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SUSTAINABLE OCEAN INITIATIVE (SOI)  
CAPACITY-BUILDING WORKSHOP FOR  
WEST AFRICA  
Dakar, 4 to 8 February 2013

### REPORT OF SUSTAINABLE OCEAN INITIATIVE (SOI) CAPACITY-BUILDING WORKSHOP FOR WEST AFRICA

#### INTRODUCTION

1. In 2010, the Conference of the Parties to the Convention on Biological Diversity, at its tenth meeting, in Nagoya, Japan, 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. The Conference of the Parties to the Convention, at its tenth meeting, 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.
3. The 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.
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, 27 of decision XI/18 A; paragraph 2(g) of decision XI/18 C).

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), side event on SOI 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 to the Convention (17 October 2012, Hyderabad, India). 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.

6. 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)<sup>1</sup> 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.

7. 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.

8. West Africa hosts a diverse and extensive range of marine ecosystems spanning three of the world's 12 marine realms (Temperate North Atlantic, Tropical Atlantic, Temperate South Atlantic). At its heart is one of the world's most diverse and economically important fishing zones, upon which large coastal populations rely heavily for both food and foreign exchange. Sustainable development is at the core of the African Union's 2050: Africa's Integrated Maritime Strategy ([www.au.int/maritime](http://www.au.int/maritime)), and the continent is mindful of the implications of climate change (Arusha Declaration on Africa's Post Rio+20 Strategy for Sustainable Development). Such commitments build upon large-scale, long-term, multidisciplinary and cooperative scientific research and data-gathering projects initiated to understand West African marine ecosystems. Both bilateral and multilateral sub-regional projects have a long track

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<sup>1</sup> **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.

record, from the Coastal Upwelling Ecosystems Analysis Project of the 1970s and 1980s, to the current Ecosystem Approach to Fisheries (EAF)-Nansen project and three Large Marine Ecosystem (LME) projects.

9. 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 (SOI) Capacity-Building Workshop for West Africa, which was hosted by the Government of Senegal in Dakar, from 4 to 8 February 2013, in collaboration with various SOI partners, including interested Parties, relevant UN-Ocean members, such as the United Nations Environment Programme (UNEP), the Food and Agriculture Programme of the United Nations (FAO), and the United Nations Division for Ocean Affairs and the Law of the Sea (UN-DOALOS), the Abidjan Convention Secretariat and other relevant regional organizations and initiatives, the Global Ocean Biodiversity Initiative, IUCN Commission on Ecosystem Management – Fisheries Experts Group (IUCN-CEM-FEG), the Commonwealth Scientific and Industrial Research Organisation (CSIRO, Australia), and the Agence des Aires Marine Protégées (France).

10. The workshop focused on integrated ecosystem-based management efforts toward achieving Targets 6 and 11. Specifically, it aimed to:

(a) Bring together experts from the West African conservation and fisheries management sectors, who are collectively responsible for the conservation and sustainable use of marine and coastal biodiversity in West Africa;

(b) Showcase regional experiences in applying responses generated through international forums (such as the Convention on Biological Diversity or FAO) to marine biodiversity loss, focusing on West Africa and sharing experiences related to integrated management of marine resources and links to ongoing technical and capacity-building initiatives under other processes or initiatives;

(c) Facilitate preparations by Parties and organizations for the subsequent CBD South-Eastern Atlantic Regional Workshop to Facilitate the Description of Ecologically or Biologically Significant Marine Areas (EBSAs) (Namibia, 8-12 April 2013), including providing necessary background on the EBSA process under the Convention as well as other relevant global processes, including FAO's work on vulnerable marine ecosystems (VMEs); and

(d) Identify the awareness/interests/concerns of coastal States on marine and coastal resources and information gaps, and seek to demonstrate implementation of specific aspects of marine and coastal area-based management and resource planning instruments, including helping national biodiversity programmes integrate marine and coastal issues more effectively.

11. 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 mission of the Sustainable Ocean Initiative. Likewise, 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 break-out groups, and participatory forums. A field study visit was also organized illustrating key issues within the local context and interacting with local stakeholders.

12. 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 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 Angola, Benin, Cameroon, Cape Verde, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Gabon, The Gambia, Guinea, Guinea-Bissau, Liberia, Mauritania, Morocco, Namibia, Nigeria,

Sao Tomé and Príncipe, Senegal, Sierra Leone; South Africa; Togo; Abidjan Convention Secretariat; Agence française des Aires Marines Protégées; Biosfera I; BirdLife International; BirdLife South Africa; Canary Current Large Marine Ecosystem Project; Centre de Suivi Ecologique; Fondation International du Banc d'Arguin (FIBA); United Nations Food and Agriculture Programme (FAO); GRID-Arendal, United Nations Environment Programme; IUCN Commission on Ecosystem Management – Fisheries Experts Group (IUCN-CEM-FEG); Nature Communautés Développement; Programme Gestion de Ressources Naturelles (ProGRN); Partenariat Régional de Conservation de la zone Côtière et Marine en Afrique de l'Ouest; Réseau Regional d'Aires Marine Protégées en Afrique de l'ouest; Sub-Regional Fisheries Commission; and the WWF West Africa Marine Ecoregion Office (WAMER). The full list of participants is attached as annex I.

### **ITEM 1. OPENING OF THE WORKSHOP**

13. On behalf of Mr. Árni Mathiesen, Assistant Director General of the Fisheries and Aquaculture Department of the Food and Agriculture Organization of the United Nations, Ms. Merete Tandstad delivered opening remarks. Mr. Mathiesen indicated that CBD and FAO have had several recent opportunities to work together to promote the conservation and sustainable use of biodiversity. He stated that FAO works to assist countries and regional fisheries bodies to implement the ecosystem approach to fisheries (EAF), which addresses both natural and human issues related to exploited aquatic systems. He indicated that ecological and human well-being, as well as the ability to achieve it, can be considered the pillars of EAF, and that marine protected areas are one of the tools available to be used in an EAF. He stated that FAO has recently published guidelines on MPAs and fisheries, and is actively supporting countries and Regional Fisheries Management Organizations (RFMOs) on the implementation of the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas and relevant UN General Assembly Resolutions, including through work on vulnerable marine ecosystems (VMEs). He further expressed that both EAF and VME processes contribute to the achievement of the goals of the CBD, and that FAO has been collaborating with the CBD Secretariat to exchange experience and expertise and to promote cross-sectoral collaboration, of which this workshop is the latest example. He expressed his wish that participants enjoy fruitful discussions and a successful workshop.

14. On behalf of the Abidjan Convention, Mr. Abou Bamba, Regional Coordinator, delivered opening remarks. He began by noting the contrast between the low level of socioeconomic development in the region and its abundant marine and coastal resources, and stated that the question before participants was how the region's natural resources can contribute to its sustainable development. Mr. Bamba noted that the Sustainable Ocean Initiative (SOI), which aimed to achieve a balance between the conservation and sustainable use of marine and coastal biodiversity, provided the beginning of the answer to this question. SOI focused on building the capacity of those involved in the management of marine and coastal resources with an action-oriented approach that called for immediate results. He noted also that SOI was a global platform to create partnerships and reinforce capacities in a holistic manner to address Aichi Biodiversity Targets 6, 10 and 11. Recalling Target 6, which called for sustainable fishing, Mr. Bamba noted that this was a binding commitment of Parties to the Convention to fight illegal, unregulated and unreported fishing in order to allow stocks to continuously recover, so that the African people could continue to derive benefits. Mr. Bamba noted that during the last Conference of the Parties to the Abidjan Convention in November 2012, the 22 coastal states of west, central and southern Africa gave the Secretariat of the Abidjan Convention a mandate to collaborate actively with the Secretariat of the CBD for the implementation of Targets 6 and 11, hence its presence and involvement in this workshop. Mr. Bamba ended by pointing to the correlation between the level of development of States and their access (or not) to the ocean. Most coastal countries in the region had abundant marine and coastal resources, but an unacceptably low level of social and economic development. He expressed his hope that starting with this process, Africans would start to feel the effects of sustainable management of the riches of the ocean. He ended by thanking the Government of Senegal for hosting this workshop and for its hospitality, as well as the Secretariat of the CBD for initiating this process and partnering with the

Secretariat of the Abidjan Convention; he also thanked the Japan Biodiversity Fund for their financial support.

15. Mr. Souleye Ndiaye, Director of the National Parks Authority of Senegal, delivered an opening statement on behalf of Mr. Haydar El Ali, Minister of the Environment and Sustainable Development. In his statement, Mr. El Ali recalled that Senegal was cultivating very close links with other coastal West African countries, particularly regarding the management of shared ecosystems. He highlighted that with its 700 km of coastline and its EEZ of nearly 200,000 nautical miles, Senegal had a long tradition of biodiversity conservation. This was demonstrated, for example, by the establishment of a network of protected areas representing different habitats, in which marine protected areas played an important role. Mr. El Ali highlighted the important role of MPAs in the maintenance of ecosystem services, as well as livelihoods, economic and social well-being, in addition to the mitigation of the impacts of climate change. He announced that, recognizing that MPAs were the cornerstone of species and ecosystem conservation, His Excellency the President of the Republic of Senegal decided to create a national agency dedicated to their management using a community approach. Mr. El Ali then noted that President Macky had recently won the “Excellence in National Stewardship of the Ocean” award from Greenpeace, an honour that recognized the country’s efforts in sustainable management of its fisheries. Highlighting the seasonal migrations of birds and pelagic resources that linked people and nations, Mr. El Ali emphasized the need to promote transboundary cooperation for collaborative management of biodiversity and critical habitats, particularly through international conventions, such as CBD and the Convention on Migratory Species. He thanked the Secretariat of the CBD and the Government of Japan for their technical and financial support, as well as the FAO and the Secretariat of the Abidjan Convention for their contribution to the organization of this workshop. Finally, he assured participants that the Government of Senegal would look closely at the results of the workshop and wished them a pleasant stay in Dakar.

16. On behalf of the Executive Secretary, Mr. Braulio Dias, Mr. David Cooper (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 first regional workshop organized in the framework of the Sustainable Ocean Initiative (SOI) global partnership. Mr Dias thanked the Government of Senegal for hosting this workshop, and for their support and hospitality. He also thanked the SOI collaborators and partners who provided their inputs and expertise. He also thanked the Japan Biodiversity Fund for financially supporting the organization of this workshop. Mr Dias noted that all of humanity depended on marine biodiversity, with a great many relying directly on it for their livelihoods. He noted, however, that while many communities in western Africa and around the world were striving to achieve sustainable development, they faced multiple challenges due to unsustainable fishing practices, pollution, ocean acidification and the emerging threats of climate change. He recalled a key outcome of the United Nations Conference on Sustainable Development (Rio+20), wherein global leaders stressed the importance of the conservation and sustainable use of the oceans and seas and their resources, and they were committed to protect and restore their health, productivity and resilience, and to maintain their biodiversity. He 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 Targets based on innovative partnerships for linking science with policy development and implementation. In closing, he noted that this workshop aimed to help further strengthen national capacities to achieve the Aichi Biodiversity Targets and expressed his wish for a successful workshop.

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

17. The representatives of the CBD Secretariat and the Abidjan Convention Secretariat, together with the SOI training programme coordinator, gave an overview of the background, objectives, scope and expected outcomes of the workshop. The Secretariat also briefed participants on the meeting documents as well as background documents made available for the participants at the workshop, as summarized in annex I of the annotations to the provisional agenda, available as document UNEP/CBD/CBW/SOI/WAFR/1/1/Add.1 on the meeting website (<http://www.cbd.int/doc/?meeting=CBWSOI-WAFR-01>).

18. Mr. David Cooper introduced the Strategic Plan for Biodiversity 2011-2020 and the 2020 Aichi Biodiversity Targets, which were adopted at the tenth meeting of the Conference of the Parties to the CBD. He focused on those targets related to marine and coastal biodiversity. He addressed the need to develop national targets in line with global targets to further facilitate local actions for conservation and sustainable use of marine and coastal biodiversity.

19. Ms. Jihyun Lee (CBD Secretariat) informed participants that at the tenth meeting of the Conference of the Parties to the CBD, Parties emphasized the need for training and capacity-building of developing country Parties. Ms. Lee explained that the mission of SOI was to provide targeted capacity-building with a focus on facilitating achievement of the Aichi Biodiversity Targets on marine and coastal biodiversity, particularly Targets 6, 10 and 11, in a holistic manner, through a strategic action-oriented approach that would support on-the-ground implementation priorities and a reliance on partnerships and knowledge-sharing. Ms. Lee then briefed participants on the workshop's objectives (described in paragraph 10 above), including the need to prepare the experts in the region for the upcoming regional workshop on ecologically or biologically significant areas (EBSAs) to take place in Swakopmund, Namibia, in April 2013. She explained that the workshop would focus on regional experiences in the use of integrated marine and coastal area management, as a framework and processes, toward achieving Aichi Biodiversity Targets 6 and 11; scientific and technical tools and approaches in support of these targets, such as the description of ecologically or biologically significant marine areas (EBSAs), MPAs, ecosystem approach to fisheries; facilitating on-ground implementation of the Strategic Plan for Biodiversity 2011-2020 within the local implementation of integrated marine and coastal management; and linking global commitments/processes with regional/national/subnational implementation.

20. Mr. Abou Bamba, Regional Coordinator, Abidjan Convention, provided a presentation on marine and coastal biodiversity in West Africa and outlined its contribution to the sustainable development of the region. He noted that the Atlantic coast of West Africa provided a wide range of goods and services, including fisheries, marine-based renewable energy, coastal tourism, oil and gas, and shipping. In terms of fisheries, he outlined the total commercial fish catches in the member States of the Abidjan Convention, noting that they had appeared to peak in the 1980s, and that the majority of fish stocks were now over-exploited or had collapsed, but he noted that stocks seemed to be rebuilding. He indicated that there was a high potential for marine-based renewable energy, such as wind, wave and tidal energy, but that very little was thus far utilized. Regarding coastal tourism, Mr. Bamba noted that it was globally the largest market segment and was growing rapidly. He outlined its potential to reduce poverty in the region, but noted that it needed to be developed sustainably. He identified the oil and gas blocks in the region and indicated that Côte d'Ivoire, Nigeria and Senegal were the states of the Abidjan Convention that handled the highest level of cargo traffic in the region. He expressed his hope that this SOI workshop could help to build the capacity of these States to manage these marine and coastal resources in a sustainable manner.

21. Mr David Johnson, SOI training programme coordinator, reiterated the objectives of the workshop and set out briefly the international context. He recalled the legal basis provided by the United Nations Conference on Environment and Development (Chapter 17, Agenda 21) and the roles of different global institutions including UN-DOALOS, CBD, FAO, UNEP, IUCN, GEF and relevant international

programmes and projects promoted by non-governmental organizations and development agencies. He emphasized the over-arching context of sustainable development and the ecosystem approach, noting in particular links to the philosophy of 'Satoumi' as applied in the Japanese archipelago (CBD Technical Series No. 61) and the UNEP synthesis report *Green Economy in a Blue World*. This international context was then related to West Africa, with its five distinct and relatively persistent oceanic currents, three distinct marine ecosystems, relatively narrow continental shelf and dependent coastal populations and 23 coastal and two island States supported by regional organizations and projects. The themes of the workshop were expected to establish a better understanding of the limits of current scientific knowledge; critical processes for maintaining structure and functioning of ecosystems; interactions within food webs and the scientific tools to describe marine areas requiring a high level of protection.

22. The workshop was organized in plenary and break-out-group sessions. The Secretariat, in consultation with the Host Government and Abidjan Convention Secretariat, nominated facilitators and rapporteurs for both plenary and break-out groups, based on the expertise and experience of the workshop participants.

### **ITEM 3. OVERVIEW OF REGIONAL-LEVEL EFFORTS TOWARD ACHIEVING AICHI BIODIVERSITY TARGETS ON MARINE AND COASTAL BIODIVERSITY**

23. Under this item, selected participants were invited to provide presentations on regional-level efforts toward achieving the Aichi Biodiversity Targets on marine and coastal biodiversity. During plenary, presentations were made by experts from South Africa, Morocco, Togo, Gabon, Mauritania, Namibia, Sierra Leone, Benin, Guinea, Democratic Republic of the Congo, Senegal, Côte d'Ivoire and RAMPAO.

24. Following the presentations, workshop participants were invited to share their views and insights, focusing on the challenges and barriers as well as opportunities in their current management approaches as well as relevant scientific assessment activities. Discussion noted the challenges and opportunities illustrated by the South African experience, with potential to maximize socio-economic benefits of non-consumptive use (i.e., tourism value of charismatic species). Interest in how resources had been mobilized to establish MPAs, concern over threats from oil exploration and exploitation and the importance of inclusion of key NGOs to help achieve capacity and resources. The fisheries examples prompted discussion of how to regulate and control illegal boats and the time periods needed for monitoring to establish whether or not management measures were proving to be effective.

### **ITEM 4. OVERVIEW OF SELECTED TOOLS FOR SCIENTIFIC ASSESSMENT AND MANAGEMENT TOWARD ACHIEVING AICHI BIODIVERSITY TARGETS, IN PARTICULAR TARGETS 6 AND 11**

25. Under this item, selected experts were invited to provide presentations on selected tools for scientific assessment and management toward achieving Aichi Biodiversity Targets, including on: (i) Target 6 and implications for fisheries policy; (ii) Target 11 and implications for marine protected areas; (iii) CBD process on ecologically or biologically significant marine areas (EBSAs); (iv) FAO's work on vulnerable marine ecosystems (VMEs); and (v) data collection and synthesis in support of describing areas meeting EBSA criteria.

26. Following the presentations, workshop participants were invited to share their views and insights, focusing on the implication of Aichi Biodiversity Targets as well as EBSA and VME processes to their current national biodiversity planning and management approaches as well as relevant scientific assessment activities.

### **Target 6 and implications for fisheries policy**

27. Mr. Serge Garcia (IUCN-CEM-FEG) presented Target 6, its nature, its objectives, its rationale and agenda as well as its implementation issues. The need to integrate the partially overlapping objectives of different sectors and policies was described, stressing the main policy and management questions. Evaluations were presented of the some of the significant costs of inaction (and status quo) and of corrective actions, together with significant costs and benefits of solutions available to achieve Target 6. It was also stressed that Governments were facing, in the process, a number of difficult choices and alternatives to identify the best pathway to reaching Target 6 in their particular context. In conclusion, it was stressed that Target 6 represented an objective (indeed a bundle of objectives) as much as a “vision” towards which Governments had committed themselves to mobilize efforts and resources. It implied a very important set of actions by States to sustainably correct the situations. Noting that insufficient capacity (at central and local level) was the main shortcoming, particularly in the developing world, it was stressed that Target 6 was not only a target but also a mid-term vision towards which national and regional efforts had to be mobilized for the best possible outcome to be obtained in the shortest possible time – hopefully before 2020.

28. The presentation by Mr. Garcia was followed by feedback from the participants. In their comments, participants noted and stressed that:

- (a) The limited time (e.g., 5 years) that characterizes political/electoral processes did not facilitate the adoption and implementation of the longer-term actions needed to achieve Target 6;
- (b) It was important to realize that the long-term cost of not reaching Target 6 might be much higher than the short- to medium-term costs of reaching it;
- (c) It was stressed that the institutional and operational integration/collaboration needed should not be limited to fisheries management and biodiversity conservation but should also involve the other impacted or potentially beneficiary sectors. This could be done for example through marine spatial planning; and
- (d) It was stressed that amidst all reports on declining resources, it should also be noted that in a number of important cases (e.g., groupers in Senegal) countries had also succeeded in rebuilding some resources, demonstrating that it was possible.

#### *Summary of discussion on Target 6*

29. Addressing the degradation of the natural and human systems requires political coherence and a move away from short-term economic projections. The ecosystem approach to fisheries (EAF) is a sectoral application of the ecosystem approach, which demands societal responsibility, and interdisciplinary considerations based on science and compatibility of measures. In fisheries, this is made more difficult by complex feedback loops, complicating variables (such as genetics) and natural environmental variations. Further to FAO’s Code of Conduct for Responsible Fisheries (1995) a first stage of EAF has focussed on minimizing impacts, with consideration given to incentives and better collaboration. The timeframe in which to achieve this Aichi Target is ambitious.

30. The EAF process and toolbox seeks to maintain resources by controlling human impacts through the application of a practical four-step procedure resulting in a management plan. The FAO portal provides practical advice, including guidance on consultation. The workshop highlighted the vulnerability of fishers and the need to consider alternative livelihoods; provided examples of the need to reconcile both regional and national/local challenges; and emphasized the need for equity, education and enforcement. Participants discussed the merits of mesh sizes, selectivity of gears (eliminating destructive practices) and limiting fishing effort.



31. As part of the EAF process, identification and prioritization of assets and issues, leading to a risk assessment, was considered in more detail. This requires a systematic approach, and the FAO toolbox suggests using component trees. Risk levels, based upon consequence and likelihood, must be determined and acceptability of risk evaluated. EAF values can then be calculated in terms of sustainability, viability, economics, social impact, food security, waste minimization and other factors. Discussion included national examples provided by Gabon, Togo, Cote d'Ivoire, Gambia and Angola, suggesting that levels of adoption of EAF varied significantly. Despite many projects, difficulties with national co-ordination and continuation were noted.

### **Target 11 and implications for marine protected areas**

32. Mr. Jeff Ardron (Technical Support Team) delivered a presentation that began by pointing out that Aichi Target 11 emphasizes the protection of areas of “particular importance for biodiversity and ecosystem services”, to which the description of EBSAs has a clear link. The history of the establishment of the EBSA criteria, drawing upon dozens of other criteria systems, was also briefly summarized. Mr Ardron pointed out that not all EBSAs would be MPAs, and not all MPAs would necessarily be EBSAs, though it was expected that most MPAs would indeed include aspects of ecologically or biologically significant areas. Some MPAs, however, were established for other reasons; for example, to protect sites of cultural or spiritual value. Furthermore, there was an increasing need to cooperate with other related protective designations, such as vulnerable marine ecosystems (VMEs) as defined by the Food and Agriculture Organizations of the United Nations, with regard to bottom fisheries in areas beyond national jurisdiction.

A brief overview of systematic conservation planning (SCP) was provided. SCP typically involved: a structured step-wise approach; developing goals, objectives, targets; identifying existing gaps; identifying (possible) conservation sites; mapping (possible) conservation networks; feedback, revision, and reiteration. It was highlighted that for many West African States, the process of MPA selection was just beginning. Mr Ardron suggested that in getting started, States: 1) Mapped areas that were already recognized for their outstanding ecological values; 2) Focused on data that is of central relevance to ecosystems in that region; 3) When drawing boundaries, a) anchored shapes around more persistent features, when possible; b) chose scales that were stable to perturbations (e.g., functional communities vs individual species level); and, c) kept it simple (did not make boundaries overly complex). He ended by reiterating that EBSAs were not MPAs.

### *Summary of Discussion on Target 11*

33. Establishing an MPA stops the cycle of genetic truncation, allowing normal genetic populations to flourish; no other fisheries management measures can achieve this. The MPA creates a buffer or “insurance” policy, albeit one that can also cause social and/or economic hardship. Therefore good planning is required to balance ecological and economic values.

34. Network design, drawing upon many criteria, aims to bring together complementary sites. Problems when using scoring and overlays to identify possible MPAs and EBSAs were outlined. Instead, tools supporting spatial planning (Marxan), collaborative planning by stakeholders (SeaSketch) and management plans (Miradi) were explained and their complementary role to building relationships and collective targets were emphasized.

35. Considering MPAs in fisheries management requires a detailed look at expected costs and benefits, with considerations of both efficiency and equity. Very little analysis has been published on the efficiency benefits of multi-use MPAs and/or networks, and social dynamics have generally been under-evaluated.

36. Collecting local knowledge (socio-economic information) is not as easy as it sounds. Good practice when engaging stakeholders includes assigning precision to mapping by participants, subsequent validation and reconciling very different costs. Scenarios of different costs can be applied and multiple zones for specific activities (e.g. trawling zones, etc.) established as a precursor to marine spatial planning.

#### **CBD process on ecologically or biologically significant marine areas (EBSAs)**

37. Ms. Lee began by explaining that the EBSA criteria were originally developed and adopted for open-ocean waters and deep-sea habitats, but it was later recognized that they could also be useful to coastal waters. She emphasized that the EBSA process was clearly scientific and technical in nature, and did not cover management issues or threats. Ms. Lee explained that the Secretariat was tasked to organize a series of regional workshops to facilitate the description of areas meeting the EBSA criteria. She noted that five EBSA workshops had taken place thus far, with funding from the Japan Biodiversity Fund and other sources. These workshops had provided scientists with an opportunity to see the ocean as an interconnected ecosystem. She noted that these workshops had facilitated regional collaboration and capacity-building. Ms. Lee emphasized the intensity of the scientific process involved in these workshops, a process that was explained in the next presentation by Mr. Piers Dunstan. She explained that once the workshop report was approved and adopted by the workshop participants, it was submitted to a meeting of the Subsidiary Body for Scientific, Technical and Technological Advice for its consideration, and then to the Conference of the Parties to the CBD, which may decide to transmit the results to United Nations General Assembly.

#### **FAO's work on vulnerable marine ecosystems (VMEs)**

38. Ms. Merete Tanstad (United Nations Food and Agriculture Organization) outlined the background and context of the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas and the criteria on vulnerable marine ecosystems (VMEs) was explained, highlighting areas of common ground with the EBSA criteria, but also noting the differences in use and application. VMEs were used in the context of the management of deep-sea fisheries as one of the management measures, but were also applicable to other circumstances. Since 2006, many of the regional fisheries management bodies (RFMOs) with the mandate to manage deep-sea fisheries had been applying the guidelines and the VME criteria. RFMOs had also been applying spatial management measures and developing protocols for vessel encounters with VMEs. A new project on deep seas in areas beyond national jurisdiction (jointly implemented by FAO and UNEP) would start in early 2014 and would provide opportunities for countries or regions to work together on issues related to VMEs and on ecosystem values attributed to EBSAs in the deep seas.

#### **Data collection and synthesis in support of describing areas meeting EBSA criteria**

39. Mr. Piers Dunstan (Technical Support Team/CSIRO-Australia) delivered a presentation demonstrating the data needed to support the description of areas meeting EBSA criteria, using examples from the Southern Indian and South-west Pacific Oceans. EBSAs were described using a wide range of data types, ranging from global data sets, which are readily available, to national- and local-scale data sets. Regional organizations such as RFMOs, LME projects and regional seas organizations are all important sources of data and can make important contributions to the EBSA process.

40. Data used can be broadly broken into two different types: biological data and physical data. Physical data are derived from large-scale global and regional data sets and comprise either information on the seafloor (e.g., seamount and vent locations, geology and canyons) or the upper pelagic biome (e.g., global climatologies, satellite observations and derived oceanic data layers). Physical data is generally

publically available and accessible on the internet. Biological data can come in a number of formats. Data from scientific surveys can be accessed from individual researchers or through data repositories such as OBIS. Regional organizations (e.g., RFMOs, LMEs) also hold biological data and can provide excellent sources of information. Fisheries data are also an important data source and can be obtained from RFMOs.

#### **Overall Summary of Agenda Item 4**

41. The opening statements of the workshop underlined an explicit commitment by the Government of Senegal (acting as hosts), the urgency and need to address the underlying causes of marine biodiversity loss, the inter-relationship between different economic sectors in West Africa, the rationale of the Sustainable Ocean Initiative and the aims and objectives of the workshop.

42. A representative selection of presentations by workshop participants illustrated region-specific challenges and opportunities. Even in South Africa, where the national MPA network is relatively advanced, the offshore area is significantly under-represented. Some West African nations have yet to establish any MPAs. Protocols and legislation are at different stages of updating. A variety of scientific programmes and protection measures have been applied, and stakeholders have been involved at different levels. Several countries are concerned about how resources can be mobilised for marine biodiversity conservation. The RAMPAN network of marine protected areas presented an ecological coherence and gap analysis evaluation using their MPA database, having consulted regional experts, and suggesting examples of potential EBSAs.

43. Participants noted:

(a) Aichi Target 6: recalling worrying signals for fisheries, with significant progress towards recommended action in some places and much less in most others. Achieving Target 6 raises numerous policy issues (such as risks for resources and populations, trade-offs and alternatives, use rights – communal, individual, transferable or not, compensation, tariff trade barriers) and many management questions (such as levels of knowledge about resources, fishing gears and practices and their impacts, uncertainty, management plans, operational objectives, reference points). There are also significant costs of inaction. Ways of integrating institutions must be found, and it is important to take into account what has already been done, the successes, and above all, the failures;

(b) Aichi Target 11: The EBSA process can support a systematic, stepwise way of moving towards more intelligent marine spatial planning and coordinated responses to human impacts. Practical advice includes mapping features of central relevance, recognizing persistent features (such as seamounts and canyons), adopting scales that are stable to perturbations, and understanding that EBSAs are not MPAs;

(c) The EBSA process itself draws on scientific information and requires collaboration by dedicated experts. For the open oceans and deep seas both within and beyond national jurisdiction the process has already generated significant momentum and made substantial progress. Scattered data needs to be collected, building on national expertise and mobilising international support; and

(d) Data for describing EBSAs represents an investment involving universal challenges. The expert-driven process requires both physical and biological data, and information sources can be global, regional, national and from existing databases. Sensitivities noted include data availability, ownership and sharing, and problems of combining datasets for transboundary features.

44. The FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas were drawn up in response to United Nations General Assembly Resolution 61/105, for uptake and implementation by RFMOs. VME criteria have been developed and a description of “significant adverse impacts” provided. Awareness of the spatial extent of fisheries is critical. Tools include the “encounter protocol”, a global database of VMEs, and regional EBSA workshops (e.g., Southern Indian Ocean, 2012).

**ITEM 5. SCIENTIFIC AND TECHNICAL APPROACHES FOR DATA/INFORMATION COMPILATION, ANALYSIS, SYNTHESIS AND MAPPING TO DESCRIBE AREAS MEETING CBD'S SCIENTIFIC CRITERIA FOR ECOLOGICALLY OR BIOLOGICALLY SIGNIFICANT MARINE AREAS (EBSAs) AND FAO'S CRITERIA FOR VULNERABLE MARINE ECOSYSTEMS (VMEs)**

45. Under this item, based on the introductory presentations provided under the previous agenda item above, further presentations were provided by selected experts on: (i) CBD scientific criteria for EBSAs; (ii) application of EBSA criteria; (iii) collection, analysis, synthesis and mapping of scientific data/information for the description of areas meeting the scientific criteria for EBSAs; (iv) sources of available scientific data and information; (v) submission of relevant scientific information using a template on description of areas meeting EBSA criteria, as described in CBD notification (Ref. No. 2012-53, issued on 18 December 2012; available at <http://www.cbd.int/notifications/>); (vi) building an EBSA data network and partnership at a regional level; and (vii) potential contribution of EBSA scientific data/information to enhance current efforts on integrated coastal and marine management as well as other global and regional processes, including FAO's VME process.

46. Following the presentations, workshop participants were invited to share their views and insights, focusing on the scientific process in support of the EBSA process under the Convention on Biological Diversity and its contribution to current management efforts at the national level and implementation of relevant global and regional processes, including FAO's VME process.

***Describing areas meeting EBSA criteria from data***

47. Mr. Piers Dunstan (Technical Support Team/CSIRO-Australia) delivered a presentation focusing on using data to describe potential EBSAs. Four examples were given from previous workshops: three from the Southern Indian Ocean and one from the Western South Pacific. These examples were used to demonstrate the approaches and data that previous workshops had used. The first example was the New Hebrides Trench Region in the Western South Pacific. This region is between Vanuatu and New Caledonia and covers a range of habitats. It was primarily identified based on the New Hebrides Trench, but also included habitats around three major islands. It is an area with unique trench features and is important for the reproduction of freshwater eels. The area has high biological diversity and has had limited impact from human activities.

48. Three examples were given from the Southern Indian Ocean. The first was Coral Seamount, a large seamount in the southern central Indian Ocean. This seamount has been the subject of scientific surveys and has also been mapped by the Southern Indian Ocean Deepsea Fishers Association (SIODFA). Fine-scale backscatter data was used, along with information from scientific surveys to delimit the area. It is also an area that SIODFA has closed to fishing.

49. The second area was the Agulhas Front, a large high-productivity feature extending from southern Africa across the Indian Ocean. It is an area of high primary productivity that provides important habitat for breeding colonies of seabirds, southern right whales and bluefin tuna. It is the only productivity feature of its kind in the Indian Ocean.

50. The final area described was the Protea banks and sardine run, located on the coast of South Africa. The area has a unique deep reef feature that provides habitat for endemic species and four shelf-incising submarine canyons. It is a key migration route for several species, notably the sardine *Sardinops sagax*. The sardines are followed by large numbers of sharks, cetaceans and seabirds.

51. The final section of the presentation introduced the data sets that have been identified prior to the workshop that can be used to describe areas meeting the EBSA criteria in the South-East Atlantic Ocean. The presentation covered both physical and biological data, and demonstrated the range of environments found in the western coast of Africa. The presentation ended with a reminder that data was necessary for

the EBSA process and that biological and fine-scale data were the most difficult to source, but also key to EBSA description.

*Use of GIS for marine conservation and sustainable use*

52. Mr. Rodolphe Devillers (Technical Support Team) delivered a presentation on the use of Geographic Information Systems (GIS) to study marine environments. The session aimed at introducing participants to GIS tools, illustrating the benefit of using those tools in the context of marine conservation (Target 11) and fisheries (Target 6), and discussing how GIS could support the process of describing areas meeting EBSA criteria. The session provided a combination of theory and hands-on exercises that built on the previous session on data for the EBSA process. The presentation first discussed the important role of GIS in the study of marine environments but also described the technical and scientific complexity related to the use of those tools. It discussed the possible consequence of using poor data on analyses performed using GIS. Before the session, participants were encouraged to download the free open-source software Quantum GIS (QGIS) and were provided with all of the data (mostly about the physical environment) compiled. Most participants had installed QGIS and the data on their laptops and had some time during the session to explore those data on their own with the GIS, giving them some basic skills that will allow them to do further analyses upon their return to their respective countries. The presentations continued with a discussion of the Ocean Biodiversity Information System (OBIS) database and how it can be used (or misused) in the process of describing areas meeting the EBSA criteria. Participants were shown how OBIS data can be downloaded and integrated into QGIS and how some basic GIS analyses, such as kernel density estimations, can be derived to identify important areas for specific species. Participants had some time to do this exercise on their own, with the support of the facilitator and other participants knowledgeable in GIS.

53. Mr Abou Bamba (Abidjan Convention Secretariat) provided an interim analysis of participant feedback, stating that participants:

- (a) Had a better understanding of what an EBSA should be and the differences between EBSAs and MPAs;
- (b) Were now aware of the resources and data to be collected and methods of how to collect them;
- (c) Realized the need for both raw and modeled/analyzed data;
- (d) Appreciated the value of GIS as a tool and the advantage of having a GIS expert in their EBSA workshop team;
- (e) Wished to focus more on how to use available data, how to describe areas meeting the EBSA criteria;
- (f) Acknowledged the need to raise awareness on the EBSA process among policymakers; and
- (g) Welcomed further discussion on the way forward and resources available to describe EBSAs.

**ITEM 6. THE ECOSYSTEM APPROACH TO FISHERIES (EAF) WITHIN THE CONTEXT OF INTEGRATED MARINE AND COASTAL AREA MANAGEMENT**

54. Under this item, selected experts, as recommended by FAO, were invited to provide presentations on: (i) introduction to the ecosystem approach to fisheries (EAF); (ii) risk assessment and management in the EAF context; and (iii) the EAF management toolbox.

55. Mr. Serge Garcia (Technical Support Team) delivered a presentation introducing the ecosystem approach to fisheries, adopted by FAO in 2003, focusing on the rationale for its adoption, the relevant definitions and principles and the changes it brought to fisheries science and governance paradigms. He recalled: (i) the generally declining quality of the natural system and resource base under multiple impacts (as recognized, for example in the 2005 Millennium Ecosystem Assessment); (ii) the reaction of the media and some consumer groups and industry leaders (actively prompted by the campaigns of non-governmental organizations) and the parallel processes in IGOs and scientific institutions to adapt the governance, legal and scientific frameworks to the new, broader, perspective required. Mr. Garcia reminded participants of the definition of the ecosystem approach adopted by the CBD and the sectoral equivalent adopted by FAO, their largely overlapping objectives; and their “pillars” (risk minimization, multiple sources of information, spatial integration, adaptive processes, good governance principles, and equity). He stressed the consequences of the increased overlap between fisheries and ecosystem management theories and practices: increased complexity; the focus on the food chain and its maintenance and the importance of trophic cascades; the phenotypic (and perhaps genetic) responses of populations; the impact on scientific assessments; the role of natural medium to large scale oscillations; etc. The 1995 FAO Code of Conduct for Responsible Fisheries had already anticipated the required governance changes and its Guidelines and International Plans of Action constitute the implementation framework within the available international law. The level of implementation at the time was quite high in a few developed countries and very elementary, if not non-operational, in many developing countries. The wide adoption of the ecosystem approach offered grounds for enhanced cross-sectoral and inter-agency cooperation but the immediate costs implied and the low capacity of the developing countries represented a major barrier to EAF implementation.

56. The presentation raised interest and a number of comments and questions from the participants and response from the presenters related to:

(a) The fact that the EAF implementation process was indeed similar to the processes advocated for MPA management and more generally for any science-based participative decision-making process and that “good governance” principles were as essential as ecosystem principles;

(b) The impact on fisheries of factors extraneous to the sector and out of reach of its managers called for spatially integrated management;

(c) The need to have management plans articulated between the local and subregional levels, particularly for pelagic/migrating resources;

(d) The relevance of the conventional mesh size regulation and its real impact in an ecosystem context taking cascading food chains into account. The debate recalled the Balanced Harvest strategy presented at the 2012 IUCN Congress in Nagoya and being elaborated under IUCN-CEM-FEG<sup>2</sup>

(e) The need to understand better the influence of natural oscillations and non-fishery impacts (e.g., pollution and climate change ) on the food chain;

(f) The need to add a “layer” of specific tools to the conventional instruments used by science and management in fisheries (see next sections);

(g) The importance of addressing the precautionary approach as well as equity;

(h) The need to improve gear performance and improve enforcement of gear regulations, eliminating destructive gears and practices; and

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<sup>2</sup> S. M. Garcia, J. Kolding, J. Rice, M.-J. Rochet, S. Zhou, T. Arimoto, J. E. Beyer, L. Borges, A. Bundy, D. Dunn, E. A. Fulton, M. Hall, M. Heino, R. Law, M. Makino, A. D. Rijnsdorp, F. Simard and A. D. M. Smith. 2012. Reconsidering the consequences of selective fisheries conservation. *Science*, 335: 1045-1047.

- (i) The importance and difficulties in organizing effective multidisciplinary science and of integrating local knowledge

### **EAF Process and ToolBox and risk assessment**

57. Ms. Merete Tanstad (FAO) presented an introduction to the EAF holistic methodology, which through a risk-based approach identified key priority issues to address in a fisheries management context, across the three pillars of sustainable development: ecological sustainability (i.e., target and non-target species, habitats), socioeconomic issues and benefits, and governance – including impact from external factors that can impact the management system (both human-induced and natural). The process involved the full range of different stakeholders involved in that particular fishery. Appropriate management options should be developed based on set of priorities. The approach also highlighted and made explicit biodiversity concerns that may arise in relation to fisheries and identified appropriate management approaches in a given context and thus complements CBD efforts. This approach was discussed as a useful tool for implementing Aichi Biodiversity Target 6.

58. Following the presentations, workshop participants were invited to share their views and insights, focusing on challenges, barriers or opportunities in implementing EAF at the national and regional level. The following points were raised:

- (a) Traditional rights: not being legally formalized, they are being threatened or even lost. The interaction between local rights and social concerns is often not considered, creating tensions and threatening equity. The CBD concern for equitable benefit-sharing needs highlighting;
- (b) The need for bilateral collaboration is particularly important for small countries (like Gambia, Ghana, Togo, Benin and Equatorial Guinea) that share most of their resources (and often fleets) with neighboring States. There is a need for collaboration between FAO and CBD and other agencies involved to bring in more coordination;
- (c) The role of aquaculture, not covered by the terms of reference of this workshop, should not be neglected, both as a source of ecosystemic problems and solutions;
- (d) The coastal countries need financial assistance for conducting large ecosystem-based projects, including MPAs. The risks of financial dependency were stressed, however, pointing to the need to use locally applicable, low-cost solutions;
- (e) EAF implementation highlights the institutional issues created by the interaction between the ministries respectively in charge of the environment, parks and fisheries (in addition to the other sectors);
- (f) The importance of stock-rebuilding; and
- (g) The need for CBD Secretariat's technical and financial support for the description of EBSAs in collaboration with various regional partners.

### **FIELD TRIP**

59. Participants had the opportunity to visit the key Senegalese fishing town of Cayar, approximately 60km north of Dakar, where they were welcomed by the Mayor and the Chief of Village, the Cayar MPA Manager, the Oceanographic Research Centre and representatives of the community, including the head of the local MPA management committee and head of the Cayar fisheries women's group.

60. Mr Moussa Mbengue, Head of Cayar Fisheries Department (Chef du Service Départemental des pêches et de la surveillance de Thies in Cayar) explained the background, successes and challenges of the Cayar sustainable fisheries model. He explained that the fisher groups (e.g., long liners, purse seiners)

have their own associations, and that the community has established its own rules forbidding the catch of juvenile fish and setting catch limits.

61. Community representatives explained how they had reached the current position of establishing and strictly enforcing catch limits, which was leading to the recovery and reappearance of some species. Limits on landings had been agreed by consensus, taking due regard also of market conditions. In 2005 conflict with fishers from outside the community had caused some civil unrest but the model now set an example of good practice from which lessons could be learned elsewhere. In 2012 the Government of Senegal also acted to support the interests of small-scale inshore fishers by cancelling licences of 29 foreign fishing trawlers.

#### **ITEM 7. MARINE PROTECTED AREAS (MPAs) WITHIN THE CONTEXT OF INTEGRATED MARINE AND COASTAL AREA MANAGEMENT**

62. Under this item, selected experts were invited to provide presentations on: (i) tools for MPA planning and implementation; (ii) MPA networks: from theory into practice; (iii) MPAs and fisheries management; (iv) socioeconomics of MPAs; and (v) linking MPAs, EAF, VMEs and EBSAs within the framework of integrated marine and coastal management.

##### **MPAs and planning tools (7.1 and 7.2)**

63. Marine protected areas (MPAs): Mr. Jeff Ardron (Technical Support Team) began by pointing out that they had entered a new era in human history, the “Anthropocene”, whereby humans had become the dominant driver on the planet. Management techniques and attitudes that were previously successful may now be harmful. Marine protected areas (MPAs) were for some people difficult to accept, and yet they provided the necessary habitats for biodiversity in this quickly changing world. MPAs were now very well studied, with their benefits well-documented. However, not all MPAs were effective. Care had to be taken to ensure good selection and also good management leading to compliance. Recent genetic studies were showing that MPAs did provide “spillover” benefits for commercially valuable species. MPAs could also help buffer against genetic truncation (because fisheries generally target larger fish, there was an evolutionary selection for smaller more quickly maturing ones). MPAs could also provide resilience to changing conditions and reduce variability in catches.

64. Planning tools: With increasing variety of pressures on the marine environment, there was an increasing need for marine spatial planning. There were several tools that could aid in this process. Taken together, they could help ensure a systematic approach that would fulfill the CBD MPA network guidance (COP decision IX/21, annex II), protecting special places (e.g., some components of areas meeting the EBSA criteria), with representativity, replication, connectivity, and adequacy/viability. Tools could also help build good relationships with stakeholders, if they were invited to participate in the setting of targets. Examples from other parts of the world were provided. However, many of these tools, like Marxan, required good information about the ecology and human uses of the waters. If the data was not available, it was recommended to take an expert approach combined with local knowledge.

##### **MPAs and Fisheries Management**

65. Mr. Serge Garcia (Technical Support Team) delivered a brief presentation on some aspects of the use of MPAs (sensu IUCN) in fisheries management. His conclusions were based on a worldwide analysis of the subject requested by the Sub-Regional Fishery Commission in 2010-2011. Stressing that the problems encountered were often due to the difference between the high expectations and the realization of the actual impacts of MPAs on fisheries, Mr. Garcia summarized the expectations of fishery managers in terms of positive (benefits) and negative (costs) and the impacts effectively observed. He noted the generally positive impacts obtained inside reserves (no-take zone); the information building up



about the impacts of no-take zones on fisheries outside them (the so-called spillover effects); the relative lack of economic information in the MPA and outside it and the preliminary conclusions that, in most cases, the opportunity and indirect costs provoked by MPAs were not (or at least not immediately) compensated by the expected and delayed benefits. He noted the importance of alternative income generating activities (AIGAs) to compensate or mitigate these immediate losses, noting, however, the strong ongoing debate on their efficiency, adequacy, and sustainability. Work in that area was ongoing actively, including in the region. Mr. Garcia noted also the limited but growing amount of scientific and other information on social impacts which, with few exceptions, appeared far from insignificant (for the fisher communities). He reported on the problem created by the exportation of many AIGA benefits out of the fishing community, in capitals and abroad, particularly through tourism. He also noted that it was not always clear whether the negative social assessments published, e.g. in India, West and South Africa and Central America were only related to MPAs or to some extent also to the ambient degradation of conditions in the rural sector under globalization. Mr. Garcia also briefly described the various MPA-Fishery set-ups: (i) Neighbouring fishing grounds and MPAs; (ii) MPAs within fishing grounds; and (iii) Fishing grounds within large multi-use MPAs, stressing the different implications for governance. He stressed the complexity added by the 3-D nature of MPAs compared to terrestrial ones. He also recalled the limited tolerance of most IUCN categories types of MPAs for fisheries with the strong exception of low-impact subsistence fisheries and the possibilities offered by categories V and VI, provided the overriding conservation objectives were protected. Finally, Mr. Garcia highlighted very briefly: (i) the issues related to pelagic/migratory or highly migratory resources and fisheries; and (ii) the use of conventional space-time restrictions in fisheries as alternatives or complements to MPAs.

66. Following this presentation, the following issues were raised by the participants:

(a) The important role of “observatories” to collect all the information needed to better assess the role of MPAs on fisheries and fishery governance;

(b) The importance of decentralization and the principle of subsidiarity to increase the effectiveness of MPAs in fisheries;

(c) The importance of participation of key actors in the governance and the need for fisheries managers to really believe that these actors could help in the difficult tasks he /she faced;

(d) The development of AIGAs should be a prerequisite to any implementation of MPAs, particularly in areas where communities are extremely dependent on fisheries for their livelihoods; and

(e) The potential importance of trophic cascades in MPAs and the evolution of their impact with time.

#### **Socioeconomics of MPAs (7.4)**

67. Mr. Jeff Ardron (Technical Support Team) noted in his presentation that the CBD (and many other forums) emphasized the importance of using local knowledge in decision-making. However, collecting local knowledge was a time-consuming process that required trust-building, patience, and like all data-gathering, a systematic approach. Once the data was collected, it could require advanced GIS techniques to statistically make sense of the various pieces of “spaghetti” on the maps provided by various local users (e.g., fishers) – of varying precision, completeness and accuracy. After the information had been compiled into single summary layers, it could be used to inform cost-benefit analyses of MPA selection, using tools like Marxan. However, the balancing of many differing human uses was more difficult than it may first appear. A common way of comparing them had to be established; for example, numbers of jobs, or income produced. It was not straightforward deciding if five lower-paying artisanal fisheries jobs were worth more or less than one or two higher-paying industrial fisheries jobs. One way around these difficult decisions was to spatially assign zones for different activities, so that each had its

own share. This required good spatial socioeconomic data, however, which was often not available. Therefore, one had to begin by collecting it.

### **EBSAs, MPAs and VMEs: Different Tools, Shared Goals**

68. In the presentation delivered by Mr. Serge Garcia (Technical Support Team), he made three main points:

(a) MPAs, EBSAs and VMEs often, but not always, share goals and objectives. Therefore, there is room to increase the current level of cooperation. That said, there will be instances when MPAs are set up for reasons beyond just fisheries, and likewise, decisions will be made in the context of fisheries for reasons beyond the protection of biodiversity (e.g., delineating trawl zones).

(b) Building compliance into planning is essential. In nearshore areas this can often be achieved through local management arrangements. Further offshore, remote surveillance and enforcement will be necessary.

(c) Flexibility to adapt to new information, changing climate, or new concerns should be built into management plans through yearly updates as well as planned reviews (e.g., every 5 years or so).

69. A detailed discussion followed concerning institutional coherence, which included the following:

(a) A view that CBD might need to consider influencing institutional coherence at the national level on the implementation in marine and coastal areas (i.e., to resolve issues beyond the remit of the CBD national focal point);

(b) The importance of inter-agency cooperation on specific issues (e.g., for mangrove conservation in Nigeria);

(c) The potential of “independent” MPA agency e.g. the French MPA Agency; and

(d) The example of the Namibian Coast Conservation and Management Project.

70. Additional related presentations were made by Mr. Christophe Lefebvre (IUCN and French MPA Agency) who briefed participants on the plans for the Third International Marine Protected Areas Congress (Marseille and Corsica, France, 21 to 27 October 2013) and Mr. Woulter Rommens (Marine Programme, UNEP/GRID-Arendal) who provided an overview of an ecosystem approach model to be developed for application in Africa with the goal of facilitating pilot marine spatial plans. Both presenters stressed the link between these initiatives and the Aichi Targets and opportunities for awareness-building at a high level.

### **ITEM 8. SUBREGIONAL PARTICIPATORY FORUM ON LINKING SCIENTIFIC ASSESSMENT AND MANAGEMENT TOOLS TOWARD ACHIEVING AICHI BIODIVERSITY TARGETS, IN PARTICULAR TARGETS 6 AND 11**

71. Under this item, building on the above presentations and deliberations of the workshop in plenary session, participants were invited to split into two break-out groups, with an opportunity to further progress specific issues on the application of EBSA criteria, to discuss key challenges and barriers as well as opportunities in addressing Targets 6 (led by Mr. Serge Garcia and Ms. Merete Tansted) and 11 (led by Mr Jeff Ardron) within a context of integrated marine and coastal area management, and identify key strategies to address those challenges/barriers identified and enhance the progress in implementation, building upon identified opportunities.

72. Workshop participants in the plenary session reviewed the results of break-out group sessions and developed key messages for the workshop conclusion, including on data networking and partnership, sharing of management experiences and practices, multi-stakeholder collaboration, collaboration among

different global processes within the regional context and priority capacity-building needs at the regional level.

### **Key points of discussion and lessons learned in Target 6 group**

73. The break-out group session was tasked to address the implementation of risk assessment in an EAF framework, using simple multi-criteria decision analysis based on the use of a decision tree. The group decided to split itself into two sub-groups based both on common language and concern: (i) a francophone subgroup decided to deal with demersal high-value fisheries; (ii) an anglophone subgroup decided to address small-scale pelagic fisheries important for food security. Both exercises were based on fictional cases in that they were aggregating parameters and characteristics of many of the fisheries of that type in the region. The two subgroups decided not to include foreign fleets in their debates to limit the complexity of their exercise. Having defined which were the bio-ecological and socioeconomic issues, objectives, and risks in the fisheries considered, the two groups compiled their respective risk assessment matrix.

74. Recognizing that dealing with real fisheries would call for much longer processes, with high levels of participation, the participants noted, however that:

(a) The FAO risk assessment process helped in providing a clear road map for integrating knowledge into the management process;

(b) It also provided the scientists with a solid, well documented, argument for fishers as well as managers, integrating all concerns and prioritizing them, hence clarifying and streamlining the interaction;

(c) The use of colours (red, orange, and green) to represent risk was very useful in terms of communication of the conclusions to stakeholders;

(d) The approach seemed to be more adequate for local areas and fisheries than at national, sectoral or regional levels. The response clarified that this impression was related to the fact that “single” fisheries has been considered in the exercise but that the approach could be adapted and used at all scales.

(e) The risks to be considered should be at local (resources and community) level as well as at national (sub-sectoral and sectoral levels) and regional level (for shared or straddling resources).

75. It was also stressed that in future training courses of this kind, it would be useful to have a set of fisheries fully described beforehand (in training documents) that trainees could select from and use for the demonstrations.

### **Key points of the discussion and lessons learned in Target 11 group**

76. This break-out group session provided an opportunity to share lessons learned—both challenges and successes—from other West African countries. Two main topics were: 1) inter-ministerial cooperation; and 2) surveillance, enforcement and compliance.

77. Cooperation: The positive and negative aspects of bringing together conservation and fisheries interests were discussed. Many examples were provided of problems arising from having separate ministries for fisheries and conservation. One example of a country where they were at one time the same ministry and then split apart illustrated how this led to many challenges. However, several participants pointed out that while there were problems in the national institutional arrangements, in the field the officers often cooperated and collaborated. The positive role of non-governmental organizations (NGOs), which provide additional funding and expertise, was highlighted. Many stressed that the MPA process was very slow, often taking much more than ten years. All agree they were still some distance away from achieving ecologically coherent MPA networks.

78. Compliance: Due to limited management resources, MPAs and fisheries closures were often poorly monitored and hence many illegal activities, particularly fishing, were still occurring. Everyone agreed on the importance of compliance, both top-down (surveillance and enforcement) and bottom-up (community management that benefits the local communities). In one case, illegal fishers were re-trained to become part of the surveillance personnel. The point was made that fisheries are often seen as less significant than drug trafficking and tracking threats of terrorism. The value of integrated enforcement, where all vessel information is shared, was suggested. Scientific studies could also be used to help, as another set of “eyes on the water”. Basic tools, like radios and boats, were often desperately needed. Once again, the positive role that NGOs could play was highlighted. Many agreed on the value of ongoing communication with locals as well as annual consultations. Some feared that offshore oil development would override coastal conservation concerns and that this industry would need stringent surveillance and compliance mechanisms.

79. An information session was held to ensure that those participating in the South-Eastern Atlantic Regional Workshop to Facilitate the Description of Ecologically or Biologically Significant Areas (Namibia 8-12 April, 2013) were aware of the template for submission of scientific information to describe EBSAs. This session gave participants the opportunity to address any final questions they had about EBSA criteria and the data or information that could be used to support descriptions. Participants were able to begin the process of describing areas and completing the template. A preliminary 31 areas meeting EBSA criteria were discussed by participants for description at the forthcoming meeting in Namibia.

### **Priorities going forward**

80. In a follow-up participatory session, participants sub-divided into the three natural Large Marine Ecosystem groupings for West Africa, namely the Benguela Current (BCLME), Guinea Current (GCLME) and Canary Current (CCLME). These groups reflected on actions to be taken forward to the South-Eastern Atlantic EBSA workshop and beyond. Outcomes of these discussions included the following:

(a) BCLME group: recognized the value of extending the South African spatial plan and potential for consideration of transboundary EBSAs. Engaging at a national level to refine proposals for descriptions of areas meeting EBSA criteria was considered essential. The need to expand MPA networks and undertake a gap analysis at a regional level was acknowledged but this needed funding support to implement actions. For sustainable fisheries a regional risk assessment and recovery plan for transboundary stocks was considered a priority, as was linking fisheries measures to the MPA network.

(b) GCLME group: made assumptions concerning data availability and considered that support was needed to help organize the collection and validation of such data in order to describe areas meeting EBSA criteria in the region. For sustainable fisheries the value of priority monitoring actions and risk assessments using the EAG approaches were recognized. Technical assistance and financial support were required to address these needs. For MPAs some countries had already established MPAs, others had not – thus needs were different. Developing a strategic approach for the region was advocated, taking into account specific regional biology and migratory species.

(c) CCLME group: sought to foster regional cooperation to describe EBSAs and recognized that they could build upon gap analyses already undertaken, taking into account the impacts of climate change and important pelagic ecosystems. Assessing the effectiveness of managing MPAs was considered to be important for mainstreaming both Aichi Targets 6 and 11

**ITEM 9. CONCLUSION**

81. Participants were invited to consider and adopt the key messages of the workshop conclusion on the basis of a summary prepared and presented by the Secretariat and the workshop rapporteurs, as described in annex II.

**ITEM 10. CLOSURE OF THE WORKSHOP**

82. Closing statements were provided by the representatives of the CBD Secretariat, the Abidjan Convention Secretariat and the Government of Senegal. Workshop participants expressed their appreciation to the host Government for their great hospitality as well as to the Secretariat of the Convention on Biological Diversity and the Abidjan Convention Secretariat as well as Technical Support Team members for efficient and effective conducting and servicing of the workshop.

83. The workshop was closed at 5 p.m. on Friday, 8 February 2013.

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*Annex II*

**SUMMARY OF WORKSHOP KEY MESSAGES**

**General**

1. **National inter-ministerial cooperation:** Providing comprehensive data for EBSAs, and achieving Aichi Target 6 (sustainable fisheries) and Aichi Target 11 (marine protected areas), which are inter-related, will benefit from political coherence at national level and the active cooperation of relevant ministries (i.e. Environment, Natural Resources and Fisheries). Furthermore these two targets should not be seen in isolation from the other Aichi Targets.

**Target 6 and the Ecosystem Approach to Fisheries**

2. **Community co-management of fisheries resources:** Visiting a Senegalese fishing community (Cayar) illustrated the benefits of sustainable management principles which are cooperatively developed and enforced by local people (representative associations). The benefit of collaboration with an NGOs (both environmental and fishery sectors) was also highlighted.
3. **Ecosystem approach to fisheries:** There are several pilot initiatives on EAF implementation, including within the EAF Nansen and CCLME projects and lessons learned could be shared among countries
4. **Vulnerable Marine Ecosystems:**  
Along the coast of West Africa, SEAFO has, as a precaution, closed areas to protect potential VMEs and established management measures. CECAF has an advisory mandate on the high seas but there are no deep-sea fisheries in ABNJ

**Target 11 and Marine Protected Areas**

5. **MPAs:** It was recognised that countries had made varying levels progress designating MPAs with some countries having only established a small number of MPAs, or none at all. It was recognised that some countries have already included plans for marine protected areas in their Plans of Action for the CBD programme of work on protected areas, noting the development of Protocol on MPAs is underway under the Abidjan Convention. It was also noted that EBSA descriptions, when combined with socio-economic data, would be useful when identifying possible MPAs.
6. **MPA networks:** The value of representative networks of MPAs was underlined, including coastal areas, open-ocean waters and deep-sea habitats, and marine areas beyond national jurisdiction. Currently, almost all protection in West Africa is in coastal areas.
7. **Meeting Aichi Target 11:** The meeting agreed that in order to achieve Aichi Target 11, much more work from West African countries will be required. It was noted that the 10% global target applies not only to territorial waters but to all marine areas. It was emphasised that ecology recognizes no boundaries and that coherent networks of MPAs will require protections across national boundaries. Therefore, countries are encouraged to cooperate, exchange data, and assist one another in this shared objective.

**Ecologically or Biologically Significant Marine Areas (EBSAs)**

1. **EBSAs and management implications:** EBSAs are special places for biodiversity, as described against agreed CBD criteria. Due to their particular ecological value, EBSAs (or parts thereof) may require enhanced implementation of management measures, such as MPAs or fisheries

closures and other measures for conservation and sustainable use. However, the current CBD process on EBSAs should be seen as scientific descriptions only. Any possible management measures are the responsibility of the States and competent organizations. EBSAs can be described for all marine areas, including the open ocean waters and deep sea habitats as well as coastal areas.

2. **Data/Information/knowledge:** There are significant biological and physical data/information/knowledge, including traditional knowledge, requirements involved in the description of EBSAs. Countries should facilitate the access to nationally held datasets of relevance to the EBSA description process. Countries should also make all efforts to facilitate sharing of data at subregional and regional levels, in particular regarding shared marine resources. Researchers and research institutions should be actively encouraged to share their data through data-sharing agreements that provide assurances with regard to proper usage and publication rights.

### **Future actions**

1. National and subregional actions on each of the themes of the Workshop were scoped by participants and potential areas for further support identified.
2. A way forward to consolidate provision of relevant scientific information for descriptions of areas meeting EBSA criteria in South-eastern Atlantic region (to be undertaken by CBD regional workshop on EBSAs to be held in Namibia, 8-12 April 2013) was agreed.
3. **Forthcoming meetings and the Sustainable Ocean Initiative:** Opportunities were identified including additional SOI capacity-building workshops in other regions, IMPAC3 (21-27 October 2013), CBD SBSTTA 17 (Oct 2013)/18 (June 2014), and CBD COP 12 (Oct 2014), Abidjan Convention COP 11 (Mar 2014) to promote the SOI vision and mission.

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