

The time for action
is now



GOBI at the races: achieving the right formula

by Christopher Barrio Froján, GOBI Secretariat

After almost two years of patiently waiting behind the pandemic safety car, the revving engines of various processes on the international political agenda have finally been given the all-clear to go full throttle – and look at them go! – the international season for ocean conservation and governance is back on track with a vengeance. The GOBI pit crew is, as ever, primed and ready to support the discussions with science-based actionable knowledge.

Leading the pack in this rolling start and helping everyone regain their traction was June's UN Oceans Conference in Lisbon. A number of themes dominated discussions, namely the stewardship of the seabed and deep-seabed mining with its associated scientific research, the ocean's role in dealing with the climate crisis, and the need for greater inclusivity of missing voices (of youth, women and indigenous communities). Pent-up ambitions were not, however, fully realised for a number of both political and logistical reasons, but the need to secure equitable funding and connect different silos and sectors was acknowledged. The racetrack unfolds.

Hot on the (w)heels of the UN Ocean Conference was the fifth session of the Intergovernmental Conference on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ), held in August at UN Headquarters in New York. Convening for what many hoped would be the final round of negotiations, Parties were, however, unable to reach consensus on a new High Seas treaty. The by-now-familiar gravel traps of contention that have plagued the process since its inception – such as the mechanics of benefit sharing, not undermining existing mandates, the balance between global minimum standards or guidelines, and interface with other instruments frameworks or bodies – frustrated delegates yet again. With the chequered flag in sight, discussions are set to resume in early 2023 for the final push across the finish line.

Undeterred, the pack races on, with the UNFCCC COP27 – the Climate Change conference – taking the lead in Sharm el Sheik in November, followed in its slipstream by its team-

mate, CBD COP15 – the Biodiversity conference, held in December in Montreal. Both racers are hauling hefty carriages across challenging hairpin bends in front of an expectant crowd. At the time of writing, negotiations at COP27 are still ongoing and appear not to have veered too far over the rumble strips, as the world becomes increasingly aware that cutting corners is not an option for victory in the long term. Capitalising on this rare tandem, both COP27 and COP15 aim to assess existing interdependent ocean and climate actions, as well as identify the gaps in action that need to be addressed. One of their common intentions over the advancing ocean decade is to reverse the decline in ocean health, transform ocean knowledge into good decisions and innovation for sustainable development, and fast-track ocean-based solutions to global issues. This is no easy feat, as the processes within the ocean that play a critical role in climate regulation are themselves changing unpredictably. Committing to fair strategies to keep within 1.5°C of global warming and getting the CBD post-2020 Global Biodiversity Framework adopted by COP15 may have already taken its toll on the racers' tyres, but ambition and expectation remain high, even if some bodywork will need to be adjusted for improved performance along the way. To reach the finish line for this race – an ultra marathon, not a sprint – will take all the political, economic and scientific resources that all of society can muster, as we are all in the passenger seat.

As the lap count mounts and the post-pandemic pileup of postponed events disperses, there is little time for idle spectating. For the GOBI pit crew and other fellow supporters the race goes on, with new racers constantly joining the track, all of them hungry for new evidence to fuel discussions and reach decisions. To this end, in February 2023 GOBI will be contributing to the proceedings of the fifth International Marine Protected Area Congress (IMPAC5) in Vancouver, hosting dedicated scheduled events supporting the congress agenda. In addition, GOBI is organising a one-day workshop prior to the congress to discuss synergies between the various important areas identified using the distribution of major marine taxa, such as Important Bird and Biodiversity Areas (IBAs), Important Marine Mammal

Areas (IMMAs), Important Shark and Ray Areas (ISRAs) and Important Marine Turtle Areas (IMTAs). The outcomes of that workshop will feed directly into a scheduled session on the IMPAC5 agenda.

Lastly, to mark almost seven years of fruitful scientific research funded by Germany's International Climate Initiative (IKI), GOBI will be doing a lap of honour alongside IMPAC5: a two-day GOBI symposium (Vancouver, 1-2 February 2023) will showcase results and achievements to the wider science community and relevant stakeholders, as well as provide opportunity for scientists working on complementary research to present their work. Through an interactive and stimulating format, this event aims to share experiences and demonstrate how targeted research can be used to smooth the transition from science to policy. Discussion will explore how project results can further support new research ideas and initiatives. With this event and the following IMPAC5 conference setting the pace for another busy year, it is imperative that the scientific community and its policy teammates continue to work together on the urgent and ongoing task of delivering transformative science solutions for the ailing ocean we so deeply depend upon. At a time when we all have skin in the game, don't just watch the race – be a part of it.

The time for action is now.

GOBI side events @ COP15

Ecologically or Biologically Significant Marine Areas (EBSAs): Describing the special places of the ocean in a changing world

13:15, Friday 9 December 2022: CEE Meeting Room 510A
Co-organisers: CBD Secretariat & GOBI

A decade ago, the CBD community embarked on an epic journey around the world to map and describe the “special places” of the ocean and seas – places that are the most important to the healthy functioning of the global marine ecosystem – known as “ecologically or biologically significant marine areas”, or EBSAs. After more than 10 years, the regional EBSA workshop process has examined around 75% of the global ocean and has yielded a portfolio of EBSAs that encompasses a wide range of species, habitats, ocean features and biogeographic provinces. This process has generated positive outcomes and co-benefits, not only describing and mapping out the special places in the ocean, but also catalyzing partnerships and enhancing political attention on the most important parts of the ocean.

Over time, new information has emerged all over the ocean, including for EBSAs. This side event will review new information that has emerged in various EBSAs around the world, and the implications of this for the use of EBSA information and the future of the EBSA process.

From Aichi Target 11 to 30x30: Marine ecosystem connectivity and science-driven processes in support of decision making

18:15, Saturday 10 December 2022: SIDS meeting room 513C
Co-organisers: French Biodiversity Agency & GOBI

This side event will focus on efforts to recognise critical habitat and pathways for migratory species in the context of Goal A of the post-2020 Global Biodiversity Framework (GBF). Ecosystem connectivity also has relevance for a broader range of species and their survival. Target 3 of the GBF (as drafted) maintains continuity with Aichi Target 11, specifically referring to well-connected systems or networks of marine protected areas and other effective area-based conservation measures. We will showcase latest efforts that can contribute to ensuring and enabling Parties to achieve a higher percentage of protected areas and that also support objectives of the Convention on Migratory Species.

The Sustainable Ocean Initiative: Learning from the past to better build capacity to achieve global ocean goals into the future

13:15, Tuesday 13 December 2022: CEE Meeting Room 510A
Co-organisers: CBD, MOF Korea, JBF, OFB

The Sustainable Ocean Initiative (SOI), a capacity-building programme coordinated by the CBD Secretariat, celebrated its 10 year anniversary in 2020, reflecting on numerous achievements in building improved capacity to achieve global ocean goals, as highlighted in the 10-year SOI Impact Study (www.cbd.int/marine/soi/booklet-soi-10years-en.pdf).

Through activities such as the SOI Global Dialogue with Regional Seas Organizations and Regional Fishery Bodies, regional and national capacity building workshops and training of trainers, SOI has worked to provide a holistic and strategic framework through which to catalyze partnerships, build on lessons learned and knowledge gained, and facilitate improved coordination to address the capacity needed for achieving global, regional and national objectives for the ocean.

The heightened ambition of the post-2020 Global Biodiversity Framework (GBF) calls for expanded and accelerated action for conservation and sustainable use of marine and coastal biodiversity. This makes the work of SOI even more urgent, as achieving the goals of the post-2020 GBF will require robust capacity for implementation.

This side event will provide a key opportunity to reflect on the history and achievements of SOI, consider what the post-2020 GBF will mean for ocean-related capacity building and highlight potential future directions for SOI.

For details of all CBD COP15 side events please see www.cbd.int/side-events



2020 UN BIODIVERSITY CONFERENCE
COP 15 - CP/MOP 10 - NP/MOP 4
Ecological Civilization-Building a Shared Future for All Life on Earth
KUNMING – MONTREAL

Making it count:

Science in support of ocean conservation and governance

GOBI warmly invites you to a two-day symposium on creating actionable science and facilitating the transition from science to policy



1-2 February 2023

The Nest, Vancouver

Free registration; all welcome

More details at www.gobi.org/making-it-count

GOBI international workshop on EBSAs in ABNJ



On 6-9 November 2022, GOBI convened an expert workshop on Ecologically or Biologically Significant Marine Areas (EBSAs) in Areas Beyond National Jurisdiction (ABNJ) in Santa Cruz, California. The workshop took place at an inspirational venue – the Seymour Marine Discovery Center, a community-supported marine science education center of the University of California Santa Cruz. During breaks participants could walk beside the sea, watch whales close inshore and admire squadrons of pelicans patrolling the surf. Due to a combination of geological features and currents, Monterey Bay is one of the richest marine environments in the world and the Monterey Bay National Marine Sanctuary was designated in 1992.

Experts attended (in person and online) by invitation in their personal capacity at a critical time for the EBSA process. The first day was a chance to take stock of the EBSA portfolio – how we got to where we are. Participants were split between those immersed in EBSAs and the Convention on Biodiversity (CBD) agenda (including representatives of both technical teams involved in all the CBD Regional EBSA Workshops), those with some experience of EBSAs, and those with little or none. This made for a healthy and constructive ‘self-critical’

mix of scientific and technical talent, giving the workshop a collective chance to explain and reflect on how and why the current coverage of EBSAs in ABNJ came about.

Subsequent days addressed gaps. New EBSA template suggestions were used to take a deep-dive into and showcase features that might merit future consideration and to illustrate the technical complexities of interpreting EBSA criteria in ABNJ. This underlined the need to add information to the existing suite of EBSAs to reflect advances in scientific understanding and maintain relevance of EBSAs in ABNJ. Not least this is seen as critical for implementing the forthcoming



Right: Dan Costa leads workshop participants on a tour of the UCSC marine facilities.
Far right: scenes from the workshop. Images D. Johnson, V. Gunn & G. Ortuño Crespo.

international legally-binding implementing agreement for the conservation and sustainable use of biodiversity beyond national jurisdiction. Participants did not shy away from jurisdictional or sectoral competence complications but at the same time recognised that best science must feed into a policy context with political sensitivities.

The workshop brainstormed a detailed set of challenges that face the EBSA process in general and those that apply to ABNJ in particular. Finally, small group discussions scoped

ways to improve the utility of EBSAs and considered threats from both the impacts of human activities on the marine environment and from possible stagnation of the EBSA process if Parties cannot find a way forward at CBD COP15. Our thanks to all those who participated and to the staff of the Seymour Marine Discovery Center who provided us with such a unique venue to exchange views and rekindle a spirit of collective impetus to understand and care for our high seas biodiversity.



Third Sustainable Ocean Initiative Global Dialogue: Forging a new era of regional leadership in the post-2020 world



Hosted by the Ministry of Oceans and Fisheries of the Republic of Korea on 25-28 October 2022, the third Sustainable Ocean Initiative (SOI) Global Dialogue brought together Regional Seas Organisations (RSOs) and Regional Fishery Bodies (RFBs). SOI is a global platform for capacity building and partnerships, acknowledging that regional organisations are key players in achieving global goals. The latter can be achieved through translating global commitments, facilitating implementation, and reporting on progress, challenges and gaps.

This hybrid (in-person and online) meeting received updates from various regions on cross-sectoral cooperation at the regional scale and inputs to relevant global processes. The evolving global ocean policy-scape has implications for emerging initiatives related to strengthening regional ocean governance. Managing pressures interacting with the effects of climate change, controlling pollution, area-based management and protection of threatened species

and habitats were prominent discussion topics. Regions provided examples of where cross-sectoral cooperation and coordination has been tailored to specific regional circumstances.

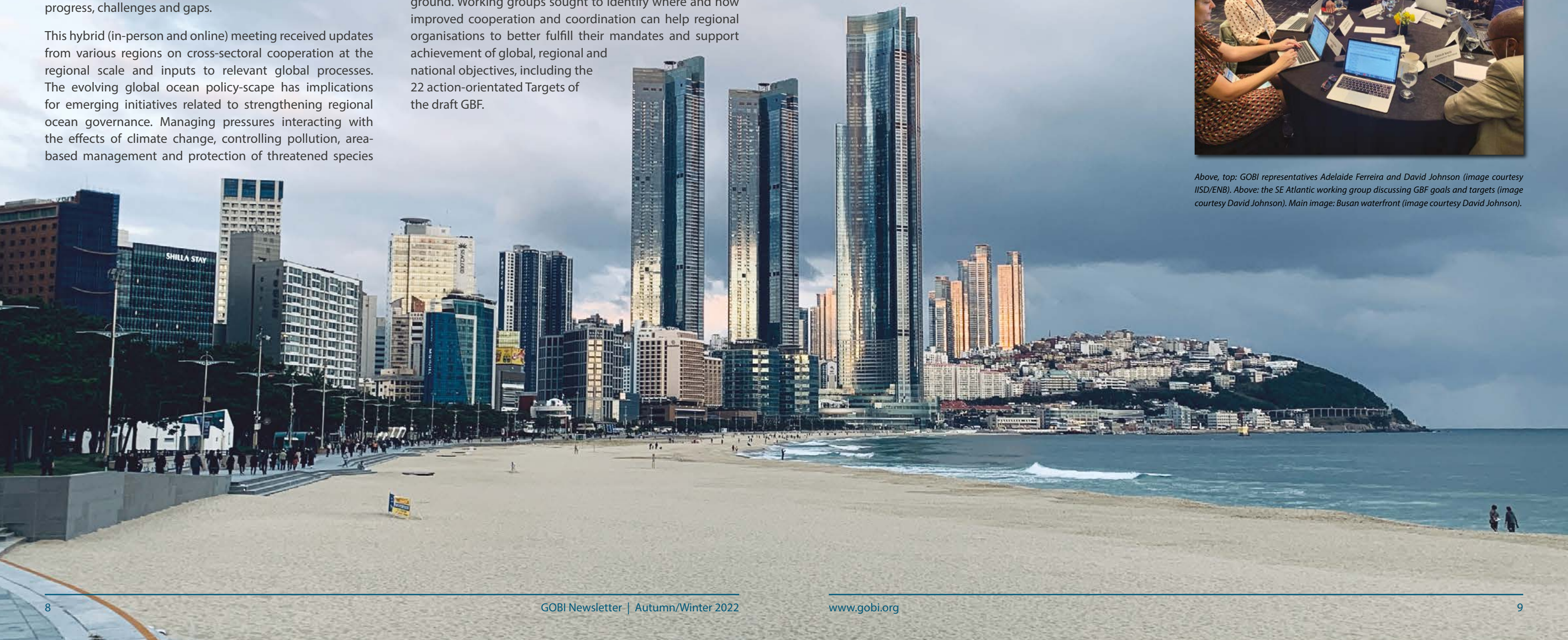
Critically, ahead of CBD COP15, the Dialogue examined the state of play of the post-2020 Global Biodiversity Framework (GBF), particularly translating global goals to the regional level and supporting implementation on the ground. Working groups sought to identify where and how improved cooperation and coordination can help regional organisations to better fulfill their mandates and support achievement of global, regional and national objectives, including the 22 action-orientated Targets of the draft GBF.

In addition to consideration of the GBF, the Dialogue took note of emerging tools and processes, including: progress on FAO Guidelines on Other Effective Conservation Measures, negotiations to finalise a legally-binding agreement on the conservation and sustainable use of biodiversity beyond national jurisdiction, and the roadmap towards a UN Plastics Treaty. These discussions can also help inform revision of National Biodiversity Strategic Action Plans, updating of the CBD marine Programme of Work, and associated indicators.

The formal conclusion is a 'Busan Outcome' text reporting on the meeting and reaffirming the core objectives of the SOI Global Dialogues, extolling the merits of regional leadership. It will reflect an emphasis placed in the later discussion phase of the meeting on consolidating regional roadmaps and priority actions to advance collaboration and coordination between RSOs and RFBs. Busan is well known as a major centre of marine science and port operations. It is also an education to wander around Jagalchi Market, Busan's world-famous international fish market.



Above, top: GOBI representatives Adelaide Ferreira and David Johnson (image courtesy IISD/ENB). Above: the SE Atlantic working group discussing GBF goals and targets (image courtesy David Johnson). Main image: Busan waterfront (image courtesy David Johnson).





Important Marine Mammal Areas (IMMAs) – moving into high gear

by Erich Hoyt, IUCN Marine Mammal Protected Areas Task Force and Whale and Dolphin Conservation

As I write this, seven of us, members of the Task Force's IMMA Secretariat, are preparing to travel to Praia do Forte, Brazil, to join more than 30 scientists for the sixth GOBI-sponsored Important Marine Mammal Area (IMMA) regional workshop, covering the Southwest Atlantic Ocean, from the Guyanas to Tierra del Fuego, Argentina. At the completion of this workshop in December 2022, and the subsequent peer-review of the chosen areas, the IMMA process will have worked in more than half of the world ocean to identify IMMAs and make them available on the global IMMA e-Atlas¹.

At the same time, we are pleased to announce the successful approval after peer-review of 36 new IMMAs and five candidate IMMAs (cIMMAs; yet to be finalised) from the last regional IMMA workshop, which targeted the South East Tropical and Temperate Pacific Ocean from Mexico to Chile, held in San José, Costa Rica. These new IMMAs identify habitats for the ocean's most productive populations of blue whales, along with endangered vaquita, Burmeister's porpoises, Chilean dolphins and Galápagos sea lions, all endemic to this region.

With these new additions, there is now a total of 209 IMMAs, 30 cIMMAs and 152 areas of interest (Aoi) on the global IMMA e-Atlas, ready to be used for conservation, research and marine spatial planning.

Nearly a decade ago, at the third International Marine Protected Areas Congress (IMPAC3) in Marseille on 25 October 2013, we launched the IUCN Task Force on Marine Mammal Protected Areas within the Species Survival Commission and the World Commission on Protected Areas. Three years later, just six years ago, we began the IMMA regional workshop programme to map the habitats for 132 marine mammal species across the whole ocean. The MAVA Foundation helped with the first regional IMMA workshop for the Mediterranean, and that was followed by sustained support from GOBI for seven more regional IMMA workshops across the southern hemisphere and one in the Black and Caspian seas. A further regional workshop in the Southern Ocean around Antarctica was funded by the French government and with help from several foundations. The overall project has been administered through the Tethys Research Institute in Italy with assistance from Whale and Dolphin Conservation in the UK. In 2017, IMMAs were endorsed by the UN Convention on Migratory Species through a Resolution adopted by the Conference of Parties.

Today, the IMMA e-Atlas has become the portal for accessing spatial information about the world's whales, dolphins, porpoises, seals, sea lions, manatees, dugong, sea otters and the polar bear. To date, more than 400 sets of shapefiles

have been requested and the monthly number of requests has steadily increased. Many IMMAs are being put to work for conservation, as detailed in the Summer 2022 edition of the GOBI Newsletter and in our paper published this year in *Frontiers in Marine Science*². Other IMMAs have already become threatened, notably the four IMMAs identified for unique subspecies of bottlenose and common dolphins and harbour porpoises found in the Black Sea waters of Ukraine. These IMMAs have been subjected to mines, bombs, war-time ship traffic and blockades with unknown impact and no accessibility for monitoring or further research.

Next up for the Task Force's IMMA Secretariat are several sessions and presentations at IMPAC5 to be held in Vancouver in February 2023. This will lay the groundwork and provide contacts relevant to working in the North East Pacific. Before that, however, in May 2023, the IMMA Secretariat will host the regional IMMA workshop for the Northeast Atlantic in Germany, adding a vital piece of the Atlantic puzzle to the IMMA portfolio.

² *The Important Marine Mammal Area network: a tool for systematic spatial planning in response to the marine mammal habitat conservation crisis*, by Michael Tetley and colleagues in *Frontiers in Marine Science*, DOI: [10.3389/fmars.2022.841789](https://doi.org/10.3389/fmars.2022.841789)



Above: Northern elephant seals in Guadalupe. Image courtesy Fernando Elorriaga.

Main image, left: Rough-toothed dolphin. Image courtesy David Palacios-Alfaro.

¹ www.marinemammalhabitat.org/imma-eatlas/

Ongoing scientific and planning efforts towards protecting the Southern Ocean

by Cassandra Brooks and Sarah Becker, University of Colorado Boulder

Antarctica is exceptional. The coldest, windiest, iciest, driest, and most remote of continents is widely celebrated for its rich history of exploration, science and diplomacy and for its exceptional beauty. It's also critically important. Since its discovery, scientists have documented how the Antarctic is vital to Earth systems. And despite the extreme environment, life thrives in incredible abundance. The freezing Southern Ocean that surrounds the Antarctic continent teems with whales, seals, penguins, toothfish and krill. This frozen seascape harbours some of the last remaining great wildernesses on the planet. However, fishing pressure – mostly for krill (*Euphausia superba*) and toothfishes (*Dissostichus eleginoides* and *D. mawsoni*) – combined with cumulative impacts of climate change, jeopardises the future of Antarctic life in the Southern Ocean. The multinational

Commission for the Conservation of Antarctic Marine Living Resources (or CCAMLR) holds the great responsibility of managing Southern Ocean fisheries now and into the future.

Extensive research supports that protected areas – areas that are off-limits to fishing and other human activities – can conserve biodiversity, and perhaps most importantly in the case of the Southern Ocean, can enhance resilience to climate change impacts. In 2002, CCAMLR committed to establishing a network of marine protected areas (MPAs) to meet targets set by the 2002 United Nations World Summit on Sustainable Development. By 2005, CCAMLR began working towards identifying priority areas for protection and compiling the best available science to guide development of an ecologically representative network of Southern Ocean MPAs.

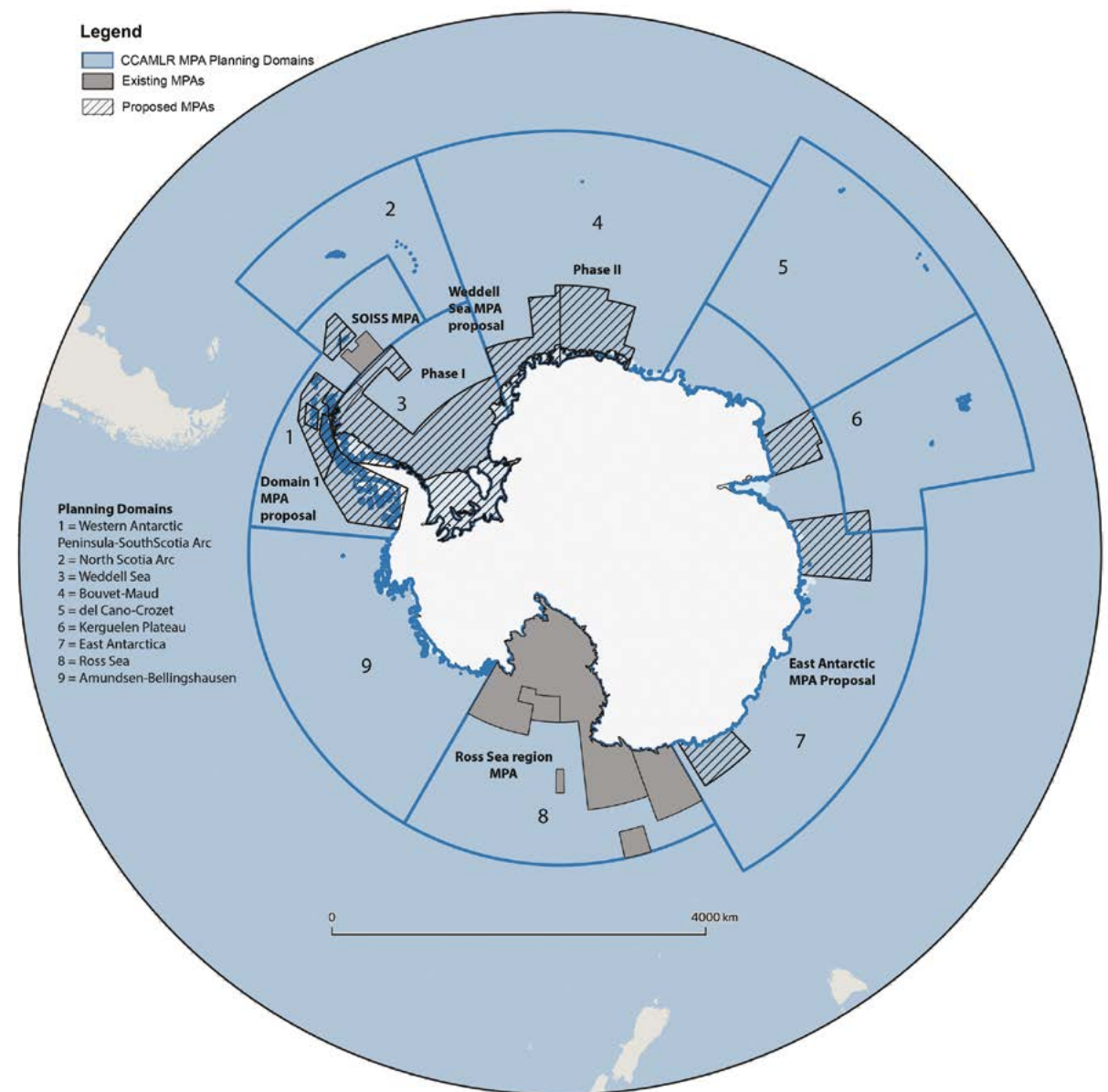


Figure 1: CCAMLR's MPA planning domains, MPAs and proposals. Existing MPAs (South Orkney Islands Southern Shelf (SOISS) and Ross Sea region) shown in gray. Proposals for MPAs (Domain 1 – western Antarctic Peninsula, Weddell Sea and East Antarctic) shown by hashed lines. MPA planning domains illustrated by numbers 1-9.

In 2009, CCAMLR adopted its first MPA – and the world’s first international MPA – south of the South Orkneys Islands which protects around 94,000 km² as a no-take reserve (Figure 1). In 2011, the Commission adopted a framework to guide the MPA process and multiple CCAMLR members began developing MPA proposals across the Southern Ocean guided by nine Planning Domains (Figure 1). In 2016, CCAMLR made history by adopting one of the world’s largest MPAs in the Ross Sea, Antarctica conserving about 2M km² with over 70% being fully off-limits to fishing (Figure 1). The Ross Sea is one of the healthiest large marine ecosystems in the world, and is the most productive stretch of the Southern Ocean, supporting a disproportionate array of marine life (Figure 2).

Currently there are three potential MPAs still under negotiation, including in the Weddell Sea, East Antarctic

and the western Antarctic Peninsula – all of which would contribute to a representative network of Southern Ocean protected areas (Figure 1). The proposed East Antarctic MPA has been designed as a representative network, containing three areas (MacRobertson, Drygalski, and D’Urville Sea-Mertz) which are incredibly important for mammals and birds, including vulnerable penguin colonies which have experienced breeding failure in recent years, likely due in part to climate change. The Weddell Sea is among the least disturbed marine ecosystems in the Southern Ocean, home to a vast array of wildlife and exceptional biodiversity and the MPA proposal has been designed to protect vulnerable marine ecosystems on the seafloor, fish species, birds and mammals. The Weddell Sea MPA proposal is currently being developed in two phases - Phase 1 including the western

Figure 2. The Ross Sea region biodiversity and ecosystem, including (from top left to bottom right) Ross Sea killer whales, Emperor penguins, Adélie penguins, Antarctic Minke whale, Emerald Rockcod, Weddell seal, isopod on a glass sponge, and the benthic seafloor (images courtesy John B. Weller, with permission).



King penguins and seal pup, Antarctica. Image courtesy Rod Long/unsplash.

region and Phase 2 the eastern region (Figure 1). Phase 1 is currently under negotiation and Phase 2 is scheduled to come to CCAMLR as a formal MPA proposal in 2023. Finally, the Antarctic Peninsula (also known as Domain 1) is significant for its outstanding environmental values, including harbouring the majority of Antarctic krill and large populations of penguins, seals and whales. However, it is also the region of Antarctica most impacted by human activities (including research and fishing) and environmental change. Additional important regions that would contribute to a representative network of MPAs across the planning domains, such as in the Amundsen Sea, will be developed in the future.

Despite many years of scientific planning and ongoing diplomatic discussions at CCAMLR, progress on adopting MPAs has slowed. This has been largely due to difficulty negotiating during the Covid-19 pandemic, conflicting economic interests, and most recently, geopolitical barriers. CCAMLR had been forced to meet remotely during scientific and diplomatic discussions between 2020-2021, making decision-making slow and difficult. Fishing interests have continued to grow in the most remote reaches of the Southern Ocean and some CCAMLR Members see MPAs as a threat to current and future economic and food securing opportunities. Furthermore, global international tensions – including the ongoing war in Ukraine (both Russia and Ukraine are members of CCAMLR) – influence negotiations and have acted as a barrier to adopting MPAs. The 41st meeting of CCAMLR took place in person between 24 October and 4 November 2022, and was an opportunity for face-to-face

negotiations after two years of meetings online. While no new MPAs were adopted at this meeting, CCAMLR agreed to hold a special intersessional meeting of the Commission focused explicitly on advancing MPA implementation. This meeting is scheduled to commence in Chile in the first half of 2023. Further, this year marked the first five year reporting since the adoption of the Ross Sea region MPA. Hundreds of studies conducted through collaborations between 20 of the 26 CCAMLR Member States have been completed or are ongoing in support of research and monitoring of the MPA. Thus, the MPA appears to be actively managed, with active research, monitoring and enforcement and thus is exemplary of CCAMLR’s ability to design, adopt and manage large-scale Southern Ocean MPAs.

Antarctica has long been a beacon of international diplomacy, including in globally difficult times. The Antarctic Treaty was signed at the height of the Cold War and banned nuclear and military activities and set aside the continent for peace and science. CCAMLR has demonstrated global leadership towards adopting large-scale protected areas in the Southern Ocean, achieving diplomatic consensus even in difficult times, to conserve Antarctic marine life for future generations. Negotiations will resume in 2023 when CCAMLR has the opportunity to resume its work towards a Southern Ocean network of protected areas. Agreeing to protect further regions of the Southern Ocean would ensure Antarctic marine ecosystems thrive in the future.

Voyage to the Ridge 2022

by David Johnson, GOBI Coordinator



Fogbow seen from the back deck of NOAA Ship Okeanos Explorer during the second Voyage to the Ridge 2022 expedition. Image courtesy NOAA Ocean Exploration, Voyage to the Ridge 2022.

US National Oceanic and Atmospheric Administration (NOAA) Ocean Exploration undertook a three-part series of telepresence-enabled ocean exploration expeditions this summer in the North Atlantic Ocean (coded EX2204, EX2205 and EX2206). In addition to extensive multibeam sonar mapping operations, using the ship's deep-water acoustic systems, NOAA ship *Okeanos Explorer* deployed ROV *Deep Discoverer* to acquire high-definition visual data. The expeditions also collected targeted samples in poorly explored areas along the Mid-Atlantic Ridge (MAR), the Azores Plateau and the deep waters off Puerto Rico. This was a contribution to NOAA's Atlantic Seafloor Partnership for Integrated Research and Exploration (ASPIRE), a major multiyear, multinational collaborative programme that generates impressive educational outreach materials.

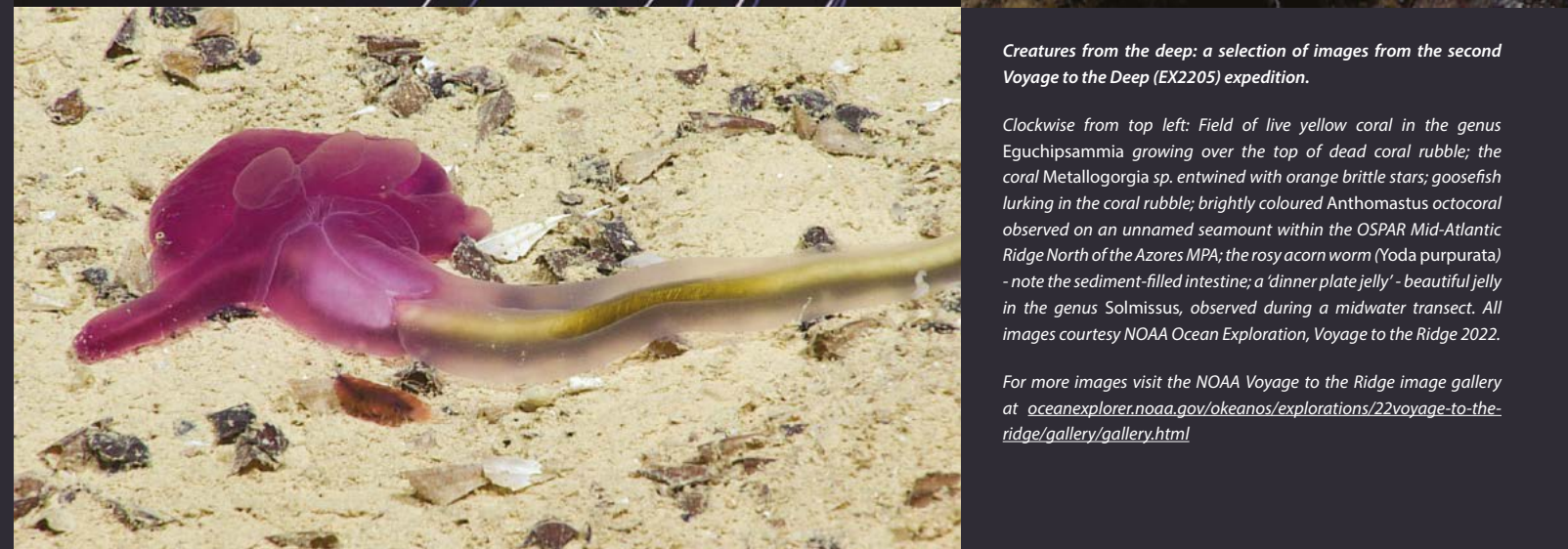
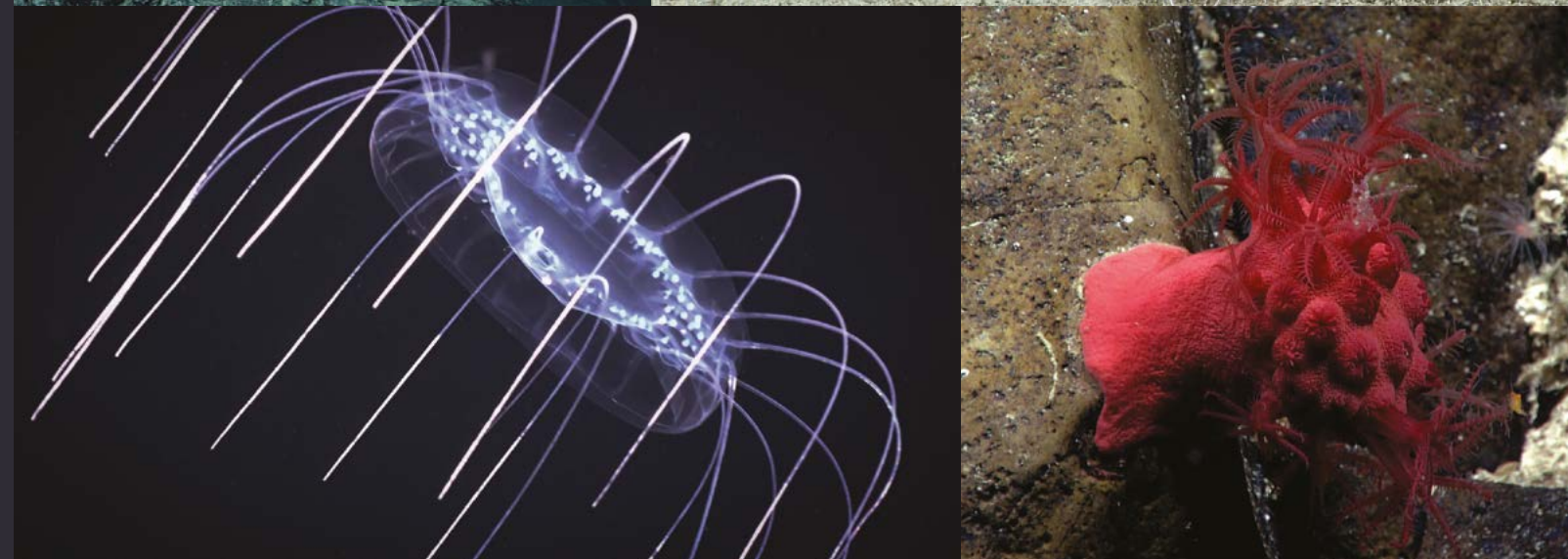
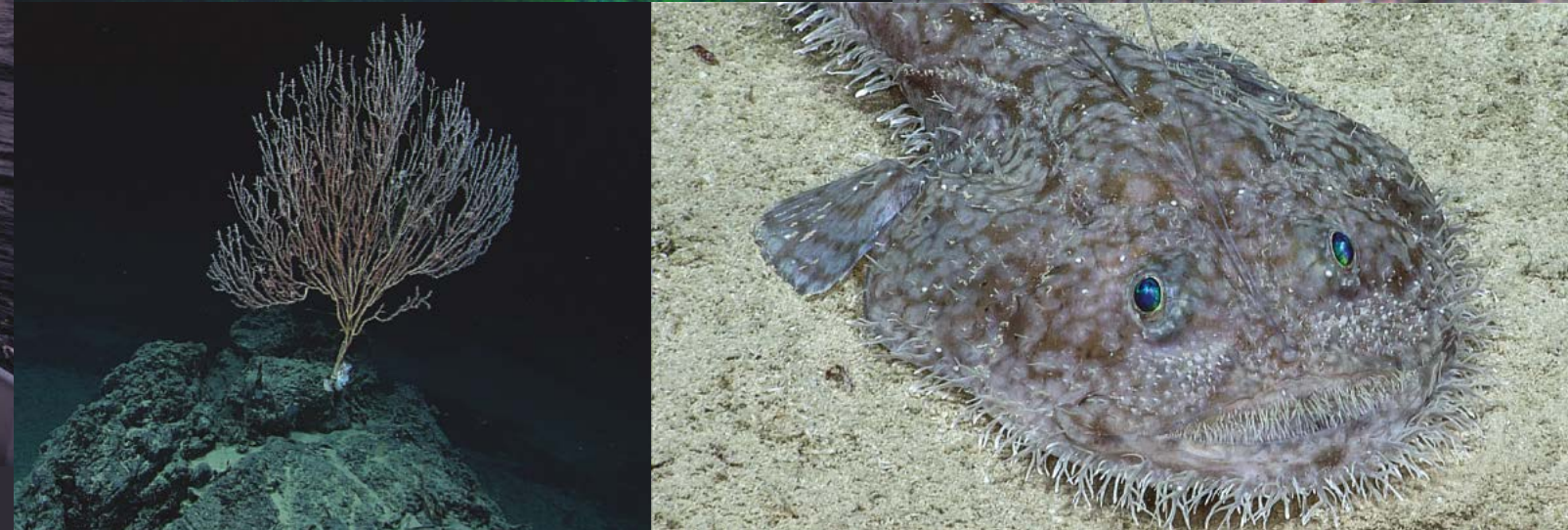
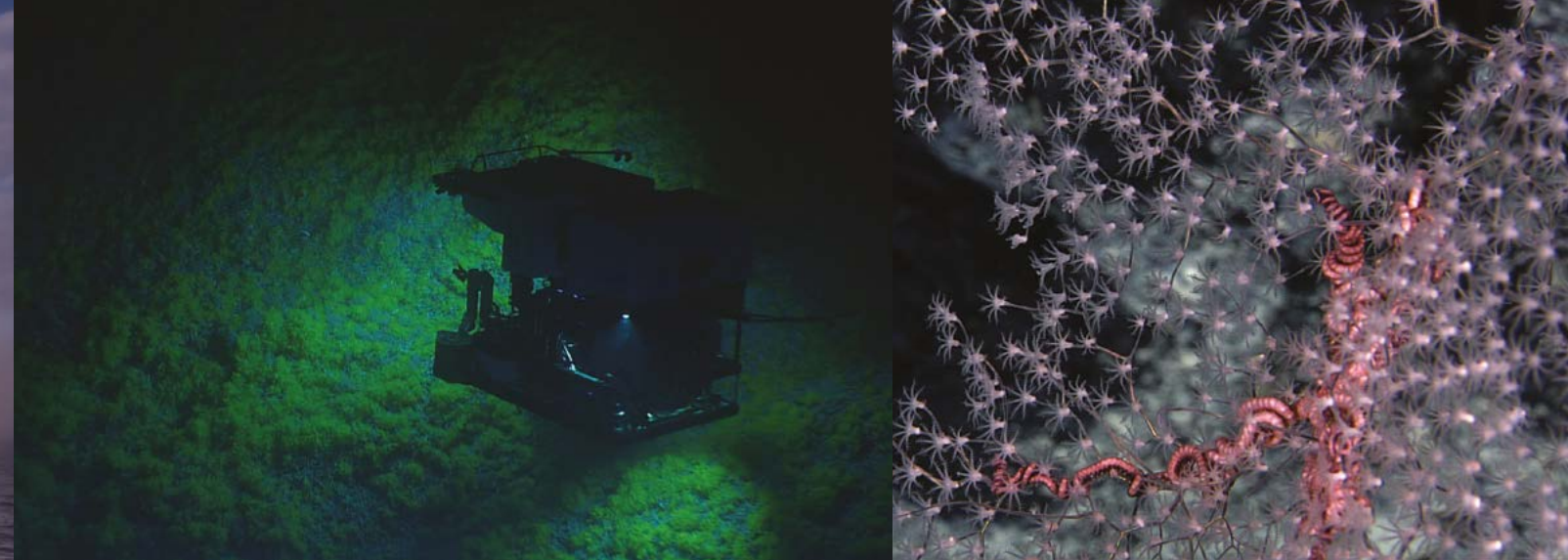
Despite being bedeviled by heavy weather, technical issues and an excess of *Sargassum* in some locations, the missions were a success. The cruises were highly accessible to shoreside scientists who were able to view and comment on the live high-resolution video feeds, participate in teleconference planning sessions and respond to open invitations to chat and help annotate the dive footage. Dives included carefully planned transects on unexplored seamounts and ridges as well as mid-water transects.

The GOBI Secretariat took a particular interest in the second cruise (EX2205), particularly those dives in areas beyond

national jurisdiction. The first three dives took place on steep walls and topographic highs in the divergent plate boundary of the MAR North of the Azores. These were within areas designated by OSPAR as a High Seas Marine Protected Area and described as a candidate EBSA in the North East Atlantic Regional EBSA Workshop.

Dive 1 on the western flank of the MAR rift valley ascended an unnamed seamount, revealing patches and then fields of coral rubble, finally reaching a circling crown of bright yellow coral (*Eguchipsammia*). The dive came to an apt and spectacular conclusion, chancing upon a large Goosefish, stock still at the summit of the seamount, defiantly staring back 'king of the castle'-like at the ROV. Dive 2 took in the Moytirra Vent Field, initially exploring inactive sulphide vent habitats before moving on to observe active black smoker chimneys. Dive 3 comprised a series of mid-water transects in the water column of the OSPAR MPA. At 500 m depth, this included a dive in the deep-water scattering layer: a high concentration of marine organisms, including jellyfish and squid, suspended in the water column.

For more details on individual dives and expedition features (including an essay by yours truly on the Charlie-Gibbs Fracture Zone) and an amazing image gallery see: oceanexplorer.noaa.gov/okeanos/explorations/22voyage-to-the-ridge/welcome.html



Creatures from the deep: a selection of images from the second Voyage to the Deep (EX2205) expedition.

Clockwise from top left: Field of live yellow coral in the genus *Eguchipsammia* growing over the top of dead coral rubble; the coral *Metallogorgia* sp. entwined with orange brittle stars; goosefish lurking in the coral rubble; brightly coloured *Anthomastus octocoral* observed on an unnamed seamount within the OSPAR Mid-Atlantic Ridge North of the Azores MPA; the rosy acorn worm (*Yoda purpurata*) - note the sediment-filled intestine; a 'dinner plate jelly' - beautiful jelly in the genus *Solmissus*, observed during a midwater transect. All images courtesy NOAA Ocean Exploration, Voyage to the Ridge 2022.

For more images visit the NOAA Voyage to the Ridge image gallery at oceanexplorer.noaa.gov/okeanos/explorations/22voyage-to-the-ridge/gallery/gallery.html

Integrating connectivity into high seas conservation: a case study of the Salas y Gómez and Nazca ridges

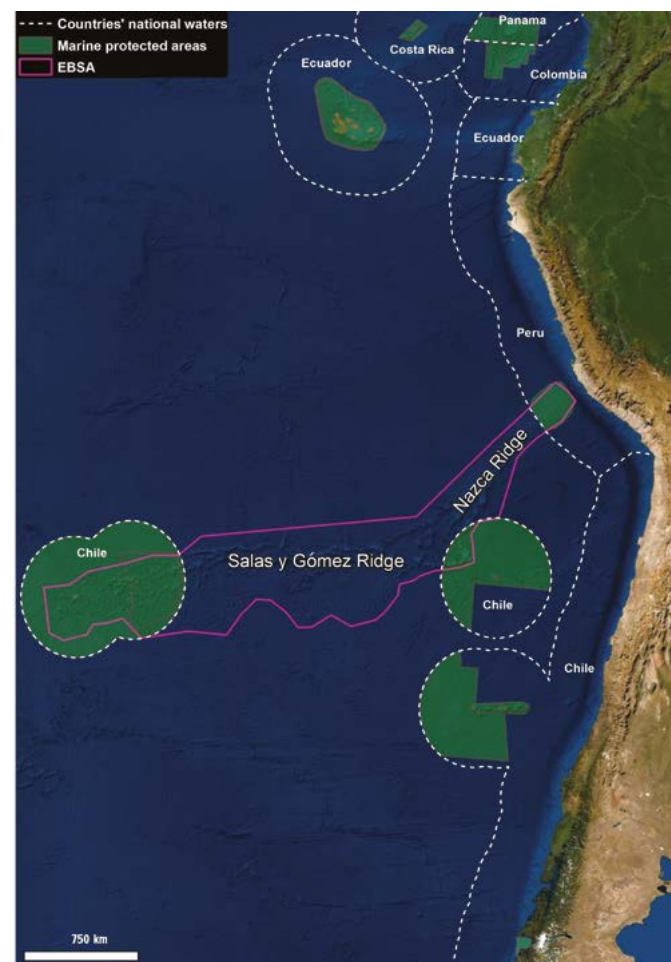
by Ben Boteler, Institute for Advanced Sustainability Studies Potsdam

Connectivity is essential to consider in area-based marine conservation measures because it greatly impacts vital ecological processes (e.g., recycling nutrients, regulating temperature, sequestering carbon, and supporting the life cycle of species). However, it is generally not well studied or integrated into conservation measures, particularly in the Southeast Pacific. This region is home to the Salas y Gómez and Nazca ridges, two adjacent seamount chains that stretch between the Peruvian coast and Rapa Nui (i.e., Easter Island). The area has been recognised for its exceptional natural and cultural significance as well as one of the most important global areas to protect. However, over 73% of the ridges are in areas beyond national jurisdiction, where they are unprotected and under threat. Marine conservation efforts in this region are generally focused on either coastal areas in the continental margins, or waters surrounding offshore islands under the jurisdiction of South American countries. However, there is little information about connectivity between these coastal areas and offshore islands, thus hindering conservation efforts, particularly in areas beyond national jurisdiction (ABNJ).

Current knowledge on connectivity in the Salas y Gómez and Nazca ridges has been compiled and synthesised in a recent review, providing practical recommendations for integrating this knowledge into conservation and management measures for the region. While data on connectivity is still limited, it should not constrain the development of conservation measures, which should be co-designed and co-developed, leveraging the expertise of international working groups throughout the region. Due to their high rates of species endemism, as well as the area's importance as a migratory corridor, enacting large-scale conservation measures would address important conservation considerations for both connectivity and endemism. Enacting such large-scale conservation measures

would not only elevate the Salas y Gómez and Nazca ridges as an exemplary case study, providing lessons for other marine regions seeking to implement similar measures, but could also help raise awareness on the severity of externally originating threats like climate change and plastic pollution to global audiences.

More detailed information on the findings and conclusions of the review can be found in the article: Borderless conservation: Integrating connectivity into high seas conservation efforts for the Salas y Gómez and Nazca ridges, by Boteler and colleagues in *Frontiers in Marine Science*, 2022. DOI: [10.3389/fmars.2022.915983](https://doi.org/10.3389/fmars.2022.915983)



Map showing the location of MPAs around the Salas y Gómez and Nazca Ridges. More than 73% of the Salas y Gómez and Nazca ridges lie in ABNJ where they are unprotected. Map reproduced with permission from Boteler et al. (2022).



Celebrating BirdLife International's centenary

by Tammy Davies, BirdLife International

On 20 June 1922, a group of concerned naturalists gathered at the London home of the Chancellor of the Exchequer, Sir Robert Horne, united by their passion for birds and their plight. The prevailing fashion for ostentatious plumed headwear had led to the excessive exploitation of exotic wild birds. The group decided that coordinated action was needed to address this and other threats facing birds worldwide. They consequently founded The International Council for Bird Preservation – now known as BirdLife International.

Since those humble beginnings, BirdLife International has grown to the world's largest nature conservation partnership, with 119 partner organisations working in unison to protect birds and biodiversity in all continents, landscapes and seascapes.

One hundred years after its conception, BirdLife International celebrated its centenary with a World Congress in September 2022, hosted by the BirdLife International Secretariat at its headquarters in Cambridge. The congress was opened by Her Imperial Highness Princess Takamado of Japan, BirdLife International's Honorary President. More than 1,000 people attended the conference, both in person and virtually via live streaming events. Amongst the activities and celebrations, the congress saw the launch of the new 10-year strategy to address the nature and climate crises, as well as thematic sessions on BirdLife's focal work areas, workshops, and a Partnership fair showcasing the work of many of the BirdLife Partners.

2022 also marks 25 years of the BirdLife Marine Programme. In 1997, work began to establish a coordinated approach to address the worrying decline in albatross populations



Tammy Davies presenting the latest developments in seabird tracking data applications.

driven by bycatch in longline and trawl fisheries. This led to the first compilation of tracking data for albatross and petrel (Procellariiform) species to map their distributions and inform conservation efforts. This compilation was a precursor to the Seabird Tracking Database that now contains more than 20 million data points for more than 150 species and provides the evidence base for much of the Programme's marine conservation work.

During the World Congress, the BirdLife Marine Programme celebrated its 25th anniversary with a look back at some key successes, including reductions in seabird bycatch in target fisheries and the protection and recognition of important areas for seabirds using a globally agreed set of criteria. Examples of its further successes include the inclusion of such important bird and biodiversity areas (IBAs) within the process led by the Convention on Biological Diversity to describe ecologically and biologically significant marine areas (EBSAs), and the recent designation of the North Atlantic Current and Evlanov Seabasin marine protected area.

More details on the origins, history and achievements of BirdLife International can be found at:

www.birdlife.org/birdlife100

Left: BirdLife International 100th anniversary celebration dinner at London's Victoria and Albert museum.



The first year of SARGADOM: Success to build on

by Fae Sapsford and David Freestone, Sargasso Sea Commission

The Sargasso Sea Commission will receive €961,000 from the Fonds Français pour l'Environnement Mondial (FFEM) over five years as part of the 'SARGADOM' project. The objective of the project is to contribute to the protection of biodiversity and ecosystem services in the high seas, with a focus on the Sargasso Sea in the North Atlantic and the Costa Rica Thermal Dome in the Eastern Tropical Pacific. 'SARGADOM' combines the names of the project's two focus sites.

Project partners include Fundación MarViva, Université de Bretagne Occidentale (UBO) and Office Français pour la Biodiversité (OFB). Already this year, the project partners have made significant progress: putting expert management teams in place, beginning work on a DPSIR (drivers-pressures-states-impacts-responses) analysis that will provide an up-to-date picture of both natural and social factors at play in the two focus sites, and hosting numerous events at international fora to share and promote the work of the project.

The SARGADOM project hosted a side event at the UN Ocean Conference in Lisbon on 29 June 2022. This event was held aboard a riverboat on the Tagus river and brought together co-financiers, supporters, and other partners of the project. Presentations were given by Fundación MarViva and the Sargasso Sea Commission, and representatives from each organisation made calls to action. Haydée Rodríguez, Project Coordinator for Fundación MarViva, called for the formation of a technical working group focused on the Thermal Dome to be established as part of the High Ambition Coalition

for BBNJ, saying "let it be a blueprint for ocean governance in the future." The Honourable Walter H. Roban, JP, MP, Deputy Premier of Bermuda and Minister of Home Affairs, called for more governments to become signatories to the 2014 Hamilton Declaration on Collaboration for the Conservation of the Sargasso Sea, saying "though we often feel as if they belong to no one, the high seas are the responsibility of everyone."

In addition, the SARGADOM project hosted a roundtable event titled 'Generating science for high seas conservation: the SARGADOM project' as part of the Congreso Latinoamericano de Ciencias del Mar (COLACMAR), held 19-23 September 2022 in Panama. Haydée Rodríguez acted as the facilitator for the event. Dr David Freestone and Dr Jorge Jiménez gave presentations on the context and conservation challenges for the Sargasso Sea and the Thermal Dome, respectively. Other speakers, presenting on different aspects of the SARGADOM project, included Dr Guillermo Ortuño Crespo, Mia Oenoto, Fae Sapsford, Dr Eric J. Alfaro, and Dr Mariamalia Rodríguez Chavez. This roundtable was the only event focused on high seas issues at the COLACMAR congress, providing a valuable opportunity for networking amongst Latin American scientists dealing with the high seas.

On 17 October 2022, the Sargasso Sea Commission Secretariat, along with SARGADOM partners Fundación MarViva and UBO, convened the second annual SARGADOM Steering Committee meeting at the Villa Caletas hotel in

Costa Rica, as well as an expert data analysis group workshop for the Sargasso Sea and the Thermal Dome. During the Steering Committee meeting, the first annual project report was approved by the project partners. The data analysis workshop was a valuable opportunity for collaboration and coordination between the implementing partners of the project: Duke University Marine Geospatial Ecology Laboratory (MGEL), Imperial College London Centre for Environmental Policy, Bermuda Institute of Ocean Sciences, and the NASA COVERAGE project. The project will produce a DPSIR analysis for both focus areas, and the DPSIR framework was also discussed.

Lastly, the Sargasso Sea Commission's Inception Workshop for the separate but complementary GEF project, 'Strengthening the stewardship of an economically and biologically significant high seas area – the Sargasso Sea,' supported by implementing agency UNDP, and executing agency IOC-UNESCO, a child project of the FAO Common Oceans Programme, also took place in Costa Rica on 18 October 2022. It is envisaged that both projects will work closely to maximise the impact of their combined findings.



Clockwise from top left: Members of the SARGADOM team Joelle Richardson, Project Coordinator for UBO; Fae Sapsford, Marine Research Fellow for SSC; Charline Guillou, Communications Officer for UBO, and Haydée Rodríguez, Project Coordinator for MarViva. Sargasso Sea Commissioners with the Hon. Walter H. Roban (centre) JP, MP, Deputy Premier of Bermuda and Minister of Home Affairs. The GEF project inception meeting, Costa Rica (image courtesy Ronan Long). The Hon. Walter H. Roban, JP, MP, Deputy Premier of Bermuda and Minister of Home Affairs speaking at the SARGADOM side event during the UN Ocean Conference earlier this year. Opposite page: Humpback whale off Bermuda; image courtesy Fae Sapsford.

Sharing science from the deep sea

by Brandon Gertz, Deep-Ocean Stewardship Initiative (DOSI)

Who cares about the deep ocean?

If you've been keeping an eye on how environmental policies addressing the deep ocean have been designed over the past several decades, it can be tempting to answer that question with "almost no one cares." The lack of attention received by over 90% of our global ocean – the biggest environment on Earth – is such a concern for ocean scientists that entire conference sessions are dedicated to ideas for boosting the deep ocean's public image.

And yet, that view of the deep ocean as "out of sight, out of mind" may not be quite as true as it used to be. Recent years have seen the deep ocean's profile rise, if not to the top of policymakers' minds, then at least out of their darkest depths. International negotiations on Biodiversity Beyond National Jurisdiction (BBNJ) rely heavily on deep-sea science when

discussing topics like marine genetic resources. Side events on seabed mining at the 2022 UN Ocean Conference were forced to turn delegates away for lack of enough seats. As ideas for spurring the 'blue economy' swirl and the Decade for Ocean Science charges on, a light is finally starting to shine on the key role the deep ocean plays in the health of our planet.

While this is great news, being in the spotlight creates its own set of challenges for the deep. For new policies that target the deep ocean to succeed, its unique environments and their influence on humanity have to be understood. That's no simple task: the deep sea is huge, dark, and expensive to study. And while ocean researchers do amazing work to add to our ever-growing knowledge base, most policymakers don't have the years of training needed to draw conclusions

from the evolving research. But as those in positions of power shape our relationship with the ocean for years to come, they need clear answers to one key question: What does the deep ocean do for us?

The Role of Science Communicators

The Deep-Ocean Stewardship Initiative (DOSI) was founded to make those connections between science and policy. Our Working Groups bring ocean scientists and other experts together to review the latest research on topics like deep-sea minerals, fisheries, and pollution. We then identify the key takeaways that policymakers must understand to make informed decisions, transforming those points into policy briefs, information sheets, and comments to share where the science is most needed.

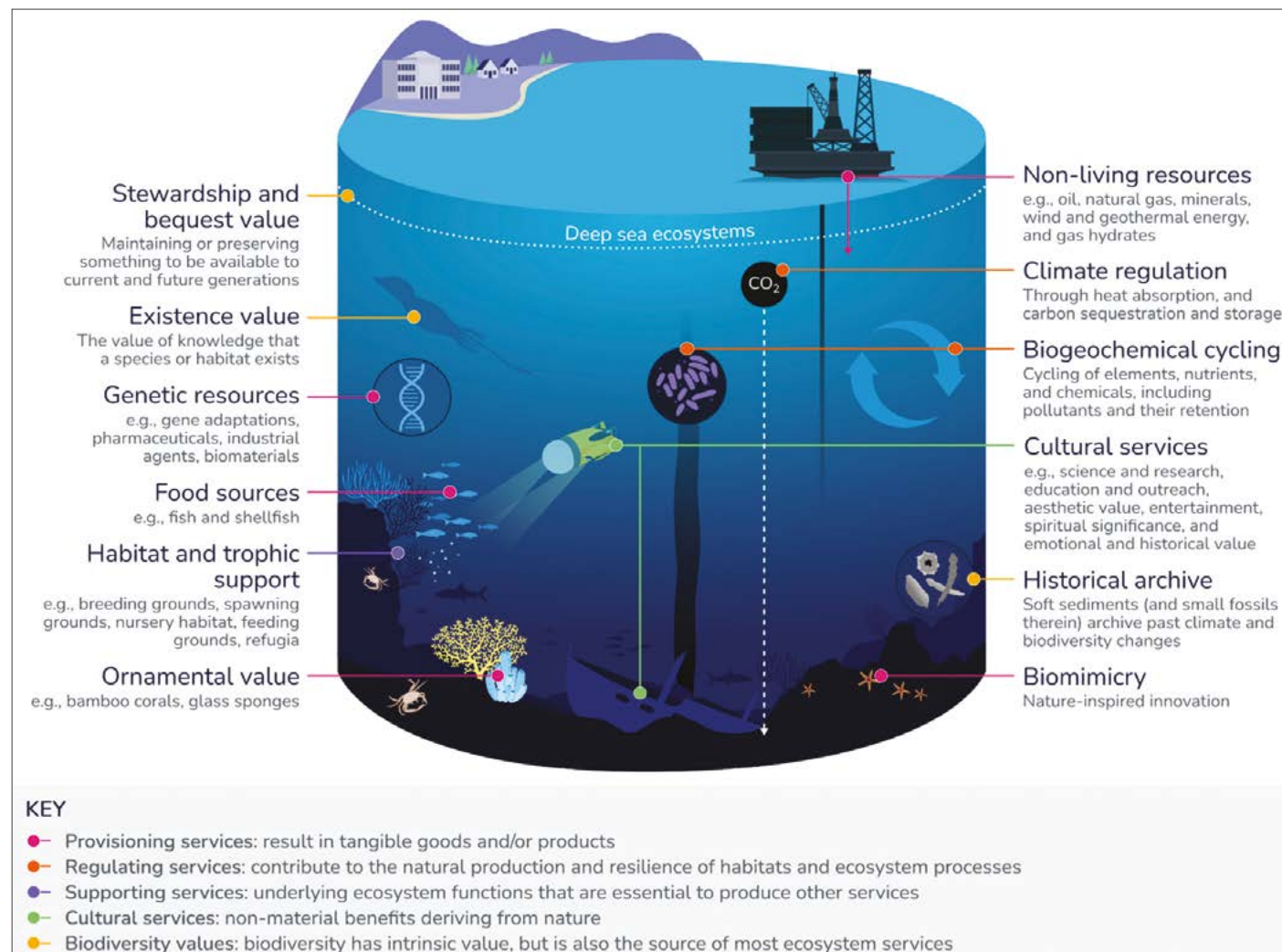
One of DOSI's newest programmes, our Biodiversity Task Force, has been especially active in this regard. Its recent policy brief *What Does the Deep Ocean Do for You?* takes on a complicated subject – the ecosystem services that the deep ocean provides to humans – and distills that topic into clear, understandable points ready to inform policy. The policy brief defines ecosystem services for those who may not know what they are and highlights the most important services the deep ocean provides: food sources, nutrient cycling, and genetic resources, for example. The brief then describes the ways in which human activities can change those benefits.

To overcome the challenge of explaining such an unfamiliar environment, the authors of the brief connect their information about ecosystem services to a helpful graphic that transforms the benefits provided by the deep ocean from abstract concepts into things that happen in a very real place on Earth (see figure, left). By sharing science effectively, hard but crucial concepts like the ocean's role in climate regulation can be used to help policymakers chart an informed course forward.

Looking ahead

So, who cares about the deep ocean? While the answer may still be fewer people than we would like, the deep ocean is a bigger topic now than ever before. And with international attention focused on climate change, biodiversity, and the blue economy, the intense need for policies to consider the deep ocean shows no signs of weakening. Throughout the process, decision-makers will need help from experts who can provide clear, understandable science. We're excited by the progress we have seen so far, and we look forward to helping the connections between deep-ocean science and policy grow.

If you would like to help communicate important deep-ocean knowledge, we would be delighted for you to join our efforts. You can sign up for DOSI's newsletter or find Working Groups to join on our website at dosi-project.org.



Planktonia by Erich Hoyt

The greatest migration on Earth happens twice each night in the ocean. Every evening at sunset, zooplankton, followed by predator fish, squid, octopus and other species that have acquired a taste for plankton, start moving up from the deep waters of the ocean. In this vertical migration to the surface, the zooplankton feast on plant plankton and other tasty morsels in the water as well as on each other. The feeding ends just before dawn when the plankton retreat to the depths of the ocean to hide during the day until, once again, the next evening, they migrate back up the water column.

Planktonia goes on a dive into the secret world of the nighttime ocean. Countless microscopic plankton – creatures such as the ornate ghost pipefish, left-handed hermit crabs and bony-eared assfish – are delicate and beautiful; some look terrifying. This massive vertical migration attracts larger creatures too, such as solitary 15 cm bigfin reef squid and the fierce and hungry 2 m female blanket octopus. Everyone joins the migration for the midnight feast, and they are all ravenously hungry.

Planktonia

The Nightly Migration of the Ocean's Smallest Creatures



ERICH HOYT

More details at: erichhoyt.com/books/planktonia/

FSO SAFER oil spill risk: tiptoeing on the brink of catastrophe

by David Johnson, GOBI Coordinator

Moored 4.8 km off the Red Sea coast of war-torn Yemen is one of the biggest oil tankers ever built. Storing an estimated 1.14 million barrels (48 million gallons) of crude oil, the former ultra-large crude carrier (ULCC) single-hulled tanker *SAFER*, converted to a floating storage and offloading unit (FSO) in 1986, is now rotting away. The long-standing conflict in Yemen has resulted in it not being inspected or maintained since 2015; it is uninsured and deteriorating rapidly.

The Red Sea coral reefs are 2,000 km long, collectively forming the longest continuous reef system in the world and covering 13,605 km². They are exceptionally diverse and relatively resilient to climate change: the southern Red Sea reefs live near their maximum temperature tolerance range, and the northern Red Sea reefs could provide climate refugia for heat-displaced species (Fine et al., 2019). Approximately 50% of live coral cover has been lost globally since the 1870s, attributed to diverse human pressures but climate change has become a primary concern. However, the Sixth Global Coral Reef Monitoring Network report (GCRMN, 2021) concluded that, if other pressures allow, reefs have the capacity to recover from mass bleaching events, potentially within a decade. Status and trends for coral reefs of the Red Sea and Gulf of Aden showed potential recovery from the global 1998 bleaching event from 2016 onwards; it is therefore imperative to safeguard Red Sea reefs against any impending harm to avoid further loss - to keep them as a habitat, carbon sink, source of food security, wonder and future medicines?

Within the CBD EBSA portfolio is the Southern Red Sea Pelagic Ecosystem EBSA, recognised as the most productive region of the entire Red Sea. It supports vulnerable marine mammals, whale sharks, manta and devil rays and seabirds. The Southern Red Sea Islands EBSA is also highly productive with many endemic species, providing a migratory corridor and a nesting and breeding ground for both turtles and birds. Djibouti's Seven Brothers Islands and Godorya EBSA is special for its mangroves, seagrasses, corals, fish species, charismatic megafauna and as a bird migration route – incorporating Ras Siyyan MPA, the largest marine protected area in Djibouti. GOBI partners have provided complementary data identifying Important Bird and Biodiversity Areas (IBAs) and Important Marine Mammal Areas (IMMAs) (see Figure 1).

So what impacts would result if the *SAFER* leaks, ruptures or explodes? A risk assessment undertaken by ACAPS in

2020 quantified the impacts of both an explosion and a fire onboard, plotting air and waterborne pollution trajectories (ACAPS, Catapult and Riskaware, 2020). Immediate socio-economic impacts could include extreme and exacerbated hardship for local communities, health risks, clean-up costs, and trade/port disruption. Coastal communities dependent on artisanal fishing will struggle and wider impacts could affect millions, jeopardising drinking water supplies and regional tourism income.

Acute crude oil spills impact species and habitats. Mortality of marine mammals, fish, turtles and seabirds is readily visible. Residual toxins, such as polycyclic aromatic hydrocarbons, persist in the marine environment with lasting effects on physiology, productivity and population dynamics. Oil exposure can kill coral on varying timeframes and impair both primary production and energy transfer. In 2020, the MV *Wakashio* grounding in Mauritius highlighted the vulnerability of tropical corals, mangroves and seagrass habitats, but this incident was orders of magnitude smaller than a *SAFER* spill might be. Damaged coral reefs can take decades to centuries to recover, and sensitive locations such as the Farasan archipelago IMMA (a refuge for threatened marine mammals including dugongs, Indian Ocean humpback dolphins and Indo-Pacific bottlenose dolphins, with known aggregation sites and extensive seagrass beds) and IBAs such as the islands north of Al-Hudaydah, Jaza'ir al-Hanish and Midi-Al-Luhayyah (important for Red Sea endemic, near-threatened White-eyed gulls) and Jaza'ir al-Zubayr (important for Brown boobys) are particularly at risk.

A worst-case scenario in the Red Sea would involve difficult trade-off decisions for oil spill response: active clean up with booms and skimmers will be fraught with difficulties, bringing into play other options such as *in situ* burning or use of oil dispersants. The environmental threat is not restricted to the coast of Yemen. The Red Sea is a semi-enclosed marginal sea, with a unique northward-flowing eastern boundary current and two seasonal vertical meridional overturning cells. Within three weeks spilled oil could drift north to Saudi Arabia and west and south to Eritrea and Djibouti (Huynh et al., 2021; Figure 1). The extent of the Southern Red Sea Pelagic Ecosystems EBSA reflects the whole region's critical importance for megafauna, particularly whale sharks and cetaceans (Bryde's whales, spinner dolphins, long-beaked common dolphins, pantropic spotted dolphins, Indian Ocean

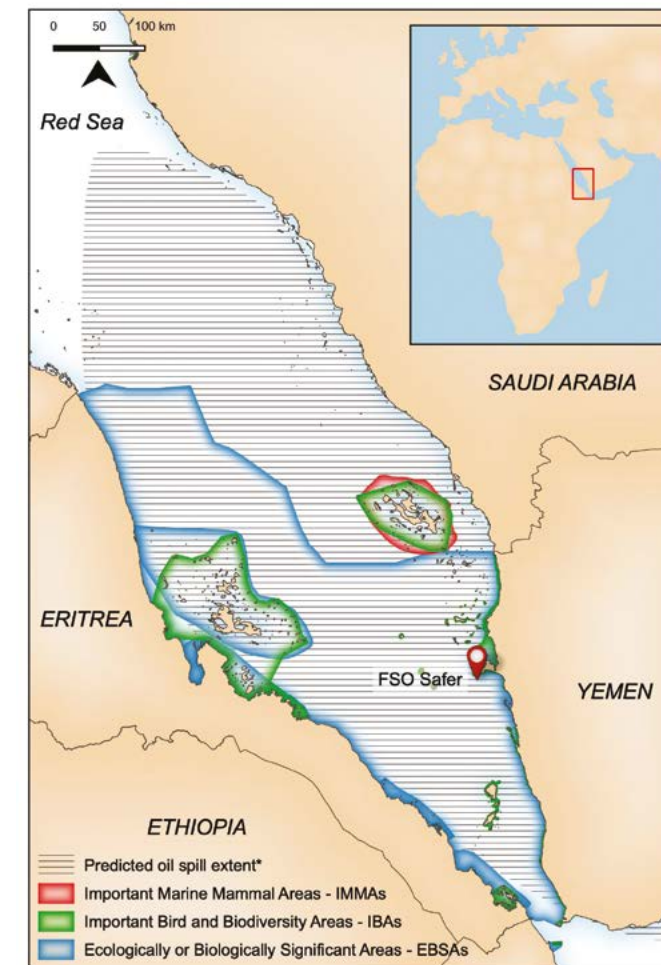


Figure 1: Areas identified for their biodiversity value that will be at risk if FSO SAFER ruptures.

humpback dolphins, false killer whales and bottlenose dolphins). The Red Sea area is used as a nesting, foraging and migratory corridor for sea turtles and Eritrea is home to five of the world's seven turtle species, all of which are threatened with extinction globally. Depending on seasonal monsoon conditions, contaminants could reach the Bab-el-Mandeb Strait that connects the Red Sea with the Gulf of Aden. This threatens not only Red Sea coral reefs but would impact on pelagic larval exchange dynamics between the coral reefs in the Southern Red Sea and the Indian Ocean (Wang et al., 2019) and mobile species using this region for feeding and as a migratory corridor. The Regional Organization for the Conservation of the Environment of the Red Sea & Gulf of Aden Region (PERSGA) has a clear mandate to conserve biodiversity and establish a network of protected areas. An evaluation of Regional Seas inputs to the CBD's post 2020 Global Biodiversity Framework noted proactive efforts by PERSGA towards a network of marine protected areas and work on coral conservation in partnership with the International Coral Reef Initiative, but stronger representative and coordinated ecologically coherent protection is needed.

In this situation, the environment has become a geopolitical bargaining chip and biodiversity conservation efforts based on years of knowledge building and supporting science are at risk of being wiped out. In April 2022 a UN-coordinated plan to address the threat was unveiled. The plan, to install a long-term replacement for the FSO *SAFER* and offload its cargo to an emergency interim temporary vessel, is costed at \$144m with the emergency operation estimated at \$80m. Finance has been pledged but not enough. On 13 June 2022 a social media crowd-funding campaign was launched in an attempt to find a further \$5m to finance the emergency operation. Thus, while the international community belatedly recognises the climate ocean nexus, articulates concerns on extinctions and sets new targets for the post-2020 Global Biodiversity Framework, key ecosystems of the southern Red Sea and their ecosystem services are on the brink of disaster.

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Dugong feeding on seagrass, Red Sea. Image courtesy Anett Szaszi / Ocean Image Bank.

Hot off the press



The CBD post-2020 biodiversity framework: people's place within the rest of nature, by K Friedman and colleagues, in *People and Nature*. DOI: [10.1002/pan3.10403](https://doi.org/10.1002/pan3.10403).

This perspective intends to help the CBD's post-2020 biodiversity framework set people firmly as part of nature, not apart from it. Despite work done so far through four meetings, new thinking and focus is needed on 'what' changes must be conceptualised and implemented, and 'how' those changes are to be delivered. To help achieve that new thinking, it highlights six key foci that offer potential to strengthen delivery of the framework and break the 'business as usual' logjam.

Mismatches in scale between highly mobile marine megafauna and marine protected areas, by MG Conners and colleagues, in *Frontiers in Marine Science*. DOI: [10.3389/fmars.2022.897104](https://doi.org/10.3389/fmars.2022.897104).

Using global tracking data from 36 species across five variably mobile taxa, this article demonstrates that most MPAs are too small to encompass complete home ranges of most species. It also demonstrates how benefits from MPAs are still likely to accrue by targeting seasonal aggregations and critical life history stages of species and through other management techniques.



Evaluating the quality of environmental baselines for deep seabed mining, by S Christiansen and colleagues, in *Frontiers in Marine Science*. DOI: [10.3389/fmars.2022.898711](https://doi.org/10.3389/fmars.2022.898711).

Robust baseline knowledge is a prerequisite for evaluating and predicting the effects of future deep seabed mining on the seafloor and in the water column. However, there are no criteria for evaluating what a robust baseline entails. This paper seeks to address this gap by not only analysing the role and importance of baselines for environmental management but also suggesting criteria for evaluating the quality of baselines.



Putting sharks on the map: a global standard for improving shark area-based conservation, by CA Hyde and colleagues, in *Frontiers in Marine Science*. DOI: [10.3389/fmars.2022.968853](https://doi.org/10.3389/fmars.2022.968853).

Spatial planning tools often fail to consider the habitat needs critical for the survival of sharks, rays and chimeras. The Important Shark and Ray Area (ISRA) approach is proposed as a response to the dire global status of these taxa. The ISRA Criteria presented in this article provide a framework to identify discrete, three-dimensional portions of habitat important for one or more shark, ray, or chimaera species, that have the potential to be delineated and managed for conservation.



Stakeholder-derived recommendations and actions to support deep-reef conservation in the Western Indian Ocean, by P Stefanoudis and colleagues, in *Conservation Letters*. DOI: [10.1111/conl.12924](https://doi.org/10.1111/conl.12924).

This study assesses current conservation approaches in the Western Indian Ocean focusing on deep reefs. Results indicate that deep-reef data are sparse and commonly stemming from non-peer-reviewed or non-publicly available sources, and are often not used to inform conservation of marine protected areas. Based on those findings, it presents a framework and recommends specific actions to be undertaken by regional actors to improve the capacity of the region to collect and share deep-reef information.

Progressing delineations of key biodiversity areas for seabirds, and their application to management of coastal seas, by JM Handley and colleagues, in *Diversity and Distributions*. DOI: [10.1111/ddi.13651](https://doi.org/10.1111/ddi.13651).

Using the KBA framework, and by developing a conservative protocol to identify sites, this article identifies globally important places for breeding seabirds throughout the coastal seas of the southwest Atlantic Ocean. It goes on to inform marine spatial planning by evaluating potential activities that may impact species and how a proposed network of Marine Management Areas (MMAs) overlap with important sites.



Getting beyond yes: fast-tracking implementation of the United Nations agreement for marine biodiversity beyond national jurisdiction, by KM Gjerde and colleagues, in *Ocean Sustainability*. DOI: [10.1038/s44183-022-00006-2](https://doi.org/10.1038/s44183-022-00006-2).

This article provides reflections for supporting rapid, effective, and equitable implementation of the BBNJ Agreement in three priority areas: (1) bringing the Agreement into force; (2) establishing the institutional framework, and (3) developing capacity, science, and technology. It goes on to make suggestions for encouraging wide ratification of the BBNJ Agreement, mobilizing resources, and building partnerships to advance science and capacity.



A global horizon scan of issues impacting marine and coastal biodiversity conservation, by JE Herbert-Read and colleagues, in *Nature Ecology & Evolution*. DOI: [10.1038/s41559-022-01812-0](https://doi.org/10.1038/s41559-022-01812-0).

For this marine and coastal horizon scan, 30 scientists, policymakers and practitioners with transdisciplinary expertise in marine and coastal systems were questioned to identify new issues that are likely to have a significant impact on the functioning and conservation of marine and coastal biodiversity over the next 5-10 years. Fifteen issues were distilled from all responses. Early identification of these issues and their potential impacts on marine and coastal biodiversity is intended to support scientists, conservationists, resource managers and policymakers in addressing the challenges facing marine ecosystems.



Avoiding the misuse of other effective area-based conservation measures in the wake of the blue economy, by J Claudet and colleagues, in *One Earth*. DOI: [10.1016/j.oneear.2022.08.010](https://doi.org/10.1016/j.oneear.2022.08.010).

Other effective area-based conservation measures (OECMs) represent unique opportunities to help achieve the 2030 biodiversity conservation agenda. However, potential misuse by governments and economic sectors could compromise the outcome of these conservation efforts. This article proposes three ways to ensure that the application of OECMs toward meeting biodiversity targets provide benefits for both people and nature.

Demystifying ecological connectivity for actionable spatial conservation planning, by M Beger and colleagues, in *Trends in Ecology and Evolution*. DOI: [10.1016/j.tree.2022.09.002](https://doi.org/10.1016/j.tree.2022.09.002).

The authors show how connectivity can be included in mathematically defining conservation planning objectives. They provide a path forward for linking connectivity to high-level conservation goals, such as increasing species' persistence, and propose ways to design spatial management areas that gain biodiversity benefit from connectivity.





Global Ocean Biodiversity Initiative


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, Nuclear Safety and Consumer Protection (BMUV) supports this initiative on the basis of a decision adopted by the German Bundestag.

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2021
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