</li> </ul>	<ul style="list-style-type: none"> <li>• PCSD-KKP-TMO MOA</li> <li>• Comprehensive Tourism Management Plan 2013</li> <li>• Dive Operators' Consultation</li> </ul>	Adequate

## FISHING

	CONTEXT	Score	Justification	Evidence/ Sources	Confidence
CO1	The values <sup>13</sup> in TRNP relevant to FISHING are understood by managers.	4	<ul style="list-style-type: none"> <li>The values of TRNP relevant to illegal fishing are well understood by managers</li> <li>There is knowledge about the methods of fishing and their risks to park values</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Enforcement Plan</li> </ul>	Adequate
CO2	The current condition and trend of values relevant to FISHING are known by managers	4	<ul style="list-style-type: none"> <li>Current condition and trends in fish populations are known through annual monitoring</li> <li>Indicator and commercially important fish species are monitored annually for changes in biomass and density</li> <li><i>Trochus niloticus</i> were formerly targeted by fishers from 2006 – 2010. Its condition, last assessed in 2010, need to be updated</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystem Research and Monitoring Report</li> <li>TMO Enforcement database</li> <li>Dolorosa et al. 2010. Population structure and abundance of <i>Trochus niloticus</i> in Tubbataha Reefs Natural Park, Palwan, Philippines with notes on poaching events. SPC Trochus information bulletin no. 15</li> </ul>	Adequate
CO3	The impacts (direct, indirect and cumulative) associated with FISHING are understood by managers.	4	<ul style="list-style-type: none"> <li>The direct impacts of fishing in the park are understood by managers</li> <li>Fishing within the park will impact on its ability to deliver ecosystem goods and services to surrounding areas</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>TRNP Management Plan 2011-2021</li> </ul>	Adequate
CO4	The broader (national/international) level influences relevant to FISHING are understood by managers.	4	<ul style="list-style-type: none"> <li>The value to TRNP to fisheries is recognized by the Philippine government through the passage of RA 10067</li> <li>Decline of stocks in most fishing grounds makes the park vulnerable to intrusions by illegal fishers</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>TMO Enforcement database</li> </ul>	Adequate

<sup>13</sup> Values include biological (biodiversity), socio-economic, and educational or scientific significance and ecological goods and services



			<ul style="list-style-type: none"> <li>Increasing international demand for marine products may increase likelihood of illegal fishing within the park</li> <li>Although no illegal fishing incidents have been reported in TRNP since 2013, the threat remains ever present and requires continued vigilance</li> </ul>		
CO5	The stakeholders relevant to FISHING are well known by managers.	4	<ul style="list-style-type: none"> <li>LGU of Cagayancillo appreciates the value of no-take policy in TRNP and its contribution to increased fish stocks. The LGU has established MPAs in the municipality</li> <li>Representatives of commercial fishing companies have expressed support for the no-take policy implemented in TRNP</li> <li>Fishers formerly arrested in TRNP profess their support by advocating for compliance with RA 10067</li> <li>Dive operators report the presence of suspicious fishing boats within the park</li> <li>MPRs are allowed to fish for subsistence</li> </ul>	<ul style="list-style-type: none"> <li>Cagayancillo Coastal Resource Management Plan</li> <li>2006 National Conference: 'Conservation through collaboration'</li> <li>Provincial Parole and Probation Office Restorative Justice meetings</li> <li>Compliance and Enforcement Plan</li> </ul>	Adequate

	PLANNING	Score	Justification	Evidence/ Sources	Confidence
PL1	There is a planning system in place that effectively addresses FISHING.	4	<ul style="list-style-type: none"> <li>The framework for the management of TRNP is articulated in RA 10067, which provides that TRNP is to be managed under a no-take policy</li> <li>Effort and funds are focused to ensure that no-take policy is implemented</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>TRNP Management Plan 2011-2021</li> <li>Annual Work and Financial Plan</li> <li>Buffer Zone Management Plan</li> </ul>	Adequate

			<ul style="list-style-type: none"> <li>Impacts of fishing activities in areas contiguous to the park is recognized, but needs further study, e.g. commercial fishing</li> </ul>		
PL2	The planning system for FISHING addresses the major risks/threats to the TRNP's values.	4	<ul style="list-style-type: none"> <li>Enforcement of no-fishing policy is a management priority</li> <li>Outreach and education activities are designed to increase compliance with park regulations</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Information, Education and Communications Plan</li> </ul>	Adequate
PL3	The actions for implementation regarding FISHING are clearly identified within the plan.	4	<ul style="list-style-type: none"> <li>Planning processes identify actions for enforcing no-fishing policy</li> <li>Fishing communities are targeted for outreach and education activities to increase compliance</li> <li>Actions for implementation regarding fishing are identified in the Buffer Zone Management Plan</li> <li>Management ensures that all cases filed are progressing as conviction is a form of disincentive to fishers</li> </ul>	<ul style="list-style-type: none"> <li>Compliance and Enforcement Plan</li> <li>Information, Education and Communications Plan</li> <li>Buffer Zone Management Plan</li> <li>Annual Work and Financial Plan</li> </ul>	Adequate
PL4	Clear, measurable, and appropriate objectives for management of FISHING have been documented.	4	<ul style="list-style-type: none"> <li>The main objective for the management of fishing is to ensure that no extraction occur in the park</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Compliance and Enforcement Plan</li> </ul>	Adequate
PL5	There are plans and systems in place to ensure that appropriate and adequate	4	<ul style="list-style-type: none"> <li>Annual research and monitoring is conducted to generate information in relation to fish population and density. Results are used as a proxy for determining occurrence of fishing activities</li> </ul>	<ul style="list-style-type: none"> <li>Research and Monitoring Plan</li> <li>Ecosystem Research and Monitoring Reports</li> <li>Compliance and Enforcement Plan</li> </ul>	Adequate

	monitoring information is gathered in relation to FISHING.		<ul style="list-style-type: none"> <li>Surveillance system is in place to detect intrusions</li> </ul>		
PL6	The main stakeholders &/or the local community are effectively engaged in planning to address FISHING.	4	<ul style="list-style-type: none"> <li>The LGU of Cagayancillo is involved in policy making, planning, and compliance and enforcement</li> <li>Representatives of commercial fishing companies are engaged in planning</li> <li>Dive operators and relevant governmental agencies are engaged in planning and enforcement to address fishing</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>Buffer Zone Management Plan</li> <li>TRNP Management Plan 2011-2021</li> </ul>	Adequate
PL7	Sufficient policy currently exists to effectively address FISHING.	4	<ul style="list-style-type: none"> <li>The law is explicit on no-take policy within the park</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> </ul>	Adequate
PL8	There is consistency across agencies when planning for FISHING.	4	<ul style="list-style-type: none"> <li>Relevant government offices recognize and help in the enforcement of no-take policy</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> </ul>	Adequate

	INPUTS	Score	Justification	Evidence/ Sources	Confidence
IN1	The internal financial resources are adequate and prioritised to meet specific management objectives (refer to PL4) to address FISHING.	3	<ul style="list-style-type: none"> <li>Compliance and enforcement is considered a core management activity, hence financial resources are prioritized</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Annual Work and Financial Plan</li> </ul>	Adequate
IN2	The human resources within the TPAMB are <u>adequate</u> to meet	1	<ul style="list-style-type: none"> <li>There is a composite team of MPRs, however, the current number of personnel</li> </ul>	<ul style="list-style-type: none"> <li>Compliance and Enforcement Plan</li> </ul>	Adequate

	specific management objectives (refer to PL4) to address FISHING.		deployed does not meet the ideal number per tour of duty		
IN3	The right skill sets and expertise are currently available to the TPAMB to address FISHING.	4	<ul style="list-style-type: none"> <li>The TPAMB is a multi-sectoral body, which includes representatives from law enforcement and fisheries management agencies, and research institutions</li> <li>MPRs are trained to perform both law enforcement and biophysical monitoring activities</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>Compliance and Enforcement Plan</li> </ul>	Adequate
IN4	The necessary biophysical information is currently available to address FISHING.	3	<ul style="list-style-type: none"> <li>Annual monitoring generates biophysical information, e.g., fish population and density to serve as basis for policy making</li> <li>There is a need to update population and density status of commercially important species, e.g., <i>Tectus niloticus</i> and elasmobranchs</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystem Research and Monitoring Report</li> </ul>	Adequate
IN5	The necessary socio-economic information is currently available to address FISHING.		<ul style="list-style-type: none"> <li>N/A</li> </ul>		Adequate
IN6	There are additional sources of non-government input (e.g. volunteers) contributing to address FISHING.	4	<ul style="list-style-type: none"> <li>Private sector, NGOs and academe provide significant contributions in the implementation of public outreach and education program, law enforcement and research activities</li> </ul>	<ul style="list-style-type: none"> <li>PSFI-TMO MOA</li> <li>Consultancy Agreements</li> </ul>	Adequate

	PROCESSES	Score	Justification	Evidence/ Sources	Confidence
PR1	The main stakeholders &/or industry(ies) are effectively engaged in the ongoing management of FISHING.	4	<ul style="list-style-type: none"> <li>• LGU of Cagayancillo is part of the TPAMB</li> <li>• Dive operators report the presence of suspicious fishing boats within the park</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• Dive Operators' Consultation report</li> </ul>	Adequate
PR2	The local community <sup>14</sup> is effectively engaged in the ongoing management of FISHING.	4	<ul style="list-style-type: none"> <li>• Local community is represented in the TPAMB</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> </ul>	Adequate
PR3	There is a sound governance system in place to address FISHING.	4	<ul style="list-style-type: none"> <li>• Governance is participatory</li> <li>• Statutory regulations in place to ensure that no-fishing policy is implemented</li> <li>• Implementation by various agencies</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• TRNP Management Plan 2011-2021</li> <li>• Compliance and Enforcement Plan 2012</li> </ul>	Adequate
PR4	There is effective monitoring, including regular appraisal of assessment tools to gauge progress towards the objective(s) for FISHING.	4	<ul style="list-style-type: none"> <li>• Annual research and monitoring is conducted to generate information in relation to fish population and density. Results are used as a proxy for determining occurrence of fishing activities</li> <li>• Surveillance system is in place to detect intrusions</li> </ul>	<ul style="list-style-type: none"> <li>• Research and Monitoring Plan</li> <li>• Ecosystem Research and Monitoring Reports</li> <li>• Compliance and Enforcement Plan</li> </ul>	Adequate
PR5	Appropriate training is available to the managing agencies to address FISHING.	4	<ul style="list-style-type: none"> <li>• Training is provided as needed</li> <li>• Participation to fora, workshops and trainings provided by other agencies</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive Training for Marine Park Rangers of TRNP</li> <li>• Training/travel reports</li> </ul>	Adequate

<sup>14</sup> Municipality of Cagayancillo

PR6	Management of FISHING is consistently implemented	4	<ul style="list-style-type: none"> <li>No fishing policy is consistently applied, except for MPRs, who are allowed to fish for subsistence</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>Compliance and Enforcement Plan 2012</li> </ul>	Adequate
PR7	There are effective processes applied to resolve differing views/conflicts regarding FISHING.	4	<ul style="list-style-type: none"> <li>The law provides for regulations banning fishing and how to resolve conflicts regarding fishing</li> <li>Commercial fishing companies are invited to participate in decision-making</li> <li>Good relationship exist between park authorities and other agencies</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>Buffer Zone Management Plan</li> <li>Compliance and Enforcement Plan 2012</li> </ul>	Adequate
PR8	Impacts (direct, indirect and cumulative) of activities associated with FISHING are appropriately considered.	3	<ul style="list-style-type: none"> <li>Impacts of fishing by MPRs have not been studied</li> <li>Impacts of fishing contiguous to park boundaries have not been investigated</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	Adequate
PR9	The best available <u>biophysical</u> research and/or monitoring information is applied appropriately to make relevant management decisions regarding FISHING.		<ul style="list-style-type: none"> <li>N/A</li> </ul>		Adequate
PR10	The best available <u>socio-economic</u> <sup>15</sup> research and/or monitoring information is applied appropriately to make		<ul style="list-style-type: none"> <li>N/A</li> </ul>		Adequate

<sup>15</sup> Socio-economic research relevant to tourism refers to dive industry

	relevant management decisions regarding FISHING.				
PR11	Relevant standards are identified and being met regarding FISHING.		<ul style="list-style-type: none"> <li>N/A</li> </ul>		Adequate
PR12	Targets have been established to gauge management performance for FISHING.	4	<ul style="list-style-type: none"> <li>The target relevant to fishing is expressed in the law, which established the park as a no-take zone</li> <li>The maintenance of population trends of fish is ensured through a vigilant compliance and enforcement system, and active education and outreach</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>TRNP Management Plan 2011-2021</li> <li>Compliance and Enforcement Plan 2012</li> <li>Information, Education and Communications Plan 2014</li> </ul>	Adequate

	OUTPUTS	Score	Justification	Evidence/ Sources	Confidence
OP1	To date, the actual management program (or activities) have progressed in accordance with the planned work program for FISHING.	4	<ul style="list-style-type: none"> <li>Activities to ensure compliance with no-take policy, e.g., compliance and enforcement system and education and outreach, have progressed in accordance with planned work program</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> <li>Annual Operational Report</li> </ul>	Adequate
OP2	Implementation of management documents and/or programs relevant to FISHING have progressed in accordance with	4	<ul style="list-style-type: none"> <li>Programs are implemented in accordance with timeframe</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> <li>Annual Operational Report</li> </ul>	Adequate

	timeframes specified in those documents.				
OP3	The results (in OP1 above) have achieved their stated management objectives for FISHING.	4	<ul style="list-style-type: none"> <li>Public outreach and compliance and enforcement resulted in achievement of no-take policy objectives</li> </ul>	<ul style="list-style-type: none"> <li>Annual Operational Report</li> </ul>	Adequate
OP4	To date, products or services have been produced in accordance with the stated management objectives for FISHING.	4	<ul style="list-style-type: none"> <li>Information gleaned from annual monitoring activities are provided to schools, fishing villages, tourists, general public in the form of primer, brochures, videos, radio plugs, pre-departure briefings and outreach activities</li> </ul>	<ul style="list-style-type: none"> <li>Information, Education and Communications Plan 2014</li> <li>Annual Operational Report</li> <li>Tubbataha Primer 2014, Promotional and Tourist brochures  <a href="http://tubbatahareef.org/wp/education-outreach">http://tubbatahareef.org/wp/education-outreach</a> </li> </ul>	Adequate
OP5	Knowledge regarding FISHING is effectively managed and shared with the community	4	<ul style="list-style-type: none"> <li>Data on illegal fishing is maintained</li> <li>Data on illegal fishing is shared to relevant agencies and target audiences</li> <li>Social media and other education programs are in place</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Database</li> <li>Information materials and journal publications, e.g., Jontila, et al. 2014. Effects of poaching on Top shell <i>Tectus niloticus</i> population of Tubbataha Reefs Natural Park, Palawan, Philippines. The Palawan Scientist, Vol 6, pp 14-27</li> <li><a href="http://www.tubbatahareef.org">www.tubbatahareef.org</a></li> <li><a href="https://www.facebook.com/OfficialTubbataha">www.facebook.com/OfficialTubbataha</a></li> </ul>	Adequate



	OUTCOMES	Score	Justification	Evidence/ Sources	Confidence
OC1	The relevant managing agencies are to date effectively addressing FISHING and moving towards the attainment of the desired outcomes.	4	<ul style="list-style-type: none"> <li>Partner agencies are effectively engaged in law enforcement and other management activities to ensure no-take policy is implemented</li> <li>Desired outcomes are attained</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Ecosystem Research and Monitoring Report</li> </ul>	Adequate
OC2	The outputs relating to FISHING are on track to ensure the values of TRNP are protected (refer to CO1).	4	<ul style="list-style-type: none"> <li>Biophysical monitoring is regularly conducted to ensure that values are protected</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystem Research and Monitoring Report</li> </ul>	Adequate
OC3	The outputs (refer to OP1 & 3) for FISHING are reducing the major risks and the threats to the TRNP.	4	<ul style="list-style-type: none"> <li>Outputs are reducing major risks and threats to TRNP</li> </ul>	<ul style="list-style-type: none"> <li>Annual Operational Report</li> <li>Ecosystem Research and Monitoring Report</li> </ul>	Adequate
OC4	Use of the TRNP relating to FISHING is demonstrably <u>environmentally</u> sustainable.		<ul style="list-style-type: none"> <li>N/A</li> </ul>		Adequate
OC5	Use of the TRNP relating to FISHING is demonstrably <u>economically</u> sustainable.		<ul style="list-style-type: none"> <li>N/A</li> </ul>		Adequate
OC6	Use of the TRNP relating to FISHING is demonstrably socially sustainable enhancing		<ul style="list-style-type: none"> <li>N/A</li> </ul>		Adequate

	understanding and/or enjoyment.				
OC7	The relevant managing agencies have developed effective partnerships with local communities and/or stakeholders to address FISHING.	4	<ul style="list-style-type: none"> <li>• Effective partnership exists with relevant agencies and communities</li> <li>• Regular meetings with stakeholders help identify and address issues</li> <li>• Public outreach activities in fishing villages are recruited to be partners in conservation by providing intelligence and disseminating information</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• Dive Operators' Consultation Report</li> <li>• Information, Education and Communications Plan 2014</li> </ul>	Adequate

## MARINE POLLUTION

	CONTEXT	Score	Justification	Evidence/ Sources	Confidence
CO1	The values <sup>16</sup> in TRNP relevant to MARINE POLLUTION are understood by managers.	3	<ul style="list-style-type: none"> <li>The values relevant to marine pollution are well understood by managers</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> </ul>	Adequate
CO2	The current condition and trend of values relevant to MARINE POLLUTION are known by managers	3	<ul style="list-style-type: none"> <li>Data on volume and type of marine debris are regularly collected and reported by MPRs</li> </ul>	<ul style="list-style-type: none"> <li>MPR DAR</li> </ul>	Adequate
CO3	The impacts (direct, indirect and cumulative) associated with MARINE POLLUTION are understood by managers.	3	<ul style="list-style-type: none"> <li>TRNP Law provides penalties to safeguard against marine pollution in the park</li> <li>TRNP is currently applying PSSA status to mitigate impacts of marine pollution</li> <li>Dive boats are required to discharge graywater at least 1 nm from reef edge, provided it is not within the channel</li> <li>MPRs routinely collect trash on the islets and those encountered during patrols</li> <li>Public outreach and education highlights the impacts of marine pollution to encourage awareness and compliance with communities</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067, Section 23</li> <li>PSSA Application</li> <li>Comprehensive Tourism Management Plan 2013</li> <li>MPR DAR</li> <li>IEC Reports</li> </ul>	Adequate
CO4	The broader (national/international) level influences relevant to MARINE	3	<ul style="list-style-type: none"> <li>TRNP is currently applying PSSA status to mitigate impacts of marine pollution</li> <li>Public outreach and education includes areas immediately outside of the park, e.g. Palawan and Panay islands</li> </ul>	<ul style="list-style-type: none"> <li>PSSA Application</li> <li>IEC reports</li> <li>Workshop proceedings and presentations</li> </ul>	Adequate

<sup>16</sup> Values include biological (biodiversity), socio-economic, and educational or scientific significance and ecological goods and services

	POLLUTION are understood by managers.		<ul style="list-style-type: none"> <li>• Presentations in international and national venues highlights the impacts of marine pollution in the conservation of the park</li> </ul>		
CO5	The stakeholders relevant to MARINE POLLUTION are well known by managers.	3	<ul style="list-style-type: none"> <li>• Major sources of marine pollution, e.g. shipping, surrounding islands, in TRNP are known by managers</li> <li>• However, direct correlation of these sources as well as the magnitude of their impacts have not been fully established</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• Emergency and Risk Reduction Plan 2012</li> </ul>	Adequate

	PLANNING	Score	Justification	Evidence/ Sources	Confidence
PL1	There is a planning system in place that effectively addresses MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>• Actions addressing marine pollution, e.g. solid waste management, PSSA application, regulation on graywater discharge, are articulated in the plans</li> <li>• MPRs routinely collect trash on the islets and those encountered during patrols, and data on volume and type of marine debris are regularly collected and reported</li> <li>• However, actions taken by managers are localized to the park while the sources of marine pollution are mostly outside of its jurisdiction</li> <li>• TRNP is currently applying for PSSA designation</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• TRNP Management Plan 2011-2021</li> <li>• Buffer Zone Management Plan</li> <li>• Emergency and Risk Reduction Plan</li> <li>• Comprehensive Tourism Management Plan 2013</li> <li>• MPR DAR</li> <li>• PSSA Application</li> </ul>	Adequate
PL2	The planning system for MARINE POLLUTION addresses the major risks/threats to the TRNP's values.	3	<ul style="list-style-type: none"> <li>• Planning system to address marine pollution reduces risks to oil and chemical spill, accumulation of marine debris, contamination of organisms</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency and Risk Reduction Plan</li> <li>• Compliance and Enforcement Plan</li> </ul>	Adequate

			<ul style="list-style-type: none"> <li>• Mitigating measures, i.e., response protocols to risks have been established</li> </ul>		
PL3	The actions for implementation regarding MARINE POLLUTION are clearly identified within the plan.	3	<ul style="list-style-type: none"> <li>• Actions to address marine pollution, e.g., oil and chemical spill, accumulation of marine debris, contamination of organisms, are clearly identified within the plan</li> <li>• MPRs routinely collect trash on the islets and those encountered during patrols, and data on volume and type of marine debris are regularly collected and reported</li> <li>• TRNP is currently applying PSSA status to mitigate impacts of marine pollution</li> <li>• Increase in marine traffic is believed to be a source of marine pollution.</li> <li>• Public outreach and education includes areas immediately outside of the park, e.g. Palawan and Panay islands</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency and Risk Reduction Plan</li> <li>• MPR DAR</li> <li>• PSSA Application</li> <li>• IEC Reports</li> </ul>	Adequate
PL4	Clear, measurable, and appropriate objectives for management MARINE POLLUTION have been documented.	3	<ul style="list-style-type: none"> <li>• Although there are no clear, measurable and appropriate objectives specifically for management of marine pollution, activities outlined in the Management Plan do address this issues</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> </ul>	Adequate
PL5	There are plans and systems in place to ensure that appropriate and adequate monitoring information is gathered in relation to MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>• Data on volume and type of marine debris are regularly collected and reported by MPRs</li> <li>• Monitoring of passing vessels in place</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance and Enforcement Plan</li> <li>• MPR DAR</li> <li>• MPR Radar Log</li> </ul>	Adequate

PL6	The main stakeholders &/or the local community are effectively engaged in planning to address MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>Main stakeholders, i.e. PCG, dive operators, IMO, oil companies and the local community are consulted and/or engaged in the planning</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan</li> <li>Buffer Zone Management Plan</li> <li>PSSA Application</li> <li>Dive Operators' Consultation</li> </ul>	Adequate
PL7	Sufficient policy currently exists to effectively address MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>TRNP Act, IRR and management plans addresses marine pollution</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>TPAMB AO 01-12</li> <li>Buffer Zone Management Plan</li> <li>Compliance and Enforcement Plan</li> <li>Emergency and Risk Reduction Plan 2014</li> </ul>	Adequate
PL8	There is consistency across agencies when planning for MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>Relevant stakeholders, i.e., PCG, dive operators, IMO, oil companies and the local community were actively consulted and/or engaged in the production of these plans</li> <li>Specific plans are aligned with the general management plan</li> <li>Concerns cited in the plans have been brought to the attention of the national and international communities for conflict resolution (e.g., potential conflict with ASL Bill no. 159; overlap of boundaries with oil exploration claim)</li> </ul>	<ul style="list-style-type: none"> <li>Position paper on Senate Bill no. 159 (2013)</li> <li>PSSA Application</li> <li>Travel report on Meeting with DOE to resolve oil exploration claim overlapping with TRNP boundaries</li> </ul>	Adequate

	INPUTS	Score	Justification	Evidence/ Sources	Confidence
IN1	The internal financial resources are adequate and prioritised to	1	<ul style="list-style-type: none"> <li>There are no funds specifically to address marine pollution, however, management</li> </ul>	<ul style="list-style-type: none"> <li>Compliance and Enforcement Plan</li> <li>Annual Work and Financial Plan</li> </ul>	Adequate

	meet specific management objectives (refer to PL4) to address MARINE POLLUTION.		actions are incorporated in other core activities, e.g., patrols, enforcement <ul style="list-style-type: none"> <li>• PCG, Philippine Navy and Cagayancillo LGU provide counterpart through deployment of personnel and equipment</li> </ul>		
IN2	The human resources within the TPAMB are <u>adequate</u> to meet specific management objectives (refer to PL4) to address MARINE POLLUTION.	1	<ul style="list-style-type: none"> <li>• Human resources are currently inadequate due to limited funds and resources</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance and Enforcement Plan</li> <li>• MPR Tour of Duty Reports</li> </ul>	Adequate
IN3	The right skill sets and expertise are currently available to the TPAMB to address MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>• Right skill sets and expertise are present</li> <li>• Response protocols to risks of marine pollution are in place</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency and Risk Reduction Plan</li> <li>• Oil Spill Response Training</li> <li>• SOLAS Training</li> </ul>	Adequate
IN4	The necessary biophysical information is currently available to address MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>• Baseline data on water quality established in 2014; regular data collection will be done annually</li> <li>• Annual research and monitoring activities provide information on conditions of marine organisms</li> </ul>	<ul style="list-style-type: none"> <li>• Water Quality Report 2014</li> <li>• Ecosystem Research and Monitoring Reports</li> <li>• Coral Reef Targeted Research (Licuanan et al. 2014)</li> </ul>	Adequate
IN5	The necessary socio-economic information is currently available to address MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>• There is socio-economic information available on Cagayancillo community and resources and diving industry which have some impact on marine pollution; these served as basis for policies relevant to marine pollution</li> </ul>	<ul style="list-style-type: none"> <li>• WWF report</li> <li>• Tourism Reports</li> </ul>	Adequate
IN6	There are additional sources of non-government input (e.g.	3	<ul style="list-style-type: none"> <li>• Private sector, academe and NGOs provide significant contributions in the implementation of public outreach and</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Operational Report</li> <li>• PSFI-TMO MOA</li> </ul>	Adequate

	volunteers) contributing to address MARINE POLLUTION.		education program, law enforcement and research activities	<ul style="list-style-type: none"> <li>Ecosystem Research and Monitoring Report</li> </ul>	
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	PROCESSES	Score	Justification	Evidence/ Sources	Confidence
PR1	The main stakeholders &/or industry(ies) are effectively engaged in the ongoing management of MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>Relevant government agencies, oil companies and local community are consulted and/or engaged in the management of issues on marine pollution</li> <li>Visitors and boat crew briefings are conducted to increase compliance to park rules</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan</li> <li>Buffer Zone Management Plan</li> <li>Tourism report</li> </ul>	Adequate
PR2	The local community is effectively engaged in the ongoing management of MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>Local community is represented in the TPAMB</li> <li>Cagayancillo LGU provides additional MPRs</li> <li>Public outreach and education program includes promotion of waste management</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>Compliance and Enforcement Plan</li> <li>Cagayancillo LGU-TPAMB MOA (2008)</li> <li>IEC Module</li> </ul>	Adequate
PR3	There is a sound governance system in place to address MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>There is an existing governance system</li> <li>Planning and management is participatory</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>TRNP Management Plan</li> </ul>	Adequate
PR4	There is effective monitoring, including regular appraisal of assessment tools to gauge progress towards the objective(s) for MARINE POLLUTION.	2	<ul style="list-style-type: none"> <li>Volume and type of marine debris, and frequency of passing vessels monitored by MPRs</li> <li>Source of marine debris can only be inferred</li> </ul>	<ul style="list-style-type: none"> <li>MPR DAR</li> </ul>	Adequate



PR5	Appropriate training is available to the managing agencies to address MARINE POLLUTION.	2	<ul style="list-style-type: none"> <li>• TMO MPRs are trained on the use of Radar and other surveillance equipment</li> <li>• Right skill sets and expertise are present, however, further training has not yet been identified</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency and Risk Reduction Plan</li> <li>• Oil Spill Response Training</li> <li>• SOLAS Training</li> </ul>	Adequate
PR6	Management of MARINE POLLUTION is consistently implemented	3	<ul style="list-style-type: none"> <li>• Management of marine pollution is incorporated in core management programs, e.g., regular conduct of coastal clean-up, monitoring of passing vessels and dive boat graywater discharge</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Work and Financial Plan</li> <li>• MPR DAR and Radar Log</li> </ul>	Adequate
PR7	There are effective processes applied to resolve differing views/conflicts regarding MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>• Consultations are held by TMO to resolve differing views on marine pollution</li> <li>• TMO participates in national and international workshops and meetings on marine traffic</li> </ul>	<ul style="list-style-type: none"> <li>• Dive Operators' Consultation report</li> <li>• Buffer Zone Workshop report</li> <li>• PSSA consultation meeting report</li> <li>• IMO meetings</li> </ul>	Adequate
PR8	Impacts (direct, indirect and cumulative) of activities associated with MARINE POLLUTION are appropriately considered.	3	<ul style="list-style-type: none"> <li>• Not all impacts of marine pollution in the park have been identified; those that are known to managers are being addressed</li> <li>• Dive boat operators and managers are informed of the impacts of marine pollution before every dive season</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan</li> <li>• Dive Operators' Consultation report</li> </ul>	Adequate
PR9	The best available <u>biophysical</u> research and/or monitoring information is applied appropriately to make relevant management decisions regarding MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>• Biophysical information gathered is provided to management for appropriate actions</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Ecosystem Research and Monitoring Report</li> <li>• Water Quality Report</li> </ul>	Adequate

PR10	The best available <u>socio-economic</u> <sup>17</sup> research and/or monitoring information is applied appropriately to make relevant management decisions regarding MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>Available socio-economic information on Cagayancillo and the dive industry are applied in decision-making for marine pollution management</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067, TPAMB AO 01-12</li> <li>WWF socio-economic report</li> </ul>	Adequate
PR11	Relevant standards are identified and being met regarding MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>Results of biophysical monitoring are used as proxy standards for determining impacts of marine pollution, e.g., 71% live coral cover (2014) indicates good conditions</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystem Research and Monitoring Report</li> </ul>	Adequate
PR12	Targets have been established to gauge management performance for MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>Targets for management performance have been established and incorporated in the core activities</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> <li>Water Quality Report</li> </ul>	Adequate

	OUTPUTS	Score	Justification	• Evidence/ Sources	Confidence
OP1	To date, the actual management program (or activities) have progressed in accordance with the planned work program for MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>Activities have progressed in accordance with the planned work program; current management actions are limited within the boundaries of the park</li> <li>Since 2010, data on marine traffic, and volume and type of marine debris have been more regularly and systematically collected and recorded</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> <li>Compliance and Enforcement Plan 2014</li> <li>MPR DAR and Radar Log</li> <li>PSSA Application</li> <li>Dive Operators' Consultation report</li> </ul>	Adequate

<sup>17</sup> Socio-economic research relevant to tourism refers to Cagayancillo community and the dive industry

			<ul style="list-style-type: none"> <li>• Application to PSSA is on-going; designations expected in 2017</li> <li>• Dive Operators' Consultation conducted annually, with emphasis on compliance to park rules</li> </ul>		
OP2	Implementation of management documents and/or programs relevant to MARINE POLLUTION have progressed in accordance with timeframes specified in those documents.	3	<ul style="list-style-type: none"> <li>• All activities in the AWFP are accomplished in accordance with timeframes</li> <li>• Coordination with PCG, DFA and UP-IMLOS for PSSA application is continuous</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Work and Financial Plan</li> <li>• PSSA Application; correspondence</li> </ul>	Adequate
OP3	The results (in OP1 above) have achieved their stated management objectives for MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>• Data on marine traffic, and volume and type of marine debris have been used to support PSSA application</li> <li>• PSSA designation is expected in 2017, at the earliest</li> </ul>	<ul style="list-style-type: none"> <li>• PSSA Application</li> <li>• Annual Tourism report</li> </ul>	Adequate
OP4	To date, products or services have been produced in accordance with the stated management objectives for MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>• Results of analysis on marine traffic, and volume and type of marine debris was presented in a national scientific conference</li> <li>• Simulation on oil and chemical spills by UP-MSI employed data collected by MPRs</li> </ul>	<ul style="list-style-type: none"> <li>• David et al. 2013. Observations on the trends of external threats to TRNP. PAMS workshop proceedings</li> <li>• Simulation video (TMO Files)</li> </ul>	Adequate
OP5	Knowledge regarding MARINE POLLUTION is effectively managed and shared with the community	3	<ul style="list-style-type: none"> <li>• Database on marine traffic and volume and type of marine debris updated</li> <li>• Results of analysis on marine traffic and debris presented in national scientific conference</li> <li>• Simulations on oil and chemical spills are incorporated in the AVP to be presented in the IMO meetings</li> </ul>	<ul style="list-style-type: none"> <li>• TMO database</li> <li>• David et al. 2013. Observations on the trends of external threats to TRNP. PAMS workshop proceedings</li> <li>• Simulation video (TMO Files)</li> </ul>	Adequate

			<ul style="list-style-type: none"> <li>• Consultations with relevant agencies, e.g., PCG, PN, DOE, PAGASA, academe, dive operators, conducted to address marine traffic and pollution</li> </ul>	
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	OUTCOMES	Score	Justification	Evidence/ Sources	Confidence
OC1	The relevant managing agencies are to date effectively addressing MARINE POLLUTION and moving towards the attainment of the desired outcomes.	3	<ul style="list-style-type: none"> <li>• Relevant agencies have not yet determined the exact source of pollution in TRNP and Sulu Sea</li> <li>• Contingency protocols for oil and chemical spills have been identified in the plan</li> <li>• Increased compliance among dive operators</li> <li>• Mitigating measures are mainstreamed into regular duties of MPRs</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency and Risk Reduction Plan 2014</li> <li>• Compliance and Enforcement Plan</li> <li>• MPR DAR</li> </ul>	Adequate
OC2	The outputs relating to MARINE POLLUTION are on track to ensure the values of TRNP are protected (refer to CO1).	3	<ul style="list-style-type: none"> <li>• Biodiversity protection is the main goal of all management actions; all activities related to managing marine pollution focus on mitigating impacts to biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• TRNP Management Plan 2011-2021</li> <li>• Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
OC3	The outputs (refer to OP1 & 3) for MARINE POLLUTION are reducing the major risks and the threats to the TRNP.	3	<ul style="list-style-type: none"> <li>• Actions are believed to lessen the impacts of marine pollution to the marine organisms</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> </ul>	Adequate
OC4	Use of the TRNP relating to MARINE POLLUTION is	2	<ul style="list-style-type: none"> <li>• Dive operators and tourists are required to comply with rules and regulations; boat</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Dive Operators' Consultation</li> <li>• Annual Tourism report</li> <li>• TRNP State of Conservation Report 2010</li> </ul>	Adequate

	demonstrably <u>environmentally</u> sustainable.		<p>crew and pre-departure briefings are intensified to increase compliance</p> <ul style="list-style-type: none"> <li>It is recognized that regulation of shipping traffic adjacent to park boundaries is beyond management control</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan</li> <li>Buffer Zone Management Plan</li> </ul>	
OC5	Use of the TRNP relating to MARINE POLLUTION is demonstrably <u>economically</u> sustainable.	N/A			Adequate
OC6	Use of the TRNP relating to MARINE POLLUTION is demonstrably socially sustainable enhancing understanding and/or enjoyment.	N/A			Adequate
OC7	The relevant managing agencies have developed effective partnerships with local communities and/or stakeholders to address MARINE POLLUTION.	3	<ul style="list-style-type: none"> <li>Partnerships with stakeholders, e.g., PCG, PN, DOE, NAMRIA, PGP, academe, dive operators and local shipping companies, have been developed through consultations and meetings regarding marine traffic and pollution</li> </ul>	<ul style="list-style-type: none"> <li>PSSA consultation meeting report</li> </ul>	Adequate

## SHIPPING

	CONTEXT	Score	Justification	Evidence/ Sources	Confidence
CO1	The values <sup>18</sup> in TRNP relevant to SHIPPING <sup>19</sup> are understood by managers.	3	<ul style="list-style-type: none"> <li>The values of TRNP relevant to SHIPPING are understood by managers but knowledge needs to be improved</li> <li>Expected increase in shipping traffic in the Sulu Sea intensify risks to the values of TRNP</li> </ul>	<ul style="list-style-type: none"> <li>TPAMB Resolution no. 13-10 on PSSA application for TRNP</li> <li>IMO data on shipping</li> <li>MPR Radar Log</li> <li>Workshop report 'Conservation Through Collaboration' (2006)</li> </ul>	Adequate
CO2	The current condition and trend of values relevant to SHIPPING are known by managers	2	<ul style="list-style-type: none"> <li>Managers have some knowledge of the current condition and trend of values of TRNP relevant to SHIPPING</li> <li>More extensive records of shipping activities around the park is needed</li> </ul>	<ul style="list-style-type: none"> <li>TPAMB Resolution no. 13-10 on PSSA application for TRNP</li> <li>IMO data on shipping</li> <li>MPR Radar Log</li> </ul>	Adequate
CO3	The impacts (direct, indirect and cumulative) associated with SHIPPING are understood by managers.	2	<ul style="list-style-type: none"> <li>Managers have limited knowledge of the impacts associated with shipping as resources, such as equipment, is not readily available to address this kind of situations</li> <li>There is limited capacity to respond to impacts, e.g., ship groundings, oil and chemical spills, alien invasive species and diseases, and marine debris</li> <li>Cumulative impacts are not known</li> </ul>	<ul style="list-style-type: none"> <li>TPAMB Resolution no. 13-10 on PSSA application for TRNP</li> <li>Simulation of oil and chemical spill scenarios around the park</li> <li>Heij, et al. (2013) Ship incident risk around the heritage areas of Tubbataha and Banc d'Arguin. <i>Transportation Research Part D</i> 25, 77-83</li> </ul>	Adequate

<sup>18</sup> Values include biological (biodiversity), socio-economic, and educational or scientific significance and ecological goods and services

<sup>19</sup> International shipping activities

CO4	The broader (national/international) level influences relevant to SHIPPING are understood by managers.	2	<ul style="list-style-type: none"> <li>Shipping is controlled by an international regime thereby initiatives need to be linked with national agencies recognized by IMO</li> <li>Establishment of Archipelagic Sea Lanes (ASL) in the Sulu Sea could have impacts on the values of TRNP</li> <li>The TPAMB have little knowledge of the international regime of shipping but the PCG is aware of the national level of influences.</li> </ul>	<ul style="list-style-type: none"> <li>TPAMB Resolution no. 13-10 on PSSA application for TRNP</li> <li>Discussion paper on ASL (IMLOS, 2013)</li> <li>Position papers on ASL submitted to the Philippine Senate (TPAMB, 2013)</li> </ul>	Adequate
CO5	The stakeholders relevant to SHIPPING are well known by managers.	3	<ul style="list-style-type: none"> <li>International shipping regime is not well known to managers</li> <li>Efforts have been made to collaborate with stakeholders, e.g., IMO, DFA, PCG, NAMRIA, academe, maritime industry, specifically for the PSSA application</li> </ul>	<ul style="list-style-type: none"> <li>PSSA Consultation Workshop Report (29 October 2013)</li> </ul>	Adequate

	PLANNING	Score	Justification	Evidence/ Sources	Confidence
PL1	There is a planning system in place that effectively addresses SHIPPING.	2	<ul style="list-style-type: none"> <li>The only planning system in place that directly relates to shipping is for the PSSA application of TRNP</li> <li>Buffer Zone Management Plan addresses shipping</li> </ul>	<ul style="list-style-type: none"> <li>PSSA application</li> <li>Buffer Zone Management Plan 2014</li> <li>Position papers on ASL submitted to the Philippine Senate (TPAMB, 2013)</li> </ul>	Adequate
PL2	The planning system for SHIPPING addresses the major risks/threats to the TRNP's values.	3	<ul style="list-style-type: none"> <li>The planning system for shipping addresses the major risks known to managers</li> </ul>	<ul style="list-style-type: none"> <li>PSSA application</li> <li>Buffer Zone Management Plan 2014</li> <li>Position papers on ASL submitted to the Philippine Senate (TPAMB, 2013)</li> <li>MPR Radar Log</li> </ul>	Adequate

PL3	The actions for implementation regarding SHIPPING are clearly identified within the plan.	2	<ul style="list-style-type: none"> <li>• Buffer Zone Management Plan identifies actions regarding shipping</li> <li>• There is no mention of actions to manage shipping within the TRNP General Management Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Buffer Zone Management Plan 2014</li> <li>• Draft TRNP General Management Plan 2015-2021 as of 05 February 2015</li> <li>• MPR Radar Log</li> </ul>	Adequate
PL4	Clear, measurable, and appropriate objectives for management of SHIPPING have been documented.	2	<ul style="list-style-type: none"> <li>• There is no clear, measurable, and appropriate objectives for management of shipping and therefore no document exists on the subject</li> </ul>		Adequate
PL5	There are plans and systems in place to ensure that appropriate and adequate monitoring information is gathered in relation to SHIPPING	3	<ul style="list-style-type: none"> <li>• MPRs collect shipping data regularly</li> <li>• Shipping data accessed from other agencies, e.g., IMO, PN, PCG</li> </ul>	<ul style="list-style-type: none"> <li>• MPR Radar Log</li> <li>• Compliance and Enforcement Plan 2012</li> <li>• IMO 2014 international shipping traffic data</li> </ul>	Adequate
PL6	The main stakeholders &/or the local community are effectively engaged in planning to address SHIPPING.	3	<ul style="list-style-type: none"> <li>• Stakeholder consultations on PSSA application conducted</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop report 'Conservation Through Collaboration' (2006)</li> <li>• PSSA Consultation Workshop Report (29 October 2013)</li> <li>• IMO-NORAD PSSA Consultation (14-16 July 2014)</li> </ul>	Adequate
PL7	Sufficient policy currently exists to effectively address SHIPPING.	2	<ul style="list-style-type: none"> <li>• The Buffer Zone Management Plan contains a policy on shipping</li> <li>• The national government is crafting a policy on shipping in the Sulu Sea (ASL Bill)</li> </ul>	<ul style="list-style-type: none"> <li>• Buffer Zone Management Plan 2014</li> <li>• Senate Bill no. 2738, ASL</li> <li>• House Bill no. 4153, ASL</li> </ul>	Adequate
PL8	There is consistency across agencies when planning for SHIPPING.	2	<ul style="list-style-type: none"> <li>• There were some issues pertaining to the ASL Bill as proposed sea lanes overlapped TRNP boundaries</li> </ul>	<ul style="list-style-type: none"> <li>• Position paper on Senate Bill no. 159 (2013)</li> </ul>	Adequate



	INPUTS	Score	Justification	Evidence/ Sources	Confidence
IN1	The internal financial resources are adequate and prioritized to meet specific management objectives (refer to PL4) to address SHIPPING.	1	<ul style="list-style-type: none"> <li>There is limited capacity to respond to shipping incidents</li> <li>No funds are allocated to respond to shipping incidents</li> <li>National Coast Watch Council to provide state-of-the-art radar system</li> </ul>	<ul style="list-style-type: none"> <li>AWFP</li> <li>Minutes of ExeCom meeting 30 January 2015</li> </ul>	Adequate
IN2	The human resources within the TPAMB are adequate to meet specific management objectives (refer to PL4) to address SHIPPING.	2	<ul style="list-style-type: none"> <li>MPRs are tasked to monitor shipping activities around the park</li> <li>Very limited capacity to respond to shipping incidents</li> </ul>	<ul style="list-style-type: none"> <li>MPR Radar Log</li> </ul>	Adequate
IN3	The right skill sets and expertise are currently available to the TPAMB to address SHIPPING.	2	<ul style="list-style-type: none"> <li>Limited skill sets and expertise to address shipping</li> <li>National Coast Watch Council to provide expertise to man new radar system</li> </ul>	<ul style="list-style-type: none"> <li>MPR Radar Log</li> <li>Minutes of ExeCom meeting 30 January 2015</li> </ul>	Adequate
IN4	The necessary biophysical information is currently available to address SHIPPING.	3	<ul style="list-style-type: none"> <li>Need more information on species distribution and habitat of some taxa, particularly dolphins and whales</li> </ul>	<ul style="list-style-type: none"> <li>Aquino and Alarcon (2010) Monitoring the Cetacean populations in the Tubbataha Reefs Natural Park, Cagayancillo, Palawan, Philippines, unpublished</li> </ul>	Adequate
IN5	The necessary socio-economic information is currently available to address SHIPPING.	1	<ul style="list-style-type: none"> <li>No study on the socio-economic benefits of shipping is available</li> </ul>		Limited

IN6	There are additional sources of non-government input (e.g. volunteers) contributing to address SHIPPING.	3	<ul style="list-style-type: none"> <li>UNESCO, academe, NGOs and private sector provide external funding and expertise contributing to address shipping</li> </ul>	<ul style="list-style-type: none"> <li>AWFP 2014</li> <li>Pilipinas Shell Foundation, Inc. 5-year grant (MOA)</li> </ul>	Adequate
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	PROCESSES	Score	Justification	Evidence/ Sources	Confidence
PR1	The main stakeholders &/or industry(ies) are effectively engaged in the ongoing management of SHIPPING.	3	<ul style="list-style-type: none"> <li>Stakeholder consultations on PSSA application conducted</li> <li>Buffer Zone Management prescription on navigation by international vessels is the means for managing shipping</li> </ul>	<ul style="list-style-type: none"> <li>Workshop report 'Conservation Through Collaboration' (2006)</li> <li>PSSA Consultation Workshop Report (29 October 2013)</li> <li>IMO-NORAD PSSA Consultation (14-16 July 2014)</li> <li>Buffer Zone Management Plan 2014</li> </ul>	Adequate
PR2	The local community <sup>20</sup> is effectively engaged in the ongoing management of SHIPPING.	2	<ul style="list-style-type: none"> <li>Local community engagement in the management of shipping is limited to membership of LGU and POs of Cagayancillo in the management board</li> </ul>	<ul style="list-style-type: none"> <li>Workshop report</li> </ul>	Adequate
PR3	There is a sound governance system in place to address SHIPPING.	2	<ul style="list-style-type: none"> <li>The Buffer Zone Management Plan contains a policy on shipping</li> <li>The national government is crafting a policy on shipping in the Sulu Sea (ASL Bill)</li> </ul>	<ul style="list-style-type: none"> <li>Buffer Zone Management Plan 2014</li> <li>Senate Bill no. 2738, ASL</li> <li>House Bill no. 4153, ASL</li> </ul>	Adequate
PR4	There is effective monitoring, including regular appraisal of assessment tools to gauge	2	<ul style="list-style-type: none"> <li>There is regular monitoring of shipping activities around the park</li> </ul>	<ul style="list-style-type: none"> <li>MPR Radar Log</li> </ul>	Adequate

<sup>20</sup> Municipality of Cagayancillo

	progress towards the objective(s) for SHIPPING.				
PR5	Appropriate training is available to the managing agencies to address SHIPPING.	2	<ul style="list-style-type: none"> <li>The PCG, which is the regulatory body for shipping, appear to have trainings to address shipping</li> <li>Other agencies represented in the TPAMB, and the TMO, do not have appropriate training to address shipping</li> </ul>	<ul style="list-style-type: none"> <li>RA 9993 or the Philippine Coast Guard Law of 2009</li> </ul>	Adequate
PR6	Management of SHIPPING is consistently implemented	3	<ul style="list-style-type: none"> <li>The TPAMB does not manage shipping; it is not the primary regulatory agency for shipping</li> <li>The PCG is the national management agency for shipping</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>RA 9993</li> </ul>	Adequate
PR7	There are effective processes applied to resolve differing views/conflicts regarding SHIPPING.	3	<ul style="list-style-type: none"> <li>Yes, consultative processes are used to resolve conflicts, e.g., ASL</li> <li>For international shipping, the national government has processes to resolve conflicts</li> </ul>	<ul style="list-style-type: none"> <li>Position papers on ASL submitted to the Philippine Senate (TPAMB, 2013)</li> <li>UNCLOS and other relevant international conventions c/o DFA</li> </ul>	Adequate
PR8	Impacts (direct, indirect and cumulative) of activities associated with SHIPPING are appropriately considered.	1	<ul style="list-style-type: none"> <li>Impacts are not appropriately considered because of limited understanding of shipping</li> <li>Impacts of shipping on water quality, alien invasive species and introduction of diseases not yet being studied</li> </ul>		Adequate
PR9	The best available <u>biophysical</u> research and/or monitoring information is applied appropriately to make relevant	3	<ul style="list-style-type: none"> <li>Exclusion of shipping within the buffer zone and application of PSSA designation for TRNP is based on biophysical research and monitoring information</li> </ul>	<ul style="list-style-type: none"> <li>Aquino and Alarcon (2010) Monitoring the Cetacean populations in the Tubbataha Reefs Natural Park, Cagayancillo, Palawan, Philippines, unpublished</li> <li>Research and Monitoring reports</li> </ul>	Adequate

	management decisions regarding SHIPPING.				
PR10	The best available <u>socio-economic</u> <sup>21</sup> research and/or monitoring information is applied appropriately to make relevant management decisions regarding SHIPPING.	1	<ul style="list-style-type: none"> <li>Socio-economic research is a weakness of managers, therefore no studies on the economic and social factors of shipping have yet been undertaken</li> </ul>	<ul style="list-style-type: none"> <li>Annual accomplishment reports</li> </ul>	Adequate
PR11	Relevant standards are identified and being met regarding SHIPPING.	1	<ul style="list-style-type: none"> <li>PSSA designation will institute relevant standards for shipping. PSSA designations expected in 2017.</li> </ul>	<ul style="list-style-type: none"> <li>PSSA application</li> </ul>	Adequate
PR12	Targets have been established to gauge management performance for SHIPPING.	1	<ul style="list-style-type: none"> <li>The TPAMB has no authority to manage shipping, therefore targets have not been established to gauge performance</li> </ul>		Adequate

	OUTPUTS	Score	Justification	Evidence/ Sources	Confidence
OP1	To date, the actual management program (or activities) have progressed in accordance with the planned work program for SHIPPING.	3	<ul style="list-style-type: none"> <li>The main work program for shipping is the PSSA application; it has progressed in accordance with the plan</li> </ul>	<ul style="list-style-type: none"> <li>PSSA application</li> </ul>	Adequate

<sup>21</sup> Socio-economic research refers to research in local communities, e.g., Cagayancillo

OP2	Implementation of management documents and/or programs relevant to SHIPPING have progressed in accordance with timeframes specified in those documents.	3	<ul style="list-style-type: none"> <li>Information paper has been drafted and due for submission during IMO-MEPC 68 meeting in May 2015</li> </ul>	<ul style="list-style-type: none"> <li>Identification and protection of special areas and PSSAs</li> </ul>	Adequate
OP3	The results (in OP1 above) have achieved their stated management objectives for SHIPPING	1	<ul style="list-style-type: none"> <li>PSSA designation is expected in 2017, at the earliest</li> </ul>	<ul style="list-style-type: none"> <li>PSSA application</li> </ul>	Adequate
OP4	To date, products or services have been produced in accordance with the stated management objectives for SHIPPING.	2	<ul style="list-style-type: none"> <li>Information paper 25 prepared for submission to MEPC68</li> <li>Information on vessel traffic being collected</li> <li>Simulations of oil and chemical spill scenarios produced</li> </ul>	<ul style="list-style-type: none"> <li>Identification and protection of special areas and PSSAs</li> <li>MPR Radar Log</li> <li>Simulations of oil and chemical spill scenarios</li> </ul>	Adequate
OP5	Knowledge regarding SHIPPING is effectively managed and shared with the community	3	<ul style="list-style-type: none"> <li>Information on vessel traffic being collected, analysed, kept in TMO database and shared with other agencies</li> <li>It is assumed that national shipping data is lodged with relevant agencies, e.g., NAMRIA, PCG</li> <li>Information on vessel traffic being collected, analysed, kept in TMO database and shared with other agencies</li> </ul>	<ul style="list-style-type: none"> <li>MPR Radar Log</li> </ul>	Adequate

	OUTCOMES	Score	Justification	Evidence/ Sources	Confidence
OC1	The relevant managing agencies are to date effectively addressing SHIPPING and moving towards the attainment of the desired outcomes.	3	<ul style="list-style-type: none"> <li>Shipping is being addressed through PSSA application</li> <li>Information on vessel traffic being collected and analysed to serve as input to decision making</li> </ul>	<ul style="list-style-type: none"> <li>PSSA application</li> <li>MPR Radar Log</li> </ul>	Adequate
OC2	The outputs relating to SHIPPING are on track to ensure the values of TRNP are protected (refer to CO1).	3	<ul style="list-style-type: none"> <li>Information paper 25 prepared for submission to MEPC68</li> <li>Information on vessel traffic being collected</li> <li>Simulations of oil and chemical spill scenarios produced</li> </ul>	<ul style="list-style-type: none"> <li>Identification and protection of special areas and PSSAs 25</li> <li>MPR Radar Log</li> <li>Simulations of oil and chemical spill scenarios</li> </ul>	Adequate
OC3	The outputs (refer to OP1 & 3) for SHIPPING are reducing the major risks and the threats to the TRNP.	1	<ul style="list-style-type: none"> <li>The major risks and threats is expected to be reduced upon PSSA designation</li> </ul>	<ul style="list-style-type: none"> <li>IMO timeframe for PSSA designations</li> <li>IMO-NORAD Philippine inter-ministerial/ national meeting 17 July 2014</li> </ul>	Adequate
OC4	Use of the TRNP relating to SHIPPING is demonstrably <u>environmentally</u> sustainable.	2	<ul style="list-style-type: none"> <li>There is no method to monitor shipping impacts, e.g., ballast water discharge, marine debris, alien invasive species</li> <li>Expected increase in shipping activities pose greater risks to the values of TRNP</li> </ul>	<ul style="list-style-type: none"> <li>Heij, et al. (2013) Ship incident risk around the heritage areas of Tubbataha and Banc d'Arguin. <i>Transportation Research Part D</i> 25, 77-83</li> </ul>	Adequate
OC5	Use of the TRNP relating to SHIPPING is demonstrably <u>economically</u> sustainable.	N/A			

OC6	Use of the TRNP relating to SHIPPING is demonstrably socially sustainable enhancing understanding and/or enjoyment.	2	<ul style="list-style-type: none"> <li>The use of TRNP by the shipping industry has no demonstrable positive social impacts</li> </ul>		Very limited
OC7	The relevant managing agencies have developed effective partnerships with local communities and/or stakeholders to address SHIPPING.	3	<ul style="list-style-type: none"> <li>Partnerships relevant to shipping revolve around the PSSA application for TRNP and implementation of the buffer zone management plan e.g., IMO, PN, PCG, NAMRIA, academe</li> </ul>	<ul style="list-style-type: none"> <li>IMO-NORAD Philippine inter-ministerial/ national meeting 17 July 2014</li> </ul>	Adequate

## CLIMATE CHANGE

	CONTEXT	Score	Justification	Evidence/ Sources	Confidence
CO1	The values <sup>22</sup> in TRNP relevant to CLIMATE CHANGE are understood by managers.	3	<ul style="list-style-type: none"> <li>Values relevant to climate change and extreme weather are understood by most of the managers</li> </ul>	<ul style="list-style-type: none"> <li>Emergency and Risk Reduction Plan</li> <li>TRNP Business Plan</li> <li>Ecosystem Research and Monitoring Report</li> <li>TRNP Comprehensive Management Plan 2011-2021</li> </ul>	Adequate
CO2	The current condition and trend of values relevant to CLIMATE CHANGE are known by managers	2	<ul style="list-style-type: none"> <li>Some researches focus on climate change impacts and adaptation, e.g., corals, top predators, seabirds</li> <li>Management assessment process includes impacts of CLIMATE CHANGE</li> <li>Vulnerability assessment of climate change impacts was carried out but failed to provide a clear picture of current trends and conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystem Research and Monitoring Report</li> <li>Emergency and Risk Reduction Plan</li> <li>Aquino et al. 2011. Vulnerability and Resilience Assessment of Tubbataha Reefs Natural Park, Cagayancillo, Palawan, Philippines. Proceedings of the Asian Wetlands Symposium 2011, Sabah, Malaysia</li> </ul>	Adequate
CO3	The impacts (direct, indirect and cumulative) associated with CLIMATE CHANGE are understood by managers.	2	<ul style="list-style-type: none"> <li>Impacts of CLIMATE CHANGE not fully understood by all managers</li> <li>1998 bleaching incident led researchers and managers to believe that natural recovery is still the best strategy for TRNP</li> </ul>	<ul style="list-style-type: none"> <li>Arceo et al. 2001. Coral bleaching in the Philippine Reefs: coincident evidences with mesoscale thermal anomalies. Bulletin of Marine Science, 69(2):579-593</li> </ul>	Adequate
CO4	The broader (national/international) level influences relevant to CLIMATE	2	<ul style="list-style-type: none"> <li>TRNP is considered by various ongoing international and national studies as their pilot site for climate change monitoring</li> <li>Knowledge is focused on climate change adaptation rather than mitigation</li> </ul>	<ul style="list-style-type: none"> <li>NOAA Ocean Acidification Program</li> <li>UP-MSI ICE CREAM Project</li> </ul>	Adequate

<sup>22</sup> Values include biological (biodiversity), socio-economic, and educational or scientific significance and ecological goods and services



	CHANGE are understood by managers.				
CO5	The stakeholders relevant to CLIMATE CHANGE are well known by managers.	3	<ul style="list-style-type: none"> <li>Public outreach and education infused the discussion of climate change into its general message, e.g., stakeholders/target audience are encouraged to protect their adjacent coral reefs as a means of contributing to TRNP conservation, WWF Environmental Life Skills (ELS) Training for Teachers</li> <li>Collaboration with academe and other research institutions, e.g., NOAA, DOST, UP-MSI, DLSU, to monitor effects of climate change</li> </ul>	<ul style="list-style-type: none"> <li>TRNP IEC reports</li> <li>MOA</li> </ul>	Adequate

	PLANNING	Score	Justification	Evidence/ Sources	Confidence
PL1	There is a planning system in place that effectively addresses CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>CLIMATE CHANGE are believed to be addressed to some extent by current conservation actions; thus, all conservation plans of TRNP touch on these impacts</li> <li>Plans are focused on climate change adaptation rather than mitigation</li> </ul>	<ul style="list-style-type: none"> <li>Emergency and Risk Reduction Plan</li> <li>TRNP Business Plan</li> <li>Ecosystem Research and Monitoring Plan</li> <li>TRNP Comprehensive Management Plan 2011-2021</li> </ul>	Adequate
PL2	The planning system for CLIMATE CHANGE addresses the major risks/threats to the TRNP's values.	3	<ul style="list-style-type: none"> <li>Emergency and Risk Reduction Plan identifies and addresses the major risks to TRNP values</li> <li>The same plan was reviewed by various relevant sectors for functionality</li> </ul>	<ul style="list-style-type: none"> <li>Emergency and Risk Reduction Plan</li> <li>TRNP Comprehensive Management Plan 2011-2021</li> </ul>	Adequate

			<ul style="list-style-type: none"> <li>Conservation actions help strengthen TRNP to adapt to climate change</li> </ul>		
PL3	The actions for implementation regarding CLIMATE CHANGE are clearly identified within the plan.	3	<ul style="list-style-type: none"> <li>Consideration of climate change is now a feature of basic plans and strategies, e.g., research and monitoring, compliance and enforcement, public outreach and education</li> <li>Specific actions regarding CLIMATE CHANGE are further identified in the Emergency and Risk Reduction Plan</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Comprehensive Management Plan 2011-2021</li> <li>Ecosystem Research and Monitoring Plan</li> <li>Emergency and Risk Reduction Plan</li> <li>TRNP IEC Plan 2014-2019</li> </ul>	Adequate
PL4	Clear, measurable, and appropriate objectives for management of CLIMATE CHANGE have been documented.	2	<ul style="list-style-type: none"> <li>Emergency and Risk Reduction Plan specifically targets CLIMATE CHANGE but measurable objectives were not clearly expressed</li> <li>Other plans contain targets that pertain to CLIMATE CHANGE.</li> </ul>	<ul style="list-style-type: none"> <li>Emergency and Risk Reduction Plan</li> <li>TRNP Comprehensive Management Plan 2011-2021</li> <li>Ecosystem Research and Monitoring Plan</li> </ul>	Adequate
PL5	There are plans and systems in place to ensure that appropriate and adequate monitoring information is gathered in relation to CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>Data from weather station and loggers regularly collected as part of monitoring for climate change impacts</li> <li>Research activities include monitoring of climate change impacts, e.g., Reef Check, NOAA project, Philippine Coral Bleaching Watch, Coral Reef Targeted Research (CRTR)</li> </ul>	<ul style="list-style-type: none"> <li>NOAA Ocean Acidification Program</li> <li>Ecosystem Research and Monitoring report</li> </ul>	Adequate
PL6	The main stakeholders &/or the local community are effectively engaged in planning to address CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>RA 10067 encourages participation of the private sector and local government units in the protection, preservation, and promotion of TRNP</li> <li>Local community in Cagayancillo is represented in the TPAMB</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>Workshop reports</li> </ul>	Adequate

			<ul style="list-style-type: none"> <li>Stakeholders, e.g., local community, researchers, academe, policy-makers, are involved in planning for adaptation to climate change</li> </ul>		
PL7	Sufficient policy currently exists to effectively address CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>Conservation actions i.e. enforcement, no-take policy, help strengthen TRNP to adapt to climate change</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>TPAMB AO 01-12</li> </ul>	Adequate
PL8	There is consistency across agencies when planning for CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>RA 10067 provides for supplementary application of existing laws, i.e., provisions of this law is construed liberally in favor of achieving biodiversity conservation</li> <li>Generally, stakeholders from the local community, private sector, academe, and government units are involved in planning as provided by RA 10067</li> <li>RA 10067 however does not make any mention of climate change, but focuses on biodiversity conservation</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067 Section 44</li> </ul>	Adequate

	INPUTS	Score	Justification	Evidence/ Sources	Confidence
IN1	The internal financial resources are adequate and prioritized to meet specific management objectives (refer to PL4) to address CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>Compliance and enforcement is a core activity of TMO for which internal financial resources are allocated and prioritized to ensure a healthy ecosystem that is resilient to effects of climate change</li> <li>Annual monitoring is conducted as an early warning mechanism to identify impacts of climate change, if any</li> </ul>	<ul style="list-style-type: none"> <li>Compliance and Enforcement Plan</li> <li>Ecosystem Research and Monitoring Plan</li> </ul>	Adequate

IN2	The human resources within the TPAMB are <u>adequate</u> to meet specific management objectives (refer to PL4) to address CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>• There are adequate human resources to conduct compliance and enforcement activities</li> <li>• Annual monitoring activities require help of external researchers</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance and Enforcement Plan</li> <li>• Research and Monitoring Plan</li> </ul>	Adequate
IN3	The right skill sets and expertise are currently available to the TPAMB to address CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>• There are adequate skill sets and expertise to protect the park</li> <li>• Technical support is available when in-house monitoring expertise is inadequate</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance and Enforcement Plan</li> <li>• Research and Monitoring Plan</li> </ul>	Adequate
IN4	The necessary biophysical information is currently available to address CLIMATE CHANGE.	2	<ul style="list-style-type: none"> <li>• Biophysical information is available for major indicator taxa, e.g., fish, corals, seabirds, turtles, but not enough to address impacts of climate change</li> <li>• Monitoring stations for bleaching events are in place (CRTR)</li> </ul>	<ul style="list-style-type: none"> <li>• Research and Monitoring reports</li> <li>• Coral Reef Targeted Research Project</li> </ul>	Adequate
IN5	The necessary socio-economic information is currently available to address CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>• Socio-economic information served as input to compliance and enforcement planning</li> <li>• There is lack of information on tourism and its relation to climate change</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance and Enforcement Plan</li> </ul>	Adequate
IN6	There are additional sources of non-government input (e.g. volunteers) contributing to address CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>• Full support is provided to external researchers in the conduct of climate change studies</li> <li>• Monitoring stations for bleaching events are in place (CRTR)</li> <li>• Volunteer researchers are engaged</li> <li>• Grants from private sector fund some research activities, e.g., PSFI</li> </ul>	<ul style="list-style-type: none"> <li>• Coral Reef Targeted Research Project</li> <li>• Consultancy agreements</li> <li>• TMO-PSFI MOA</li> </ul>	Adequate

	PROCESSES	Score	Justification	Evidence/ Sources	Confidence
PR1	The main stakeholders &/or industry(ies) are effectively engaged in the ongoing management of CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>Members of the TPAMB, who represent various stakeholders, e.g., academe, national government agencies, LGUs, are engaged in the ongoing management of TRNP</li> <li>The tourism industry is engaged in planning and the monitoring of climate change impacts</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>TRNP Management Plan 2011-2021</li> <li>Comprehensive Tourism Management Plan</li> <li>Ecosystem Research and Monitoring Plan</li> </ul>	Adequate
PR2	The local community <sup>23</sup> is effectively engaged in the ongoing management of CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>The local community is engaged in the ongoing management of TRNP through its representation to the TPAMB</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> </ul>	Adequate
PR3	There is a sound governance system in place to address CLIMATE CHANGE.	4	<ul style="list-style-type: none"> <li>A consultative and transparent governance mechanism is in place to address climate change</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>Workshop reports</li> </ul>	Adequate
PR4	There is effective monitoring, including regular appraisal of assessment tools to gauge progress towards the	4	<ul style="list-style-type: none"> <li>Annual biophysical monitoring is conducted as an early warning mechanism to identify impacts of climate change, if any</li> <li>MPRs regularly monitor signs of coral bleaching</li> </ul>	<ul style="list-style-type: none"> <li>Research and Monitoring Plan</li> <li>MPR DAR</li> </ul>	Adequate

<sup>23</sup> Municipality of Cagayancillo

	objective(s) for CLIMATE CHANGE.				
PR5	Appropriate training is available to the managing agencies to address CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>MPRs are trained to monitor coral bleaching and other impacts of climate change</li> <li>Appropriate training is available to In-house researchers, albeit opportunistically</li> <li>Other agencies, e.g., DENR, BFAR, academe, conduct trainings to address climate change</li> </ul>	<ul style="list-style-type: none"> <li>Training on Integrated Coastal Sensitivity, Exposure, Adaptive Capacity for climate Change (I-C-SEA Change) Assessment Tool</li> </ul>	Adequate
PR6	Management of CLIMATE CHANGE is consistently implemented	3	<ul style="list-style-type: none"> <li>Management activities are often reactive and event based, e.g., baseline study on gastropods conducted after illegal harvesting by fishers</li> <li>MPRs regularly conduct patrols</li> <li>Research activities are conducted annually</li> <li>TRNP is a demonstration site to study responses of a natural reef system to climate change</li> </ul>	<ul style="list-style-type: none"> <li>MPR DAR</li> <li>Research and Monitoring Plan</li> <li>ICE CREAM Project</li> <li>Coral Reef Targeted Research Project</li> </ul>	Adequate
PR7	There are effective processes applied to resolve differing views/conflicts regarding CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>Consultative mechanisms have proven effective in resolving differing views and conflicts</li> <li>Conflicts that result in the degradation of resources, e.g., illegal fishing, are resolved either administratively or legally</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> </ul>	Adequate
PR8	Impacts (direct, indirect and cumulative) of activities associated with CLIMATE	3	<ul style="list-style-type: none"> <li>Compliance and enforcement activities are vigilantly conducted</li> <li>Tourism activities are regulated to minimize anthropogenic effects which could increase vulnerability of TRNP to climate change</li> </ul>	<ul style="list-style-type: none"> <li>Compliance and Enforcement Plan</li> <li>Comprehensive Tourism Management Plan</li> </ul>	Adequate

	CHANGE are appropriately considered.				
PR9	The best available <u>biophysical</u> research and/or monitoring information is applied appropriately to make relevant management decisions regarding CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>• Weather station provides information on climate-related parameters, e.g., ambient temperature, rainfall, wind speed</li> <li>• Calcification Acidification Unit System and Autonomous Reef Monitoring Structures (CAUS and ARMS) measure changes in benthic community in response to ocean acidification</li> <li>• Annual monitoring activities provide information that are used to make relevant management decisions</li> <li>• Networks of relevant experts, e.g., UP-MSI, DLSU, provide advice to inform management decisions</li> </ul>	<ul style="list-style-type: none"> <li>• NOAA Ocean Acidification Program</li> <li>• TRNP Ecosystem Research and Monitoring reports</li> </ul>	Adequate
PR10	The best available <u>socio-economic</u> <sup>24</sup> research and/or monitoring information is applied appropriately to make relevant management decisions regarding CLIMATE CHANGE.	2	<ul style="list-style-type: none"> <li>• Socio-economic and/or monitoring information is rarely collected</li> </ul>		Adequate
PR11	Relevant standards are identified and being met regarding CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>• Park authorities focus on enhancing ecosystem resilience to mitigate climate change impacts</li> </ul>		Adequate

<sup>24</sup> Socio-economic research relevant to tourism refers to dive industry

PR12	Targets have been established to gauge management performance for CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>Ensuring that the no-take policy is adhered to is one of the main targets of management and serves to gauge performance for climate change</li> <li>Tourism activities are regulated to minimize anthropogenic effects which could increase vulnerability of TRNP to climate change</li> <li>Maintenance of OUV is an indicator of effective management</li> </ul>	<ul style="list-style-type: none"> <li>Compliance and Enforcement Plan</li> <li>Comprehensive Tourism Management Plan</li> </ul>	Adequate
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	OUTPUTS	Score	Justification	Evidence/ Sources	Confidence
OP1	To date, the actual management program (or activities) have progressed in accordance with the planned work program for CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>Compliance and enforcement, and biophysical research and monitoring have progressed in accordance with planned work programs</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> </ul>	Adequate
OP2	Implementation of management documents and/or programs relevant to CLIMATE CHANGE have progressed in accordance	3	<ul style="list-style-type: none"> <li>Management programs have progressed in accordance with time frames</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> </ul>	Adequate



	with timeframes specified in those documents.				
OP3	The results (in OP1 above) have achieved their stated management objectives for CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>• Compliance and enforcement ensures that anthropogenic factors do not exacerbate the impacts of climate change on the reef</li> <li>• Results of research and monitoring activities give managers insights on the potential effects of climate change to TRNP, e.g., live coral cover, demersal fish biomass, seabird populations</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance and Enforcement Plan</li> <li>• MPR DAR</li> <li>• Research and Monitoring Reports</li> </ul>	Adequate
OP4	To date, products or services have been produced in accordance with the stated management objectives for CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>• Vigilant patrols ensured that the park is free from fishing</li> <li>• Preliminary vulnerability assessments made</li> <li>• Ecosystem research and monitoring reports produced annually</li> </ul>	<ul style="list-style-type: none"> <li>• MPR DAR</li> <li>• Aquino et al. 2011. Vulnerability and Resilience Assessment of Tubbataha Reefs Natural Park, Cagayancillo, Palawan, Philippines. Proceedings of the Asian Wetlands Symposium 2011, Sabah, Malaysia</li> <li>• TRNP Integrated Coastal Sensitivity, Exposure, Adaptive Capacity for climate Change (I-C-SEA Change) Assessment</li> <li>• Research and Monitoring Reports</li> </ul>	Adequate
OP5	Knowledge regarding CLIMATE CHANGE is effectively managed and shared with the community	3	<ul style="list-style-type: none"> <li>• Data is stored in TMO Information System</li> <li>• TMO has limited data on climate-related parameters, e.g., sea surface temperature, sea level rise, etc.</li> <li>• Reports are published in TRNP website</li> <li>• Data are provided to external researchers</li> </ul>	<ul style="list-style-type: none"> <li>• Tubbataha Information System</li> <li>• <a href="http://tubbatahareef.org/wp/reports_publications">http://tubbatahareef.org/wp/reports_publications</a></li> </ul>	Adequate

	OUTCOMES	Score	Justification	Evidence/ Sources	Confidence
OC1	The relevant managing agencies are to date effectively addressing CLIMATE CHANGE and moving towards the attainment of the desired outcomes.	3	<ul style="list-style-type: none"> <li>Climate change is not directly managed though addressed in management programs, e.g., compliance and enforcement, research and monitoring activities</li> <li>Gaps are augmented by collaborative efforts with external experts</li> <li>There is a need for comprehensive research on more taxa and ecological processes</li> <li>Minimizing anthropogenic impacts to TRNP which could impinge on climate change resilience are effectively addressed by managing agencies, e.g., regular and vigilant patrols</li> </ul>	<ul style="list-style-type: none"> <li>Annual Operational Report</li> <li>ICE CREAM Project</li> <li>Coral Reef Targeted Research Project</li> <li>NOAA Ocean Acidification Program</li> <li>Research and Monitoring Plan</li> <li>Compliance and Enforcement Plan</li> </ul>	Adequate
OC2	The outputs relating to CLIMATE CHANGE are on track to ensure the values of TRNP are protected (refer to CO1).	3	<ul style="list-style-type: none"> <li>No-take policy strictly enforced</li> <li>Annual monitoring reports produced</li> </ul>	<ul style="list-style-type: none"> <li>MPR DAR</li> <li>Ecosystem Research and Monitoring Reports</li> </ul>	Adequate
OC3	The outputs (refer to OP1 & 3) for CLIMATE CHANGE are reducing the major risks and the threats to the TRNP.	3	<ul style="list-style-type: none"> <li>Compliance and enforcement ensures that anthropogenic factors do not exacerbate the impacts of climate change on the reef</li> <li>Results of research and monitoring activities give managers insights on the potential effects of climate change to TRNP, e.g., live coral cover, demersal fish biomass, seabird populations</li> </ul>	<ul style="list-style-type: none"> <li>Compliance and Enforcement Plan</li> <li>MPR DAR</li> <li>Research and Monitoring Reports</li> </ul>	Adequate

OC4	Use of the TRNP relating to CLIMATE CHANGE is demonstrably <u>environmentally</u> sustainable.	3	<ul style="list-style-type: none"> <li>• Tourism and Research are the only allowed activities within the park which only run for 3 months</li> <li>• Tourism industry and researchers adhere to park rules and regulations</li> <li>• There is need for comprehensive diver impact and carrying capacity studies</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• TRNP Management Plan 2011-2021</li> <li>• Comprehensive Tourism Management Plan</li> <li>• Research and Monitoring Plan</li> </ul>	Adequate
OC5	Use of the TRNP relating to CLIMATE CHANGE is demonstrably <u>economically</u> sustainable.	2	<ul style="list-style-type: none"> <li>• Effects of climate change on the reefs will ultimately jeopardize tourism activities in the park</li> </ul>		Limited
OC6	Use of the TRNP relating to CLIMATE CHANGE is demonstrably socially sustainable enhancing understanding and/or enjoyment.	N/A			Adequate
OC7	The relevant managing agencies have developed effective partnerships with local communities and/or stakeholders to address CLIMATE CHANGE.	3	<ul style="list-style-type: none"> <li>• Managers have strong collaboration with academe and government agencies, e.g., UP-MSI, DLSU, WPU, GIZ, DENR, TIEZA, etc., to monitor potential impacts of climate change</li> <li>• Partnership with dive industry ensures that human impacts to the reefs are mitigated</li> <li>• Private sector, e.g., PSFI, supports management activities that increase park's resilience to climate change</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• Research and Monitoring Plan</li> <li>• Annual Dive Operators' Consultation</li> <li>• TMO-PSFI MOA</li> </ul>	Adequate

## RESEARCH

	CONTEXT	Score	Justification	Evidence/ Sources	Confidence
CO1	The values in TRNP relevant to RESEARCH are understood by managers.	3	<ul style="list-style-type: none"> <li>Managers have fair understanding of the value of biophysical research in managing TRNP</li> <li>Partnerships with reputable institutions in research</li> <li>There is need to translate research results into popular form to increase understanding by managers</li> <li>There is weakness in research on some taxa e.g., seagrass, gastropods, cetaceans</li> <li>Dependence on other agencies for socio-economic data</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Research and Monitoring Plan 2015-2020</li> <li>AWFP</li> </ul>	Adequate
CO2	The current condition and trend of values relevant to RESEARCH are known by managers	3	<ul style="list-style-type: none"> <li>There is regular reporting of MPR and tourist observations on species and habitats, and research results to the TPAMB</li> <li>Research gaps remain for many groups of species, for habitats, and ecological processes as monitoring is focused on benthos, fish, seabirds and marine turtles</li> </ul>	<ul style="list-style-type: none"> <li>Monthly, quarterly and annual report</li> <li>Research and Monitoring Reports</li> </ul>	Adequate
CO3	The impacts (direct, indirect and cumulative) associated with RESEARCH are understood by managers.	3	<ul style="list-style-type: none"> <li>Research permits apply to all external researchers</li> <li>MPRs assist in the conduct of research activities to ensure that values are not put to risk</li> <li>Collection of specimens subject to approval of TPAMB and issuance of permit by PCSD</li> </ul>	<ul style="list-style-type: none"> <li>IRR of RA 10067</li> <li>Research and Monitoring Plan 2015-2020</li> <li>Contract with researchers</li> </ul>	Adequate

CO4	The broader (national/international) level influences relevant to RESEARCH are understood by managers.	3	<ul style="list-style-type: none"> <li>Monitoring of climate change impacts conducted throughout the year by MPRs and in summer by researchers</li> <li>Instrument for monitoring of weather patterns installed in TRNP by DOST</li> <li>Participation in national level coral reef monitoring training which aims to standardize methods across the country</li> </ul>	<ul style="list-style-type: none"> <li>DAR</li> <li>Research reports</li> <li><a href="http://fmon.asti.dost.gov.ph/weather/pr edict">http://fmon.asti.dost.gov.ph/weather/pr edict</a></li> <li>Training report</li> </ul>	Adequate
CO5	The stakeholders relevant to RESEARCH are well known by managers.	3	<ul style="list-style-type: none"> <li>Partnerships with reputable institutions in research under MoUs</li> <li>Good understanding of permitting requirements by researchers</li> <li>Collaboration with relevant researchers through workshops, programs, TRNP Scientific Advisory Committee</li> </ul>	<ul style="list-style-type: none"> <li>MoUs</li> <li>Research and Monitoring Plan 2015-2020</li> <li>Research contracts</li> <li>Workshop reports</li> </ul>	Adequate

	PLANNING	Score	Justification	Evidence/ Sources	Confidence
PL1	There is a planning system in place that effectively addresses RESEARCH.	3	<ul style="list-style-type: none"> <li>Planning system is in place for priority taxa, e.g. fish, benthos, seabirds</li> <li>No consistent planning for research of other taxa</li> <li>Research permits, which indicate guidelines, required</li> </ul>	<ul style="list-style-type: none"> <li>Research and Monitoring Plan 2015-2020</li> <li>Research contracts</li> </ul>	Adequate
PL2	The planning system for RESEARCH addresses the major risks/threats to the TRNP's values.	3	<ul style="list-style-type: none"> <li>Research permits required</li> <li>Insufficient clarity of regulations in relation to tourists conducting research</li> </ul>	<ul style="list-style-type: none"> <li>IRR of RA 10067</li> <li>Research and Monitoring Plan 2015-2020</li> </ul>	Adequate

PL3	The actions for implementation regarding RESEARCH are clearly identified within the plan.	3	<ul style="list-style-type: none"> <li>Research actions indicated in the plan</li> <li>Collaboration with research institutions continue to expand</li> </ul>	<ul style="list-style-type: none"> <li>Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
PL4	Clear, measurable, and appropriate objectives for management of RESEARCH have been documented.	3	<ul style="list-style-type: none"> <li>Objectives are clear and appropriate, but not measurable</li> <li>There is a need to document the zoning scheme for TRNP</li> </ul>	<ul style="list-style-type: none"> <li>Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
PL5	There are plans and systems in place to ensure that appropriate and adequate monitoring information is gathered in relation to RESEARCH	3	<ul style="list-style-type: none"> <li>Monitoring program has been maintained since 1997, but limited to 4 taxa</li> <li>Monitoring program maintained by NGO partner since 1982</li> </ul>	<ul style="list-style-type: none"> <li>Research and monitoring reports</li> <li>Saving Philippine Reefs reports, CCEF</li> </ul>	Adequate
PL6	The main stakeholders &/or the local community are effectively engaged in planning to address RESEARCH.	4	<ul style="list-style-type: none"> <li>Collaboration with research institutions continue to expand</li> <li>Planning for research involves academe and other research institutions</li> <li>Tourism industry participates through Reef Watch</li> </ul>	<ul style="list-style-type: none"> <li>Management Plan 2011-2021</li> <li>Research and Monitoring Plan 2015-2020</li> <li>Workshop report</li> <li>Reef Watch report</li> </ul>	Adequate
PL7	Sufficient policy currently exists to effectively address RESEARCH.	4	<ul style="list-style-type: none"> <li>Research is one of the main programs of management</li> <li>Tourism rules and regulations also applicable in the conduct of research</li> </ul>	<ul style="list-style-type: none"> <li>Management Plan 2011-2021</li> <li>IRR of RA 10067</li> </ul>	Adequate

PL8	There is consistency across agencies <sup>25</sup> when planning for RESEARCH.	4	<ul style="list-style-type: none"> <li>Research methods used consistent with national standards</li> <li>TRNP research agenda consistent with DENR</li> </ul>	<ul style="list-style-type: none"> <li>Research and Monitoring Report 2014</li> <li>Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
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	INPUTS	Score	Justification	Evidence/ Sources	Confidence
IN1	The internal financial resources are adequate and prioritised to meet specific management objectives (refer to PL4) to address RESEARCH.	2	<ul style="list-style-type: none"> <li>TMO budget allocation is minimal</li> </ul>	<ul style="list-style-type: none"> <li>AWFP</li> </ul>	Adequate
IN2	The human resources within the managing organisations are <u>adequate</u> to meet specific management objectives (refer to PL4) to address RESEARCH.	2	<ul style="list-style-type: none"> <li>TMO does not have adequate number of research staff in relation to research needs</li> <li>Limited engagement with local universities to augment human resources</li> </ul>	<ul style="list-style-type: none"> <li>TMO roster</li> </ul>	Limited
IN3	The right skill sets and expertise are currently available to the managing organisations to address RESEARCH.	2	<ul style="list-style-type: none"> <li>There is limited scientific knowledge and skills within the TPAMB and TMO to manage scientific research</li> <li>External consultants design research methods</li> <li>There is need to develop in-house skills and expertise in research planning, design, and implementation</li> </ul>	<ul style="list-style-type: none"> <li>Memoranda of Agreement with local universities</li> </ul>	Adequate

<sup>25</sup> Agencies refer to government bodies with influence in the management of TRNP, e.g. DENR, PCSD, Cagayancillo LGU

IN4	The necessary biophysical information is currently available to address RESEARCH.	3	<ul style="list-style-type: none"> <li>• Biophysical information on benthos, fish, seabirds, and turtles are currently available</li> <li>• There is inadequate information on other taxa and on ecological processes</li> <li>• There is internal database of species and raw data</li> </ul>	<ul style="list-style-type: none"> <li>• TMO Information System</li> <li>• Research reports</li> </ul>	Adequate
IN5	The necessary socio-economic information is currently available to address RESEARCH.	2	<ul style="list-style-type: none"> <li>• Socio-economic data collected in Cagayancillo in 2014</li> <li>• No socio-economic information on other areas/municipalities</li> <li>• Limited socio-economic research, mostly biophysical research conducted</li> <li>• Conduct of socio-economic research is not considered in both the management and research plan</li> </ul>	<ul style="list-style-type: none"> <li>• WWF socio-economic data on Cagayancillo</li> <li>• Management Plan 2011-2021</li> <li>• Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
IN6	There are additional sources of non-government input (e.g. volunteers) contributing to address RESEARCH.	4	<ul style="list-style-type: none"> <li>• External researchers provide technical support to fill research gaps</li> <li>• Scuba diving industry is engaged in monitoring activities</li> <li>• TMO staff is augmented by volunteers in the conduct of research</li> <li>• Financial support for research accessed from NGOs (WWF, PSFI, GIZ, DLSU, etc.)</li> <li>• Arrangements with some research institutions are not formalized e.g., through MoU/MOA</li> </ul>	<ul style="list-style-type: none"> <li>• Memoranda of Agreement with local universities</li> <li>• Reef Watch reports</li> <li>• Volunteer agreements</li> <li>• MOA</li> </ul>	Adequate



	PROCESSES	Score	Justification	Evidence/ Sources	Confidence
PR1	The main stakeholders &/or industry(ies) are effectively engaged in the ongoing management of RESEARCH.	3	<ul style="list-style-type: none"> <li>• Researchers and universities are regularly consulted with respect to research planning and design</li> <li>• Research methods consistent with national government protocol</li> </ul>	<ul style="list-style-type: none"> <li>• ERM Workshop report</li> <li>• CoRVA Training report</li> </ul>	Adequate
PR2	The local community is effectively engaged in the ongoing management of RESEARCH.	2	<ul style="list-style-type: none"> <li>• Local community engagement in the management of research is limited to membership of LGU and POs of Cagayancillo in the management board</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• RA 10067</li> </ul>	Adequate
PR3	There is a sound governance system in place to address RESEARCH.	4	<ul style="list-style-type: none"> <li>• Guidelines for issuance of research permits is implemented</li> <li>• Compliance with research requirements, e.g., specimen collection, of relevant agencies</li> </ul>	<ul style="list-style-type: none"> <li>• IRR of RA 10067</li> <li>• MOA with PCSDS on research</li> </ul>	Adequate
PR4	There is effective monitoring including regular appraisal of assessment tools to gauge progress towards objectives of RESEARCH	3	<ul style="list-style-type: none"> <li>• Annual biophysical monitoring activities conducted</li> <li>• Poor performance in socio-economic monitoring</li> <li>• Appraisal of MEE tool conducted in 2014 leading to adaptation of this tool from <i>How is your MPA doing?</i></li> </ul>	<ul style="list-style-type: none"> <li>• Research and Monitoring Plan 2015-2020</li> <li>• First participatory evaluation 2005</li> <li>• MEE 2006 (CI)</li> <li>• MEE 2009 and 2010 (<i>How is your MPA doing?</i>)</li> <li>• MEAT 2011 and 2014</li> <li>• MEE 2014 (new tool from GBR)</li> </ul>	Adequate
PR5	Appropriate training is available to the managing agencies to address RESEARCH.	3	<ul style="list-style-type: none"> <li>• Budget allocated for capacity building but no specific training plan</li> <li>• TMO research staff and MPRs trained on national and international assessment methods (CoRVA, Reef Check)</li> </ul>	<ul style="list-style-type: none"> <li>• AWFP</li> <li>• Training reports</li> </ul>	Adequate

PR6	management of RESEARCH is consistently implemented	3	<ul style="list-style-type: none"> <li>• Research permitting system in place and implemented</li> <li>• Research policy established</li> <li>• Compliance with research requirements, e.g., specimen collection, of relevant agencies</li> </ul>	<ul style="list-style-type: none"> <li>• IRR of RA 10067</li> <li>• ERM Workshop report</li> <li>• Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
PR7	There are effective processes applied to resolve differing views/conflicts regarding RESEARCH.	3	<ul style="list-style-type: none"> <li>• Research policy addresses concerns such as data ownership and sharing, and authorship</li> <li>• Experts consulted on issues regarding research methods</li> </ul>	<ul style="list-style-type: none"> <li>• Research and Monitoring Plan 2015-2020</li> <li>• ERM Workshop report</li> </ul>	Adequate
PR8	Impacts (direct, indirect and cumulative) of activities associated with RESEARCH are appropriately considered.	3	<ul style="list-style-type: none"> <li>• Permitting system allows for assessment of potential impacts of research activities</li> <li>• TMO staff and MPRs participate in all externally-led research</li> </ul>	<ul style="list-style-type: none"> <li>• Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
PR9	The best available <u>biophysical</u> research and/or monitoring information is applied appropriately to make relevant management decisions regarding RESEARCH.	3	<ul style="list-style-type: none"> <li>• Biophysical research and monitoring conducted annually to generate current data for decision making</li> <li>• Research and monitoring plan developed for a more structured approach</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• Research and Monitoring Plan 2015-2020</li> <li>• AWWP 2014</li> </ul>	Adequate
PR10	The best available <u>socio-economic</u> research and/or monitoring information is applied appropriately to make relevant management decisions regarding RESEARCH.	2	<ul style="list-style-type: none"> <li>• Comprehensive socio-economic research in Cagayancillo not conducted since 2004</li> <li>• Socio-economic research has not been considered necessary to make decisions about research</li> </ul>	<ul style="list-style-type: none"> <li>• Subade, R. (2004) Socio-economic impacts of illegal fishing in the conservation of Tubbataha Reefs National Marine Park and UNESCO WHS, Cagayancillo, Palawan</li> </ul>	Adequate

PR11	Relevant standards are identified and being met regarding RESEARCH.	3	<ul style="list-style-type: none"> <li>Permits are required prior to conduct of research</li> <li>All park rules apply to researchers</li> <li>Research protocols are consistent with PCSDS and DENR standards</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067 and IRR</li> <li>RA 7611 – SEP Law</li> <li>RA 7586 – NIPAS Act</li> </ul>	Adequate
PR12	Targets have been established to gauge management performance for RESEARCH	3	<ul style="list-style-type: none"> <li>Timely preparation of RM reports is a target</li> <li>Publication of at least 1 research paper per researcher per year</li> <li>Good collaboration between TMO, national, and international research institutions</li> <li>AWFP sets target for research</li> </ul>	<ul style="list-style-type: none"> <li>Research and Monitoring Report 2014</li> <li>TOR of research staff</li> <li>MOA with universities</li> <li>AWFP 2014</li> </ul>	Adequate

	OUTPUTS	Score	Justification	Evidence/ Sources	Confidence
OP1	To date, the actual management program (or activities) have progressed in accordance with the planned work program for RESEARCH.	3	<ul style="list-style-type: none"> <li>AWFP research targets have been mostly met</li> <li>Targeted studies, e.g., connectivity and carrying capacity, not conducted due to absence of fund and expertise</li> </ul>	<ul style="list-style-type: none"> <li>AWFP 2014</li> <li>TRNP Management Plan 2011-2021</li> <li>Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
OP2	Implementation of management documents and/or programs relevant to RESEARCH have progressed in accordance with timeframes specified in those documents.	3	<ul style="list-style-type: none"> <li>Activities with allocated budget implemented in accordance with timeframes, e.g., fish and benthos, seabirds, water quality, turtle research</li> <li>Publication of research papers not in accordance with timeframes</li> </ul>	<ul style="list-style-type: none"> <li>AWFP 2014</li> <li>TRNP Management Plan 2011-2021</li> <li>Research and Monitoring Plan 2015-2020</li> </ul>	Adequate

OP3	The results (in OP1 above) have achieved their stated management objectives for RESEARCH.	3	<ul style="list-style-type: none"> <li>• Research results provided reliable information on ecosystem health and served as input for decision making</li> <li>• Key biophysical indicators were measured and found to be in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Research and Monitoring Report 2014</li> <li>• TRNP Management Plan 2011-2021</li> <li>• Research and Monitoring Plan 2015-2020</li> </ul>	Adequate
OP4	To date, products or services have been produced in accordance with the stated management objectives for RESEARCH.	3	<ul style="list-style-type: none"> <li>• IEC materials use research results to convey the importance of TRNP</li> <li>• Research papers presented in scientific conferences</li> <li>• Eco-guide training for dive masters include research findings</li> <li>• Management effectiveness measured through evaluation/assessment of biophysical indicators</li> <li>• Social media and website established but not maximized as an information tool</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• Comprehensive Tourism Management Plan 2014</li> <li>• IEC Plan 2015-2020</li> <li>• Research and Monitoring Plan 2015-2020</li> <li>• Eco-guide module</li> <li>• Primer, tourist brochures, maps, videos</li> <li>• Philippine Association of Marine Scientists workshop proceedings</li> <li>• Annual Research and Monitoring Reports</li> </ul>	Adequate
OP5	Knowledge regarding RESEARCH is effectively managed and shared with the community	3	<ul style="list-style-type: none"> <li>• Database for raw data, species, and reports is maintained</li> <li>• A research policy that addresses concerns such as data ownership and sharing, and authorship is implemented</li> <li>• Research reports are published in the website</li> <li>• Provide scientific information to journalists and students in popular form</li> <li>• Staff attendance to national and international workshops/symposia to share research knowledge</li> <li>• Partnership with other agencies in educational activities</li> </ul>	<ul style="list-style-type: none"> <li>• TMO Information system</li> <li>• Research and Monitoring Plan 2015-2020</li> <li>• <a href="http://www.tubbatahareef.org">www.tubbatahareef.org</a></li> <li>• Wells, S. and White, A. (2014) Tubbataha Reefs Natural Park – a beacon of hope for coral reefs. Reef Encounter</li> <li>• Workshop proceedings</li> <li>• IEC Plan 2015-2020</li> </ul>	Adequate

			<ul style="list-style-type: none"> <li>Public outreach and information activities use research results to highlight the values of TRNP</li> <li>Tubbataha Youth Ambassadors provided with necessary knowledge to become future conservation leaders</li> </ul>		
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	OUTCOMES	Score	Justification	Evidence/ Sources	Confidence
OC1	The relevant managing agencies are to date effectively addressing RESEARCH and moving towards the attainment of the desired outcomes.	3	<ul style="list-style-type: none"> <li>Structured permitting process in place</li> <li>Research information is used for decision making</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Research and Monitoring Plan 2015-2020</li> <li>AWFP 2014</li> </ul>	Adequate
OC2	The outputs relating to RESEARCH are on track to ensure the values of TRNP are protected (refer to CO1).	3	<ul style="list-style-type: none"> <li>More research are being undertaken through partnerships, e.g., PCSDS on water quality, UQ Catlin Seaview Survey</li> <li>Research is targeted on addressing issues of key management concerns, e.g., coral disease, water quality, PSSA.</li> </ul>	<ul style="list-style-type: none"> <li>MOA</li> <li>Research contract</li> </ul>	Adequate
OC3	The outputs (refer to OP1 & 3) for RESEARCH are reducing the major risks and the threats to the TRNP.	3	<ul style="list-style-type: none"> <li>Research results serve as input for decision/policy making to address threats</li> <li>However, research results do not necessarily reduce threats, e.g., David et al. 2013</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Research and Monitoring Plan 2015-2020</li> <li>AWFP 2014</li> <li>David et al. 2013. Observations on the trends of external threats to TRNP. PAMS workshop proceedings</li> </ul>	Adequate

OC4	Use of the TRNP relating to RESEARCH is demonstrably <u>environmentally</u> sustainable.	4	<ul style="list-style-type: none"> <li>• Permitting procedures in place</li> <li>• Researchers' compliance to park rules and regulations</li> <li>• Non-invasive research methods employed</li> <li>• Stringent permitting system for specimen collection</li> </ul>	<ul style="list-style-type: none"> <li>• IRR of RA 10067</li> <li>• Research and Monitoring Plan 2015-2020</li> <li>• PCSDS specimen collection and transport permits</li> </ul>	Adequate
OC5	Use of the TRNP relating to RESEARCH is demonstrably <u>economically</u> sustainable.	2	<ul style="list-style-type: none"> <li>• Research in TRNP is not economically sustainable due to lack of regular financial allocation</li> <li>• Research allocation is only P100, 000.00. Research requirement was P2.3M</li> <li>• Only key species are regularly monitored, e.g., fish, benthos, seabirds, turtles, but through partnerships/external grants</li> </ul>	<ul style="list-style-type: none"> <li>• AWWP 2014</li> <li>• Grant contracts</li> </ul>	Adequate
OC6	Use of the TRNP relating to RESEARCH is demonstrably socially sustainable enhancing understanding and/or enjoyment.	3	<ul style="list-style-type: none"> <li>• Intermittent dissemination of research results through various channels, e.g., website, Facebook, radio, print, TV</li> <li>• Inadequate human resources to focus on information dissemination</li> <li>• IEC, feedback mechanisms, orientation of divers increase understanding and enjoyment</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="http://www.tubbatahareef.org">www.tubbatahareef.org</a></li> <li>• <a href="https://www.facebook.com/OfficialTubbataha">www.facebook.com/OfficialTubbataha</a></li> <li>• Consultation proceedings</li> <li>• IEC reports</li> <li>• <a href="http://www.acccoast.bmb.gov.ph">www.acccoast.bmb.gov.ph</a></li> </ul>	Adequate
OC7	The relevant managing agencies have developed effective partnerships with local communities and/or stakeholders to address RESEARCH.	4	<ul style="list-style-type: none"> <li>• Research partnerships with local and international institutions</li> <li>• Participation in TRNP management planning review, MEE and research workshops</li> <li>• Participation of tourism sector in research</li> </ul>	<ul style="list-style-type: none"> <li>• UQ – Catlin Seaview survey</li> <li>• MOA with local universities</li> <li>• Workshop reports, e.g. ERM, MEE and Management Planning</li> <li>• Tubbataha Reef Watch reports</li> </ul>	Adequate

## TOURISM

	CONTEXT	Score	Justification	Evidence/ Sources	Confidence
CO1	The values <sup>26</sup> in TRNP relevant to TOURISM <sup>27</sup> are understood by managers.	4	<ul style="list-style-type: none"> <li>• Tourism is one of the main activities allowed in the park</li> <li>• Managers understand the value of tourism as main source of income</li> <li>• Managers collaborate with diving industry in the formulation of rules and regulations and in planning</li> <li>• Training of diving professionals that work in TRNP</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• TRNP Management Plan 2011-2021, Comprehensive Tourism Management Plan 2013</li> <li>• TPAMB Administrative Order 01-2012</li> <li>• Annual Dive Operators' Consultation Reports</li> <li>• Training reports</li> </ul>	Adequate
CO2	The current condition and trend of values relevant to TOURISM are known by managers	4	<ul style="list-style-type: none"> <li>• Informal feedback mechanism in place for private sector to report observations</li> <li>• Biophysical research results provide information on current condition and trends</li> <li>• Permits database provide data on status and trends in tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Tourism Report</li> <li>• Annual Dive Operators' Consultation Reports</li> <li>• Research and Monitoring Reports</li> </ul>	Adequate
CO3	The impacts (direct, indirect and cumulative) associated with TOURISM are understood by managers.	3	<ul style="list-style-type: none"> <li>• Park authorities apply various management tools, e.g., zones, permitting and mooring system, and park rules, to minimize impacts</li> <li>• Insufficient understanding of diving impacts and carrying capacity</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• TPAMB Administrative Order 01-2012</li> <li>• Emergency and Risk Reduction Plan 2014</li> </ul>	Adequate
CO4	The broader (national/international) level	4	<ul style="list-style-type: none"> <li>• Park authorities are aware of its dependence on the industry for financing</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• 2002 tourism data</li> </ul>	Adequate

<sup>26</sup> Values include biological (biodiversity), socio-economic, and educational or scientific significance and ecological goods and services

<sup>27</sup> International shipping activities

	influences relevant to TOURISM are understood by managers.		<p>and of the dependence of tourism on a healthy environment</p> <ul style="list-style-type: none"> <li>• Peace and order situation in the Philippines impinge on tourism in TRNP</li> <li>• International markets influence tourism revenues of private sector, e.g., decrease in oil prices</li> </ul>		
CO5	The stakeholders relevant to TOURISM are well known by managers.	4	<ul style="list-style-type: none"> <li>• Annual consultation with private sector conducted to engage the diving industry in park management</li> <li>• Lines of communication with the private sector maintained</li> <li>• Tourism reports provided to other agencies, e.g., DOT, DENR, Provincial Government</li> <li>• Dive operators and tourists are considered the main stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Dive Operators' Consultation Reports</li> <li>• Official correspondence</li> <li>• Tourism reports</li> </ul>	Adequate

	PLANNING	Score	Justification	Evidence/ Sources	Confidence
PL1	There is a planning system in place that effectively addresses TOURISM.	4	<ul style="list-style-type: none"> <li>• Zoning and management arrangements are in place to address tourism</li> <li>• Comprehensive Tourism Management Plan formulated in 2014</li> <li>• Framework for coordination with other agencies to respond to environmental incidents, e.g., groundings, oil spills, formulated</li> <li>• Emerging trends not proactively addressed, e.g., private yachts and bigger boats <i>vis a vis</i> use of facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Work and Financial Plan</li> <li>• TRNP Management Plan 2011-2021</li> <li>• Comprehensive Tourism Management Plan 2013</li> <li>• Emergency and Risk Reduction Plan 2014</li> </ul>	Adequate



PL2	The planning system for TOURISM addresses the major risks/threats to the TRNP's values.	3	<ul style="list-style-type: none"> <li>• Risks of tourism to the park's values, e.g., diver impacts, water quality, grounding, are addressed through park rules, permitting, dive masters' training</li> <li>• Diver impacts and carrying capacity need to be better understood through the conduct of a study</li> <li>• Zoning is in place</li> <li>• Collaboration with dive operators in reporting unusual incidents</li> </ul>	<ul style="list-style-type: none"> <li>• RA 10067</li> <li>• TPAMB Administrative Order 01-2012</li> <li>• Annual Dive Operators' Consultation Reports</li> <li>• TRNP Management Plan 2011-2021</li> </ul>	Adequate
PL3	The actions for implementation regarding TOURISM are clearly identified within the plan.	4	<ul style="list-style-type: none"> <li>• Tourism and Management Plan outline actions for implementation</li> <li>• Regular activities regarding tourism are stated in the annual Work and Financial Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive Tourism Management Plan 2013</li> <li>• TRNP Management Plan 2011-2021</li> <li>• Annual Work and Financial Plan</li> </ul>	Adequate
PL4	Clear, measurable, and appropriate objectives for management of TOURISM have been documented.	3	<ul style="list-style-type: none"> <li>• There are clear objectives for management of tourism but only some are measureable</li> <li>• The quality of visitor experience was measured in 2014 and showed high satisfaction rate</li> <li>• Tourism stakeholders were engaged in biophysical data gathering</li> <li>• High compliance rate</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive Tourism Management Plan 2013</li> <li>• Tourism Exit Survey results</li> <li>• Tubbataha Reef Watch results</li> </ul>	Adequate
PL5	There are plans and systems in place to ensure that appropriate and adequate monitoring information is gathered in relation to TOURISM	4	<ul style="list-style-type: none"> <li>• Dive operators promptly report unusual observations in TRNP to marine park rangers</li> <li>• Citizen science used as a tool to monitor presence/absence of specific marine organisms and threats</li> <li>• Permitting system serves as a method for monitoring park use</li> </ul>	<ul style="list-style-type: none"> <li>• Radio messages</li> <li>• Tubbataha Reef Watch reports</li> <li>• TPAMB Administrative Order 01-2012</li> <li>• Permit database</li> <li>• Ecosystem Research and Monitoring Report</li> </ul>	Adequate

			<ul style="list-style-type: none"> <li>Monitoring of biophysical values conducted every year</li> </ul>		
PL6	The main stakeholders &/or the local community are effectively engaged in planning to address TOURISM.	4	<ul style="list-style-type: none"> <li>Dive operators and diving professionals contribute to planning, implementation, and in monitoring</li> <li>Tourists provide feedback that are considered in planning</li> <li>The TPAMB is composed of local community and other stakeholders, e.g., Cagayancillo LGU, DENR, Provincial Government, DOT, WESCOM, who are involved in policy-making and planning</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>Dive Operators' Consultation report</li> <li>Management and Tourism Planning workshops, Emergency and Risk Reduction Planning, Buffer zone planning</li> <li>Tourism Exit Survey results</li> <li>TPAMB minutes of meeting</li> </ul>	Adequate
PL7	Sufficient policy currently exists to effectively address TOURISM.	4	<ul style="list-style-type: none"> <li>Policy on permits, use of facilities, rules and regulations, are articulated in various documents</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>TPAMB Administrative Order 01-12</li> <li>Comprehensive Tourism Management Plan 2013</li> </ul>	Adequate
PL8	There is consistency across agencies when planning for TOURISM.	3	<ul style="list-style-type: none"> <li>Consistent with the goals of the National Tourism Development Plan and Tourism Act of 2009</li> <li>Not consistent with some Philippine Commission on Sports SCUBA Diving (PCSSD) Guidelines on dive boat and diving professional accreditation</li> </ul>	<ul style="list-style-type: none"> <li>National Tourism Development Plan and Tourism Act of 2009</li> <li>PCSSD Guidelines</li> </ul>	Adequate

	INPUTS	Score	Justification	Evidence/ Sources	Confidence
IN1	The internal financial resources are adequate and prioritized to meet specific management	3	<ul style="list-style-type: none"> <li>Tourism is a major contributor to park management through conservation fees</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> <li>Annual Tourism Report</li> <li>Comprehensive Tourism Management Plan 2013</li> </ul>	Adequate

	objectives (refer to PL4) to address TOURISM.		<ul style="list-style-type: none"> <li>• All revenues are used to fund management activities. Tourism is partially funded through these revenues.</li> <li>• Strategies, e.g., merchandising, increased conservation fee, to increase revenue from tourism are in place</li> </ul>		
IN2	The human resources within the TPAMB are <u>adequate</u> to meet specific management objectives (refer to PL4) to address TOURISM.	3	<ul style="list-style-type: none"> <li>• Only one dedicated position for tourism management, but augmented by MPRs and volunteers</li> <li>• Inadequate staff to monitor biophysical condition, but augmented by MPRs and volunteers</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Work and Financial Plan</li> </ul>	Adequate
IN3	The right skill sets and expertise are currently available to the TPAMB to address TOURISM.	3	<ul style="list-style-type: none"> <li>• In-house skill sets need to be enhanced to improve tourism management and identify impacts</li> <li>• Expertise is available through volunteers and consultation with stakeholders</li> <li>• Staff are trained to use appropriate technology to facilitate permitting and generation of tourism data</li> </ul>	<ul style="list-style-type: none"> <li>• Volunteer Agreements</li> <li>• Tourism database and online facility</li> </ul>	Adequate
IN4	The necessary biophysical information is currently available to address TOURISM.	3	<ul style="list-style-type: none"> <li>• Biophysical information relevant to tourism management is available and accessible</li> <li>• There is need to study other taxa and ecological processes, e.g., recruitment</li> </ul>	<ul style="list-style-type: none"> <li>• Ecosystem Research and Monitoring Report</li> </ul>	Adequate
IN5	The necessary socio-economic information is currently available to address TOURISM.	3	<ul style="list-style-type: none"> <li>• Information on economic benefits of tourism is available</li> <li>• Limited socio-economic information to address tourism</li> <li>• Socio-economic information on tourists generated through permitting system in</li> </ul>	<ul style="list-style-type: none"> <li>• Subade, R. (2006) Mechanisms to capture economic values of marine biodiversity: The case of Tubbataha Reefs UNESCO World Heritage Site, Philippines. Mar Policy</li> <li>• Tourism database</li> <li>• Exit survey results</li> </ul>	Limited

			2002 and exit survey in 2014, but not maximised		
IN6	There are additional sources of non-government input (e.g. volunteers) contributing to address TOURISM.	4	<ul style="list-style-type: none"> <li>Mooring system, information materials, design of merchandise, maintained and developed through grants and volunteers</li> <li>Contributions in the form of promotions, images, videos, and ad space received from individuals and companies</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> <li>PSFI-TMO 2014 MOA</li> <li>Dive Operator websites and information materials, Photo Use Agreements, MOA</li> </ul>	Adequate

	PROCESSES	Score	Justification	Evidence/ Sources	Confidence
PR1	The main stakeholders &/or industry(ies) are effectively engaged in the ongoing management of TOURISM.	4	<ul style="list-style-type: none"> <li>Active participation of dive operators in consultations, planning, and research</li> <li>Coordination between park authorities and dive operators</li> <li>Minimal incidents of non-compliance</li> </ul>	<ul style="list-style-type: none"> <li>Annual Dive Operators' Consultation</li> <li>Tourism report</li> <li>Tubbataha Reef Watch</li> </ul>	Adequate
PR2	The local community <sup>28</sup> is effectively engaged in the ongoing management of TOURISM.	4	<ul style="list-style-type: none"> <li>The local community is involved in on-going management through provision of law enforcement personnel and membership in the TPAMB</li> </ul>	<ul style="list-style-type: none"> <li>MOA with Cagayancillo</li> <li>RA 10067</li> </ul>	Adequate
PR3	There is a sound governance system in place to address TOURISM.	4	<ul style="list-style-type: none"> <li>Multi-stakeholder management board ensures that governance is participatory</li> <li>Planning involves relevant sectors</li> <li>Complementary management arrangements between agencies, e.g.,</li> </ul>	<ul style="list-style-type: none"> <li>RA 10067</li> <li>Workshop reports</li> <li>Emergency and Risk Reduction Plan</li> </ul>	Adequate

<sup>28</sup> Municipality of Cagayancillo

			secondment of law enforcement personnel, emergency response		
PR4	There is effective monitoring, including regular appraisal of assessment tools to gauge progress towards the objective(s) for TOURISM.	4	<ul style="list-style-type: none"> <li>Performance monitoring is achieved through annual reports</li> <li>Biophysical values are monitored regularly</li> </ul>	<ul style="list-style-type: none"> <li>Annual Operational Reports</li> <li>Ecosystem Research and Monitoring Report</li> </ul>	Adequate
PR5	Appropriate training is available to the managing agencies to address TOURISM.	3	<ul style="list-style-type: none"> <li>Although there is no specific targeted training program for tourism, opportunities are available for staff to participate in training and workshops on tourism</li> <li>There is need to actively explore and participate in tourism training/workshop opportunities elsewhere</li> </ul>	<ul style="list-style-type: none"> <li>World Ecotourism Conference travel report</li> </ul>	Adequate
PR6	Management of TOURISM is consistently implemented	4	<ul style="list-style-type: none"> <li>Permitting system and rules and regulations are consistently implemented</li> </ul>	<ul style="list-style-type: none"> <li>TPAMB Administrative Order 01-12</li> <li>Tourism report</li> </ul>	Adequate
PR7	There are effective processes applied to resolve differing views/conflicts regarding TOURISM.	4	<ul style="list-style-type: none"> <li>Annual consultations with dive operators are held to resolve conflicts, if any</li> <li>Lines of communication between park authorities and dive operators maintained</li> </ul>	<ul style="list-style-type: none"> <li>Dive Operators' Consultation report</li> <li>Correspondence</li> </ul>	Adequate
PR8	Impacts (direct, indirect and cumulative) of activities associated with TOURISM are appropriately considered.	4	<ul style="list-style-type: none"> <li>Rules and regulations address potential negative impacts of tourism</li> <li>Annual biophysical monitoring program provide data on potential impacts</li> </ul>	<ul style="list-style-type: none"> <li>TPAMB Administrative Order 01-12</li> <li>Ecosystem Research and Monitoring Report</li> </ul>	Adequate

PR9	The best available <u>biophysical</u> research and/or monitoring information is applied appropriately to make relevant management decisions regarding TOURISM.	4	<ul style="list-style-type: none"> <li>Annual biophysical monitoring program provides information to make relevant management decisions</li> <li>Targeted research contributes to identification of conservation strategies, e.g., COTS report</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystem Research and Monitoring Report</li> <li>Pan et al. 2010. Size structure of <i>Acanthaster planci</i> populations in Tubbataha Reefs Natural Park, Sulu Sea, Philippines. Marine Biodiversity of Southeast Asian and Adjacent Seas. Fisheries Centre Research Reports 18(3), p. 70-77. Fisheries Centre, University of British Columbia [ISSN 1198-6727]</li> </ul>	Adequate
PR10	The best available <u>socio-economic</u> <sup>29</sup> research and/or monitoring information is applied appropriately to make relevant management decisions regarding TOURISM.	4	<ul style="list-style-type: none"> <li>Information on park use by tourists and dive operators contribute to formulation of regulations and policy</li> </ul>	<ul style="list-style-type: none"> <li>TPAMB Administrative Order 01-12</li> <li>Tourism Reports</li> </ul>	Adequate
PR11	Relevant standards are identified and being met regarding TOURISM.	4	<ul style="list-style-type: none"> <li>Best dive practices are published in the website and tourist brochures, and included in pre-departure briefings and videos</li> <li>Minimal incidents of non-compliance</li> <li>Trainings and planned accreditation of dive professionals to ensure compliance and increase visitor satisfaction</li> <li>Not consistent with some Philippine Commission on Sports SCUBA Diving (PCSSD) Guidelines on dive boat and diving professional accreditation</li> </ul>	<ul style="list-style-type: none"> <li><a href="http://tubbatahareef.org/wordpress/?p=712">http://tubbatahareef.org/wordpress/?p=712</a></li> <li><a href="http://tubbatahareef.org/wp/dive_tubba_taha">http://tubbatahareef.org/wp/dive_tubba_taha</a></li> <li><a href="https://www.youtube.com/watch?v=oOuH5X-HdpU">https://www.youtube.com/watch?v=oOuH5X-HdpU</a></li> <li>Dive Masters' Orientation 2014 and Elasmobranch ID Training 2015</li> <li>PCSSD Guidelines</li> </ul>	Adequate

<sup>29</sup> Socio-economic research relevant to tourism refers to dive industry

PR12	Targets have been established to gauge management performance for TOURISM.	2	<ul style="list-style-type: none"> <li>Some tourism targets have been clearly articulated in the Annual WFP</li> <li>Other tourism objectives will be translated into annual targets</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> <li>Comprehensive Tourism Management Plan 2013</li> </ul>	Adequate
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	OUTPUTS	Score	Justification	Evidence/ Sources	Confidence
OP1	To date, the actual management program (or activities) have progressed in accordance with the planned work program for TOURISM.	4	<ul style="list-style-type: none"> <li>Activities have progressed in accordance with AWFP, e.g., maintenance of mooring system, permitting system, marketing and promotion through partnership with Digichive, PSFI and GIZ</li> <li>Not all objectives stipulated in the Comprehensive Tourism Management Plan were targeted in the AWFP</li> <li>10% share from tourism revenue is given to the Municipality of Cagayancillo as part of the sustainable resource management strategy of TRNP</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> <li>Annual Operational Report</li> </ul>	Adequate
OP2	Implementation of management documents and/or programs relevant to TOURISM have progressed in accordance with timeframes specified in those documents.	4	<ul style="list-style-type: none"> <li>Programs relevant to tourism have been implemented in accordance with timeframes</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> <li>Annual Operational Report</li> </ul>	Adequate
OP3	The results (in OP1 above) have achieved their stated	4	<ul style="list-style-type: none"> <li>Results of program implementation have achieved their management objectives for tourism</li> </ul>	<ul style="list-style-type: none"> <li>Annual Work and Financial Plan</li> <li>Annual Operational Report</li> </ul>	Adequate

	management objectives for TOURISM.				
OP4	To date, products or services have been produced in accordance with the stated management objectives for TOURISM.	4	<ul style="list-style-type: none"> <li>• Tubbataha Reef Watch forms improved based on result of initial implementation</li> <li>• Tubbataha primer, promotional and tourist brochures, and tokens developed and distributed</li> <li>• User-friendly online permitting system established and in use</li> <li>• Tourism facilities, e.g., communication and mooring systems upgraded and maintained</li> </ul>	<ul style="list-style-type: none"> <li>• Tubbataha Reef Watch</li> <li>• Tubbataha Primer 2014, Promotional and Tourist brochures <a href="http://tubbatahareef.org/wp/education_outreach">http://tubbatahareef.org/wp/education_outreach</a></li> <li>• Annual Operational Report</li> </ul>	Adequate
OP5	Knowledge regarding TOURISM is effectively managed and shared with the community	4	<ul style="list-style-type: none"> <li>• Tourism database is in place and regularly updated</li> <li>• Tools to disseminate information are available, e.g., pre-departure briefings, website, social media accounts</li> <li>• Information about tourism is on the TRNP website</li> <li>• Research results published in the website and used in collaterals</li> </ul>	<ul style="list-style-type: none"> <li>• TMO Information System</li> <li>• <a href="http://tubbatahareef.org/wp/dive_tubbataha">http://tubbatahareef.org/wp/dive_tubbataha</a></li> <li>• <a href="http://tubbatahareef.org/wp/scientific_research">http://tubbatahareef.org/wp/scientific_research</a></li> </ul>	Adequate

	OUTCOMES	Score	Justification	Evidence/ Sources	Confidence
OC1	The relevant managing agencies are to date effectively addressing TOURISM and	4	<ul style="list-style-type: none"> <li>• Management of tourism in being addressed through regular consultation with stakeholders, effective implementation of plans and policies, and adaptive management measures</li> <li>• Minimal incidence of non-compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Dive Operators' Consultation Report</li> <li>• TPAMB Administrative Order 01-12</li> <li>• Annual Operational Report</li> </ul>	Adequate



	moving towards the attainment of the desired outcomes.				
OC2	The outputs relating to TOURISM are on track to ensure the values of TRNP are protected (refer to CO1).	4	<ul style="list-style-type: none"> <li>• Outputs are on track and values are protected through implementation of management plan and AWFP</li> <li>• Comprehensive Tourism Management Plan is being implemented</li> <li>• Emphasis on best practice minimize tourism impact on values</li> </ul>	<ul style="list-style-type: none"> <li>• TRNP Management Plan 2011-2021</li> <li>• Annual Work and Financial Plan</li> <li>• Comprehensive Tourism Management Plan 2013</li> <li>• <a href="http://tubbatahareef.org/wordpress/?p=712">http://tubbatahareef.org/wordpress/?p=712</a></li> </ul>	Adequate
OC3	The outputs (refer to OP1 & 3) for TOURISM are reducing the major risks and the threats to the TRNP.	4	<ul style="list-style-type: none"> <li>• Risks from tourism activities significantly reduces through regulation, outreach and education activities, collaboration with dive operators</li> </ul>	<ul style="list-style-type: none"> <li>• TPAMB Administrative Order 01-12</li> <li>• Tourism Report</li> <li>• Dive Operators' Consultation Report</li> </ul>	Adequate
OC4	Use of the TRNP relating to TOURISM is demonstrably <u>environmentally</u> sustainable.	4	<ul style="list-style-type: none"> <li>• Environmental sustainability of tourism is ensured through permitting and mooring system, compliance and enforcement, and research</li> <li>• Tourism operators are required to show proof of adherence to maritime regulations prior to issuance of permits to ensure safe operations</li> <li>• Greater understanding of tourism impacts on the environment could be generated through the conduct of a diver impact study</li> <li>• Exit survey shows that tourists find the rules and regulation adequate to protect the values of TRNP</li> </ul>	<ul style="list-style-type: none"> <li>• TPAMB Administrative Order 01-12</li> <li>• Exit Survey Results</li> </ul>	Adequate

OC5	Use of the TRNP relating to TOURISM is demonstrably <u>economically sustainable</u> .	2	<ul style="list-style-type: none"> <li>Projected increase in the international tourism arrival in the Philippines in 2015 is expected to result in increase in visitations in TRNP</li> <li>Increase in conservation fees would contribute to management financing, and thereby to conservation</li> <li>TRNP is highly reliant on tourism revenues, and cessation of operations of dive boats impact significantly on management financing</li> <li>Ability to generate funds for management is limited by a narrow tourism window</li> </ul>	<ul style="list-style-type: none"> <li><a href="http://www.interaksyon.com/lifestyle/do-t-declares-2015-as-visit-the-philippines-year">http://www.interaksyon.com/lifestyle/do-t-declares-2015-as-visit-the-philippines-year</a></li> <li>TRNP Management Plan 2011-2021</li> </ul>	Limited
OC6	Use of the TRNP relating to TOURISM is demonstrably socially sustainable enhancing understanding and/or enjoyment.	4	<ul style="list-style-type: none"> <li>Exit survey shows that 91% of tourists who visited TRNP were very satisfied with the experience and 87.5% of the respondent signified their intent to return</li> <li>Pre-departure briefings and regular meetings/communications with the private sector increase understanding of TRNP</li> </ul>	<ul style="list-style-type: none"> <li>Exit Survey results</li> <li>Tourism Report</li> <li>Correspondence</li> </ul>	Very limited
OC7	The relevant managing agencies have developed effective partnerships with local communities and/or stakeholders to address TOURISM.	4	<ul style="list-style-type: none"> <li>Active partnership with dive industry has been maintained and cultivated</li> <li>Administrative process for operating in TRNP simplified through inputs of dive operators</li> <li>Formal and informal forum is provided</li> </ul>	<ul style="list-style-type: none"> <li>TRNP Management Plan 2011-2021</li> <li>Comprehensive Tourism Management Plan</li> <li>Dive Operators' Consultation Report</li> </ul>	Adequate