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SUSTAINABLE OCEAN INITIATIVE (SOI)
CAPACITY-BUILDING WORKSHOP FOR
SOUTH AMERICA
Lima, 23-27 February 2015

REPORT OF THE SUSTAINABLE OCEAN INITIATIVE CAPACITY-BUILDING WORKSHOP FOR SOUTH AMERICA

INTRODUCTION

1. In 2010, at its tenth meeting, in Nagoya, Japan, the Conference of the Parties to the Convention on Biological Diversity adopted the Strategic Plan for Biodiversity 2011-2020, with its Aichi Biodiversity Targets. The mission of the Strategic Plan is to take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being and poverty eradication.

2. At the same meeting, the Conference of the Parties also undertook its in-depth review of the progress made in the implementation of the programme of work on marine and coastal biodiversity under the Convention, and provided further guidance for enhancing its implementation. As such, the Conference of the Parties urged Parties and other Governments to achieve long-term conservation, management and sustainable use of marine resources and coastal habitats, and to effectively manage marine protected areas in order to safeguard marine and coastal biodiversity and marine ecosystem services, and sustainable livelihoods, and to adapt to climate change, through appropriate application of the precautionary approach and ecosystem approaches, including the use of available tools such as integrated river basin and integrated coastal zone management, marine spatial planning, and impact assessments (paragraph 15 of decision X/29).

3. Parties then emphasized the need for training and capacity-building of developing country Parties, in particular the least developed countries and small island developing States, as well as countries with economies in transition, as well as through relevant regional initiatives, and that these training workshops should contribute to sharing experiences related to integrated management of marine resources and the implementation of marine and coastal spatial planning instruments, facilitate the conservation and sustainable use of marine and coastal biodiversity, and may address other regional priorities that are brought forward as these workshops are planned (paragraph 37 of decision X/29).

4. Subsequently, the Conference of the Parties to the Convention, at its eleventh meeting, further emphasized the urgent need for capacity-building on various issues/tools concerning the conservation and sustainable use of marine and coastal biodiversity, including ecologically or biologically significant marine areas (EBSAs), the impacts of climate change on coral reefs, marine debris, and marine spatial planning (paragraphs 14, 19, 20 and 21 of decision XI/17; paragraphs 12 and 27 of decision XI/18 A; paragraph 2(g) of decision XI/18 C).

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5. Pursuant to the requests mentioned above, the Sustainable Ocean Initiative (SOI) was born at the margins of the tenth meeting of the Conference of the Parties, in collaboration with Japan, COP-10 President, as well as with various partners who were willing to provide the necessary expertise, technical and financial resources. The SOI concept was further developed in subsequent meetings, such as the SOI Programme Development Meeting (2-4 August 2011, Kanazawa, Japan), SOI side event at the sixteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) (2 May 2012, Montreal, Canada), SOI high-level meeting (5 June 2012, Yeosu, Republic of Korea), and a high-level side event on SOI at the eleventh meeting of the Conference of the Parties (17 October 2012, Hyderabad, India).

6. To facilitate the implementation of SOI at the regional scale, the CBD Secretariat convened, in collaboration with various SOI partners, the Sustainable Ocean Initiative Capacity-building Workshop for West Africa, hosted by the Government of Senegal in Dakar, from 4 to 8 February 2013, and the Sustainable Ocean Initiative Capacity-building Workshop for East, South and South-East Asia, hosted by the Government of China in Guangzhou, from 9 to 13 December 2013. Further details on these workshops are provided respectively at https://www.cbd.int/doc/?meeting=CBWSOI-SEASI-01 and http://www.cbd.int/doc/?meeting=CBWSOI-WAFR-01

7. SOI is currently being funded by the Japan Biodiversity Fund and the Agence des Aires Marines Protégées (French marine protected areas agency), and its implementation is being coordinated by the Secretariat of the Convention on Biological Diversity in collaboration with various partners.

8. SOI is evolving as a global platform to build partnerships and enhance capacity to achieve the Aichi Biodiversity Targets related to marine and coastal biodiversity in a holistic manner (in particular targets 6, 10 and 11)[1] by:

(a) Facilitating the sharing and exchange of knowledge, information, experience and practices;

(b) Creating partnerships that can provide targeted capacity-building and technical assistance in support of on-the-ground implementation priorities;

(c) Enhancing interactive communication among global policy, science and local stakeholders;

(d) Monitoring progress on Aichi Biodiversity Targets related to marine and coastal biodiversity;

(e) Developing partnerships among different sectors and stakeholders at local, regional and global scales; and

(f) Working together to achieve a balance between the conservation and sustainable use of marine biodiversity, and promoting flexible and diverse approaches towards this end.

9. SOI focuses on achieving a balance between the conservation and sustainable use of marine and coastal biodiversity, through applying an action-oriented, holistic and integrated capacity-building framework. SOI is committed to building bridges between biodiversity conservation and resource management sectors.

10. It is in this context that the Executive Secretary convened, with financial support from the Government of Japan (through the Japan Biodiversity Fund), the Sustainable Ocean Initiative Capacity-

[1] **Target 6**: By 2020, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits; **Target 10**: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning; **Target 11**: By 2020, at least 17 per cent of terrestrial and inland water areas, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

building Workshop for South America, which was hosted by the Government of Peru in Lima, from 23 to 27 February 2015, in collaboration with the Ministry of Environment of Peru as well as the Permanent Commission for the South Pacific and UNEP Caribbean Environment Programme.

11. Participants in the workshop mainly comprised officials and experts from each of the countries and relevant organizations in the region responsible for addressing the Aichi Biodiversity Targets concerning marine and coastal biodiversity, in particular within the context of national biodiversity strategies and action plans (NBSAPs), as well as for policies/plans on integrated marine and coastal area management at national and/or regional levels. As such, the participants were expected to be in a position to translate the knowledge and skills gained during the workshop into concrete actions in support of implementation at national and/regional levels. The workshop was attended by experts from Argentina, Brazil, Chile, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Uruguay, Venezuela, UNEP Caribbean Environment Programme, Permanent Commission for the South Pacific, Universidad Simon Bolivar, Comisión Nacional de Areas Naturales Protegidas de México, Network of Marine Protected Area Managers in the Mediterranean, Convención Interamericana para la Protección y Conservación de las Tortugas Marinas, Green Heritage Fund Suriname, Fundación para la investigación y desarrollo social, Red de Cooperación Amazonica and The Nature Conservancy. The full list of participants is attached as annex I.

12. The SOI regional workshop was preceded by a national workshop for Peru, which was attended by relevant officials and experts from coastal provinces and relevant academic and research institutions. The participants in the national workshop also attended the SOI regional workshop.

13. The workshop focused on integrated ecosystem-based management efforts that can be used to achieve targets 6 and 11. Specifically, it aimed to:

(a) Bring together experts from the environment and fisheries management sectors in South America, who are collectively responsible for the conservation and sustainable use of marine and coastal biodiversity in the region;

(b) Showcase regional experiences in integrated management of marine resources and links to ongoing technical and capacity-building initiatives under other processes or initiatives; and

(c) Identify the awareness/interests/concerns of Parties in the region on marine and coastal resources and information gaps, and demonstrate the implementation of specific aspects of marine and coastal area-based management and resource planning instruments.

14. The emphasis of the workshop was therefore on exchange of information and experiences, active learning of skills and tools, and building regional-level partnerships for continuous information-sharing and capacity-building in pursuit of the Aichi Biodiversity Targets in marine and coastal areas. The workshop format featured a mix of presentations with question-and-answer sessions, interactive group exercises to introduce relevant scientific and technical tools, discussions in breakout groups and participatory forums.

15. The workshop programme is provided in annex II.

ITEM 1. OPENING OF THE WORKSHOP

16. Mr. Gabriel Quijandria Acosta, Vice Minister for Strategic Development of Natural Resources in the Ministry of Environment of Peru, chaired the opening ceremony. He welcomed all participants from the region and relevant international and regional organizations as well as from Peru’s coastal provinces and cities.

17. On behalf of the Executive Secretary of the CBD, Mr. Braulio Dias, Ms. Jihyun Lee (Environmental Affairs Officer for marine and coastal biodiversity at the CBD Secretariat) delivered the opening statement. In the statement, Mr. Dias welcomed participants and thanked them for participating in this important workshop, the third regional workshop organized in the framework of the Sustainable Ocean Initiative (SOI) global partnership. Mr Dias thanked the Government of Peru for hosting this workshop, and the Ministry of Environment of Peru for their support and hospitality. He also thanked the

Permanent Commission for the South Pacific and the Caribbean Environment Programme and many other collaborators and partners who provided their inputs and expertise, as well as institutions, universities and organizations, in attendance. He also thanked the Japan Biodiversity Fund for financially supporting the organization of this workshop. Mr Dias noted that sustainable development of oceans would require the consolidated efforts of all the communities of users and stakeholders at global, regional and national levels, and he pointed out that the new Strategic Plan for Biodiversity 2011–2020 and its 20 Aichi Biodiversity Targets provided the overarching global framework for achieving this goal. He emphasized the need to build a shared vision and strong commitments to the conservation and sustainable use of marine biodiversity in order to achieve the Aichi Biodiversity Targets based on innovative partnerships for linking science with policy development and implementation. He reminded participants that SOI was established at the tenth meeting of the Conference of the Parties to the Convention, in October 2010, to develop these partnerships and build capacity in countries for their implementation of the Aichi Biodiversity Targets in marine and coastal areas. He noted that this region, which was so rich in marine ecosystems, presented a unique opportunity to operationalize the global partnerships of the SOI, building upon the region's long-term experience in integrated ocean and coastal governance. In closing, he expressed his wish for a successful workshop.

18. Mr. Fernando Félix, of the Permanent Commission for the South Pacific (CPPS), delivered opening remarks on behalf of the Executive Secretary, Mr. Julián Reyna. He informed participants that the countries of the South East Pacific ratified their engagement to implement the Strategic Plan 2011-2020 and reach the Aichi Targets related to fishing resources, vulnerable ecosystems and marine protected areas within the framework of CPPS during the External Relations Ministerial Meeting of August 2012 held in Galapagos Islands, Ecuador. He noted that through this commitment, these countries expressed their wish to ensure that marine and coastal ecosystems continue providing essential services for the well-being of the populations of the region. The growing demand for goods and services from coastal and marine ecosystems had led to increased human activities in these areas, putting enormous pressure on the ecosystem and creating imbalances. Given the multiplicity of sectors involved in such activities, actions were required to stop environmental degradation through the implementation of innovative mechanisms for management and governance that will maintain the social and environmental benefits in the long term. Marine spatial planning was therefore a tool that facilitates peaceful coexistence and the sustainability of coasts and oceans. It was therefore very important that it be incorporated into the management processes of coastal and marine areas. Events like this and others that institutions such as CPPS and CBD had incorporated into their work plan were essential to create the conditions for implementing the ecosystem approach in coastal and marine management. He wished success to all participants in the activities to be carried out during the workshop.

19. Ms. Alessandra Vanzella-Khouri delivered a statement on behalf of Mr Nelson Andrade Colmenares, Coordinator of the Secretariat of the Cartagena Convention and its Protocols on Biodiversity (SPAW) and Marine Pollution. He congratulated the CBD Secretariat for organizing the workshop which brought together Parties from the region to address ocean sustainability, on which the livelihood of millions of persons depended. He pointed out that the work of SPAW contributed to achieving the objectives of the CBD and many of the Aichi Targets. He noted the importance of marine biodiversity in the greater Caribbean as coral reefs alone contributed enormously to the region's economy, and the effective implementation of the SPAW Protocol required a high level of cooperation and regional and international collaboration, essential in a region of 38 countries sharing a relatively small area and a common sea with environmental and transboundary problems. He expressed his wish for continued collaboration with the CBD Secretariat for biodiversity conservation in the region and wished participants fruitful discussions and a successful workshop.

ITEM 2. WORKSHOP BACKGROUND, OBJECTIVES, SCOPE AND EXPECTED OUTCOMES

20. The workshop was co-chaired by Mr. Fernando Félix (CPPS) and Ms. Alessandra Vanzella-Khouri (CEP). The workshop was organized in plenary and break-out-group sessions. The Secretariat, in

consultation with the host Government, nominated the following facilitators and rapporteurs for both plenary and break-out groups, based on the expertise and experience of the workshop participants:

- Agenda item 2 (Workshop background, objectives, scope and expected outcomes): Mr. Oscar Lazo Calle (Peru); context of the workshop: CBD Secretariat; regional context: Fernando Félix (CPPS) and Alessandra Vanzella-Khouri (CEP).

- Agenda item 3 (Global initiatives and activities to facilitate the achievement of the Aichi Biodiversity Targets): Ms. Purificació Canals (MedPAN)

- Agenda item 4 (Sharing regional and national experiences on the implementation of the Strategic Plan for Biodiversity 2011-2020 and achieving Aichi Biodiversity Targets in marine and coastal areas): Ms. Ana Paula Prates (Brazil) and Mr. Eduardo Klein (Universidad Simon Bolivar)

- Agenda item 5 (Application of marine spatial planning as a tool to address various Aichi Biodiversity Targets in an integrated manner): Mr. Ricardo Gomez Lozano (CONANP Mexico)

21. Ms. Jihyun Lee (CBD Secretariat) provided an overview of the background and context of the workshop, with its focus on marine spatial planning as a tool for achieving the Aichi Biodiversity Targets. A summary of this presentation is provided in annex III.

ITEM 3. GLOBAL INITIATIVES AND ACTIVITIES TO FACILITATE THE ACHIEVEMENT OF THE AICHI BIODIVERSITY TARGETS

22. Under this item, the CBD Secretariat and selected experts were invited to provide presentations on the relevant aspects of the CBD's work on marine and coastal biodiversity:

- Ms. Jihyun Lee (CBD Secretariat) delivered a presentation on the CBDs work on marine spatial planning in the context of the Sustainable Ocean Initiative, and how this work builds on other activities under the CBD, including on EBSAs and the Priority Action Plan for Target 10 on coral reefs and associated ecosystems;

- Mr. Eduardo Klein (Universidad Simon Bolivar) provided a presentation on approaches to the description of Ecologically or Biologically Significant Marine Areas (EBSAs) and linkages to the Ocean Biogeographical Information System (OBIS)

- Summaries of the above presentations are provided in annex III.

23. Following the presentations, the workshop participants engaged in a question and answer and open discussion session.

ITEM 4. SHARING REGIONAL AND NATIONAL EXPERIENCES ON THE IMPLEMENTATION OF THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020 AND ACHIEVING AICHI BIODIVERSITY TARGETS IN MARINE AND COASTAL AREAS

24. Under this item, participants were invited to provide presentations to the plenary on their national or regional experiences on the implementation of the Strategic Plan for Biodiversity 2011-2020 and achieving the Aichi Biodiversity Targets in marine and coastal areas:

(a) The following individuals provided presentations on national experiences:

- Ms. Reina Sotillo de Galgano (Argentina)

- Ms. Luciane Rodrigues Lourenco Paixão (Brazil)

- Ms. Beatriz Ramirez Miranda (Chile)

- Mr. Heins Bent (Colombia)

- Ms. María del Pilar Solis Coello (Ecuador)

- Ms. Hélène Delvaux (French Guiana)
- Mr. Kemraj Parsram (Guyana)
- Mr. Oscar Lazo Calle (Peru)
- Mr. Mario Yspol (Suriname)
- Ms. Graciela Fabiano Gonzalez (Uruguay)
- Mr. Frederick Pérez Domínguez (Bolivarian Republic of Venezuela)

(b) The following individuals provided presentations on regional experiences:

- Mr. Diego Alejandro Albareda (Inter-American Convention for the Protection and Conservation of Sea Turtles) provided a presentation on the Regional Conservation and Research Program for Marine Turtles in Argentina.
- Mr. Fernando Ghersi (The Nature Conservancy) provided a presentation on the Humbold Current Project.
- Ms. Purificació Canals (MedPAN) provided a presentation on the Mediterranean Marine Protected Areas Network.

25. Following the presentations, workshop participants discussed common barriers, challenges and opportunities at the national and regional levels.

ITEM 5. APPLICATION OF MARINE SPATIAL PLANNING AS A TOOL TO ADDRESS VARIOUS AICHI BIODIVERSITY TARGETS IN AN INTEGRATED MANNER

26. Under this item, selected experts were invited to provide presentations on different aspects of governance related issues of MSP:

(a) Mr. Joseph Appiott (CBD Secretariat) provided a presentation on the key elements in the marine spatial planning process;

(b) Mr. Heins Bent (Colombia) provided a presentation on engaging political commitments and facilitating cross-sectoral coordination to support marine spatial planning;

(c) Ms. Fernando Felix (CPPS) provided a presentation on key governance-related challenges for applying marine spatial planning at regional and national scales;

(d) Ms. Alessandra Vanzella-Khouri (UNEP–CEP) provided a presentation on regional collaboration and governance approaches to facilitate integrated planning and management;

(e) Ms. Ana Paula Prates (Brazil) provided a presentation on efforts to advance the implementation of marine spatial planning in Brazil and the role of local governance and community-based management efforts.

27. Summaries of the above presentations are provided in annex III.

28. Following the presentations, workshop participants were divided into small groups to discuss the following:

(a) Identifying the needs and objectives for applying area-based management tools, such as MSP;

(b) Engaging political commitments to initiate MSP;

(c) Setting in place legal and institutional arrangements;

(d) Cross-sectoral coordination;

(e) Addressing multiple-use conflicts through MSP; and

(f) Complementing/enhancing existing sector-based management.

29. Selected experts were invited to provide presentations on different elements of technical approaches of marine spatial planning:

(a) Mr. Joseph Appiott (CBD Secretariat) delivered a presentation on CBDs work on biodiversity-inclusive environmental impact assessment and strategic environmental assessments in marine and coastal areas;

(b) Ms. Purificació Canals (MedPAN) delivered a presentation on regional cooperation and stakeholder coordination in the management of marine protected areas;

(c) Mr. Jesse Cleary (Duke University) and Mr. Eduardo Klein (Universidad Simon Bolivar) delivered a presentation on addressing data needs for marine spatial planning, including through participatory mapping in data-poor areas;

(d) Mr. Ricardo Gomez (Mexico) delivered a presentation on approaches to spatial management of marine biodiversity, including coral reefs and invasive species; and

(e) Mr. Fernando Felix (CPPS) delivered a presentation on communication strategies for marine spatial planning.

30. Summaries of the above presentations are provided in annex III.

31. Following the presentations, workshop participants were divided into small groups to discuss the following issues related to technical approaches to marine spatial planning:

(a) Planning approaches

(b) Communication with stakeholders,

(c) Stakeholder involvement;

(d) Information gathering, synthesis and analysis;

(e) Mapping tools; and

(f) Incorporation of traditional knowledge.

32. A presentation on addressing information needs for MSP, including through cross-sectoral information gathering, use of Ocean Biogeographic Information System (OBIS) data/biogeographic information to support MSP, and use of GIS database and analysis was provided by Mr. Eduardo Klein (Universidad Simon Bolivar) and Mr. Jesse Cleary (Duke University). A summary of this presentation is provided in annex III.

33. Workshop participants were divided into small groups to discuss the following issues related to information requirements for marine spatial planning:

(a) Cross-sectoral collaboration for information gathering and analysis;

(b) Use of OBIS data/ information to support MSP;

(c) Use of GIS tools; and

(d) Use of scientific information related to EBSAs in support of MSP.

34. Following this discussion, participants undertook a simulation exercise in which they were presented with a hypothetical scenario in which competing uses and conservation priorities for a given coastal area must be reconciled using cross-sectoral collaboration for marine spatial planning. The exercise approach and results are presented in annex IV.

35. The workshop was then organized into breakout group sessions to undertake an exercise in developing strategies and action plans for initiating/enhancing the application of marine spatial planning

at different scales. Participants were invited to work on plans at a national, regional or subregional level to produce strategies and action plans to initiate or enhance the application of MSP. Participants were also invited to seek input and advice from other experts present at the workshop, including resource persons and participants from other Parties and organizations, in this exercise.

36. In undertaking this exercise to produce draft roadmaps, strategies and action plans, participants focused their efforts at different scales. Some focused on local areas, in the context of specific pilot areas, while others outlined potential steps for developing and/or enhancing MSP and integrated governance approaches at the national level. In each roadmap/strategy/action plan, participants addressed the following key elements, building on the tools and approaches discussed during the workshop:

(a) Common vision/objectives to be shared among different sectors/agencies;

(b) National/subnational priorities that roadmap/strategy/action plan would contribute to;

(c) Issue(s) to be addressed;

(d) Key stakeholders to be involved and their roles/relevance;

(e) Strategies and actions to:

- Engage political commitment
- Develop/strengthen legal/institutional basis
- Facilitate cross-sectoral coordination among authorities
- Communicate with different stakeholders, including IP&LCs
- Facilitate capacity building at national and local levels
- Ensure sustainable implementation/monitoring/evaluation
- Ensure sustainable financing, including synergies with potential/existing initiatives

ITEM 6. CONCLUSION

37. Under this agenda item, participants discussed opportunities for future collaboration, including in the context of SOI activities, building on the workshop discussions and outputs.

38. Participants then provided their views on the effectiveness of the workshop itself to be considered in future SOI capacity development activities.

ITEM 7. CLOSURE OF THE WORKSHOP

39. Closing statements were provided by the representatives of the Ministry of Environment of Peru and CBD Secretariat. Workshop participants expressed their appreciation to the host Government for their hospitality as well as CBD Secretariat for the efficient and effective organization and servicing of the workshop.

40. The workshop was closed at 3 p.m. on Friday, 27 February 2015.

Annex I

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Annex II

WORKSHOP PROGRAMME

Time	Monday 23 February	Tuesday 24 February	Wednesday 25 February	Thursday 26 February	Friday 27 February
0900-1030	0900-0930 **Agenda Item.1 Opening of the Workshop** Master of Ceremony: Peru Ministry of Environment ◆ Representative from the Peru Ministry of Environment ◆ Representative of the Executive Secretary of the CBD ◆ Representative of the Secretary-General of CPPS ◆ Representative of the Coordinator of CEP **Agenda Item 2. Workshop background, objectives, scope and expected outcomes** 0930 - 0950 2.1 Context of the workshop: MSP as a tool for Achieving the Aichi Biodiversity Targets (CBD Secretariat)	0900-0915 *Summary of the 1st Day Key Messages* **Agenda item 5. Application of marine spatial planning as a tool to address various Aichi Biodiversity Targets in an integrated manner** **5.1 Governance related issues of MSP** Presentation and small-group discussion/plenary discussion on: - Identifying the needs and objectives for applying area-based management tools, such as MSP - Engaging political commitments to initiate MSP - Setting in place legal and institutional arrangements - Cross-sectoral coordination - Addressing multiple-use conflicts through MSP - Complementing/ enhancing	0900-0915 *Summary of the 2nd Day Key Messages* *Agenda item 5 (continued)* **5.3 Information requirements** Workshop presentation and small-group exercise/plenary discussion on: - Cross-sectoral collaboration for information gathering and analysis - Use of OBIS data/ information to support MSP - Use of GIS tools - Use of scientific information related to EBSAs in support of MSP	0900-0915 *Summary of the 3rd Day Key Messages* *Agenda item 5 (continued)* **5.4 Breakout group session: Developing strategies and action plans for initiating/enhancing the application of MSP** Each group produces strategies and action plans to initiate or enhance the application of MSP at subnational, national, subregional or regional scale.	**5.5 Plenary presentations on the results of breakout group session**

	0950-1000 Q and A 1000-1020 2.2 Regional context : MSP as a tool for Achieving the Aichi Biodiversity Targets (CPPS and CEP Secretariats) 1020-1030 Q and A	existing sector-based management			
1030 -1100	*Coffee/tea break*	*Coffee/tea break*	*Coffee/tea break*	*Coffee/tea break*	*Coffee/tea break*
1100-1230	1100-1145 2.2 Small group discussion on the needs and expectations of participants **Agenda Item 3. Global initiatives and activities for achieving Aichi Biodiversity Targets** 1145-1215 CBD's relevant work on marine and coastal biodiversity (CBD Secretariat, CPPS, OBIS and Duke University) 1215-1230 Q and A	*(5.1 continued)*	*(5.3 continued)*	*(5.4 continued)*	*(5.5 continued)*
1230-1400	*Lunch*	*Lunch*	*Lunch 1130-1300*	*Lunch*	*Lunch*
1400-1530	**Agenda Item 4. Sharing regional and national experiences on the implementation of the Strategic Plan for Biodiversity**	**5.2 Technical approaches of MSP** Workshop presentation and small-group discussion/plenary	1300-1800 Option 1: Field visit to Puerto Callao (TBD) Option 2 :	*(5.4 continued)*	*(5.5 continued)*

	2011-2020 and achieving Aichi Biodiversity Targets in marine and coastal areas **4.1 Sharing national experiences** *(Presentations by selected workshop participants from countries, as appropriate, based on pre-meeting consultations)* Q and A; plenary discussion	on: - Planning approaches - Communication with stakeholders, - Stakeholder involvement - Information gathering, synthesis and analysis - Mapping tools - Incorporation of traditional knowledge	Group exercise on applying various technical approaches and information tools		**Agenda Item 6. Conclusion** 6.1 Key conclusions 6.2 Future collaboration 6.3. Evaluation of the workshop
1530-1600	*Coffee/tea break*	*Coffee/tea break*		*Coffee/tea break*	*Coffee/tea break*
1600-1800	**4.2 Sharing regional experiences** *(Presentations by selected workshop participants from organizations, as appropriate, based on pre-meeting consultations)* Q and A; plenary discussion <u>Facilitated plenary discussion</u> Identification of common barriers, challenges and opportunities across national and regional contexts	*(5.2 continued)*		*(5.4 continued)*	*(Agenda item 6. continued)* **Agenda Item 7. Closure of workshop**

	1900-2100 Reception dinner	2000 – 2130 Informal evening session on sharing national and regional experiences			

Annex III

SUMMARIES OF THEME PRESENTATIONS

Workshop background, scope and objectives

By Jihyun Lee, CBD Secretariat

Ms. Lee delivered a presentation outlining the context of the workshop and its focus on marine spatial planning. She described the CBDs relevant work on marine and coastal biodiversity, including the capacity development activities of the Sustainable Ocean Initiative. She discussed the focus of this work on building on and facilitating regional scale cooperation and, in this regard, previous collaboration with the CPPS as well as the two previous CBD Regional Workshops to Facilitate the Description of EBSAs in (i) the Eastern Tropical and Temperate Pacific and (ii) the Wider Caribbean and Western Mid-Atlantic. She discussed the objectives of the workshop as supporting enhanced national implementation towards achieving the Aichi Targets in marine and coastal areas, in particular by strengthening the scientific, technical and managerial capacity of relevant policymakers, managers and scientists from experts in the region in utilizing marine spatial planning as an approach for enhanced cross-sectoral coordination, planning and management. She noted the focus of the workshop on bringing together diverse expertise and experiences through cross-sectoral and inter-disciplinary approaches, sharing knowledge, experiences, and lessons-learned and facilitating technical and financial partnerships at national, subregional, and regional scales

Marine spatial planning as a tool for achieving the Aichi Biodiversity Targets

By Jihyun Lee, CBD Secretariat

Ms. Lee began her presentation by emphasizing the importance of marine spatial planning (MSP) as a tool for achieving the Aichi Biodiversity Targets. MSP is a framework that provides a means for improving decision-making as it relates to the use of marine resources and space. The key success factors are clear definition of issues, goals and measurable objectives, supportive legal framework to enable MSP and drive obligatory objective-setting and prioritization, effective governance system allowing participatory planning and adaptive management. She explained how CBD's other work on marine biodiversity can facilitate national and regional implementation of MSP, through the identification of ecologically or biologically significant marine areas (EBSAs), addressing impacts from various pressures/threats, the use of tools and guidelines to address impacts on marine biodiversity, delivering capacity building and strengthening partnerships through the Sustainable Ocean Initiative through an information-sharing mechanism.

Approaches to the description of Ecologically or Biologically Significant Marine Areas (EBSAs) and linkages to the Ocean Biogeographical Information System (OBIS)

By Eduardo Klein, Universidad Simon Bolivar

Mr. Klein noted that one of the steps in marine spatial planning is the characterization of the area, its resources and uses. At that stage it is important to consider different data sources at the national, regional and international level. He explained that the data must be analyzed to produce useful and robust information for the process. As an example of the use of scientific information, he explained how areas meeting the EBSA criteria are described, noting that many sources of environmental information are accessed, including biogeographical, physical and biological data. He noted that the use of models allows a better understanding of the oceanic environment, and he provided as evidence key elements used in the definition of the boundaries of the described EBSAs. For that, GIS software provides the necessary tools for the analysis of georeferenced data, the production of spatial models, and the elaboration of thematic maps. He pointed out that the Ocean Biogeographical Information System (OBIS) serves as a biodiversity information provider for the EBSA process. OBIS currently holds more than 42 million records of more

than 116,000 marine species from more than 1,700 data sets.* All of this data is freely available over the internet. Mr. Klein explained how a country or organization can contribute data to OBIS. He noted that the EBSA description process is successful due to its descriptive approach, based on robust, up-to-date scientific information and guided by expert knowledge.

Key elements of the marine spatial planning process

by Joseph Appiott, CBD Secretariat

Mr. Appiott outlined the recent work under the CBD on marine spatial planning. He noted that MSP is a tool, not an end in itself, and that is in inherently a people-driven process. He outlined how MSP focuses on the spatial aspects of marine resources and activities, how those resources and activities interact, the values they hold for different stakeholders and how they can be planned/managed spatially to achieve common goals. He also described how MSP is an important tool to facilitate achievement of the Aichi Targets. He then discussed the key elements of marine spatial planning, based on the discussions of the CBD expert workshop on MSP, held in September 2014. He reviewed the main stages of developing, adopting, implementing and reviewing MSP, noting that it is a cyclical and iterative process with a focus on continuous stakeholder engagement and a common understanding of the overarching goals of the process. He noted the governance challenges of MSP, highlighting important enabling factors such as having a cross-sectoral coordination mechanism, and he reviewed different approaches to improving the information base for MSP, including through participatory mapping. He stressed that MSP is a balancing act that must consider the unique nature of conflicts, compatibilities, present and future uses and competing priorities. He noted that there are many different experiences and approaches to look to, but stressed that MSP must be tailored to the unique context in which is it implemented. He further noted that the discussions at the workshop related to spatial mapping of values and cross-sectoral dialogue are an important starting point for MSP.

Engaging political commitments and facilitating cross-sectoral coordination to support marine spatial planning

by Heins Bent, Colombia

Mr. Bent described marine spatial planning as a framework that provides a means for improving decision-making related to the use of marine resources and space. He explained that governance is the process of interaction and decision-making among different actors involved in a collective problem. He further explained that the development of a marine spatial plan requires that the governance process include all stakeholders in decision-making relating to the use of marine and coastal resources and the planning of marine and coastal areas to decrease conflicts. Mr. Bent pointed out that the management of marine and coastal resources and areas faces different challenges where governance processes can help to involve different stakeholders in an effective management. Almost all marine and coastal resources and areas are public goods, where public institutions are responsible for management and administration and where different institutional competences or roles overlap in the same area. Various sector-based activities take place (e.g., fishing, tourism, conservation, ports, oil and gas) in the same area, and stakeholders have different interests. Taking into account the challenges this area faces, Mr. Bent indicated that a political commitment is necessary to start a marine spatial planning process. Is important to have clarity about the authority that is competent and responsible for leading the process, the legal mandate and the institutional arrangements needed as well a clear participation strategy that involves cross-sectoral coordination and stakeholder engagement to address the real problems of the area and propose a plan to solve them. Mr. Bent addressed some of these issues by recounting the experience of Colombia, such as the political and the legal framework for integrated coastal zone management and marine spatial planning, governance strategies during the process, cross-sectoral coordination, the progress and achievements made in the past 15 years, and the challenges and lessons learned.

* At the time of workshop.

Regional collaboration and governance approaches to facilitate integrated planning and management

By Allessandra Vanzella-Khouri, UNEP Caribbean Environmental Programme

Ms Vanzella-Khouri noted the Caribbean Environmental Programme covers the wider Caribbean region, and that its legal framework is provided by the Cartagena Convention (1986) and three protocols on biodiversity. It deals with land-based pollution and response to oil spills, and that it is administered by UNEP from Kingston, Jamaica. It comprises 13 island nations, 12 continental nations and 14 associated countries, departments and territories. Ms. Vanzella-Khouri pointed out that the root causes of the challenges faced by the three large marine ecosystems in the Caribbean are: weaknesses in governance, limited human and financial resources, inadequate access to data and information, inadequate public awareness and involvement, inadequate consideration of the value of ecosystem goods and services, population growth and cultural pressures, trade and external dependency. She mentioned as an example that the objective of facilitating the implementation of the government-endorsed Strategic Action Programme for the Caribbean and North Brazil Shelf Large Marine Ecosystems is to catalyze ecosystem-based management and fisheries management of the shared living marine resources to provide sustainable (and resilient to climate change) goods and services.

Efforts to advance marine spatial planning in Brazil and the role of local governance and community-based management efforts

By Ana Paula Prates, Brazil

Ms. Prates explained that the strategies adopted by the CBD Parties to ensure the attainment of Aichi Target 11 are diverse and raise a number of issues that need to be evaluated and discussed at the national, regional and international level, especially those related to governance in the management of protected areas. She pointed out that in Brazil there are more than 193 coastal and marine protected areas at the federal, state and municipal levels, covering 23.4 per cent of territorial waters and only 1.5 per cent of the Brazilian exclusive economic zone (EEZ). Of those, marine extractive reserves (RESEXs) comprise a protected area category that differ in that local fishing communities demand their establishment and are co-responsible for their management in partnership with the government. Ms. Prates indicated that RESEXs favor local governance of marine resources, defining a territory and a set of beneficiaries for their use. This model combines the necessary conditions for planning the sustainable use of marine resources through activities such as fishing and tourism. The growing demand for the creation of new RESEXs along the coast reflects their role as an alternative to the conventional, centralized management model of these resources, which has historically been inefficient. Initiatives such as the establishment of the National Commission for Strengthening of Coastal and Marine Extractive Reserves have demonstrated that fishing communities are important allies for the conservation and sustainable use of marine resources. She noted that more than 60 thousand families from traditional communities currently benefit from the existing RESEXs. Ms. Prates concluded by noting that since 2011, the Brazilian Government has been making efforts to start a marine spatial planning process, but precisely because of a number of conflicting interests, the process is still just beginning.

CBD's work on biodiversity-inclusive environmental impact assessment and strategic environmental assessment in marine and coastal areas

By Joseph Appiott, CBD Secretariat

Mr. Appiott described the work under the CBD in producing the CBD voluntary guidelines on biodiversity-inclusive environmental impact assessment (EIA) and strategic environmental assessment, which were also annotated for considerations in marine and coastal areas. He noted that these voluntary guidelines are structured in accordance with good practice and intend to facilitate better integration of biodiversity-related considerations into the EIA and SEA processes. He noted that the guidelines are fully consistent with the ecosystem approach and focus on people-nature interactions and the role of stakeholders in identifying and valuing potential impacts on biodiversity. Mr. Appiott discussed how the guidelines provide guidance on integrating biodiversity considerations at each stage of the EIA process:

screening to determine which activities require an EIA, scoping to identify which potential impacts are relevant to assess, to identify alternative options, assessment and evaluation of impacts and development of alternatives, reporting, decision-making on whether to approve the project, monitoring, compliance, enforcement and environmental auditing.

Lessons in regional cooperation and stakeholder coordination in marine protected areas management

By Purificació Canals, MedPan

Ms. Canals outlined the main findings of the 2012 status report on Mediterranean MPAs developed by MedPAN and RAC/SPA. This report indicates that 4.56 per cent of the Mediterranean Sea is under some kind of protection, including by the Pelagos Sanctuary for Mediterranean Marine Mammals, but without it, that figure falls to 1.08 per cent. She noted that the report concludes that there is uneven distribution of MPAs (84 per cent in the northern basin); that MPAs are lacking in the open sea (majority are coastal); weak representativity of habitats and species; and uneven proximity and weak connectivity between MPAs. She noted that the report also concludes that management is inadequate and that the most important needs are linked to enforcement, financial resources to cover recurring costs, capacity-building and socio-economic studies. Ms. Canals also noted that in the Mediterranean there is an unequal situation regarding marine spatial planning. She noted that in EU countries, there is modern legislation and norms to promote and apply this approach, but this does not exist in the other countries. In the Mediterranean basin, different zoning areas have already been delimited for many developed activities, based on, for example, the work of the General Fisheries Commission for the Mediterranean (GFCM). Ms. Canals outlined a number of ongoing and new project proposals linked to MSP in the region with the involvement of different institutions. She described the region's experience with regional cooperation with the participation of the main institutions of the region for MPAs since MedPAN was established, on such areas as capacity building, management support to issues such climate change or invasive species control. She outlined the main cooperation experiences of MedPAN, such as the Mediterranean Forum on MPAs held in Antalya (Turkey) in 2012 and the process for the development of a road map towards 2020 to achieve the Aichi Biodiversity Targets with the participation of all stakeholders. She noted some aspects of this road map on marine spatial planning and ended by stressing the role that these collaboration experiences around MPAs have in the contribution to promoting peace in the Mediterranean.

Addressing data needs for marine spatial planning, including through participatory mapping in data-poor areas

By Jesse Cleary, Duke University, and Eduardo Klein, Universidad Simon Bolivar

Mr. Cleary and Mr. Klein began their presentation covering several topics including the role of data in a marine spatial planning cycle, building sector and stakeholder engagement, and utilizing participatory mapping to fill data gaps. They stressed the importance of engaging stakeholders early in the MSP process, and that engagement, when part of an open planning process, empowers stakeholders to more fully participate in the process, including in the provision and creation of key data on ocean uses. Mapping human use of the ocean is a crucial MSP data issue, and is often less well-developed than data on physical or biological processes. They explained that participatory mapping through the use of Geographic Information Systems (GIS) can take many forms. Connecting to stakeholders in a form that is familiar to them can help overcome hurdles in initial participation. These forms can include using paper maps or charts to collect local knowledge on human uses or areas of importance. A more advanced participatory mapping form could include live sessions with GIS data and groups of stakeholders. These GIS sessions can also be hosted on the internet and run in either independent or guided group modes. A final mode of participation includes assessing stakeholder input on how to combine or prioritize data for important area designations. Mr. Cleary and Mr. Klein noted that it is important to consider different data sources, at the national, regional and international level. However, adequate analysis of the data is needed to produce useful and robust information for the process. They presented the EBSA description process as

an example of the use of scientific information. They explained that the process involved the synthesis of many sources of environmental information, including biogeographical, physical and biological data. For that, GIS software provides the necessary tools for the analysis of georeferenced data, the production of spatial models, and the elaboration of thematic maps. The presentation concluded with slides on the importance of multi-sectoral data in supporting the MSP processes, but stressed that stakeholders ultimately will need to decide how to address complimentary and competing uses that participatory data collection might highlight. Data and algorithms can help with some steps in a MSP process, but need to be guided by engaged, representative stakeholder groups.

Communication strategies for marine spatial planning

By Mr. Fernando Felix, Permanent Commission for the South Pacific

Mr. Felix noted that an effective communication strategy for marine spatial planning helps to reach the various stakeholders, promotes a common vision for the sustainable development of oceans, facilitates awareness of the value of MSP as a tool for integrated planning, and helps to engage decision makers and local stakeholders. Features such as an institutional logo, website, social media and expert networks are valuable for promoting ownership of the process by all stakeholders. Mr. Felix noted that the formats for transmitting messages can include text, tables, graphs, video, animation and maps. They are not mutually exclusive and can be used in combination. Overall, tables and graphs may be more suitable for technicians, researchers, unions and decision makers, while videos and animations are more appropriate for the general public. It is necessary to define the tools and the frequency with which information needs to be sent or updated. Mr. Felix suggested the following approach: social networks (daily); website (weekly); publications (monthly/semester); conference (semester/yearly); multimedia (semester). He noted that the type of information to be transmitted includes the project objectives and scope; the importance of involving local stakeholders from the beginning; activities, interagency coordination; training opportunities; events on marine spatial planning; use of geoportals; among others. It is important that the information flows two ways to ensure that the needs and demands of local stakeholders, including indigenous and local communities, are addressed and included in the process.

Addressing information needs for MSP, including through cross-sectoral information gathering, use of OBIS data/biogeographic information to support MSP, and use of GIS database and analysis tools

By Mr. Eduardo Klein, Universidad Simon Bolivar, and Mr. Jesse Cleary, Duke University

Mr. Klein and Mr. Cleary began by outlining the key data questions to support MSP: What data do you have about your region? What data don't you have? Does the data exist, and how can it be accessed? How will the public, users, and sectors be able to use and contribute data? If the data does not exist, what is needed in terms of time, resources, and expertise to create it? They noted the importance of gather information on physical and ecological patterns and processes, relative ecological importance of areas (condition), ecosystem services (vulnerability and resilience), economic activities, benefits and impacts, distribution among current and emerging ocean uses, existing management measures and future needs of existing or proposed uses. They outlined the value of a participatory approach to data gathering, including through open and public meetings, transparent planning processes, equitable representation (government: local, federal, tribal) and direct stakeholder engagement (commercial, recreational, indigenous). They noted that an open process supports and informs MSP data collection and creation and empowers stakeholders to engage.

Annex IV

SUMMARY AND OUTCOMES OF SIMULATION EXERCISE

Objectives

Participants undertook a simulation exercise, led by Mr. Eduardo Klein (Simon Bolivar University), in which participants were presented with a hypothetical scenario of competing uses and conservation priorities for a given coastal area must be reconciled using cross-sectoral collaboration for marine spatial planning. In particular, the goals of the exercise are:

1. To demonstrate the use of a GIS as a tool for visualizing geographical information in the context of a Marine Spatial Planning process.
2. To demonstrate approaches to structuring multi-stakeholder discussions to reconcile different uses and priorities regarding marine resources in a spatial context.
3. To encourage participants to make justified trade-offs to maximize achievement of priorities of various stakeholders to the greatest extent possible.
4. To encourage participants to define a set of management actions to support long term conservation and sustainable development of marine biodiversity in the area, in particular taking into account Aichi Biodiversity Targets.

Methodology

The exercise focuses on a hypothetical scenario in the southern Caribbean. The exercise was designed with open and free GIS software (http://qgis.org) and all of the data layers are made available for the participants in the form of printed maps and overlay transparencies. The following data layers were made available for the exercise:

- Base layers: Coastline, urban areas polygon, roads, small populated sites, submarine cables, hydrology, bathymetry, shaded relief of the terrain;
- Oil industry: Off shore bidding blocks polygons, offshore production wells, offshore exploration wells, underwater pipelines, oil refineries;
- Maritime transport: Main shipping routes, anchoring areas, ports, shipping density;
- Fisheries: 2014 fishing boat locations, summary of daily visits by quadrants, density model of fishing boats presence;
- Biodiversity: Declared protected areas polygons, priority areas for conservation of marine biodiversity, OBIS marine biodiversity records, locations and cover of mangrove forests, coastal lagoons, seagrass meadows, rocky shores, turtle feeding areas, marine crocodile habitat, cetaceans habitat, bird nesting and feeding areas, large and small pelagic fish habitat, soft bottom benthic communities, hard bottom benthic communities;
- Oceanography: Seasonal maps of sea surface temperature and chlorophyll A concentration

The group work was divided in several working teams. During the first session the participants were grouped in order to represent one of the following types of stakeholder with interest in the area:

- Oil industry
- Artisanal fisheries
- Maritime transport
- Private tourism industry
- NGO for biodiversity conservation
- Ministry of the Environment

Each team was allowed to study the available information and discuss the strategy of their respective stakeholder group for use and/or management of the area. Also they were asked to evaluate all the possible trade-offs they are willing to accept during the negotiation with the other sectors. Then, during the second session, one or more participants of each sector participated in a small round table discussion with the representatives of the others sectors. During those discussions, they were tasked with agreeing on

the best approaches to spatial management of area and produce a document with the trade-offs and agreements made. They were also tasked with producing a document with a set of management actions to support long-term conservation and sustainable development of marine biodiversity in the area, in particular taking into account Aichi Biodiversity Targets.

Rules
There are some conditions that all groups were required follow in the process of defining the spatial plan and supporting management measures for the area:

- Each of the stakeholders (biodiversity, fisheries, oil industry, maritime transport and ports, tourism) must make decisions that guarantee the continuity of its activities, but at the same time they should be prepared to make some trade-offs.
- Spatial plans for the broader area can utilize any types of management tools/approaches (e.g., MPAs, functional use zoning of marine waters/coastal lands, fishery reserves, reference areas for research and monitoring, EIAs, etc.).
- There must be at least one managed area with a higher level of protection than surrounding areas, in particular considering Aichi Target 11. Groups must decide the ideal shape and size of this managed area. Within this managed area, the following rules apply:
    - The maritime transit of commercial vessels will be allowed through the managed area, but no anchoring inside the area
    - No activity related to the extraction, transport or transformation of oil or gas will be allowed inside the managed area
    - Fishing activities inside the managed area will be allowed but it should be reduced to 25% of the fishing effort related to the actual effort (or 25% of the actual fishing grounds).

DESRIPTION OF THE DATA LAYERS
The exercise setting comprises an area of 21,500 km², located in the Gulf of Venezuela, Southern Caribbean Sea. The data layers are real and obtained from several sources. The case presented in this exercise is purely hypothetical.

Base Layers and Oceanography
These layers comprise the coastline, rivers, roads and populated centers. The footprints of highly populated areas are also provided. The terrestrial and coastal environment is dry and xerophitic with almost no human development to the north of "Los Taques". The wind is normally from the north-east with a mean velocity of about 6 m/s with frequent gusts of more that 20 m/s. The rivers are intermittent with flowing water only during the short rainy season. The annual precipitation is less than 400mm and the air temperature is between 24-35°C.

The bathymetry is very regular with a depth of 70m in some areas. Major bathymetry lines are shown in the map. A coastal and southward surface current (not shown) is present all year round, transporting sediments and nutrients from the rich upwelling areas. The tidal range is about 30cm but in several places the intertidal zone could be of tens of meters, as the beach profile is very flat. As a proxy descriptor of the upwelling phenomena, seasonal maps of surface chlorophyll concentration are provided.

Urban Infrastructure
Human populated places are generally concentrated near the coast. The main city, "Punto Fijo" has a population of roughly 300,000. The economy of the area is related to the oil industry, fisheries, tourism and goat farming. The tourism sector is not very well-developed, with generally small hotels and few tourist services available, but there is a regional plan for the expansion of the sector in the near future on the northwest coast of the peninsula.

Oil and Gas

The area has two large refineries, which together represent the third largest refinery complex in the world. These refineries employ more than 5000 workers during the peak operating season. They receive crude oil from near Maracaibo Lake fields. There is also very active offshore development of gas and oil. The crude oil is transported by tankers and some products are delivered by pipelines. The refineries have a combined processing capacity of 940,000 barrels of oil per day. For the exercise, there is only one gas field developed offshore ("Perla" field), which is also serviced by a submarine pipeline to a nearshore gas plant.

Shipping

Both commercial and oil-related shipping are present in the area. Roughly 350 vessels per month enter and exit the port of Guaraguao and the maritime terminals of Amuay and Cardon refineries. There is also a shipyard at "Los Taques". The traffic depends greatly on the oil-related activities and in the near future, and, with the new offshore developments, the frequency and number of ships are expected to rise.

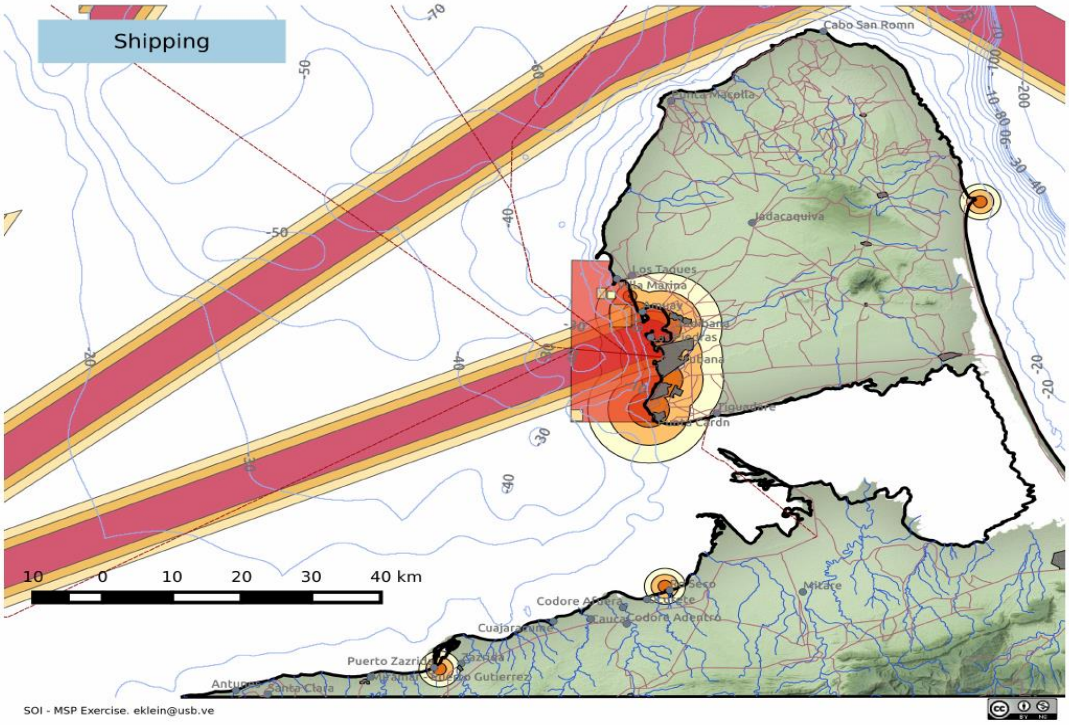

Figure 1. Data layers for shipping in the area, with the shipping lanes indicated.

Fisheries

No commercial fisheries are present in the area. Artisanal fisheries are well developed with roughly 500 registered small fishing boats (5-7 meters long with 3-4 fishermen per boat). The average monthly production per boat is 34 tonnes, but varies depending on the target species. Demersal species and shrimps comprise more than 60% of the landings. Although comprising a small volume, pelagic species have a higher high market price.

Biodiversity

There are many coastal and marine ecosystems in the area. Mangrove forests in the south are very important as nurseries, bird nesting areas and habitats of the endangered coastal crocodile. Some ecosystems are very well represented, such as sandy beaches, but others are quite unique and located in very small patches (coastal lagoons or rocky shores). The information about the biodiversity in open

waters is mostly related to benthic organisms, which are predominately detritivorous animals. The dynamics of the water column are governed by a seasonal upwelling process that occurs normally between January and April and provides a good source of nutrients from the bottom waters.

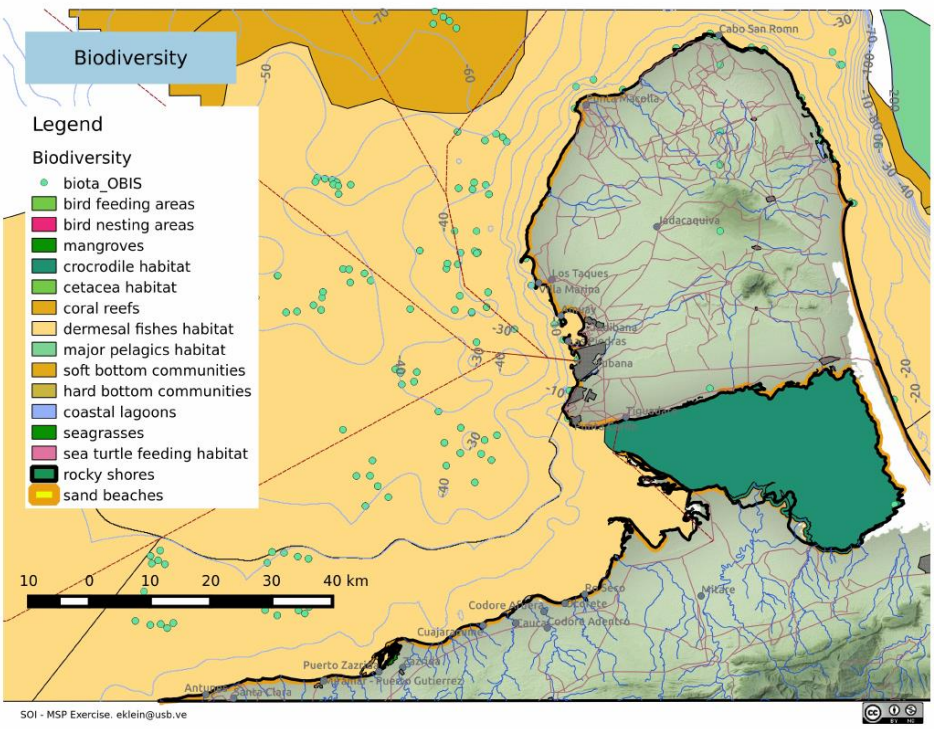

Figure 2. Data layer showing important habitats in the area.

A recent study identified several areas considered important to the conservation of marine biodiversity, due to the ecosystems that it contains and its conservation status. There is a plan to incorporate those areas (or at least parts of them) into the national system of MPAs.

Pressures

Previous studies had identified and categorized six main types of pressures on the marine environment and its biodiversity: Impacts from the oil and gas industry, aquaculture farms, maritime transport, coastal urban development, inland runoff and ports and marinas. Each of the pressures is mapped according the source and a buffer is also provided to measure the extent of the impact. Each of the pressures is classified as low, medium or high intensity. Also, a map of aggregated threats is provided.

All the data layers, information and description of the exercise is available at the Ocean Teacher Global Academy (OTGA, http://oceanteacher.org/) site, under the section of Marine Spatial Panning Courses (http://classroom.oceanteacher.org/course/view.php?id=206).

Results

**Please note that this is a hypothetical exercise and the deliberations of the various groups and compromises discussed and agreed to are fictional and do not represent the opinions of the Secretariat or the countries with regards to how this actual area should be managed.*

Each group opted for drawing the proposed area on a paper map which was also a valid solution for the exercise. Among the proposed solutions and their corresponding trade-offs were:

- Some groups included areas not originally proposed in the large MPA, considering

their biodiversity richness and uniqueness;

- Some groups made agreements with the oil and tourism sectors in order to increase funds for the implementation and sustainability of the proposed MPA;
- Some groups promoted the diversification of the artisanal fishing industry, incorporating the fishermen in a tourism-related fishery;
- Some groups negotiated with the oil industry for modification of the existing infrastructure, such as the removal of an old underwater pipeline;
- Some groups proposed the development of the coastal tourism inside the MPA, including provisions for limitations on the number of tourists per year;
- Some groups proposed the development of a plan for a port to support tourism;
- Some groups proposed a modification of shipping routes in order to avoid the proposed MPA.

The participants agreed on the usefulness of this type of exercise as an example of the utility of MSP in resolving conflicting uses and priorities. The participants also recognized the need for training in the use of open source and free GIS software to support the MSP process.

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