# PROTECTED AREAS MANAGEMENT **EFFECTIVENESS (PAME) OF SPAW SITES**

# **Survey Report**









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This publication report provides information on the management effectiveness of all the Protected Areas under the SPAW Protocol. Based on a survey, information was collected from Protected Area managers about their respective history of management. Responses received on open and non-open questions were analysed with the help of charts, graphs and other objective means. The shortcomings encountered were noted down as well. The publication has been designed to be revised over time based on new or updated information gathered from the individual Protected Areas. For questions and queries about a specific Protected Area, it is advised to consult with their respective manager/curator.







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# **INTRODUCTION**

The number of Protected Areas has been on the rise across the world to accelerate protection of biodiversity on land and in ocean, an expansion that reflects a growing political commitment across the world's nations to conserve the Earth's biodiversity. This is in line with the aims of the Strategic Plan for Biodiversity 2011-2020, leading up to the review date of the Aichi Biodiversity Targets (Aichi Target 11 for Protected Area coverage) in 2020. As was highlighted at the UN Oceans Conference 2018, Marine Protected Areas (MPAs) have increased more than 15-fold since 1993 when the Convention on Biological Diversity (CBD) entered into force. A larger area of the ocean is now protected, as compared to that of land. The global coverage of MPAs is 7.47% which is a jump from 2.5% in 10 years. This covers a total of 17,276 MPAs. The percentage of MPAs created within National waters is much higher than that in the International waters (Areas Beyond National Jurisdiction (ABNJ)). 17.32% of these waters are designated as protected areas in contrast to the 1.18% of ABNJ, which makes up 61% of the global ocean (UNEP-WCMC, IUCN and NGS, 2018).

While expanding the area under protection is vital, ever more significance is being assigned to understanding the impacts of management actions in protected areas, and towards ensuring that the already-protected areas are being effectively managed in order to achieve the objectives that they were created for. This comes from the realisation that covering greater areas will not alone halt the loss of biodiversity.

Aichi Target 11 states that protected areas should be 'effectively managed'. There is good evidence that protected areas that are effectively managed will lead to improved biodiversity outcomes. According to data reported in the Global Database on Protected Areas Management Effectiveness (GD-PAME), only 9.1% of the protected areas have an evaluation of management effectiveness reported, as shown in the World Database of Protected Areas (WDPA) (UNEP-WCMC and IUCN, 2020). However, the lack of systematic reporting, repeat assessments and the existence of multiple tools makes analysis of trends on this element of the Target difficult to assess.

Specially Protected Areas and Wildlife (SPAW) Protocol, the Biodiversity component under the Cartagena Convention is a regional agreement for the protection and sustainable use of coastal and marine biodiversity in the Wider Caribbean Region (WCR). Signed in January 1990, the SPAW Protocol came into effect in June 2000, providing a unique legal framework for the conservation of regional biodiversity which is currently endorsed by 17 countries in the region. The SPAW Protocol is also recognized as an important tool for attaining global agreement objectives, such as the CBD or the Ramsar Convention. SPAW Protocol principally focusses on four major areas in the Caribbean region: Strengthening and management of Protected Areas in the Caribbean; Conservation of threatened and endangered species; Conservation and sustainable use of marine and coastal ecosystems; and Development of guidelines for Protected Areas and species.

This report is a preliminary, first-of-its-kind assessment for management effectiveness of SPAW listed Protected Areas (a total of 35). It relies on a survey to probe the inefficiencies, areas where support is needed and identifying best practices for effective management of the Protected areas.

# PROTECTED AREAS MANAGEMENT EFFECTIVENESS (PAME) SURVEY

This survey was conducted to understand the management effectiveness of Protected Areas (PAs), carrying out a wide-ranging assessment of all SPAW sites in the Wider Caribbean Region. It tried to establish the problems that occur during conduction of management effectiveness assessments for SPAW site managers, while scoping for the areas where managers require support for better management in the future. The survey was designed such that it would be easy to understand for all stakeholders. It started with an introductory text, giving a brief background about SPAW Protocol and how it assists the ACP-MEA III Project (Enforcing Environmental Treaties in African, Caribbean and Pacific (ACP) Countries) activities. This was followed by giving the purpose of the survey, the aims it tries to accomplish and its estimated time of completion.

To make things easier, the survey was divided into five sections: (I) Name of country and MPA, (II) PAME (Protected Areas Management Effectiveness) survey, (III) Information about past PAME assessments, (IV) Contact information and (V) Publication. The survey remained open from July 2020 to September 2020, registering responses from PA managers. The language used was English and the questions were kept simple and to the point. Multiple choice options were used for enabling managers to choose between as many options as they wanted. Some questions had degrees (High, Moderate and Low) assigned to each option to better understand the priorities. Furthermore, a good mix of open-ended questions were also employed to avoid missing out on any non-common issues and pointers the managers would want to emphasize. The questions were as follows:

- (I) Name of country and PA
  - 1. Name of country
  - 2. Please select the SPAW listed Marine Protected Area (MPA) under your management
- (II) PAME (Protected Area Management Effectiveness) Assessment
  - 1. How many PAME assessments have been implemented?
  - 2. Is it mandatory in your country to report about PAME? Please elaborate if necessary.
  - 3. What are the main challenges you are facing for effective management? Please choose between High, Moderate and Low to show the degree of difficulty faced
  - 4. If applicable, what areas for which you would like to get support for better future management?
  - 5. Do you have any recommendations/suggestions for improvement of the assessment process of PAME in the future?
- (III) Information about past PAME assessments
  - 1. What year did the last assessment take place?
  - 2. What tool is used for PAME assessment? (for example- METT, GOBI Survey, AEMAPPS etc)
  - 3. Are you willing to share the assessment report/documents with UNEP CEP?
  - 4. Is the information for the assessment (including raw data, assessment meeting report or any other information) available at any public database like WCMC, GD-PAME etc? Is yes, please mention it below
- (IV) Contact information
  - 1. What is the name of the agency responsible for making the assessment(s)?
  - 2. Is the responsible agency a separate agency/consultant or part of your organisation?
  - 3. What are the contact details of the agency?
- (V) Publication
  - 1. Would you like to share photos of the MPA with credits for a publication?

# **OBSERVATIONS**

Total number of countries = 9

Total number of PAs = 35

Total number of survey entries received = 40

Country wise total PAs / Country wise survey entries received:

- 1. Belize 3 / 3
- 2. Colombia 3 / 3
- 3. Cuba 2 / 2
- 4. Dominican Republic 4 / 6
- 5. France 10 / 9
- 6. Grenada 1 / 3
- 7. Netherlands 7 / 10
- 8. St Vincent & the Grenadines 1 / 2
- 9. USA 4/2

No of MPAs which did not answer the survey = 6 (out of 35)

No of entries confirming previous PAME assessments done in the past = 26 (65%)

No of entries confirming management effectiveness assessments to be a mandatory part in their respective countries = 21 (52.5%)

Challenges with High level of difficulty faced in effective management (based on number of entries received)/ Highest priority =

- 1. Sustainable financing (30)
- 2. Staffing (20)
- 3. Climate change (19)
- 4. Law enforcement (18)
- 5. Capacity development (17)

Challenges with Moderate level of difficulty faced in effective management (based on number of entries received) =

- 1. Governance (25)
- 2. Design (21)
- 3. Poaching (21)
- 4. Inefficient planning (20)
- 5. Capacity development (19)

Challenges with Low level of difficulty faced in effective management (based on number of entries received)/ Lowest priority =

- 1. Design (17)
- 2. Inefficient planning (16)
- 3. Tourism (12)
- 4. Poaching (11)
- 5. Staffing (6)

No of entries asking for support for better future management =

- 1. Sustainable financing 35 (87.5%)
- 2. Capacity building 29 (72.5%)
- 3. Monitoring 28 (70%)
- 4. Management effectiveness (PAME) 19 (47.5)
- 5. Planning and implementation 18 (45%)

6. Networking – 17 (42.5%)

When did the last assessments take place?

```
2019 - 10 (29.4%)
2015 - 5 (14.7%)
2016 & 2020 - 3 (8.8%)
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No of entries showing the tool used most for PAME assessment

- 1. METT 10 (29.4%)
- 2. AEMAPPS 2 (5.9%)

Was the PAME assessment done by a separate agency or own organisation?

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Own organisation – 21 (61.8%)
Agency/Consultant – 13 (38.2%)
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It was observed that while a few PA managers did not answer the survey for their respective PAs, there were a few MPAs for which we received more than one response. Based on the subjectivity of the options provided, it was observed that the answers given for the same PA by different responders were not always the same. In rare cases, the answers given were completely opposite from each other.

# CHARTS, GRAPHS AND RESPONSES TO OPEN-ENDED QUESTION RECORDS

1. Country wise representation of the number of responses recorded for PAME survey

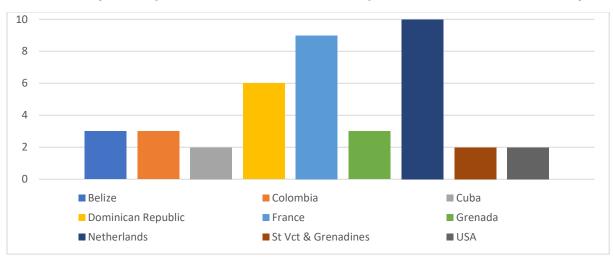


Figure 1: Column chart showing no. of survey responses received from each country (Total – 40)

2. Country wise representation of number of survey responses received versus the number of SPAW MPAs represented by each country

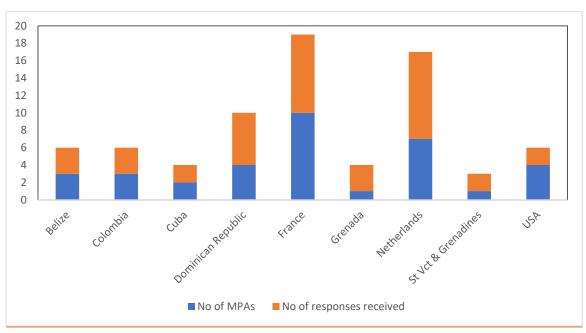
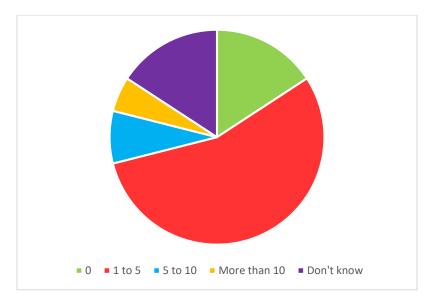


Figure 2: Column chart showing No. of responses received vs No. of SPAW MPAs

3. Number of PAME assessments that were implemented in the past



Other comments: 1. only an analysis of the first management plan's actions, not really an assessment of the effectiveness; 2. since 2009 management effectiveness studies have been carried out

Figure 3: Pie chart showing no of PAME assessments undertaken in the past

# ■ Yes ■ No ■ Other comments

# 4. Is it mandatory to report about PAME assessments in respective countries?

Other comments: 1. Some agreements in regional instances to which we are parties ask us for information on the implementation of management effectiveness in the Protected Areas System (translated to English); 2. We carry out an evaluation of the reserve management plan every 5 years (translated to English); 3. Yes, Financial and content related from our NGO to the Local Government; 4. Not that I am aware of; 5. It is optional, currently in the new National Development Plan, it is part of the goals; 6. Yes, the MPA Management Plan implementation is to be evaluated every 5 to 10 years; 7. Not mandatary (in the law) but a dashboard is highly recommended within the management plan. Our new management plan is still in redaction.

Figure 4: Pie chart showing mandatory nature of conducting PAME assessments in respective countries

# 5. The main challenges faced for effective management of the SPAW MPAs divided between degree of difficulty: High, Moderate and Low

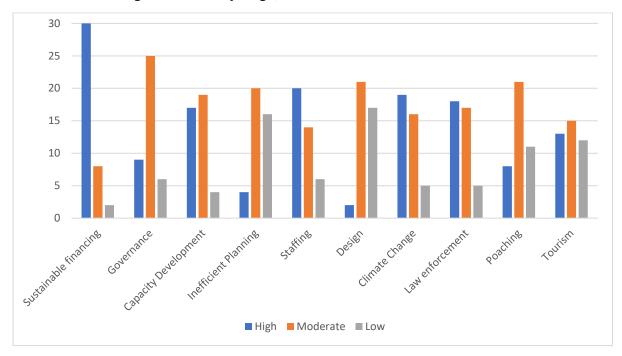
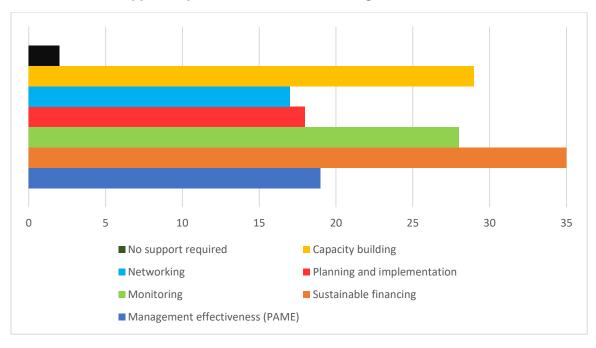


Figure 5: Column chart showing challenges faced for effective management of SPAW MPAs with different degrees- High, Moderate and High

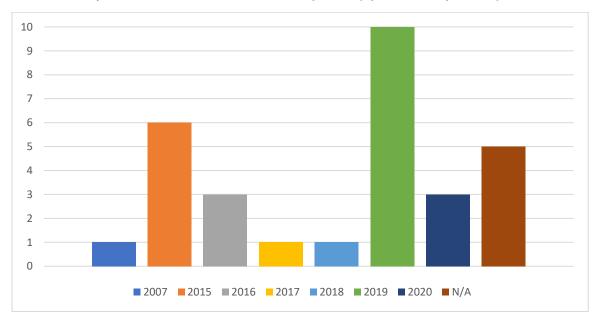
# 6. Areas of support required for better future management of SPAW MPAs



Other comments: 1. Technology Tools selection (many options both hardware and software); 2. Selecting and implementing technology and tools for conservation and law enforcement; 3. Support for the creation of an extension of the reserve (functional area)

Figure 6: Bar chart showing support areas to assist with better future management of SPAW MPAs

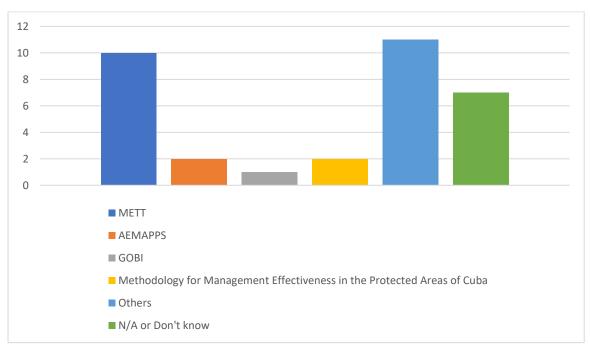
# 7. What year did the last assessment take place? (open ended question)



Other comments: 1. This is the first we participated in (Translated to English); 2. Process began in 2012 and is ongoing; 3. Ongoing; 4. In progress (Translated in English)

Figure 7: Column chart showing the year where the last assessment took place for individual MPAs

# 8. Tools used for PAME assessments (open ended question)

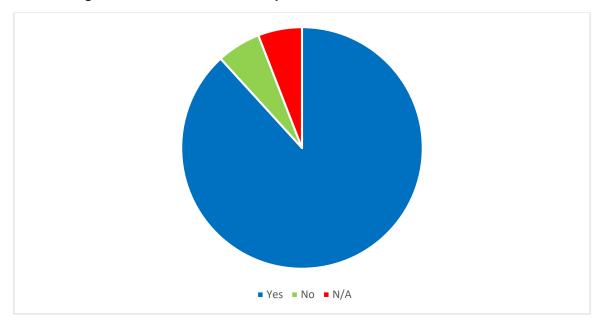


Others: 1. Tacking tool and others; 2. Public process to review effectiveness of management plan, zoning scheme, and regulations; 3. Belize National Protected Areas (NPAS)-METT Tool; 4. A combination of the last National PAME and METT; 5. Internal evaluation, management plan (Translated to English); 6. Aucun; 7. Evaluation of the management plan (Translated to English); 7. Methodology for the Evaluation of Management Effectiveness of Protected Areas of Cuba; 8. Methodology for management effectiveness in the protected areas of Cuba; 9. MPA connect Management effectiveness, METT and MARFUND mgt. effectiveness survey; 10. assessment of the

current territory charter based on indicators; 11. RAMSAR; 12. French national Management Plan Evaluation methodology.

Figure 8: Column chart displaying the various tools used for PAME assessments of SPAW MPAs

# 9. Willingness to share assessment reports/documents with UNEP CEP



Other comments: Yes. It is written in French, public and validated by state agencies

Figure 9: Pie chart showing willingness of managers to share assessment reports/documents with UNEP CEP

# 10. Type of agency who undertook the assessment

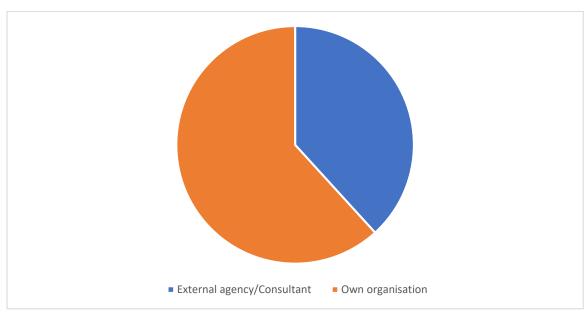
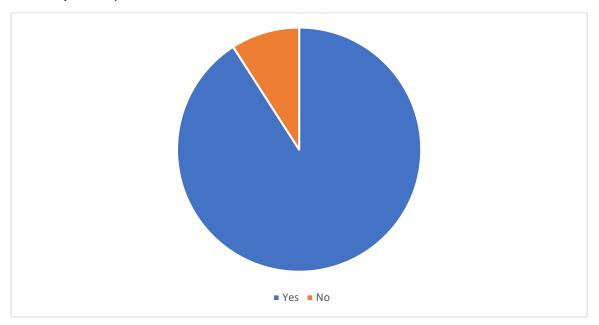


Figure 10: Pie chart showing the type of responsible agency who conducts(ed) the PAME assessment

# 11. Willingness to share photos of the MPA with credits for a publication (open ended question)



Other Comments: Not sure that I have photos

Figure 11: Pie chart showing willingness to share photos of respective MPA

# 12. Recommendations/suggestions for improvement of the assessment process of PAME in the future (open-ended question)

### Responses:

- That PAME is sufficiently participatory, that it includes both the community and all the actors involved (Translated to English)
- Exchange assessment experiences with the other protected areas included in the protocol
- Assess which technology and software tools are used/implemented
- Conduct evaluations on a more frequent basis.
- There are several assessments being done by different organizations and nationally with in each country. Efforts should be made to have one process to assess for the country, and the results made available as needed.
- Follow the format that has been developed for the country.
- Effectiveness is essential as we have too many "paper parks" which defeat the purpose of having Aichi Targets and possible 30 by 30 targets. More online videos, more 1 page fact sheets, support to collect and input data that is collected by local community (fishers, visitors to dive sites) is needed.
- The development of a more intuitive self assessment tool.
- Better estimate the number of agents needed
- The assessment tools should involve more mechanisms for involving stakeholders of the MPA in the evaluation process
- I am not familiar with PAME
- An assessment of the whole network and connection between PA would me more (at least as) effective than a assessment of individual protected areas
- It is necessary to design standard indicators to be able to measure the evolution of Marine Protected Areas and to make comparisons at the regional level.
- Let these evaluations become more continuous (Translated to English)
- MPA connect developed a management effective protocol that managers can use to assess effectiveness.
- No this is a very nice and simple form
- No this is fine

- We are getting part of our funding from the state to manage our MPA but we dont' get any additional funding to support the process of PAME that has to be done by an external person to be impartial. We also have troubles to finance our external analytical accounting needed for the PAME process.
- The owner has to sign with a manager and to fund him

# 13. Is the information for the assessment (including raw data, assessment meeting report or any other information) available at any public database like WCMC, GD-PAME etc? (open ended question)

### Responses:

- Unsure
- No get
- No X 6
- Yes: Dutch Caribbean Biodiversity Database
- dcbd.nl
- Yes, MPA website
- Not sure X 2
- It is not finalized as yet
- Not to my knowledge
- The results are unpublished
- I don't know
- Not yet
- The information is not yet available in public databases
- No, but it is available in our archives and reports were sent to GET (Translated to English) X 2
- It is not in any public database (Translated to English)
- No, but they are in our files and it was reported to the GET (Translated to English)
- No. is in our files and was reported to GEF (Translated to English)
- I do not know that information (Translated to English)
- No, but we can add to our website
- There has been an assessment before but none of the methods that are mentioned here
- Previous assement available but not based on any of the methods listed
- Everything is public

# 14. What is the name of the agency responsible for making the assessment(s)? (open ended question)

### Responses:

- The Nature Conservancy
- CORPOURABA con apoyo del proyecto GEF Conectividades Sociecosistemicas del Caribe
- CORALINA
- PARQUES NACIONALES NATURALES DE COLOMBIA
- DCNA / COZMUK, Nature2
- I am not aware
- Office of National Marine Sanctuaries/Florida Keys National Marine Sanctuary
- NOAA
- The office of the National Protected Areas System (NPAS). Consultants Wildtracks Belize
- Belize Fisheries Department
- Fisheries division
- There is no assigned agency. The Nature Conservancy assisted in the last assessment.
- Direction Générale des Territoires et de la Mer et le Parc Naturel Régional de Guyane (en interne)
- DGTM and PNRG (en interne)
- Grenada Marine Protected Areas (GMPA)
- Coastal Management Solutions
- Aucune
- TNC
- Association Tité et Office National des Forêts

- French Biodiversity Agency
- Parque Nacional Guanahacabibes
- Ministerio de Medio Ambiente y Recursos Naturales en el Viceministerio de Áreas Protegidas y Biodiversidad X 4
- La propia administración del área se autoevalúa
- EL DEPARTAMENTO DE BIODIVERSIDAD
- Government of Belize through consultancies
- Evaluation en interne selon une méthodologie partagée avec les autres parcs nationaux
- Dutch Caribbean Nature Alliance (DCNA) X 3
- Conservatoire du littoral
- Stegastes consultant (private external company), in collaboration with Réserves Naturelles de France and Office Français de la Biodiversité

# 15. What are the contact details of the agency responsible for undertaking PAME assessments? (Email, phone number and/or website) (open ended question)

# Responses:

- corpouraba@corpouraba.gov.co (57+8281022 extension 133) www.corpouraba.gov.co
- mares@coralina.gov.co
- http://www.parquesnacionales.gov.co/portal/es/ alejandro.bastidas@parquesnacionales.gov.co cienaga@parquesnacionales.gov.co
- director@dcnanature.org
- director@dcna.org / solutions@cozm.uk / kallidemeyer@me.com
- floridakeys.noaa.gov
- george.schmahl@noaa.gov
- http://protectedareas.gov.bz/ Consultant: zoeatwildtracks@gmail.com
- office@wildtracksbelize.org
- Fisheries Division, Ministry of Climate Resilience, Environment. Ministerial Complex, 473-440-2708 pssec@climateresilience.gov.gd
- grenadampas@gmail.com (+1 473 404 3814)
- solutions@cozm.co.uk
- WWW.TNC.ORG
- Raoul Lebrave Président Association Tité: asso.tite@gmail.com 0690 50 35 63 0690 56 94 25 // Sophie Le Loc'h Conservatrice à/c du 1.10.2020 sophie.leloch@onf.fr 0690 74 35 61 sophie.leloch@onf.fr
- https://ofb.gouv.fr/
- Email: Imarquez@vega.inf.cu; Phone number: 53 48750366
- Jose Manuel Mateo Feliz, josemanuel.mateofeliz@ambiente.gob.do; Pedro Radhames Arias, pedro.arias@ambiente.gob.do; Pablo Medina, pablo.medina@ambiente.gob.do y www.ambiente.gob.do
- José Manuel Mateo Feliz, 809-501-4182, josemanuel.mateofeliz@ambiente.gob.do; Pedro Radhames Arias, 809-501-2718, pedro.arias@ambiente.gob.do; Pablo Medina, 809-467-6784, pablo.medina@ambiente.gob.do, www.ambiente.gob.do
- PN Cayos de San Felipe. Email de contacto: zaimiuri8413@gmail.com; Telef +53 48 794169
- Jose Manuel Mateo Feliz, josemanuel.mateofeliz@ambiente.gob.do, 809-501-4182; Pedro Radhames Arias, pedro.arias@ambiente.gob.do, 809-501-2718; Pablo Medina, pablo.medina@ambiente.gob.do, 809-467-6784; <a href="www.ambiente.gob.do">www.ambiente.gob.do</a> X 2
- 809-567-4300 (https://ambiente.gob.do)
- office@wildtracksbelize.org, emma.doyle@gcfi.org
- director@dcnanature.org X 2
- am.bouille@conservatoire-du-littoral.fr, 0690 551585,
- Amandine VASLET <amandine.vaslet@gmail.com>; +590 690 545 896

# **ANALYSIS**

This assessment report comments on the universality of the SPAW sites, based on the cumulative sum of responses. The assessment aims to provide a holistic picture, rather than probing deep into individual MPAs.

### Recorded survey responses (Figure 1 and 2):

A total of 40 survey responses were recorded out of the 35 PAs under the SPAW umbrella, out of which, 6 PAs did not register their response to the survey (Figures 1 and 2). This discrepancy was due to double communication with more than one party responsible for managing the PAs. Sometimes there were multiple people looking after the PA, like the Man of War Shoal Marine Park, which has a manager for the park as well as an Officer for the NGO in charge of the park- Nature Foundation. In such cases, there was scope to first establish communication for understanding who overlooks the management effectiveness assessments, rather than jumping straight to the survey. As a result, there were repeat responses from the same PA by different managers/ officers of that PA. Some repeat responses were also due to multiple follow-ups from the SPAW Protocol's side with the relevant party. The survey due to its poor reception in the beginning, went through many follow ups with the PA managers to get them to record their responses, due to which the survey was open for many months.

# PAME assessment history and regulations (Figure 3 and 4):

45% of the responses mentioned that it was not compulsory for the managers to carry out a management effectiveness assessment of the respective PAs in their countries (Figure 4). But 68% (55% for 1 to 5 assessments + 8% for 5 to 10 assessments + 5% for More than 10 assessments) of the responses indicated that there have been at least one assessment done in the past, ranging from 1 to more than 10 in some cases (Figure 3). All things considered, there was indication for a positive attitude towards maintaining an 'effectively managed' PA, even if there were no regulations influencing the actions of the managers. However, there is still big scope for increasing the area under the 'effectively managed' category of PAs as well as increasing awareness among managers about the importance of maintaining PAs for biodiversity and ecosystems.

### Challenges faced for effective management (Figure 5):

To understand the main challenges faced by PA managers, various degrees of difficulty were given - High (3 points), Moderate (2 points) and Low (1 point). The various challenges have been given a score based on this (Figure 5).

Sustainable financing: 90 + 16 + 2 = 108Governance: 27 + 50 + 6 = 83Capacity development: 51 + 38 + 4 = 93Inefficient planning: 12 + 40 + 16 = 6860 + 28 + 6 = 94Staffing: Design: 6 + 42 + 17 = 65Climate change: 57 + 32 + 5 = 94Law enforcement: 54 + 34 + 5 = 93Poaching: 24 + 42 + 11 = 77Tourism: 39 + 30 + 12 = 81

The descending order (from highest to the lowest challenge faced) of the challenges faced:

Sustainable financing > Staffing = Climate change > Capacity development = Law enforcement > Governance > Tourism > Poaching > Inefficient planning > Design

Sustainable financing stood out as the main challenge (in terms of points) faced by SPAW PA managers, while Design turned out to be minimally challenging. Staffing, Climate change, Capacity development and Law enforcement were at similar levels and can be grouped as the second main challenge faced by the managers.

However, it must be kept in mind that total points are not the only representation for the challenges faced and should be treated only as a preliminary cue for quantifying the challenges. It is imperative to understand each individual challenge for each PA separately, to come to a concrete conclusion. Further investigation and examination is of the utmost importance before taking any steps.

# Areas of support requested by managers (Figure 6):

As was seen in the earlier section, Sustainable financing again stood out as the main barrier for effective management for PA managers. Capacity building and Monitoring were closely situated, and seen as the second and third biggest problems, where managers asked for future support, showing similarities to the earlier assessment. Management effectiveness (PAME) is the fourth ranked support area, at a distance from the Monitoring support area, but very closely followed by Planning and implementation and Networking successively. The ranking may act as a starting platform for diving deeper into studies of respective PA's needs before writing a blanket statement. It is also to be noted for future investigations, which must choose options very carefully and offer a wide variety of options for managers to select from. Another notable thing is to limit the usage of technical terms in options.

It was also observed that 2 PAs registered their response as 'No support required', showing high self-sufficiency among their management team.

# Tools used and type of agency responsible for the assessments (Figure 8 and 10):

The Management Effectiveness Tracking Tool or METT was the most widely used assessment tool for SPAW PAs (10 entries), followed by AEMAPPS and 'Methodology for Management Effectiveness in the PAs of Cuba' (2 entries each). GOBI survey, Aucun and RAMSAR was used by one PA each respectively (Figure 8). Some PAs also used a combination of tools for their assessments, for example- MPA Connect Management effectiveness, METT and MARFUND Management effectiveness survey used by Port Honduras Marine Reserve.

In case of the agency responsible for conducting the survey, majority of the PAs (62%) undertook their own assessments, which may have had positive and negative impacts. Positive impacts include having intricate and local knowledge about the PA, which in turn results in better assessment of important areas of concern within the PA. However, assessments undertaken by own organisation can also have the opposite effect of not conducting enough assessments to keep the PA healthy by using allocated funding in some other area of concern. External agencies like external consultants may negate the factor of impartiality which might be the case with own organisations.

It is globally known that having one universal management effectiveness tool (like METT) is the ideal scenario. But it is also understood that every region has their own set of complexities where one assessment tool would not be as effective as compared to a different one. As a result, different PAs across the world use their own suited tool. This is the same for the Caribbean region, given its complex set of coastal areas and multiple countries and territories under multiple jurisdictions.

### Recommendations/suggestions for improvement of assessment process in the future

This was an open-ended question. Multiple types of answers were recorded with different managers recommending criteria for improvement of their individual PAs. A few of them suggested a more uniform and continuous assessment tool with a set criteria and standard indicators to measure the equivalency and exchange assessment experiences. The scale varied from a regional level, country level to all PAs included in the SPAW Protocol. Standard indicators for assessing the evolution of assessments in the future and making comparisons at some level remains a common response, directly or indirectly, for making the PAME process better in the future.

Some other important suggestions include making the PAME sufficiently participatory, that it includes both the local community (like fishers and dive site visitors helping to collect and input data) and all the other actors involved and assessing the type of technology and software tools used for the assessments. The development of a more intuitive self-assessment tool, along with evaluations conducted on a more frequent basis are other types of comments left behind by managers. Two comments are also about the funding problems:

1. The owner has to sign with a manager to fund the assessment;

2. Troubles in finding funding to support assessments conducted by an external person (for being impartial) and external analytical accounting, needed for PAME process. Usage of more online videos, factsheets were further suggested to improve the process.

# **SHORTCOMINGS & AREAS OF IMPROVEMENT**

- It is important to identify the person who is in charge or has knowledge about the management aspect of the PA. It maybe even the external Contractor who conducted the survey
- 2. Language barriers: Caribbean region being a land of countries with a diverse set of languages spoken, it is important to consider the local language spoken before establishing communication
- 3. While asking for main challenges faced and areas of support required for effective management, the choice of options could have been same or on similar lines so as to understand the correlation between them.
- 4. In general, the questions and options used in the survey must be well thought out and based on the suggestions from experts in the field who have previous experience in the same areas.
- 5. While communicating the survey/study, it is very important to thoroughly understand and study/target group before deploying the survey.

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