



**MARINE MAMMAL  
PROTECTED AREAS  
TASK FORCE**



**Important Marine Mammal Area  
Regional Workshop  
for the North East Atlantic Ocean  
and Baltic Sea**

**Hamburg, Germany, 22-26 May 2023  
(Hybrid meeting)**

**FINAL REPORT  
of the 10<sup>th</sup> IMMA WORKSHOP**

**IMMA Secretariat, IUCN SSC-WCPA  
Marine Mammal Protected Areas Task Force**

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## Executive summary

From 22-26 May 2023, the 10<sup>th</sup> IMMA Regional Workshop for the North East Atlantic Ocean and Baltic Sea was held in person in Hamburg, Germany, with online access and participation also enabled. The goal of the workshop was to identify and delineate discrete portions of habitat as Important Marine Mammal Areas — IMMAs — throughout this region. The IMMA Secretariat of the IUCN Marine Mammal Protected Areas Task Force (the “Task Force”) collected 51 preliminary Areas of Interest (pAol) from experts prior to the workshop. The total of 395 pAol included many existing spatial and protected area designations in the region. Throughout the workshop, many of the 395 pAol were considered redundant or were combined with others. At the close of the workshop, through the expert-based process utilising dedicated selection criteria, 36 candidate IMMAs (cIMMAs) were proposed, and sent for review. Six additional areas were advanced as Aol to go forward. Following independent review and consideration of how the criteria supported IMMA identification, 33 IMMAs were accepted for full status with 10 submissions being reserved as Aol, all of which now appear on the IMMA e-Atlas at <https://www.marinemammalhabitat.org/imma-eatlas/> (Fig. 1). More details are provided later on in this summary and in Annex III. Worldwide, including the North East Atlantic Ocean region, there are now 280 IMMAs and 185 Aol (Fig. 2). (See Fig. 3 for before and after maps of the initial pAol and the resulting 33 IMMAs from the workshop.)

The North East Atlantic Ocean and Baltic Sea (NEATLO) Region covers nearly a quarter of the Atlantic Ocean. Its rich biodiversity features migrating humpback (*Megaptera novaeangliae*), blue (*Balaenoptera musculus*) and fin whales (*Balaenoptera physalus*), several populations of killer whales (*Orcinus orca*) and Cuvier’s (*Ziphius cavirostris*) and other beaked whale (*Mesoplodon*) species in the Canary Islands, Azores and Bay of Biscay. Besides the prevalent common minke whales (*Balaenoptera acutorostrata*), harbour porpoises (*Phocoena phocoena*), common (*Delphinus delphis*), Risso’s (*Grampus griseus*) and common bottlenose dolphins (*Tursiops truncatus*), there are species endemic to the region including the Critically Endangered and decreasing Baltic Sea harbour porpoise (*Phocoena phocoena*), the Endangered Saimaa ringed seal (*Pusa hispida saimensis*) and the Ladoga ringed seal (*Pusa hispida ladogensis*). The full list of marine mammal species in the region’s IMMAs, together with the boundaries of accepted IMMAs, is available as part of the [IMMA e-Atlas](#). Some of the region’s notable habitats for marine mammals include the Shetland and Orkney Islands and Outer

Hebrides of Scotland, the Bay of Biscay, the Canary, Madeira and Azores islands, and the south and west coast of Ireland.

The workshop was attended by 53 experts and observers (Fig. 4; Annex I). Of the total, 14 participated in person throughout the week while 23 participated remotely. There were 7 participating members of the IMMA Secretariat in attendance and 1 remote. In summary, the participants came from the 12 European North East Atlantic-facing and Baltic Sea countries, as well as Morocco, making 13 in total. In some cases, the expert held a main residence in a country other than where the research was done, and a number of experts have worked in multiple areas in the region. The workshop was organised by the Task Force with support from a grant from the Water Revolution Foundation. Additional funds and hosting were provided by Peter Lürssen with substantial local support and hosting of events, courtesy of Vienna Eleuteri. OceanCare also provided valuable support.

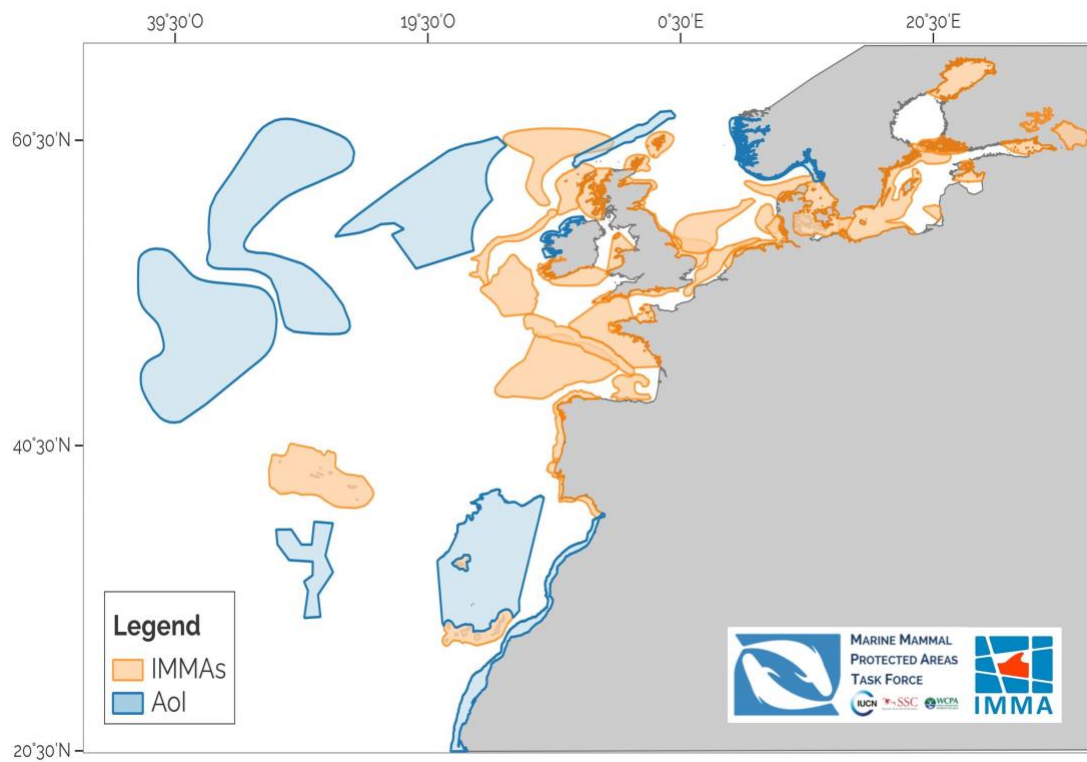
The North East Atlantic workshop follows the sequence of IMMA regional workshops starting in the Mediterranean (Chania, Greece, 24-28 October 2016), and continuing with the Pacific Islands (Apia, Samoa, 27-31 March 2017), North East Indian Ocean and the South East Asian Seas (Kota Kinabalu, Malaysia, 12-16 March 2018), Extended Southern Ocean (Brest, France, 15-19 October 2018), Western Indian Ocean and Arabian Seas (Salalah, Sultanate of Oman, 4-8 March 2019), Australia-New Zealand and South East Indian Ocean (Perth, Australia, 10-14 February 2020), Black Sea, Turkish Straits System and Caspian Sea (Virtual, 22-26 February 2021), South East Tropical and Temperate Pacific Ocean (San José, Costa Rica, 6-10 June 2022) and South West Atlantic Ocean (Praia do Forte, Brazil, 5-9 December 2022). This tenth IMMA Regional Workshop will, it is hoped, help provide conservation priorities to, and strategic direction for, place-based marine mammal conservation within the North East Atlantic Ocean (NEATLO) region.

Along with plenary discussions throughout the workshop, the focus was on the four breakout groups that covered the subregions (Fig. 5). Their task was sorting through the pAol, deleting or merging certain areas and developing others as candidate IMMAs. As is typical for these regional workshops, participants had expertise in multiple areas and had worked together before, thus many cIMMA submissions were jointly prepared. The cIMMAs were then presented in plenary and considered to be a joint result of the

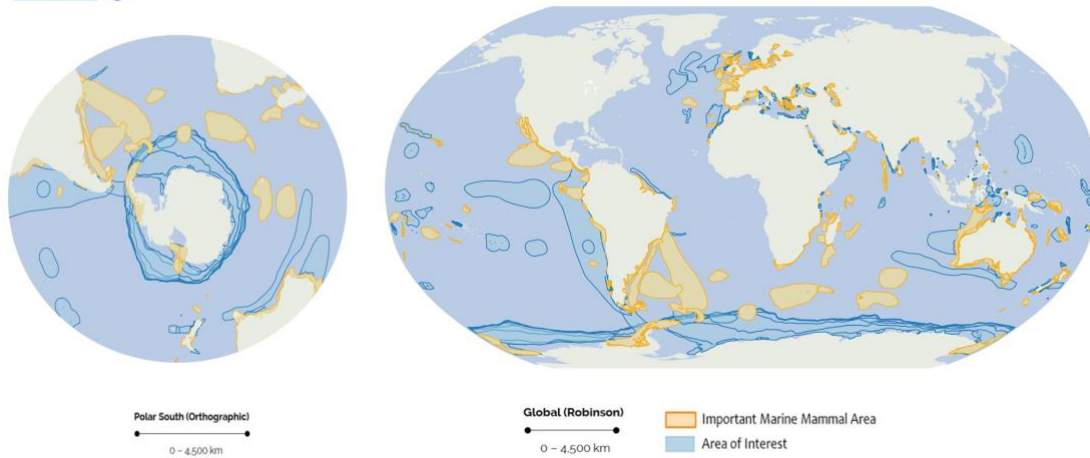
workshop. IMMA Secretariat members Margherita Zanardelli and Caterina Lanfredi presented the final numbers and names of the cIMMAs, along with maps of all the polygons prepared by Lanfredi and Valentina De Santis. On the last day, a regional Task Force group was set up to promote and progress marine mammal conservation work in the NEATLO IMMA region. The volunteer coordinators of the group will be Anna Bunney, Monica Arso Civil, Anita Gilles, Graham Pierce, and Debbie Russell; each becomes a member of the Task Force and is invited to join the IUCN World Commission on Protected Areas.

Following the workshop, the next step was to assess and then send the compiled 36 cIMMAs to the independent review panel to determine whether the criteria were applied correctly and to verify that the evidence provided was sufficient to support the case for each cIMMA. This work was managed by IMMA Secretariat members Gill Braulik, Gianna Minton and Caterina Lanfredi.

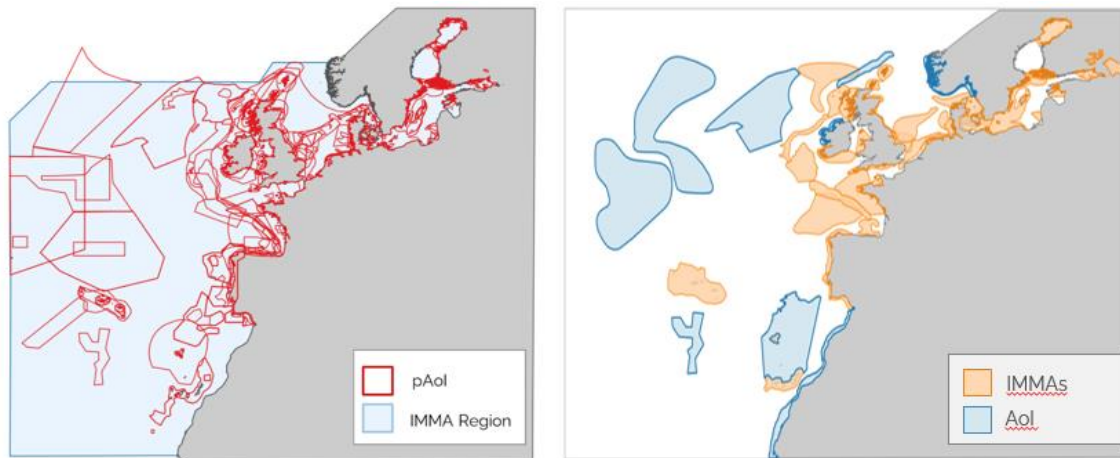
After a cIMMA is approved as an IMMA following peer review, the boundaries and a summary of the supporting evidence are made available on the IMMA e-Atlas, and included in the online IMMA database. Interested users are then able to request IMMA layers as shapefiles for implementation initiatives. For the 10 Aol, it is recognised that these areas have strong potential, but at present do not have enough information to satisfy the criteria. The 10 Aol are also shown on the IMMA e-Atlas, and thus highlight areas for further marine mammal research and monitoring to help build an evidence base on which future cIMMAs may be proposed.



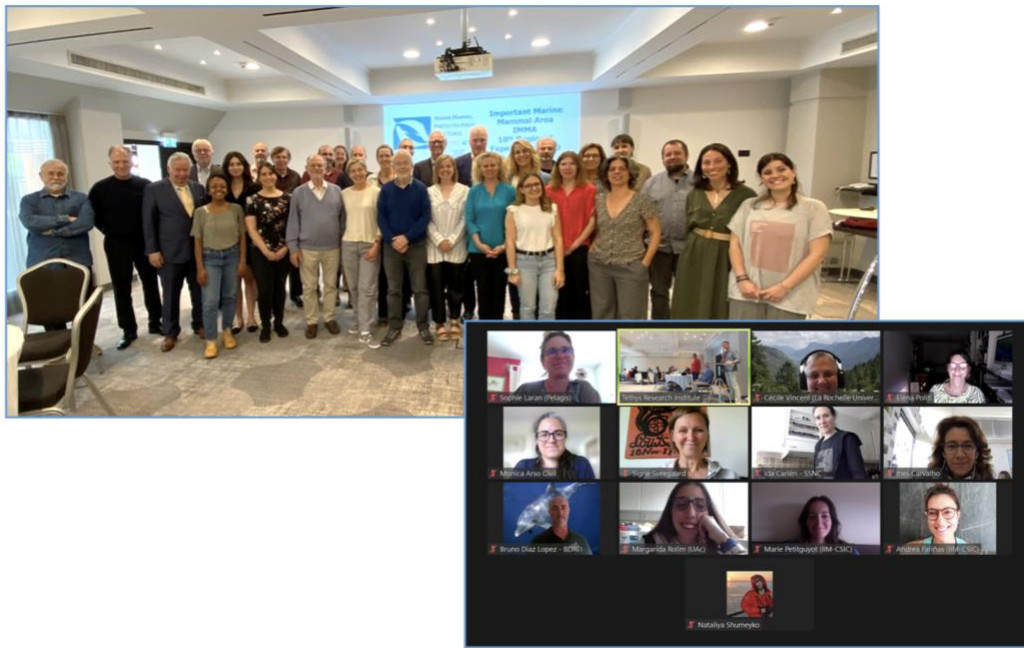
**Fig. 1.** Geographic location of the 33 IMMA and 10 Aoi identified and approved through peer review in the North East Atlantic Ocean and Baltic Sea (NEATLO) Region



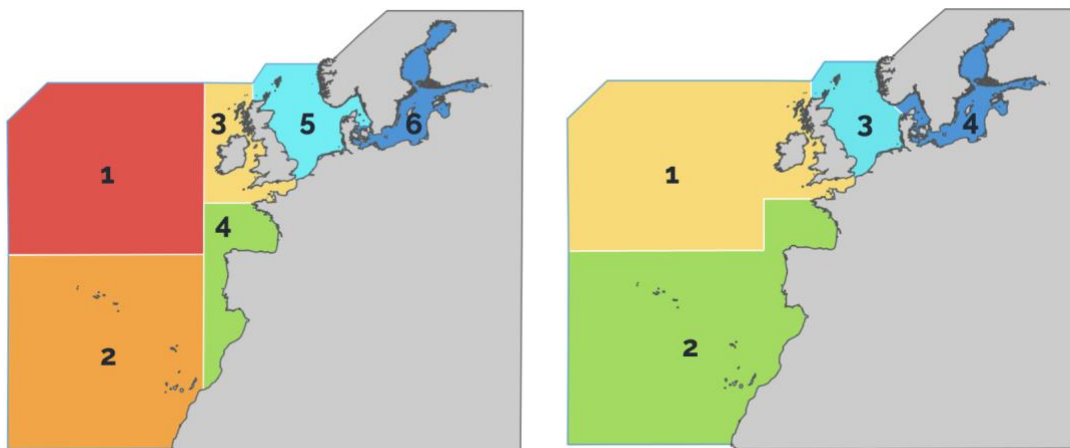
**Fig. 2.** Latest version of the global IMMA network totalling 280 IMMAs and 185 AoI (Feb. 2024)



**Fig. 3** Spatial representation of the meeting outcomes. At left, the 395 preliminary areas of interest (pAoI) collected in advance of the meeting and on the first two days and, on the right, the results of the workshop showing the 33 IMMAs and ten areas of interest (AoI) for informing the IMMA process. (See Annex III for the complete list of IMMAs and AoI).



**Fig. 4.** Participants and observers of the tenth IMMA Workshop in Hamburg, Germany, and online. For the complete list of in person and online participants and observers, see Annex I.



**Fig. 5.** The draft North East Atlantic Ocean and Baltic Sea (NEATLO) Workshop subregions and the revised subregions (on the right) as agreed and used during the workshop.



## **Acknowledgments**

The workshop was chaired by Simone Panigada, with various sessions and breakout groups led by Gill Braulik, Erich Hoyt, Giuseppe Notarbartolo di Sciarra and Margherita Zanardelli, with the GIS work for each breakout group undertaken by Caterina Lanfredi and Valentina De Santis. The workshop was organised by the Task Force with support from a grant from the Water Revolution Foundation and additional support from Peter Lürssen. In addition, substantial local support, facilitation and hosting of events were provided by Peter Lürssen and Vienna Eleuteri. Travel and all the logistics were arranged by Margherita Zanardelli and Simone Panigada from the IMMA Secretariat. Thanks also go to Gill Braulik, Caterina Lanfredi and Valentina De Santis for their extensive work during the preparation of the workshop. Secretariat member Elena Politi prepared and supervised the virtual component of the workshop and the Canvas platform during the workshop.

This report was written by Erich Hoyt. The documents presented at the workshop were prepared by Caterina Lanfredi, with help from Michael J. Tetley and Valentina De Santis; Lanfredi led the mapping efforts in the workshop. Thanks are due to Tundi Agardy (Sound Seas), Vienna Eleuteri (Water Revolution Foundation), Nicolas Entrup (OceanCare), Anne Freiberger (German Federal Ministry for the Environment), David Johnson (GOBI), Vedran Nikolić (European Commission), Jenny Renell (ASCOBANS), Susana Salvador (ACCOBAMS) and Melanie Virtue (Convention on Migratory Species), all of whom made presentations. The post-workshop submissions to the review panel and follow-ups as needed were conducted by Gianna Minton, Gill Braulik and Caterina Lanfredi. The updated new version of the IMMA e-Atlas with downloadable shapefiles was the work of Caterina Lanfredi and Elena Politi. The independent review panel is coordinated by Randall R. Reeves.

We are grateful to our other sponsor for this workshop, OceanCare, and ORCA.org supported the participation of Anna Bunney and Lucy Babey. Finally, we could not have undertaken this workshop without the substantial administrative support provided by Tethys Research Institute and Whale and Dolphin Conservation.

## Introduction and Background to the IUCN Marine Mammal Protected Areas Task Force<sup>1</sup> and the IMMA Initiative

The important marine mammal area (IMMA) initiative, developed by the IUCN Joint SSC<sup>2</sup>/WCPA<sup>3</sup> Marine Mammal Protected Areas Task Force (the “Task Force”), is modelled on the successful example of the BirdLife International process for determining important bird and biodiversity areas (IBAs). The intention is that the identification of IMMAs through a consistent expert process, independent of any political and socio-economic concerns, will provide valuable inputs about marine mammals and their habitat, which will contribute to existing national and international conservation initiatives. Yet, the application or implementation process is separate from, and occurs later than, the identification process.

IMMAs are an advisory, expert-based classification. They have no legal standing as MPAs but are intended to be used in conservation planning by a variety of stakeholders, including *inter alia*, governments, intergovernmental organisations, conservation groups, and the general public. In application, IMMAs may merit specific place-based protection and/or monitoring and, in some cases, reveal additional zoning opportunities within existing MPAs. By pointing to the presence of marine areas of particular ecological value, IMMAs can serve the function of promoting the conservation of a much wider spectrum of species, biodiversity and ecosystems, well beyond the specific scope of conserving marine mammals.

The identification of IMMAs can also help to spotlight marine areas valuable in terms of biodiversity during the process of marine spatial planning (MSP). IMMAs are already starting to build institutional capacity at the international and national levels, to make substantial contributions to the global marine conservation agenda.<sup>4</sup> Marine mammals are indicators of ocean ecosystem health and thus, the identification of IMMAs supports the Convention on Biological Diversity (CBD) marine portfolio of ecologically or biologically significant areas (EBSAs). EBSAs aim to provide a basis for promoting awareness of marine biodiversity, leading to conservation in specific areas of the world’s oceans. IMMAs are also supporting the creation of key biodiversity areas (KBAs) identified through the IUCN KBA Identification Standard. Finally, IMMAs can contribute to the designation of International Maritime Organisation (IMO) particularly sensitive sea areas (PSSAs) and other shipping directives related to the threat of ship-strikes of whales and increasing noise in the ocean.

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<sup>1</sup> IUCN SSC/WCPA Marine Mammal Protected Areas Task Force (<https://www.marinemammalhabitat.org/>)

<sup>2</sup> Species Survival Commission ([www.iucn.org/theme/species/about/species-survival-commission](http://www.iucn.org/theme/species/about/species-survival-commission))

<sup>3</sup> World Commission on Protected Areas (<https://www.iucn.org/theme/protected-areas/wcpa>)

<sup>4</sup> For more information, see: Tetley, M.J., Braulik, G., Lanfredi, C., Minton, G., Panigada, S., Politi, E., Zanardelli, M., Notarbartolo di Sciara, G., Hoyt, E. 2022. The Important Marine Mammal Area network: a tool for systematic spatial planning in response to the marine mammal habitat conservation crisis. *Front. Mar. Sci.* 9:841789 doi: 10.3389/fmars.2022.841789

The IMMA selection criteria were devised by the Task Force in consultation with the marine mammal science and wider conservation and stakeholder community. Since 2016, the Task Force has been applying these criteria to identify a worldwide network of IMMAs and to enhance their prospects for protection through regional expert workshops. The workshops have been focusing on large marine regions, beginning with the Mediterranean (October 2016), funded by the MAVA Foundation, followed by seven workshops, mainly in the southern hemisphere funded by the German International Climate Initiative (IKI) through the Global Ocean Biodiversity Initiative (GOBI): Pacific Islands (March 2017), North East Indian Ocean and South East Asian Seas (March 2018), Western Indian Ocean and Arabian Seas (March 2019), Australia-New Zealand and South East Indian Ocean (February 2020), Black Sea, Turkish Straits System and Caspian Sea (February 2021), the South East Tropical and Temperate Pacific Ocean (June 2022), and the South West Atlantic Ocean (December 2022). An additional workshop covering the Extended Southern Ocean (October 2018) was funded by the French Agency for Biodiversity through the IUCN Global Marine and Polar Programme. Supplemental funding for the various workshops was initially provided by the Eulabor Institute and then by Whale and Dolphin Conservation (WDC), MAVA Foundation, OceanCare, NRDC, Animal Welfare Institute, and Tethys Research Institute, with administrative support from Tethys and WDC.

### **Summary of the process of the IMMA Regional Workshop preparation, execution and follow-up**

**STAGE 1 – Nomination of preliminary Areas of Interest (pAol):** pAol are proposed by experts in the weeks before the workshop, via a dedicated pAol form. The collection of all pAol forms together with the associated GIS files are provided to regional experts in order to evaluate the submitted pAol, along with existing marine mammal place-based conservation measures (e.g. SACs, MPAs, EBSAs). Participants attending the workshop are also encouraged by the IMMA Secretariat to submit additional pAol by the end of the first two days.

**STAGE 2 – Workshop for the development of candidate IMMAs (cIMMAs):** participants – both in person and remotely – are invited to use their regional knowledge to develop cIMMAs, based upon their review of pAol submitted in advance or proposed during the workshop. To assist participants in the identification of cIMMAs in the region, a variety of contextual datasets (e.g. IUCN Species Range, oceanographic and geomorphological features of the area) have been summarized into an Inventory of Knowledge for use by experts. Candidate areas must start out as pAol first, and only then, after group discussion, do they have the chance to graduate to cIMMAs.

There are four categories of main criteria and eight criteria or sub-criteria, at least one of which must be met in order to propose a cIMMA:

Criterion A – Species or Population Vulnerability (based on the IUCN Red List Status)

Criterion B – Distribution and Abundance

Sub-criterion B1 – Small and Resident Populations: Areas supporting at least one resident population, containing an important proportion of that species or population, that are occupied consistently.

Sub-criterion B2 – Aggregations: Areas with underlying qualities that support important concentrations of a species or population.

Criterion C – Key Life Cycle Activities: Areas containing habitat important for the survival and recovery of threatened and declining species.

Sub-criterion C1 – Reproductive Areas: Areas that are important for a species or population to mate, give birth, and/or care for young until weaning.

Sub-criterion C2 – Feeding Areas: Areas and conditions that provide an important nutritional base on which a species or population depends.

Sub-criterion C3 – Migration Routes: Areas used for important migration or other movements, often connecting distinct life-cycle areas or the different parts of the year-round range of a non-migratory population.

Criterion D – Special Attributes

Sub-criterion D1 – Distinctiveness: Areas that sustain populations with important genetic, behavioural or ecologically distinctive characteristics.

Sub-criterion D2 – Diversity: Areas containing habitat that supports an important diversity of marine mammal species.

For Sub-criterion D2, the overall average species richness for the region and IMMA subregions (based on the species richness considered via the knowledge assessment in the Inventory of Knowledge report) is provided as a threshold benchmark for participants to consider suitable pAol for which to develop rationales for cIMMAs using the D2 Criterion.

Thus, the general outline of every workshop programme consists of:

- a plenary session to introduce the IMMA selection criteria, present the pAol, select the subregion group facilitators, and discuss the pAol on offer;
- a reading session of the IMMA documents including an IMMA Guidance Document, Inventory of Knowledge, and the list of the pAol submitted in advance of the meeting by experts as well as those gathered by the IMMA Secretariat;
- multiple working group sessions to select and draft proposals for the cIMMAs to go forward on a subregional basis; and
- a closing plenary to adopt the results of the workshop, to select one or more Task Force regional coordinators, and to discuss conservation implications of the workshop results.

**STAGE 3 – Final review and IMMA status qualification:** an independent panel chaired by Randall R. Reeves, IUCN Cetacean Specialist Group Chair, reviews the cIMMAs proposed by the workshop participants, and decides whether they can be accepted as IMMAs, often with major or minor changes (or additions) required.

### **Workshop Resources**

To aid in the efficient running of the workshop, participants are provided with a number of resources. These include the following:

- guidance documentation of the IMMA selection criteria and process,
- the Inventory of Knowledge (IoK) document of the biological and geographical features of the workshop region,
- the compilation of preliminary Areas of Interest (pAol) expert submissions and existing sites relevant to marine mammals in the workshop region,
- the Sorter Table summarizing all the pAol,
- GIS data from IoK and pAol including a spatial layers package (geographical, biological and pAol georeferenced layers),
- on hand and online instruction on the use of QGIS, and Google Earth,
- the candidate IMMA submission review template (in Microsoft Word format),
- the Task Force reports archive for all previous IMMA workshops,
- the species list for the region recognised by the Society for Marine Mammalogy's Committee on Taxonomy with the IUCN Red List Conservation Status, and
- video tutorials, including an IMMA training course.

The IMMA Secretariat has created an easy-to-use Canvas platform for the previous several workshops, in which the above materials (or links) are shared and made available for download and consultation before and during the workshop. Additional useful data are also provided on shared Google Drive documents with links in Canvas. Canvas also has instructions for connecting virtually to the workshop as well as daily updates during the five-day period.

This workshop was largely in person but organized to include a few remote participants; plenary sessions were broadcasted live on a dedicated channel on YouTube, with the remote participants connected through Zoom. Separate break-out rooms were also organized to facilitate the drafting of cIMMA templates with the help and support of virtual participants.

As these workshops contain a technical mapping element, workshop participants were advised to find means to access and edit common geospatial data, e.g., ESRI Shapefiles (.shp) and Keyhole Markup Language (.kml).

The following two free access mapping programs were recommended for use:

QGIS: <https://www.qgis.org/en/site/forusers/download.html>

Google Earth: <http://www.google.co.uk/earth/download/ge/agree.html>

## REPORT OF THE WORKSHOP

### IMMA Workshop Day 1, 22 May 2023

**Giuseppe Notarbartolo di Sciara** and **Erich Hoyt**, co-chairs of the IUCN Marine Mammal Protected Areas Task Force, welcomed participants and thanked them for coming. They introduced the workshop's sponsors, the Water Revolution Foundation, and said that they would speak in the morning session. **Simone Panigada** was nominated as chair for the workshop and agreed to accept the role.

Panigada extended his welcome to the group and introduced the first speaker, **Vienna Eleuteri** from the Water Revolution Foundation. She talked about fulfilling her dreams through helping to get this workshop funded and the influence she hoped it would have in the large yachting and shipping world in terms of the sustainability of the ocean.

Eleuteri remarked that all humans stand now at the forefront of a revolution that is not only important but more necessary than ever before. That revolution seeks to address the challenges facing the planet — the triple planetary crisis of climate change, biodiversity loss and pollution, and to create a better future for generations to come. She pointed out that when the IUCN Marine Mammal Protected Areas Task Force first embarked on their journey, the themes of the 2030 agenda and the 17 sustainable development goals were not yet mainstream, though the need for action in ecological terms was already known.

Eleuteri said that her work as an anthropologist and sustainability advisor brought together the science of nature conservation with a strategic sector of the maritime industry, the super-yachting community. The result of the joint effort was the Water Revolution model, recognised in 2016 in the Blue Solution framework by UNEP and UNESCO. This model uses innovative research areas and consolidated scientific tools, and approaches in a systematic way two orders of needs: to reduce the anthropogenic environmental footprint, and to invest in the protection of natural ecosystems for conservation and restoration.

Eleuteri then talked about her experience working with other forward-looking “revolutionaries” to start the Water Revolution Foundation with the recognition that the challenges are not only environmental or social, but systemic and urgent. Old models of charity or corporate social responsibility are no longer sufficient. A new paradigm of regenerative development must be embraced through the power of science and innovation to transform the way humans live and work. This paradigm requires that everyone works together beyond the philanthropic logic that has been prevalent in the private sector to date. Thus supporting this IMMA workshop and the commitment to help improve the ocean's health is not just a donation but an investment. Though

difficult to grasp and to implement, Eleuteri stressed that the Water Revolution Foundation's commitment goes far past the economic aspects to a strong and irrevocable engagement to create a common platform. The goal is to make a difference together by working collaboratively across sectors and borders, by sharing knowledge and resources, and by inspiring others to join in this journey of hope and transformation.

Eleuteri then thanked the IMMA Secretariat of the Task Force for their outstanding work, as well as mentioning the superyachting business community and the Water Revolution Foundation team. Eleuteri closed by citing UN Secretary General António Guterres' comment that "by working as one, ending the ocean emergency is a race we can win".

Panigada then introduced **Peter Lürssen** who welcomed and thanked the organisers and the researchers who had come to Hamburg. He said that he hoped the workshop would be productive over the next 5 days. Lürssen specifically mentioned Vienna Eleuteri for her initiative to start up the Water Revolution Foundation that was instrumental in making all this happen.

Lürssen related a brief story about his children who had told him to look around at the environment and note that the life opportunities were not so great as in the past and in fact, children will be having to clean up the mess that the previous generation has made and left behind. That includes the state of the ocean — the overfishing, the plastic waste and the many animals and plants headed for extinction. Lürssen said he had to agree with his children that his generation had lived very well off the planet but now things had changed. He noted that as a ship builder his company existed because his clients which include the large yacht owners like to enjoy a pristine ocean full of life. In that sense his company is part of the blue economy like thousands of other companies. The realisation that the ocean is not in good shape affects the blue economy and the future for children. Lürssen said that without a healthy ocean, there will be no people who want to go sailing and his company will have no business.

During the past 9 years, Lürssen's company and foundation have been supportive of the Blue Marine Foundation and, more recently, the Water Revolution Foundation. Both have projects that will hopefully make a future for the ocean. There are also other organisations they are supporting, each one working to try to revitalise the ocean. Lürssen said that the IMMA work is another piece of the puzzle. He encouraged his colleagues in the shipbuilding industry to invest more in marine conservation. It is important to take the IMMA results back to the industry to adapt and improve the awareness toward a more sustainable use of the ocean.



Next, the group heard from **Anne Freiburger**, part of the Ocean Conservation team at the German Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz) which goes by the acronym BMUV.

Freiberger thanked the scientists for their collaboration and engagement and stated that BMUV supports the scientific work of the IMMA initiative. The results have relevance for the CBD EBSA work, the implementation of the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement and in terms of fulfilling the Global Biodiversity goal to protect 30% of the ocean by 2030 (30 x 30). In order to reach the 30x30 goal, more MPAs are needed on the High Seas; implementing the BBNJ High Seas Treaty will play a crucial role. In closing, Freiburger noted that IMMAs can be used by policy-makers in order to draw on the scientific results to implement effective marine protected areas, while taking into account the needs of marine mammals.

Panigada then introduced **Vedran Nikolić** from the European Commission in Brussels who spoke online on behalf of the Nature Conservation Unit in DG Environment. Nikolić said that the European Commission has been busy putting together programmes to fight climate change and to restore natural ecosystems and that he wished to express support and appreciation for IMMAs. He said that the IMMA work will feed concretely into their marine conservation policy and initiatives under the European Green Deal approved in 2020. He noted the importance of having a solid scientific foundation because only those efforts which are built on science can deliver what is expected for biodiversity, climate and for the whole of society. IMMAs mean a lot for the implementation of EU nature legislation and policy, the Habitats Directive and the network of Natura 2000 sites. At present the Habitats Directive strictly protects all cetaceans and seals, and EU states are required to designate and effectively manage Natura 2000 sites for two cetacean and five pinniped species. IMMAs will help to verify if the existing protected areas cover the life cycle of these highly mobile species or whether further sites are needed. Also, this work can inform the establishment of necessary measures to ensure both the connectivity between their populations as well as to address the main pressures affecting them.

Nikolić remarked that IMMAs can also help with the implementation of the EU Biodiversity Strategy because EU member states have committed to legally and effectively protecting at least 30 percent of their waters by 2030 of which one third (or ten percent of the total) should be strictly protected. The EU States have also committed to ensure that that by 2030 at least 30 species protected under nature directives will have a positive trend in conservation status. This implies substantial work in the administration with stakeholders and the scientific community. Nikolić said that EU member states are currently submitting their pledges and voluntary targets for these new protected areas and for conservation improvement.

These pledges and targets will become the subject of discussions with EU authorities and stakeholders later in 2023 with recommendations of further work that may be needed to reach the targets by 2030. The discussions will focus on marine areas that merit protection and may later be considered for formal protection, and the IMMAs will play a key role in this process as scientifically verified information identifying important areas for marine mammal species. The discussions will take into account not only the existing Mediterranean IMMAs but the results that emerge from the North East Atlantic IMMA workshop when they become available.

Nikolić also mentioned another initiative of the Commission — the action plan to protect and restore marine ecosystems for sustainable and resilient fisheries. One aspect of this action plan is addressing bycatch of protected species. IMMAs may help identify areas where further action is needed.

The collective EU ambition is to implement the agreement on biodiversity beyond national jurisdiction (BBNJ) which will mean designating more protected areas in the high seas so IMMAs can help achieve both EU and global targets.

Nikolić concluded by talking about a pioneering proposal for new EU legislation put forward last year, to make nature restoration a law. This Innovative legislation, the first of its kind in the world, contains legally binding targets for restoration of ecosystems including marine ecosystems but also for habitats of all species covered by the Bird and Habitats directives, including all cetaceans and seals as well as sharks and rays. This regulation could be a real game changer in marine conservation and while discussions to adopt this legislation are ongoing, it's already clear that there is a gap in information about the presence and quality of habitats of pelagic species in particular. Thus, IMMAs can help here, too. This nature restoration law could give faster and better results for conservation of these iconic megafauna species.

“Much is at stake today,” said Nikolić. “We often hear that this decade is really the turning point for biodiversity and the climate crisis as they show more and more their destructive consequences both on our natural world and in our society and economy. Thus, protection and restoration of marine ecosystems is one of the most important tasks for our society — that's how we see it in the Commission. It's an absolute priority for us. So I wanted to thank you for your time in sharing your knowledge and for the effort that you will invest over the next few days. For our side, we can promise that we will make the best use of the information that the workshop will produce.”

Next, Panigada introduced three short online presentations from the Convention on Migratory Species (CMS) family including Melanie Virtue (CMS aquatic species team),

Susana Salvador from the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS), and Jenny Renell, from the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS).

**Melanie Virtue** noted that CMS has been associated with IMMAs since their inception when they were mentioned in a 2014 Resolution, calling on parties to apply and support IMMAs. This was enhanced in 2016 when the CMS scientific council asked the CMS Convention of the Parties to endorse IMMAs and the criteria. In 2017, CMS adopted a resolution to this effect, greatly increasing the visibility of the IMMA concept with the Parties. Now, at every COP, there are reports on progress in the development of IMMAs coming from the IMMA Secretariat and with Parties also reporting.

Virtue said that the IMMA concept fits well within CMS with its species-based approach and global remit. Recently, the signatories to a CMS MoU on Sharks and Rays also agreed to endorse, support and utilise the Important Shark and Ray Areas (ISRA) concept, which was developed with the active support of members of the IMMA Secretariat and using the IMMA model.

Then, **Susana Salvador**, from the CMS daughter agreement ACCOBAMS, talked about how important the IMMA process is for the agreement's Annex II concerning the management of critical habitats. ACCOBAMS' mission is to promote and facilitate active regional cooperation, providing expertise and standards while propelling the implementation of measures aimed at conserving cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic Area.

Salvador explained that ACCOBAMS had engaged in an identification process for Cetacean Critical Habitats (CCH), understood as "those parts of a cetacean's range that are essential for day-to-day well-being and survival, as well as for maintaining a healthy population growth rate". The criteria were developed in the ACCOBAMS framework but a combined approach with IMMAs had been followed since 2016. In the context of cetacean conservation and management, it was considered essential to incorporate the concept of current and potential human activities and threats posed to cetacean populations. Thus, the ACCOBAMS Scientific Committee recommended that in providing advice to countries under the ACCOBAMS threat-based management approach, the concepts of both IMMAs and CCH were to be incorporated.

In 2016, the Task Force, in cooperation with ACCOBAMS and the Tethys Research Institute organised a workshop on IMMA Identification in the Mediterranean Sea held in Greece. This resulted in 26 IMMAs, 5 cIMMAs and 36 Aoi in the Mediterranean. Since then, in 2018, at the European Cetacean Society Conference, in La Spezia, Italy, ACCOBAMS and the Task Force organized a joint workshop "Towards understanding the

overlap of selected threats and IMMAs across the Mediterranean Sea” with 55 participants from 20 countries. It presented an opportunity to support the ACCOBAMS mapping of specific threats posed to cetaceans by overlaying Mediterranean IMMAs with information on shipping and seismic surveys. This provided a preliminary indication of new cetacean critical habitats in the ACCOBAMS area. Further collaboration with the International Maritime Organisation (IMO) was recommended in view of establishing IMO management measures (TSS/PSSA) in relevant IMMAs.

The 2019 joint “IWC-IUCN-ACCOBAMS Workshop to evaluate how the data and process used to identify IMMAs can assist to identify areas of high risk for ship strikes” recommended that ACCOBAMS should support the designation process of an IMO particularly sensitive sea area (PSSA) in the northwestern Mediterranean Sea. In September 2022, four ACCOBAMS countries took the initiative to present a PSSA submission to IMO, partially based on the North West Mediterranean Sea, Slope and Canyon System IMMA, identified in 2016. These ongoing developments confirm how valuable the IMMA process is in assisting in the identification of potential high risk areas for ship strikes in the Mediterranean Sea, and how successful a combined approach at regional scale may be, since both IMMA and CCH are mutually supportive processes.

Next, **Jenny Renell**, Coordinator of the UN Agreement on the Conservation of Small Cetaceans in the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS) noted that this workshop was highly relevant for ASCOBANS. The northern European waters didn't yet have IMMAs, but there are important areas there, serving as feeding, breeding, and migration areas, and offering essential resources and protection for small cetaceans. More than 20 species of small cetaceans occur in the ASCOBANS area.

ASCOBANS provides a framework for countries' conservation efforts. It is a collaborative agreement involving governments, conservation organizations, and scientists working towards the protection of these species and their habitats. Ms Renell was happy to see some of the experts involved in the work of ASCOBANS taking part in the IMMA workshop.

Small cetaceans in the ASCOBANS area face acute threats, such as bycatch, underwater noise, habitat degradation, pollution, vessel traffic and other disturbance. In the Baltic proper, there is only one resident cetacean species, the Baltic Sea harbour porpoise, which IUCN and HELCOM have already classified as Critically Endangered. Urgent action is needed to keep the population from extinction. Addressing these challenges may include the establishment and management of marine protected areas, a process facilitated by IMMAs. IMMAs can also help ASCOBANS Parties and non-Party Range States to implement monitoring programmes, to ensure appropriate marine spatial planning, and to help institute precautions to be taken for any occurring activities. Collaborative actions, including through ASCOBANS, can contribute significantly to the conservation of small cetaceans in the Baltic, North East Atlantic, Irish and North Sea.

Renell wished everyone a successful workshop and said she looked forward to the results.

Leading off the Task Force presentations, **Erich Hoyt** talked about how IMMAs came about — what had led up to this the 10<sup>th</sup> IMMA Regional Workshop. In the first decade of the 2000s, there was a growing recognition that marine mammals were being missed out in various conservation planning processes. This awareness came through the International Committee on Marine Mammal Protected Areas (ICMMPA) which was formed in 2008 and had its first conference in 2009, as well as through Hoyt's book *Marine Protected Areas for Whales, Dolphins and Porpoises* (2<sup>nd</sup> ed., 2011) and the experience of Michael Tetley, Giuseppe Notarbartolo di Sciara and Hoyt bringing marine mammal data to various Convention on Biological Diversity EBSA workshops. There was no systematic process for presenting marine mammal data at the CBD EBSA workshops or at other international meetings. Much of the data was unpublished. At the CBD workshops, the value of the BirdLife International tool of important bird and biodiversity areas (IBAs) became apparent, as well as in the designation of many MPAs around Europe through the Special Areas of Conservation (SACs) of the EU Habitats Directive.

Subsequent meetings with BirdLife in Cambridge helped to shape early thinking about devising a marine mammal tool which became IMMAs. At the same time ICMMPA needed a vehicle to drive and obtain traction for this global effort and that became the IUCN Task Force on Marine Mammal Protected Areas, situated strategically within both the IUCN Species Survival Commission and the World Commission on Protected Areas.

There was a realization in the ICMMPA and in the Task Force when it was formally announced in 2013, that many MPAs that were said to protect marine mammals were designated for political or socioeconomic reasons without ecological boundaries and not based on marine mammal habitat considerations, much less effective management. There was a need to highlight important marine mammal habitat based on science first and then to move forward with efforts to try to protect that habitat through spatial and other measures and through monitoring in the future.

Hoyt gave details about how each workshop follows a predefined process developed in consultation with regional marine mammal science and conservation communities, to identify candidate IMMAs on the basis of received proposals for pAol, following the template given in Annex IV. After the workshop, cIMMAs are submitted to an independent Review Panel of experts to verify them and final approval is given to approximately 70-80% of them. Those requiring more data to support the choice of criteria revert to Aol. These Aol are included on the e-Atlas along with the cIMMAs and approved IMMAs.

Hoyt recalled the 3<sup>rd</sup> International Marine Protected Areas Congress (IMPAC 3) in Marseille in 2013 where the IUCN with ICMMPA gave birth to the Task Force and a

workshop was held to devise IMMA criteria. The purpose of IMMAs was to develop a place-based conservation tool identifying discrete portions of habitat, important for one or more marine mammal species, that have the potential to be delineated and managed for conservation. Hoyt explained that the identification of IMMAs is a scientific product generated by the best available science. Thus, IMMAs are evidence-driven and purely biocentric based on the application of scientific criteria.

Next Hoyt showed the table with the total numbers of 209 IMMAs, 30 cIMMAs and 152 AoI, and the convenient accessibility provided through the [marinemammalhabitat.org](http://marinemammalhabitat.org) e-Atlas on the website.<sup>5</sup>

Hoyt then turned things over to **Giuseppe Notarbartolo di Sciara** who provided some of the metrics to date:

- The Task Force has examined 67% of the global ocean.
- The total area of all 209 IMMAs identified so far is more than 25.7 million km<sup>2</sup>.
- The largest IMMA is 2,861,819 km<sup>2</sup> encompassing an area of the Prince Edward Island and Western Oceanic Waters in the Extended Southern Ocean.
- The smallest IMMA is 45 km<sup>2</sup>, the Akrotiri IMMA which includes small breeding caves for the Mediterranean monk seal (*Monachus monachus*).
- 78 species in total have IMMAs identified (60% of all marine mammal species).
- 25 threatened species (Critically Endangered, Endangered and Vulnerable) have IMMAs identified (19%).
- Including the current workshop, there have been more than 300 scientists from many countries cumulatively participating across the ten (to date) week-long workshops.

Notarbartolo di Sciara explained that IMMAs are not created in a vacuum; there are many processes and organisations that can use them. Other initiatives including CBD EBSAs, MSP, MPAs, IMO PSSAs and KBAs<sup>6</sup> can utilize products of the IMMA process. A

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<sup>5</sup> Note: The total 209 IMMAs was before the results announced from the South West Atlantic and of course before the final results announced in the current report for the North East Atlantic. The current total as of February 2024 is 280 IMMAs and 185 AoI.

<sup>6</sup> For handy reference, all acronyms are identified at the end of this report on pages 63-64.

significant step was made when the Convention on Migratory Species (CMS) adopted a resolution recognizing the IMMAs, which has put them into the global arena. At the 2017 CMS COP, Resolution 12.13 established that IMMAs can promote ecological networks and connectivity, and acknowledging the IMMA criteria and process, requested Parties and invited Range States to identify specific areas where the identification of IMMAs could be beneficial. The resolution also invited the CBD, IMO and IUCN to consider IMMAs as useful contributions for the determination of EBSAs, PSSAs and KBAs. A number of countries have started using IMMAs in their spatial planning work and in support of MPA designations. The US Navy has recognized IMMAs in their proscribed efforts to avoid using low frequency sonar around marine mammals.

Finally Notarbartolo di Sciara displayed the IMMA Secretariat's joint paper on all the IMMA work to date, published in *Frontiers in Marine Science* in July this year, and said that it was available for free download on the IMMA web page:

<https://www.marinemammalhabitat.org/download/the-important-marine-mammal-area-network-a-tool-for-systematic-spatial-planning-in-response-to-the-marine-mammal-habitat-conservation-crisis/>

Panigada then called for questions. One participant enquired as to why the IMMA work to date seemed to have avoided the densely populated northern hemisphere areas. Was that it because it's more political or more complicated?

Hoyt and Notarbartolo di Sciara answered that this was just our sponsor's desire to focus on the Southern Hemisphere to start with, related to the German government's International Climate Initiative (IKI) focus on climate and helping the southern hemisphere, and on the French government's interest in the Southern Ocean around Antarctica. It wasn't political at all, but indeed we were lucky to focus on areas where there was less known and the science was younger as we could then develop our process. Now, in the northern hemisphere, things may be more challenging with so many more human pressures, so it is good that we have now the experience of working in nine previous regions.

As there were no more questions for the moment, Panigada outlined the process of the next few days as set out in the agenda. Panigada then called for participant introductions. One by one, participants came up to the microphone to say a few words and present their background; then we heard from the online participants (Annex I lists the names and affiliations of each person, both those attending in person and those on line).

The coffee break provided a good chance for informal discussions.

After the coffee break, Panigada called for Eleuteri to reveal what was planned for the afternoon and evening. She explained about the closed meeting at the Maritime Museum for the visiting yacht building community and that the Task Force co-chairs Hoyt and Notarbartolo di Sciara and workshop chair Panigada were invited. Then in the evening, all the participants would be invited for a free tour at the museum and dinner with a chance to meet and talk with industry leaders in the yacht building industry.

Then Professor **David Johnson**, Coordinator of the Global Ocean Biodiversity Initiative (GOBI), the international scientific partnership supported financially by the Government of Germany, briefly presented how the IMMA work feeds into a number of ongoing international conservation processes. He explained that the GOBI International Climate Initiative Project had supported and collaborated on many of the previous IMMA regional workshops. GOBI was formed in 2010 and is closely aligned with different elements of the Convention on Biological Diversity (CBD) portfolio of work on marine and coastal biodiversity. Central to this is the description of ecologically or biologically significant marine areas (EBSAs) providing scientific and technical information at the ocean science/policy interface. Described by scientists based on seven agreed criteria, 338 EBSAs have been identified over a series of 15 regional workshops over the past decade. This effort is summarized in a recent publication "Special Places in the Ocean" authored by the GOBI Secretariat in collaboration with the CBD. The EBSA process has covered almost 76% of the world ocean and EBSAs themselves cover approximately 20% of the global ocean. Notably the Northeast Atlantic is the region most recently covered in 2019 by the CBD EBSA process, so the IMMA workshop should complement and add to this wider scientific and technical baseline.

The CBD has set a target of protecting 30% of the ocean by 2030. IMMAs can contribute to this effort both in terms of helping to recognise existing and potential marine protected areas along with "Other Effective Conservation Measures" (OECMs). OECMs recognise measures taken by other sectors, local actors and indigenous managers to conserve biodiversity. The Kunming-Montreal Global Biodiversity Framework, agreed by CBD Parties in December 2022, represents an ambitious suite of targets that combine reducing threats to biodiversity, meeting peoples' needs through sustainable use and benefit-sharing, and tools and solutions for implementation and mainstreaming. Ocean science is key to supporting these efforts, hence the relevance of the IMMA work.

Marine spatial planning, regional collaboration including status reporting and the management of sensitive transboundary regions, and World Heritage Convention marine sites can also benefit from IMMA information. The finalisation of an international legally binding instrument to conserve and sustainably use biodiversity beyond national jurisdiction (the BBNJ Treaty) also makes the IMMA work both timely and globally significant. High Seas governance is currently fragmented and the responsibility of many sectoral bodies and Agreements. Whilst this will not change fundamentally, the BBNJ Agreement is set to provide a platform for relevant



international institutions to cooperate and manage the more than 60% of ocean area that is beyond national jurisdiction. IMMAs provide a building block to advance effective and equitable ocean management. Finally, Johnson presented a selection of slides on the Charlie Gibbs Fracture Zone, a specific High Seas feature in the northeastern Atlantic. He used this example to highlight the problems associated with gathering data for remote deep-sea areas and hoped that the IMMA workshop would have the opportunity to provide some insights into key high seas areas.

Next Panigada introduced **Gill Braulik** who presented a talk on the “IMMA Selection Criteria, Identification Process and the Inventory of Knowledge (IoK) for the North East Atlantic Ocean Region”. She introduced her presentation by saying that this would be a more technical discussion of IMMAs to set the framework to show how the information will be used. She said that there is such a strong appetite now from industry and managers for this intermediary product to in effect be able to access the raw data and what’s published in scientific papers, so that it can be used for decision making. She said that she thought it would be useful to demonstrate the end product and what will happen at the end of the workshop and after everything has been through review and put on to the website as IMMAs. The Task Force site [marinemammalhabitat.org](http://marinemammalhabitat.org) displays all the IMMAs and when users click on individual polygons they see the full information, the metadata (including species, locations, criteria used for selection and why the habitat is important) and links to a downloadable PDF where they can obtain the shapefiles. Then Braulik walked the group through the searchable database.

Braulik outlined the process of working from the pAol, many of them submitted by participants who would over the next few days sift through them to refine and determine which ones would be combined or thrown out. She said that there would be breakout groups by subregion that would focus on each subregion’s portion of the pAol and decide which ones could go forward before bringing them to the full group in plenary. Thus the next few days would be a process of working and presenting progress until the workshop arrived at a final product. The whole group would thus be on board with the final package and the work would be considered not of an individual but of the whole workshop. Then after the workshop, the cIMMAs would go for expert review with some being returned for more work.

Finally, Braulik went through the eight selection criteria and subcriteria in detail, the nuts and bolts of how you build an IMMA, along with examples for each. She pointed out the “IMMA Guidance” PDF, available through Canvas or the [marinemammalhabitat.org](http://marinemammalhabitat.org) website, which had been developed over a number of years by the IMMA Secretariat in consultation with outside experts and was constantly being refined and updated. This is the best source for understanding the application of the criteria, as well as other points related to the process of creating candidate IMMAs (See <https://www.marinemammalhabitat.org/download/guidance-on-the-use-of-selection-criteria-for-the-identification-of-important-marine-mammal-areas-immas/>). She also

pointed out that there were videos on canvas and a short “cheat sheet” which had been printed out with multiple copies so that the criteria and examples could be quickly accessed during discussions and preparation of cIMMAs.

Braulik reminded the group that it’s best to pick the criteria and the species for which you have the strongest data and supportive evidence. Different currencies of information could be used to support each criterion, but in every case the focus was on the habitat. She remarked that, regarding boundaries, they should be drawn with the evidence supporting that particular habitat and that there is no minimum or maximum size. Straight lines on maps and political boundaries rarely correspond to actual habitats. Static bathymetric features can be a good basis for drawing boundaries, while dynamic habitat features and modelled data are weaker. She said that Lanfredi would help with drawing boundaries for submission as we get closer to deciding on the cIMMAs chosen. Braulik added that how the group brings together the data and integrates them is part of the process of working together over the next few days.

Next Braulik explained the difference between primary species, the ones being used for criteria, and the supporting species, those species present in the area but without sufficient data to defend criteria. She explained that an IMMA can be made on the basis of one species, but that some IMMAs have many species that can be employed to support the Diversity Criterion D2. She pointed to the Society for Marine Mammalogy website for the official list of species (<https://marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies/>) but noted that they were also available on Canvas.

Panigada thanked Braulik and called for questions. The first one came from online and the subsequent questions were from Mark Simmonds in the room.

Q: Can candidate IMMAs extend outside of the region or do we have to keep within the limits of the North East Atlantic?

A: It’s fine if a cIMMA extends into another region. We can’t pretend marine mammals don’t cross our artificial boundaries. If a cIMMA extends outside, we can in most cases just go ahead but sometimes we might defer final decisions to a further process involving that other region, especially if it will happen next, or soon.

Q: Is a small population of, for example, harbour porpoises enough to make a cIMMA?

A: It depends if it satisfies a criterion. If it’s a small, resident population, for example, it could be B1 Criterion and then that would be enough.

Q: Are threats or population decline part of the consideration for making an IMMA?

A: No, they're not because we don't include human impacts or threats under the various criteria. However, the A Criterion is conservation status, so the fact that the species or in some cases the population may be rated in one of the threatened categories is in effect giving some reference of human impacts or threats, but the A Criterion alone is not enough to make an IMMA. Any of the other criteria can be used alone and be able to satisfy making an IMMA, but not Criterion A.

Q: Are the last three days devoted to writing up — is it prose, i.e. a written justification?

A: Yes.

Another question came from Peter Evans:

Q: What happens if you have a pilot whale habitat extending up and down over a vast area of the shelf. Would we say that the whole area is important for feeding? And of course they are breeding, too.

A: It might be better to use B2, for example, as that shows aggregations to indicate favourable habitat for the species, where they occur there more than they do in surrounding areas. But if there is strong evidence for more than that, of course include it in the cIMMA proposal.

A couple more questions came from online participants:

Q: What is the timeline for reviewing and then seeing the IMMAs on the e-Atlas with full descriptions?

A: It's roughly a 6-month period because it takes time to prepare the cIMMA proposals for the reviewers, then for the review, followed by any minor or major revisions, then editing the text and finalizing the maps, and producing the final layer to go on to the e-Atlas.

Q: Are we working only at the species level?

A: If there is information on distinct populations or subspecies, then include it. The IUCN Red List is mostly around species but there are subspecies and populations rated separately in some cases, such as in the Black Sea and the Mediterranean, to mention two.

Panigada said that additional questions would no doubt arise as we went through the identification of cIMMAs. He told the group that after lunch, the sessions would resume in the afternoon and questions could be addressed in plenary or sometimes in the subgroups that would be set up to handle each subregion.

After lunch, Panigada posted the list of subgroups and round tables and asked if the participants could select the best subregion for their expertise. But he added that people would be able to move from one subregion to another if their expertise extended further afield.

**Caterina Lanfredi** began her talk, emphasizing that she would be guiding everyone through the process we'd be following in the next day. She explained that information was summarized from various sources including IUCN species range maps and the OBIS SE data, plus geomorphological and oceanographic features, and that those are summarized into an inventory of knowledge available on Canvas or as a PDF for download. There is also a table summarizing all the potential data sets that can be used for consultation during the week. Lanfredi then showed examples of the maps for some of the species and the maps which showed diversity through overlap of species. She explained that these maps and tables and lists of materials are only to supplement what the experts had available. Their data for the individual species and specific areas would not normally be included in the lower resolution background inventory. Still, the additional data overlaid can be useful, for example, in identifying hot spots and confirming high diversity areas. As examples, 24 marine mammal species were included with the detailed maps but there was available information on the full set of 41 species found in the region.

For this region, based on the overall regional diversity, Lanfredi explained that 5 species or more could be considered enough for nominating a candidate IMMA under the criterion for D2 Diversity. If there were 14 or more species in a cIMMA, this would be considered exceptional and likely to pass review using the D2 Criterion. Thus, on the cIMMA template (Annex IV) to be filled out in careful detail at the workshop, when the qualifying and supporting species number at least 5, then the cIMMA can be proposed under the criterion for D2. Lanfredi stressed that it was not enough just to have 5 species documented in an area to pass the D2 Criterion—data must clearly indicate that the 5 species are regularly present, and that the habitat has unique characteristics that allow it to support that diversity. If the D2 Criterion is being used, all the species that are regularly present and clearly supported by the habitat should be included in the Summary Table of cIMMA Species, even if they do not meet other criteria.

During the review process, splitting and joining of cIMMAs may occur several times. The advice is to avoid creating super IMMAs that cover everything, but instead to draw the lines to encompass the habitat that satisfies the criteria, bearing in mind that IMMAs should have the “potential to be managed”, and that smaller areas that meet a more

specific selection of criteria for particular species may help users develop more practical management measures than vast areas encompassing multiple species with potentially varying seasonal, temporal or geographical habitat use.

In terms of species, subspecies and special population names, the Society for Marine Mammalogy list should be followed (<https://www.marinemammalscience.org/species-information/list-marine-mammal-species-subspecies/>).

Lanfredi then called for questions.

Q: What do you do if the data available on the Canvas site are incomplete or if they are considered wrong?

A: The two main sources of information to rely on are the expert pAol submissions as well as the areas already catalogued as MPAs, such as the EU Habitats Directive Special Areas of Conservation (SACs), OSPAR MPAs and CBD EBSAs.

Next Lanfredi explained about the division of the region into subregions (Fig. 5). This was just for the convenient purpose of organising the effort during the workshop; the geographical division is not ecologically significant and will not appear on the e-Atlas.

Lanfredi explained that there were more than 344 existing areas listed as pAol, plus the 51 pAol submitted by experts, and that the groups, once they divided into subgroups according to the map would then need to go through each one of them, determining which were the most relevant, discarding many overlaps, combining or splitting others. This would be accomplished by going through the pAol sorter table. The pAol sorter table which will be refined in all the subgroups over the next few days is a key document because it gives access to the numbers and draft names for all the areas and where maps and more information can be found. The numbers provide links to the GIS maps, but the maps are also available as kml files for use in Google Earth. As the subgroups delete, use or join up the various pAol, the list will shrink to perhaps 10% of the original list. The numbers will then stay the same and link up with the cIMMA proposals. Lanfredi said that the pAol sorter tables would be available for download and use tomorrow (Tuesday) and would be updated every night until the end of the workshop.

**Elena Politi**, from the IMMA Secretariat who was online, then gave a refresher on accessing Canvas and said that links for the live feed of the workshop as well as videos of all the presentations were available there and could be accessed at any time, following the completion of any session. She offered to help anyone having problems with access or looking for information.

Another question came from the group regarding the most sensible approach for selecting an IMMA in view of political boundaries. Was it better to merge areas into one strong IMMA rather than having many overlapping IMMAs? Both options may make sense in terms of biology.

Lanfredi answered that selecting IMMAs is a biocentric process based on ecology so there is no thought about the political aspect. It is necessary to consider always the evidence available to propose the IMMA under the criteria. Does the data support the criteria as applied for a given habitat? Braulik added that it is no problem having overlapping IMMAs but if a given habitat is supporting two or multiple species, then it's logical to make only one IMMA. Examples where more than one IMMA makes sense are coastal dolphins and offshore humpback migratory routes. Or nearshore dugong grasslands and offshore whale-dolphin feeding areas.

Simmonds asked about the fact that there were no proposed pAol from the coast of Norway. Lanfredi answered that those areas would be considered at a future Arctic workshop, but that if anyone had something they wanted to propose now based on data, that could be possible in the areas immediately adjacent to the described area, i.e. southern Norway. She reminded the group that the workshop participants represented a portion of the expertise for the region and that all were welcome to contact and bring in others in your own networks to contribute. She added that it would be great to fill any gaps that participants were aware of and could help complete.

Patrick Lyne added that Mauritania was also unrepresented and it's an important breeding and feeding area for large baleen whales. Lanfredi replied that we can address those gaps in the workshop, although in future we will also have a South East Atlantic IMMA regional process.

Then Sophie Laran, an online participant, remarked that in her experience as a participant of the Pacific Islands workshop, the area was huge but the data were few and so it was relatively easy to determine the hot spots based on where the work had gone on. Now, in the North East Atlantic, the number of pAol is huge from resident dolphins inhabiting many small spots to baleen whales like blue whales ranging over very wide and vast corridors.

The advice was to start with the 51 areas proposed by experts — these are the ones for which there is the strongest evidence, and then use the other overlapping pAol that are MPAs, SACs and EBSAs to help supply information, boundaries, and to develop the rationale for protection.

Panigada said that the proposal that the Secretariat would like to make would be to divide the region into three groups, instead of the six subdivisions indicated initially. This

would conveniently divide up the work and take account of the fact that the high seas areas had few proposals. Still, he reminded the group that participants would be fine to move from one group to another, as information was required. Lanfredi then showed the old and newly proposed divisions of the region.

Lyne asked who would be responsible for areas that straddle two subregions. Both groups would contribute, replied Panigada, and there would be a point of contact (PoC) for those candidate IMMAs.

Evans asked how the participants online were going to work together with our breakout tables.

Panigada said there will be a zoom link so the interaction can occur. Virtual rooms will be created for each subgroup. In the subregion groups, there should be a facilitator who reports to Plenary and the Secretariat and another in the group that deals with online participants and includes their participation in the mix.

Further discussions ensued about the division of the subregions, e.g. in view of the Bay of Biscay being split, and the North Sea being lumped with the very different habitat of the Baltic Sea, but Panigada assured the group that this would not be an issue, and that consultation between the two relevant subgroups would allow a polygon to be drawn across the appropriate area, even if it stretched across a second subregion. Again, it was emphasized that the division was just for convenience in view of the work to be done; and it was not an ecological rationale. Additional discussion and input from Graham Pierce, with support by Evans, resulted in the Baltic being separated out as one subregion and thus the creation of four subgroups instead of just three (Fig. 5).

The four subgroups, or tables, were then arranged. Zanardelli and Braulik took notes of the names of the experts in each subgroup, including those online and those who wanted to participate in two subregions. With that set up, Lanfredi reminded participants that pAol submissions could still be added to the list if they come in by the end of the day. On Day 2 the plan would be to break into the subgroups and start the discussions for the identification of candidate IMMAs. The rest of the afternoon was reserved for the participants to read the materials and, if needed, prepare submissions for any missing pAol. Participants were told about the arrangements for the evening visit to the Maritime Museum and the dinner.

Panigada welcomed the group to the more operational phase of the meeting, explaining about the arrangement of the four breakout subregion tables. Various printouts would be available on each table, the concise “cheat sheet” outlining the criteria plus a list of questions to guide the discussions as each subgroup went through the pAol, one by one. It was explained that Lanfredi and De Santis were available to help with GIS boundaries.

The breakout groups arranged themselves on separate tables for the day with the mission to go through their subregion, decide which pAol they wanted to keep and which ones were to be joined or separated (Table 1). Panigada then concluded the plenary, saying that it was critical that each breakout group complete the cIMMA template forms for all the areas by Friday.

The starting point challenge for the day was to determine which species were likely to satisfy IMMA criteria in each chosen subregion and to narrow down the areas to those most useful in terms of becoming a cIMMA or being joined with other cIMMAs. Each table had a group coordinator, an IMMA Secretariat facilitator, as well as GIS technical support. Panigada reminded each subgroup that one person should also operate on Zoom to ensure good exchanges with the relevant online participants who would be arranged into breakout rooms. The groups considered each of the 395 expert pAol in turn, with reference to the much larger group of MPAs, SACs, EBSAs and other pAol also available for reference (Fig. 6). Each subgroup downloaded the pAol sorter table in the detailed spreadsheet, selecting out the particular pAol for their given subregion and going through them one by one with the subgroup discussion. The group coordinator guided the discussion using the following questions, focused also by the facilitators:

1. Is the pAol important for the species/area when compared to the IMMA selection criteria?
2. Is there information or data to be able to create a boundary around the species/habitat for a cIMMA?
3. Could the pAol species/area be combined with other pAol for different species to create a multi-species cIMMA?
4. If the pAol is not suitable for meeting the IMMA Selection Criteria, could the species/area be used to meet the IMMA selection Criterion D2 on Diversity when combined with other overlapping pAol for different species?
5. If the pAol for the species/area is not suitable as a cIMMA, and cannot be used to support another cIMMA for a different species/area, should the pAol for the



species be either Option 1 – kept as an Aol to inform a future process – or Option 2, not considered as an Aol on the IMMA e-Atlas?

**Table 1. Breakout groups**

<b>Breakout group (Table/subregion) number</b>	<b>Region: Countries included</b>	<b>Group coordinator</b>	<b>IMMA Secretariat facilitator</b>	<b>GIS Technical</b>
1	England & Scotland west coast including Orkney & Shetland Islands, Ireland, offshore waters into open North Atlantic including Mid-Atlantic Ridge	Peter Evans	Erich Hoyt	Valentina De Santis
2	Bay of Biscay to offshore NW Africa: France, Spain, Portugal, Azores, Madeira, Canary Islands, Morocco	Graham Pierce	Giuseppe Notarbartolo di Sciara	Caterina Lanfredi & Valentina De Santis
3	North Sea to Bay of Biscay: Scotland & England (east coast)	Anita Gilles	Gill Braulik	Caterina Lanfredi & Valentina De Santis
4	Baltic Sea, including Kattegat and Skagerrak: Norway, Sweden, Finland, Denmark, Germany, Poland, Lithuania, Latvia, Estonia	Michael Dähne	Margherita Zanardelli	Caterina Lanfredi

At the end of the day, the subgroups were asked to report on their progress (Table 2). Evans reported for breakout group 1 that several of the 24 expert pAol sites had been combined and modified. He presented the suggested boundaries of several areas relevant to other subgroups. In addition, Johnson was working to submit three high seas sites that he was familiar with from his OSPAR and CBD EBSA work. Lyne confirmed with remote participant Simon Berrow that Galway probably didn't have enough evidence to make a cIMMA so it was put in the Aol category. There was discussion about the names of the cIMMAs, with participants trying to refine the names so as not to have the names of countries but to use geographical names. Evans asked about working with breakout group 2 for proposals that overlapped and it was decided that this could be discussed between members of each table later in the drafting stage.

Pierce reported next for breakout group 2 whose 17 expert proposals had gone down initially to 7 and then after discussion moved back up to 10 cIMMAs. Pierce relayed the gist of the discussions around the various areas off Spain, Portugal and northwest Africa. Everything seemed to be moving ahead. There had been some discussion about harbour porpoises and where to situate cIMMAs for them and specifically about a harbour porpoise cIMMA off northwest Africa but for the moment it was still in the category of an Aol. Johnson asked if the Desertas of Madeira were included; Notarbartolo di Sciarra replied that this had been done for Mediterranean monk seals as part of the extraordinary monk seal workshop organised in 2018 as a side event to the meeting of the European Cetacean Society in La Spezia, and Luis Freitas agreed that they were happy with this area for monk seal and that it was somewhat separate from the bottlenose dolphin populations which are more wide ranging and extend offshore. Notarbartolo di Sciarra said that Cap Blanc also had an IMMA for monk seals, but in both cases, Desertas and Cap Blanc, participants at this workshop could revise them if they felt it was advisable. This would require engagement with the IMMA Secretariat as well as potentially the independent review panel. Johnson also noted that the EBSA called Atlantis-Meteor Seamount Complex has a reference to the presence of mid-latitude foraging for fin and blue whales. He indicated that while there may not be enough data for a cIMMA proposal, that it would be good to flag it up as an Aol. After some discussion about recordings from that area by one participant who verified the baleen and sperm whale presence, participants agreed that the data were not enough for a cIMMA, but that the area should be put forward as an Aol.

Next there was a discussion about humpback whale data from tagging which had revealed a corridor from northern Norway down to the Azores and across to the Caribbean. This corridor also implicates blue and sei whales. Participants asked how to address this. Panigada suggested removing the outside tracks and focusing on the middle ones as has been done in the South West Atlantic Ocean. Panigada said that if the group wanted to submit a cIMMA that would be great and then the reviewers could respond to say if they considered that there were enough data. However, several times during the workshop, discussion continued about creating a special imaging tool for migrations and potentially to be illustrated on the map as part of a revision in the way

the IMMAs and AoI are visualised on the website. The e-Atlas would be more useful, it was felt, if the various layers could be switched on and off and combined only as needed.

Subregion 4, the Baltic, was next and Michael Dähne gave an overview of the cIMMAs proposed including for the subspecies of ringed seals in the eastern part of the subregion. There was a comment from Signe Sveegaard that perhaps the Skaggerak and Belt areas should be separated. Dähne said that the other experts for this subregion will need to be contacted and he would do that. Dähne said that the group had decided to put the two freshwater Ladoga seal subspecies together into one cIMMA proposal, because both of these are remnant populations within freshwater lakes close to the Baltic Sea. Dähne also presented the issue of how accurately to account for harbour porpoise presence in the Baltic, Skaggerak and Belt seas in light of harbour seals, whether these are combined in one large cIMMA proposal(s) or broken down. There was not much feedback from participants so he said he would get back to the experts and discuss it.

Subregion 3, represented by Anita Gilles, was last to report. Their 15 pAoI were narrowed down to six total but they had also added one new area. Four of their areas came from a University of St Andrews student course in which Gill Braulik had presented the IMMA concept and given students a chance to nominate pAoI. There were discussions about the seal areas which had been made into larger polygons from the data maps. As with other subregions, the considerations centred around whether it made sense to make one large cIMMA or a number of smaller cIMMAs. Gilles pointed out that for managers wanting to make some interventions the smaller areas around individual species could be more useful. Another consideration could be making one large cIMMA but subdividing it into smaller parts. Panigada responded that it really depends on the species involved, the robustness of the data and that, looking at Gilles' map, he was inclined to suggest separate areas, though noting that Cecile Vincent (online) and others were suggesting the larger option; it is also possible to make one large cIMMA submission for, in this case, the harbour seals, and then smaller ones for individual cetacean species, and wait for the opinion of the review panel. More discussion would be needed between the experts in the subregion to decide this and also whether Dogger Bank should be a separate cIMMA. Notarbartolo di Sciara said the decision should not be for management but for the specific criteria supported by data that would be chosen for the cIMMA. Braulik cited a comparative case in the Black Sea that could be relevant here but essentially it was up to the experts to propose something and then to see how the reviewers responded.

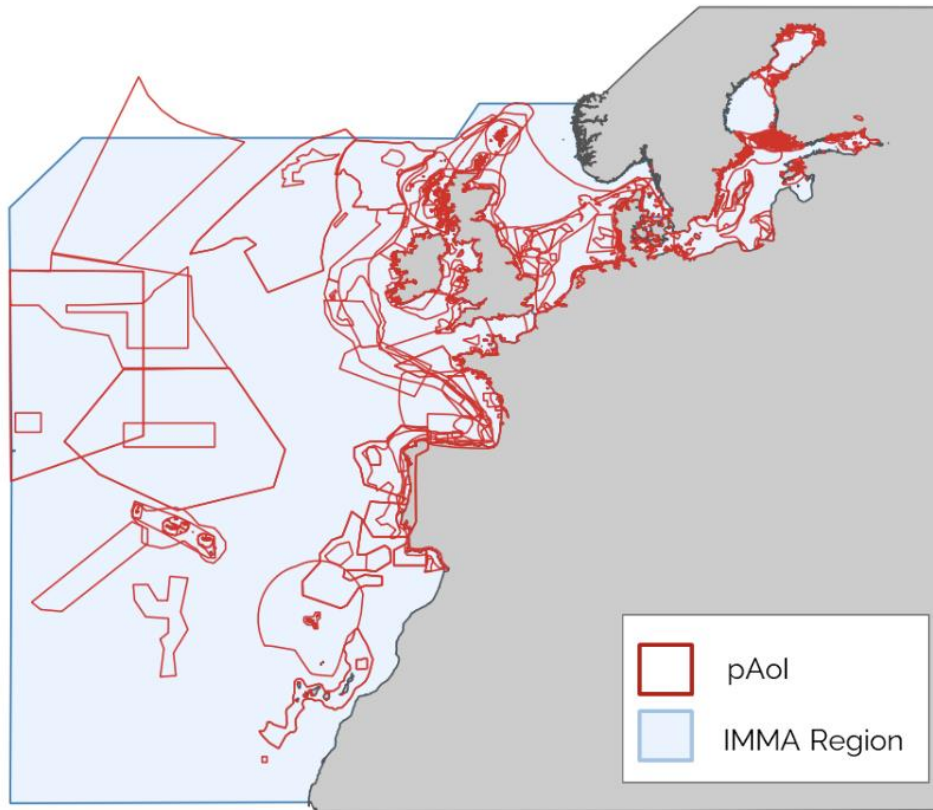
A further discussion ensued over whether to have separate cIMMA proposals for the Shetland and Orkney islands or if it was all one cIMMA. Evans noted that the killer whales are travelling throughout these areas but other species are more local. Notarbartolo di Sciara suggested looking at the overall data and the data will point to

the most robust approach to defining the boundaries; it could be a large area for killer whales and small cIMMAs for the other species. After further discussion about splitting into small or merging into one large cIMMA, Hoyt added that discrete areas which are usually smaller are generally more useful; it is possible to have a large discrete area and that's fine, but if there are natural subdivisions, i.e. discrete smaller areas, it is better to go for them.

Panigada then thanked everyone and said that tomorrow Braulik would provide guidance on how to write the candidate IMMA template and Politi would give a description of the breakout rooms in Canvas which can be used during the drafting period.

**Table 2.** Day 2 status of cIMMAs going forward

<b>Breakout group (Table/subregion) number</b>	<b>Started with (including only expert areas, and after discarding redundant areas)</b>	<b>cIMMAs going forward</b>	<b>Aoi going forward</b>	<b>Group lead</b>
1	24	10	4	Peter Evans
2	17	10	0	Graham Pierce
3	15	6	0	Anita Gilles
4	6	6	0	Michael Dähne
Total	62	32	4	



**Fig. 6.** 395 pAol collated in advance of the North East Atlantic IMMA workshop consisting of 51 expert submissions as well as EBSAs and MPAs. Several pAol were added on Days 1-2.

### IMMA Workshop Day 3, 24 May 2023

Panigada convened the group to start the drafting, reminding everyone that they would need to deliver their cIMMAs by the end of the morning of Day 5. He told the groups that Lanfredi and De Santis would be moving from table to table to help with the GIS selection of the boundaries.

Zanardelli presented the new updated sorter table. A total of 33 cIMMAs were in discussion for preparation, plus 6 Aol. Discussions continued on whether Shetland and Orkneys would be two cIMMAs or only one. The North Sea could be three areas or only one, according to Gilles and that would require more debate. There were other

discussions about how to handle the Bay of Biscay. Sascha Hooker asked if it was better to make discrete areas based on the definition of IMMAs, and focusing on so called “critical habitat”, and that we might be thinking too big. Panigada gave the example of the Northwest Mediterranean IMMA with the large area taken by the International Maritime Organisation (IMO) to make a particularly sensitive sea area (PSSA), a process now nearing completion. In that case it was very useful that it was large, not small. Hoyt reminded everyone that management toward MPAs was not the only goal, and that larger scales enable management at different levels and for threats such as shipping routes. However, in general, he repeated that he was in favour of starting with discrete areas, or at least defining these as zones within a cIMMA proposal which had already been accepted in a number of regions.

Panigada then opened a discussion about the cIMMA form. He pointed out that the detailed instructions are on each form and, in answer to one query, that each proposed cIMMA needs a separate form (The cIMMA template is shown in Annex IV.) He called on Braulik to give a presentation on filling out the cIMMA form.

Gill Braulik then presented a quick tutorial on writing cIMMA proposals, filling out the templates, covering all nine sections of the form. She stressed that strong evidence was needed and in general, with the text, less is more. The important thing is to use data to convince the reviewers. She then explained about boundaries that would be refined one by one by Lanfredi and De Santis but that the strategy was to use bathymetric contours, canyons, straits, coasts, archipelagos and to avoid any political boundaries. In terms of qualifying species, she stressed only to include those for which experts are providing criteria justification. All the other species should go into the supporting species table. In general, in terms of length of text to defend criteria, 1-2 sentences were not enough but 1-3 paragraphs could be sufficient. Unpublished reports and data could be used, with key sentences taken out of the paper to show that there were data to back things up. The summary should be written last. About 150 words would be ideal. The naming of the areas should be geographically based and for the most part avoid using the names of countries or other political designations. Some names have been creative and thus memorable such as off Mozambique the “Last Dugong Holdout IMMA”, so participants can be creative but should be descriptive of the place with a unique name. That is a good starting point. Regarding the authorship, the points of contact are key because they will take the lead in the review; IMMAs are not given specific authorship but are considered the product of the workshop. Braulik reminded participants that it was fine to send unpublished data to the reviewers, just to make it clear where it came from, and that nothing would appear on the e-Atlas or be made public. Finally, she said that it was fine if participants wanted to show drafts to the secretariat and they could provide some basic guidance on what may be missing and what is too much and not needed.

Vincent (online) asked if we should refer to existing MPAs in the habitat section (yes, that’s fine) and if data should be in the text? (No, best to put it in the appendices).

Next Politi showed how to organise breakout groups within Canvas and how to post documents and share them. Laran said she preferred a google drive approach with members of the subgroup having a link to work on the same document. Politi said this was fine.

The group then proceeded through the day, including during coffee breaks, to discuss the choices to be made and the criteria supporting them. Participants worked hard, both in the room and online, and discussions about division of work moved quickly.

At the end of the afternoon, Panigada called for a brief plenary to chart progress on this key 3<sup>rd</sup> day. Evans reported first from subgroup 1. He felt he wasn't doing as well as he could but he knew where he was going and what needed to be done. The subgroup had effectively divided most of the work although Evans had the larger share. Evans raised a question about how important an area was in the UK because what was important in the UK was less important in the overall region, such as against the Bay of Biscay. Others were similarly wrestling with relative importance. Panigada suggested discussing less and drafting more. This was especially true in terms of the finely detailed discussions about the boundaries. Both De Santis and Lanfredi would help to sort that out, changing things as needed.

In subgroup 2, Pierce reported that the Azores cIMMA proposal was nearly complete, but that there were various discussions still going on about certain areas. In subregion 3, Gilles said that more discussion was needed with those online. Laran (online) reported that she had updated the map for the Bay of Biscay. Babey and Bunney had helped shape the Bay of Biscay proposals on the question of whether there should be one cIMMA or three cIMMA proposals: nearshore, middle and more offshore. There was also discussion and concern about whether the Bay of Biscay proposals should extend to include the western English Channel or even joined to the south England cIMMA proposal for common bottlenose dolphins. Overall feeling was that they should be separate proposals. Discussions were necessary and productive; the coordinators in the subgroups, in plenary and during the coffee breaks kept returning to the integral relationship of the habitat and the particular species chosen for the cIMMA, the criterion or criteria supporting the selection of that habitat and its extent, and the strength of the data supporting the criteria chosen. Those are the essential elements. Dähne, reporting for subgroup 4 (entirely online except for him), said that things were on track.

Panigada then closed the plenary. Many participants stayed in the room for some time and took dinner together in subgroups with productive discussions through the evenings. Meanwhile Lanfredi and De Santis worked on updating their maps with Zanardelli to be ready to present the status in the morning.

## IMMA Workshop Day 4, 25 May 2023

The day was spent hard at work with no morning plenary. Subgroups continued discussions over lunch. During the day, the IMMA Secretariat left the room for an internal planning meeting while work on the cIMMA proposals carried on.

At the end of the day, Panigada reconvened the plenary and asked each group to report on progress. All were on track to finish, although Evans felt for subgroup 1 that they still had a lot to do. He went through the cIMMA proposals one by one and the logic behind the boundaries for each of them, including the four AoI, three of which were on the high seas. There were also 4 non-contiguous areas for bottlenose dolphins being proposed as one cIMMA.

Dähne in Group 4 said that two of the cIMMAs for the Ladoga seal subspecies were done but others in the Baltic were still being reviewed and a new area in Skaggerak for the harbour seal was being proposed.

Next Gilles reported from Group 3 that five of the eight cIMMAs had been drafted and sent to co-authors. Pierce, for Group 2, said they were close to completion with six ready and others not far behind. Notarbartolo di Sciara talked about the killer whale Strait of Gibraltar IMMA which had been finalised in the Mediterranean IMMA workshop in 2016. Now with the wider northeastern Atlantic under discussion and more research confirming the movements of individuals (39) from the small Critically Endangered population, it was time to reconsider the size of the original IMMA. He had contacted Ruth Esteban about either keeping the polygon as is, just around the Strait of Gibraltar, or expanding it north to include Galicia. The decision was to extend the IMMA based on substantial reporting of this killer whale group's movements, including several hundred incidents with yachts where the orcas interfered with the rudder, sometimes breaking it off completely.

Zanardelli discussed the names of the cIMMAs with participants, in some cases recording slight changes. Lanfredi showed the new map with the refinements of the GIS polygons suggested by experts at the workshop, now totalling 36 cIMMAs and 6 AoI (Table 3), 3 cIMMAs having been added from the previous day for various proposals such as Shetland and Orkney islands that had gone from one cIMMA to two. Other areas had emerged from the discussions about the Bay of Biscay and the Baltic Sea.

**Table 3.** Day 4 status of cIMMAs and AoI going forward



<b>Breakout group (Table/subregion) number</b>	<b>cIMMAs going forward</b>	<b>Aoi going forward</b>	<b>Group lead</b>
1	10	4	Peter Evans
2	10	1	Graham Pierce
3	6	1	Anita Gilles
4	6	0	Michael Dähne
Total	36	6	

Finally, Hoyt outlined the future role of the expert regional groups as well as the need for regional coordinators—between one and five per region. All the participants would be part of the supporting regional group of which there were more than 300 now in all the IMMA regions. Notarbartolo di Sciara then went over the provisions, including (1) group maintenance and (2) e-Atlas maintenance, (3) support for follow-up actions and future workshops, (4) IMMA Regional implementation, (5) knowledge base consolidation and (6) annual reporting of developments in the region. He directed them to the website for more details (<https://www.marinemammalhabitat.org/immas/regional-groups/>).

Discussion was kept short, and as plans were made for the following morning, most participants kept working and indeed spent part of the evening finishing their cIMMA proposals.

### **IMMA Workshop Day 5, 26 May 2023**

Day 5 had no opening plenary. Participants stayed in their subgroups and worked on the cIMMA proposals. At the closing plenary, at 2.30 PM, Panigada called upon Braulik to present a concise talk on the cIMMA review process so that participants would know what to expect in terms of the timeline for receiving back decisions. Braulik aimed to check the submissions, complete the internal review and send them for review in July. The review decisions could come back by September to the points of contact (PoC).

Revisions toward the final version would then be due within about a month. Braulik said that the aim was to have final versions approved and up on the e-Atlas in late 2023 or early 2024, with final report issued at the same time, and news and media releases to follow.

Braulik called for questions and this provided participants in the room and online with the chance to make comments.

Sveegaard (online) remarked that it was great to be part of this global scientific process and asked if some credit is given to the scientists who participated. Panigada answered that all our names would appear in the report and that the workshop results were considered to have come from the entire group. There is no mention of the scientists on the e-Atlas except in the acknowledgments and in the references in the downloadable Fact Sheets. Of course, each IMMA carries references that are cited.

Nataliya Shumeyko, a pinniped expert and online participant of this workshop, offered her help if it was needed by other coordinators or by the IMMA Secretariat and Task Force. She is one of the coordinators for the Black Sea, Turkish Straits System and Caspian Sea, following the completion of the IMMA workshop for that region in 2021. She said that the IMMA process was an excellent outcome for marine mammal researchers worldwide; the successful implementation of IMMAs starts with researchers. She mentioned that Kazakhstan has begun using all 3 Caspian seal IMMAs from the Black Sea, Turkish Straits System and Caspian Sea IMMA process. She wished the IMMA Secretariat and the other participants every success for this new region.

Panigada then thanked the participants for their hard work and made a special note for the online participants who stayed despite difficulties with the wi-fi technology. He thanked the IMMA Secretariat including co-chairs Notarbartolo di Sciara and Hoyt. He then thanked the Water Revolution Foundation for their sponsorship, making a special note of thanks for Vienna Eleuteri without whom the connection would not have happened. The IMMA Secretariat decided to give her the gift of a signed copy of the new book *Planktonia* by Hoyt.

Panigada called for the regional coordinator nominations. It was fairly straightforward. As in earlier workshops, there was regional representation. The five coordinators are Anna Bunney, Monica Arso Civil, Anita Gilles, Graham Pierce, and Debbie Russell.

Panigada then gave the floor to Lanfredi to display the workshop's results in map form. Lanfredi showed the first map slide and explained that we had started 4 days earlier, on Monday, with a total 51 expert and 344 other pAoI for a total of 395 pAoI. Some were submitted but most were collected before and during the first couple days of the workshop. With the careful coordination of Zanardelli and De Santis, as well as Braulik, the last-minute changes in names and maps were accommodated so that the results could be rolled out. And the final result meant that the workshop had selected 36

candidate IMMAs and 6 Aol (See Annex III). Lanfredi thanked the whole group for their efforts. The final map led to applause from the group and photographs taken in front of the slide.

Panigada reminded participants about the cocktail party, a short reporting event with the Water Revolution Foundation, and the celebration dinner at the Maritime Museum. A few participants stayed to finish their work in the workshop room, but most got ready for the party and dinner. Panigada then closed the workshop.

## Annexes

### Annex I – List of participants

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Elena Politi (attending remotely)  
IUCN Marine Mammal Protected Areas Task Force  
Tethys Research Institute  
Milano, Italy



## Annex II – Workshop agenda

### Day 0 – Sunday 21 May 2023

19:00 – 22:00 Icebreaker reception/welcome dinner – Peter Pane Burger Grill & Bar, Hamburg

### Day 1 – Monday 22 May 2023 - Hotel Crowne Plaza Hamburg - City Alster

09:00 – 11:00 Introduction to the North East Atlantic Ocean Region Workshop IMMA

- Opening of the workshop: Giuseppe Notarbartolo di Sciara and Erich Hoyt
- Nomination of Workshop Chair
- Welcoming addresses:
  - Vienna Eleuteri (Water Revolution Foundation)
  - Peter Lürssen (Lürssen Foundation)
  - Anne Freiburger (Ministry of Environment, Germany)
  - Vedran Nikolić (European Commission) online
  - Melanie Virtue (Convention on Migratory Species) online
  - Susana Salvador (ACCOBAMS) online
  - Jenny Renell (ASCOBANS) online
- Presentation by IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task Force Co-Chairs: Giuseppe Notarbartolo di Sciara and Erich Hoyt background of the IMMA programme
- Adoption of Agenda, Workshop Facilitator(s) and Participants introductions

11:00 – 11:30 Coffee Break

11:30 – 12:30 Introduction to Important Marine Mammal Areas

- David Johnson: IMMAs and the big picture.
- IMMA Identification Process and Selection Criteria for the North East Atlantic Ocean Region - Presentation by Gill Braulik, IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task Force
- Question and Answer Session

12:30 – 14:00 Lunch

14:00 – 15:00 Preliminary Areas of Interest (pAol)

- Collated pAol for the North East Atlantic Ocean Region - Presentation by Caterina Lanfredi, IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task Force

- 15:00 – 16:00 PLENARY Discussion on candidate IMMA (cIMMA) options, agreement of pAol list for cIMMA investigation, and organisation of Breakout Groups – Group leader and GIS expert for each table
- 16:00 – 16:30 Coffee Break
- 16:30 – 18:30 Reading time
- 19:00 Pick up to dinner venue - International Maritime Museum

**Day 2 – Tuesday 23 May 2023**

- 9:00 – 10:30 PLENARY - Collation of final pAol and cIMMA Group Assignments
- 10:30 – 11:00 Coffee Break
- 11:00 – 13:00 BREAKOUT GROUPS SESSION 1
- 13:00 – 14:30 Lunch
- 14:30 – 16:30 BREAKOUT GROUPS SESSION 2
- 16:30 – 17:00 Coffee Break
- 17:00 – 18:30 PLENARY - Assessment of cIMMA list (Sub-Region Summary)
  - Group Facilitator Reports
  - Discussion
  - Agreement on preliminary cIMMA list
  - Revised pAol list
- 20:00 – 22:00 Informal dinner

**Day 3 – Wednesday 24 May 2023**

- 09:00 – 10:30 PLENARY - How to prepare a cIMMA template - Presentation by Gill Braulik, IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task Force
- 10:30 – 11:00 Coffee Break
- 11:00 – 13:00 DRAFTING SESSION 1 – cIMMA submission forms
- 13:00 – 14:30 Lunch
- 14:30 – 16:30 DRAFTING SESSION 2 – cIMMA submission forms
- 16:30 – 17:00 Coffee Break
- 17:00 – 17:30 PLENARY - Review of cIMMA drafting progress
  - Discussion
- 20:00 – 22:00 Informal dinner

#### **Day 4 – Thursday 25 May 2023**

- 09:00 – 13:00 DRAFTING SESSION 3 – cIMMA submission forms (including coffee break at 10:30)
- 13:00 – 14:30 Lunch
- 14:30 – 16:30 DRAFTING SESSION 4 – cIMMA submission forms
- 16:30 – 17:00 Coffee Break
- 17:00– 17:30 PLENARY - Review of cIMMA drafting progress
- Discussion
- 19:30 – 22:00 Informal dinner

#### **Day 5 – Friday 26 May 2023**

- 09:00 – 13:00 DRAFTING SESSION 5 – cIMMA submission forms (including coffee break at 10:30)
- 13:00 – 14:30 Lunch
- 14:30 – 16:30 PLENARY - Agreed cIMMA list and next steps for review –
- Final round-up by workshop organizers and Task Force Co-Chairs
  - Implementation of IMMAs by workshop participants
  - Regional Coordinator(s) and Regional Expert Groups
  - Agreement on final revised Aol list
  - Agreement on final cIMMA for review
  - Workshop Closes
- 16:30 – 17:00 Coffee Break
- 20:00 – 23:00 Celebratory dinner and drinks – International Maritime Museum

## Annex III – List of IMMAs and AoI selected by workshop participants and approved through peer review

From a total of 395 pAoI submissions, 36 candidate important marine mammal areas (cIMMAs) were identified by the experts attending the IMMA Regional Workshop for the North East Atlantic Ocean and Baltic Sea. The 36 standard submissions for IMMA status were prepared for inspection and potential approval by the independent review panel. Following peer review and substantial revisions in some cases, 33 areas were accepted as IMMAs, and 10 areas were kept as AoI. For IMMAs, a summary of the supporting rationale for each area is available on the Task Force website ([marinemammalhabitat.org](http://marinemammalhabitat.org)).

Regarding the ten AoI, when there is not enough evidence to succeed with a cIMMA proposal, it may be considered important to mark the AoI status on the e-Atlas so that the area can be used to facilitate and focus future monitoring and research activities on marine mammals in the region. This enhanced activity could provide additional evidence for the AoI to be reconsidered as an IMMA candidate during future iterations of the IMMA identification process and the regional expert workshops. The AoI below can be seen listed and mapped on the Task Force IMMA website ([marinemammalhabitat.org](http://marinemammalhabitat.org)).

The names of the 33 approved IMMAs and 10 AoI are as follows:

### **IMMAs**

1. Porcupine Seabight and Bank IMMA
2. Azores Archipelago IMMA
3. Canary and Madeira Islands IMMA
4. Dingle to Mizen Head IMMA
5. Central Irish Sea IMMA
6. Southeastern Rockall Slope and Canyons IMMA
7. Celtic Sea IMMA
8. Atlantic Coast of the Iberian Peninsula IMMA
9. Biscay Shelf Edge and Slope IMMA
10. Southern Biscay Canyon System IMMA
11. Biscay Abyssal Plain IMMA
12. Northern Continental Shelf of the Bay of Biscay IMMA
13. Rockall Trough Seamounts and Banks IMMA
14. Minches and the Sea of the Hebrides IMMA
15. Western English Channel IMMA
16. Orkney Isles and Pentland Firth IMMA
17. Moray Firth to Humber Estuary IMMA

18. Shetland and Fair Isle IMMA
19. Baltic Proper IMMA
20. The Wash IMMA
21. Monach Isles and Outer Hebrides Western Continental Shelf IMMA
22. Dogger Bank IMMA
23. Eastern North Sea and Southern Slopes of the Norwegian Trench Complex IMMA
24. Baltic Ringed Seal Area IMMA
25. Ladoga Lake IMMA
26. Saimaa Lake IMMA
27. Western Baltic IMMA
28. Southern North Sea and Eastern Channel Seasonal Aggregation IMMA
29. Sado Estuary IMMA
30. Rias of Galicia IMMA
31. Wadden Sea IMMA
32. Dakhla Bay IMMA
33. The Shannon (Sionna) Approaches IMMA

**Aol:**

1. Malin Head to Clew Bay Aol
2. Canaries Madeira Northern Seamounts Aol
3. Atlantic Coast of Northwest Africa Aol
4. Norwegian Coast and Western Baltic Sea Haul Outs Aol
5. Rockall and Hatton Banks Aol
6. Galway Bay Aol
7. Faroe-Shetland Channel Slope Aol
8. North Atlantic Current and Evlanov Sea Aol
9. Atlantis Meteor Seamount Complex Aol
10. Northern Mid-Atlantic Ridge Aol

## Annex IV – Template for preliminary Area of Interest (pAoi) leading to candidate IMMA (cIMMA) submission form

Preparatory to the North East Atlantic IMMA workshop, the expert participants, members of the public, and the marine mammal and ocean ecosystem communities were asked to fill out a pAoi/cIMMA submission form for any areas that they would potentially like to nominate for consideration as candidate IMMAs. This form was then used at the workshop to draft the cIMMA submissions using the template below.

### **pAoi - cIMMA Template**

The following template should be used to complete information for submission of a **preliminary Area of Interest (pAoi)/candidate Important Marine Mammal Area (cIMMA)** to be discussed during the upcoming IMMA Regional Workshop. Please watch the following YouTube video tutorials prior to completing this form: 1. [What is an IMMA](#), 2. [What is a cIMMA](#). 3. [IMMA Criteria](#)

As part of your proposal, please include an ESRI shapefile (.shp) or Google Earth file (.kml) or a JPG image file showing the proposed area. The IMMA Secretariat will then produce a simple boundary map, by adopting a standardized format, and will include it in the document before the workshop.

The text should be as complete and polished as possible. The fields included in this form reflect those that are presented to the public for each IMMA on the IMMA website ([www.marinemammalhabitat.org](http://www.marinemammalhabitat.org)), and is also used for creating PDF Factsheets that can be downloaded from each IMMA portfolio page (see [Hellenic Trench IMMA](#) for example). Ensuring that the text provided on this form is of high quality will increase the likelihood of a successful submission.

**Species** - Please follow the list of marine mammal species officially recognised by the Society for Marine Mammalogy's Committee on Taxonomy:

<https://marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies/>.

- **IMMA Name** – Use a title that is short, interesting, descriptive or memorable and that describes the area within the IMMA. Avoid easily confused names such as 'Southern Australia coast IMMA' and use instead names that refer to distinctive features that will be unique and recognisable. See examples [here](#)

- **Point(s) of Contacts** – please list all parties who were involved in the drafting of the pAol/cIMMA submission (this is for internal reference only and is not displayed online).
- **Summary Table of Species and Criteria** –
  - Table 1 - Qualifying Species Table. Complete the table for all species meeting the IMMA criteria and note which criteria are met by marking with an X. Where D2, Diversity, is applied the list of species may be long.
  - Table 2 - Supporting Species Table. Complete the table to include all marine mammal species recorded within the IMMA that are not already listed in the Primary Species Table. These may be less commonly recorded species for which information is insufficient to satisfy one of the IMMA criteria – do not include vagrants, or very rare species.
- **Justification of IMMA Criteria text** – provide specific descriptions of why the various [criteria](#) were met for the relevant species along with cited references. If peer-reviewed journal articles are not available, use reports from reputable sources, preferably those that can be publicly accessed. All species and criteria in Table 1 need to be justified. Remember, this text is the crucial element that allows IMMA users to understand which species may require protection or mitigation from anthropogenic threats.
- **Rationale for Boundary delineation** - explain which features of the habitat or the species provided the rationale for defining the boundary of your IMMA.
- **Description of habitat**– provide information on the geography, location, bathymetry, oceanography, and habitat within the suggested pAol/cIMMA. Information on protective measures (e.g. MPAs etc) and other designations to the area (e.g. EBSA, KBA etc) can be provided here as well as other information giving useful background. Two paragraphs are sufficient.
- **IMMA Summary** – please ensure that the summary (i.e. abstract) for the IMMA is no longer than 150 words. This text should summarise the submission including information on the location, geography and habitat, marine mammal species, and criteria used in the IMMA submission. [See here details of how to prepare a strong IMMA Summary](#).
- **References** – please provide a full list of references that were cited in the text of the IMMA submission –use the ‘Harvard system’ format. [See the IMMA Reference Format Document for more details and examples](#).

- **Annex - Supporting Figures, Maps and Images** – provide any figures, images, graphs or maps for inclusion in the IMMA submission, either by pasting directly into the document or by pasting a URL link to the Figure. These may be taken from published papers or be unpublished material. Provide a legend describing each figure. These materials strengthen cIMMA submissions considerably. The material will not be displayed in the online portfolio, but can be used in the downloadable IMMA Fact sheets.



**Submission Type: preliminary Aol / candidate IMMA**

**pAol/cIMMA/ Name:**

[Short, interesting, descriptive or memorable name that describes the area or habitat within the pAol/cIMMA/]. See examples of previous IMMA names [here](#).

**Point(s) of Contacts**

[please list all parties who were involved in the drafting of the pAol/cIMMA submission - these are for internal use only and will not be published]

[Name, Affiliation/Organization, Contact Email]

[Name, Affiliation/Organization, Contact Email]

[Name, Affiliation/Organization, Contact Email]

**1. Summary Table of qualifying marine mammal species and qualifying [criteria](#)**

Table 1: Qualifying Species – species that satisfy [the criteria](#) to qualify the area for IMMA status. All species and criteria listed on Table 1 need to be justified in Section 2 below under the relevant section.

ID	Scientific Name	Common Name	Population/Sub-population Name	IUCN Red List Status	IMMA Selection Criteria Met (x)								
					A	B1	B2	C1	C2	C3	D1	D2	
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													

Table 2: Supporting Species – species present in the area but which do not meet at least one of the IMMA criteria. Do not include vagrant or extremely rare species.

ID	Scientific Name	Common Name	Population / Subpopulation Name	IUCN Red List status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

**IMMA Map**

Please, when submitting this form, include an ESRI shapefile or Google Earth file (.kml) or a JPG image file, with the boundaries of the proposed areas. - A simple boundary map will be produced and added to this document by the IMMA Secretariat before the workshop.

**2. Justification of IMMA Criteria**

[provide text giving a justification for only the criteria marked with X in Table 1. Remove those criteria below that are not being applied to this cIMMA. Make sure there is justification text for each species listed under that criteria in Table 1]

**Criterion A – Species or Population Vulnerability**

[Detailed description and careful explanation as to how this criterion is met for each qualifying species. Each species detailed here should also be listed in Table 1 under Criterion A *and should satisfy at least one additional criterion below*. This text must include a full reference to the species' or population's threatened status on the global IUCN Red List, as well as an explanation of national listings or local circumstances that contribute to vulnerability.]

### **Criterion B1 - Small and Resident Populations**

[Provide a careful description as to how the proposed area supports at least one resident population, containing an important proportion of that species or population, which are occupied consistently. Each species detailed here should also be listed in Table 1 under Criterion B1.]

### **Criterion B2 – Aggregations**

[Provide a careful description as to how the proposed area has underlying qualities that support important concentrations of a species or population. Each species detailed here should also be listed in Table 1 under Criterion B2.]

### **Criterion C1 – Reproductive Areas**

[Provide a careful description as to how the proposed area has conditions that are important for a species or population to mate, give birth, and/or care for young until weaning. Each species detailed here should also be listed in Table 1 under Criterion C1.]

### **Criterion C2 – Feeding Areas**

[Provide a careful description as to how the proposed area has conditions that provide an important nutritional base on which a species or population depends. Each species detailed here should also be listed in Table 1 under Criterion C2.]

### **Criterion C3 – Migration Routes**

[Provide a careful description as to how the proposed area is important for migration or other movements, connecting distinct life cycle areas or connecting different parts of the year-round range of a non-migratory population. Each species detailed here should also be listed in Table 1 under Criterion C3.]

### **Criterion D1 – Distinctiveness**

[Provide a careful description as to how the proposed area sustains populations with important genetic, behavioural or ecologically distinctive characteristics. Each species detailed here should also be listed in Table 1 under Criterion D1.]

## **Criterion D2 – Diversity**

[Provide a careful description as to how the proposed area contains habitat that supports an important diversity of marine mammal species. Note that vagrant species or those for which only isolated records are available should not be listed here. Each species detailed here should also be listed in Table 1 under Criterion D2.]

### **3. Rationale for boundary delineation**

[describe which features of the habitat or of the species distribution that were used to place the boundary of the IMMA]

### **4. Description of Habitat**

[A description, with supporting scientific references, of the location, physical geography, oceanographic and biological processes within the IMMA that make it important for marine mammals. Information on existing protective measures and jurisdiction may also be added. Two paragraphs are sufficient.]

### **5. IMMA Summary**

[Please write an abstract for your submission. This should be less than 150 words and provide details of the importance of the IMMA to marine mammals, some information on the habitat in the IMMA, and brief details of the criteria used to define the IMMA. This should be well crafted text as it will be the first information seen by most users of the IMMA website]. See here for more details on [correctly writing and formatting an IMMA Summary](#).

### **6. References and other supporting literature**

[Create a reference list of all materials cited in the text to support this submission. These may include scientific papers, books, reports, links to websites or databases. Please ensure references are complete with Authors, Date, Title, Journal/Publisher, Issue, Pages]. For more details see [IMMA Reference Format document](#).

## **Annex 1. Supporting Figures, Maps and Images**

[Use this space to add supporting information to your submission, along with relevant sources and captions. These might include information taken from published papers etc. such as figures, distribution maps, sighting locations, data tables, graphs, images etc. which support the submission of the IMMA. These can add considerable weight to submissions and later be used in the development of downloadable IMMA factsheets.]

## Annex V – Historical data, traditional knowledge and IMMAs

As has been discussed in previous workshops, historical whaling data can be useful for proposing pAol as well as contributing to cIMMA proposals. In the Indian and Pacific oceans, whaling data provided input for the EBSA determinations, and also have had a role in identifying pAol contributing to the cIMMAs in those regions.

In recent years, the Scientific Committee of the International Whaling Commission (IWC) and associated researchers have helped to organize whaling data and make them accessible in scientific papers and on the IWC database. The two main data sources are a massive compilation of 19<sup>th</sup> Century whaling records, which plots sightings and catches, as well as the more formal record keeping from the 20<sup>th</sup> Century whaling industry. In future, it could be useful to explore in greater depth the value of historical data to IMMAs. Whaling, or other historical data, may help confirm the long-term viability of an area where marine mammals continue to be found, rather than as guidance for identifying present-day areas.

In December 2019, a Task Force workshop was held at the World Marine Mammal Conference in Barcelona, Spain, to explore data and pAol triggers for the IMMA identification process. This included discussions regarding IWC historic catch records.

Traditional knowledge can also be used to assist in the identification of IMMAs, both in terms of informing the selection process and validating other data. In areas where marine mammals have been traditionally hunted, it may be possible to compute abundance and population trends. In any case, IMMAs are independent of political and socioeconomic factors during the identification stage.

## Annex VI – Preliminary areas of interest (pAoi) reserved to be considered at future workshops

No areas were reserved for future consideration at the boundaries of the North East Atlantic and Baltic Sea region. However, 3-4 migratory corridors for humpback whales and sperm whales that pass through the North East Atlantic and North West Atlantic regions were reserved for discussion and elaboration as potential cIMMAs at the IMMA Workshop planned for 2024 covering the North West Atlantic Ocean and Caribbean Sea. In addition, these areas may be revisited at other future workshops such as the Arctic Ocean and the South East Atlantic Ocean, as links between these regions and all adjoining areas are reconsidered.

## Acronyms

Aoi	Area(s) of Interest
BIA	Biologically Important Area (Australia and US)
BMU	Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety
CBD	Convention on Biological Diversity
cIMMA	Candidate Important Marine Mammal Area
CMP	Conservation Management Plan
CMS	Convention on Migratory Species
CR	Critically Endangered (IUCN RedList)
DAF	Data appraisal form (for the IMMA process)
DD	Data Deficient (IUCN RedList)
EBSA	Ecologically or Biologically Significant Area
EN	Endangered (IUCN RedList)
GOBI-IKI	Global Ocean Biodiversity Initiative's project supported by the International Climate Initiative
IBA	Important Bird and Biodiversity Area
IBAT	International Biodiversity Assessment Tool
ICMMPA 1-5	International Conference on Marine Mammal Protected Areas series of conferences with ICMMPA 1 being Maui, Hawaii (2009), ICMMPA 2 (Martinique, 2011), ICMMPA 3 (Adelaide, Australia, 2013), ICMMPA 4 (Puerto Vallarta, Mexico, 2016), ICMMPA 5 (Messinia, Greece, 2019)
ICoMMPA	International Committee on Marine Mammal Protected Areas
IMMA	Important Marine Mammal Area
IMO	International Maritime Organisation
IMPAC3	Third International Marine Protected Area Congress (Marseille, 2013)
IMPAC5	Fifth International Marine Protected Area Congress (Vancouver, 2023)
IoK	Inventory of knowledge (for the IMMA process)
IUCN	International Union for Conservation of Nature
IWC	International Whaling Commission
KBA	Key Biodiversity Area
LC	Least Concern (IUCN RedList)
MiCO	Migratory Connectivity in the Ocean
MM	marine mammal
MMO	marine mammal observer
MMPA	Marine Mammal Protected Area
MMPATF	Marine Mammal Protected Area Task Force
MPA	Marine Protected Area
MSP	Marine Spatial Planning
NRDC	Natural Resources Defense Council



NT	Near Threatened (IUCN RedList)
NEATLO	North East Atlantic Ocean (referring to the IMMA region)
NWATLO	North West Atlantic Ocean (referring to the IMMA region)
pAoi	preliminary Area(s) of Interest
PSSA	Particularly Sensitive Sea Area
SAC	Special Area of Conservation (EU Habitats & Species Directive)
SSC	Species Survival Commission (of the IUCN)
SETTPO	South East Tropical and Temperate Pacific Ocean (IMMA region)
SWATLO	South West Atlantic Ocean (IMMA region)
TEK	Traditional Ecological Knowledge
VU	Vulnerable (IUCN RedList)
WCMC	World Conservation Monitoring Centre (within UNEP)
WCPA	World Commission for Protected Areas (of the IUCN)
WDC	Whale and Dolphin Conservation
WWF	World Wildlife Fund / Worldwide Fund for Nature