Global Ocean Biodiversity Initiative

Newsletter
Spring 2016

Federal Agency for Nature Conservation

# Spring 2016 expert meetings seek to inform SBSTTA-20

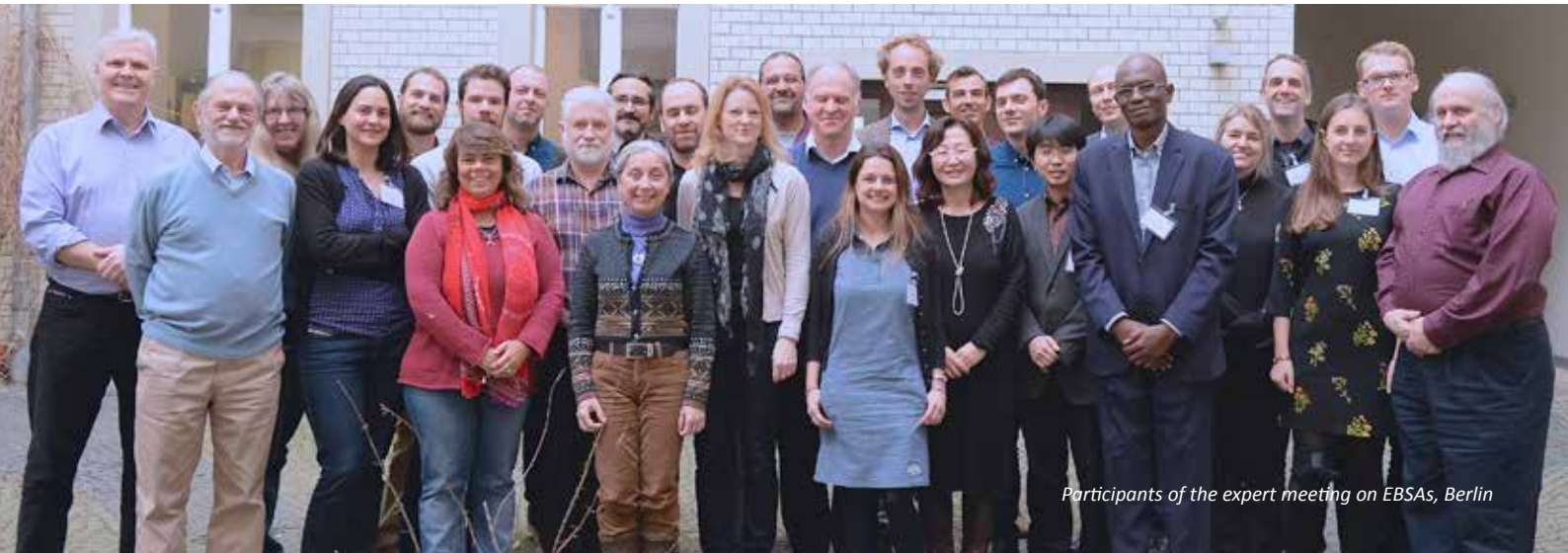
*David Johnson, GOBI Coordinator*

During the first quarter of 2016 the Secretariat of the Convention on Biological Diversity and the Secretariat of the Global Ocean Biodiversity Initiative convened three expert meetings, each providing an opportunity for substantive informal discussions informed by background documents and presentations, in the run up to CBD SBSTTA 20.

Firstly, on 22-24 February 2016 experts met in Berlin to share experiences and lessons learned on the scientific methodologies and approaches for the description of EBSAs. This meeting sought to develop future practical options drawing on the experience of experts who have been actively involved in the Regional EBSA Workshops. Those present recognized the EBSA process is open and continuous, providing information on the inherent value of marine biodiversity to assist States and competent Intergovernmental Organisations in their efforts to make any appropriate management interventions. The Chair, Pat Halpin (MGEL, Duke University), initially set out five key future challenges: i) updating and refining individual EBSA descriptions; ii) categorizing EBSAs to better explain them as fixed or dynamic features; iii) introducing more systematic methods to complement the expert driven process adopted to date; iv) considering geographical areas and ecological features not considered to date; and v) using EBSA descriptions to influence global ocean research agendas.

The meeting noted that sufficient experience has been gained during a productive five years of EBSA workshops to warrant such reflection. Consistent scientific and technical data gathering has provided workshops with useful baseline information augmented with regional knowledge and supported by national EBSA processes. Follow-on processes in West Africa were also recognized as very positive. Challenges have arisen in instances when there were lack of nominated experts to regional EBSA workshops, when relevant information was been difficult to access and where regions were subject to geopolitical constraints. Many of the key issues noted are linked to data, such as assumptions about completeness and comparability of datasets and challenges in conveying information to different audiences. The meeting examined how different EBSA criteria have been applied. Typically EBSAs meet several criteria rather than only one, suggesting the majority of areas described have multiple values. Experts also considered challenges associated with capacity building and noted examples of good practice.

Critical for the future application of EBSAs will be how to include new information, and determination of a threshold beyond which any changes to an EBSA description will need CBD COP approval. At the same time consideration must also be given to how to deal with any degraded EBSAs and identification of which areas should be reassessed if and when background reference conditions change. Working groups within the meeting considered issues such as making best use of traditional knowledge, different approaches for incorporating new scientific information and improving 'visibility' of EBSAs (for example, promoting EBSAs in National Biodiversity Strategic Action Plans). *[Continued over]*



*Participants of the expert meeting on EBSAs, Berlin*

*Puri Canals presents case studies from the Mediterranean region*

The second CBD-GOBI expert meeting also took place in Berlin, from 24-26 February 2016, to share experiences and lessons learned on achieving qualitative elements of Aichi Biodiversity Target 11 in marine and coastal areas. Co-chaired by Jake Rice (DFO, Canada) and Puri Canals (MedPAN), this meeting looked in detail at the different elements of Aichi Target 11 as applied to the marine environment. In particular participants sought to better understand the precise meanings of the terms ecologically representative, areas of particular importance for biodiversity and ecosystem services, effective management, equitable management, well-connected systems, and integration of protected areas into wider seascapes.

Consideration was given to the differences between marine protected areas (MPAs) and 'other effective conservation measures' (OECMs). Participants shared a series of insights on OECMs, noting the need for better guidance and work underway in an IUCN Task Force. Ecological coherence of MPA networks was also discussed, accepting that ultimately such networks should incorporate the full range of marine ecosystems, habitats, biotic diversity, ecological processes and environmental gradients. This prompted discussion on spacing and size of MPAs and degree of replication required to achieve conservation objectives.

Finally, on 2 April 2016 in New York, an expert meeting to discuss biodiversity and acidification in cold-water areas was chaired by David Johnson (GOBI Secretariat). The purpose of this meeting was to comment on a draft specific workplan (UNEP/CBD/SBSTTA/20/4) including considerations for monitoring and research needs. Ocean acidification is intensifying rapidly and in an unprecedented manner. Areas most at risk support, for example, deep-water reefs which in turn form important habitats for other species. The deep ocean is also vulnerable to a range of stressors, most of which are anthropogenic in nature. For this meeting, background presentations covered both current scientific understanding and an overview of policy responses. For pragmatic reasons a specific definition of 'cold-water' areas excluded polar waters as well as shallower coastal areas.

The meeting had a detailed discussion on 'resilience', noting different types of resilience relevant to biological diversity. Activities set out in the draft specific workplan were examined in detail and further small group discussion commented on associated strategic, scientific and regional issues. Participants concluded that large-scale changes affecting the world's oceans need to be addressed despite significant scientific uncertainties. To this end they welcomed Sustainable Development Goal 14, recognised different sectoral responsibilities and initiatives, and noted research gaps such as lack of good predictive studies below 2000m water depth.

The Secretariat to the Convention on Biological Diversity has scheduled side events within SBSTTA 20 to highlight key messages from all three meetings.

*Below: Particpants of the CBD-GOBI expert meeting on biodiversity and acidification in cold-water areas, New York, 2 April 2016.*

# UN takes significant step towards a new treaty to conserve marine life beyond boundaries

*Kristina Gjerde and Hiroko Muraki Gottlieb, IUCN*

In response to mounting concerns about declines in ocean health, States at the United Nations (UN) recently delivered some good news. The first of four two-week UN Preparatory Committee sessions concluded on a positive note on Friday 8 April 2016 by identifying key elements for a new treaty to better protect and sustain the marine environment and marine life in the two thirds of the ocean beyond national boundaries and adopted a roadmap for the path ahead. The next session will be convened from 26 August to 9 September 2016.

These discussions revealed broad-based agreement on three of the four main topic areas, including the need for precautionary action to sustain the health of species and ecosystems through networks of marine protected areas; the need to review the impacts of human activities prior to approving them so that measures can be taken to avoid significant adverse harm, and the need to build capacity and share technologies to ensure effective implementation of the agreement.

Significant progress was also made on the fourth - and most contentious - issue: how benefits derived from marine genetic resources from the high seas and the international seabed Area might be shared amongst the global community. While differences remain as to whether living marine resources in the high seas and the international seabed Area are or should be part of the 'common heritage of mankind,' discussions are now turning to pragmatic approaches as to how and what kind of benefits might be fairly and equitably shared. States also shared in recognizing the importance of enhancing marine scientific research and exchanging information, which can enable developing and developed countries to better manage marine activities and to conserve marine life.

Recommendations for draft elements for a new agreement under the 1982 UN Convention on the Law of the Sea are to be delivered to the UN General Assembly by the end of 2107. Though many tough challenges remain, it is widely hoped that a decision to launch formal negotiations to draft the text of a new treaty based on the PrepCom's recommendations will be taken by 2018.

At stake is no less that the future health of the global ocean and its role in sustaining and nourishing life on this planet. As revealed in the recent First World Ocean Assessment released by the UN in January 2016, the ocean has already absorbed more than 93% of heat generated by increasing $CO_2$ emissions, buffering impacts on land. In the process, however, is it becoming warmer, more acidic and less oxygenated. Such impacts are decreasing the ability of many marine species to find food, reproduce and tolerate the many additional stresses inflicted by overfishing, pollution and habitat degradation. Combined, these changes may threaten ocean productivity, biodiversity and food supplies.

That is why a robust new treaty is essential. "Saving the high seas and international seabed Area is beyond the capacity of any one nation: international cooperation is essential," said IUCN's Kristina Gjerde. "Despite some continuing disagreements on principles and priorities, it is hoped that nations can keep the spirit of the 2015 Paris Agreement alive, paving the way for a new treaty that puts the common interests and common concerns of all States and peoples at its heart and central core."

GOBI partners present at the first PrepCom meeting included the GOBI Secretariat, IUCN, Duke University, IASS and others.

# The East Asia Seas Regional EBSA workshop

## Xiamen, China, 14-18 December 2015

*David Johnson, GOBI Coordinator*

The 12th Regional Workshop to facilitate description of Ecologically or Biologically Significant Areas (EBSAs) took place in Xiamen, China, hosted by the Government of China (Ministry of Environmental Protection) on 14-18 December 2015. The Workshop was preceded by a training event covering scientific aspects of EBSA criteria and potential use of EBSA information to support implementation of the ecosystem approach. The geographic scope of the Workshop overlapped with the NE Indian Ocean Regional Workshop with respect to the waters of Myanmar that had not been fully considered previously.

*Above: the opening ceremony of the East China Seas EBSA worskhop, from left: Mr Bai Chengshou, Deputy Director General of the Nature and Ecology Conservation Department of the Ministry of Environmental Protection of China; Mr Chen Ning, Fujian Provincial Environmental Protection Department, and Ms Jihyun Lee, Environmental Affairs Officer for Marine and Coastal Biodiversity, Science, Assessment and Monitoring*

Following what is now a well-established precedent, this Workshop organised technical considerations within three sub-groups: intertidal areas, nearshore areas and open ocean/ deep-sea areas. At the outset these considerations were informed by scientific presentations pertinent to the region and and explaination of the data available to participants. Southeast Asia is recognized as a global hotspot for marine biodiversity. The Workshop acknowledged this, endorsing an overview of the ecological or biological significance of the entire region in relation to other regions globally. The overview outlined the importance of varied bathymetry (from shallow continental shelf shorelines to deep ocean trenches), diversity of physical features including numerous islands, highly dynamic water circulation patterns, extensive coastlines including major deltas, and highly diverse reef systems. The region includes the Coral Triangle with exceptional concentrations of species, many of which are endemic. The deep-sea pelagic environment supports important spawning areas and migratory species of seabirds, mammals and turtles.

The Workshop was also informed about the East Asian-Australasian Flyway Partnership (EAAFP). Mr Spike Millington ,representing EAAFP, explained that some 50 million migratory waterbirds of more than 250 populations depend on sites within this flyway, now threatened by loss and degradation of intertidal habitat, particularly due to reclamation in East Asia. Mr Millington proposed that a network of intertidal sites might constitute a single area meeting EBSA criteria, particularly stressing the importance of connectivity. This represents an interesting development in the application of EBSA criteria. It is a transboundary issue requiring an international response based on scientific studies showing projected population losses of different shorebird species experiencing high rates of decline year on year. For example, it is predicted the Spoon-billed Sandpiper will become extinct by 2020 if no action is taken. An IUCN situation analysis on east and southeast Sian intertidal habitats, with particular reference to the Yellow Sea (including the Bohai Sea), assessed the ornithological importance of 395 sites with significant tidal flats. This analysis informed discussion at the EBSA Workshop taking into account globally threatened and near threatened wader species and other waterbirds, overall wader abundance, and wader populations of international importance (1% of their biogeographical population).

*Workshop Co-Chair Mr Loke Ming Chou (Singapore) - standing with yellow tie - listens in on EBSA group working discussions. He is Adjunct Research Professor at the National University of Singapore*

The workshop described more than 30 areas meeting the EBSA criteria. An important contribution was a national EBSA description process undertaken by the Government of Japan that has compiled ecological information in the South Asia region. The outcome of this Workshop, together with EBSA descriptions from both the Northeast and Northwest Indian Ocean Regional Workshops will be considered by SBSTTA 20 (25-29 April, 2016) and, subject to any recommendations, at CBD COP 13 in December 2016.

GOBI participants included colleagues from CSIRO and the GOBI Secretariat. CSIRO collated scientific information providing technical support to the Workshop and summarized the bioregions of the Seas of East Asia as described by the Marine Ecoregions of the World. EBSA Workshops have developed over time, recalling and interpreting COP guidance on EBSA criteria. GOBI Partners were able to assist the Secretariat to ensure consistency between workshops and by providing examples of previous decisions. GOBI also contributed to the workshop discussion on identification of gaps and need for further elaboration of EBSA descriptions. Scientific gaps were identified by each of the three sub-groups and the complexity of nearshore habitats was emphasized as a challenge.

*Above: Co-Chair Mr Zhengguang Huang (Senior Engineer at South China Institute of Environmental Sciences) highlights significant ecological features during discussion.*

# GOBI convenes annual meetings of partners and Advisory Board members

The GOBI partnership came together for its annual meeting on the evening of Wednesday 24 February 2016. Hosted at the NABU headquarters in Berlin, representatives from twelve GOBI partner organisations met to discuss achievements over the past year, and to plan activities for the year ahead.

Chaired by Henning von Nordheim (BfN), much of the meeting centred on the busy schedule of GOBI-relevant meetings coming up in 2016, starting with the CBD expert meetings in early spring (see front page), progressing through the first BBNJ Prep Comm meeting in New York and SBSTTA-20 in Montreal, and leading on to the International Marine Conservation Congress event in Newfoundland at the end of the summer (see the back page of this newsletter). The year will be rounded off with the CBD COP13 meeting in Mexico in December. GOBI will have a strong presence at all these events.

David Johnson, GOBI Coordinator, presented a brief overview of the GOBI Secretariat's activities over the past 12 months. In addition to attending a large number of meetings and workshops, a key activity for the Secretariat has been the preparation and submission of €5 million proposal to the German Climate Change Initiative (IKI) to fund an exciting suite of activities designed to advance the practical application of EBSA data and to further strengthen the information supporting EBSA descriptions. The proposal also provides for a further 5 years of funding to support the GOBI Secretariat operation. The project is currently planned to start in May 2016, subject to approval of funding from the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB).

The 8th GOBI Advisory Board meeting took place in New York on the evening of 30 March 2016, in the margins of the first meeting of the BBNJ Preparatory Committee. Organisations represented at the meeting included CBD Secretariat, International Seabed Authority, Food and Agricultural Organization, United Nations Environment Programme, United Nations Division for Ocean Affairs and the Law of the Sea, and IOC's Ocean Biogeographic Information System. The meeting proved a fruitful platform for exchange of information on the multitude of GOBI-relevant activities currently underway or planned in the near future by these organisations.

Both meetings highlighted the importance of 2016 for advancing the marine conservation agenda, and GOBI's role in continuing to provide scientific advice and expertise in support of these activities.

# Sustainable Ocean Initiative delivers capacity building to the East African region...

The Sustainable Ocean Initiative (SOI) is a global platform to build partnerships and enhance capacity to achieve the Aichi Biodiversity Targets related to marine and coastal biodiversity. Conceived in the margins of the CBD COP-10 meeting, SOI has advanced as a global programme of partnership meetings, capacity uilding and knowledge exchange workshops and other training opportunities, as well as an information exchange network, with the support of a range of national and international partners. The implementation of SOI activities are being coordinated by the Secretariat of the Convention on Biological Diversity (S-CBD).

In line with the activities described in the SOI Action Plan 2015-2020, a Regional Capacity Development Workshop for East Africa took place in Nosy Be, Madagascar, from 18 to 22 January 2016. This event was organised by S-CBD in collaboration with the Nairobi Convention Secretariat and the Western Indian Ocean Marine Science Association (WIOMSA) as well as experts from GOBI, including CSIRO and WWF-Madagascar. The workshop was hosted by the Government of Madagascar and financially supported by the Government of Japan through the Japan Biodiversity Fund, and the Government of France via the French Marine Protected Areas Agency (Agence des aires marines protégées).

The workshop focused on supporting enhanced national implementation towards achieving the Aichi Biodiversity Targets in marine and coastal areas, in particular by strengthening the capacity of policymakers, managers and scientists in the region in to use marine spatial planning (MSP) as an approach for enhanced cross-sectoral coordination, planning and management. The workshop also built on regional experiences in integrated marine and coastal area management, the description of EBSAs, and the application

of impact assessments, such as environmental impact assessments and strategic environmental assessments.

The 45 workshop participants (pictured above) comprised officials and experts in fields related to marine biodiversity conservation, fisheries management and other areas of marine resource planning and management from countries and relevant organizations in the region. The workshop was targeted at individuals responsible for addressing Aichi Biodiversity Targets in marine and coastal areas, in particular within the context of national biodiversity strategies and action plans (NBSAPs) and integrated marine and coastal area management at national and/or regional levels. It is expected that participants would be able to translate the knowledge and skills gained during the workshop into concrete actions in support of implementation at national and/regional levels.

The emphasis of the workshop was therefore on exchange of information and experiences, active learning of skills and tools, and building regional-level networking and partnerships for continuous information-sharing and capacity-building to facilitate progress towards the achievement of the Aichi Biodiversity Targets in marine and coastal areas. With this in mind, the workshop format featured a mix of presentations with question-and-answer sessions, plenary discussion, interactive group exercises, discussions in breakout groups, and participatory forums. Resource speakers were drawn from a range of organisations around the world and included GOBI partner Dr Piers Dunstan from CSIRO.

More information about the Sustainable Ocean Initiative can be found at https://www.cbd.int/soi. The full workshop report can be downloaded at https://www.cbd.int/doc/?meeting=SOIWS-2016-01.

*Left and above: Participants at the SOI training workshop in Nosy Be, Madagascar.*

# ...and to Namibia

A National Capacity Workshop for Namibia was held in Swakopmund, Namibia, 13-16 October 2015 under the auspices of the Sustainable Ocean Initiative (SOI), in line with SOI's focus on achieving a balance between conservation and sustainable use of marine and coastal biodiversity by applying an action-orientated, holistic and integrated capacity-building framework. SOI is evolving as a global platform to build partnerships and enhance capacity to achieve the Aichi Biodiversity Targets and is committed to building bridges between the biodiversity conservation and resource management sectors.

The Workshop was convened jointly by the CBD Executive Secretary and the Government of Namibia, with financial support from the Government of Republic of Korea (through the EXPO 2010 Yeosu Korea Foundation and the Korea Maritime Institute) as well as the Federal Republic of Germany (through the BCC-GIZ Benguela Current Marine Spatial Management and Governance Project, financed by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, BMUB).

It was co-chaired by Dr Moses Maurihungirire (Permanent Secretary of the Ministry of Fisheries and Marine Resources) and Dr David Johnson (GOBI Coordinator) with a focus on identifying the potential impacts of commodity mining activities in the context of the environmental and socioeconomic values of Namibia's marine resources. The intention was also to enhance the capacity of relevant policymakers and managers in Namibia to apply integrated assessment and planning tools to strengthen existing national efforts toward the long-term sustainable development of Namibian marine resources. Workshop participants explored the use of tools and approaches such as the application of biodiversity-inclusive impact assessments (i.e. environmental impact assessment and strategic environmental assessment) and marine spatial planning. It was particularly valuable to have participation from participants from the Ministry of Environment and Tourism, Ministry of Fisheries, Ministry of Mining and Energy and Ministry of Transport contributing to ideas and insights for a long-term vision for the sustainable development of marine resources and conservation of marine biodiversity in Namibia. Sharing experiences from South Africa and New Zealand also enriched discussions on cross-sectoral coordination and decision-making. Key issues recognised by participants were the unique coastal upwelling and exceptional productivity of the Benguela Current system, a need for data sharing to promote better scientific understanding of ecosystem functioning and the importance of understanding and applying opportunity cost scenarios linked to resource management.

The full report of the workshop can be dowmloaded at https://www.cbd.int/doc/?meeting=SOIWS-2015-03

*Namibia's marine environment: a major coastal upwelling ecosystem important for fisheries resources, non-living natural resources and marine biodiversity. Photo D. Johnson*

# The Biology and Ecosystems Panel of GOOS:

## Towards the identification of priorities for global monitoring of marine biology and ecosystems

*Nic Bax, CSIRO*

The International Ocean Commission of UNESCO, through the Biology and Ecosystems Panel of the Global Ocean Observing System (GOOS) is supporting a workshop on marine monitoring convened by the CBD Secretariat in conjunction with SBSTTA 20. The GOOS BioEco Panel aims to develop and coordinate international efforts to implement a sustained and targeted global ocean observation system of essential ocean biological variables, driven by societal needs. This information is crucial to inform priority scientific and societal questions that will facilitate critical policy development and management decision-making on ocean and coastal resource sustainability and health.

Continuous, long-term observations are needed in order to know if, and how, ocean life is responding to human use, as well as to effectively mitigate or manage adverse changes, predict potential future changes and plan accordingly. Not all ocean life can be monitored everywhere, anytime, nor needs to be. Relevant changes in marine biodiversity, its function, and the services it provides can be detected by monitoring some of its essential variables. In addition to being scientifically credible in terms of providing an indicator of change, these biological essential ocean variables (EOVs) should be based on (1) their relevance in helping to solve science questions and addressing societal needs, (2) their contribution to improving management of marine resources, and (3) their feasibility and practicality for global measurement in terms of cost, available technology, and human capabilities.

To identify biological and ecosystem EOVs, the Panel followed a DPSIR process (Drivers-Pressures-State-Impact-Response). Societal drivers and pressures requiring sustained global ocean observations were identified by analyzing the goals and societal issues addressed by more than 20 major international bodies and/or conventions, either binding or non-binding.

The main drivers identified in these conventions are included in Table 1, and included development, sustainable use and conservation; improved access to scientific knowledge and data, including capacity building; and improved management through an integrated ecosystem approach. More specific drivers were prevention and mitigation of threats, food security and environmental quality.

The main pressure identified (Table 1) was the loss of resources including habitats and biodiversity, with specific pressures including climate change, variability and ocean acidification; coastal development, pollution (including eutrophication), solid wastes and noise; invasive species; and to lesser degree mining.

| DRIVERS | % | PRESSURES | % |
|---|---|---|---|
| Knowledge: science / data access | 74 | Loss of resources: habitats / biodiversity | 91 |
| Sustainable use: biodiversity and resources | 74 | Climate change | 48 |
| Conservation: biodiversity and ecosystems | 65 | Pollution / eutrophication | 48 |
| Development: sustainable economic growth | 61 | Coastal development | 39 |
| Capacity building | 57 | Invasive species | 35 |
| Improve management: integrated ecosystem approach | 61 | Solid wastes | 30 |
| Threat prevention and impact mitigation | 35 | Ocean acidification | 22 |
| Food security | 26 | Extreme weather events | 22 |
| Environmental quality: health | 26 | Noise | 22 |
| | | Mining | 9 |

*Table 1 (above): Summary of societal drivers and pressures identified and percentage of international bodies addressing each of them.*

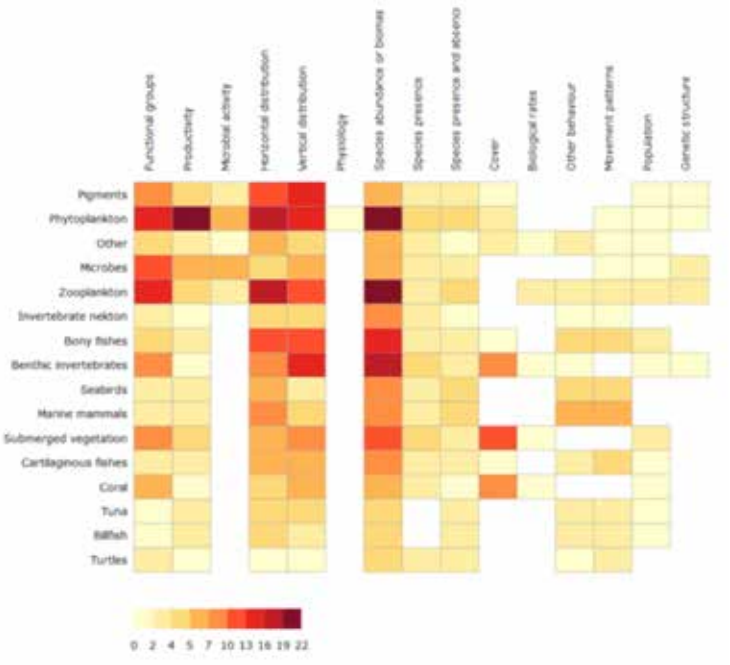



*Figure 1 (right): Summary of survey results showing the main variables measured for each of the taxonomic groups and ecosystems. The scale indicates the number of observing systems measuring each of them.*

| STATUS OF FUNCTIONAL GROUPS | HEALTH OF LIVING ECOSYSTEMS |
|---|---|
| | |
| Phytoplankton biomass and productivity | Seagrass cover |
| Incidence of harmful algal blooms | Macroalgal cover |
| Zooplankton diversity | Live coral cover |
| Fish distribution and abundance | Mangrove cover |
| Apex predator distribution and abundance | |

The current state of ocean observation of biological and ecosystem variables was assessed through an on-line survey completed by more than 50 major global and large-scale regional observing networks or programs. The survey compiled information on the extent of observations in terms of geographic area, temporal and spatial scales, biological and ecological variables measured for the different taxonomic groups and ecosystems, and data availability and readiness.

To identify EOVs, the Panel is also building on scientific expertise and existing frameworks such as the Australian Integrated Marine Observing System (IMOS), the US Integrated Ocean Observing System (IOOS), the Panel for Integrated Coastal Observations (PICO) plan, and the Southern Ocean Observing System (SOOS), among others. This process has led to nine proposed EOVs within two categories or phenomenon of interest (Table 2).

*Image: Eduardo Klein*

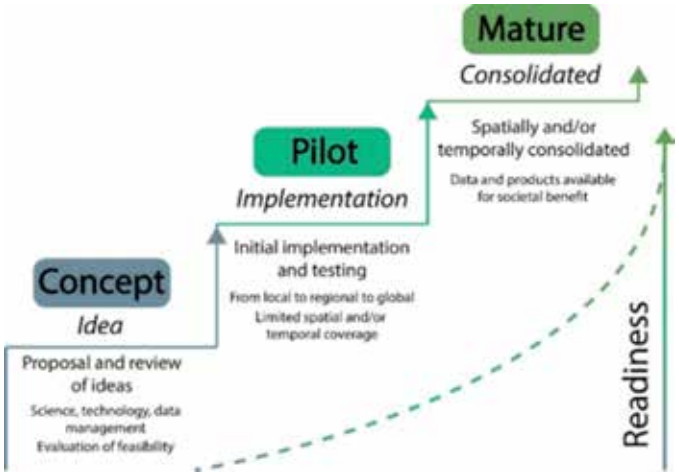



*Table 2 (above left): Proposed EOVs for Biology and Ecosystem health of marine ecosystems. Figure 2 (above): The concept of readiness levels (Modified from FOO 2012).*

The variables identified with the highest level of readiness for implementation at a global scale were those related to zooplankton and coral reefs. These proposed EOVs will now undergo a process of consultation and validation with the scientific observing community who will build specification sheets within GOOS standards, including the concepts of readiness (Figure 2).

The next steps in the action plan of the GOOS BioEco Panel are:

- Complete specification sheets for proposed EOVs
- Revisit EOVs incorporating comments from broader marine community
- Facilitate regional and global integration of existing biological observing networks to increase their value and reach
- Develop new, global biological observing networks as necessary to support sustained measurement of biological essential ocean variables
- Improve the communication of results from sustained monitoring of biological variables, thus increasing their contribution to decision making at local, national, and global scales

The outcome of these activities will be the development with the international community of an observation network of essential ocean variables to inform management of potential shifts of critical marine resources, encouraging best practices, standardization, and development of technology to facilitate sampling. This collective approach will strengthen data sharing and interoperability, and enhance capacity building and technology transfer.

*FOO 2012. A Framework for Ocean Observing. By the Task Team for an Integrated Framework for Sustained Ocean Observing (IFSOO).UNESCO 2012 (IOC/INF-1284). DOI: 10.5270/FOO*

## GOOS BioEco Panel

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*The GOOS BioEco Panel is supported by UNESCO IOC and the Oceans Institute of the University of Western Australia, the Australian Institute of Marine Science, CSIRO Australia and the Marine Mammal Commission, USA.*

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http://ioc-goos.org/biology

*Image: Eduardo Klein*

*Image: AK Carbonini*

# Protection of Banc d'Arguin National Park World Heritage Site and an adjacent sea area

*David Johnson, GOBI Coordinator*

Summary reports of EBSA Workshops are included in the EBSA repository and submitted to the United Nations General Assembly as well as its relevant working groups (CBD decisions XI/17 and XII/22). In paragraph 17 of decision XI/17, CBD Parties requested the CBD Executive Secretary to make scientific information and datasets compiled by the regional workshops available to Parties, other Governments and intergovernmental organizations for their use according to their competences. Descriptions of areas that meet the EBSA criteria have been noted by the International Maritime Organization at its Marine Environmental Protection Committee (MEPC). The following proposal (text taken directly from MEPC 69/INF.19) has drawn on EBSA data from the South Eastern Atlantic Regional Workshop to facilitate the description of EBSAs that took place in Swakopmund, Namibia on 8-12 April 2013. It provides a useful example of how an EBSA description can inform other processes.

## Introduction

Banc d'Arguin National Park (BANP) and an adjacent zone of the Atlantic (Gulf d'Arguin) can be described as an ecologically interconnected region of global significance situated at the junction of two biogeographic realms. Offshore, the most intense and persistent upwelling in the Western Palearctic provides the productivity in surface waters underpinning a system of critical ecological and biogeographic importance.

Banc d'Arguin National Park was inscribed on UNESCO's World Heritage List for its Outstanding Universal Value in 1989. At its thirty-eighth session in 2014, the World Heritage Committee reiterated its request to the Government of Mauritania to submit to the International Maritime Organization the request to designate the Banc d'Arguin region as a Particularly Sensitive Sea Area (World Heritage Committee Decision 38COM7B.62). MEPC 69/INF.19 Page 2 [1]

The area has been described by the Convention on Biological Diversity (CBD) as an Ecologically or Biologically Significant Area (EBSA) on the basis of meeting four criteria: i) ecological uniqueness/rarity; ii) special importance for life history stages of species; iii) biological productivity (upper 200 m), and iv) biological diversity. Establishing protective measures to ensure comprehensive protection of this sensitive area is beyond coastal state jurisdiction to be imposed unilaterally, and must be pursued through the appropriate international legal channels.

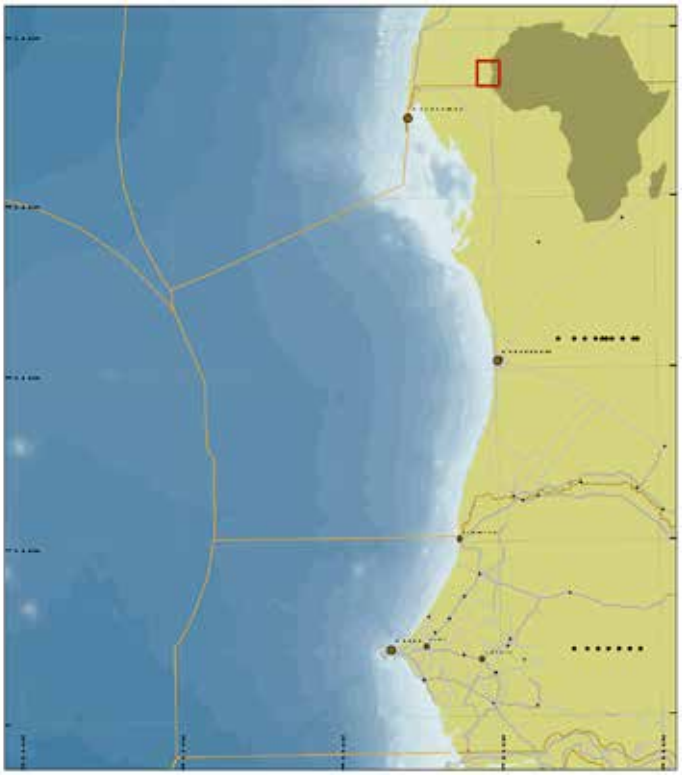

*Figure 1: Location of Banc d'Arguin (red box)*

## The Mauritanian Gulf d'Arguin upwelling zone

Geographically BANP is located on the Atlantic desert coast of Mauritania, midway between Nouakchott in the south and Nouadhibou in the north (refer to annex 1). The park extends from Cap Timiris in the south, including the Ile de Tidra, Ile d'Arguin and Cap d'Arguin, to Pointe Minou in the north. The park boundary extends a maximum of 60 km into the shallow sea and 35 km inland into the Sahara. However, the ecological connections of BANP extend offshore into the Exclusive Economic Zone (EEZ) of Mauritania and beyond. Most specifically this includes the Cap Blanc upwelling system, an extensive area that straddles the 200 NM limit thus falling both into, and beyond, national jurisdiction.

The continental margin off Mauritania is characterized by a relatively narrow shelf (30-40 km) and moderately steep slope of 2.5 - 3°. Extending offshore, between two large mud wedges, the Cap Timiris Canyon exhibits many fluvial features and an evolution characterized by large episodic sediment inputs. The Cap Blanc persistent oceanic upwelling zone off the Mauritanian coast is associated with the Canary Current. This

oceanographic feature is particularly pronounced to the west of Banc d'Arguin. South of Cap Blanc, upwelling is seasonal, occurring mainly in winter and spring.

BANP hosts the largest concentration of wintering wading birds in the world and one of the most diversified communities of nesting piscivorous birds. Of the 7 million wading birds that use the East Atlantic flyway, approximately 30% spend the winter at BANP. The Wadden Sea Flyway Initiative links the Wadden Sea with critical sites such as BANP along the East Atlantic Flyway in Africa. At least 108 bird species have been recorded and wintering shorebirds number over three million. Fish are one of the most important components of the marine fauna, the shallow tidal flats acting as important breeding and nursery areas. Socio-economically, the region is key to indigenous subsistence fishing communities, and offshore to commercial fishing with a developing oil and gas industry.

## International shipping near the Mauritanian Gulf d'Arguin upwelling zone

The ecological connections of BANP extend offshore into the waters used by international shipping. Analyses of the Gulf d'Arguin ecosystem draw an explicit oceanographic and biological connection between the rich upwelling Canary Current ocean water and its penetration in the shallows of BANP. Thus, in terms of vulnerability the two areas should be considered together. Current patterns suggest any pollution offshore is likely to be transported north and into the calmer waters of BANP (i.e. a natural importing system).

An analysis of global shipping movements and the specific movement of international vessels through the area clearly shows transit routes for different types of international vessels passing through the Mauritanian EEZ within close proximity to the BANP. This transit route is one of the most heavily trafficked routes in the North Atlantic. Between 400 and 500 million tonnes of hydrocarbons are shipped through Mauritanian waters each year. Ship specific risk, increase in vessel traffic levels, risks associated with interaction between international shipping and other activities (fishing and oil and gas exploitation), exacerbated by chronic poor offshore visibility, pose a real pollution threat to the region. In the vicinity of Baie du Levrier and in the MEPC 69/INF.19 Page 3 [2]

[1] *https://edocs.imo.org/Final Documents/English/MEPC 69-INF.19 (E).docx*

[2] *https://edocs.imo.org/Final Documents/English/MEPC 69-INF.19 (E).docx*

*Typical artisinal fishing vessel wihtin the Banc d'Arguin National Park. Image D. Johnson*

# New project will use earth observation data to protect, conserve and monitor marine wildlife

*Ben Lascelles, BirdLife International*

In January 2016 a new three-year project, EO4wildlife, funded by the European Horizon 2020 program for research and innovation, was launched. The multi-disciplinary collaboration between ATOS, Argos CLS, Agence des Aires Marines Protégées, BirdLife International, IT Innovation and the University of Exeter will explore how earth observation data can be better used to protect, conserve and monitor marine wildlife. The project will be guided by an advisory board including additional marine management bodies and scientific organisations.

EO4wildlife is planning to develop a tool that allows management authorities, biologists, ecologists, scientists and ornithologists to easily cross-reference their own data with those from various sources including satellite images from the European 'Copernicus' Earth monitoring program, Argos CLS geolocation and environmental data, scientific and environmental databases such as Wildlifetracking.org or Seabirdtracking.org, and more. The design of the platform will be informed by four different use case scenarios in the fields of wildlife movements, habitats and behaviour.

The first will focus on the French EEZ (including Overseas Territories) and explore how to set up tools for Marine Protected Areas managers which will: 1) allow them to predict the distribution of marine species with MPAs (e.g. Natura 2000 sites, OSPAR MPAs); 2) provide them with tools for surveillance of human activities in MPAs, and 3) model marine mammal habitat use via tools for cross-analysing oceanographic data with telemetry and/or observation data from intensive aerial surveys.

The second will explore how seabird tracking data (held at seabirdtracking.org) and oceanographic variables can be combined to develop predictive habitat utilisation and species distribution models. These could then be used to set up dynamic management tools for authorities (e.g. fisheries, shipping, Marine Protected Areas) to help them make real-time decisions to protect selected seabird species.

The third aims to enhance knowledge about Blue Fin Tuna migration routes, reproduction and feeding behaviours in the Mediterranean and North Atlantic regions.

The fourth will focus on marine turtles and look at approaches that can be used to define habitat preferences and environmental niches using environmental data to inform dynamic management scenarios. This use case will also explore how the EO4wildlife platform and SeaTurtle.org platform can be made interoperable.

Updates on the use cases and the platform development will be provided via the project website (eo4wildlife.eu), and presented at a range of conferences in the coming years. The EO4wildlife project is financed by the European Commission under Grant Agreement No. 687275.

# GOBI partners support the ABNJ Deep Seas Project

*Chris O'Brien, FAO*

The ABNJ Deep Seas Project, led by FAO and UNEP, brings together a broad range of partners working on deep-sea fisheries and conservation issues in the ABNJ. The partnership includes the GEF, regional fisheries bodies responsible for the management of deep-sea fisheries, Regional Seas Programmes, fishing industry partners and a range of international organisations and institutions. Six GOBI partners are involved: CBD, CSIRO, Duke University, IUCN, GRID-Arendal and UNEP-WCMC.

The ABNJ Deep Seas project focuses on four key areas of work:

### Improvements in policy and legal frameworks

- Working with legal experts to analyse existing policy and legal frameworks for sustainable fisheries and biodiversity conservation in the ABNJ Deep Seas, in particular the relevant UNGA resolutions and the International guidelines for the management of deep-sea fisheries in the high seas with the aim to develop practical tools to improve their implementation.

### Reduced adverse impacts on VMEs and enhanced conservation of components of EBSAs

- Improving understanding on areas of ABNJ where information is scarce, including decent work in deep seas fisheries, fisheries value chain analyses, the value of ecosystem services, and fishing impacts on deep-seas biodiversity;
- Working with FAO and the fishing industry to develop information tools such deep sea species identification guides, manuals on data collection, and at-sea electronic data collection applications to improve the biodiversity information collected from deep seas fisheries;
- Working with deep-sea regional fisheries bodies to identify best practices for VME protection and management and ensure this information is available to all relevant authorities;
- Supporting science and data partners to improve sharing of EBSA related information, promote data sharing, and the appropriate application of EBSA criteria.

### Improved planning and adaptive management

- Harnessing the expertise of the world's foremost fisheries scientists to identify keystone references and indicators for commercially-important deep seas fisheries species;
- Working with deep seas fisheries stakeholders to support the implementation of ecosystem-based management approaches.

### Development and testing methods for area-based planning

- Piloting the use of area-based planning tools for deep-sea ecosystems in new areas such as the Western Indian Ocean and the Southeast Pacific, in collaboration with the countries and regional bodies in these regions.

The ABNJ Deep Seas Project has been designed to harness some of the important activities currently undertaken by GOBI partners, and consequently these partners will be making important contributions to the achievement of Project outputs and outcomes. In return, the Project is providing an avenue to increase awareness on GOBI activities, and there will be opportunities for GOBI partners to access funding that can be used to enhance some activities or explore new areas of work.

Overall, the GOBI partners are playing a major role in the ABNJ Deep Seas Project and their contributions are essential as we work towards improving the sustainable use of deep sea fisheries, and the protection of associated bycatch species, ecosystems, habitats and biodiversity in ABNJ.

The Project Coordinator (chris.obrien@fao.org) is based in FAO, Rome, Italy; and the Area-Based Planning Specialist (Hannah.Thomas@unep-wcmc.org) is based at the UNEP-WCMC offices in Cambridge, UK. More information on the project can be found at http://www.commonoceans.org

# Oceans Day at COP21

Oceans Day at COP 21 was held at the Rio Conventions Pavilion on 4 December 2015, during the 21st session of the Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC COP 21) in Paris, France. Hosted by the Global Ocean Forum, and the Intergovernmental Oceanographic Commission (IOC) of the UN Educational, Scientific and Cultural Organization (UNESCO), together with 44 other partner organizations (including the Governments of Grenada, Indonesia, Portugal, Seychelles, South Africa, and Sweden), Oceans Day at COP 21 brought together over 400 participants to advance the climate and ocean agenda.

Oceans Day aimed to advance the climate and ocean agenda by achieving four major objectives: i) highlighting major climate and ocean issues and their impacts on vulnerable peoples and ecosystems, and suggesting steps forward; ii) fostering political leadership, and moving forward on the major climate and oceans solutions by engaging high-level leaders from around the world; iii) catalyzing and sharing solutions as part of the global portfolio of actions, and iv) mobilizing collaboration in developing a five-year strategic plan on oceans and climate to guide policy and action.

Six panel sessions were convened, covering: challenges and opportunities in the context of climate and oceans; addressing the effects of climate change on oceans and on coastal and Small Island Developing States (SIDS) populations; mitigation and the oceans; adaptation and financing for adaptation; capacity development, scientific monitoring, and public education; and bringing it all together: a five-year agenda for action.

A high-level segment included addresses from Prince Albert II of Monaco, Mary Robinson, President of the Mary Robinson Foundation, and Ségolène Royal, French Minister of Ecology, Sustainable Development and Energy.

The full report of Oceans Day can be found at http://www.iisd.ca/climate/cop21/cbd-rcp/html/enbplus186num7e.html


*Mr Braulio de Souza Dias, Executive Secretary of the Convention on Biological Diversity, addressing delegates at the Ocean Day*

# Conserving the other 50% of our planet:

## Status and opportunities in conservation of areas beyond national jurisdiction

*Pre-conference Focus Group at the International Marine Conservation Congress*
*28-29 July 2016, St John's, Newfoundland, Canada*

*Convenors: Daniel Dunn (Duke University), Telmo Morato (University of the Azores) and Steve Fletcher (UNEP-WCMC)*

For over half of Earth's surface, the open ocean and deep seas in areas beyond national jurisdiction (ABNJ), no comprehensive mechanism exist to conserve biodiversity. Driven by swelling market demand and new technologies, the human footprint in the high seas increasingly threatens marine biodiversity. This has led to repeated calls for the conservation of areas beyond national jurisdiction.

In June 2015, the UNGA adopted a resolution to establish a Preparatory Committee to begin negotiations on a new legally-binding instrument for the conservation and sustainable use of marine biological diversity beyond national jurisdictions. This consensus resolution marks both the culmination of a herculean 10-year effort to bring the topic to the floor of the UNGA and, at the same time, the first step in a larger process. The negotiations that will ensue over the next two years will set the stage for the conservation of biodiversity for the other 50% of the planet and represent an enormous opportunity to inform conservation policy and effect change.

In this Focus Group event we will examine the status and opportunities for conservation of ABNJ by reviewing new scientific findings and current sectoral efforts to conserve biodiversity. We will synthesize this information and consider how it can inform a new instrument and how the new instrument may affect existing competent authorities.

This event will take place over two full days on 28-29 July 2016, preceding the main International Marine Conservation Congress in Newfoundland. The line-up of speakers promises a very engaging and informative event, and anyone with an interest in high seas conservation is encouraged to attend.

Pre-registration for the Focus Group is required via the main conference website: http://conbio.org/mini-sites/imcc-2016

Early bird registration is now open, offering discounted conference fees until 8 May 2016.

## Global Ocean Biodiversity Initiative

*Working towards high seas conservation*

The Global Ocean Biodiversity Initiative is an international partnership advancing the scientific basis for conserving biological diversity in the deep seas and open oceans. It aims to help countries, as well as regional and global organisations, to use and develop data, tools and methodologies to identify ecologically significant areas with an initial focus on the high seas and deep seabed beyond national jurisdiction.

The GOBI partnership and activities are coordinated by a Secretariat team, provided by Seascape Consultants Ltd and funded by the German Federal Agency for Nature Conservation (BfN; www.bfn.de).

For more information about GOBI please visit our website at www.gobi.org