IMPORTANT MARINE MAMMAL AREAS - IMMAs

A NEW TOOL FOR BIODIVERSITY CONSERVATION

The IUCN Marine Mammal Protected Areas Task Force is engaged in an effort to identify Important Marine Mammal Areas. IMMAs are designed to offer actionable knowledge to implement biodiversity place-based conservation at the national, regional and global levels, capitalizing on the indicator role of marine mammals.

MARINE MAMMAL PROTECTED AREAS TASK FORCE

IUCN SSC WCPA

WHAT ARE IMPORTANT MARINE MAMMAL AREAS?

IMPORTANT MARINE MAMMAL AREAS (IMMAs) ARE CREATED TO IDENTIFY DISCRETE HABITAT AREAS, IMPORTANT FOR ONE OR MORE MARINE MAMMAL SPECIES, THAT HAVE THE POTENTIAL TO BE DELINEATED AND MANAGED FOR CONSERVATION

Introduced by the IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task Force to support marine mammal and marine biodiversity conservation, IMMAs complement other marine spatial assessment tools, including the Convention on Biological Diversity's Ecologically or Biologically Significant Areas (EBSAs) and Key Biodiversity Areas (KBAs) identified through the global KBA Standard. IMMAs are identified on the basis of four main scientific criteria (species or population vulnerability; distribution and abundance; key life cycle activities; and special attributes) designed to capture critical aspects of marine mammal biology, ecology and population structure, and are subjected to peer review. They are devised through a biocentric expert process that is independent of any political and socio-economic pressure or concern, and performed on a region-by-region basis.

Initially, the Task Force advertises and solicits within the scientific and conservation practitioners' communities the submission of Areas of Interest (AoI); submissions are accepted from any person or institution. If they qualify based on criteria and robustness of data, AoI are then considered and elaborated as candidate IMMAs (cIMMAs) during regional expert workshops. Having undergone independent peer review after the regional workshop, if successful and if the criteria have been met, cIMMAs formally become IMMAs and are posted on a dedicated e-Atlas and searchable database. After review, a cIMMA that has not reached a sufficient level of robustness but only needs minor adjustments to become an IMMA (adjustments that can be made without resubmission to a successive workshop) maintains its status as a cIMMA and is shown as such on the e-Atlas; by contrast, cIMMAs that need substantial additional knowledge and a reassessment including new collective scrutiny through a workshop and review, are posted on the e-Atlas as AoI.

To address the concern that volatile environmental conditions, including climate disruption and distributional changes in a population as well as improved ecological knowledge, are likely to render original IMMA designations less useful and outdated, a region-based revision is built into the process which aims to recur every approximately 10 years.

Previous page: Blue whale, Photo: Lucy Molleson

Steller sea lions, Photo: Erich Hoyt

Mother and calf killer whale, Photo: Tanya Ivkovich

WHAT ARE IMMAs FOR?

Dugong, Photo: Mandy Etpison

IMMAs FUNCTION AS A TOOL TO FOCUS THE CONSERVATION SPOTLIGHT ON THE OCEAN PLACES THAT MOST MATTER TO MARINE MAMMALS AND TO BROADER MARINE BIODIVERSITY, ADDRESSING THE CHALLENGE OF WHERE TO DIRECT LIMITED CONSERVATION RESOURCES

IMMAs are an advisory, expert-based classification applied to the world's oceans, consisting of areas that merit monitoring and place-based protection for marine mammals and broader biodiversity.

By **aggregating actionable knowledge** which can be readily incorporated into management, policy and industry processes, IMMAs represent a transformative improvement compared to the provision of raw data, which requires time and capacity to analyse.

IMMAs are not prescriptive—they are not marine protected areas (MPAs)—but their identification helps to catalyse faster deployment of MPAs as well as assisting with zoning, marine spatial planning, ecological network building—in short, systematic conservation planning.

Soon after appearing in 2017, IMMAs began to be adopted into international conservation policy. That year, the Convention on Migratory Species endorsed the IMMA criteria and process, requesting States to support the initiative. IMMAs have since contributed to the work of the Convention on Biological Diversity with its ecologically or biologically significant area (EBSA) programme, and have supported the identification of IUCN key biodiversity areas (KBAs). IMMAs are being used by the International Whaling Commission to address the threat to whales derived by ship strikes, and by the U.S. Navy as Offshore Biologically Important Areas relevant to the mitigation of disturbance and mortality from sonar testing. The International Maritime Organisation (IMO) has expressed interest in considering speed restrictions and traffic separation schemes in IMMAs where marine mammal populations are sensitive to noise or face the risk of collisions.

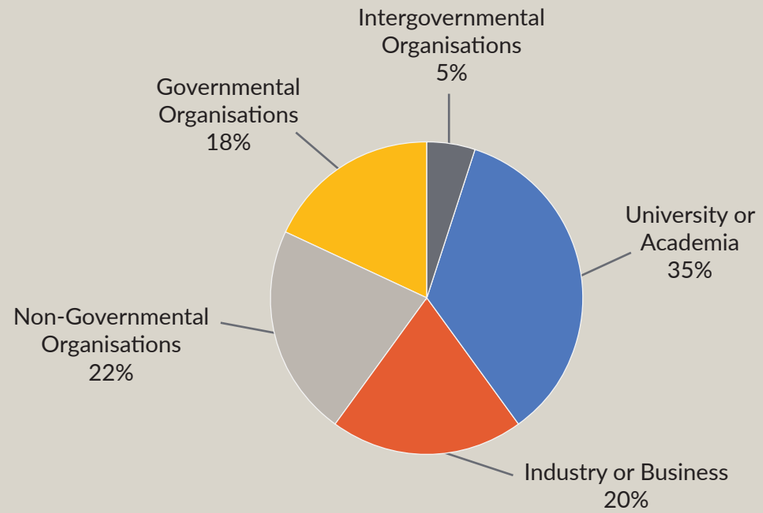
Up to early 2020, the Task Force had received 78 requests for IMMA shapefiles and metadata. Such requests are not proof of use by the diverse stakeholders, but they indicate potential conservation action.

The creation of IMMAs has helped shape and lead to MPAs in Vietnam and Bangladesh, e.g., contributing to the declaration in June 2019 of the Nijhum Dwip MPA and National Park. In Mozambique, the South African SASOL company relinquished two oil & gas blocks in key dugong habitat following its identification as the Bazaruto Archipelago to Inhambane Bay IMMA, home to the last viable African dugong population.

Indian Ocean humpback dolphin, Photo: Gill Braulik

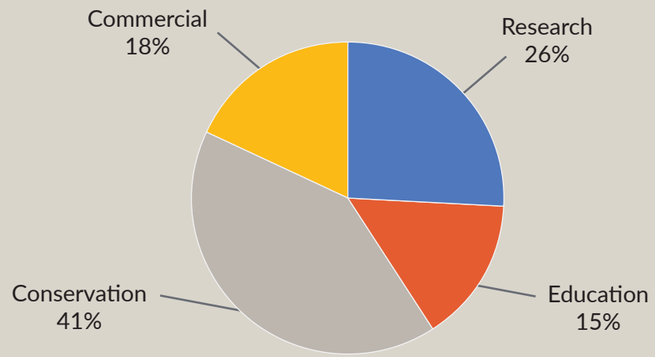
The origin of the IMMA shapefile and metadata requesters is shown below.

IMAGE LAYER REQUEST ORIGIN (2017 - 2020)



Although 26% of requests were for research, 18% for commercial, and 15% for educational purposes, most of them (41%) had declared an explicit conservation purpose. Of course, the other purposes, including education, research and commercial may also have some conservation benefit.

IMAGE LAYER REQUEST PURPOSE (2017 - 2020)

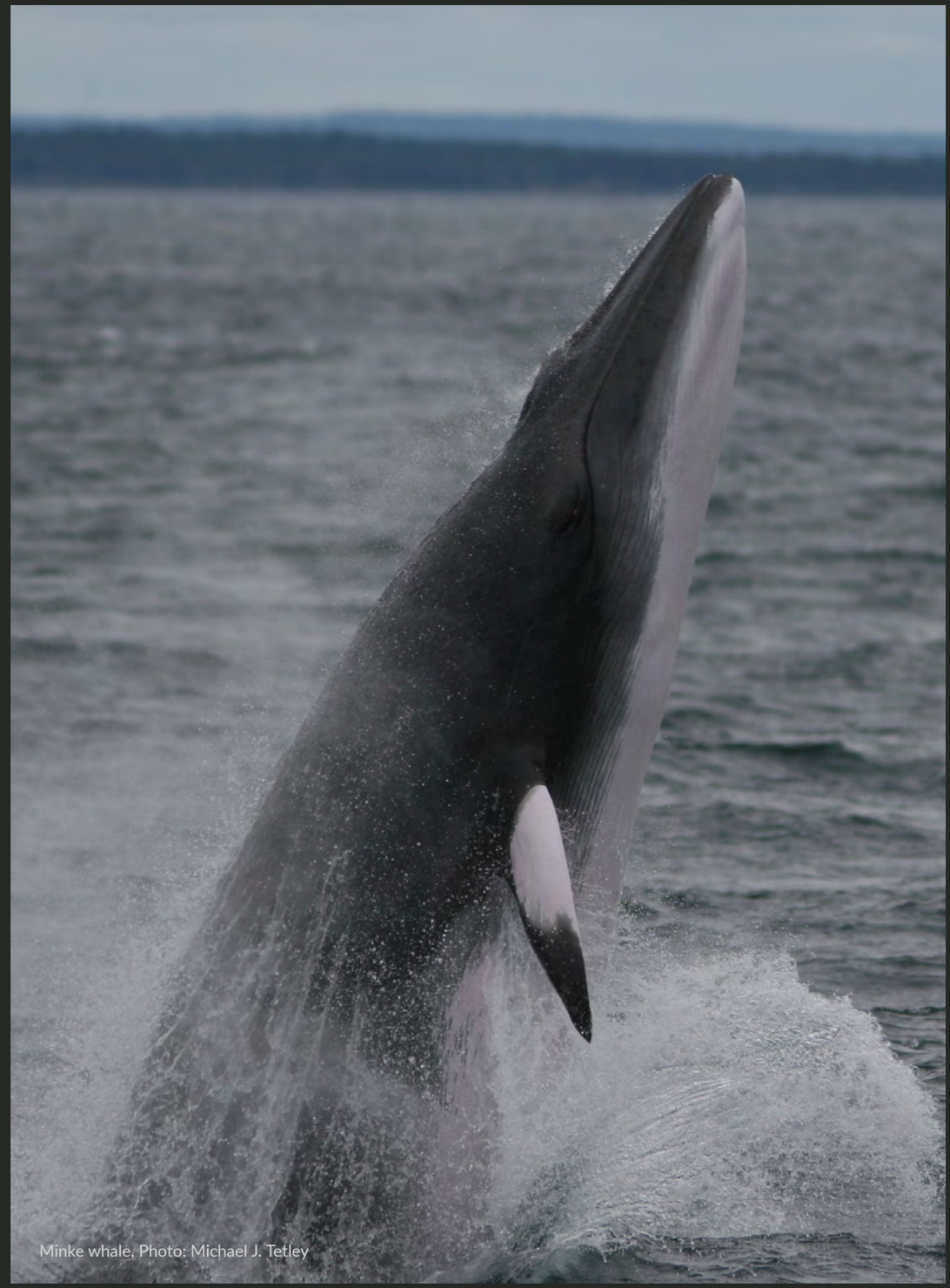


WHERE ARE WE NOW?

With 158 IMMAs identified to date through six regional workshops, the IMMA identification effort has covered most of the Southern Hemisphere and small portions of the Northern Hemisphere—close to half of the global ocean. The results from a seventh workshop dealing with the South East Temperate and Tropical Pacific Ocean will be available in late 2021, concluding IMMA Phase 1. Phase 2 will focus on the Northern Hemisphere and the South Atlantic Ocean, completing the global coverage.

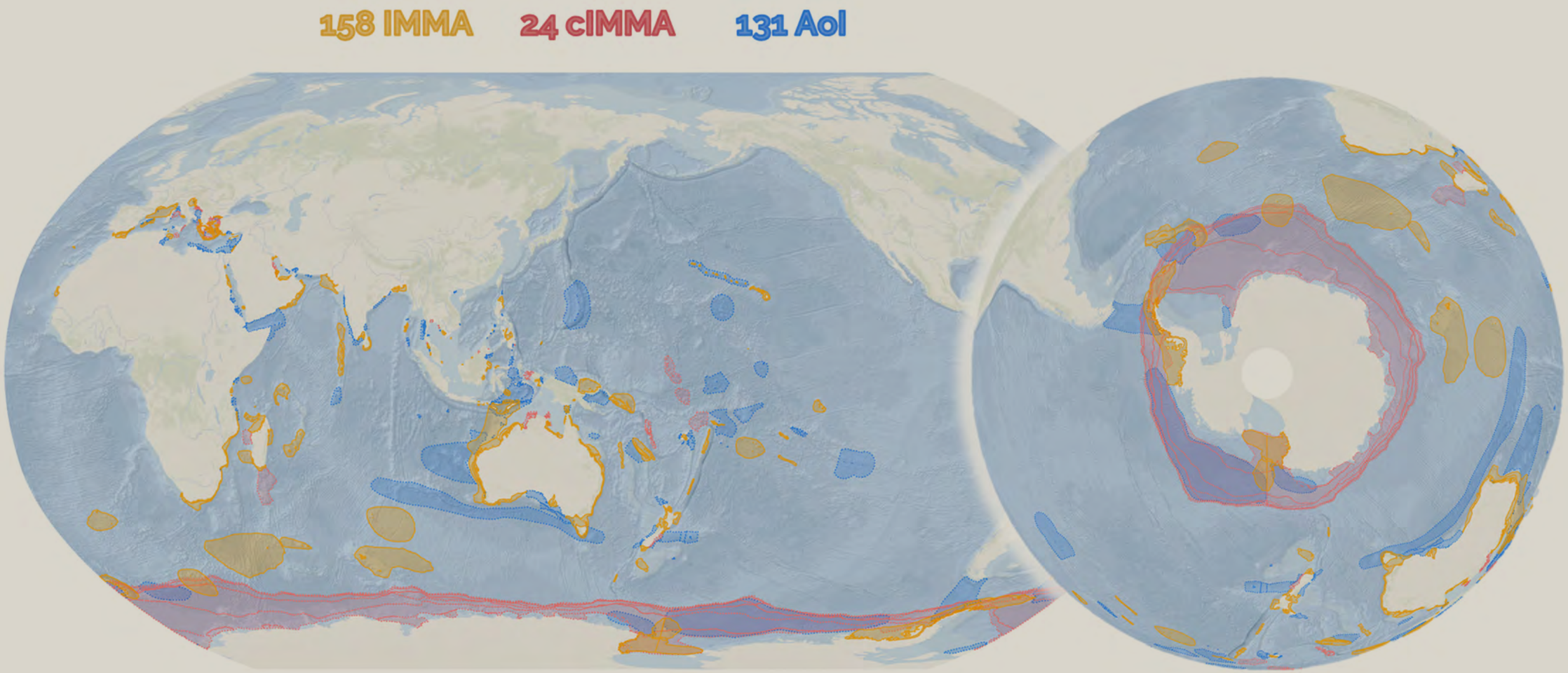
MARINE REGION	EXTENT	IMMAs IDENTIFIED	WORKSHOP LOCATION	YEAR
MR1	Mediterranean (includes adjacent Atlantic for monk seals)	28	Chania, Greece	2016
MR2	Pacific Islands	20	Apia, Samoa	2017
MR3	North East Indian Ocean and South East Asian Seas	30	Kota Kinabalu, Malaysia	2018
MR4	Extended Southern Ocean	13	Brest, France	2018
MR5	Western Indian Ocean and Arabian Seas	37	Salalah, Oman	2019
MR6	Australia-New Zealand and South East Indian Ocean	30	Perth, Australia	2020
MR7	South East Tropical and Temperate Pacific Ocean	--	Planned in Costa Rica	TBD

These regional efforts were supported by: a) the German Ministry for the Environment, Nature Conservation and Nuclear Safety through its IKI office, and facilitated by the Global Ocean Biodiversity Initiative (Pacific Islands; North East Indian Ocean and South East Asian Seas; Western Indian Ocean and Arabian Seas; Australia, New Zealand and South East Indian Ocean; South East Tropical and Temperate Pacific Ocean); b) the French Office for Biodiversity (Extended Southern Ocean); and c) the MAVA Foundation (Mediterranean Sea). The Task Force work on IMMAs has also benefitted from the support of the Marine Mammal Commission, Pacific Life Foundation, The Ocean Foundation, OceanCare, Natural Resources Defense Council, Fondation Prince Albert II de Monaco, IUCN Global Marine and Polar Programme and Animal Welfare Institute.



Minke whale, Photo: Michael J. Tetley

CURRENT WORLD DISTRIBUTION OF IMMAs (JULY 2020)



The online IMMA e-Atlas can be consulted on the Task Force's website at: https://www.marinemammalhabitat.org/imma-eatlas/

IMMAs, cIMMAs and AoI can also be accessed on an online searchable database at: https://www.marinemammalhabitat.org/immas/immas-searchable-database/

Baird's beaked whales, Photo: Olga Filatova

ORGANIZATION OF WORK

Each region involves 12 months of work, requiring a total of 800 person-days.

Each regional effort is subdivided into five stages, as follows: 1) workshop preparation: months 1-4, 230 person-days; 2) workshop delivery: 5 days during month 5, 80 person-days; 3) cIMMA review process: months 6-8, 190 person days; 4) workshop reporting and communication: months 6-10, 110 person-days; and 5) e-Atlas and database population: months 8-12, 190 person-days. All the above tasks are carried out by a small group of professionals making up the IMMA Secretariat embedded in the Task Force, including marine mammal place-based conservation ecologists, marine conservation policy experts, GIS experts, data managers, web managers, plus personnel involved in communication, administration and logistics.

For administrative purposes the Task Force avails itself of the Tethys Research Institute, a not-for-profit research organization based in Milano, Italy, and Whale and Dolphin Conservation, based in the UK, USA, Australia, Argentina and Germany, a UK and German charity with 501(c)3 status in the USA. Overhead (10%) calculated in the budget compensates these organizations for their work.

THE LEGACY OF IMMA WORKSHOPS

In every region where IMMA expert workshops have been conducted, the attendee scientists have formed a regional group. These groups are led by 1-3 coordinators, also from the workshop, who periodically report on IMMA developments and opportunities in the region and help to maintain communication between members and the IMMA Secretariat. A main function is to monitor existing IMMAs and to act both as an early warning system for threats and also for opportunities to pursue further conservation, scientific and educational goals.

Hector's dolphins, Photo: Mike Bossley

TIMELINE

The global IMMA identification effort, which began in 2016, is estimated to take approximately ten years to cover 17 regions of the ocean and inland waterways where marine mammals live. After ten years, the process plans to continue by considering new research and assessing environmental changes to existing IMMAs.

STRENGTHS AND RISKS

The IMMA selection process is a highly-visible endeavour that has a global reach.

The IMMA work has evolved to proceed along a well-honed process consolidated during more than five years of practical experience. No risk is anticipated in the Task Force's ability to carry out its activities, with the exception of major global disruptions such as a pandemic. The COVID-19 pandemic may delay or complicate arrangements for the 5-day long workshop phase of the process, but all of the other activities related to planning, preparation, peer review and follow-up are accomplished through remote and home-office working.

The IMMA process has multiple conservation implications extending beyond the original goal of promoting the conservation of marine mammal habitats and marine biodiversity. Buy-in from relevant sectors of society, including the scientific, conservation, management, business and policy communities, has been substantial and continues to grow.

THE 17 IMMA REGIONS

1. Mediterranean
2. Pacific Islands
3. North East Indian Ocean and South East Asian Seas
4. Extended Southern Ocean
5. Western Indian Ocean and Arabian Seas
6. Australia-New Zealand and South East Indian Ocean
7. South East Temperate and Tropical Pacific Ocean
8. Arctic Region
9. North American Atlantic Ocean
10. European Atlantic Ocean (including Baltic and North Seas)
11. Gulf of Mexico and Caribbean Sea
12. South American Atlantic Ocean
13. African Atlantic Ocean
14. North American Pacific Ocean
15. Asian North Pacific Ocean
16. Black and Caspian Seas
17. Global Inland Waters

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http://marinemammalhabitat.org

Common dolphin, Photo: David Selwood