De: Javier Trivelli Zondek
Enviado el: lunes, 17 de junio de 2024 16:31
Para: DS Lista Sitios
CC: Rinaldo Verdi
Asunto: Sitio Prioritario Nº1 Entre Caleta Papudo y Monumento natural Islote Cachagua
Datos adjuntos: IMMA-8-Costa-Rica-Important-Marine-Mammal-Area-Workshop-SETTPO-Final-Report-LD.pdf

Estimado/a,

En el marco del proceso de sumar antecedentes para los Sitios Prioritarios de la Región de Valparaíso, les enviamos información referente al Sitio Prioritario Nº1 Entre Caleta Papudo y Monumento Natural Islote Cachagua, identificado en la REs. Ex. 739/2007 con el número identificador 54 respecto de que ha sido priorizado el año 2022 por el Octavo Taller Regional sobre Áreas Importantes de Mamíferos Marinos para el Sureste del Océano Pacífico Tropical y Templado como Candidata a Importante Área de Mamíferos Marinos por la presencia de la especie *Lontra felina* o Chungungo para que lo tengan en consideración al momento de priorizar esta área como de gran interés para la conservación de la biodiversidad, toda vez que en Chile el estado de esta especie ha empeorado, lo que ha llevado al Ministerio del Medio Ambiente a recategorizar de Vulnerable a en Peligro a la población de esta especie.

Adjunto el reporte del taller para que sea considerado.

Saludos cordiales

--

Javier Trivelli Zondek
Presidente
Fundación Lontra

FUNDACIÓN LONTRA
REOTTERING CHILE

Important Marine Mammal Area Regional Workshop for the South East Tropical and Temperate Pacific Ocean

San José, Costa Rica, 6-10 June 2022
(Hybrid Meeting)

FINAL REPORT
of the 8th IMMA WORKSHOP

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

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This Final Report, along with maps and IMMA background data, is available for download from the IUCN Marine Mammal Protected Areas Task Force website: marinemammalhabitat.org/resources/documents/.

Citation: IUCN Marine Mammal Protected Areas Task Force. 2022. Final Report of the 8th IMMA Workshop: Important Marine Mammal Area Regional Workshop for the South East Tropical and Temperate Pacific Ocean, 6-10 June 2022.

Executive Summary[1]

From 6 to 10 June 2022, the IMMA Regional Workshop for the South East Tropical and Temperate Pacific Ocean was held in hybrid mode in San José, Costa Rica, with the goal to identify and delineate important marine mammal areas — IMMAs. These discrete portions of habitat, important for marine mammal species, aim to have the potential to be delineated and managed for conservation. The IMMA Secretariat of the IUCN Marine Mammal Protected Areas Task Force (the 'Task Force') collected 118 preliminary Areas of Interest (pAoI), 39 of which were submitted by participants before the meeting and 17 more submitted in the first two days, while the others consisted of existing marine mammal spatial designations including marine protected areas (MPAs) and ecologically or biologically significant areas (EBSAs) from the Convention on Biological Diversity. At the close of the workshop, 48 candidate IMMAs (cIMMAs) were identified and proposed through the expert-based process, utilizing dedicated selection criteria. Six additional areas would be advanced as AoI and 64 pAoI were merged or deferred.

Following independent review and consideration of how the criteria supported IMMA identification, 36 IMMAs were accepted for full status with 5 remaining as cIMMAs and 11 being reserved as AoI, all of which now appear on the IMMA e-Atlas (Fig. 1). More details are provided later on in this summary and in Annex III and IV. Worldwide, including the South East Tropical and Temperate Pacific Ocean region, there are now 209 IMMAs, as well as 30 cIMMAs and 152 AoI (Fig. 2). (See Fig. 3 for before and after maps of the initial pAoI and the proposed cIMMAs from the workshop.)

The Costa Rica 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 South East Asian Seas (Kota Kinabalu, Malaysia, 12-16 March 2018), the 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) and Black Sea, Turkish Straits System and Caspian Sea (Virtual, 22-26 February 2021). It is hoped that the results from this eighth IMMA Regional Workshop will help provide conservation priorities

[1] This summary covers the work of the IMMA Regional Workshop for the South East Tropical and Temperate Pacific Ocean, held in San José, Costa Rica, in June 2022, as well as the subsequent review with the tally of IMMAs, cIMMAs and AoI completed in November 2022 and reported in Annexes III and IV.

to, and strategic direction for, place-based marine mammal conservation within the South East Tropical and Temperate Pacific Ocean (SETTPO) region.

The workshop was attended by 58 experts (Fig. 4; Annex I), including 20 observers, 14 of them remote. Of the 58 experts, 27 participated in person through the week while 4 participated remotely. There were 7 participating members of the IMMA Secretariat in attendance. In summary, the participants came from the Pacific-facing countries of Mexico to Chile, as well as from Australia, Belgium, Brazil, Italy, Netherlands, United Kingdom, and United States of America. The observers came from Chile, Colombia, Costa Rica, Dubai, Ecuador, Kenya, Peru and the USA. 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 partner grant with GOBI funded by the German government's International Climate Initiative (IKI).

The SETTPO Region is an area of rich biodiversity. The 56 expert pAoI submissions from participants were the core of the work to go forward but the IMMA Secretariat also provided a number of valuable pAoI for marine mammal habitats sourced through the CBD EBSAs and MPAs from the World Database on Protected Areas (protectedplanet.net). Examining all the pAoI one by one during the workshop, the group merged some areas and deferred others, and then prepared cIMMA submissions, proposing boundaries and detailing how each one met the various IMMA criteria.

The experts identified cIMMAs for the first time for the Critically Endangered vaquita (*Phocoena sinus*) and Endangered marine otters (*Lontra felina*), as well as Near Threatened Burmeister's porpoises (*Phocoena spinipinnis*) and Chilean dolphins (*Cephalorhynchus eutropia*). Other cIMMA proposals focused on populations of humpback whales (*Megaptera novaeangliae*) and Endangered blue whales *(Balaenoptera musculus)* from both the North and South Pacific, including areas that are used by humpback whales from both hemispheres when they cross the Equator in their long migrations. The full list of marine mammal species included in the region's IMMAs, together with the boundaries of accepted IMMAs, will become available as part of the IMMA e-Atlas.

It was recognized that there are substantial data gaps for marine mammals across many species groups and areas in the region — partly due to logistical challenges and a lack of funding for larger scale surveys and other research, particularly in the high seas.

There were several plenary discussions throughout the workshop, but the focus was on the breakout groups that were divided into six sections covering the subregions (Fig. 5). Their task was sorting through the pAoI, merging those areas that might be better considered together, and deferring certain pAoI back to the originating authority if the case for becoming a cIMMA were weak. In the main part of the workshop, the subregion groups prepared a proposal for each cIMMA, detailing how selected species fulfilled relevant IMMA criteria. As most participants had expertise in multiple areas and had worked together before, 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, Caterina Lanfredi, and Michael Tetley presented the final numbers along with maps of all the polygons prepared by Lanfredi and Tetley. On the last day, a regional Task Force group was set up to promote and progress marine mammal conservation work in the SETTPO IMMA region. The volunteer coordinators are Carlos Olavarría from Chile, Susana Cardenas Alayza from Peru, Ester Quintana from Guatemala representing Central America, and Lorenzo Rojas de Bracho and Jorge Urbán jointly representing México.

Following the workshop, the 48 cIMMAs were compiled and assessed, and sent for independent review to determine whether the criteria were applied correctly and to verify that the evidence provided was sufficient to support the case for each cIMMA. Many of the cIMMAs required major or minor revisions and were returned to the points of contact for further work. For the approved IMMAs, the boundaries and a summary of the supporting evidence have been made available on the IMMA e-Atlas, and included in the online IMMA database. Interested users will be able to request IMMA layers as shapefiles for implementation initiatives. A number of cIMMAs, 5 of them, requiring revisions were not received by the deadline and will remain as cIMMAs until revisions are completed and accepted. They have been placed on the IMMA e-Atlas awaiting final revisions. For the 11 AoI it is recognized that these areas have potential but at present do not have enough information to satisfy the criteria. The 11 AoI will also be shown on the e-Atlas, and thus highlight areas for further marine mammal research and monitoring to help build an evidence basis on which future cIMMAs may be proposed.

At the end of the workshop, Gabriela Toscano, based at the BirdLife office in Ecuador, described how at least three of the cIMMAs would be likely to fulfil the criteria including thresholds for KBAs or to facilitate the expansion and fill gaps in identified KBAs. She also talked about the growing flexibility of KBAs. The number of KBAs worldwide that feature marine mammals is slowly expanding. Considering the focused work of Charlotte Boyd working on KBAs globally, Golo Maurer from BirdLife

Australia, and others, their participation at previous IMMA workshops represents the most productive way to ensure that IMMAs enable the identification of potential KBAs and that KBA thresholds inform IMMAs if they are selected together – the process currently facilitated by the IMMA Expert Workshop process.

The 36 new IMMAs, 5 cIMMAs and 11 areas gaining AoI status are listed below:

Important Marine Mammal Areas (IMMAs)

1. Almirantazgo Sound IMMA
2. Almirante Montt Gulf IMMA
3. Banderas Bay and Islands of Nayarit IMMA
4. Carnegie Ridge, Galapagos to Mainland IMMA
5. Central America Humpback Whale Corridor IMMA
6. Central Humboldt Current Upwelling System IMMA
7. Central Magellan Strait IMMA
8. Chacao Channel - Guamblin Island IMMA
9. Chiloe Interior IMMA
10. Cobquecura-Itata IMMA
11. Continental Shelf of the Northern Humboldt Current IMMA
12. Costa Rica Thermal Dome IMMA
13. Eastern Pacific Warm Pool IMMA
14. Galapagos Archipelago IMMA
15. Gorgona-Tribuga-Malpelo IMMA
16. Guadalupe Island IMMA
17. Gulf of Arauco IMMA
18. Gulf of California IMMA
19. Gulf of Chiriqui IMMA
20. Gulf of Panama IMMA
21. Gulf of Penas IMMA
22. Gulfo Dulce IMMA
23. Humboldt Archipelago IMMA
24. Juan Fernandez Archipelago IMMA
25. La Paz Bay IMMA
26. Magdalena-Puyuhuapi IMMA
27. Osa Peninsula IMMA
28. Pacific Coast of Baja California Peninsula IMMA
29. Papudo-Maitencillo IMMA
30. Pitipalena Anihue IMMA
31. Revillagigedo Archipelago IMMA
32. San Jose Canyon and Adjacent Shelf IMMA
33. San Juan del Sur-Papagayo IMMA
34. Upper Gulf of California IMMA
35. Western Baja California Lagoons and Coastal Waters IMMA

36. Western Magellan Strait IMMA

Candidate Important Marine Mammal Areas (cIMMAs)

1. Beagle Channel - Southern Patagonia cIMMA
2. Fitzroy Channel cIMMA
3. Laguna San Rafael cIMMA
4. Northwestern Patagonia cIMMA
5. Southeastern Pacific Whale Migratory Corridor cIMMA

Areas of Interest (AoI)

1. Cocos Island AoI
2. Desventuradas Islands AoI
3. Diego Ramirez Islands AoI
4. Eastern Equatorial Pacific Ocean AoI
5. Eastern Magellan Strait AoI
6. Golfo de Fonseca AoI
7. Loanco-Pelluhue AoI
8. Los Cobanos Reef AoI
9. Nicoya Gulf AoI
10. Padre Ramos AoI
11. Rapa Nui and Motu Motiro Hiva AoI

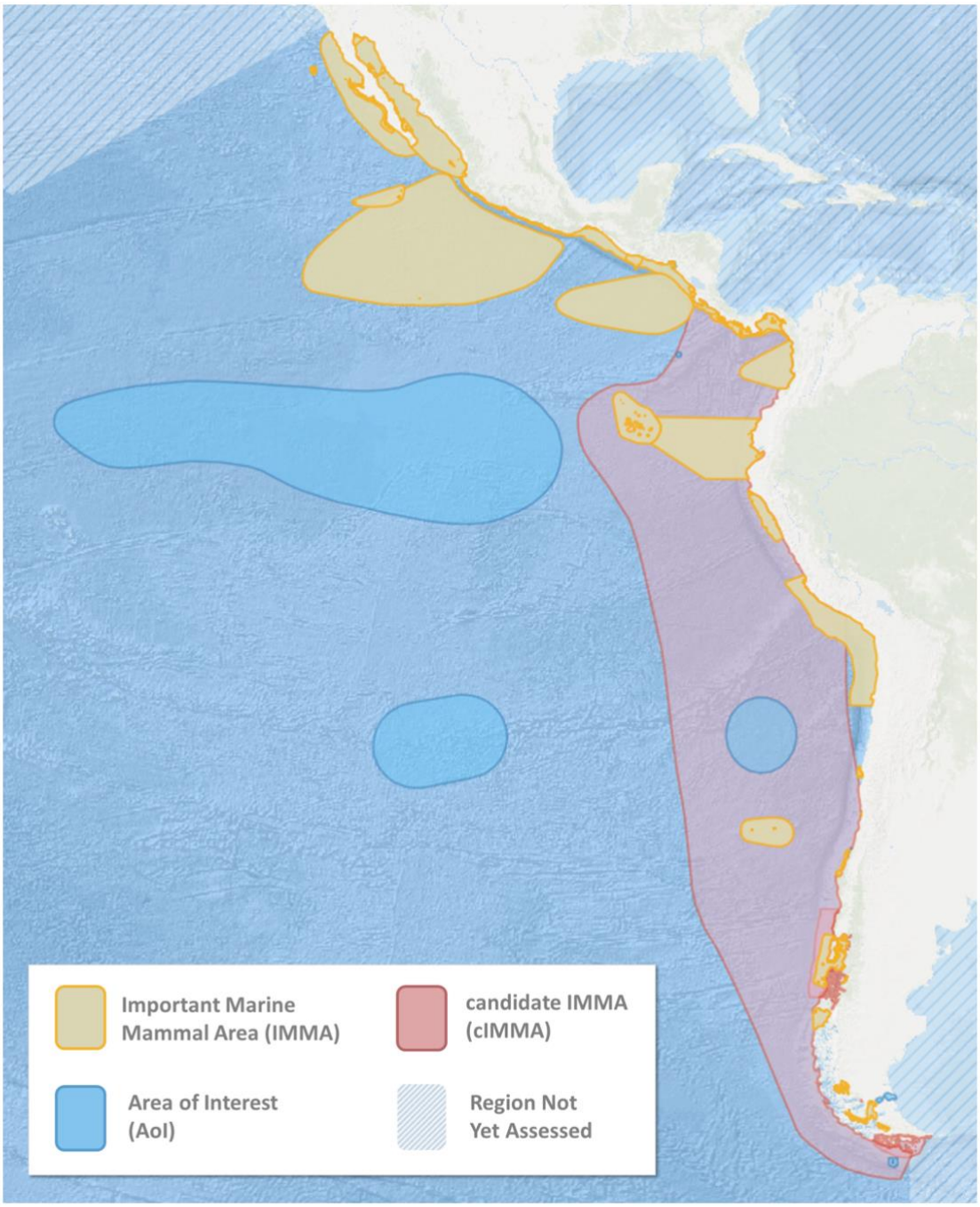

Fig. 1. *Geographic location of the 36 IMMAs, 5 cIMMAs and 11 AoI identified and approved through peer review in the South East Tropical and Temperate Pacific Ocean Region*

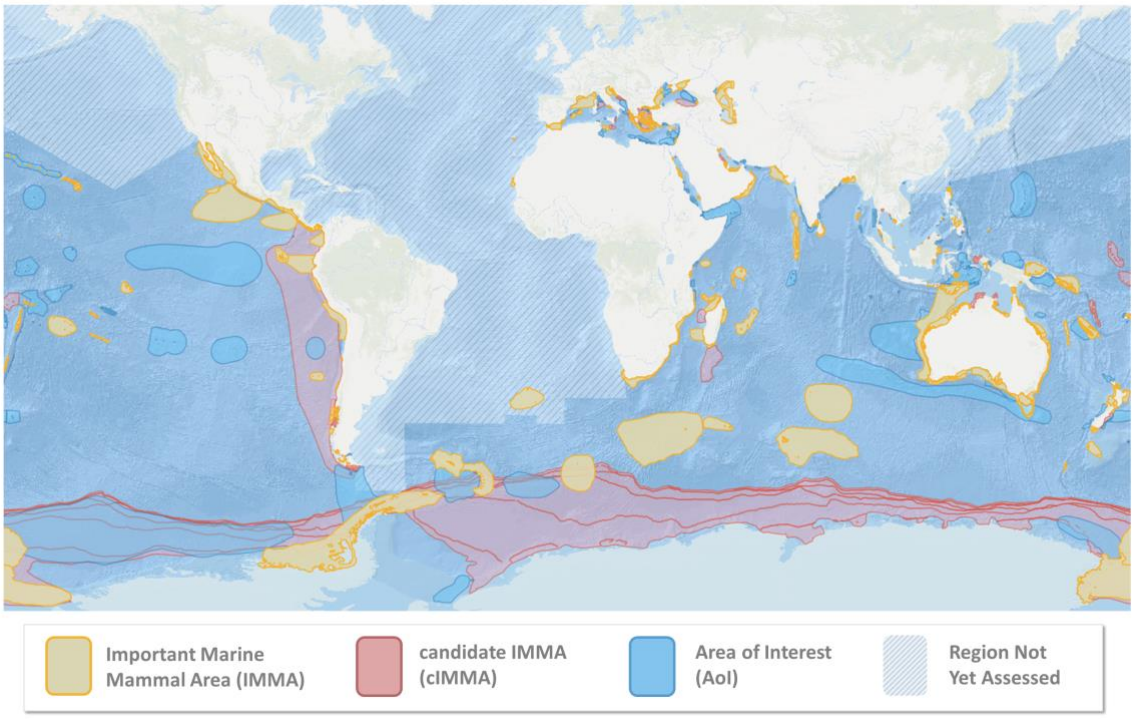

Fig. 2. *Latest version of the global IMMA network totalling 209 IMMAs, 30 cIMMAs and 152 AoI (October 2022)*

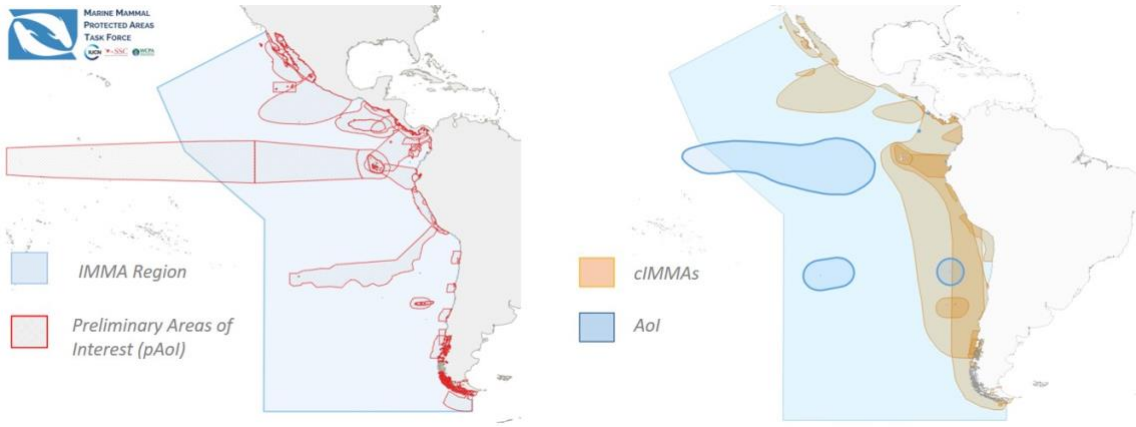

Fig. 3. *Spatial representation of the initial meeting outcomes. Preliminary Areas of Interest (pAoI) collected in advance of the meeting (on the left) and preliminary results of the workshop showing the 48 candidate IMMAs (cIMMAs) and 6 Areas of Interest (AoI) for informing the IMMA process (see Annex III for complete list of cIMMAs and AoI).*

Fig. 4. *Participants of the Eighth IMMA Workshop in San José, Costa Rica. For the complete list of in person and online participants and observers, see Annex I.*

Acknowledgments

The workshop was chaired by Simone Panigada, with various sessions and breakout groups led by Giuseppe Notarbartolo di Sciara, Erich Hoyt, Michael J. Tetley, Caterina Lanfredi, Margherita Zanardelli, and Gianna Minton. Travel and all the logistics, before and during the workshop, were arranged by Margherita Zanardelli and Simone Panigada from the IMMA Secretariat. Thanks also go to Miguel Iñíguez, Bob Brownell, and Gill Braulik for their extensive help 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. Throughout the five days, Adriana Vieira de Miranda helped coordinate the online and the technical aspects at the workshop to keep things running smoothly. MarViva facilitated the organization of the workshop with logistical and general support.

This report was written by Erich Hoyt. The documents presented at the workshop as a support for IMMA identification were prepared by Michael J. Tetley and Caterina Lanfredi, and they led the mapping efforts in the workshop. Gianna Minton and Erich Hoyt kindly acted as rapporteurs during the meeting. Thanks are due to Felipe Paredes, Patrick Halpin, Jorge Jimenez (President, MarViva Foundation), Eugenia Arguedas (Ministerio de Ambiente y Energía) and Gabriela Toscano (BirdLife International), all of whom made presentations. The post-workshop submissions to the review panel and follow-ups as needed are being conducted by Gianna Minton and Michael J. Tetley, with advice from Gill Braulik and Caterina Lanfredi. The

independent review panel is coordinated by Randall R. Reeves, with reviewers Bob Brownell, Jason Baker, Enrique Crespo, Tom Jefferson, and Phil Clapham.

Additional thanks are due for use of the SeaSketch platform, acting partly as an IMMA facility for the collection of pre-workshop AoI proposals, which is kindly provided by the McClintock Lab at the Marine Science Institute at the University of California Santa Barbara. Our deepest thanks go to the International Climate Initiative (IKI) of the Government of Germany for funding the five southern hemisphere IMMA workshops and three IMMA implementation efforts, and to GOBI and Seascape Consultants, especially David Johnson and Vikki Gunn. We are also grateful to our other sponsors, especially Whale and Dolphin Conservation for their timely funding to supplement the GOBI-IKI grant with support for Gianna Minton's attendance. The Promar Foundation of Costa Rica, courtesy of Javier Rodriguez Fonseca, helped to support the attendance of several participants.

INTRODUCTION AND BACKGROUND

The IUCN Marine Mammal Protected Areas Task Force[2] and the IMMA Initiative

The important marine mammal area (IMMA) initiative, developed by the IUCN Joint SSC[3]/WCPA[4] 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.[5] 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

[2] IUCN SSC/WCPA Marine Mammal Protected Areas Task Force (https://www.marinemammalhabitat.org/)
[3] Species Survival Commission (www.iucn.org/theme/species/about/species-survival-commission)
[4] World Commission on Protected Areas (https://www.iucn.org/theme/protected-areas/wcpa)
[5] 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

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.

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 workshops 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 finally the South West Atlantic Ocean (planned for 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 and Tethys Research Institute, with administrative support from Tethys and WDC.

Summary of the process of the IMMA Regional Workshop and Follow-up

The general outline of every workshop programme consists of:

- a plenary session to introduce the IMMA selection criteria, present the pAoI, select the subregion group facilitators, and discuss the pAoI on offer;
- a reading session of the IMMA documents including an IMMA Guidance Document, Inventory of Knowledge, and the list of the pAoI 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.

The Workshop is part of a three-stage process that works toward producing the final IMMAs:

STAGE 1 – Nomination of Preliminary Areas of Interest (pAoI): pAoI are proposed by experts in the weeks before the meeting, via a dedicated online system (SeaSketch) or through completion of the available pAoI forms and are then summarized in the pAoI report. This document is provided to regional experts in order to evaluate the submitted pAoI, along with existing marine mammal place-based conservation measures. Participants attending the workshop are also encouraged by the IMMA Secretariat to submit additional pAoI by the end of the first two days.

STAGE 2 – Development of cIMMAs: participants are invited to use their regional knowledge to develop cIMMAs, based upon their review of pAoI submitted in advance or proposed during the workshop. Candidate areas must start out as AoI first, and only then, after group discussion, 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 baseline for participants to consider suitable AoI for which to develop rationales for cIMMAs using the D2 criterion.

STAGE 3 – Final review and IMMA status qualification: an independent panel chaired by Randall R. Reeves, IUCN Cetacean Specialist Group Chair, reviews the cIMMAs and decides whether they can be accepted as IMMAs.

Workshop Facilities

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 for the workshop region,
- the Preliminary Areas of Interest (pAoI) Report of submissions and existing sites in the workshop region,
- the IMMA SeaSketch facility,
- on hand and online instruction on the use of QGIS, and Google Earth, and
- the candidate IMMA submission review template (in Microsoft Word format).

The IMMA Secretariat has created an easy-to-use Canvas platform for the last two 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 made available on shared google drives with links in Canvas. Canvas also

provides instructions for connecting virtually to the workshop as well as daily updates during the five-day period.

This workshop was the first one organized in a hybrid way; plenary sessions were broadcasted live on a dedicated channel on YouTube, with several participants remotely 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, 6 June 2022

Erich Hoyt, co-chair of the IUCN SSC-WCPA Marine Mammal Protected Areas Task Force, welcomed the group, recalling that it had taken 2 years for us to get here due to Covid, but that we were so happy to be here finally and able to see everyone in person. He also welcomed those online, for this would be a hybrid workshop. Task Force co-chair **Giuseppe Notarbartolo di Sciara** followed with his welcome. Both co-chairs expressed their fondness for the region, and excitement about the prospect of the workshop.

It was agreed that **Simone Panigada** would chair the workshop. He introduced **Eugenia Arguedas** from the Ministerio de Ambiente y Energía who formally welcomed all the Task Force members and invited participants to Costa Rica and emphasised the importance of the role of scientists in conservation. She described how science played a critical role in the design and implementation of Costa Rica's high proportion of terrestrial protected areas. Costa Rica is also dedicated to the Convention on Biological Diversity (CBD) target of achieving 30% of its EEZ designated as marine protected areas by 2030 (often referred to as the 30 x 30 target). She declared her interest in working with other governments to ensure that they reach this target as well. 'It is only by listening to scientists that governments will be able to preserve their biodiversity and natural resources.'

Speaking virtually from Santiago, Chile, **Felipe Paredes Vargas,** Marine Vice Chair of the IUCN World Commission on Protected Areas (WCPA), provided a presentation to help place the IMMA workshop in the context of WCPA's global framework. Felipe was proud to have the workshop taking place in 'our region'. Paredes provided background information on the nature of the IUCN, its six main commissions and its sprawling membership, which comprises more than 1,400 members from national governments, government agencies, NGOs, civil society, and Indigenous organisations from 170 countries. The WCPA is focused on helping member governments achieve the 30 x 30 target, using the best science to inform where these areas should be located. To help achieve this goal, the WCPA also focuses on capacity building. Paredes core initiatives and working groups, among which is the Marine Mammal Protected Areas Task Force. Important marine mammal areas, the main product of this Task Force, are a key to the success of the WCPA because they lead to a stronger global profile for the role of marine mammals in marine protected

areas, and because they ensure increased participation of the marine mammal community in IUCN and WCPA initiatives.

Next, **Jorge Jimenez**, president of the MarViva Foundation, who played a crucial role in helping to host this workshop, welcomed participants and emphasised the value of the workshop to the region. Costa Rica hosts approximately 32 species of marine mammals. These animals do not respect political boundaries, creating a necessity for a truly regional approach to conservation. Jimenez noted that this IMMA workshop will facilitate collaboration between researchers across the region, stimulating valuable regional collaboration.

Maria Gabriela Toscano of Birdlife International gave a comprehensive presentation on key biodiversity areas (KBAs). Her presentation started with the history and the background of the development of KBAs, which are intended to provide a unifying global framework to identify areas important for all types of biodiversity. Launched in 2016, the KBA framework is based on five categories of criteria: A) threatened biodiversity, B) geographically restricted biodiversity, C) ecological integrity, D) biological processes, and E) irreplaceability through quantitative analysis. Each criterion has assessment parameter thresholds, which are somewhat flexible so that they can be applied to a wide range of taxa.

Toscano noted that the identification of KBAs is a 'bottom up' process that involves local and national constituencies. The world database of KBAs allows users to consult information that can help them to design or expand protected areas (including use of the 30 x 30 target) or to work towards achieving other sustainability goals. KBAs can also be used by NGOs or other research and advocacy groups to strengthen proposals for funding to conduct work in those areas, and industry stakeholders are increasingly integrating KBAs into relevant frameworks such as the Integrated Biodiversity Assessment Tool (IBAT). Toscano drew attention to a new Latin American and Caribbean KBA focal point who could play a critical role in ensuring synergy between IMMAs and KBAs in the region.

The KBA Programme is 'a comprehensive network of sites that contribute significantly to the global persistence of biodiversity is appropriately identified, correctly documented, effectively managed, sufficiently resourced and adequately safeguarded.' The KBA process works as an umbrella framework designed to harmonize all previous existing approaches (eg, IBAs).

The KBA Standard includes elements of biodiversity across genetic, species and ecosystem levels. Collectively, the KBA criteria are applicable to marine, freshwater, terrestrial and subterranean systems and address different aspects by which sites contribute significantly to the global persistence of biodiversity.

- In total, there are 11 criteria grouped into 5 categories, namely:
  A. Threatened biodiversity (Criteria A1 and A2)
  B. Geographically restricted biodiversity (Criteria B1, B2, B3 and B4)
  C. Ecological integrity (Criterion C)
  D. Biological processes (Criteria D1 demographic aggregations, D2 environmental refugia and D3 recruitment processes)
  E. Very high irreplaceability, as determined through quantitative analysis (Criterion E).
- The KBA criteria have quantitative thresholds to ensure that site identification is transparent, objective, and repeatable.
- All sites should be assessed against as many KBA criteria and for as many taxonomic groups and ecosystem types as possible, even though a site needs to meet the thresholds for only one criterion to qualify as a KBA.
- It should be noted that for some regions, current technological and capacity constraints mean that a longer period will be required to collect the data and level of detail needed to demonstrate that sites meet the quantitative thresholds associated with the KBA criteria. Ongoing initiatives to highlight biodiversity protection areas through expert-led processes, such as important marine mammal areas, may help fill data gaps and inform the KBA identification process (and vice versa).
- However, the standard is also designed to be flexible to enable the identification of KBAs for biodiversity elements with limited data.
- The second step of delineation requires that the ecological boundaries are refined as needed to yield a manageable site, so that it is possible to implement actions locally to ensure the persistence of the biodiversity elements for which the KBA has been identified.
- KBAs are identified and delineated by local and national constituencies using these globally standardized criteria, thresholds, and delineation procedures. KBAs has a national presence through the national coordination groups.
- Information on the location of KBAs and the biodiversity they contain is made publicly available through the World Database of Key Biodiversity Areas (WDKBA). This information is then used by government to support conservation priority-setting, strategic expansion of protected areas networks, guide the preparation of development and land use plans (terrestrial and marine), and the implementation of international

environmental agreements; KBAs are a priority for many multilateral donors, including the GEF (Global Biodiversity Facility), CEPF; Information on KBAs is also channelled to large natural resource based corporations, through the Integrated Biodiversity Assessment Tool (IBAT), so they can take this information into account early in the project exploration and development phase and avoid negative impacts on KBAs where possible; Guidelines on Business and KBAs have been developed to help businesses engage in KBA conservation and minimise their impacts on these globally important sites.

Leading off the Task Force presentations, **Erich Hoyt** talked about how IMMAs came about — what had led up to the 8th 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* (2nd 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. 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 this global effort and that became the IUCN Task Force on Marine Mammal Protected Areas.

There was a realization in the ICMMPA and in the Task Force when it was formally announced in 2013, that many MPAs were designated for political or socioeconomic reasons without ecological boundaries and not based on marine mammal habitat considerations. 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 pAoI, following the template given in Annex V. After the workshop, cIMMAs are submitted to an independent Review Panel of experts to verify them and final

approval is given to approximately 70% of them. Those close to passing review but short of information remain candidate IMMAs, while others requiring more data to support the choice of criteria revert to AoI. These AoI are included on the e-Atlas along with the cIMMAs and approved IMMAs.

Hoyt showed the maps illustrating the process of moving from pAoI to cIMMAs to peer-reviewed IMMAs and AoI in the Mediterranean, the Pacific Islands, and the North East Indian Ocean and South East Asian Seas. There are 173 IMMAs in total at present and, in 2022, workshops are covering not only the Pacific coast of Latin America, from the southern tip of Chile to the northern border of Mexico, but will also be moving on in December to the South West Atlantic Ocean, from Guyana to Argentina.

Next, **Giuseppe Notarbartolo di Sciara** continued the talk on the Task Force work. He recalled the 3rd 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. Notarbartolo di Sciara explained that the identification of IMMAs is a scientific product generated by the best available science. IMMAs are based on an evidence-driven, purely biocentric process based on the application of scientific criteria.

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 can utilize products of the IMMA process. A very 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. Notarbartolo di Sciara showed the table with the total numbers of IMMAs, cIMMAs and AoI, maximum and minimum size and gave accounts of the species, led by humpback whales, that have been included. He provided some of the metrics to date:

• The Task Force has examined 35% of the global ocean, but by year end it will be more than 50%.
• The total area of all 173 IMMAs identified before this Costa Rica workshop was more than 21 million km^2.
• The largest IMMA is 2,861,819 km^2 encompassing an area of the Prince Edward Island and Western Oceanic Waters in the Extended Southern Ocean.
• The smallest IMMA is 45 km^2, the Akrotiri IMMA which includes small breeding caves for the Mediterranean monk seal (*Monachus monachus*).
• A total of 58 species have IMMAs identified (44% of all marine mammal species).
• A total of 21 threatened species (Critically Endangered, Endangered and Vulnerable) have IMMAs identified (36%).
• Including the current workshop, we have now had more than 250 scientists from many countries cumulatively participating across the eight (to date) week-long workshops.

Notarbartolo di Sciara then re-introduced **Jorge Jimenez** from MarViva who returned to the microphone to talk about the Costa Rica Thermal Dome. His presentation included information about the oceanographic and ecological features that make the Dome particularly productive including supporting high cetacean diversity. The Dome is described as '… a marine biodiversity hotspot in the Eastern Tropical Pacific. Located off the western coast of Central America, its extent varies between 300 and 1,000 kilometers wide. The average location of the Dome's core is near 9° North and 90° West, beyond national jurisdiction. Its diameter and position changes year to year but with a characteristic annual cycle.'[6] The area also hosts populations of spinner and spotted dolphins that were severely depleted in the 1970s and 80s through bycatch in the Tuna purse seine fishery.[7] Despite a significant reduction in bycatch through improved fisheries practices, these dolphin populations have not recovered.[8] 60% of the cargo fleet from the Panama Canal also moves through the dome, creating a risk of ship strikes and underwater noise. MarViva has created a Costa Rica Thermal Dome Atlas, as a tool for stakeholders using the area. Jimenez expressed his hope that the IMMA workshop could help to raise awareness of the Dome, as well as being a catalyst for intersectoral efforts to effectively manage and protect its marine mammal biodiversity.

[6] Fiedler, P.C. 2002. The annual cycle and biological effects of the Costa Rica Dome. Deep Sea Research Part I: Oceanographic Research papers 49(2):321-38.
[7] Ballance, L. T., T. Gerrodette, C. E. Lennert-Cody, R. L. Pitman, and D. Squires. 2021. A History of the Tuna-Dolphin Problem: Successes, Failures, and Lessons Learned. Frontiers in Marine Science 8 (1700) (Review) doi: 10.3389/fmars.2021.754755
[8] Gerrodette, T., and J. Forcada. 2005. Non-recovery of two spotted and spinner dolphin populations in the eastern tropical Pacific Ocean. Marine Ecology Progress Series 291:1–21.

Patrick Halpin, of the Marine Geospatial Lab at Duke University provided a remote presentation with further information on the Costa Rica Thermal Dome and an overview of the Migratory Connectivity in the Ocean (MiCO) project. 'MiCO has a growing list of international partners that contribute data, expertise and guidance to the project. These partner organizations are comprised of data warehouses, national observing systems, taxa conservation groups, museums, environmental non-governmental organizations, universities, intergovernmental commissions and UN Conventions.' The Project has built a tool that uses satellite telemetry and other types of tracking data from a wide range of taxa to build a system that 'helps to bridge the knowledge gap between scientists generating data and the fora producing management recommendations and policies'. It is hoped that this system can become increasingly useful for examining connectivity between IMMAs as more and more are identified throughout the world ocean basins.

Participant Introductions: Panigada then asked participants—both in the room and online—to introduce themselves. There were four or more participants each from Mexico, Costa Rica and Chile; the other countries were mostly represented by one or two participants. The IMMA Secretariat roles were explained, with Hoyt and Notarbartolo di Sciara, the Task Force co-chairs, helping also in the breakout groups and as needed. Along with chairing the workshop, Panigada and Margherita Zanardelli would continue to handle logistics. Zanardelli would also keep the candidate IMMA lists as they materialize and help in the breakout groups. Michael Tetley and Caterina Lanfredi would focus on GIS and mapping, refining the boundaries of the candidate proposals. Gianna Minton was taking notes for the report of the workshop that Hoyt would write, but she was mainly entrusted to support participants who would like feedback and support to refine cIMMA proposals, in light of her role after the workshop to prepare the cIMMA proposals for the review panel and to handle the revisions in consultation with Tetley.

The agenda was briefly presented and adopted (see Annex II). Next Panigada made housekeeping announcements and then introduced **Michael J. Tetley** from the IMMA Secretariat who gave a presentation on the 'IMMA selection criteria and identification process.' He outlined the criteria and the process for applying the criteria to create candidate IMMAs. Different currencies of information could be used to support the proposal, but in every case the focus was on the habitat. During past workshops he would explain each criterion in detail, one by one. In order to allow more time for collaborative work drafting during this SETTPO workshop, he provided links to the videos and documents on Canvas that were available to help all the participants. He presented the Data Appraisal Form statistics for each subregion,

giving an indication of where there were more data and confidence in the data and where there were much less, which was generally offshore; he explained that this would help dictate how we divide the overall region into subregions for discussion and addressing the work to be done. He went through the cIMMA proposal form that was the core of the group's work during the week and walked them through preparing the submissions. He pointed out how we would draw boundaries for IMMA delineation, based on the data available, moving then from the evidence to the buffer zone.

For this region, based on the overall regional diversity, Tetley explained that 12 species or more could be considered enough for nominating a candidate IMMA under criterion D2 diversity. If there were 20 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 VI) to be filled out later in the workshop, when the primary and secondary species number at least 12, then the cIMMA can be proposed under the criterion for Diversity (D2). Hoyt stressed that it was not enough just to have 12 species documented in an area to pass the criterion D2—data must clearly indicate that the 12 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 was to be followed (https://www.marinemammalscience.org/species-information/list-marine-mammal-species-subspecies/).

After Tetley's presentation, Panigada invited questions and plenary discussion. Some of the questions answered included:

Q: Can there only be one qualifying (primary) species per area?

A: No, there can be multiple species that meet different criteria.

Q: Does 'discrete' in the IMMA definition mean small?

A: No, the proposed cIMMAs can be large.

Q: What happens when you have populations that have been reduced?

A: IMMA workshops have considered historical ocean habitats, such as ex-whaling grounds, as well as historical caves for Mediterranean monk seals. These could become Areas of Interest (AoI) on the IMMA e-Atlas. For cIMMA proposals the boundaries should reflect the current status of the particular marine mammals, where they are now.

Q: How do we deal with El Niño — by use of dynamic boundaries?

A: IMMAs can have larger boundaries to accommodate dynamic features — for example with changes in feeding areas due to upwellings, and for the seasonally changing Costa Rica Thermal Dome.

Q: Can you provide examples of the levels of evidence that are required to convince reviewers (and ultimately end users) that a species fulfils a particular criterion?

A: The most 'solid' evidence is that which can be verified in peer-reviewed literature. However, in cases where peer-reviewed literature is not available to demonstrate a particular species' fulfilment of a criterion, grey literature such as government reports, or unpublished data can be used. In these cases, the reports should be publicly accessible and/or summaries and/or figures and tables from the unpublished data should be made available to reviewers. More details of the types of evidence that can be submitted can be found in Annex 5 of the IMMA Guidance Document.

After lunch, **Caterina Lanfredi** presented the 'Introduction to Preliminary Areas of Interest (pAoI)' report detailing the basic information on the 101 pAoI, with summary data and a map of each area. She thanked everyone for their submissions. It had taken many weeks of work to compile this and it would be one of the key documents during the process of refining which of the pAoI singly, or in combination, would go forward as cIMMAs.

The 101 submissions in the pAoI report included 39 from experts, plus 41 existing MPAs and 21 ecologically or biological significant area (EBSA) designations. Lanfredi

showed participants where to find the pAoI report on Canvas, as well as the location of the Inventory of Knowledge and links to the ESRI shapefiles (i.e. pAoI polygons, geomorphological features, bathymetric lines), raster data (i.e. environmental data such averaged surface temperature and chlorophyll) and .kml files that all the participants could access. She explained that she and Tetley were available to help with the GIS and the delineation of boundaries during the cIMMA proposal drafting process. She stressed that the pAoI report was the core of our work and demonstrated the distribution of numbers of pAoI from each subregion (Fig. 5).

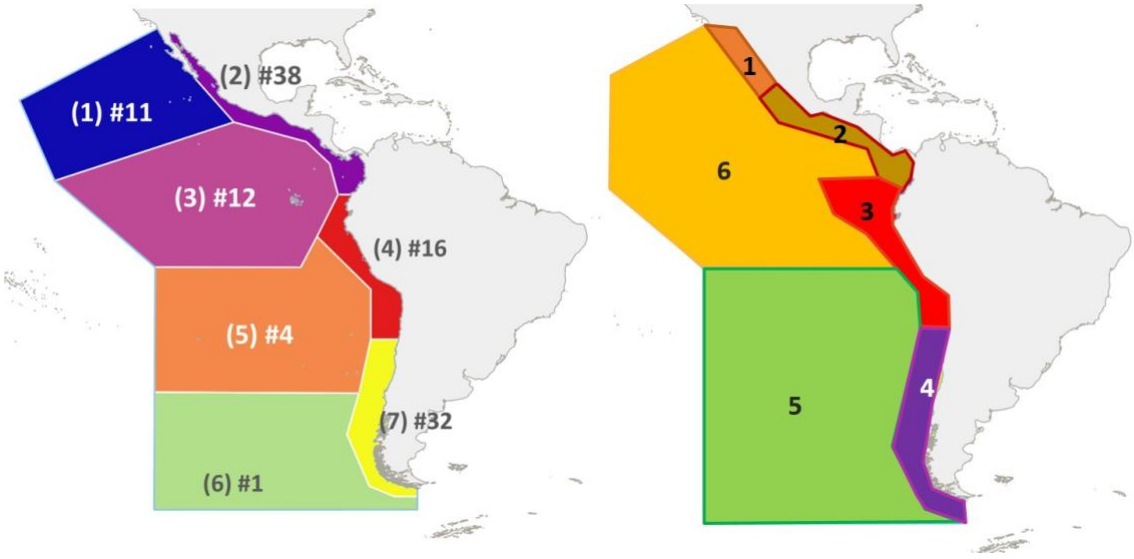

Fig. 5. *The original and revised subregions for the workshop.*

Lanfredi also talked about the boundaries of the subregions and how this would facilitate breakout groups in view of the expertise available and the amount of work to do. There was concern about how rigid the subregion boundaries would be. Jorge Urbán agreed to the IMMA Secretariat's proposed new boundaries but suggested that there should also be a humpback whale migration corridor that extended across subregions.

Notarbartolo di Sciara clarified that the boundaries of the regions by no means preclude the identification of IMMAs that span multiple regions. Carlos Olavarría wondered about using data regarding the humpback whale migratory route to make a long corridor for Southern Hemisphere whales moving between Antarctic feeding grounds and reproductive areas. Tetley said that there were similar IMMAs in other areas that have been assessed to draw attention to transboundary migration corridors, and that we just need to be clear who will coordinate and draft the proposals since they will cross subregions. After considerable discussion with the

scientists, the boundaries were adjusted with help of Tetley and Lanfredi, into 6 revised subregions (Fig. 5).

Lanfredi advised participants that it was not too late to submit new pAoI on day one of the workshop. They could then be discussed the next day when the workshop broke into subregions and started to work on them. Indeed, by the end of the day, there were several additional expert submissions, expanding the pAoI number to 105, and in the next days this would go to 117, and finally to 118 pAoI, with 57 of them by experts.

The proposed breakout groups by subregion were then put forward and adjusted and finally agreed with participants. Panigada presented a table with the participant assignments to subregions. He stressed that people could contribute to subregion groups other than their main group, and that certainly for the humpback migration areas it would be necessary to collaborate across several subregions. He asked the group to take the remainder of the late afternoon and early evening to read over the materials accessible on Canvas and consider where they were best placed to be able to contribute at the start of Day 2 when there would be a short plenary followed by breakout groups.

IMMA Workshop Day 2, 7 June 2022

On Day 2 Panigada introduced Tetley who presented a new map, highlighting the new pAoI. He explained how to work with the master pAoI sorter table after downloading it from the Canvas site. He said that it's critical that each breakout group complete the cIMMA template forms for all the areas by Friday. 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 VI.)

The breakout groups then arranged themselves on separate tables for the day with the mission to go through their subregion, decide which pAoI they wanted to keep, which ones were to be joined or separated, and which species were likely to satisfy IMMA criteria in each chosen area (Table 1). Each table had a group coordinator, an IMMA Secretariat facilitator, as well as GIS technical support. The groups considered each pAoI in turn, asking the following questions, focused by the facilitators:

1. Is the pAoI 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/area for a cIMMA?

3. Could the pAoI species/area be combined with other pAoI for different species to create a multi-species cIMMA?

4. If the pAoI 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 pAoI for different species?

5. If the pAoI 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 pAoI for the species be either Option 1 – kept as an AoI to inform a future process or Option 2 – not considered as an AoI on the IMMA e-Atlas?

Table 1. *Breakout groups*

Breakout group (Table) number	**Region: countries included**	**Group coordinator**	**IMMA Secretariat facilitator**	**GIS Technical**
1	**Northern Mexico:** Mexico, Baja California	Lorenzo Rojas Bracho	Giuseppe Notarbartolo di Sciara	Caterina Lanfredi, Michael Tetley
2	**Central America:** S. Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia	Ester Quintana	Gianna Minton	Caterina Lanfredi, Michael Tetley
3	**Northern South America:** Ecuador, Galápagos Islands, Peru	Joëlle De Weerdt	Simone Panigada	Caterina Lanfredi, Michael Tetley
4	**Southern South America:** Chile	Sonja Heinrich	Erich Hoyt	Caterina Lanfredi, Michael Tetley
5	**Offshore Southern:** High Seas off Peru to Chile	Carlos Olavarría	Margherita Zanardelli	Caterina Lanfredi, Michael Tetley
6	**Offshore Northern:** High Seas off Mexico to Peru	Jorge Urbán	Margherita Zanardelli	Caterina Lanfredi, Michael Tetley

Through the rest of the day, the groups worked hard to come up with the final list of cIMMAs that they would be proposing, liaising as needed with the virtual participants who took responsibility for certain cIMMAs. At the end of the day, each group reported on their progress presenting the number of potential cIMMAs. Tetley presented a revised map depicting the reduced number of areas to be advanced, so that everyone could start to see what things looked like in the overall region. He said that after he went through all the cIMMAs in detail and Lanfredi refined more of the boundaries overnight, the map images would change.

Toscano provided a brief explanation of how the cIMMA delineation process could relate to key biodiversity areas (KBAs). She pointed again to the KBAs on their database, mostly related to marine birds, and emphasized that the cIMMAs might contain information useful to add in to the existing KBAs. Toscano promised to review the breakout groups' work as we went along and to note if some can be suggested for KBAs or, if possible, to expand existing KBAs. Recognition as a KBA would give an IMMA an added special boost for potential management interest and protection.

IMMA Workshop Day 3, 8 June 2022

On World Ocean Day — also Jorge Urbán's birthday — there was a good feeling around the room. The Secretariat prepared a surprise birthday cake for the coffee break. Panigada opened a short plenary to say that we now had 118 pAoI. Thus, a total of 17 had been added on Day 1, 2, and early on Day 3 (Fig. 6). About half of these were discarded or merged with others, and the group initially selected out 51 potential cIMMAs with drafting to begin shortly. Eight other areas were currently on the list to go forward as AoI. Tetley presented the new maps showing the amended and reduced shapefiles based on the new table compiled by Zanardelli overnight.

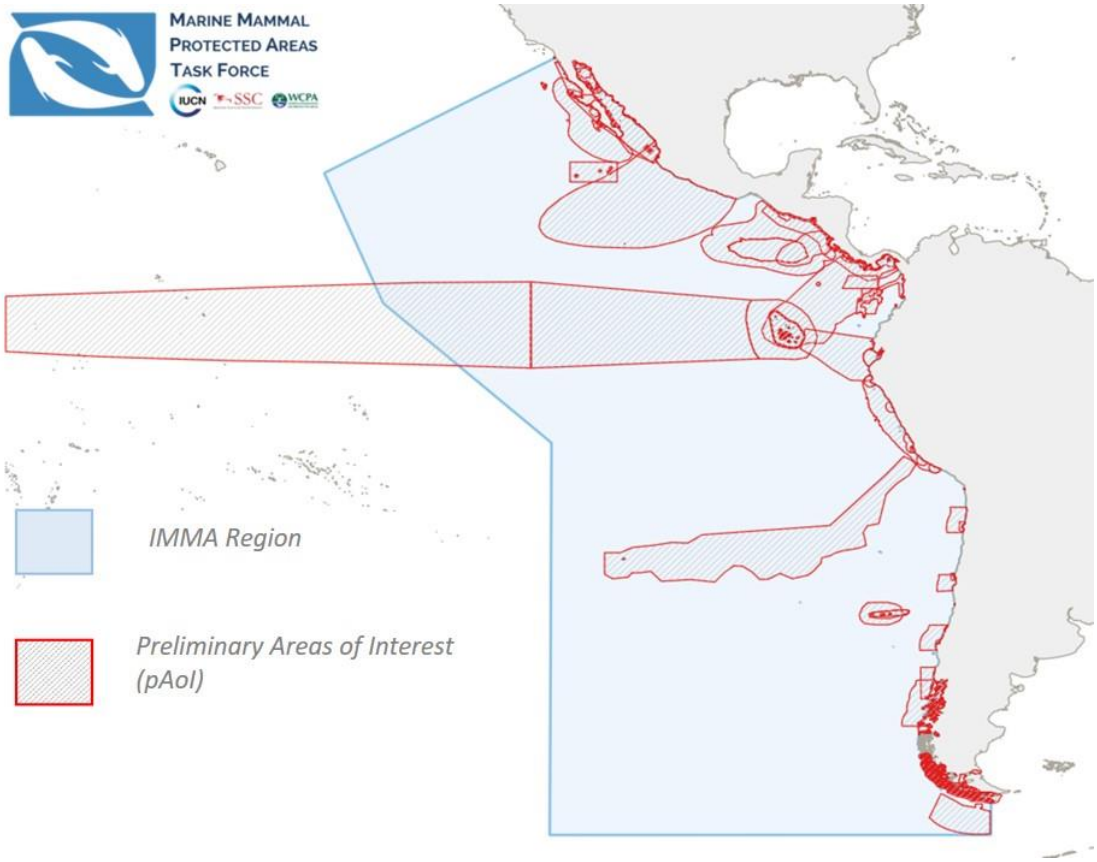

Fig. 6. *101 pAoI collated in advance of meeting (including Expert Submissions, EBSAs and MPAs) + 17 pAoI added on Days 1-3*

Next, having processed the pAoI sorter tables, Zanardelli presented her compiled list of cIMMAs, subregion by subregion, showing the names projected for all to see. The goal was to seek agreement from the whole group. There followed substantial discussion regarding whether the name for each IMMA should include only English words or a mixture of local and English, the name of the species living in the IMMA, the country, city, or other socio-political references, and/or the name of an existing MPA or EBSA if it overlapped its boundaries.

Following this workshop discussion on the IMMA names, it was agreed that because IMMAs are an English language product/tool, we should use English names for bodies of water and features (e.g., Gulf, Sound, Strait, Island), but use local spellings and nomenclature for proper names where appropriate. The e-Atlas will display both the English name and the Spanish name – so proposals should include both with a '/' between them.

The group then went through all the names one by one, changing some of them with the idea that we would adopt the name most comfortable within each subgroup. Hoyt noted that some names might be altered by reviewers or in the process of further amalgamation or separation.

Zanardelli said she would go around table to table in the breakout groups to confirm the names which should then remain final through the rest of the week to facilitate the process of finalizing the cIMMA submissions and attaching shapefiles.

Panigada urged the group to split into their drafting groups and start work on drafting the cIMMA proposals. Some had already taken the initiative to start the previous day. He reminded participants of the relatively short time and that all the time until Friday afternoon, the remaining two days, would be focussed on this task. Subgroup 4, whose members covered the entire Chilean coast and EEZ had 2-3 times as many cIMMA proposals as other subregional groups. It would take good organisation and dedication to finish on time, but the group was lucky to have particularly dedicated participants who had completed a considerable amount of preparatory work before the workshop. The advantage of having done some of the work in advance became obvious during the preparation of the cIMMA proposals.

IMMA Workshop Day 4, 9 June 2022

In plenary, Panigada urged everyone to continue focusing on finishing the cIMMA proposals. Most participants were already in their separate groups working and many had worked the previous evening as well. Tetley showed the latest map depicting the evolving boundaries of cIMMAs and AoI to go forward. These included 2 big AoI in high seas areas. He then overlayed these shapefiles with cetacean and pinniped sightings from OBIS Seamap showing that the proposed shapes and nicely encompassed the concentrations of cetacean sightings. Tetley noted the substantial number of pinniped records in an offshore area at the southwestern tip of the continent. He said that these probably were derived from satellite tracking data on the feeding grounds and that they deserved future attention.

Tetley showed some examples of IMMA profiles that are published on the IMMA e-Atlas in order to give participants an idea of the length and level of detail that should be captured in cIMMA proposals, as ideally cIMMA proposal text will form the basis of final IMMA profiles. It was noted that the examples included as Annex 2 in the IMMA Guidance Document do not include in-text citations for the criteria sections. These are already being changed to include examples of IMMAs that do include in-text citations, as these are required for all IMMAs proposed at the workshop.

There was also a brief discussion of the type of information that can form the supporting materials. These can include figures, charts, or other visual information that helps reviewers interpret and visualise data presented in the main text.

After lunch, Panigada called on each subgroup to report on progress and whether they would be finishing on time. All groups reported that they were on track to finish but subregion 4 covering Chile remarked that they would be working late into the evening. Others were waiting for materials and input from online participants but in general the situation was looking optimistic. Next, Tetley reported that he and Lanfredi were also on track to finish working with the subgroups to draw the boundaries of the shapefiles based on the available information. Progress had also been made on the ambitious effort to define migration corridors. Things had gone back and forth and the small group working on this was coming to an agreement for a proposal going forward with separate areas related to the movements of blue whales and the movement of humpback whales. The humpback corridor would be more coastal, following the coastline from Patagonia, Chile to Nicaragua, and the corridor for the blue whales would be more offshore extending from southern Chile to the Galápagos. The mapping had not yet been completed for the pinniped areas in the southern portions of the region but that would be done during the day.

Tetley drew a fair representation of a baleen whale on the PowerPoint as if to inspire the good work in process. From online came a comment from Pitman: 'Killer whale food'.

The subgroups continued working until the end of the day when Panigada called for another progress report. Everything was still on track. Tetley and Lanfredi were also on track. Tetley noted another AoI to go forward specifically for the foraging pinnipeds. Panigada invited participants to come in and finish the following morning but that there would be no plenary. He said that everyone should hand in their completed templates for the cIMMAs so that they could be compiled with the maps. He said that drafting could continue until after lunch and the afternoon coffee break and then the closing sessions would consist of the nomination of regional coordinators, questions about the implementation, and how the implementation of them would be progressed. And then there would be a final roundup of all the cIMMAs and AoI to go to the reviewers, with the maps.

IMMA Workshop Day 5, 10 June 2022

In the morning, the participants worked on finishing the cIMMA proposals and the first plenary was held at 12.30 PM just before lunch. Panigada reminded participants about the importance of continuing to wear face masks, and the need to complete templates and nominate regional coordinators before the end of the day. He also indicated how the Red List status should be cited in the templates, using the (author,

date) format in text citations and the full citation as suggested on the IUCN Red List website for each assessment cited in the references.

Participants were also requested to share good quality photos of species occurring in the region for the report or media releases related to this workshop. Several people came forward to help provide photographs.

Hoyt talked about implementation of the IMMAs and how all the workshop participants carry the legacy of this workshop and the IMMAs that result from it. Of course, the workshop participants can work to implement them in the various ways that may be individually relevant. Some may become MPAs or extensions of MPAs, or help to shape zoning proposals for existing MPAs. Others may show the need for traffic separation schemes or other navigation advisories through the IMO. Hoyt talked about the monitoring proposals currently part of funding requests through Whale and Dolphin Conservation. Giving baseline numbers to all the IMMAs was an ambitious goal but the plan is that it would be explored in at least a few IMMAs in each region in the next couple years.

Hoyt then explained that the coordinator role would be partly to help with this monitoring and that the goal was to find funding for these roles in each IMMA region. He referred prospective regional coordinators — those who might be interested in volunteering — to the Coordinators' Terms of Reference for further information.

At the final plenary at 5 PM, Hoyt asked for volunteers for the coordinator role. The first to be nominated was Carlos Olavarría from Chile. Next Susana Cardenas from Peru stepped forward. Because of the great distances in the region matched with diverse species and habitats, Hoyt asked for volunteers from the northern part as well. Jorge Urbán and Lorenzo Rojas Bracho from México volunteered as long as they could be joint coordinators. Finally, as the session was being concluded, Ester Quintana from Guatemala volunteered herself because of the gap in representation from all of Central America. It was unusual to have 5 (or 4 with the joint coordinator role from Mexico) coordinators, but the group accepted it in view of the situation. The enthusiasm of the group to push things forward was noted.

Hoyt congratulated the new regional coordinators and talked about the initiation of the coordinators into the Task Force, as well as admitting them as members of the IUCN World Commission on Protected Areas. He talked briefly about IMMA implementation in various regions, particularly in Malaysia where regional coordinators have worked with the national government to ensure that IMMAs are used in coastal zone management and marine spatial planning and that progress has

been made toward encoding this in national law. He also talked about the availability of IMMA shapefiles to all stakeholders with more than 300 shapefile requests logged and processed to date from a wide range of users including academic, industry, military, tourism and conservation sectors. The IMMA Secretariat is also collaborating with IBAT and Proteus to make the IMMA layers more easily available to ocean businesses and the private sector.

Then Toscano provided a brief overview of the synergy identified between this workshop and the regional KBA process. She envisages three potential ways in which the IMMAs resulting from this workshop could enrich the KBA process:

1. Sites that were already KBAs can be updated and re-assessed to include more detailed and up-to-date information on marine mammals. This could be done, for example, with the Northern Gulf of California cIMMA, which is also a KBA for vaquita.

2. Information from IMMAs can be used to extend the boundaries of existing KBAs to take marine mammals into account. This could be the case, for example with Guadeloupe Island, designated as a KBA for important bird populations, but which could be extended into the marine realm for pinnipeds.

3. IMMAs can be used to identify new sites that should be considered for KBA designation. The South American fur seals in the Humboldt Current Mid Upwelling System cIMMA appear to meet KBA criteria. This cIMMA also has South American sea lions and marine otters.

The IMMAs help fill the gaps with KBAs and enlarge them. Notarbartolo di Sciara noted that the IMMA Secretariat would collaborate with the KBA Secretariat to facilitate this synergy once the peer review process was complete. Later in the year, when the Task Force shares the final IMMAs it may be possible for the points of contact to do a more thorough analysis to see if other IMMAs are suitable for KBA proposals.

Next Olavarría shared news about the agreement between American countries with Pacific coastlines signed at the 9th Summit of the Americas called Americas for the Protection of the Ocean Declaration. The agreement has the goal of establishing a network of MPAs across the region. Workshop participants were advised that they could liaise with their relevant government contacts to ensure that IMMAs and marine mammals will be considered in this process.

Hoyt highlighted other opportunities for expanding IMMA awareness and use including the GOBI-IKI meeting as part of the UN Ocean Conference in Lisbon starting in June 2022, and IMPAC 5 in February 2023 in Vancouver, the latter to have a focus on the Pacific. There are also ongoing possibilities for synergy within the EBSA process and the Biodiversity Beyond National Jurisdiction (BBNJ) process. He also noted that the next IMMA workshop will be the South West Atlantic Ocean (SWATLO) region workshop, funded by GOBI-IKI, and planned for 5-9 December 2022.

To close the workshop, Tetley, Lanfredi and Zanardelli presented the final results. They started with the breakdowns by subregion (Table 2), with warm congratulations from the overall group as individual results were announced for each subregion for their considerable effort over the past days. Then came the totals. There was clapping and cheers to see that a total of 48 cIMMAs would be going forward for review, along with 6 AoI (Fig. 7). This was the second highest number of cIMMA proposals for a single region since the start of the IMMA process. Only the Western Indian Ocean and Arabian Seas region had more. Tetley showed the evolution of the work from the initial pAoI to the final boundaries of the cIMMAs and AoI going forward. He reminded participants that not all cIMMAs would progress to become IMMAs following peer review. Hoyt reminded the group that usually about 75-80% passed peer review, and some needed minor or major revisions to pass.

Zanardelli collected all the final submissions of cIMMA and AoI templates from every breakout group and prepared a backup of the results of the workshop.

Finally, warm congratulations were delivered to the participants for the final results with information about the celebratory dinner at a nearby Mexican restaurant including free drinks and entertainment.

Table 2. *Day 5 final cIMMA and AoI numbers by subregion group*

Breakout group subregion number	**Proposed number of cIMMA submissions**	**Proposed number of AoI nominations**
1	10	0
2	11	3
3	4	0
4	20	0

5	1	2
6	0	1
Multi-region	2	
Total	**48**	**6**

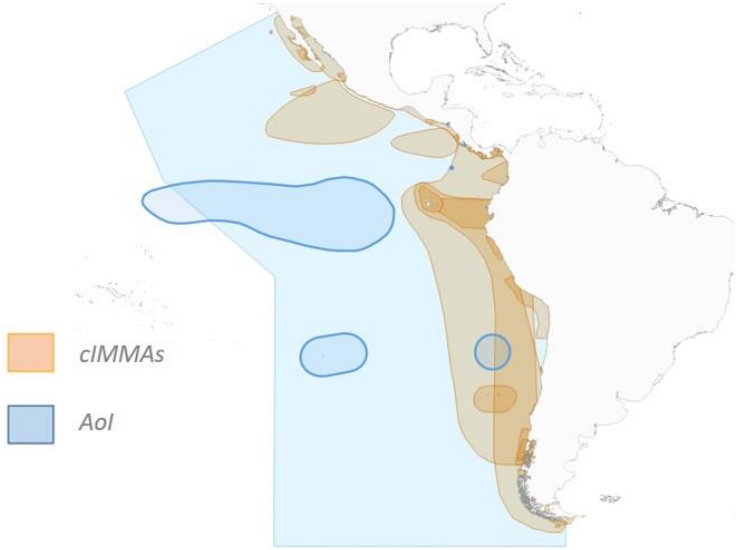

Fig. 7. *Map summary showing 48 candidate IMMAs (cIMMAs) and 6 areas of interest (AoI) going forward for review.*

Annexes

Annex I – List of participants

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Annex II – Workshop agenda

Day 0 - 5 June 2022

19:00 – 22:00 Icebreaker reception and welcome dinner

Day 1 - 06 June 2022

09:00 – 10:30 Introduction to the IMMA South East Tropical and Temperate Pacific Ocean Region Workshop

- Welcoming addresses: Eugenia Arguedas, Felipe Paredes Vargas (WCPA), Jorge Jimenez, Maria Toscano (KBA)
- Presentation by IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task Force Co-Chairs: GNS welcome and EH background of the IMMA programme
- Jorge Jimenez (Costa Rica Thermal Dome)
- Patrick Halpin (Duke University MGel and MiCO)
- Participant introductions
- Adoption of Agenda, Chair, and Workshop Facilitator(s)

10:30 – 11:00 Coffee Break

11:00 – 13:00 Introduction to Important Marine Mammal Areas

- IMMA Selection Criteria, Identification Process, and Inventory of Knowledge (IoK) for the South East Tropical and Temperate Pacific Ocean Region - Presentation by Michael Tetley, IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task Force
- Question and Answer Session

13:00 – 14:15: Lunch

14:15 – 14:45 Preliminary Areas of Interest (pAoI) and Assignment of Breakout Groups

- Collated pAoI for the South East Tropical and Temperate Pacific Ocean Region - Presentation by Caterina Lanfredi, IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task Force

14:45 – 15:30 PLENARY Discussion on candidate IMMA (cIMMA) options, agreement of AoI list for cIMMA investigation, and organisation of Breakout Groups – Group leader and GIS expert for each table

15:30 – 16:00 Coffee Break

16:00 – 19:00 Personal Reading and Planning Session

19:30 – 22:00 Informal dinner

Day 2 - 07 June 2022

08:30 – 9:00 Breakout Group Facilitators Pre-Meeting (if needed)

9:00 – 10:30 PLENARY - Collation of final pAoI and cIMMA Group Assignments

10:30 – 11:00 Coffee Break

11:00 – 13:00 BREAKOUT GROUPS SESSION 1

13:00 – 14:15 Lunch

14:15 – 16:30 BREAKOUT GROUPS SESSION 2

16:30 – 17:00 Coffee Break

17:00 – 18:30 Assessment of cIMMA list (Sub-Region Summary) – Workshop Chair

- Group Facilitator Reports
- PLENARY Discussion
- Agreement on preliminary cIMMA list
- Revised AoI list

19:30 – 22:00 Informal dinner

Day 3 - 08 June 2022

09:00 – 10:30 BREAKOUT GROUPS SESSION 3

10:30 – 11:00 Coffee Break

11:00 – 13:00 Assessment of cIMMA list (Sub-Region Summary) – Workshop Chair

- Group Facilitator Reports
- PLENARY Discussion
- Agreement on final cIMMA list
- Revised AoI list

13:00 – 14:15 Lunch

14:15 – 16:30 DRAFTING SESSION 1 – cIMMA standard submission forms

16:30 – 17:00 Coffee Break

17:00 – 18:00 Review of cIMMA drafting progress

- PLENARY Discussion – if requested

19:30 – 22:00 Informal dinner

Day 4 - 09 June 2022

09:00 – 13:00 DRAFTING SESSION 2 – cIMMA standard submission forms (including coffee break at 10:30)

13:00 – 14:15 Lunch

14:15 – 16:30 DRAFTING SESSION 3 – cIMMA standard submission forms

16:30 – 17:00 Coffee Break

17:00– 17:30 Review of cIMMA drafting progress – Workshop Chair

- PLENARY Discussion – if requested

19:30 – 22:00 Informal dinner

Day 5 - 10 June 2022

09:00 – 13:00 DRAFTING SESSION 4 – cIMMA standard submission forms (including coffee break at 10:30)

13:00 – 14:10 Lunch

14:15 – 16:30 Agreed cIMMA list and next steps for review –

- PLENARY Discussion
- Agreement on final cIMMA for review
- Agreement on final revised AoI list
- Formal submission of cIMMA standard forms

16:30 – 17:00 Coffee Break

17:00 – 18:30 Closing session

- Regional Coordinator(s) and Regional Experts groups
- Implementation of IMMAs by workshop participants
- Final round-up by workshop organizers and Task Force Co-Chairs
- Workshop Closes

20:00 – 23:00 Celebratory dinner and drinks

Annex III – List of approved IMMAs and cIMMAs

From a total of 118 pAoI submissions, 48 candidate important marine mammal areas (cIMMAs) were identified by the experts attending the IMMA Regional Workshop for the South East Tropical and Temperate Pacific Ocean (Table 2, Fig. 7). The 48 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, 36 areas were accepted as IMMAs, and 5 areas stayed as cIMMAs, subject to additional data or clarifications needed to pass review in future (Fig. 1). The other cIMMAs reverted to AoI status with the recognition that these areas will be monitored and with additional research could become a cIMMA at a future IMMA expert workshop. The total number of AoI going forward was 11. For IMMAs and cIMMAs, a summary of the supporting rationale is now available on the Task Force website (marinemammalhabitat.org).

The titles of the 36 approved IMMAs and 5 cIMMAs are as follows:

Important Marine Mammal Areas (IMMAs)

1. Almirantazgo Sound IMMA
2. Almirante Montt Gulf IMMA
3. Banderas Bay and Islands of Nayarit IMMA
4. Carnegie Ridge, Galapagos to Mainland IMMA
5. Central America Humpback Whale Corridor IMMA
6. Central Humboldt Current Upwelling System IMMA
7. Central Magellan Strait IMMA
8. Chacao Channel - Guamblin Island IMMA
9. Chiloe Interior IMMA
10. Cobquecura-Itata IMMA
11. Continental Shelf of the Northern Humboldt Current IMMA
12. Costa Rica Thermal Dome IMMA
13. Eastern Pacific Warm Pool IMMA
14. Galapagos Archipelago IMMA
15. Gorgona-Tribuga-Malpelo IMMA
16. Guadalupe Island IMMA
17. Gulf of Arauco IMMA
18. Gulf of California IMMA
19. Gulf of Chiriqui IMMA
20. Gulf of Panama IMMA
21. Gulf of Penas IMMA
22. Gulfo Dulce IMMA
23. Humboldt Archipelago IMMA

24. Juan Fernandez Archipelago IMMA
25. La Paz Bay IMMA
26. Magdalena-Puyuhuapi IMMA
27. Osa Peninsula IMMA
28. Pacific Coast of Baja California Peninsula IMMA
29. Papudo-Maitencillo IMMA
30. Pitipalena Anihue IMMA
31. Revillagigedo Archipelago IMMA
32. San Jose Canyon and Adjacent Shelf IMMA
33. San Juan del Sur-Papagayo IMMA
34. Upper Gulf of California IMMA
35. Western Baja California Lagoons and Coastal Waters IMMA
36. Western Magellan Strait IMMA

Candidate Important Marine Mammal Areas (cIMMAs)

1. Beagle Channel - Southern Patagonia cIMMA
2. Fitzroy Channel cIMMA
3. Laguna San Rafael cIMMA
4. Northwestern Patagonia cIMMA
5. Southeastern Pacific Whale Migratory Corridor cIMMA

Annex IV – List of AoI for future consideration

After consideration of the large number of Areas of Interest (AoI) summarized in the AoI report with some added during the workshop, some were merged or deferred and others went into cIMMA submissions, leaving initially 6 to be kept as AoI, later expanded after the review process to 11 AoI, due to the lack of evidence suitable for IMMA approval (Fig. 1). Thus, these 11 sites consist of (1) AoI originally submitted to the Task Force prior to the workshop, (2) those AoI additionally identified by experts over the course of the workshop in light of new information and knowledge presented, and (3) cIMMAs that failed to become IMMAs or to be kept as cIMMAs. The AoI status is valuable in terms of facilitating and focusing future monitoring and research activities on marine mammals in the region.

This enhanced activity could provide additional evidence for such AoI to be reconsidered as an IMMA candidate during future iterations of the IMMA identification process and the Regional Expert Workshops. The AoI listed below, and any supporting rationale, will be highlighted in the future on the Task Force website (marinemammalhabitat.org) and in other Task Force publications.

Areas of Interest (AoI)

1. Cocos Island AoI
2. Desventuradas Islands AoI
3. Diego Ramirez Islands AoI
4. Eastern Equatorial Pacific Ocean AoI
5. Eastern Magellan Strait AoI
6. Golfo de Fonseca AoI
7. Loanco-Pelluhue AoI
8. Los Cobanos Reef AoI
9. Nicoya Gulf AoI
10. Padre Ramos Aoi
11. Rapa Nui and Motu Motiro Hiva AoI

Annex V – Template for preliminary Areas of Interest (pAoI) submission form

Preparatory to the Costa Rica workshop, the expert participants, members of the public, and the marine mammal and ocean ecosystem communities were asked to fill out an AoI 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 in Annex VI.

THE PRELIMINARY AREA OF INTEREST (pAoI) SUBMISSION FORM

pAoI Title:
[Brief name that describes the area within the AoI]

Point(s) of Contacts
[Name, Affiliation/Organization, Contact Email]
[Name, Affiliation/Organization, Contact Email]
[Name, Affiliation/Organization, Contact Email]

Abstract
[Brief summary of the pAoI description and qualifying selection criteria — 250 words maximum]

Summary Table of pAoI species

ID	Scientific Name	Common Name	Population/ Subpopulation Name	IUCN Status	IMMA Selection Criteria Met (x)							
					A	B1	B2	C1	C2	C3	D1	D2

pAoI Map
[Simple boundary map of the AoI location]

Description of pAoI
[Description and references to supporting information about the pAoI location, i.e. country, geographic locality]

[Description and references to supporting information about the marine mammal species occurring within the pAoI]

[Description and references to supporting information about why the area meets the IMMA selection criteria and should be considered as a pAoI]

References and Other Supporting Information

[Use this space to add any references used in the submission including those citations, books, reports, or links to websites or databases used to support to submission]

Annex VI – Template for cIMMA submission form

At the Costa Rica workshop, a simplified cIMMA submission form was used (see immediately below). Following this form is a more detailed list of points that have been used to assist participants of regional workshops to draft their cIMMA submissions.

THE cIMMA SUBMISSION FORM

cIMMA Title:
[Brief name that describes the area within the cIMMA]

Point(s) of Contacts
[Name, Affiliation/Organization, Contact Email]
[Name, Affiliation/Organization, Contact Email]
[Name, Affiliation/Organization, Contact Email]

Abstract
[Brief summary of the cIMMA description and qualifying selection criteria 250 words maximum]

Summary Table of cIMMA species

ID	Scientific Name	Common Name	Population/ Subpopulation Name	IUCN Status	IMMA Selection Criteria Met (x)							
					A	B1	B2	C1	C2	C3	D1	D2

cIMMA Map
[Simple boundary map of the cIMMA location]

Description of cIMMA
[Description and references to supporting information about the cIMMA location, i.e. country, geographic locality]

[Description and references to supporting information about the marine mammal species occurring within the cIMMA]

[Description and references to supporting information about why the area meets the IMMA selection criteria and should be considered as a cIMMA]

Criterion A – Species or Population Vulnerability
[Detailed description for meeting the above criterion – only required if the area meets the above criterion]

Criterion B1 - Small and Resident Populations
[Detailed description for meeting the above criterion – only required if the area meets the above criterion]

Criterion B2 – Aggregations
[Detailed description for meeting the above criterion – only required if the area meets the above criterion]

Criterion C1 – Reproductive Areas
[Detailed description for meeting the above criterion – only required if the area meets the above criterion]

Criterion C2 – Feeding Areas
[Detailed description for meeting the above criterion – only required if the area meets the above criterion]

Criterion C3 – Migration Routes
[Detailed description for meeting the above criterion – only required if the area meets the above criterion]

Criterion D1 – Distinctiveness
[Detailed description for meeting the above criterion – only required if the area meets the above criterion]

Criterion D2 – Diversity
[Detailed description for meeting the above criterion – only required if the area meets the above criterion]

References and Other Supporting Literature
[Use this space to add any references used in the submission including those citations, books, reports, or links to websites or databases used to support to submission]

Annex A. Supporting Figures or Maps
[Use this space to add any figures including those maps, sightings, charts, data tables, or images which support the submission of the cIMMA – please ensure each figure is accompanied by a figure legend / appropriate description of the figure]

Annex B. List of Primary and Secondary Species
Primary Species – rationale for cIMMA proposal

Scientific Name	Common Name of Species	Population / Subpopulation Name	IUCN / other status assessment

Secondary Species – present in areas but not used in the rationale for cIMMA proposal

Scientific Name	**Common Name of Species**	**Population / Subpopulation Name**	**IUCN / other status assessment**

LIST OF POINTS USEFUL FOR THE PREPARATION OF cIMMA SUBMISSIONS

Part 1: cIMMA Description

- Title/Name of the area
- Points of contact for submission (names, affiliations, title, contact details)
- Abstract (100-word summary of the submission)
- Introduction (feature type(s) present, geographic description, depth range, oceanography, general information data reported, availability of models)
- Location (Indicate the geographic location of the area/feature and the underlying rationale for boundary selection. This should include reference to a location map shown on page 11 of this form in the space provided, and the total size of the area in km^2. It should state if the area is within or outside national jurisdiction or straddling both.)
- Description of the species and features which qualify as IMMA (information about the characteristics of the feature to be proposed, e.g. in terms of species, population and underlying physical description (water column feature, benthic feature, or both) and then refer to the data/information that is available to support the proposal and whether models are available in the absence of data. This needs to be supported where possible with maps, models, reference to analysis, or the level of research in the area)

Part 2: Criterion A – Species or Population Vulnerability

- Explanation for cIMMA assessment (including rationale for feature selection and description of feature and condition)
- Declaration of confidence in evidence available (including information on data gathered, gaps in knowledge, reliability, age of information and any known biases)
- Additional notes on the cIMMA submission on Criterion A

Part 3: Criterion B - Sub-criterion B1 – Small and Resident Populations

- Explanation for cIMMA assessment (including rationale for feature selection and description of feature and condition)
- Declaration of confidence in evidence available (including information on data gathered, gaps in knowledge, reliability, age of information and any known biases)
- Additional notes on the cIMMA submission on Sub-criterion B2

Part 4: Criterion B - Sub-criterion B2 – Aggregations

- Explanation for cIMMA assessment (including rationale for feature selection and description of feature and condition)
- Declaration of confidence in evidence available (including information on data gathered, gaps in knowledge, reliability, age of information and any known biases)
- Additional notes on the cIMMA submission on Sub-criterion B2

Part 5: Criterion C - Sub-criterion C1 – Reproductive Areas

- Explanation for cIMMA assessment (including rationale for feature selection and description of feature and condition)
- Declaration of confidence in evidence available (including information on data gathered, gaps in knowledge, reliability, age of information and any known biases)
- Additional notes on the cIMMA submission on Sub-criterion C1

Part 6: Criterion C - Sub-criterion C2 – Feeding Areas

- Explanation for cIMMA assessment (including rationale for feature selection and description of feature and condition)
- Declaration of confidence in evidence available (including information on data gathered, gaps in knowledge, reliability, age of information and any known biases)
- Additional notes on the cIMMA submission on Sub-criterion C2

Part 7: Criterion C - Sub-criterion C3 – Migration Routes

- Explanation for cIMMA assessment (including rationale for feature selection and description of feature and condition)
- Declaration of confidence in evidence available (including information on data gathered, gaps in knowledge, reliability, age of information and any known biases)
- Additional notes on the cIMMA submission on Sub-criterion C3

Part 8: Criterion D - Sub-criterion D1 – Distinctiveness

- Explanation for cIMMA assessment (including rationale for feature selection and description of feature and condition)
- Declaration of confidence in evidence available (including information on data gathered, gaps in knowledge, reliability, age of information and any known biases)
- Additional notes on the cIMMA submission on Sub-criterion D1

Part 9: Criterion D - Sub-criterion D2 – Diversity

- Explanation for cIMMA assessment (including rationale for feature selection and description of feature and condition)
- Declaration of confidence in evidence available (including information on data gathered, gaps in knowledge, reliability, age of information and any known biases)
- Additional notes on the cIMMA submission on Sub-criterion D2

Part 10: Numerical Threshold Benchmarks

- Complete threshold benchmarks table where appropriate (including estimates of population abundance or percentage of population size)

Part 11: Species Description

- Complete the species list table where appropriate (including IUCN or other source for threatened or declining status information)

- Species condition and future outlook of the proposed area (description of the current condition of the area and species present– are they static, declining, improving, what are the particular vulnerabilities? Any planned research/programmes/investigations?)

Part 12: Maps and Figures

- Maps and supporting figures (showing the boundary or area of the candidate IMMA and any relevant supplementary contextual information supporting IMMA classification)

Part 13: References

- References (relevant documents and publications, including URL where available; relevant data sets, including where these are located; information pertaining to relevant audio/visual material, video, models, etc.)

Annex VII – Historical data, traditional knowledge and IMMAs

As has been discussed in the past, historical whaling data can be useful for establishing pAoI as well as contributing to cIMMA proposals. In the Indian and Pacific Ocean, whaling data has provided input for the EBSA determinations, and therefore also had a role in identifying pAoI which contributed 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 it accessible in scientific papers and on the IWC database. The two main data sources are a massive compilation of 19th Century whaling records, which plots sightings and catches, as well as the more formal record keeping from the 20th 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 AoI 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. IMMAs are independent of political and socioeconomic factors during the identification stage.

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)
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)
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