APPENDIX 8: Stakeholder Engagement

Aruba Conservation Foundation

Meaningful Stakeholder Engagement for Marine Conservation Management

Parke Marino Aruba Stakeholder Engagements Results

Executive summary

The Aruba Conservation Foundation (ACF) has prioritized meaningful stakeholder engagement in the development of the Marine Protected Area (MPA) Conservation Management Plan for 2025-2029. Recognizing the critical role of community involvement in marine conservation, this document outlines the structured engagement process undertaken to integrate diverse perspectives into sustainable management strategies for Parke Marino Aruba.

The stakeholder engagement process encompassed a variety of interactive sessions, including 10 public and 22 individual informative meetings, a stakeholder analysis survey, 2 extensive SWOT and TOWS analysis workshops, and 2 intensive zoning and regulation discussions. These efforts aimed to foster awareness, gather insights, and build consensus among key stakeholders such as government entities, local communities, fishers, tourism operators, and conservation organizations.

Key findings from the engagement process revealed widespread concerns regarding the transparency of the MPA designation process, the impact of restrictions on local livelihoods, and the need for balanced conservation measures. Surveys and workshops highlighted the importance of ecosystem services, with stakeholders advocating for improved enforcement, habitat restoration, and sustainable resource use.

Conservation targets identified by the stakeholders are marine biodiversity, coastal birds, marine megafauna, reef fish and coral-, seagrass-, and mangrove ecosystems. The primary threats are considered to be human access, pollution, and species loss. And the most popular opportunities and solutions are protection of species and habitats, enforcement, waste management and awareness.

Through collaborative discussions, stakeholders identified conservation priorities, including coral restoration and seagrass restoration zones, and the establishment of no-go or no-take areas. Additionally, recommendations were made for regulatory measures such as no-anchoring zones with designated moorings, marked maritime channels, and limitations on high-impact recreational and fishing activities.

Stakeholders agree that only low impact activities should be allowed in the MPAs. The most popular activities such as onshore recreation and swimming were considered as low impact by the stakeholders and the high impact activities identified included jet skis, speedboats, motorized watersports, kitesurfing, foiling and jet pack activities. The majority also indicated that fishing activities should be limited to only traditional local subsistence fishing and to not allow commercial or recreational fishing.

The overarching vision emerging from these engagements is to establish Parke Marino Aruba as a thriving marine ecosystem supported by science-based management, education, enforcement, and inclusive collaboration. Moving forward, ACF remains committed to fostering an adaptive, participatory management approach that ensures the long-term protection and sustainable use of Aruba's marine resources.

Contents

Introduction

Parke Marino Aruba was officially established by law AB 2018 no. 77 on 21 December 2018 (and brought under the management of the Aruba Conservation Foundation (ACF) on 16 April 2019. During the transition phase, as described in Parke Marino Aruba's Preliminary Management Plan (2019-2021) ACF has dedicated significant effort in the inclusion of a broad spectrum of stakeholders in preparation of the Marine Protected Area (MPA) Conservation Management Plan for 2025-2029.

Stakeholders must always be properly informed of the importance of protecting certain areas and the benefits they will gain by proper marine conservation. This enhances the support of the entire community for the project. While stakeholder consultations have taken place in the government-led designing process of the marine park, evaluations and continued stakeholder engagements throughout the further management process will remain a priority to build upon to form a long-term working relationship.

It is widely known that the involvement of (key) stakeholders leads to greater ownership of the solutions and the likelihood of a commitment to their delivery either in relation to policy or practice. Stakeholder involvement should therefore be a significant part of the future protection and management of Parke Marino Aruba and is an activity that will be driven and taken forward by ACF.

Most of the areas that comprise Parke Marino Aruba are widely used by a range of stakeholders such as the local community, government, fishermen, tourism operators, cultural and natural heritage and wildlife enthusiasts. In order to assess current adverse impact and find alternatives or solutions, it is important to first identify key stakeholders.

A stakeholder identification using ACF's network and expertise followed by the development of a program to engage the key stakeholders in one-on-one and small group / focus group meetings with the specific purpose of providing them with:

- increased awareness of the values and issues around the site;
- an opportunity to input their views and opinions on the present and future protection and management of the areas;
- a common, agreed vision for the site;
- ownership of the solutions; and
- a commitment to being part of the delivery.

The stakeholder engagement process of for Parke Marino Aruba consisted of several engaging opportunities and events, including:

- 4 Press releases
- 2 Press conferences
- 10 Informative sessions (in person and virtual)
- 22 Individual or small-scale meetings upon request
- Stakeholder analyses survey
- 2 SWOT Analysis Workshop
- 2 Zoning and Regulations Workshops
- Validation of stakeholder engagement results

Besides the above structured elements of the stakeholder engagement process, Parke Marino Aruba participated, consulted and hosted other themed engagements concerning marine conservation around Aruba, either with government or fellow nature NGOs, on topics as spearfishing, dredging, marine spatial planning, RAMSAR, Stony Coral Tissue Loss Disease, marine mammal conservation, coral and mangrove restoration and sustainable coastal development.

This report elaborates on the interactive portion of the stakeholder engagement process where the community at large was encouraged to provide valuable insights to enhance the inclusivity and effectiveness of marine conservation management for the four MPAs that comprise Parke Marino Aruba.

Informative sessions

A total of nine informative evenings were held publicly and online during the months of August, September and October to introduce the current status of Parke Marino Aruba and the stakeholder engagement process.

These events were publicly announced through social media and press releases, and invitations were sent to key stakeholders, ACF conscientiously selected low profile, accessible, community-oriented venues to be as inclusive and approachable as possible. Only when temporary Covid-pandemic related measures did not allow in-person sessions to continue, ACF opted to host those two sessions virtually.

Date	**Venue**	**Number of attendees**
Thursday, August 19, 2021	Visitor Center of Parke Nacional Arikok, Santa Cruz	15
Saturday, August 21, 2021	MFA Savaneta	20
Thursday, August 26, 2021	Virtual	9
Saturday, August 28, 2021	Virtual (English)	3
Saturday, September 18, 2021	Centro di Bario Noord	9
Tuesday, September 21, 2021	Teresita Center, San Nicolas	12
Thursday, September 23, 2021	Centro di Bario Playa Pabao	15
Thursday, October 14, 2021	Coastguard headquarters	22
Tuesday, October 19, 2021	Centro di Bario Playa Pabao	23
	Total	**128**

These informative sessions illustrated interest and support from the public. Attendees brought forward many important points for consideration and posed numerous questions related to the current status of Parke Marino Aruba. The participation of the entire community in these informative sessions was important to broaden the collaboration and involvement of individuals and organizations in the consultation process.

Content provided by ACF

During these informative sessions, ACF introduced itself as the independent conservation management organization (NGO), responsible for the management of the protected nature areas of Aruba. An overview is also given of all protected nature reserves that ACF currently manages, including the Parke Marino Aruba which consists of four Marine Protected Areas (MPAs). More information was provided about the main goal of nature conservation in general and specified to the marine environment. ACF introduced the concept of Ecosystem-Based Management (EBM) to the stakeholders. EBM is an integrated adaptive management approach that helps us consider tradeoffs in resource uses and to protect and sustain diverse and productive ecosystems and the services they provide. Informed by science, EBM incorporates the entire ecosystem, including humans, into resource management decisions.

During the informative sessions, the four MPAs of Parke Marino Aruba are discussed as well as their designation as part of the EU BEST project led by TNO. The role of the government in legally designating protected areas and the role of ACF as the conservation management organization. The transition phase

to a marine management plan and the different elements of the stakeholder engagement process would contribute to an inclusive and integrated management plan.

Concerns and suggestions from stakeholders

After a 30-45 presentation on the above content provided by ACF ample time was dedicated to open discussions and question and answers. Below is an overview of the main concerns brought forward by the stakeholders during these discussions.

Question or Concern	**ACF's response**
Designation process was not transparent and top-down	ACF joins the public in this sentiment as the process to legally designate the 4 MPAs of Parke Marino Aruba, as executed by TNO for the government did not include sufficient stakeholder engagement.
Why these 4 MPAs and not for example Palm Beach or near the landfill, 2 areas that need proper management to recover.	While the 4 selected areas can be linked back to the 2009 spatial plan for Aruba (ROP2009) as areas of high biodiversity that would be suitable to designate as strict nature reserves within an island round marine park model. It is also unclear to ACF why the current designation employs these 4 areas as multi-use MPAs and does not incorporate the entire recommendation of ROP2009 of an island round marine park with zoning and regulation. Additionally, nature – and especially marine biodiversity – does not recognize or adhere to human made boundaries. Therefore, integrated and sustainable marine spatial planning for the entire Aruban marine environment is essential. ACF will continue to advocate for an island round marine park where EBM can enhance the benefits for humans and nature alike.
Concerns on restriction of activities	ACF is mandated to manage the MPAs as multi-use, this does allow activities, as long as they are sustainable and do not have a negative impact on the natural values of the MPAs. During the stakeholder engagement process the activities will be listed and evaluated on their sustainability and zoning and regulation measures can be introduced to limit the negative impact. While further determining zoning and regulations, current laws continue to apply, for example kitesurfing and speedboats are not allowed inside the MPAs per ROP2019.
Concerns for restrictions on fishing	Within the decree designating the 4 MPAs as protected areas there is a specific mention of artisanal fisheries to be the only extractive activity that can be allowed within the MPAs.

	Fishing practices do need to be regulated in order to be sustainable. As with the other activities, current laws continue to apply within the MPAs as well in regard to protected species and illegal fishing methods such as spearfishing or cast nets in certain areas.

All participants were encouraged to fill out the Stakeholder Analysis Survey for a more structured way to provide their initial insights and to also stay pending for the following engagement events of the stakeholder engagement process. Contact information was shared, and all stakeholders encouraged to contact ACF should there be any questions or concerns during the entire process.

Considerations for marine conservation management

There are many doubts and concerns about the transparency and inclusivity of the MPA designation process as well as how the management of the areas will impact the community and their livelihoods. Most stakeholders do agree that there is a need for more structured marine conservation to ensure sustainable use of marine resources to conserve the marine environment for future generations.

It is important for ACF to continue to engage all stakeholders, provide open and transparent communication and when new regulations are introduced that this is done gradually to allow time for the community to adapt to the relatively new concept of marine conservation in Aruba.

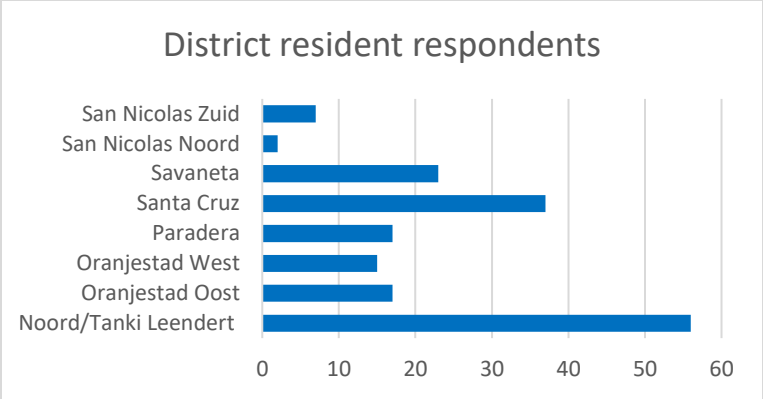
Stakeholder Analysis Survey

While ACF was hosting the informative sessions all stakeholders were encouraged to fill out the Stakeholder Analysis Survey for an initial quantitative impression of the social-economic aspects of human activities, practices and dependencies within the MPAs. The survey was conducted through digital platform Microsoft Forms and offered in all 4 languages spoken by the community of Aruba (Papiamento, English, Dutch and Spanish) for inclusivity. The link to this survey was repeatedly shared through social media, press releases, press conferences and at all informative sessions. A paper version of the survey was developed and shared with stakeholders that were unable to fill in the form digitally to remove as many barriers as possible from filling out the survey. All data collected was compiled and is presented here, there was a total of 193 respondents. The survey consisted of 40 questions total.

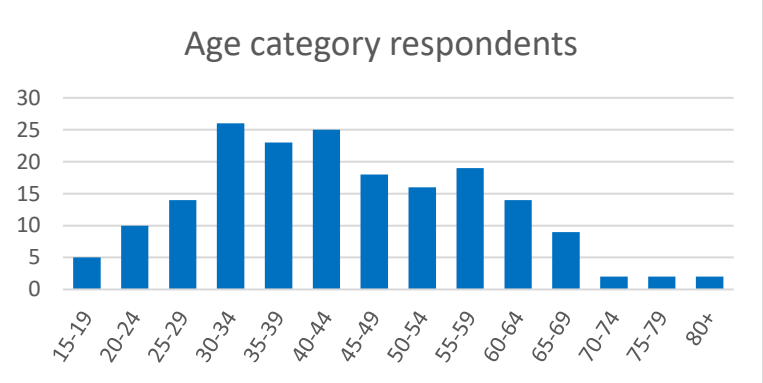
Demographics

Several questions of the survey were dedicated to acquiring general information of the respondents to assess whether the group of respondents is reflective of the community of Aruba. Of the respondents, 90% are residents of Aruba. The 10% non-residents were either born in Aruba or have ties to Aruba as repeat visitors and can therefore be considered part of the broader community of Aruba.

Within the residents of Aruba there was a relatively low representation from the districts of San Nicolas. These districts are less densely populated, especially compared to Noord, which has a higher population density[1] which is also reflected by the relative number of respondents.



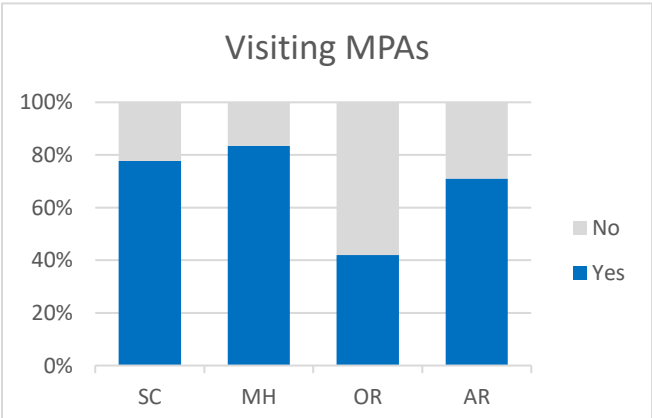
With 99 female, 92 male and 2 'prefer not to say' respondents, the gender ratio is reflective of the Aruba population that has slightly more female residents than male[2].



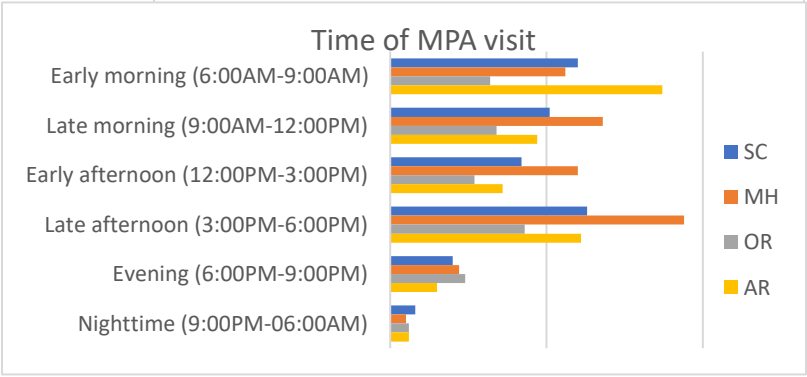
The age distribution of the respondents had a slightly higher representation of the 30-44 age categories than would be reflective of our community. This slightly higher representation of ages 30-44 combined with the relative under-representation of the 45+ age groups may be attributed to the digital platform used for this survey.

Activities and use of the MPAs

Not all MPAs are equally accessible, appealing, or safe for visitors. The respondents were asked if they regularly visit each MPA. MPA Oranjestad Reef (OR) is the least visited MPA. And the most visited MPA is MPA Mangel Halto (MH).



The majority of the respondents do not visit the MPAs during the night or evening. There are some variations in the preferred time to visit the MPAs. While MPA Arikok (AR) is mostly visited in the early morning, MPA Mangel Halto (MH) has more visitors in the late afternoon.

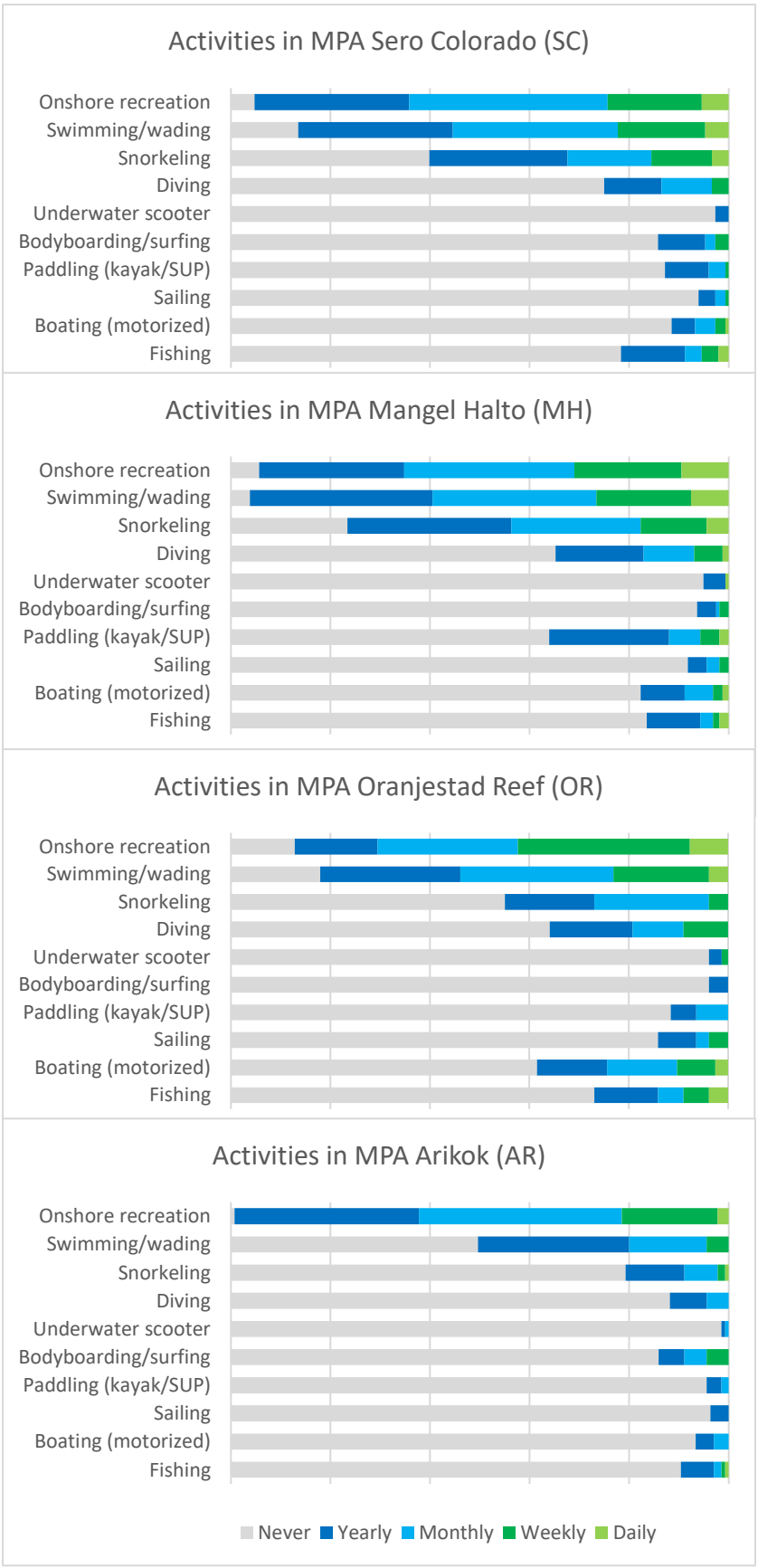


[1] Community Profile Aruba Census 2020 v12 (arcgis.com)
[2] Population by age and sex – Central Bureau of Statistics (cbs.aw)

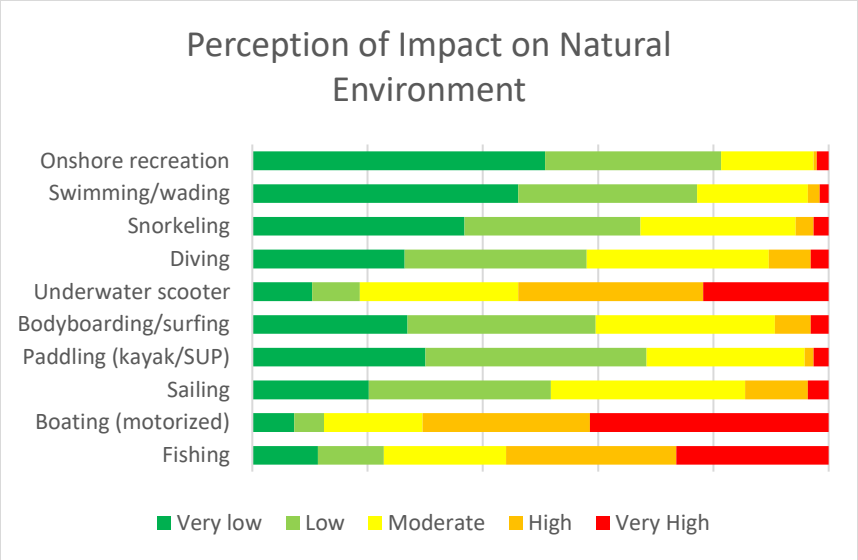
The survey respondents that indicated to visit an MPA, were asked to indicate the frequency at which they participate in different recreational activities in that MPA. The selection of activities only includes activities that are currently permitted by law within these areas, therefore, for example kitesurfing, jet-skiing and spearfishing were not included. Onshore recreation (walking, resting/sitting, playing and wildlife watching) is the most frequent activity in all 4 of the MPAs, followed by swimming/wading. Snorkeling is a relatively common activity for the leeward MPAs (SC, MH and OR) and Diving most common in MPAs Mangel Halto and Oranjestad, followed by MPA Sero Colorado. Due to the rough sea conditions, most of these activities are not commonly practiced in MPA Arikok. Paddling (Kayak/SUP) activity is most frequent in MPA Mangel Halto.

Boating (motorized) and fishing is most frequent in MPA Oranjestad.

The use of underwater scooters is the least frequent. For all MPAs, less than 5% of the respondents participate in this activity, and if so, mostly once a year.

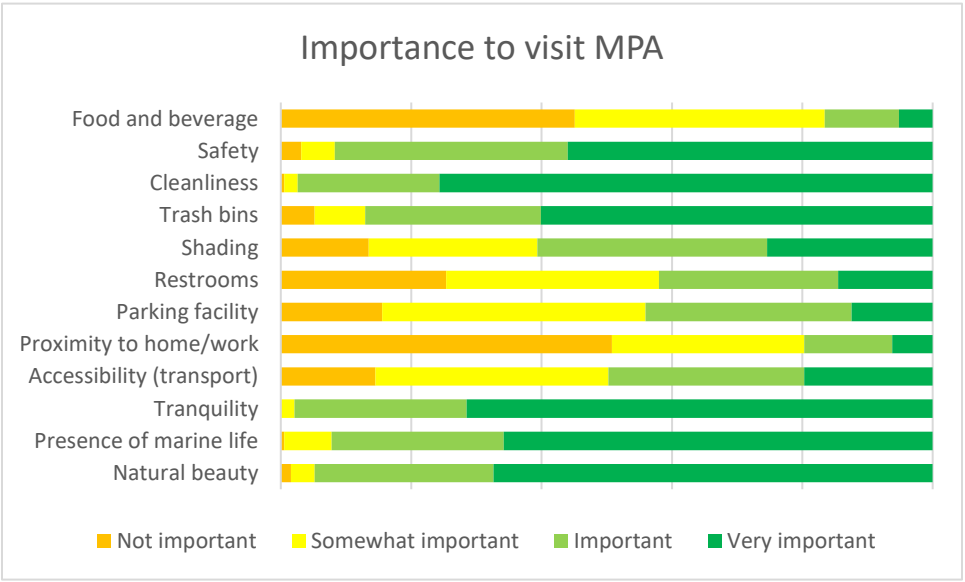


When the respondents were asked to indicate their perceived level of impact on the natural environment over 80% of the respondents perceive onshore recreation to have low to very low impact. The activities that have the highest perceived impact are 'Underwater scooter', 'Boating (motorized)', and 'Fishing'. Each of these activities was indicated to have a high or very high impact on the natural environment by over 50% of the respondents. Within both the motorized boating and fishing activities, there was no distinction made between different types of vessels or fishing methodologies. The estimated impact could therefore vary depending on the precise activity. However, in general these are perceived by the respondents as high impact activities.

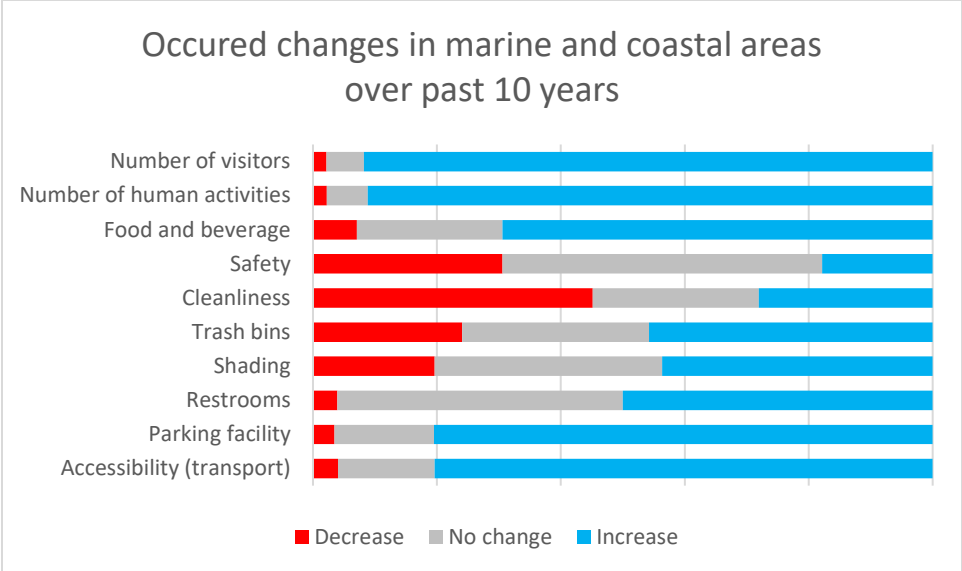


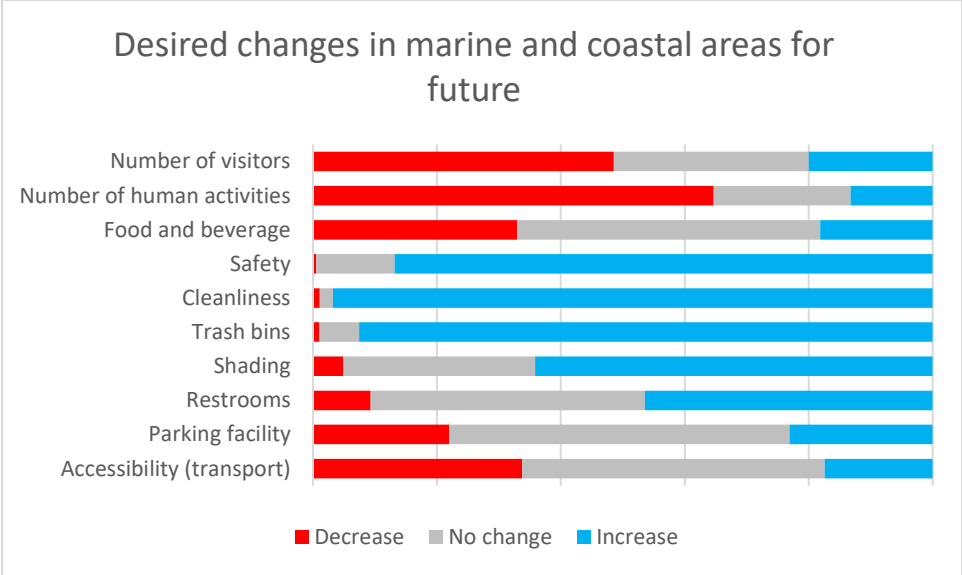
Factors contributing to appeal of MPAs

Respondents were also asked to indicate the importance of several factors and facilities in their choice to visit an MPA. Factors attributing to the pristineness of the MPA, such as 'Cleanliness', 'Tranquility', 'Presence of marine life' and 'Natural beauty', are perceived as most important by the respondents, with over 90% marking these factors as important or very important. Safety and the presence of functional trash bins are also valued as important or very important factors to choose to go to an MPA site. The least important factors are the proximity to their home/work and availability of food and beverage on site. Restrooms, Shading, Parking facility and Accessibility received mixed responses, which could indicate that these are specific preferences per individual and could also depend on the intended purpose of the visit to the area, which may differ per MPA. This distinction was not included in this initial basic survey.



To further gain insight in the views of the respondents towards human tailored factors or facilities contributing to the overall appeal of the MPAs, the respondents were asked to indicate in their view what changes have occurred in these factors over the past 10 years, and what change they would like to see in the future. The answer choices were 'Increase', 'No change', 'Decrease' or 'Not sure'. The 'Not sure' responses were left out of the analysis to reduce their influence on the results (this was on average 13% of the respondents in the question on occurred changes, and 6% of the respondent in the question on desired changes).

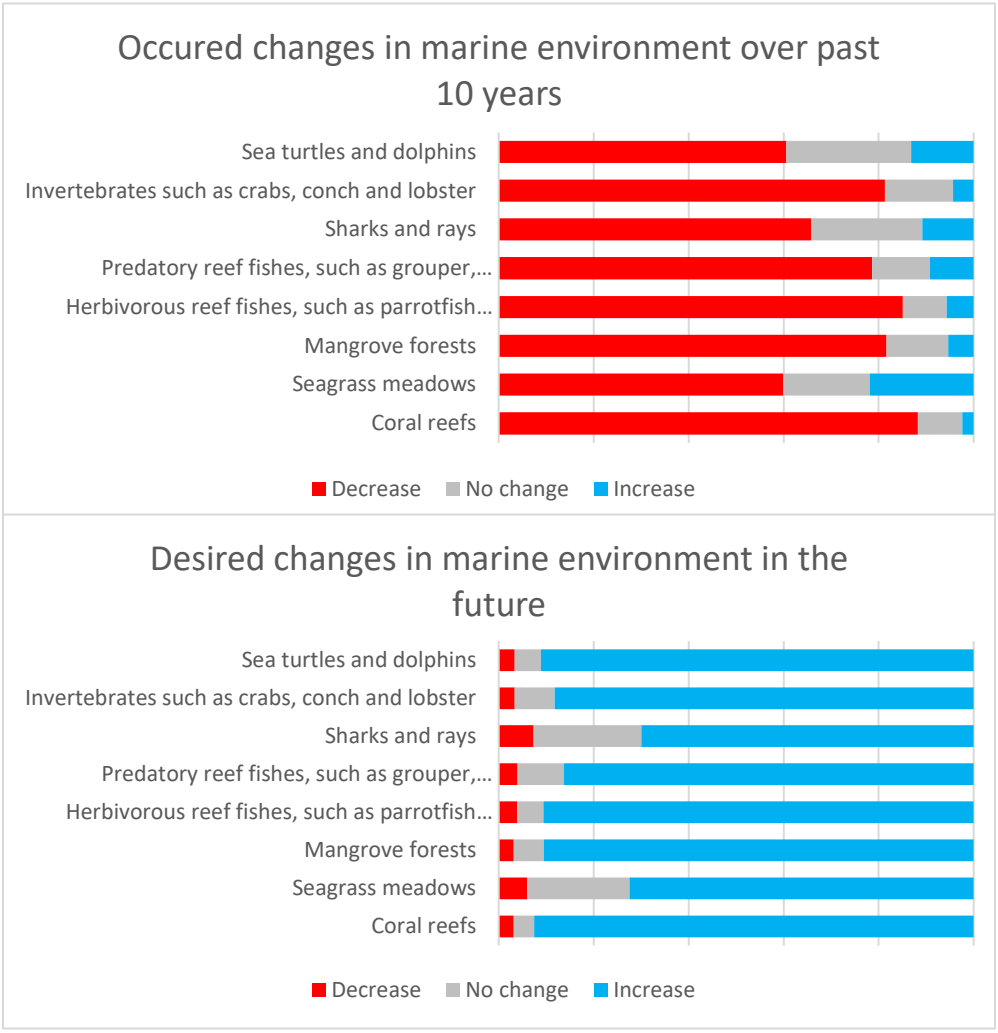




In these two graphs comparing the change that occurred, according to the respondents, and the desired change for the future it is visible that a shift of focus will be needed. The respondents have experienced an increase in 'Number of visitors', 'Number of human activities', 'Parking facility' and 'Accessibility (transport)', and would like to see a decrease (or no further change) in these factors for the future. As more respondents experienced a decrease in 'Safety', 'Cleanliness', and 'Trash bins', they would like to see these factors increase in the future.

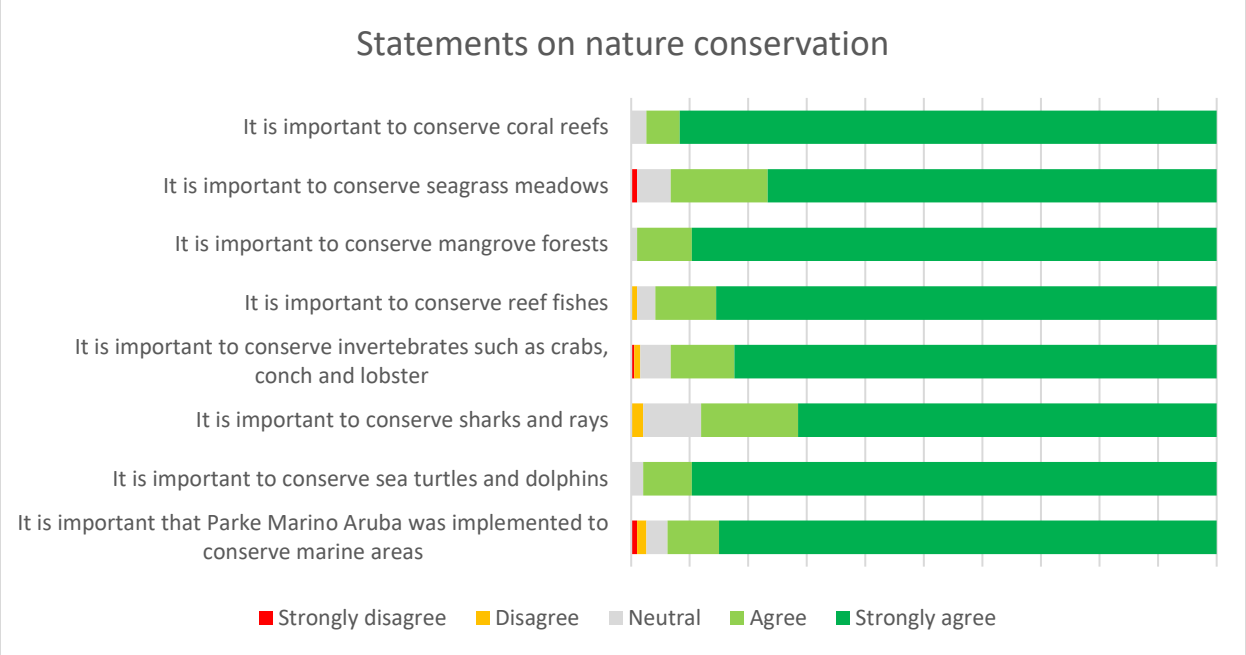
Similarly, the respondents were asked to indicate the perceived change over the past 10 years as well as the change they would wish to see in the future for the natural factors of the MPAs. Again, the the 'Not sure' responses were omitted from this analysis. However, the average 26% of respondents to answer 'Not sure' at occurred changes is indicative of a reduced level of awareness or shared knowledge on the state of the marine environment. For the desired changes question only 8% answered 'Not sure'.

Similar to the human factors as described above, the respondents wish to see a different change for the future than they have experienced over the past 10 years. A vast majority of the respondents indicated a decrease for all natural values over the past 10 years. At the same time their wish for the future is an increase in these values. This is indicative of a desire to not only protect what is still there, but also to restore these natural values.



Sharks and rays and Seagrass meadows did receive a bit more votes for decrease or no change compared to the other natural values. This could be an indication of reduced awareness of the importance of these species in the health and biodiversity of the other values.

In line with this wish to see an increase in natural values the large majority of the respondents strongly agrees that it is important to conserve these natural resources when asked to what extent they agree or disagree with statements indicating this importance.



Ecosystem services and livelihood dependence

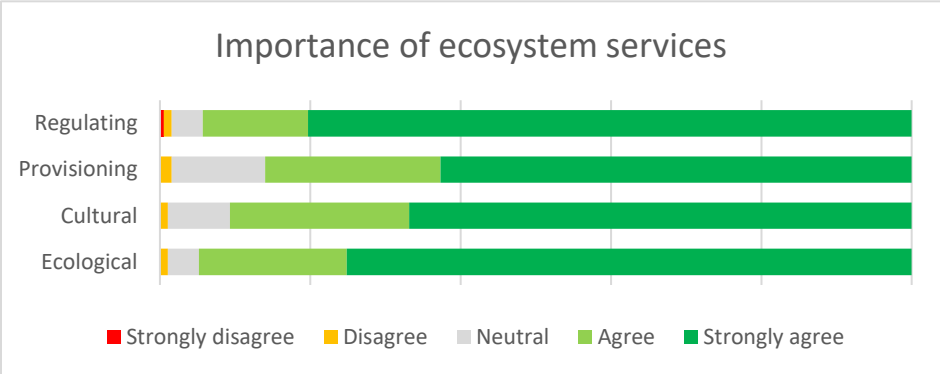
The respondents were asked to indicate whether they (strongly) agree or disagree with statement on the four different ecosystem services (regulating, provisioning, cultural and ecological) that the marine environment delivers. In the survey ecosystem services are defined as (human) benefits obtained from ecosystems. These were the statements as used in the survey to reflect the different ecosystem services:

Regulating: Healthy, biodiverse and resilient marine ecosystems will benefit and enhance regulating ecosystem services such as protection against storms, pollution control and shoreline stabilization (less erosion).

Provisioning: Healthy, biodiverse and resilient marine ecosystems will benefit and enhance provisioning services by providing human food and nutrient sources (such as fish and shellfish), raw materials (such as algae, minerals), ingredients for man-made medicines (such as algae, chitin, and cod liver oil) and being a source of energy.

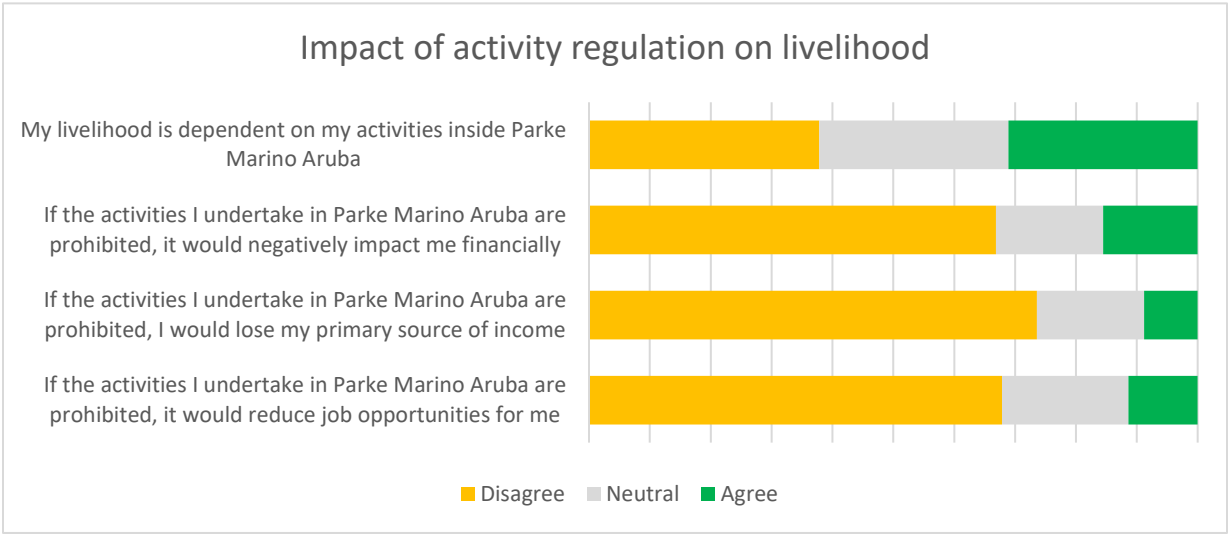
Cultural: Healthy, biodiverse and resilient marine ecosystems will benefit and enhance cultural services by protecting the connection between people and the ocean and contribute to the identity and natural heritage of Aruba and its people.

Ecological: Healthy, biodiverse and resilient marine ecosystems will benefit and enhance ecological services by protecting habitats for local species, help replenish fish populations and other marine life.

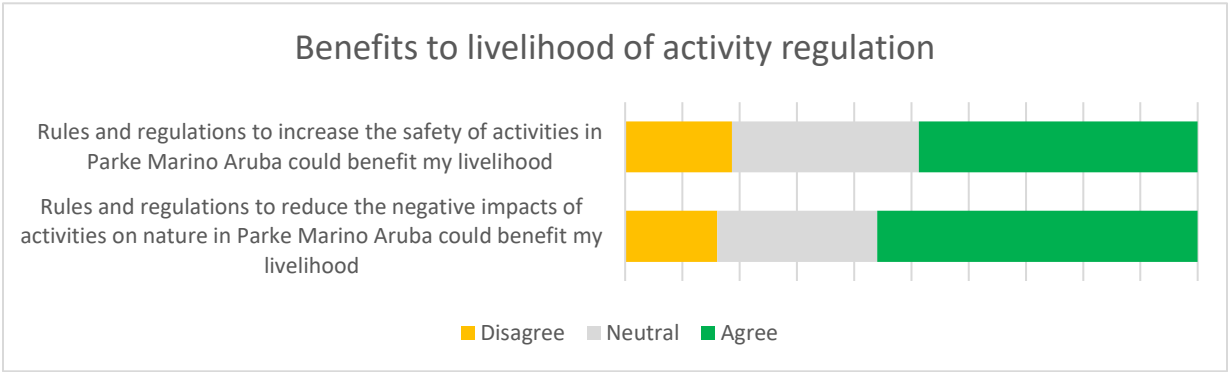


The majority of the respondents (strongly) agreed with the statements indicating the importance of all four of the ecosystem services.

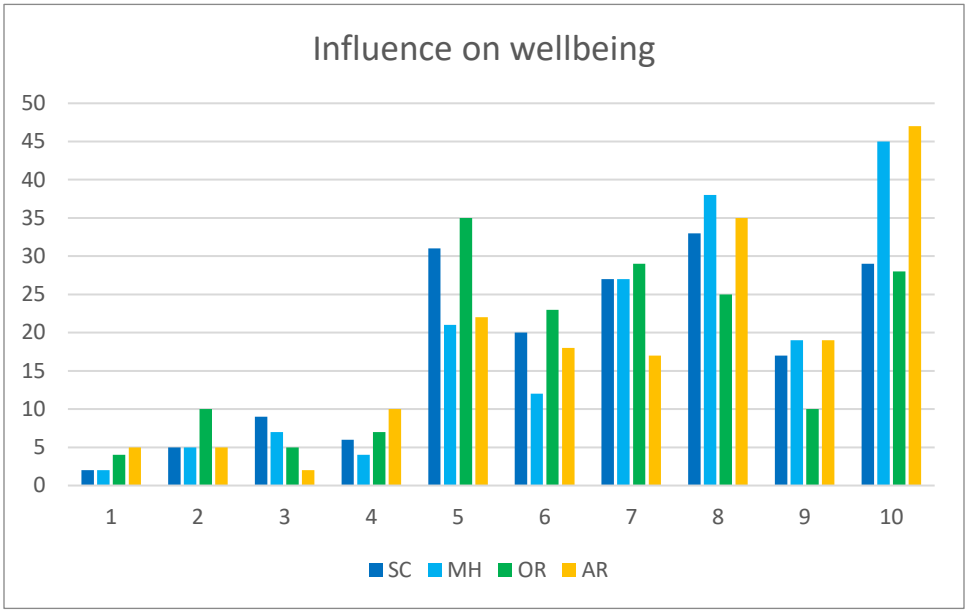
The majority of the respondents (>65%) disagreed with statements indicating that prohibition of their activities in Parke Marino Aruba would have a negative impact on their livelihood (financially, primary source of income, reduced jobs). However, the respondents were very evenly divided on the statement "My livelihood is dependent on my activities inside Parke Marino Aruba" (31% agreed, 31% neutral, 38% disagreed).



A higher proportion of the respondents agreed that rules and regulations either for safety or to reduce negative impacts on nature could benefit their livelihoods.



Influence on wellbeing scored above 6.5 on average. From a 6.6 average score for MPA Oranjestad, to 6.9 for MPA Sero Colorado, 7.3 for MPA Arikok and 7.4 for MPA Mangel Halto. This indicates that a majority of the respondents perceived the MPAs to have an influence on their wellbeing.



And MPAs Arikok and Mangel Halto are perceived to have a slightly higher influence on the respondents' wellbeing compared MPAs Sero Colorado and Oranjestad.

Considerations for marine conservation management

While the survey did not receive sufficient response to be a statistically significant representation of the community at large, it can still provide an initial insight into the views of a part of the community. The most popular activities in the MPAs are onshore recreation and swimming, which are relatively low impact activities. Some of the higher impact activities are also less frequent amongst the respondents. Many of the respondents wish to see a decrease in human activities and an increase in natural values and ecosystem services. And the respondents see how regulations could benefit their livelihoods, while such regulations should have minimal negative impact on their livelihood.

SWOT Analysis Workshops

ACF invited key stakeholders to this interactive workshop to give insights from all branches on the current situation of Parke Marino Aruba and the vision for the future. These were the first structured interactive sessions, where a total of 64 (30 + 34) participants contributed to a SWOT analysis, TOWS analysis and Vision 2030 for Parke Marino Aruba in interactive work sessions.

To ensure the safety and health of all participants the participants were divided into two groups for the sessions. Each group participated in a session of 2 intensive days. The first group attended the two workshop days on 26 and 27 October 2021, and the second group followed a week later on 3 and 4 November 2021. In each group there were 6 to 7 tables with representatives from different branches related to Parke Marino Aruba, such as: nature, the community, authorities, fishers and tourism.

Each table was led by neutral facilitators – IPA Movecion y Salud students – who guided the group through discussions to reach results in a structured manner. In this way each table had a mix of different perspectives and interests in marine conservation and healthy discussions took place at each table creating a broader understanding within the entire group of all the different perspectives and disciplines that come into play with marine conservation.

SWOT analysis

A SWOT analysis is a situational analysis for Parke Marino Aruba. A SWOT analysis is typically conducted during the strategic planning process to provide a comprehensive overview of the internal and external factors that may affect an organization's ability to achieve its objectives. By identifying these factors, organizations can develop strategies to capitalize on strengths, address weaknesses, take advantage of opportunities, and mitigate threats. The SWOT analysis is a versatile and widely used tool in business, marketing, and organizational development. It helps decision-makers make informed choices and develop strategies that align with the organization's goals and the external environment.

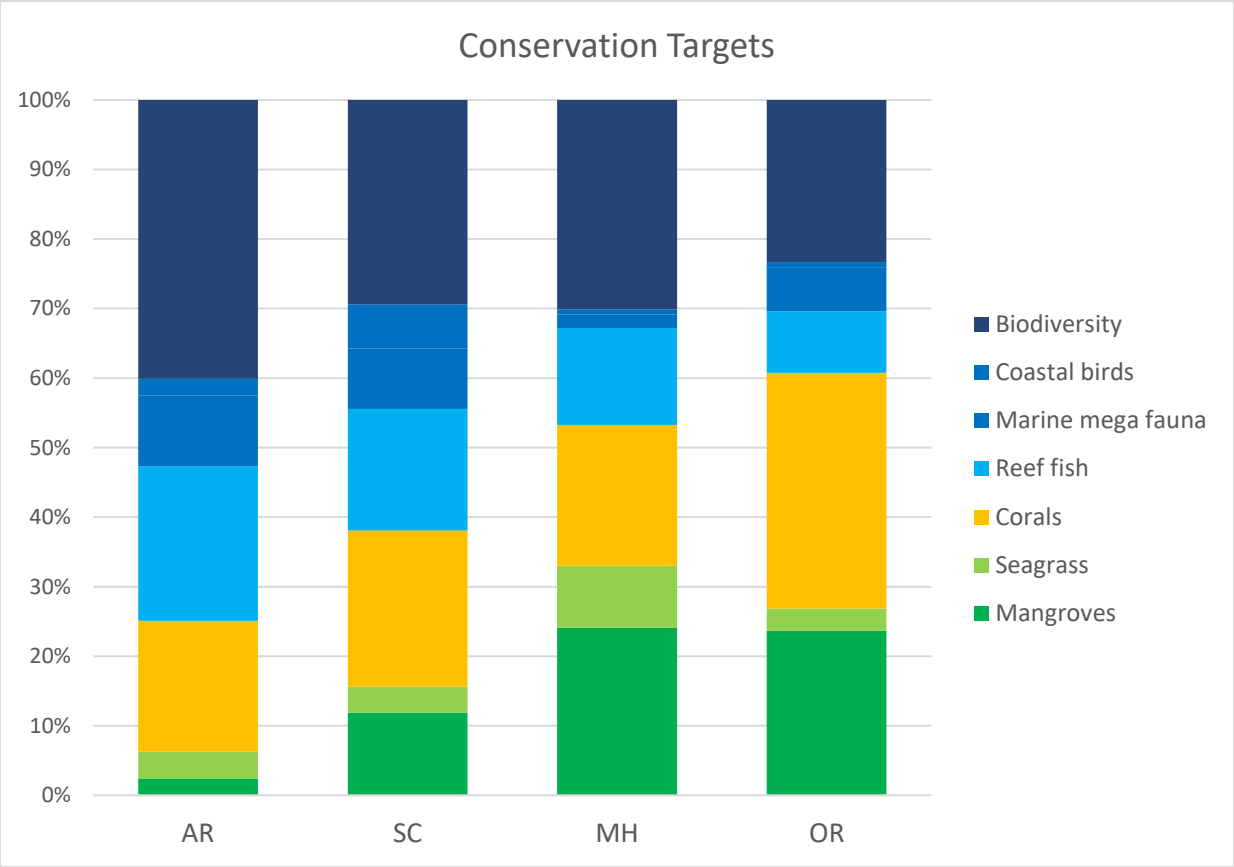
While marine conservation is not a business, the same logic of a SWOT analysis can be applied. Where strengths and weaknesses are the internal factors, seen from the nature perspective these are the strengths and weaknesses of the natural values in the MPAs. The opportunities and threats are the external factors, in this case the human impacts (positive or negative) on the natural values of the MPAs.

Per MPA, each individual participant was encouraged to first individually note down strengths, weaknesses, opportunities, and threats that he/she could think of on sticky notes. Then these were discussed in the subgroup and placed in the SWOT table on a flip chart. After discussing all individual contributions each member voted for the strength, weakness, opportunity, and threat that he/she found to be most important. All this data has been recorded by ACF.

The contents of a total of 1822 sticky notes were processed and entered in an Excell data file for further processing, of which there were 497 strengths, 400, weaknesses, 451 opportunities and 474 threats. Each note received a score based on the priority votes (a score of 1 was given if no one voted on the note and each vote adding a point to the score of that note). All the individual inputs were then categorized to allow further analysis.

Conservation targets

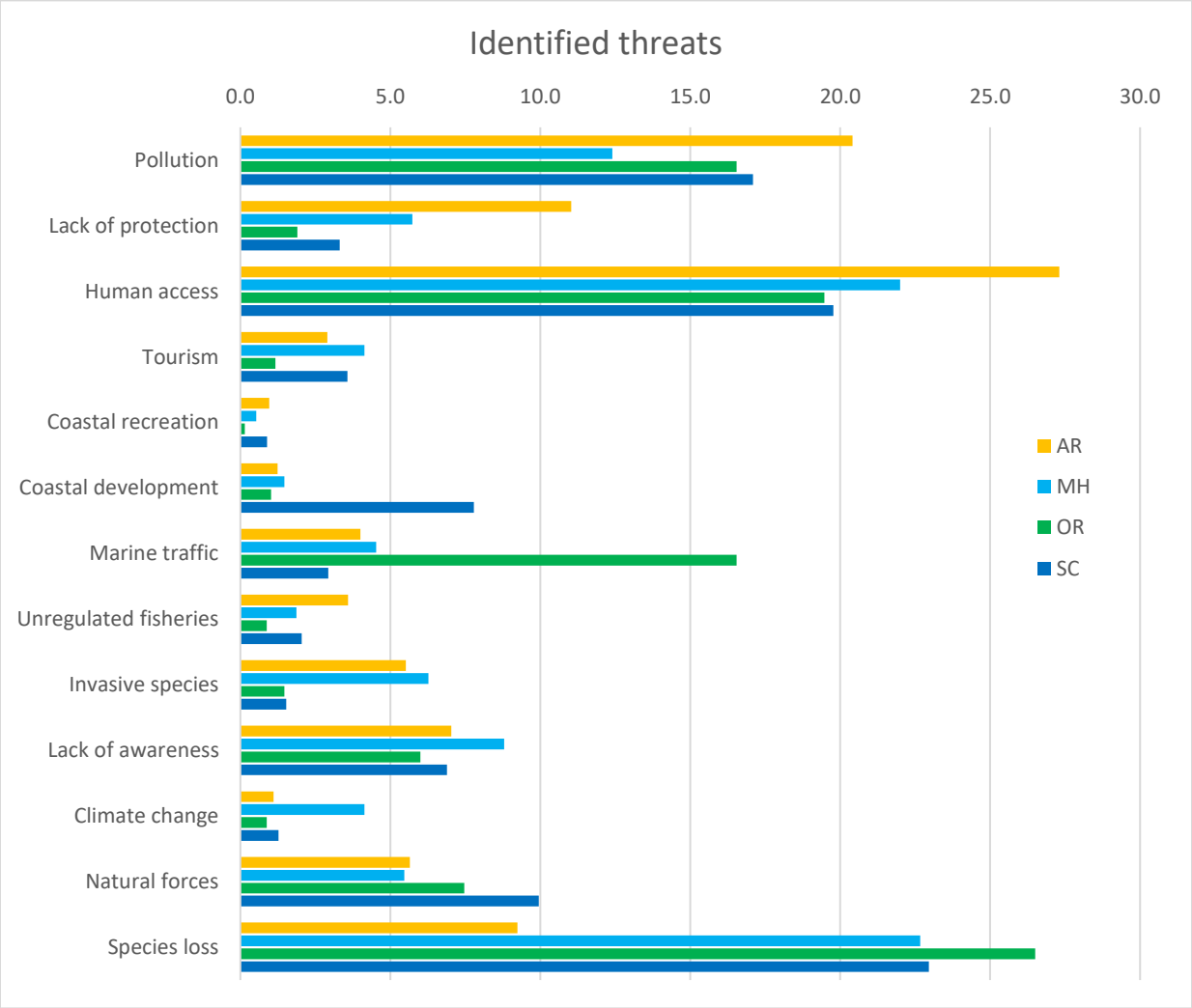
In line with the situation analysis approach of the Conservation Standards[3], the strengths and weaknesses were used to determine the desired conservation targets as brought forward by the stakeholders. In the below figure the prioritized conservation targets with their respective score are plotted per MPA.



[3] Open Standards for the Practice of Conservation version 4.0 CMP-Open-Standards-for-the-Practice-of-Conservation-v4.0.pdf (conservationstandards.org)

Threats

All identified threats were categorized and counted per MPA to give an impression of which threats are perceived to be having the most impact on the marine environment. In the figure below these numbers are show as percentages of the total votes per threat per MPA.

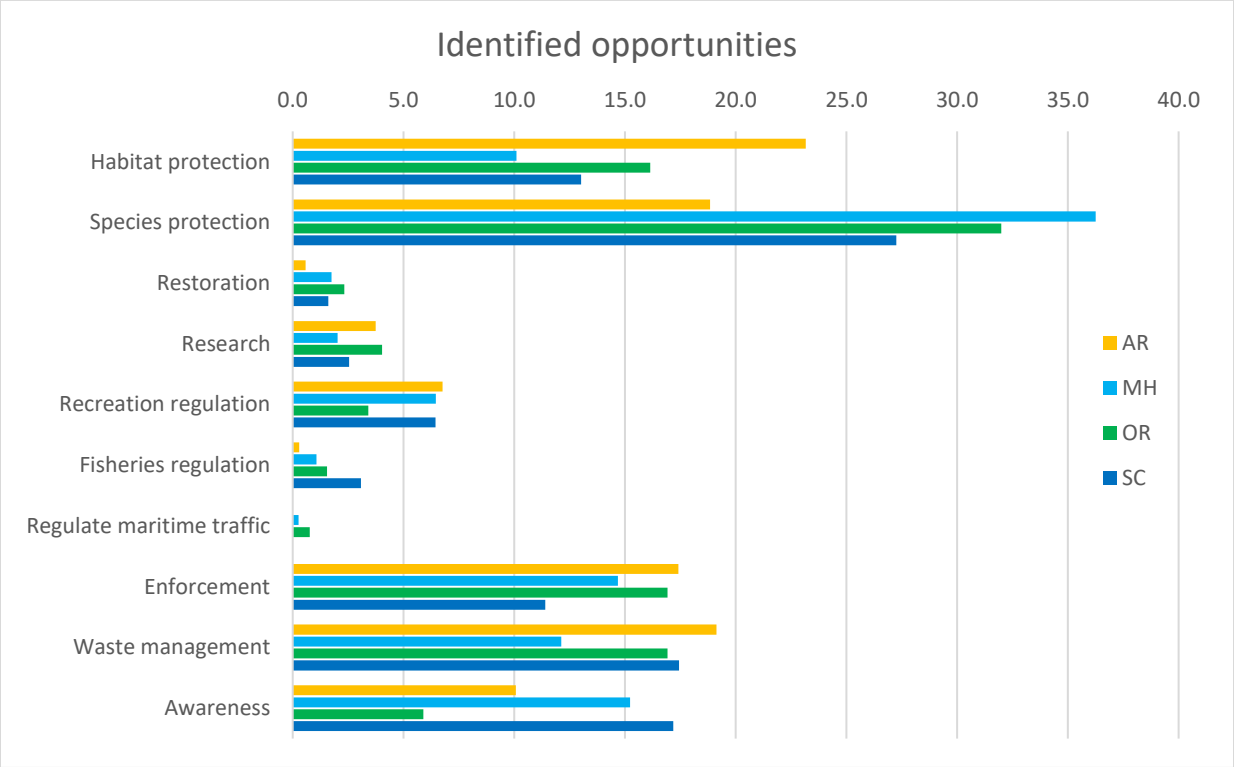


It is clear that the stakeholders identified pollution, human access and species loss as the most important threats present in the MPAs. Coastal development scored relatively high for MPA Sero Colorado, this may be influenced by the hotel development that had just started in this area at the time of the stakeholder engagement session. MPA Oranjestad surrounds the cruise ship harbor, which would explain the higher score for maritime traffic as a threat for this MPA.

TOWS analysis

Each subgroup used the strength, weakness, opportunity, and threat with the most votes was then used in the next TOWS analysis exercise. They discussed solutions and actions to utilize the strengths and opportunities and mitigate the weaknesses and threats. These results per table were then presented in plenary fashion to the rest of the participants.

All proposed solutions and actions were entered in an Excell spreadsheet for further analysis. Combined with the opportunities also mentioned in the SWOT analysis. In the figure below the categorized opportunities and solutions are resented as a percentage of the total votes per MPA.



Most popular opportunities are habitat and species protection along with enforcement, awareness, and waste management. This prioritization of opportunities and solutions matches the previously identified most prominent threats of human access, pollution, and species loss.

Vision 2030

Each 2-day session was rounded off with an exercise to formulate the vision 2030 for our marine life. The groups all brough forward inspiring messages and words on what Parke Marino Aruba should entail 10 years from now. Frequently repeating words were: healthy, full of marine life, enforcement, authority, island-round, inclusive, awareness, education, balance, collaboration, innovation, research, regulation, win-win. Compiling all the different visions of the sub-groups, the following vision resulted:

> **“Parke Marino Aruba supports thriving biodiversity and healthy marine ecosystems through sustainable management that includes science, education, collaboration, and enforcement.”**

Considerations for marine conservation management

All branches are concerned about the current state of our marine environment and agree that improvement is desirable. There were multiple suggestions to create opportunities for a balance between the use of marine areas while ensuring marine life can also be restored. Suggestions included different projects to restore corals, seagrasses and mangroves, additional research and monitoring to determine current states and best practices, educational programs and projects to raise awareness, and the need for regulation and zoning of human activities to minimize their impact.

Zoning and Regulations Workshops

Based on the results of the SWOT, TOWS and Vision 2030 exercises, ACF hosted a follow up interactive session to determine certain regulations and zoning areas for the MPAs of Parke Marino Aruba. This same one-day (8:00AM-2:00PM) session was hosted twice, on 25 and 27 October 2022, to allow the stakeholders to select the date that was most convenient for them and have an overall larger attendance. Over the two sessions a total of 51 (26 + 25) stakeholders participated. During this session the results from the previous session were presented to which feedback from the stakeholders was encouraged and noted for incorporation (feedback was already included in previous chapter).

Additionally, several key conservation actions and a selection of threat mitigations (regulations/solutions) that were proposed by the stakeholders in the previous sessions were developed further and presented. Here the stakeholders asked to discuss where these conservation actions and regulations or solutions would be most effective in their view and draw these interventions as zones on the MPA maps.

As with the previous interactive workshop multidisciplinary groups were formed from the stakeholders present. Ensuring each group had at least one representative of the different stakeholder branches that interact with the MPAs: nature, the community, authorities, fishers, and tourism. On each day there were four groups that rotated during the day to cover all four MPAs separately. At each table a different MPA was discussed and there was one dedicated facilitator (an ACF staff member) per MPA table that would guide the conversation and discussions and take notes of the input from the stakeholders. The facilitators made sure to only guide and facilitate the discussions, making sure everyone was being heard, without influencing the stakeholders' views and resulting input. The stakeholders used colored markers, sticky notes, and stickers to map out their vision for the zones in each MPA. Each group had their own color, each session resulting in a map of each MPA with four zoning plans in one overview. Each MPA map per session with the four colored layer of the four groups that gave input was photographed and can be found in Annex 2.

To structure the discussions and mapping efforts at the tables, the group was provided with specific conservation actions, regulations, and solutions to discuss. The results are presented by topic for all MPAs.

Conservation actions

Not all potential conservation actions are discussed, as not all conservation actions are dependent on zoning of areas. For this workshop, only the three conservation actions that are zoning dependent were discussed. All stakeholders were enthusiastic about the conservation actions.

Artificial reefs

For the conservation targets Coral reef ecosystem and Reef fish (and Biodiversity), ACF has acquired funding from the EU RESEMBID Programme through a collaborative partnership with Wageningen University & Research, University of Aruba and ScubbleBubbles Foundation. This project will install artificial reef structures in the three leeward MPAs (SC, MH & OR) as pilot project of a potential coral restoration strategy. The stakeholders discussed and marked the most suitable sites for the placement of these artificial reef structures.

While discussing and selecting the sites the stakeholders were prompted to consider sites where there would have been historic coral presence, a depth of 10-15 meters, relatively easy access for

maintenance and monitoring and to consider that the restoration sites will become restricted areas for the success of the project. Each group could place 7 artificial reef (AR) round stickers.

For MPA Sero Colorado, there were a few sites that were highly favored compared to other sites (Image 1). During these discussions stakeholders also indicated a high presence of gorgonians in the Southern areas (where the coral restoration sites are more scattered) and the potential to use the bay of Santana di Cacho as a coral nursery area.

Image 1: MPA Sero Colorado with grouped results of artificial reef placements

MPA Mangel Halto (Image 2) also has a few highly favored sites. Stakeholders also considered the direction of the currents for natural recruitment of coral either to or from the coral restoration sites. On group expressed concern about the implications of the restricted area surrounding the coral restoration site if placed at Santo Largo.

Image 2: MPA Mangel Halto with grouped results of artificial reef placements

At MPA Oranjestad (Image 3) the large majority of reefs were placed outside of the (harbor) reef islands and spread quite evenly with a slight increased density at both outer edges (East and West). Three of the eight groups placed a total of 11 reefs in the area outside of Bushiri beach with the intention for the structures to help stabilize this dynamic (beach) area and the associated seagrass beds.

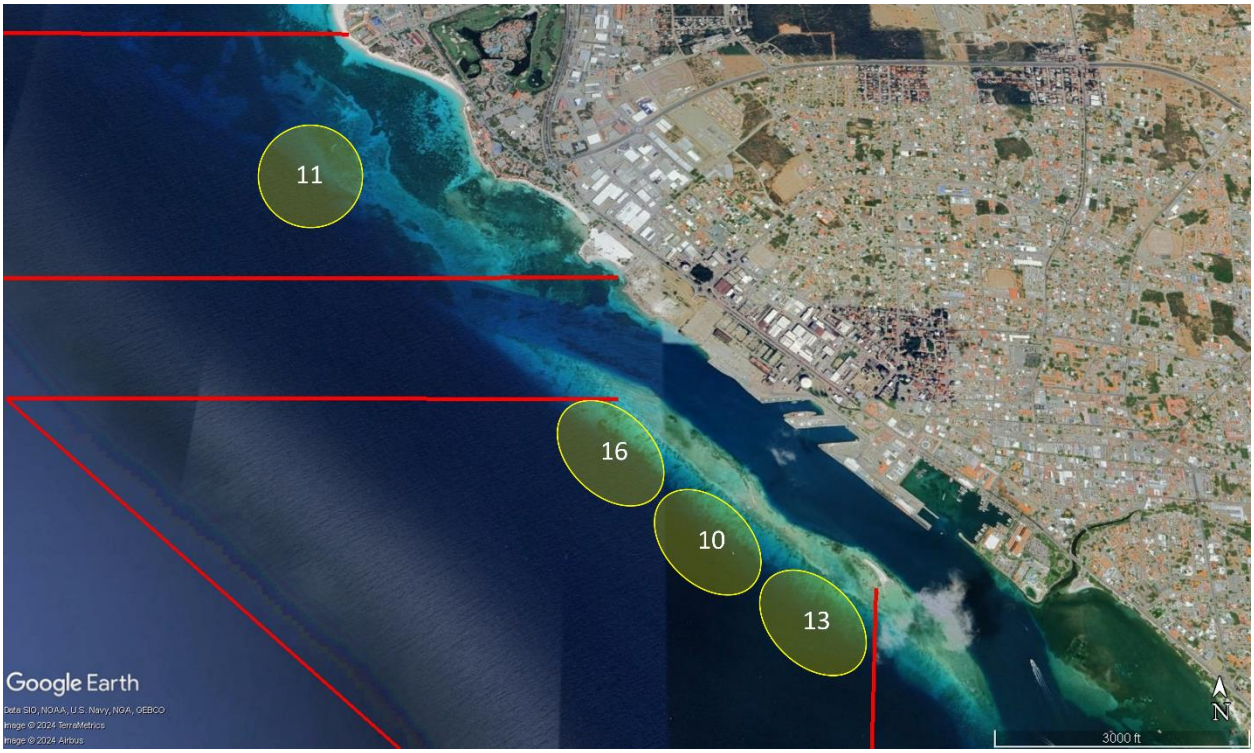


Image 3: MPA Oranjestad with grouped results of artificial reef placements

Seagrass restoration zones

For the conservation target of the seagrass ecosystem there is opportunity to develop restoration sites by reducing the impacts of trampling, dragging, anchoring and boat traffic in shallow seagrass areas. The stakeholders were prompted to identify potential seagrass restoration zones, considering the historic presence of seagrass and areas that are particularly highly impacted by trampling or other maritime traffic. For MPA Arikok a few areas with some seagrasses were indicated, however as the pressures targeted with the proposed seagrass restoration zones (trampling, dragging, anchoring or boat traffic) do not occur in this MPA, it was deemed not applicable for MPA Arikok by the stakeholders.

At MPA Sero Colorado all groups indicated Rodgers Beach bay as historic seagrass area and suitable for seagrass restoration and or conservation (Image 4).

Image 4: MPA Sero Colorado seagrass restoration zone as indicated by all groups

In MPA Mangel Halto (Image 5) nearly the entire coastline the first meters of water were identified as historic seagrass areas (marked yellow). For the seagrass restoration zones not all the different groups marked the same areas. The areas that multiple groups marked for restoration sites are marked red in the image. Most groups did state that there should be pathways or openings available for swimming and wading toward swimming, snorkeling, or diving areas (especially at Santo Largo).

Image 5: MPA Mangel Halto seagrass restoration potential. Area colored yellow has been identified to have (historic) seagrass presence, and red are areas marked by multiple groups as restoration zones.

At MPA Oranjestad (Image 6) two areas were identified to have (historic) seagrass and marked as seagrass restoration zone. It is important to note that out of the total of 8 groups one zone was marked by 2 groups in one session and the other zone by 2 groups in the other session. The two groups could have influenced each other, and not all groups indicated these zones.

Image 6: MPA Oranjestad marked seagrass restoration zones. Each zone was marked by 2 groups (out of 8).

No-go or no-take zones

For overall marine conservation the concept of no-take or no-go zones was introduced and discussed if applicable. Such restricted areas, if large enough and at effective sites, could produce 'spillover' to adjacent accessible areas. Ideally these restricted areas are placed where there is high biodiversity present or potential, and could be extra effective in areas where mangroves, seagrass and coral ecosystems are connected. Restricted areas can also be effective in protecting specific sensitive species in their habitat. Areas that already have low accessibility would be most enforceable and limiting less people in their activities.

While this topic was clearly a more sensitive matter for most stakeholders, as restricted areas could also restrict their own respective interests, all stakeholders do agree that such zones are needed for effective marine conservation. No-take zones were drawn by most groups in the areas surrounding their placements of artificial reefs and in some groups the seagrass restoration zones as well.

Only one no-go area was selected almost unanimously by all stakeholders, except one individual. The exact size of the area did differ between the groups, however in general it covers the naturally isolated area with low accessibility surrounding the Isla di Oro reef island (Image 7). This area has high biodiversity, harbors the 3 primary ecosystems – mangroves, seagrass, and corals – and already receives relatively low visitation. This would also mean that less stakeholders would be negatively impacted by restrictions in this area.

Image 7: MPA Mangel Halto with the only unanimously selected area for a biodiversity replenishment zone in the form of a no-go-zone.

Additional areas that were marked by several groups a no-go zones, where the reef islets in MPA Sero Colorado (as also dictated by the ROPv, Aruba's 'spatial plan with regulations') and the reef islets of MPA Oranjestad. Both mainly to conserve the tern populations that breed on these islets and/or the mangroves that can (potentially) grow there.

Regulations & Solutions

The regulations, infrastructure and solutions for which stakeholder views are essential for the success and effectiveness of these interventions were discussed. This included the desired locations of mooring buoys, maritime channels and potential zoning or regulations for recreational or fishing activities.

No Anchoring zones with mooring placement

The stakeholders discussed and marked where moorings should be placed when anchoring is prohibited in the MPAs. In these discussions the stakeholders were prompted to carefully consider the number of moorings as this would also influence the amount of pressure from human activity at the sites and to indicate whether a mooring could be used by small (<12m) or large boats (≥12m) and if they could be used only during the day or overnight as well.

For all areas it was clear that the stakeholders wish to see a prohibition on all anchoring in the future. None of the groups indicated any moorings to be placed in MPA Arikok. However, for the other 3 MPAs where and what kind of moorings should be placed to tie the vessels was less unanimous. For all MPAs, one subgroup placed marker buoys for all MPAs in order to indicate the borders and make them visible when people are inside an MPA.

At MPA Sero Colorado, several subgroups indicated to maintain or renew the current small mooring buoys near the fisher pier that have been placed by the fishers for their boats (red). Only two subgroups placed large mooring buoys in the bay area for overnight mooring; one of the groups placed 1 and the other group placed 3 large overnight moorings in the yellow area (Image 8).

Image 8: MPA Sero Colorado with the two areas that have been indicated by stakeholders for potential mooring zones.

At MPA Mangel Halto the groups placed many moorings, all for daytime use only, no overnight moorings. There were some repeat patterns between the subgroups (Image 9). With many placing small mooring buoys at regular distances of about 500 meters from each other near the drop-off (‘kantiel’) either for dive boats or fishing boats (red). Several groups followed this same pattern but switched to large mooring buoys closer to Mangel Halto and its reef islet (yellow). Additional clusters of small and or large moorings were selected to place just inside the Mangel Halto reef islets (orange), as this area is already regularly used by tour and dive operators (currently with their own private made and maintained buoys). Closer to the shore, yet outside of the official swimming zone, multiple groups placed clusters of small moorings for local use (purple).

Image 9: MPA Mangel Halto potential mooring placement zones.

In MPA Oranjestad similar to Mangel Halto the stakeholders placed a pattern of small buoys approximately every 500 meters along the drop-off of the reef islands outside the harbor (yellow) (Image 10). One group placed a small mooring buoy near the beach between Divi and Tamarijn resorts (red), to accommodate the watersports operator that operates from that beach.

Image 10: MPA Oranjestad potential mooring placement zones

Maritime channels/routes

The stakeholders were prompted to discuss and indicate if there are any specific channels or routes used by boats that would need to be marked. This can be both for safety and for marine conservation to prevent maritime traffic from passing and causing disturbance everywhere and prevent collisions or grounding. This should also consider the national law that already indicated that the first 75m of water is a swimming zone where boats are allowed a maximum velocity of 10km/h.

No channels were indicated for MPA Arikok and MPA Oranjestad, but all groups did agree to maintain and clearly mark the currently used channels for the lagoon area of MPA Mangel Halto (Image 12) and inside Rodgers Beach bay of MPA Sero Colorado (Image 11).

Image 12: MPA Mangel Halto's lagoon area with the indicated channel for maritime traffic

Image 11: MPA Sero Colorado's Rodgers Beach bay with the indicated channels for maritime traffic.

Limits on recreational activities

The stakeholders discussed whether there are certain recreational activities that are currently legal inside the MPAs that should be limited in access. And if so, where should such an activity be restricted. Kitesurfing, Jet skis and speedboats are already prohibited by law. The stakeholders were encouraged to think of activities that currently occur that are of high impact. Due to time constraints this topic was not discussed by all groups.

Most groups that discussed this topic mentioned that only low impact activities should be allowed. Activities considered of high impact by the groups:

- Jet skis, speedboats, motorized watersports
- Kitesurfing and foiling
- Jet pack activities in shallow seagrass areas

Additionally, regulations were mentioned for low impact visitors that would need to use reef-safe sunblock to keep their impact to a minimum.

Limits on fishing activities

The stakeholders discussed if there are any fishing practices currently legal, that should be limited or regulated. If yes, which method(s), species, or sizes, and in which area. Also consider current legal restrictions already in place on commercial fishing, spearfishing, driftnets, crate fishing (‘kanasta’) and protected species. Due to time constraints this topic was not discussed by all groups.

For MPA Arikok most groups indicated to allow the cliff fishing to only local traditional practitioners. But do regulate their behavior on land by creating clearly marked parking spaces and signage. The groups that were able to discuss this for MPA Sero Colorado also emphasized that fishing should only be allowed to local fishers and not for recreation.

Several groups mentioned placing Fish Aggregation Devices (FADs) to support local fisheries by increasing fish catches for their efforts. The FADs should be placed in deeper waters, this would often be just outside the MPA borders.

Considerations for marine conservation management

The stakeholders have provided clear indications where the conservation actions of artificial reefs for coral restoration, regulations for seagrass restoration zones and potential no-take and no-go zones are perceived as most effective. Additionally, zones suitable for moorings were identified to facilitate the prohibition on anchoring. Existing maritime channels are indicated to remain in place and properly marked to prevent harm to marine life as well as vessels. Multiple recreational activities were indicated as high impact that should be regulated or prohibited in the MPAs.

Annexes

Annex 1: Stakeholder Analysis Survey Form

Parke Marino Aruba Stakeholder Survey

Dear stakeholder,

Fundacion Parke Nacional Aruba (FPNA) is responsible for the management of four marine protected areas (MPAs) in the coastal waters of Aruba, which together comprise Parke Marino Aruba. In developing the management plan for the coming five years (2022-2026), FPNA, as the managing organization, will establish rules and regulations for each MPA and the different zones within an MPA in consultation with the different stakeholders.

Regulation of public access and recreational behavior is necessary to reach the primary goal and objectives of the marine park, namely marine conservation. However, to determine such regulations and ensure a broad acceptance and practical enforceability, it is crucial to execute extensive research, monitoring and stakeholder consultations beforehand. FPNA has already started investigating and monitoring biophysical factors such as seagrass, and coral health and abundance, as well as their associated species.

This survey is the first step in a series of stakeholder engagements to determine the social-economic aspects of human activities, practices and dependencies within the MPAs.

This survey will take about 20 minutes of your time and will be accessible until the end of September 2021. We appreciate your contribution to this survey and all information you provide will be treated confidentially. A summary of the results of this survey will be published no later than October.

Please follow our website (www.arubanationalpark.org) or Facebook page (@arubanationalpark) for more information on Parke Marino Aruba and its current status.

* Required

Please answer a few questions about yourself first

1

Are you a resident of Aruba? *

- ◯ Yes
- ◯ No

2

In which district do you live? *

- ◯ Noord/Tanki Leendert
- ◯ Oranjestad Oost
- ◯ Oranjestad West
- ◯ Paradera
- ◯ Santa Cruz
- ◯ Savaneta
- ◯ San Nicolas Noord
- ◯ San Nicolas Zuid

3

What is your country of birth? *

- ◯ Aruba/Netherlands Antilles
- ◯ Netherlands
- ◯ Colombia
- ◯ Venezuela
- ◯ Dominican Republic
- ◯ Other

Activities within the MPAs of Parke Marino Aruba

Parke Marino Aruba consists of four marine protected areas (MPAs), that extend approximately two kilometers from the coast:

MPA Sero Colorado: The coastal water around the "Eastern Cape" of Sero Colorado, from just south of the refinery to Bachelors Beach, including the bays of Rodger's Beach, Baby Beach and Santana di Cacho (Pet Cemetery).

MPA Mangel Halto: The coastal water along Mangel Halto, Isla di Oro and Santo Largo, including coastal mangroves.

MPA Oranjestad Reef: In the capital city, from the lagoon next to Governor's Bay Beach up to Punto Brabo, excluding the cruise ship passage channel.

MPA Arikok: The coastal waters adjacent to Parke Nacional Arikok (PNA), from Daimari to Vader Piet

For the following questions it is important to know the four areas of Parke Marino Aruba and where they are located.

4

Do you visit **MPA Sero Colorado?** *

- ◯ Yes
- ◯ No

5

What time of the day would you normally visit **MPA Sero Colorado**? *

- [ ] Early morning (6:00AM-9:00AM)
- [ ] Late morning (9:00AM-12:00PM)
- [ ] Early afternoon (12:00PM-3:00PM)
- [ ] Late afternoon (3:00PM-6:00PM)
- [ ] Evening (6:00PM-9:00PM)
- [ ] Nighttime (9:00PM-06:00AM)

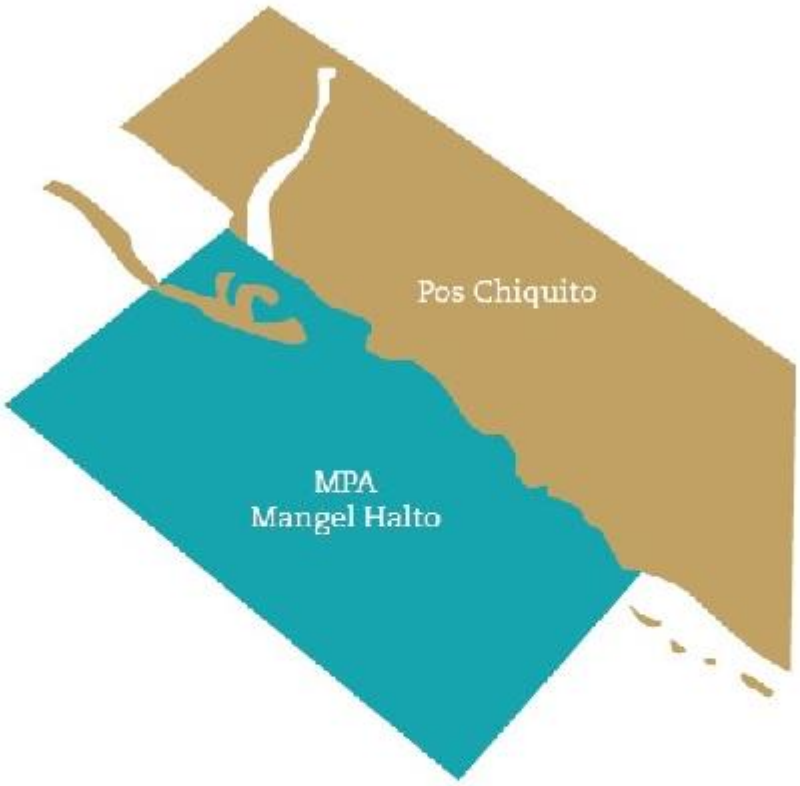
6

Please indicate for each activity how often you currently undertake this activity in **MPA Sero Colorado** *

	Daily	Weekly	Monthly	Yearly	Never
Onshore recreation (walking, resting/sitting, playing, wildlife watching)	○	○	○	○	○
Swimming/wading	○	○	○	○	○
Snorkeling	○	○	○	○	○
Diving	○	○	○	○	○
Underwater scooter	○	○	○	○	○
Bodyboarding/surfing	○	○	○	○	○
Paddling (kayak/SUP)	○	○	○	○	○
Sailing	○	○	○	○	○
Boating (motorized)	○	○	○	○	○
Fishing	○	○	○	○	○

7

Do you visit **MPA Mangel Halto?** *



- ◯ Yes
- ◯ No

8

What time of the day would you normally visit **MPA Mangel Halto**? *

- [ ] Early morning (6:00AM-9:00AM)
- [ ] Late morning (9:00AM-12:00PM)
- [ ] Early afternoon (12:00PM-3:00PM)
- [ ] Late afternoon (3:00PM-6:00PM)
- [ ] Evening (6:00PM-9:00PM)
- [ ] Nighttime (9:00PM-06:00AM)

9

Please indicate for each activity how often you currently undertake this activity in **MPA Mangel Halto** *

	Daily	Weekly	Monthly	Yearly	Never
Onshore recreation (walking, resting/sitting, playing, wildlife watching)	○	○	○	○	○
Swimming/wading	○	○	○	○	○
Snorkeling	○	○	○	○	○
Diving	○	○	○	○	○
Underwater scooter	○	○	○	○	○
Bodyboarding/surfing	○	○	○	○	○
Paddling (kayak/SUP)	○	○	○	○	○
Sailing	○	○	○	○	○
Boating (motorized)	○	○	○	○	○
Fishing	○	○	○	○	○

10

Do you visit **MPA Oranjestad Reef?** *

- ◯ Yes
- ◯ No

11

What time of the day would you normally visit **MPA Oranjestad Reef**? *

- [ ] Early morning (6:00AM-9:00AM)
- [ ] Late morning (9:00AM-12:00PM)
- [ ] Early afternoon (12:00PM-3:00PM)
- [ ] Late afternoon (3:00PM-6:00PM)
- [ ] Evening (6:00PM-9:00PM)
- [ ] Nighttime (9:00PM-06:00AM)

12

Please indicate for each activity how often you currently undertake this activity in **MPA Oranjestad Reef** *

	Daily	Weekly	Monthly	Yearly	Never
Onshore recreation (walking, resting/sitting, playing, wildlife watching)	○	○	○	○	○
Swimming/wading	○	○	○	○	○
Snorkeling	○	○	○	○	○
Diving	○	○	○	○	○
Underwater scooter	○	○	○	○	○
Bodyboarding/surfing	○	○	○	○	○
Paddling (kayak/SUP)	○	○	○	○	○
Sailing	○	○	○	○	○
Boating (motorized)	○	○	○	○	○
Fishing	○	○	○	○	○

13

Do you visit **MPA Arikok**? *

- ◯ Yes
- ◯ No

14

What time of the day would you normally visit **MPA Arikok**? *

- [ ] Early morning (6:00AM-9:00AM)
- [ ] Late morning (9:00AM-12:00PM)
- [ ] Early afternoon (12:00PM-3:00PM)
- [ ] Late afternoon (3:00PM-6:00PM)
- [ ] Evening (6:00PM-9:00PM)
- [ ] Nighttime (9:00PM-06:00AM)

15

Please indicate for each activity how often you currently undertake this activity in **MPA Arikok** *

	Daily	Weekly	Monthly	Yearly	Never
Onshore recreation (walking, resting/sitting, playing, wildlife watching)	○	○	○	○	○
Swimming/wading	○	○	○	○	○
Snorkeling	○	○	○	○	○
Diving	○	○	○	○	○
Underwater scooter	○	○	○	○	○
Bodyboarding/surfing	○	○	○	○	○
Paddling (kayak/SUP)	○	○	○	○	○
Sailing	○	○	○	○	○
Boating (motorized)	○	○	○	○	○
Fishing	○	○	○	○	○

16

Please indicate for each activity the **level of impact** you believe it would have **on the natural environment.** *

	Very low	Low	Moderate	High	Very High
Onshore recreation (walking, resting/sitting, playing, wildlife watching)	○	○	○	○	○
Swimming/wading	○	○	○	○	○
Snorkeling	○	○	○	○	○
Diving	○	○	○	○	○
Underwater scooter	○	○	○	○	○
Bodyboarding/surfing	○	○	○	○	○
Paddling (kayak/SUP)	○	○	○	○	○
Sailing	○	○	○	○	○
Boating (motorized)	○	○	○	○	○
Fishing	○	○	○	○	○

17

Can you think of activities that are not covered by the above list? *

- ◯ Yes
- ◯ No
- ◯ Maybe

18

Please mention these activities *

19

Would you consider these activities of low or high impact on the natural environment? *

20

How important are the following factors or facilities in determining your choice to visit one or more of the MPAs? *

	Not important	Somewhat important	Important	Very important
Natural beauty	○	○	○	○
Presence of marine life	○	○	○	○
Tranquility	○	○	○	○
Accessibility (transport)	○	○	○	○
Proximity to home/work	○	○	○	○
Parking facility	○	○	○	○
Restrooms	○	○	○	○
Shading	○	○	○	○
Trash bins	○	○	○	○
Cleanliness	○	○	○	○
Safety	○	○	○	○
Food and beverage	○	○	○	○

Stakeholder perceptions of natural value

This section consist of several statements relating to different topics regarding nature conservation and ecosystem services and a few questions on past changes in the state of nature and desired changes for the future.

21

Please indicate whether you agree or disagree with the following statements on the importance of nature conservation *

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It is important to conserve coral reefs	○	○	○	○	○
It is important to conserve seagrass meadows	○	○	○	○	○
It is important to conserve mangrove forests	○	○	○	○	○
It is important to conserve reef fishes	○	○	○	○	○
It is important to conserve invertebrates such as crabs, conch and lobster	○	○	○	○	○
It is important to conserve sharks and rays	○	○	○	○	○
It is important to conserve sea turtles and dolphins	○	○	○	○	○

It is important that Parke Marino Aruba was implemented to conserve marine areas	○	○	○	○	○

22

Please indicate whether you agree or disagree with the following statements on ecosystem services. *

Ecosystem services are defined as (human) benefits obtained from ecosystems.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Healthy, biodiverse and resilient marine ecosystems will benefit and enhance regulating ecosystem services such as protection against storms, pollution control and shoreline stabilization (less erosion).	○	○	○	○	○
Healthy, biodiverse and resilient marine ecosystems will benefit and enhance provisioning services by providing human food and nutrient sources (such as fish and shellfish), raw materials (such as algae, minerals), ingredients for man-made medicines (such as algae, chitin, and cod liver	○	○	○	○	○

oil) and being

23

What key changes have occurred in the marine environment around Aruba over the past 10 years? *

Please indicate for each marine habitat or species if you have noticed a decrease, no change or an increase.

	Decrease	No change	Increase	Not sure
Coral reefs	○	○	○	○
Seagrass meadows	○	○	○	○
Mangrove forests	○	○	○	○
Herbivorous reef fishes, such as parrotfish and surgeonfish	○	○	○	○
Predatory reef fishes, such as grouper, snapper and barracuda	○	○	○	○
Sharks and rays	○	○	○	○
Invertebrates such as crabs, conch and lobster	○	○	○	○
Sea turtles and dolphins	○	○	○	○

24

What key changes would you wish to see in the marine environment around Aruba in the future? *

Please indicate for each marine habitat or species if you would wish to see a decrease, no change or an increase.

	Decrease	No change	Increase	Not sure
Coral reefs	○	○	○	○
Seagrass meadows	○	○	○	○
Mangrove forests	○	○	○	○
Herbivorous reef fishes, such as parrotfish and surgeonfish	○	○	○	○
Predatory reef fishes, such as grouper, snapper and barracuda	○	○	○	○
Sharks and rays	○	○	○	○
Invertebrates such as crabs, conch and lobster	○	○	○	○
Sea turtles and dolphins	○	○	○	○

Stakeholder perceptions of social and economic factors in the marine environment

This section consist of a few questions on past changes in facilities and human activity and desired changes for the future and several statements relating to economic interest and dependence for Parke Marino Aruba.

25

What key changes have occurred in the marine and coastal areas of Aruba over the past 10 years in regard to facilities and human activity? *

	Decrease	No change	Increase	Not sure
Accessibility (transport)	○	○	○	○
Parking facility	○	○	○	○
Restrooms	○	○	○	○
Shading	○	○	○	○
Trash bins	○	○	○	○
Cleanliness	○	○	○	○
Safety	○	○	○	○
Food and beverage	○	○	○	○
Number of human activities	○	○	○	○
Number of visitors	○	○	○	○

26

What key changes do you desire to see in the marine and coastal areas of Aruba in the future in regard to facilities and human activity? *

	Decrease	No change	Increase	Not sure
Accessibility (transport)	○	○	○	○
Parking facility	○	○	○	○
Restrooms	○	○	○	○
Shading	○	○	○	○
Trash bins	○	○	○	○
Cleanliness	○	○	○	○
Safety	○	○	○	○
Food and beverage	○	○	○	○
Number of human activities	○	○	○	○
Number of visitors	○	○	○	○

27

Please indicate for the following statements whether you agree or disagree. *

	Agree	Neutral	Disagree
My livelihood is dependent on my activities inside Parke Marino Aruba	○	○	○
If the activities I undertake in Parke Marino Aruba are prohibited, it would negatively impact me financially	○	○	○
If the activities I undertake in Parke Marino Aruba are prohibited, I would lose my primary source of income	○	○	○
If the activities I undertake in Parke Marino Aruba are prohibited, it would reduce job opportunities for me	○	○	○
Rules and regulations to increase the safety of activities in Parke Marino	○	○	○

Aruba could

28

Would you be willing to pay for or contribute to the development of the following amenities? *

	Yes	No	Maybe
Natural beauty	○	○	○
Presence of marine life	○	○	○
Tranquility	○	○	○
Accessibility (transport)	○	○	○
Proximity to home/work	○	○	○
Parking facility	○	○	○
Restrooms	○	○	○
Shading	○	○	○
Trash bins	○	○	○
Cleanliness	○	○	○
Safety	○	○	○
Food and beverage	○	○	○

29

To what extent do you think **MPA Sero Colorado** has an influence on your wellbeing? *

0	1	2	3	4	5	6	7	8	9	10

Not at all influential — Extremely influential

30

To what extent do you think **MPA Mangel Halto** has an influence on your wellbeing? *

0	1	2	3	4	5	6	7	8	9	10

Not at all influential — Extremely influential

31

To what extent do you think **MPA Oranjestad Reef** has an influence on your wellbeing? *

0	1	2	3	4	5	6	7	8	9	10

Not at all influential — Extremely influential

32

To what extent do you think **MPA Arikok** has an influence on your wellbeing? *

0	1	2	3	4	5	6	7	8	9	10

Not at all influential — Extremely influential

33

Please name one rule or regulation that you would like to see implemented in Parke Marino Aruba. *

Final questions

This section contains just a few more questions about you and this survey.

34

What is your age? (please enter number of years)

The value must be a number

35

What is your gender?

- ◯ Woman
- ◯ Man
- ◯ Prefer not to say
- ◯ Other

36

What is your highest completed education? *

- ◯ None
- ◯ Primary school
- ◯ Lower vocational education (EPB, LTS, LEAO, LHNO, LBO, VMBO-bp)
- ◯ Lower secondary education (MAVO, (M)ULO, MBO, VMBO-tl)
- ◯ Higher vocational education (MBO-lang, MTS, MEAO, BOL, BBL, INAS)
- ◯ Higher secondary education (HAVO, VWO, Atheneum, Gymnasium, HBS, MMS)
- ◯ College & University (incl. HBO, WO, PhD)

37

Did the survey meet your expectations? *

- ◯ Yes
- ◯ No
- ◯ Not fully

38

Do you have any additional comments or concerns?

39

Would you like to be kept informed about Parke Marino Aruba? *

- ◯ Yes
- ◯ No

40

Please fill in your email address *

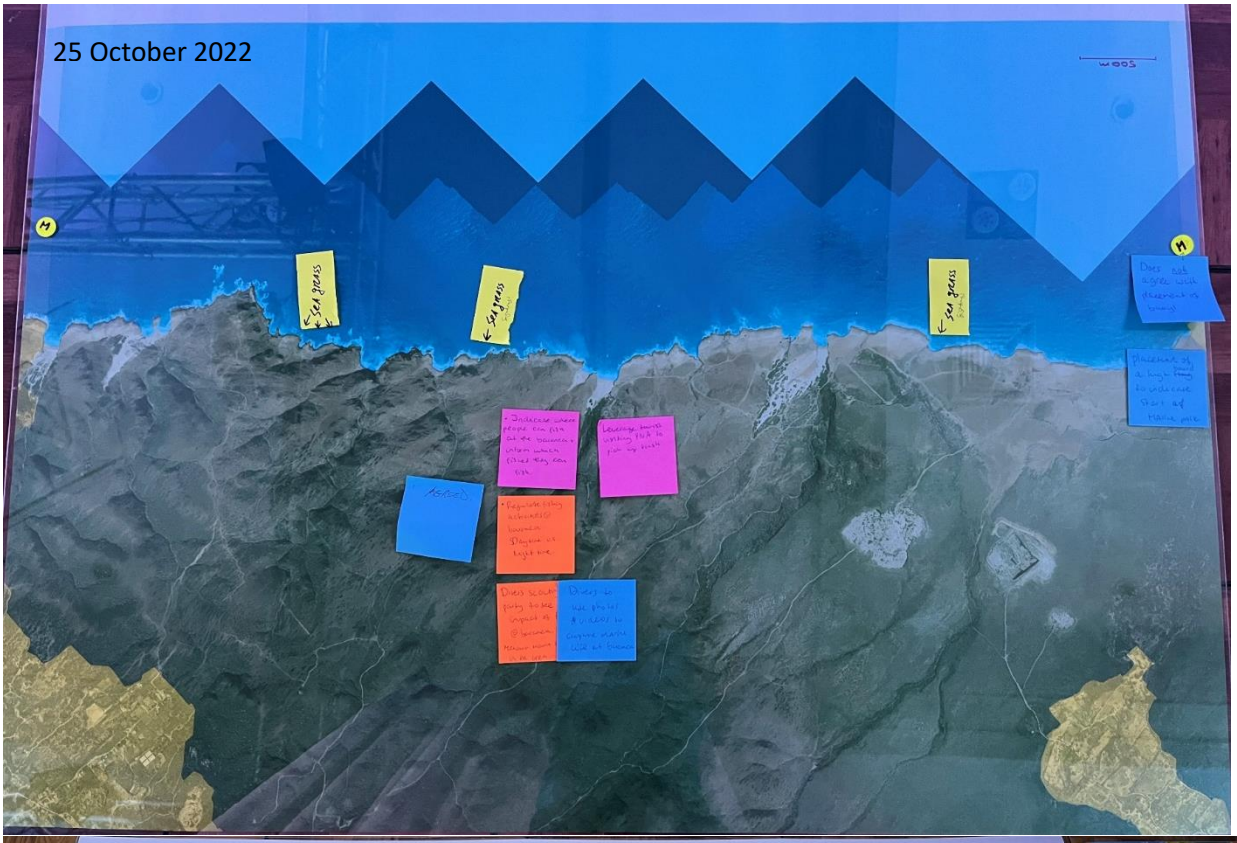
41

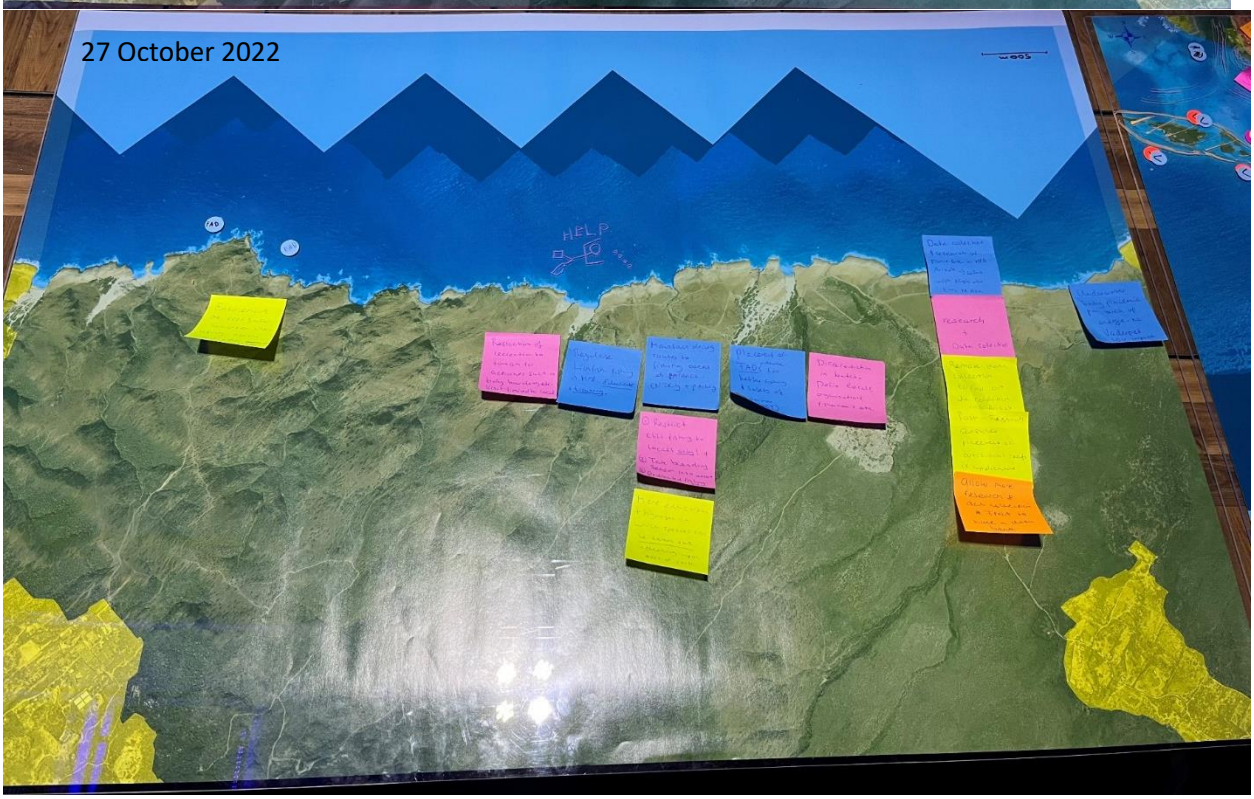
On what topic(s) would you like to receive more information in the future? *

- [ ] Only the results of this survey
- [ ] Future surveys
- [ ] Further stakeholder engagement process and results
- [ ] General information on Parke Marino Aruba

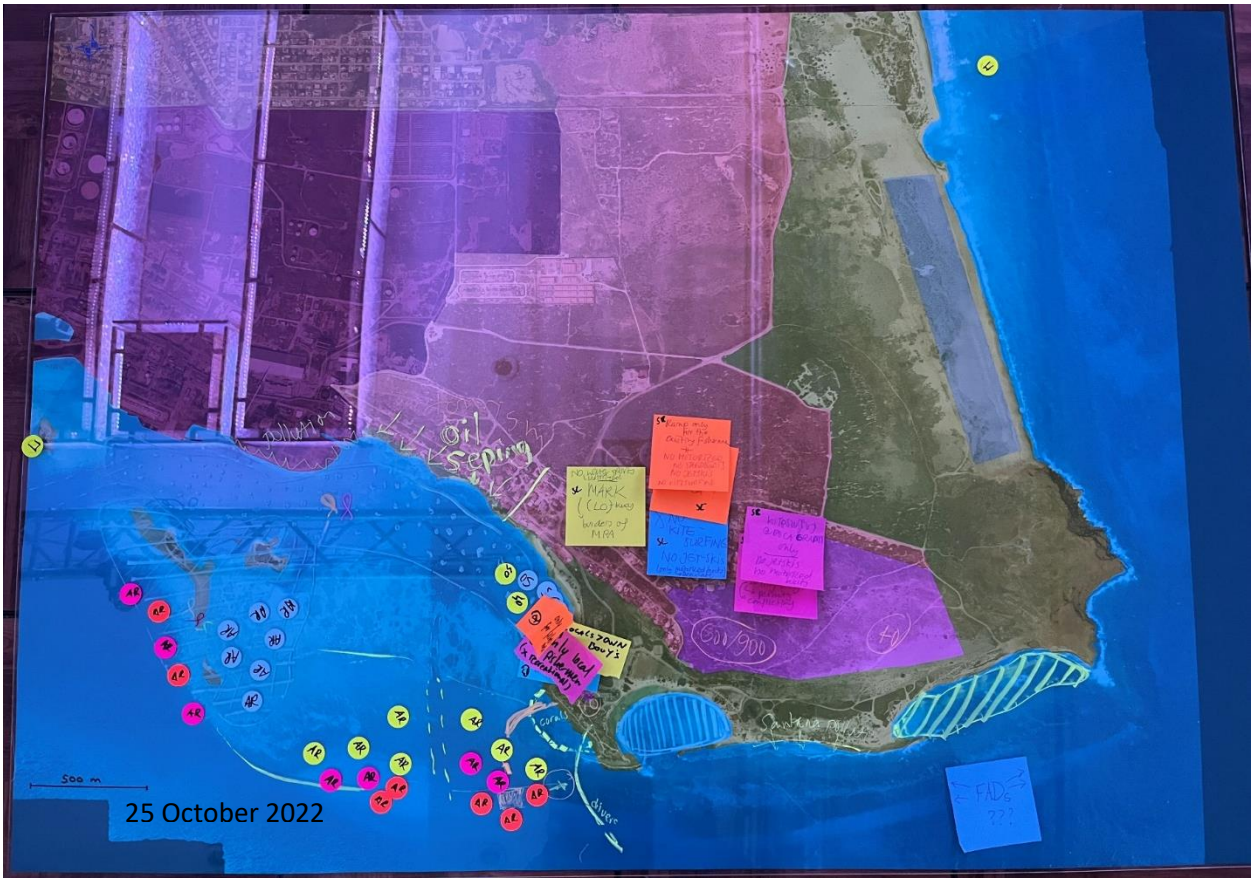
Annex 2: Photographs of the Zoning & Regulations workshop results

MPA Arikok

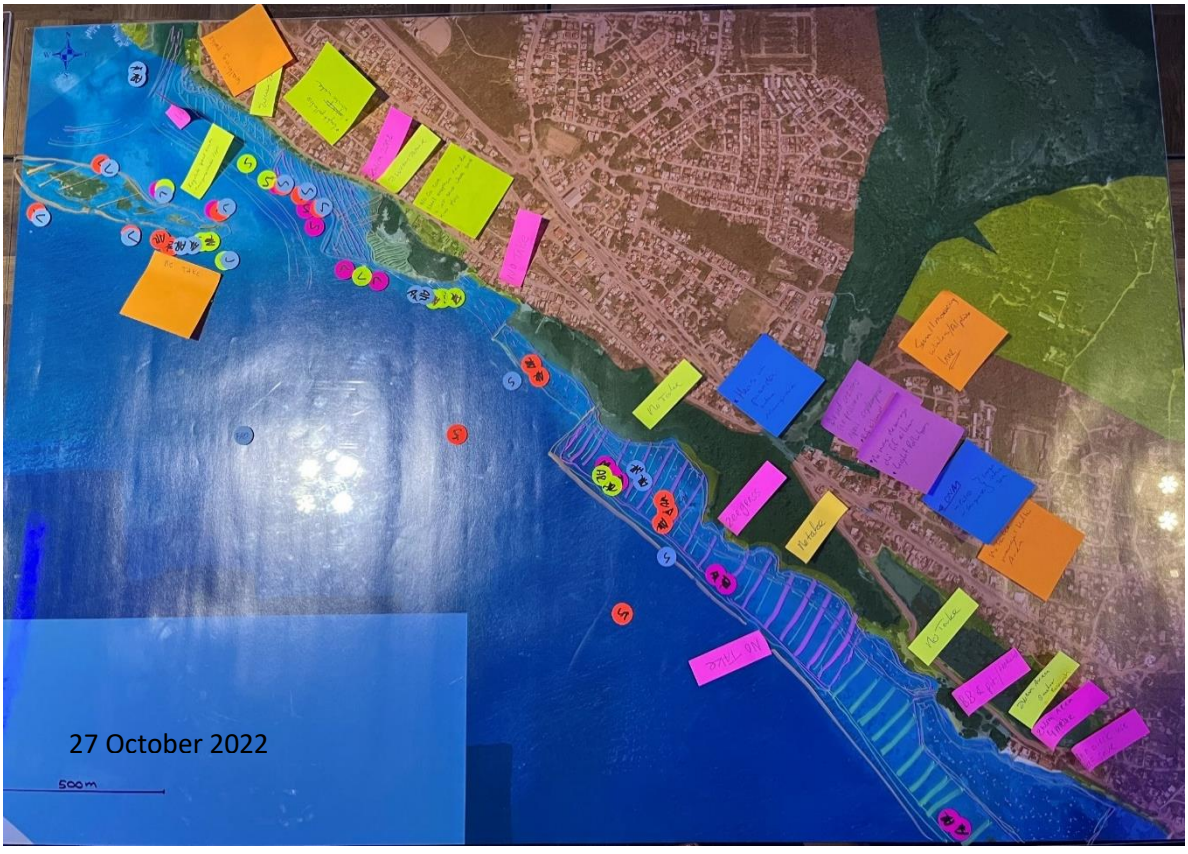




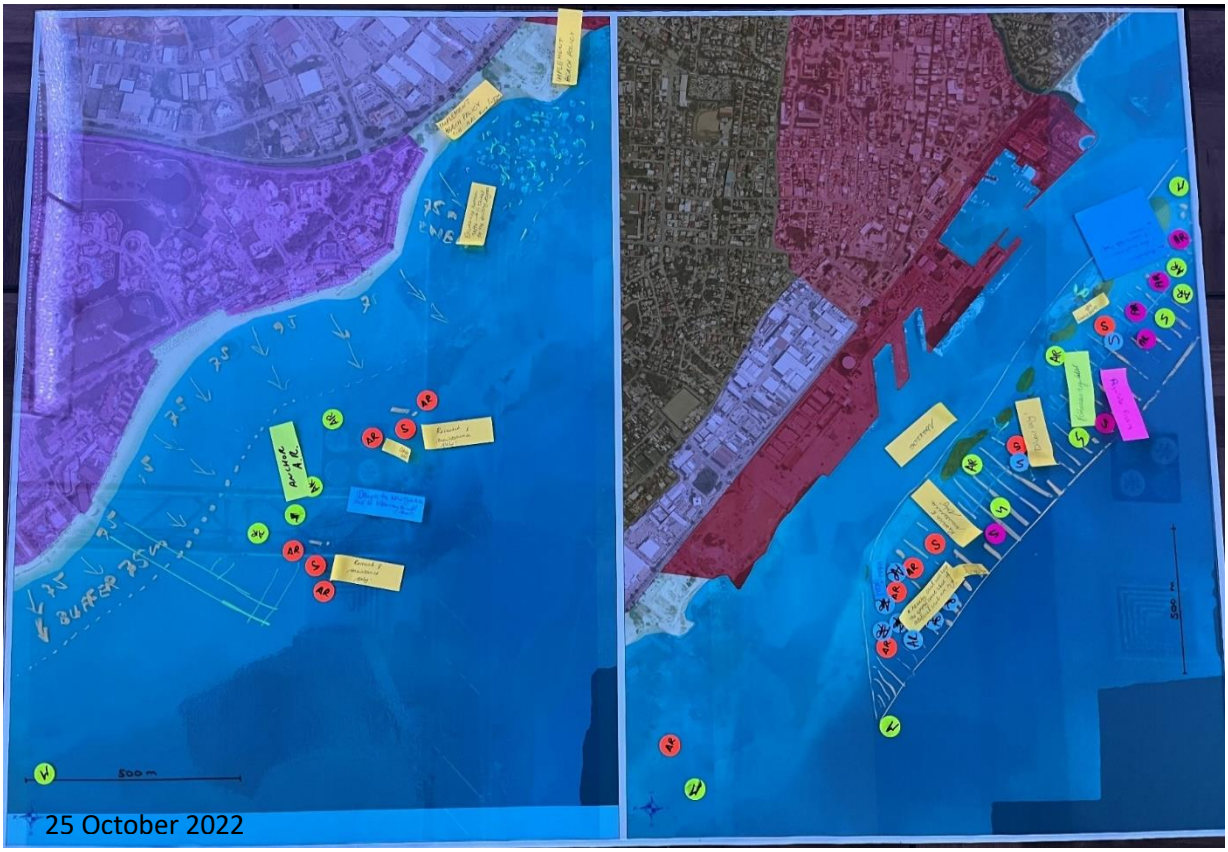
MPA Sero Colorado



MPA Mangel Halto



MPA Oranjestad



25 October 2022

27 October 2022

Annex 3: Zoning & Regulations maps Legend