



**CONVENTION ON
MIGRATORY
SPECIES**

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Agenda Item 27.4

IMPORTANT SHARK AND RAY AREAS (ISRAs)

(Prepared by the Secretariat)

Summary:

To further the implementation of core mandates of the Convention for sharks and rays listed in CMS Appendices, in particular CMS Art III (4), this document provides information about the use of Important Shark and Ray Areas (ISRAs) and proposes a Draft Resolution and Draft Decisions.

Rev.1 makes consistent the language in decisions directed to the Scientific Council.

IMPORTANT SHARK AND RAY AREAS (ISRAs)

Background

1. Sharks and rays, along with bony fish, are the most threatened species listed in CMS Appendices. The International Union for Conservation of Nature Red List of Threatened Species (IUCN Red List)¹ estimates that approximately 37% of these species are at risk of extinction. Population declines are driven by overfishing due to targeted and incidental catch, but habitat degradation may also impact some of the species listed in the Appendices of the Convention, such as sawfish or Angelshark.
2. The conservation of important habitats that support populations of CMS listed species is of significant importance to achieve the central goal of the Convention to achieve and maintain a sustainable conservation status for migratory species of wild animals.
3. In Article II(1) of CMS

“The Parties acknowledge the importance of migratory species being conserved and of Range States agreeing to take action to this end whenever possible and appropriate, paying special attention to migratory species the conservation status of which is unfavourable, and taking individually or in co-operation appropriate and necessary steps to conserve such species and their habitat.”
4. Article III(4) of CMS provides that

“Parties that are Range States of a migratory species listed in Appendix I shall endeavour:

a) to conserve and, where feasible and appropriate, restore those habitats of the species which are of importance in removing the species from danger of extinction;

....”
5. The Memorandum of Understanding on the Conservation of Migratory Sharks (Sharks MOU), includes strong mandates calling for the identification of critical habitats (including known aggregation, feeding and breeding sites, and migratory corridors) and their conservation to enhance the conservation status of species listed in Annex 1 of the Sharks MOU.
6. In 2022, Parties to the Convention on Biological Diversity (CBD) adopted the Kunming-Montreal Global Biodiversity Framework at their 15th Conference of the Parties. Through Target 3 Parties agreed to

“ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable

¹ Dulvy NK, Pacoureau N, Rigby CL, Pollom RA, Jabado RW, Ebert DA, Finucci B. *et al.* (2021) Overfishing drives over one-third of all sharks and rays toward a global extinction crisis. *Curr. Biol.* 31(21): 4773-4787. doi: 10.1016/j.cub.2021.08.062 <https://pubmed.ncbi.nlm.nih.gov/34492229/>

use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities including over their traditional territories.”

7. Area-based conservation can be an important management tool to safeguard biodiversity. Several approaches have been developed and implemented for identifying networks of globally important areas based on the delineation of sites or seascapes of importance for various elements of biodiversity (e.g., birds, marine mammals).

ISRA initiative

8. The initiative to identify Important Shark and Ray Areas (ISRAs)² is led by the Shark Specialist Group of the IUCN Species Survival Commission (IUCN SSC SSG). It is modelled on the successful example of identifying Important Marine Mammal Areas (IMMAs) developed by the IUCN Marine Mammal Protected Areas Task Force, supported by CMS Resolution 12.13. This Resolution established a precedent whereby the identification of taxon-specific “important areas” can support the attainment of the goal of protecting CMS-listed species and should be encouraged. Both ISRAs and IMMAs are based on guidance from other approaches for identifying sites or seascapes of biodiversity importance, including Important Bird and Biodiversity Areas (IBAs), Ecologically or Biologically Significant Marine Areas (EBSAs), and Key Biodiversity Areas (KBAs).

Criteria and process for the identification of ISRA

9. Four globally standardized scientific criteria, with seven sub-criteria, were developed, based on input collated during four expert workshops conducted in 2022, organized by the IUCN SSC SSG and the IUCN Ocean Team, with support from the IUCN Marine Mammal Protected Areas Task Force. Detailed information about these criteria and how those should be applied are provided in Annex 3 of this document and on the website of the initiative at: <https://sharkrayareas.org/isra>.
10. The ISRA Criteria provide a framework to assist in an independent, expert-based process to inform the identification and selection of areas that are critical for shark populations, and to identify discrete, three-dimensional portions of habitat important for one or more shark species, that have the potential to be delineated and managed for conservation. The ISRA Criteria can be applied to all environments where sharks occur (marine, estuarine, and freshwater) and consider the diversity of species, their complex behaviours and ecology, and biological needs. It is intended as a primary resource to inform the nomination of preliminary Areas of Interest (pAol) and development of candidate Important Shark and Ray Areas (cISRAs) prior to and during regional, expert-driven workshops.
11. The identification of ISRAs is undertaken on a region-by-region basis with 13 global regions identified. It is anticipated that one to two regions can be covered per year, with all global waters assessed by 2027. Throughout the identification process, the IUCN SSC SSG will engage with representatives from each region to ensure relevant experts are identified that have the experience and skills needed to propose ISRAs, collate and evaluate available data, and apply the evidence against the ISRA Criteria. Candidate ISRAs (cISRAs) identified by the workshop are subjected to review by an Independent Review Panel before ISRAs are displayed on an ISRA online e-Atlas. Ideally, re-appraisal of regions will take place every 10 years. In this time, both environmental

² <https://sharkrayareas.org/isra/>

changes (e.g., warming, species ranges), IUCN Red List status, and data availability mean that revisions to the regional ISRA configuration would be warranted.

Progress in implementation

12. The first ISRA workshop was held in hybrid mode (in person and online) in Bogotá, Colombia from 3–7 October 2022. The goal was to identify and delineate three-dimensional and discrete portions of habitat that are critical to shark populations, and that have the potential to be managed for conservation. The workshop covered ISRA Region 12 (the Central and South American Pacific (CSAP), from the tip of Baja California in Mexico to the south of Chile). This scientific collaboration amongst regional and global experts resulted in the identification of 65 ISRAs, five candidate ISRAs, and 11 Areas of Interest that are now mapped on the ISRA eAtlas (www.sharkrayareas.org/e-atlas/).
13. The second ISRA workshop was held in hybrid mode in Thessaloniki, Greece from 8–12 May 2023. The workshop covered ISRA Region 3, the Mediterranean and Black Seas. Candidate ISRAs proposed at the workshop will go through a peer review process before they are finalized in August 2023.
14. The third ISRA workshop is planned for September 2023 and will cover ISRA Region 7, the Western Indian Ocean. It is anticipated that areas delineated will be finalized by December 2023.

Endorsement by Sharks MOU Signatories

15. At the 4th Meeting of the Signatories to the Sharks MOU (MOS4), Signatories welcomed the Initiative and progress made by the IUCN SSC SSG in developing robust selection and review criteria for identifying ISRAs and acknowledged the criteria and identification process posted on the ISRA website (sharkrayareas.org) with minor changes. They further acknowledged that ISRAs are an advisory, expert-based classification that can be used as a valuable resource for the integration of shark, ray, and chimaera species into existing and future national, regional, and international conservation strategies.
16. Signatories included activities to support the implementation of the initiative in their Programme of Work (2023-2025) and agreed to, where possible, support and encourage the IUCN SSC SSG to advance these approaches in consultation with Signatories and Range States and to support the IUCN SSC SSG, as appropriate and as feasible, with the identification of ISRAs including sharing relevant information and expertise, and for example by providing data, where available.

Discussion and analysis

17. The ISRA initiative will contribute significantly to the implementation of several mandates under CMS, including Articles II(1) and III(4) of the Convention on Migratory Species and the CMS Sharks MOU. It aims to increase recognition of the habitat needs of sharks and rays, guide the development of area-based conservation initiatives, and contribute to mortality reduction and population recovery. By raising awareness of the importance of considering sharks and rays in marine spatial planning, it will provide guidance for the design and implementation of conservation measures that will reduce mortality and restore populations.
18. The anticipated outcome, a global map of identified ISRAs, will be instrumental to support Parties with identifying and prioritizing marine areas for conservation that are most critical for the survival of sharks and rays listed in CMS Appendices. This will be particularly important in light of the “30 by 30 target” an important goal of the Global

Biodiversity Framework aiming to effectively conserve and manage at least 30 percent of coastal and marine areas. The Secretariat, therefore, suggests supporting the initiative as feasible and appropriate through the Convention.

Recommended actions

19. The Conference of the Parties is recommended to:
 - a) adopt the draft Resolution contained in Annex 1 of this document;
 - b) adopt the draft Decisions contained in Annex 2 of this document;
 - c) note the criteria and process for the identification of ISRA contained in Annex 3 of this document.

DRAFT RESOLUTION

IMPORTANT SHARK AND RAY AREAS (ISRAs)

Alarmed that sharks, rays, and chimaeras are facing a biodiversity crisis with an estimated 37% of species threatened with extinction driven by overfishing,

Conscious that area-based conservation is essential to safeguard declining biodiversity, and concerned that sharks, rays, and chimaeras are overlooked by many national and international efforts to develop and apply area-based marine conservation and management measures such as the creation of marine protected areas and other forms of habitat protection,

Welcoming target 3 of the Kunming-Montreal Global Biodiversity Framework which aims to ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed.

Recalling the Memorandum of Understanding on the Conservation of Migratory Sharks (Sharks MOU) which calls in Art. 13 (f) to “Identify and conduct studies of shark migration, aggregation, critical habitats, ecology, behaviour and life stages, and, to the extent practicable, protect the sites”.

Recognizing that Important Shark and Ray Areas (ISRAs) are an advisory, expert-based classification applied to the world’s oceans, and relevant inland water bodies, consisting of discrete portions of habitat, important to shark, ray, and chimaera species, that have the potential to be delineated and managed for conservation.

Recalling CMS Resolution 12.13 *Important Marine Mammal Areas (IMMAs)* which amongst other things acknowledges the IMMAs criteria and identification process for CMS-listed marine mammals, requests Parties and invites Range States, Intergovernmental Organizations, and partners to identify specific areas where the identification of IMMAs could be particularly beneficial.

Welcoming the development of robust selection and review criteria for the identification of ISRAs by the IUCN SSC Shark Specialist Group (IUCN SSC SSG) and progress made in identifying ISRAs that will complement and contribute to the Convention on Biological Diversity (CBD) Ecologically or Biologically Significant Areas (EBSAs) and the IUCN Key Biodiversity Areas (KBAs).

*The Conference of the Parties to the
Convention on the Conservation of Migratory Species of Wild Animals*

1. *Acknowledges* the Important Shark and Ray Areas (ISRAs) criteria and identification process available as ISRA Guidance Document posted on the ISRA website (sharkrayareas.org) for CMS listed shark and rays;
2. *Requests* Parties and invites all Range States, intergovernmental organizations and partners to support with the identification of specific areas where the delineation of ISRAs could be particularly beneficial, for example through stimulating protected area

network design and connectivity, or addressing threats to sharks and rays more comprehensively;

3. *Recommends* that such work to identify specific areas engages the authorities of Parties in the spirit of transparency at an early stage;
4. *Invites* Parties, Range States, intergovernmental organizations and partners to request the support of the IUCN SSC SSG to advance these approaches;
5. *Also invites* the Convention on Biological Diversity and the International Maritime Organization to consider ISRAs as useful contributions for the determination of Ecologically or Biologically Significant Areas (EBSAs), Key Biodiversity Areas (KBAs) and other areas such as Particularly Sensitive Sea Areas (PSSA); and
6. *Encourages* Parties to make use of the identified Important Shark and Ray Areas (ISRAs) posted on the ISRA website (<https://sharkrayareas.org>) when designating marine protected areas, or generally for marine spatial planning processes, to support the conservation of CMS-listed sharks and rays.

DRAFT DECISIONS

IMPORTANT SHARK AND RAY AREAS (ISRAS)

Directed to Parties

14.AA Parties are requested to:

- a) prioritize identified ISRAs for conservation in light of target 3 of the Global Biodiversity Framework aiming to ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures.
- b) report to the Conference of Parties at its 15th meeting on the progress in implementing the decision.

Directed to Parties, intergovernmental and non-governmental organizations

14.BB Parties, intergovernmental and non-governmental organizations are encouraged to

- a) actively engage with and provide technical support to the IUCN SSC Shark Specialist Group for the process of identifying Important Shark and Ray Areas globally.

Directed to the Scientific Council

14.CC The Scientific Council is requested to:

- a) support the IUCN SSC Shark Specialist Group, in collaboration with the Sharks MOU Advisory Committee, with the identification of ISRAs for CMS-listed shark and ray species, through sharing information and data and contributing to ISRA expert workshops.

Directed to the Secretariat

14.DD The Secretariat shall:

- a) continue to liaise with the IUCN SSC Shark Specialist Group to promote the value of ISRAs for the conservation of CMS-listed sharks and rays;
- b) inform the Scientific Council and the Parties of newly identified ISRAs; and
- c) report to the Conference of Parties at its 15th meeting on the implementation of this Decision.

ANNEX 3

CRITERIA AND PROCESS FOR THE IDENTIFICATION OF IMPORTANT SHARK AND RAY AREAS (ISRA)

(Developed by the IUCN SSC Shark Specialist Group³)

1. Criteria for the identification of ISRA

Criterion A (Vulnerability): Criterion A refers to areas important to the persistence and recovery of threatened sharks. Threatened sharks are those listed on the IUCN Red List as Critically Endangered, Endangered, or Vulnerable (International Union for Conservation of Nature [IUCN], 2022). Under this criterion, ‘threatened’ could also refer to sharks at risk of extinction as reflected in other available assessments (e.g., national regulatory and legal frameworks that assess the extinction risk of species such as the United States Endangered Species Act [ESA] or the Australian Environment Protection and Biodiversity Conservation Act [EPBC]).

Criterion B (Range restricted): Criterion B refers to areas holding the regular and/or predictable presence of range restricted sharks, that are occupied year-round or seasonally.

Criterion C (Life-history): Criterion C refers to areas that are important to sharks for carrying out vital functions across their life-cycle (i.e., reproduction, feeding, resting, movement, or undefined aggregations). This includes five sub-criteria to encompass the wide variety and complexity of life-histories. In this work, species occurrence data are compiled, where available, to include information on age structure, reproductive status, sex, and seasonality.

Sub-criterion C (Reproductive areas): Reproductive areas are important for shark mating, birth, egg laying, or providing refuge or other advantages to the young (e.g., predator avoidance or access to food sources), and are therefore critical to reproductive success. These include sites which can be identified as ‘nursery areas’ that are important for newborns, young-of-the-year, or juveniles of viviparous species; or ‘egg nursery areas’ that are important for egg laying and development until hatching and the development of newborns and juveniles of oviparous species.

Sub-criterion C2 (Feeding areas): Feeding areas are important for shark nutrition at one or more life-cycle stages. Sub-criterion C2 relates to areas where sharks are known to derive nutrition, and that are supported by the regular and predictable occurrence of prey.

Sub-criterion C3 (Resting areas): Resting areas are important for sharks to conserve energy and are often related to environmental conditions or temporal factors. These are areas where an aggregation or assemblage of sharks spends time during daily activity cycles and which can be influenced by environmental conditions (e.g., tidal cycle) or temporal factors (e.g., time of day).

Sub-criterion C4 (Movement): This sub-criterion identifies areas used by sharks regularly or predictably during their movements, such as migrations, which contribute to the connectivity of important areas. Sub-criterion C4 addresses the predictable movement of sharks, aggregations, or assemblages from one place to another, often

³ Also available at: <https://sharkrayareas.org/>

related to a seasonal or vital function such as reproduction or feeding.

Sub-criterion C5 (Undefined aggregations): This sub-criterion identifies areas where an aggregation or assemblage of sharks regularly and/or predictably occurs, year-round or seasonally, but the function of the aggregation is currently unknown. Sub-criterion C5 refers to aggregations or assemblages of sharks in an area which engage in, or display a behavior that is known to occur, but is not (yet) attributed to a known vital function (e.g., reproduction, feeding, resting, or movement) or predator avoidance (e.g., schooling).

Criterion D (Special attributes): Criterion D refers to areas important for sharks considered for distinct biological, behavioral, or ecological attributes (unique or associated with a unique habitat type) or which support an important diversity of species. It consists of two sub-criteria related to distinctiveness and diversity.

Sub-criterion D1 (Distinctiveness): Sub-criterion D1 identifies areas where sharks display distinct biological, behavioral, or ecological characteristics. The variety of sharks, their unique features, and their adaptations could result in distinctive characteristics.

Sub-criterion D2 (Diversity): Sub-criterion D2 identifies areas that sustain an important diversity of sharks. These are areas that may host a high diversity of sharks (i.e., the diversity of the assemblage of shark species occurring is high or exceptional for that region) and are critical for the persistence of shark diversity.

2. ISRA identification process

ISRAs are identified through regional expert workshops. These are organized by the IUCN SSC Shark Specialist Group after consultation with its Regional Vice-Chairs. Workshop invitations are extended to regional members and non-members who have knowledge and expertise useful for the identification of ISRAs. Sources of information for consideration and assessment during each workshop are actively sought during an engagement period prior to each regional workshop and become part of the ISRA Inventory of Knowledge. Based on expert input, preliminary Areas of Interest (pAol) are examined for the regular or predictable presence of species to which the criteria can be applied. Qualifying or Supporting Species assessed against each of the ISRA Criteria within a pAol allow for a candidate Important Shark and Ray Area (cISRA) to be justified. Finally, after the workshop, each cISRA is subject to peer-review through an Independent Review Panel. This panel is composed of recognized shark experts who have not been involved in the regional workshops, but who have an in-depth understanding of the species, habitats, and ISRA Criteria (Notarbartolo di Sciara, 2021⁴).

⁴ Notarbartolo di Sciara, G. (2021) Towards an Important Shark and Ray Area (ISRA) process: implementation strategy (Report to IUCN Species Survival Commission Shark Specialist Group). Available at: <https://sharkrayareas.org/resources/meeting-workshop-reports/>.