



**Applying the Important Marine Mammal
Area concept to the bottom of the world**

IMMAs in the Antarctic

By Erich Hoyt, Co-Chair of the IUCN Marine Mammal Protected Areas Task Force

Few places on Earth elicit profound, stark wonder like the remote continent of Antarctica. Most people think immediately of penguins and ice, but the marine mammals in the surrounding ocean deserve also to be centre stage. At a recent Important Marine Mammal Area (IMMA) workshop on the extended Southern Ocean, those of us participating shared stories of fin whales around the Antarctic Peninsula – so many that it is challenging the current population estimates for fin whales all around Antarctica. We enjoyed the usual amazing orca stories of them working together to wash seals off ice floes, or poking their heads up through an ice hole right beside you, eyeball to eyeball. And so many seal stories. Most seals are central place feeders – they like to bring their dinner back to one main spot. It turns out elephant seals feed all over the place – meals on the run. Most field scientists can identify with that.

At an expert workshop held in Brest, France in October 2018, the IMMA identification effort took on the extended Southern Ocean, including both the Antarctic and the sub-Antarctic region. This latest workshop of the IUCN Marine Mammal Protected Areas Task Force was the fourth in the regional series and the second one to be held in parallel to those convened by the GOBI partnership. Funded by the French Biodiversity Agency (Agence Française pour la Biodiversité) through the IUCN Global Marine and Polar Programme, it shows the degree to which the GOBI partnership is attracting attention as well as funds to expand and enrich the existing work programme.

The IMMA extended Southern Ocean workshop proposed 15 new candidate IMMAs. These include vital habitats for humpback, minke, blue, southern right and fin whales, as well as crabeater, leopard, Weddell, Ross, southern fur and southern elephant seals, New Zealand sea lions and orcas. One huge area that the participating Antarctic scientists felt passionately about and has been made a candidate IMMA is the circumpolar ice edge, which serves as a magnet for feeding and breeding marine mammals all around Antarctica. These 15 candidate IMMAs will now go to an independent review panel, as prescribed by the formal IMMA process.

The extended Southern Ocean may be the most challenging region the Task Force has tackled to date for a number of reasons:

1. The sheer size of the region and the logistical issues involved in working with marine mammals there. Access is difficult and expensive and researchers are mainly restricted to working in the austral summer.

2. The combination of a unique High Seas region under the Antarctic Treaty as well as, in the sub-Antarctic, numerous territorial claims from northern and southern hemisphere countries.
3. The diversity of habitats for pinnipeds (seals) found in the region. To date, the Task Force has mainly considered marine areas as IMMAs for cetaceans (whales and dolphins) and sirenians (dugong and manatees), with the exception of haulout areas for Mediterranean and Hawaiian monk seals. The Antarctic and sub-Antarctic feature a rich pinniped fauna, which use a combination of land including beaches and rocky islets, ice and under the ice, as well as open water.
4. The whales found in Antarctic and sub-Antarctic waters undertake some of the longest migrations on Earth. Tagging and photo-ID have helped to elucidate some of the pathways and migratory destinations. For example, humpback whales are known to migrate from the seas around the Antarctic Peninsula to as far north as offshore Costa Rica and Panama, crossing the Equator. Other migrators moving in and out of the region include blue, fin, sei, southern right and Antarctic minke whales. In addition to the baleen whale migrators, certain toothed whales such as the killer whales (orcas) have been tracked making long journeys. One such trip involved a group of orcas swimming from Antarctica to the waters off Uruguay and southern Brazil and back in 42 days, a round trip of 9,400 km.
5. In many ways killer whales provide a good example of the complexity of Antarctic adaptations and habitats. Five separate orca ecotypes, which may be multiple species are recognised. Type A feeds on minke whales and follows their migrations. Type B Large feeds on seals on the ice floes, sometimes sliding up on the ice to catch their prey. Type B Small has been seen feeding on penguins around the Antarctic Peninsula. Type C feed on fish including Patagonian toothfish in the cold, deep Ross Sea. Type D represents sub-Antarctic orcas that also feed on Patagonian toothfish.

In addition to the French Biodiversity Agency and IUCN, the Southern Ocean IMMA workshop worked in partnership with the Scientific Committee on Antarctic Research (SCAR) and many of its scientists were invited to participate. The Tethys Research Institute contributed scientific, technical, administrative and organisational support, assisted in the latter capacity by Whale and Dolphin Conservation.

Cover and background images: NOAA NMFS SWFSC Antarctic Marine Living Resources (AMLR) Program

Ocean Inspiration in New York

By David Johnson, GOBI Coordinator

The first session of the Intergovernmental Conference (IGC) on an International Legally Binding Instrument (ILBI) under the United Nations Convention on the Law of the Sea (UNCLOS) on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ), took place on 4-17 September 2018, at UN Headquarters in New York. The GOBI Secretariat participated thanks to nominations by IUCN and the International Council of Environmental Law (ICEL). Interventions contributing to the BBNJ discussions from both these complementary organisations focused on fostering scientific research for conservation and sustainable use of BBNJ.

The first IGC is generally viewed to have had a positive outcome, where discussions progressed on substantive matters on all of the elements of a package agreed in 2011, namely (i) capacity building and marine technology transfer (CB&TT), (ii) environmental impact assessment (EIA), (iii) area based management tools (ABMTs) including marine protected areas, and (iv) access and benefit sharing of marine genetic resources (MGRs). Interventions on each element were guided by a Facilitator at their respective, dedicated informal Working Groups. Further information about the sessions can be found in the summary from Earth Negotiations Bulletin (<http://enb.iisd.org/download/pdf/enb25179e.pdf>)

This first IGC marks the start of a two-year ongoing process to elaborate the text of the intended ILBI. The President of the IGC will produce a paper (not to be called a “zero draft”) with a

draft text of the ILBI, by the end of February 2019. The text may contain options under each of the four elements discussed, as requested by some of the delegations. The second IGC will take place from 25 March through 4 April 2019, and the third will take place from 17 to 30 August 2019. Lastly, the fourth IGC is scheduled for the first half of 2020.

Highlights for GOBI were in the form of two side events led by CBD and GOBI, respectively. The CBD Secretariat’s side event, on 5 September 2018, was sponsored by Ministry of Oceans and Fisheries and National Marine Biodiversity Institute of Republic of Korea. Chaired by Mr Khurshed Alam (Bangladesh) and welcomed by Mr Sun-Do Hwang (President, National Marine Biodiversity Institute of Korea) the event highlighted CBD’s 25 years of experience contributing to the conservation and sustainable use of marine biodiversity in ABNJ. Following a theme presentation by Ms Jihyun Lee (CBD Secretariat) a panel provided insights on specific aspects of CBD’s marine portfolio. The GOBI event, on 7 September 2018, was hosted by Germany with co-organisers CBD Secretariat, UN Environment and the Convention on Migratory Species. Its message concentrated on the value of EBSAs and, in particular, the relevance of work presented by Mr Pat Halpin (Duke University) on ocean species connectivity that can enhance information held in the EBSA Repository, and work by Ms Autumn-Lynn Harrison (Smithsonian Conservation Biology Institute) on the political biogeography of migratory predators (see article on page 6). After the presentations, discussants – Mr Takehiro Nakamura

Presenters at the GOBI side event at IGC1 in New York (from left): Kristina Gjerde, Takehiro Nakamura, Melanie Virtue, Nicola Breier, David Johnson, Jihyun Lee, Pat Halpin, Autumn-Lynn Harrison, and Vikki Gunn.



(UNEP), Ms Melanie Virtue (CMS), and Ms Kristina Gjerde (IUCN) – provided insightful commentaries. Both events were well received and attended by 60-100 delegates.

Another highly complementary side event took place on 6 September 2018 organised by the Intergovernmental Oceanographic Commission (IOC) of UNESCO with the support of the Permanent Missions of Norway and Palau. This event on facilitating global and regional cooperation in ocean science, observation and capacity development, put a spotlight on the key role of enhanced and tailored ocean observing systems. IOC is a GOBI partner with a long history of facilitating and coordinating international marine scientific research. Most recently, IOC coordinated the preparatory phase of the UN Decade of Ocean Science for Sustainable Development. During the side event Mr Daniel Dunn (Duke University) set out the role of the Biological and Ecosystem Panel of the Global Ocean Observing System (for which he is co-chair). His take-home message was that sustained ocean observation is essential to improve scientific knowledge, and that consistent and on going ocean observing is capacity development. Science colleagues then reinforced this message by setting out new emerging technologies for animal telemetry, free-floating genetic information, and quantitative imaging to monitor plankton in the open ocean.

Message in a Bottle

On permanent display at the National Geographic Encounter at Times Square in New York is *Message in a Bottle*, an immersive soundscape installation of 365 mixed media plastic bottles by National Geographic explorer and artist Ms Asher Jay.

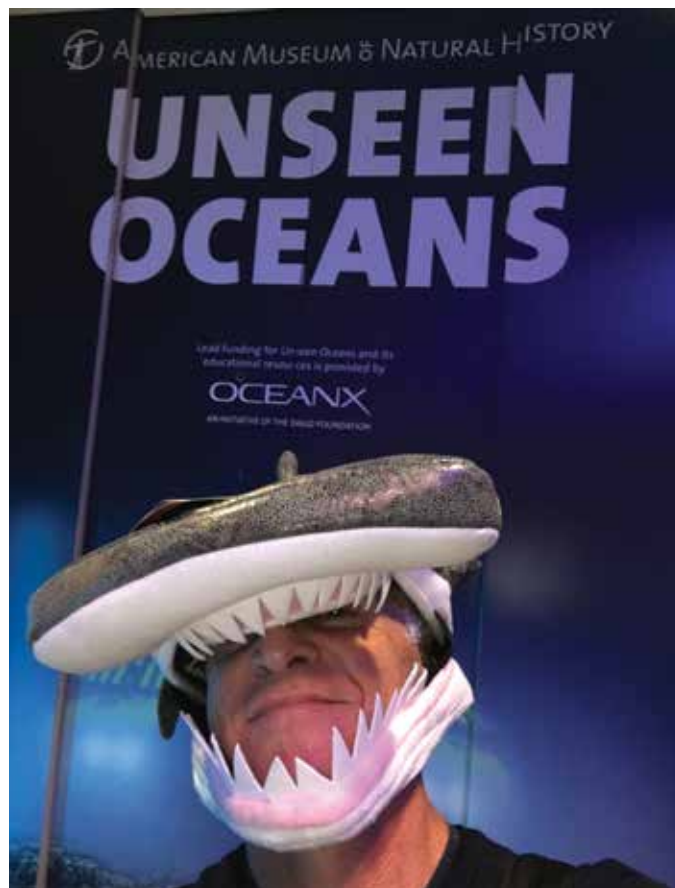


According to her website “Jay was inspired to create this work by Sting’s song *Message in a Bottle*, which she heard during a beach clean-up. 365 bottles, each otherwise a piece of trash, one for each day that it takes for the Earth to revolve around the sun – a revolution of bottles to seed a revolution of change. Personalised messages are written and ‘sound-scaped’ into the installation’s ambient environment to create a ‘bait ball’ of voices from celebrities, scientists, and conservationists, united to make an ocean of difference” (www.asherjay.com/message-in-a-bottle/).

GOBI Coordinator, Mr David Johnson, has a personal interest in the exhibit having contributed one of the messages, it reads: *“In 2010 I coordinated designation of the Charlie Gibbs MPA, one of very few High Seas protected areas and home to weird and wonderful deep-sea creatures like the acorn worm (Yoda purpurata). A deep purple person like Yoda deserves to be protected for future generations: preserved it must be!”*.

Unseen Oceans

At the same time, the American Museum of Natural History was hosting a special exhibition ‘Unseen Oceans’, a fantastic example of outreach. The concept takes visitors on a ‘journey beneath the waves’ to six connected exhibits. At each exhibit, a ‘Meet the Scientist’ station personalises some of the research and features information on enthusiastic individuals explaining their work. ‘Mysterious Drifters’ celebrates plankton, while ‘Secret Lives’ features a floor-to-ceiling array of models of bioluminescent marine species, an astonishing world of bizarre colours and patterns. ‘Encountering Giants’ stars some of the ocean’s largest creatures up close on a wraparound screen, and ‘Going Deep’ takes a virtual dive to 11,000 m, explaining each depth layer on the way. Lastly, ‘Taking a Dive’ reveals the technology needed to explore the deep ocean, and ‘Vital Abundance’ sets out threats and solutions to declining marine biodiversity, as well as future strands of ocean research. Featured content can be found at www.amnh.org/exhibitions/unseen-oceans; the exhibition runs until August 2019.



Towards a governance model for the Costa Rica Thermal Dome

By Erick Ross Salazar, Fundación MarViva

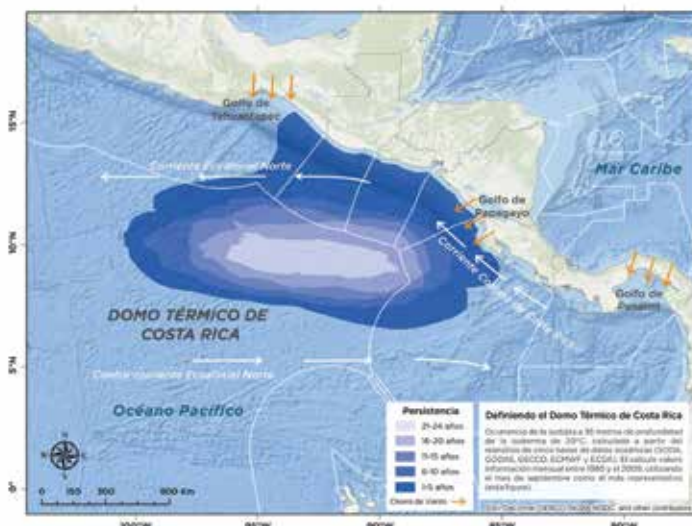
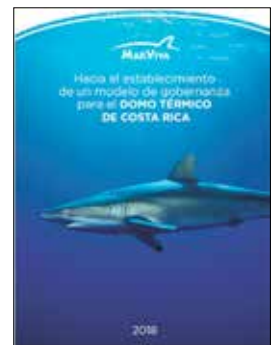
Hoping to promote a governance scheme for the portion of the Costa Rica Thermal Dome that lies beyond national jurisdictions, Fundación MarViva organised a regional workshop titled 'Towards a governance model for the Costa Rica Thermal Dome'. Participants from the Ministries of Foreign Affairs and Environment from Guatemala, Honduras, El Salvador and Costa Rica, along with representatives from the Central American Environment and Development Commission, the Central American Fisheries and Aquaculture Organization and NGOs working in areas beyond national jurisdiction met on 26-27 September 2018 in San José, Costa Rica.

The Costa Rica Thermal Dome (the Dome) is a rich and biodiverse area in the northeastern region of the Eastern Tropical Pacific Ocean (see map below). This oceanographic feature is not far from the Central American coast, straddling both national and international waters, and provides benefits to coastal communities in the region and beyond.

The Dome presents one of the world's highest concentrations of phytoplankton and primary productivity rates, attracting a vast array of pelagic species. Blue whales from the Pacific coast of the United States and Mexico visit the area to breed, calve and feed during the northern hemisphere's winter. Tagged olive ridley turtles remain in the Dome feeding and breeding throughout the year, and leatherback turtles use the area as a transit route between feeding grounds in the south-eastern Pacific Ocean and nesting beaches along the Central American coast. Tuna, sailfish, sharks and dolphins visit the Dome to feed on small fish.

All these species support important economic activities along coastal areas in Central and North America. The whale watching industries of Oregon, California and Baja California depend on the Dome as a wintering ground for the blue whales that tourists pay millions of dollars each year to observe. One of the world's most important yellowfin tuna fisheries is found in the Dome and surrounding areas. Sports fishermen from many countries visit Guatemala, Costa Rica and Panama looking to catch and release sailfish. Turtle nesting beaches along the Central American coast receive visitors from all over the world looking for an opportunity to see female turtles lay their eggs and, weeks later, watch hatchlings dig themselves out of the ground heading for the ocean.

During the workshop, Fundación MarViva released a book that analyses the road towards establishing a governance model for the Costa Rica Thermal Dome. The publication addresses the importance of the Dome for the region, and presents issues about governance in areas beyond national jurisdiction and applicable management tools for the high seas. It also reviews various governance schemes applied in areas beyond national jurisdiction in other regions of the world, and discusses core elements needed for designing a governance scheme for the Dome. The book (currently only in Spanish) is available on MarViva's website at www.marviva.net/es/biblioteca/hacia-el-establecimiento-de-un-modelo-de-gobernanza-para-el-domo-termico-de-costa-rica.



The workshop participants all agreed on the importance of the Dome for the region and the need for governments to engage in a national information and consultation process. They also backed the notion of governments being united under a common strategy in order to seek proper management measures for the natural resources found in the Dome; resources vital for the wellbeing of coastal communities in Central America.

Left: Defining the Costa Rica Thermal Dome. Caption reads: "Persistence of the 20°C isotherm at 35 m below the sea surface, calculated using five oceanographic datasets (SODA, GODAS, GECCO, ECMWF and ECDA). Calculations used monthly data from 1980 to 2009 – this figure shows the results from calculations using the September values, which were considered most representative".

Discovering the political biogeography of migratory marine predators

By Autumn-Lynn Harrison, Smithsonian Conservation Biology Institute

Ten years ago I walked with some anticipation into the first meeting of the newly formed GOBI, representing the Tagging of Pacific Predators (TOPP) project of the Census of Marine Life. TOPP was a decade-long initiative to electronically track 23 species in the Pacific Ocean, including tunas, sharks, whales, turtles, seabirds, and seals. The project's Primary Investigators, Barbara Block and Daniel Costa, had other engagements at that time, so I – a graduate student working with the TOPP dataset – was sent to field any potentially relevant conservation questions.

At this inaugural meeting, I was asked a question that would significantly broaden the expected uses of the TOPP dataset (the data went on to inform the EBSA process), as well as expand the scope of my PhD dissertation, and greatly enrich my professional life and conservation impact through involvement with GOBI. The fateful question was:

How much time do TOPP animals spend in the High Seas?

I remember both Kristina Gjerde (IUCN) and Jihyun Lee (CBD Secretariat) asking me this question, and ten years on, the answer has comprised a major component of a paper just published in the October 2018 issue of *Nature Ecology & Evolution* entitled “*The Political Biogeography of Migratory Marine Predators*.”

This new outcome of TOPP was motivated by the need to provide answers to this and other questions posed when designing international cooperative agreements for migratory animals in the ocean. Questions such as ‘Which countries were visited by each migratory species in the TOPP dataset and how much time did each species spend there?’, ‘When during the year were marine predators present within countries’ waters?’, ‘Which countries should be cooperating, either directly or through established international bodies and frameworks, to manage the species and populations studied by TOPP?’, and ‘What proportion of the year did each TOPP species spend in the High Seas?’ had never been evaluated so completely before – at this scale and for so many species – primarily because of a lack of datasets and models that could inform satisfactory answers... until now.

At GOBI's invitation, I presented the results and answers to these questions during a Side Event at the United Nations Intergovernmental Conference in September 2018 (a conservation biologist's dream!). The paper presents hard

numbers to indicate at an ocean-basin scale and for multiple migratory species, the annual movements through the high seas and the amount of time they spend there. Some species in the TOPP dataset, like leatherback turtles and Pacific bluefin tuna, have experienced severe population declines, and all migratory species face mounting threats, including plastic and noise pollution, overfishing, illegal fishing and incidental catch (bycatch of non-target species). Leatherback turtles are featured as a case study in the paper; cumulatively, those tracked by TOPP visited 32 countries! However, the eastern and western Pacific populations are both critically endangered.

The maps and measures presented in the paper show that migratory species are truly our shared responsibility. All 20 authors of the paper care deeply about the ocean and





Left: Jason Hasrick, Autumn-Lynn Harrison and Ken Yoda (left to right) attaching biologging tags to a female northern elephant seal at Año Nuevo State Reserve, California, USA. Photo Credit: Patrick Robinson.

Below: Daily locations of marine predators electronically tracked within EEZs and the high seas of the Pacific Ocean. From Harrison et al. (2018).

migratory animals. As we conclude in the paper, our study “capitalizes on what biologging technologies do best: provide continuous movement data on individual animals who spend most of their lives away from direct scientific observation. This information can and should be used to inform management.”

As a research ecologist now at the Smithsonian Conservation Biology Institute (a recent addition to the GOBI family) I continue to conduct marine migration research and I am on the Advisory Board of GOBI’s Migratory Connectivity in the Ocean (MiCO) initiative.

Thank you GOBI, for providing inspiration for my work then and now, and for letting me, a scientist, know the policy-relevant questions in need of answers.

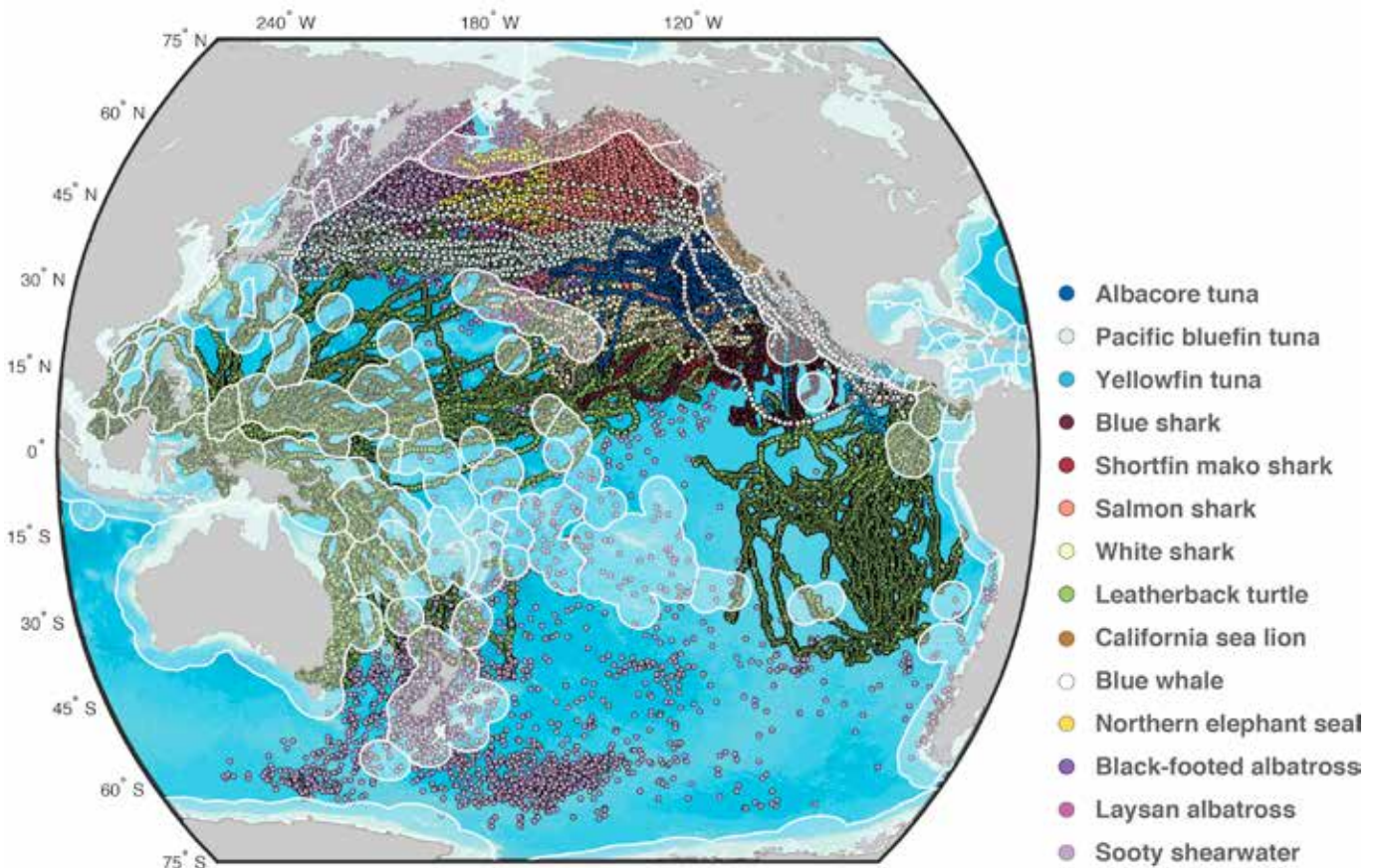
More information:

Harrison, A.-L., D.P. Costa, A.J. Winship, S.R. Benson, S.J. Bograd, M. Antolos, A.B. Carlisle, H. Dewar, P.H. Dutton, S.J. Jorgensen, S. Kohin, B.R. Mate, P.W. Robinson, K.M. Schaefer, S.A. Shaffer, G.L. Shillinger, S.E. Simmons, K.C. Weng, K.M. Gjerde, B.A. Block. (2018) The political biogeography of migratory marine predators. 2018. The political biogeography of migratory marine predators. Nature Ecology & Evolution. 2: 1571-1578.

Web link: <https://www.nature.com/articles/s41559-018-0646-8>

Read for free here: <https://rdcu.be/5J90>

The story behind the paper: *Ocean Animals are Global Citizens* - see <https://natureecoevocommunity.nature.com/channels/521-behind-the-paper/posts/38416-ocean-animals-are-global-citizens>



The Sargasso Sea Commission's journey to conserve the European eel

By Teresa Mackey, Marine Research Fellow, IUCN

A myriad of migratory species transit through the Sargasso Sea during their life cycle. Not least among these are the endangered European and American eels (*Anguilla anguilla* and *A. rostrata*, respectively). As catadromous species, the young elvers hatched at sea migrate landwards in search of fresh waterways where they live as adult eels, only to depart from their respective continents years later, and swim thousands of miles back to the Sargasso Sea where they spawn and die.

There is good scientific evidence that their spawning occurs in the Sargasso Sea, although the precise location is a mystery requiring further study. As populations of both species of eel continue to decline significantly, protection of their spawning areas will be a critical aspect to their recovery. The survival of these species may depend on conservation measures for the Sargasso Sea to encompass their essential spawning areas.



Above: European eel (*Anguilla anguilla*). Image courtesy David Curnick.

According to the International Union for Conservation of Nature's Red List, eel migration is one of the longest and most oceanographically complex of all species. Likewise, the relentless effort of the Sargasso Sea Commission to conserve the European eel - like the migration of the species itself - has been a long and complex journey.

After a preliminary meeting on general eel conservation in Maine (USA) in 2014 and a further meeting in 2016, the Commission partnered with the Secretariat of the Convention on Migratory Species (CMS) to sponsor the first Range State workshop on the European eel in Galway, Ireland. This workshop brought together representatives of 10 Range States

(i.e., countries in whose waterways the European eel is found) and the European Union, members of both the Commission and the CMS Secretariats, and international eel experts to review the European eel's conservation and management. Participants agreed that a second workshop should be held to include a broader spectrum of Range States and to continue the discussions.

Subsequent to the first workshop, a proposal for 'Concerted Action on the European Eel' was presented to the Sessional Committee of the CMS Scientific Council by a Sargasso Sea Commission Signatory Government – the Principality of Monaco – in tandem with the Sargasso Sea Commission and the IUCN Anguillid Eel Specialist Group. This proposal was recommended by the Committee, and sent to the CMS Conference of the Parties in Manila, Philippines in October 2017, where it was accepted following productive dialogue at a Sargasso Sea Commission-sponsored side event.

To build upon this momentum, in May 2018 the Sargasso Sea Commission again joined with the CMS Secretariat to convene the second European eel Range States workshop at the new Global Ocean Institute in Malmö, Sweden. Representatives of 23 Range States and the EU as well as other relevant international organisations, together with leading international eel experts agreed that there is a need for international cooperation to address gaps and challenges in the conservation of the European eel.

The Sargasso Sea Commission and the CMS Secretariat are now in the preliminary stages of consultation to set up a cooperation mechanism for European eel conservation. A key point of this proposed mechanism, among other actions, will be to establish measures to recognise the Sargasso Sea as a critical eel spawning site and identify measures, compatible with international law, to protect those spawning areas.



Above: Participants at the Second European Eel Range States Workshop, in Malmö, Sweden.

Belize Barrier Reef Reserve System is removed from UNESCO's list of World Heritage in Danger

by Fanny Douvère, UNESCO-WHC



In June 2018, during UNESCO's 42nd session of the World Heritage Committee in Manama, Bahrain, the Belize Barrier Reef Reserve System was removed from the List of World Heritage sites in Danger. This marks an important achievement through dedicated and collaborative action to halt the decline of environmental ocean quality at an international level.

The Belize Barrier Reef Reserve System was inscribed on the UNESCO World Heritage List in 1996, in recognition of its globally outstanding ecosystem and biodiversity as well as its unparalleled beauty (<http://whc.unesco.org/en/list/764>). In 2012, the site was also recognised as an Ecologically or Biologically Significant Area (EBSA), as part of the larger Mesoamerican Barrier Reef, during the 11th Conference of the Parties of the Convention on Biological Diversity. The site includes the largest barrier reef system in the northern hemisphere, comprised of offshore atolls, several hundred sand cays, mangrove forests, coastal lagoons and estuaries. All these features provide important habitat for a number of marine species, some of conservation concern, including the West Indian manatee (*Trichechus manatus*), green turtle (*Chelonia mydas*), hawksbill turtle (*Eretmochelys imbricata*), loggerhead turtle (*Caretta caretta*), and the American crocodile (*Crocodylus acutus*), as well as endemic and migratory birds which reproduce in the littoral forests of cays, atolls and coastal areas. Major bird colonies include the red-footed booby (*Sula sula*) on Half-Moon Cay, brown booby (*Sula leucogaster*) on Man O'War Cay and the common noddy (*Anous stolidus*) on Glover's Reef. Approximately 247 taxa of marine flora have been described within the site, and over 500 fish, 65

sceleractinian corals, 45 hydroid and 350 mollusc species have also been identified, in addition to a great diversity of sponges, marine worms and crustaceans. The reef sustains nearly 2 million people from four neighbouring countries: Mexico, Belize, Guatemala and Honduras.

In an attempt to halt the threat of mangrove cutting, offshore oil exploitation, and unsustainable coastal development, the site was inscribed on the List of World Heritage in Danger in 2009. Inscription on this list functions as an alarm bell – it informs the international community of conditions that are threatening the unique values that make up a World Heritage designation, and that we, humanity, potentially face an irreversible loss of our collective heritage. As a result, in 2015 the Government of Belize, in close collaboration with UNESCO, IUCN and civil society, drafted what is called a “*Desired State of Conservation for the Belize Barrier Reef*”. It sets out a roadmap with measurable indicators of what should be achieved to safeguard the future of the reef and all who depend upon it. Over the course of the past three years, the Government of Belize has worked progressively toward the implementation of the roadmap. Measures taken include a permanent moratorium on oil exploration across Belize's entire maritime zone, substantially strengthened forestry regulations that allow for better protection of mangroves, and the introduction of a permit system for new coastal developments. Already in 2016, the Belize government adopted a visionary coastal zone management plan developed in close collaboration with local communities that will guide the future management of the reef. Together, all these actions led to the Decision of the

World Heritage committee to remove the Belize Barrier Reef from the World Heritage List in Danger. This intensive effort, swift reaction and favourable outcome shows the power of collective action among governments, the international community and civil society, and sets an example for the rest of the world.

Right: Dr Fanny Douvère, coordinator of the Marine Programme at UNESCO's World Heritage Centre, and Mr Roosevelt Blades, Secretary General of the National Commission of Belize to UNESCO.



Sustainable fisheries management and biodiversity conservation of deep-sea living marine resources and ecosystems in ABNJ

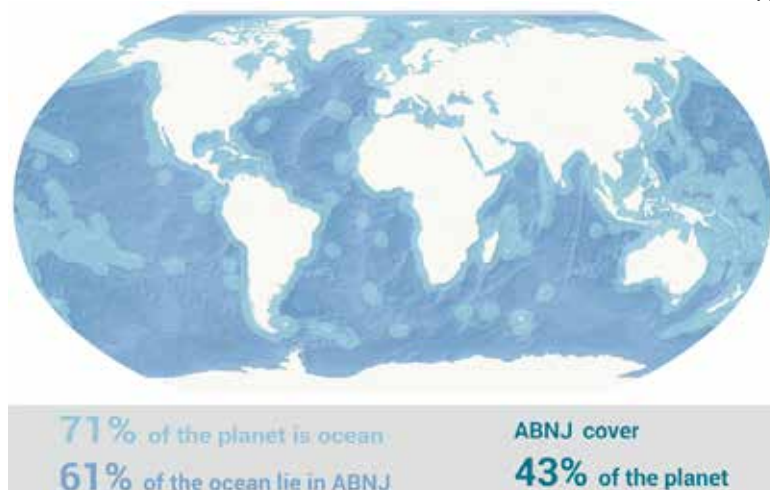
By Ruth Fletcher, WCMC

Almost half of the planet is covered by ocean in areas beyond national jurisdiction (ABNJ). With technological developments allowing increased access to these areas, collective efforts are required to ensure that ecosystems are protected and that resource use is sustainable. UN Environment, the Food and Agriculture Organization of the United Nations and UN Environment's World Conservation Monitoring Centre (UNEP-WCMC) are collectively working to support development, management and sustainability of deep-sea fisheries and biodiversity conservation in ABNJ. Specifically, UNEP-WCMC is developing and testing a methodology for cross-sectoral area-based planning in ABNJ. A series of reports has been produced to support understanding in this space. These reports have a specific focus on two pilot regions, the Western Indian Ocean

and the South East Pacific Ocean; however, they are also of relevance to other regional seas.

A key element developed under this project examined five types of area-based planning tools based on key features that would enable them to be used for cross-sectoral planning in ABNJ. Single-sector approaches used in both EEZs and in ABNJ were reviewed. Also, a cross-sectoral marine spatial planning tool was specifically assessed for use in ABNJ. The list of tools reviewed is: Marine Spatial Planning, Marine Protected Areas, Particularly Sensitive Sea Areas, Areas of Particular Environmental Interest, and Fisheries closures related to the protection of vulnerable marine ecosystems.

A full list of reports is collated in a flyer available at: wcmc.io/ABNJ_outputs





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Sustainable Ocean Initiative (SOI) Capacity-Building Workshop for Northern Africa and the Mediterranean

By Joseph Appiott and Changsung Lim, CBD Secretariat

The Sustainable Ocean Initiative (SOI) Capacity Building Workshop for Northern Africa and the Mediterranean was organised by the Secretariat of the Convention on Biological Diversity on 15-19 October 2018, in Tangier, Morocco, in collaboration with the Ministry of Agriculture, Maritime Fisheries, Rural Development, Waters and Forests of Morocco and various other partners, including the Mediterranean Action Plan, the General Fisheries Commission for the Mediterranean (GFCM) and other relevant regional and international organisations and initiatives. The workshop was convened with financial support from the Government of Japan through the Japan Biodiversity Fund, and the Government of France through the French Agency for Biodiversity (Agence Française pour la Biodiversité).

Experts, practitioners and managers from the Mediterranean and Northern Africa gathered to discuss opportunities and experiences in cross-sectoral approaches to planning and management of marine biodiversity, including through the description of ecological or biological significant marine areas (EBSAs) and the use of the ecosystem approach to fisheries management, marine protected areas and marine spatial planning. The workshop focused especially on bringing together practitioners working in biodiversity conservation and fisheries management.

Co-chaired by Mr Larbi Sbaï, the Counselor of the Secretary General of the Moroccan Ministry of Agriculture and Maritime Fisheries, and Mr Khalil Attia, the Director of the Specially Protected Areas Regional Activity Center of Mediterranean Action Plan, the workshop began by sharing national and regional experiences and progress towards the Aichi Biodiversity Targets.

Participants from each country in the region shared their experiences on national efforts on area-based conservation

and fisheries management, with a focus on cross-sectoral planning and implementation. They also identified specific gaps and needs for effective implementation by conducting a 'Strengths-Weaknesses-Opportunities-Threats' (SWOT) analysis of their national efforts.

National progress in the region towards the Aichi Biodiversity Targets and the 2050 vision of the Strategic Plan for Biodiversity 2011-2020 was assessed through a rapid self-assessment by participants, as well as a 'back-casting' exercise from the 2050 vision on the basis of this self-assessment. The workshop also featured an in-depth discussion on sector-based and cross-sectoral tools and approaches for conservation and sustainable use of marine and coastal biodiversity, such as EBSAs, MPAs, marine spatial planning, ecosystem approach to fisheries and area-based fisheries management, and tools and approaches to mitigate pressures on migratory species.

Building on the results of discussions and exercises organised during the workshop, participants developed concrete strategies and action plans to enhance cross-sectoral approaches to conservation and sustainable use of marine biodiversity, with a focus on area-based conservation and fisheries management.

The workshop is especially timely for the region, taking place just before the UN Biodiversity Conference (CBD COP 14), convened on 17-29 November 2018, Sharm El-Sheikh, Egypt, and the Forum on Fisheries Science in the Mediterranean (Fish Forum), convened by the General Fisheries Commission for the Mediterranean on 10-14 December 2018 in Rome, Italy.

More details on this workshop can be found here: <https://www.cbd.int/meetings/SOI-WS-2018-03>. More information on the Sustainable Ocean Initiative can be found at: www.cbd.int/soi.

GOBI delights at the 4th World Conference on Marine Biodiversity

Montreal, 13-16 May 2018

Despite stiff competition from some inspired presentations and innovative plenary addresses, GOBI's presence at the 4th World Convention on Marine Biodiversity did not go unnoticed. An eye-catching GOBI stand – shared with the Convention of Biological Diversity – in the main Exhibit Hall of the Palais des Congrès de Montréal attracted a steady stream of visitors, from the simply curious to the knowledgeable and enthusiastic, all eager to learn about and support GOBI's mission. At the stand, both the GOBI Secretariat and the CBD Secretariat were on hand to engage with visitors and provide explanations and context where needed.

Since 2018 marks GOBI's 10th anniversary, the GOBI Secretariat took the opportunity to celebrate this milestone by hosting a dedicated session at WCMB, chaired by GOBI Coordinator David Johnson and with thoughtful contributions from its founders. Henning von Nordheim of the German Federal Agency for Nature Conservation (BfN) recalled fondly with colleagues in the room the discussions they had in the margins of CBD COP9 in Bonn in 2008 that prompted the creation of GOBI, alongside the CBD's adoption of the scientific criteria to describe ecologically or biologically significant marine areas (EBSAs). CBD Secretariat's Joe Appiott followed by recounting how GOBI and its partners have contributed over the years to the CBD's process of describing EBSAs across the globe, while Lyle Glowka of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) praised GOBI's continuing contribution towards the protection of marine migratory animals and their habitat. In the last of the reflective presentations on GOBI's evolution, Kristina Gjerde (IUCN) acknowledged the indispensable contribution of OBIS to GOBI's beginnings, as well as highlighting its triumphs and political challenges in dealing with the high seas.

Before surrendering to a reverie of rose-tinted reminiscence, the GOBI session shifted gear to present the cutting-edge work that it currently supports, thanks to its 5-year funding award



from Germany's International Climate Initiative (IKI). Giuseppe Notarbartolo di Sciara (Tethys Research Institute) presented to a packed room the steady yet impressive progress made to date on the ambitious programme to describe a network of Important Marine Mammal Areas (IMMAs) across the world's oceans. With networks in mind, Daniel Dunn and Pat Halpin (Duke University Marine Geospatial Ecology Lab) presented their ground-breaking Migratory Connectivity in the Ocean (MiCO) system, which is undergoing final tests before its public launch in spring 2019. Cindy van Dover (also Duke University) described her latest research on the ecological and political considerations – and potential repercussions – of proposed mining of the deep seafloor along the mid-Atlantic ridge. To round off the session, Piers Dunstan (CSIRO) presented his group's work on developing a bioregionalisation of the Indian and southwest Pacific Oceans.

Judging by the frenzy of quotations and photographs from the session tagged by the audience to the WCMB's social media platforms, it seems GOBI made a considerable impact at the conference. It also has plenty more to deliver as its current round of research strands come to fruition over the coming months and years. The theme of the 4th WCMB was *Connecting with the Living Ocean*, seeking to underline the need to replace our current exploitation relationship with the ocean's living resources with a sustainable connection based on scientific knowledge. The GOBI partnership can rest assured that its contribution to this aspiration is significant. Here's to the next 10 years!

Left: Duke University's Daniel Dunn presents work on understanding migratory connectivity in the oceans. Above: Team GOBI and friends, from left: Giuseppe Notarbartolo di Sciara, Jacqueline Grekin, Pat Halpin, Chris Barrio, Daniel Dunn, Lyle Glowka, Corrie Curtice, Piers Dunstan, David Johnson, George Shillinger, Vikki Gunn and Joe Appiott.



One of the newest aquaria in Europe, the OZEANEUM in Stralsund, Germany, was host in September 2018 to the 5th International Conference on Progress in Marine Conservation. The conference, organised by Germany's Federal Agency for Nature Conservation and spearheaded by 'GOBI Godfather' Professor Dr Henning von Nordheim, reflected on the past 25 years of marine conservation since the Earth Summit in Rio, both in Europe and beyond, and looked at success stories that are paving the way for sustainable development into the future.

Four main themes provided plenty of scope for fruitful discussion amongst attendees; these included (i) Marine Protected Areas – status, management, coherence and surveillance, (ii) Conservation, fisheries and fisheries management, (iii) Further impacts of human activities, and (iv) Conservation of species and habitats. For GOBI's contribution, Dr Christopher Barrio (GOBI Secretariat) gave a presentation on behalf of Prof. Pat Halpin (Duke University) on the achievements of GOBI and the CBD's EBSA process towards a global network of marine protected areas. The event also provided ample opportunity to spread the word about GOBI's mission to a wider audience via its dedicated exhibition stand in the aquarium.

A common theme running throughout many of the presentations was that of shifting baselines for biodiversity – with each generation often accepting that present or recent conditions represent near pristine environments, and that such conditions should be protected, maintained or restored – over time, this results in a stealth degradation of biodiversity and environmental condition. The notion of avoiding 'paper parks' through ineffective conservation designations was also discussed, with calls for increased stakeholder cooperation, data and information sharing amongst scientists, and transparency from regulators echoed by several speakers. While many

Progress in Marine Conservation 2018

3-7 September 2018, Stralsund, Germany



of these themes are not new, they are worth reiterating for the benefit of providing focus to the steady, promising flow of emerging conservation practitioners operating across the diverse fields of environmental and social science.

To crown the conference, the organisers and distinguished speakers gave a heartfelt tribute to Professor von Nordheim, who – amongst many notable and far-reaching achievements both in Germany and internationally – originated the Progress in Marine Conservation conference series, and he will likely retire before the next one.



Above and left: Prof. Dr Henning von Nordheim is presented with a book of memories and messages, compiled by colleagues, to celebrate his career and many achievements in marine conservation. Images courtesy K. Wollny-Goerke.

Journeying the High Seas

Nausicaá, Boulogne sur Mer, 26-28 June 2018

By David Johnson, GOBI Coordinator

In June 2018, Nausicaa - the French National Sea Centre - staged an International Conference to raise public awareness and mobilise civil society interest in the challenges of managing the High Seas. The event also celebrated the opening of a major new exhibition 'Journey on the High Seas'. Nausicaá houses 58,000 marine creatures of 1,600 different species. With construction of the High Seas tour, Nausicaá doubled in size, part of a project to boost the regional appeal of Boulogne sur Mer costing €70m.

The High Seas tour captures visitors' imaginations by presenting the 'Living Ocean' using features such as 'The Great Fault' and 'World of the Abyss' to create a sense of scale, depth and drama. A massive extraordinary viewing panel recreates the ecosystem of the open sea. Sophisticated technology enhances the visitor experience, set off by dramatic lighting and integration of sound design (i.e., big sound recordings conveying the open sea using original recordings captured in situ). The exhibition also tells the story of Malpelo Island – marine World Heritage Site, EBSA and PSSA. Iconic creatures include hammerhead sharks, rays, giant groupers, false herring and brown jellyfish.

Organised together with the Agence Française pour la Biodiversité, GOBI staged a session within the two-day conference entitled '*Shaping a toolbox for the conservation of biodiversity in the High Seas*'. The session provided an opportunity to explain area-based management tools for the High Seas. It included legal interpretations, technical details, case studies and specifics, such as Important Marine Mammal Areas and opportunities for Marine Spatial Planning.



The event was given extra impetus by FAO and the Global Ocean Forum who showcased the Common Oceans Project, making the case for why spatial management considerations for areas beyond national jurisdiction are essential for people and planet, via a high-level dialogue and global media forum. Interventions were made by senior diplomats including His Excellency Serge Segura, France's Ambassador for the Oceans. Contributions and opinions were presented by representatives of GOBI, Tara Expeditions, DOALOS, the Global Ocean Forum and Nausicaá management. Storytelling provided a novel way of exploring common ocean experiences and putting forward examples of solutions to ABNJ challenges, enhanced by the backdrop of the exhibits at Nausicaá. Sessions highlighting UNESCO World Heritage Convention in the High Seas and giving an insight to preparations for the negotiations on Biodiversity Beyond National Jurisdiction preceded a public event on the 'Challenges of the High Seas'.

A key take-home message was the aim to move towards a 'Blue Society', by harnessing the enormous potential the global ocean offers. This is based on the responsible use of marine resources, the development of innovative technologies and new products by strengthening understanding and the interface between the public, professionals and decision-makers.

Left: GOBI representatives (from left) Erich Hoyt, Chris Barrio and David Johnson enjoy the spectacular exhibits on display at Nausicaa. Above: David Johnson gives an interview explaining the connection between the need for ocean literacy and negotiations in New York to achieve a legally binding Implementing Agreement to UNCLOS on biodiversity beyond national jurisdiction.

What's in a name number? The inflation of conservation

By Christopher Barrio Froján, GOBI Secretariat

The United Nations' 2020 deadline – under the Convention on Biological Diversity – to protect 10% of the world's oceans is looming ever closer, with commentators already doubting whether the target will be met. Achievement of the target is complicated by how marine protection is assessed (there are several protection objectives and varying degrees of protection), and critics are quick to contest any intimation of progress. As with so many milestones, its passing will likely be preceded and overshadowed by more ambitious target set for a future date, ensuring that momentum is maintained. But how are such targets decided? Is there a basis – scientific or otherwise – that supports the choice of target, the quantity of ocean protected, the quality of protection?

10% protection

The notion of setting aside a standardised 10% of a biome for the protection of biodiversity was agreed during the 1992 4th World Congress on National Parks and Protected Areas, with a view for its attainment by the year 2000. Since then, this target has become a cornerstone of national and international conservation plans, as it is applied to habitats, regions, nations, and the whole world. The origin of the 10% allocation to conservation goes back even further, and is a reasonably optimistic political construct, rather than a scientific one, based on the precedent of the maximum proportion of land already set aside in national parks by a handful of countries in 1982. There is no doubt that the 10% target has been influential in encouraging countries to increase the area of their land under protection, although the area of territorial waters under protection for conservation has always lagged behind.

30% protection

While 10% protection seemed like an achievable goal – it has largely been met on land – growing human pressures on natural resources and the realisation that there are ecological limits to their exploitation have led to the upward revision of the amount of nature that should be protected. The importance of the quality and representativity of what is protected has also been recognised. At the 5th IUCN World Parks Congress in 2003, participants called for the establishment by 2012 of an effectively managed and representative network marine protected areas (MPAs) amounting to at least 20-30% of each habitat. This ambition was echoed at the 2014 World Parks Congress and again at the 2016 IUCN World Conservation Congress, both of which set a hard threshold of 30% of each marine habitat to be included within highly protected MPAs by

2030. In 2020, the parties to the 15th meeting of the Conference of the Parties to the CBD are expected to adopt a new 10-year global biodiversity framework with goals and targets for ocean protection. It is hoped by many that parties to the conference follow recommendations that call for protecting at least 30% of the ocean.

50% protection

Advances in ecological knowledge and faster ways to explore functional and biological links between species and across ecosystems have enabled scientists to analyse the efficacy of networks of protected areas (often compromised in their placement) in conserving their intended assets, especially in relation to the globally uneven distribution of biodiversity and the ecosystem processes it maintains. Some such studies suggest that up to 40% of the sea should be protected to achieve the ecological goals of MPAs. Others go even further, advocating for an endpoint beyond saving particular species and habitats, and proposing that at least half of the Earth's biome should be set aside for nature conservation. These are not unrealistic prospects, although they would require a radical global change in moral reasoning.

Whole Earth approach

Achievement of quantitative areal goals for the protection of biodiversity is to be encouraged and celebrated. However, it is worth remembering that each progressive achievement is only a waypoint toward effective ocean protection and governance, not the endpoint. Pristine MPAs scattered in an otherwise barren ocean is not a desirable future scenario; the whole planetary ecosystem both within and outside protected areas has to be managed effectively and sustainably. In this regard, governance measures recognising EBSAs as well as current efforts to produce guidelines on the establishment of other effective conservation measures (OECMs) to stand alongside MPAs are open for debate at the 14th meeting of the Conference of the Parties to the CBD in Egypt in November 2018.

As with so many concepts and human constructs, that of establishing thresholds for protection and conservation of biodiversity is beset with complications and competing interests. The fact that biodiversity itself is so seemingly infinite in its complexity, that it is intrinsic to our wellbeing, and that it may not be as resilient as we thought, only adds to the challenge of conserving it.

Coral reefs: food security, tourism income, resilient local communities and citizen science

STAPCOR 2018 conference, Lakshadweep, 22-24 October 2018

Professor David Johnson presented a keynote address on the above topics at the latest decadal International Year of the Reef Conference held in Bangaram, Lakshadweep, India (22-24 October, 2018). The presentation headed one of five technical themes in a programme, co-organised by the Union Territory of Lakshadweep and the Zoological Society of India, attended by 65 participants.

A high-level inaugural session included an address by Dr Harsh Vardhan, Honorable Minister MoEFCC, Government of India. The status of faunal diversity of Indian reefs was reviewed against the status of coral reef biodiversity worldwide. Climate change and cumulative human impacts necessitate renewed urgency to conserve and manage reefs and apply emerging research techniques. Case studies of restoration projects in Hawaii, Maldives and Kuwait were presented and critiqued. A series of panels contributed expert opinion, building on previous STAPCOR events in 1998 and 2008: an international dimension being provided by delegates representing The Maldives, Sri Lanka, USA, Kuwait and Tanzania. It was clear that Indian marine scientists and NGOs have good knowledge and understanding of their coral reef resources, consolidated over the past 30 years. Researchers presented posters on innovative new directions. The national and regional Administrations are highly motivated to conserve and restore Indian coral reef ecosystems.

Representing GOBI in a contribution on science-based policy frameworks and management interventions for coral reef conservation, David Johnson recalled the importance of networks of MPAs and Locally Managed Marine Areas. He referenced the inter-related Aichi Biodiversity Targets and Sustainable Development Goals including the qualitative

elements of Aichi Target 11, and the need for Action Plans to implement the FAO Voluntary Guidelines on Small Scale Fisheries.

Bangaram is one of 36 atolls and coral reefs in the Laccadive Sea, 150 miles off the west coast of Kerala - a “tranquil teardrop of lush green coconut palms, fringed by creamy sand in a turquoise sea” (pictured below). Stunning! The logistical feat of staging an international conference in such a remote location is not to be underestimated.

The Bangaram Resolution, a concise list of priorities, introduced by Dr Yugraj Yadava, Director of the Bay of Bengal Programme, aims to provide direction and focus to conserve India’s coral reefs and protect the human communities who depend upon them.



Above: Bangaram Island, 150 miles off the coast of Kerala. Image D. Johnson.

The ISA's regional environmental management planning process for the Atlantic

By Rachel Boschen-Rose, Atlantic REMP project / Seascope Consultants

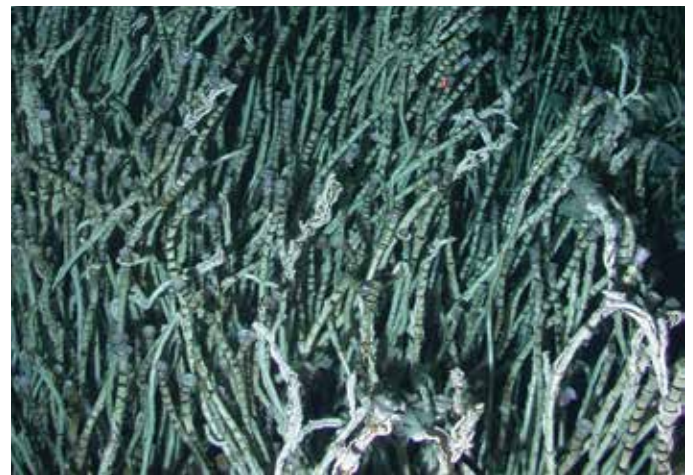
Mining of the deep seafloor is creeping closer. This year saw multiple technological developments, including the soft launch of the first Production Support Vessel and the launch of a pre-prototype collector for polymetallic nodules. In terms of environmental management, the first Environmental Impact Assessments were submitted for test mining of the seabed beyond national jurisdiction, and work continues on drafting the International Seabed Authority (ISA) Regulations for Exploitation. The number of exploration contracts also continues to rise, with 2018 seeing the 29th exploration contract issued by the ISA.

Current exploration contracts sit within five broad regions: the Clarion-Clipperton Fracture Zone (CCZ), the Indian Ocean, the Mid-Atlantic Ridge, the Pacific Ocean and the South Atlantic Ocean. With multiple contracts awarded per region, a regional approach to spatial planning is needed to ensure commercial interests can be balanced with conservation objectives. In 2012, the ISA implemented the CCZ Regional Environmental Management Plan (REMP), which designated nine Areas of Particular Environmental Interest (APEIs) and provides the spatial framework for the 16 current exploration contracts in the region. As exploration contracts are awarded in other regions, repeated calls have been made to develop REMPs for additional locations. In response to these calls, earlier this year the ISA identified priority areas for REMP development, including the Mid-Atlantic Ridge, the Indian Ocean 'triple junction' ridges, the Northwest Pacific and the South Atlantic.

Two workshops were held in 2018 as a first step towards developing REMPs for priority regions, one in Qingdao, China 26-29 May and another in Szczecin, Poland 27-29 June. The Qingdao workshop was the first in a series of workshops to develop a REMP for the 'triangle area' of crust-hosting seamounts in the northwest Pacific. The Szczecin workshop was also the first of multiple workshops to develop REMPs for key sections of mid-ocean ridge, especially the Mid-Atlantic Ridge and the Indian Ocean triple junction ridges. With the ISA budget for 2019 and 2020 including funding for multiple workshops under the new REMP programme, the development of REMPs is expected to increase during the next couple of years.

A major outcome from both the Qingdao and Szczecin workshops was a recognition of the general lack of data on the ecosystems in the priority REMP regions, and the need to strengthen environmental baselines. Absence of data is

not a reason to abandon regional planning; for example, recommendations for APEI placement have been made for relatively data-poor regions, such as the CCZ and the Mid-Atlantic Ridge. APEI placement and other REMP components are subject to review and may change as more data and information become available. Sharing environmental data and information will lead to more robust environmental baselines and lend greater support to the placement of APEIs as part of a regional approach to environmental management.



Above: Siboglinid polychaetes at the Lost City hydrothermal vent field on the Mid-Atlantic Ridge. Image courtesy NOAA Lost City Expedition, July 2005.

Effective regional environmental management requires information on the full range of ecosystem components within the region – migratory routes, the locations of vulnerable or sensitive habitats, spawning, breeding and feeding grounds, the connectivity of populations – and knowledge of how mining may impact these components. In his intervention at the Intergovernmental Conference on BBNJ in September 2018, the Secretary General of the ISA emphasised that the development of REMPs and associated area-based management tools (ABMTs) will require the establishment of environmental baselines, full participation of all interested States, and effective cooperation amongst global and regional organisations. The ISA is expected to launch its new database this year, and the BBNJ process should help facilitate the flow of biological data between States and stakeholders. Scientists and other stakeholders will be required to contribute their data, information and expertise as the REMP process continues.

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Hot off the press

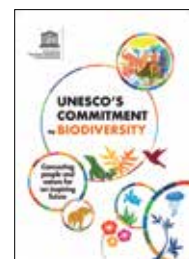


State of the world's birds – BirdLife International

Wayfaring seabirds are perhaps the most visible aspect of marine biodiversity that is otherwise largely out of sight. As such, their fate in light of the human-induced pressures all marine creatures face can be seen as an obvious indicator of the overall 'health' of the ocean and its inhabitants. BirdLife's new flagship publication on the state of the world's birds is an authoritative account of how birds are faring on land and at sea, the pressures they face, and the actions underway to safeguard their future. Although sobering in its assessment, especially given the challenges ahead, the book demonstrates that well-informed conservation efforts work, and that lasting positive impact can be achieved.

UNESCO's commitment to biodiversity – UNESCO

Understanding the dependence of prosperous human development and culture on all aspects of biodiversity is at the core of this publication. It affirms that biodiversity underpins human wellbeing, and that its rapid decline threatens nature and people alike. It goes on to highlight some of UNESCO's biodiversity-related actions and solutions that have implemented successfully on the basis of its unique mandate and diverse normative instruments, networks, programmes and partners, as well as providing suggestions for improvement and innovation. This publication is an invitation to positive action and to trust in our collective capacity and creativity to transform our relationship with biodiversity, by sharing values, solutions and knowledge.



Mainstreaming Biodiversity for Sustainable Development – OECD

This publication by the Organisation for Economic Co-operation and Development (OECD) examines how biodiversity is being mainstreamed across 16 predominantly megadiverse countries, with examples of good practice and remaining challenges. The OECD's assessment is presented in four key areas: (i) at the national level, including national development plans and other strategies, institutional co-ordination and national budgets, (ii) in the agriculture, forestry and fisheries sectors, (iii) in development cooperation, and (iv) in the monitoring and evaluation of biodiversity mainstreaming and how this could be improved. It is a must-read for biodiversity and development policymakers, as well as for co-operation agencies and other national ministries.

Life and the marine environment – EU

The European Union's adoption in 2008 of the Marine Strategy Framework Directive (MSFD) to protect and sustainably use its marine estate has improved our understanding of the European seas and brought more cooperation between EU Member States. With its first cycle of targets for good environmental status reaching fruition in 2020, the EU is now considering its next steps, turning newly-acquired knowledge and momentum into effective action. This publication highlights the achievements of the EU's LIFE programme: 45 projects with a specific focus on MSFD indicators and descriptors related to marine biodiversity. It also provides a great example of how international cooperation can tackle a diverse and complex set of concerns under a common theme.



The location and protection status of earth's diminishing marine wilderness – Current Biology

This article by Kendall R Jones and colleagues shows that Earth's marine wilderness has been eroded by humanity, with 13.2% now remaining across the oceans. Despite holding high genetic diversity, unique functional traits, and endemic species, wilderness areas are ignored in global environmental agreements, highlighting the need for urgent policy attention. DOI: 10.1016/j.cub.2018.07.081.



The long and winding road: negotiating a treaty for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction – IDDR

After decades of informal conversations, in 2017 UNGA convened an intergovernmental conference to elaborate an international legally binding instrument for the conservation and sustainable use of the biological diversity of ABNJ. For most, keeping up with the evolution of the complex issues at stake has been challenging. This report presents a clear and comprehensive understanding of the history of the process, the elements under discussion, State positions to date, and the challenges that lie ahead. It is an essential guide for both experienced participants and newcomers to the process.

Marine spatial planning in areas beyond national jurisdiction – IDDR

Negotiations for an international legally binding instrument (ILBI) regarding marine biodiversity in ABNJ provide an opportunity to facilitate the development of marine spatial planning (MSP) in these areas. This report sets out a tailored process for MSP in ABNJ that could become embedded in the ILBI, by defining the triggers for initiating MSP, establishing a mandate for cooperation and coordination, and providing oversight and review. The proposition makes best use of existing initiatives, processes and tools, ensuring no wastage of conservation efforts to date.



Recent GOBI-related publications in the academic press

- Spatial scales of marine conservation management for breeding seabirds, by Steffen Oppel and colleagues. *Marine Policy* 98 (2018) DOI: 10.1016/j.marpol.2018.08.024
- A strategy for the conservation of biodiversity on mid-ocean ridges from deep-sea mining, by Daniel Dunn and colleagues. *Science Advances* 4(7) (2018) DOI: 10.1126/sciadv.aar4313
- Protect the neglected half of our blue planet, by Glenn Wright and colleagues. *Nature* 554 (7691) (2018) DOI: 10.1038/d41586-018-01594-1
- Empowering high seas governance with satellite vessel tracking data, by Daniel Dunn and colleagues. *Fish and Fisheries* 19(4) (2018) DOI: 10.1111/faf.12285
- Deep-Sea Mining With No Net Loss of Biodiversity—An Impossible Aim, by Holly Niner and colleagues. *Frontiers in Marine Science* 5 (2018) DOI: 10.3389/fmars.2018.00053
- The Global Ocean Biodiversity Initiative: promoting scientific support for global ocean governance, by David Johnson and colleagues in *Aquatic Conservation: Marine and Freshwater Ecosystems* (accepted for publication).

Forthcoming events

- IMMA workshop - W Indian Ocean & Arabian Seas: 4-8 March 2019, Oman - Dubai - United Arab Emirates
- 6th World Ocean Summit: 5-7 March 2019, Abu Dhabi - United Arab Emirates
- Fourth Session of the UN Environment Assembly (UNEA-4): 11-15 March 2019, Nairobi, Kenya
- 2nd Intergovernmental Conference: 25 March – 5 April 2019, United Nations Headquarters, New York
- International Committee on Marine Mammal Protected Areas (ICMMPA) Conference: 8 – 12 April 2019, Messenia, Greece
- European Maritime Day: 16 – 17 May 2019, Lisbon, Portugal
- International Day for Biological Diversity 2019: 22 May 2019
- World Oceans Day 2019: 8 June 2019
- Symposium on Oceans and Climate Change: 12 – 14 June 2019, Valletta, Malta



Global Ocean Biodiversity Initiative


Providing the scientific basis for conserving biological diversity in the global ocean


The Global Ocean Biodiversity Initiative is an international partnership of organisations committed to advancing the scientific basis for conserving biological diversity in the marine environment. In particular, GOBI contributes expertise, knowledge and data to support the Convention on Biological Diversity's efforts to identify ecologically and biologically significant marine areas (EBSAs) by assisting a range of intergovernmental, regional and national organisations to use and develop data, tools and methodologies.

GOBI also undertakes research to generate new science that will enhance the value of EBSAs and their utility for promoting environmental protection and management for specific areas of the world's oceans. The intention is ultimately to reduce the rate of biodiversity loss through the application of ecosystem approaches to the management of human activities, and to support the establishment of networks of representative marine protected areas in national and international waters.

The GOBI partnership and activities are coordinated by a Secretariat team, provided by Seascope Consultants Ltd. GOBI is funded by the International Climate Initiative (IKI). The German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) supports this initiative on the basis of a decision adopted by the German Bundestag.

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