

Important Shark and Ray Areas Regional Expert Workshop Report

ISRA WORKSHOP
REGION 12

3-7 OCTOBER
2022

BOGOTA,
COLOMBIA



CENTRAL AND SOUTH AMERICAN PACIFIC
March 2023



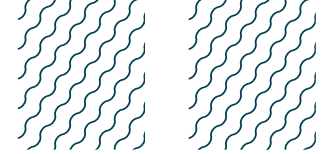
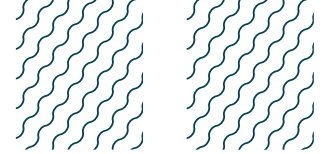


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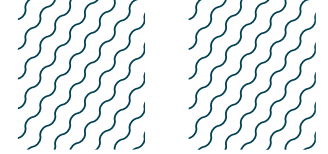
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ACRONYMS

AoI	Area(s) of Interest
CBD	Convention on Biological Diversity
CSAP	Central and South American Pacific
cISRA	candidate Important Shark and Ray Area(s)
EBSA	Ecologically or Biologically Significant Marine Area
EEZ	Exclusive Economic Zone
IMMA	Important Marine Mammal Area
IoK	Inventory of Knowledge
IRP	Independent Review Panel
IUCN	International Union for Conservation of Nature
ISRA	Important Shark and Ray Area(s)
KBA	Key Biodiversity Area
MPA	Marine Protected Area
OECM	Other Effective Area-based Conservation Measures
pAoI	preliminary Area(s) of Interest
SSG	Shark Specialist Group
SSC	Species Survival Commission



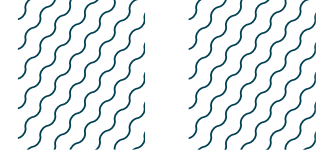
EXECUTIVE SUMMARY

The first Important Shark and Ray Areas (ISRA) regional expert 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 the survival of sharks, rays, and chimaeras, and that have the potential to be managed for conservation. The region covered was the Central and South American Pacific (CSAP), from the Gulf of California in Mexico to southern Chile.

In addition to the eight-person ISRA team coordinating the meeting, the workshop was attended by 55 experts, including in-person participants (n = 25), online participants (n = 26), and observers (n = 4). All the 11 Pacific Central and South American countries were represented: Chile (n = 4 representatives), Colombia (n = 10), Costa Rica (n = 2), Ecuador (n = 10), El Salvador (n = 3), Guatemala (n = 3), Honduras (n = 1), Mexico (n = 8), Nicaragua (n = 1), Panama (n = 3), and Peru (n = 5) (for the complete list of in-person and online participants and observers, see Annex II). Representatives of each country proposed areas they considered critical for the survival of sharks, rays, and chimaeras (hereafter ‘sharks’). In many cases, experts had experience working in multiple countries across the region and/or had already been working collaboratively through the International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC) Shark Specialist Group (SSG) network of members or various regional initiatives (e.g., MigraMar).

Prior to the workshop, the ISRA team worked closely with workshop participants to gather scientific evidence on the use of habitats by sharks, rays, and chimaeras in the region and worked on identifying preliminary Areas of Interest (pAol). Firstly, a Survey of Existing Knowledge was circulated via email to assess the level of knowledge by species across the region and subregions of the CSAP. It was recognised that there are substantial data gaps for sharks across the region, partly due to logistical challenges and a lack of funding for larger-scale surveys and other research - particularly in the high seas (areas beyond national jurisdiction). Secondly, the ISRA team contacted each country representative to work on gathering available information and collated 54 pAols supported by the application of the ISRA Criteria. When gathering information about each pAol, one key consideration was the existing spatial delineation of the 184 Key Biodiversity Areas (KBAs) from IUCN, 22 Ecologically or Biologically Significant Marine Areas (EBSAs) from the Convention on Biological Diversity (CBD), and the 194 Marine Protected Areas (MPAs) found within this region. By examining the pAols one by one during the workshop, the group merged some areas, rejected others, and proposed new ones based on the available science. The group then worked together to prepare candidate ISRA (cISRA) submissions, proposed boundaries, and detailed how each met the ISRA Criteria.

By the end of Day 4 of the workshop, 74 cISRA had been submitted and agreed on by consensus from all the participants. Five additional areas were identified as Areas of Interest (Aol) (Fig. 1). Qualifying and Supporting Species included a range of threatened species (e.g., the Critically Endangered Scalloped Hammerhead *Sphyrna lewini*) and Data Deficient species (e.g., Roughskin Eagle Ray *Aetomylaeus asperimus*). There was also a range of deepwater (e.g., Longnose Velvet Dogfish *Centroselachus crepidater*), pelagic (e.g., Pelagic Thresher *Alopias pelagicus*), coastal (e.g., Pacific Nurse Shark *Ginglymostoma unami*), and estuarine-inhabiting species (e.g., Largetooth Sawfish *Pristis pristis*) with enough data to satisfy the ISRA Criteria.



Following the workshop, the 74 cISRA proposals were reviewed and finalised by the authors, and sent to the Independent Review Panel (IRP). The IRP determined whether there was sufficient evidence to support the cISRA proposals and whether the ISRA Criteria were applied correctly. If a cISRA was approved after this peer review process, the boundaries and a summary of the supporting evidence for the ISRA was made available on the [ISRA eAtlas](#) and included in the online ISRA database. Geographic Information System (GIS) files of each area are available upon request. A summary description of Aols which do not have enough information to satisfy the criteria at present is also included on the eAtlas. These areas may warrant further investigation and potentially could be proposed as a cISRA in a future CSAP workshop if sufficient information is collated. Areas which remain as cISRA are also mapped on the ISRA eAtlas.

Information collected during the workshop and delineated areas are already contributing to other area-based conservation approaches. For example, the cISRA representing the Costa Rica Thermal Dome has been integrated into a proposal by the Important Marine Mammal Areas (IMMA) Task Force to consider this site within the Convention of Biological Diversity Ecologically and Biologically Significant Marine Areas (EBSA) at a workshop in November 2022. Furthermore, the Latin America Coordinator for the Key Biodiversity Areas (KBA) approach attended the meeting to provide information on the KBA process and determine which areas might meet the KBA criteria thresholds. Finally, the ISRA Team has received requests from various entities to provide the GIS datasets of the ISRA ahead of spatial planning exercises.

The CSAP workshop is the first in a sequence of ISRA regional expert workshops conducted by the ISRA team. This presented the first opportunity for experts to apply the ISRA process and collate knowledge on the most important areas contributing to the long-term survival of sharks.

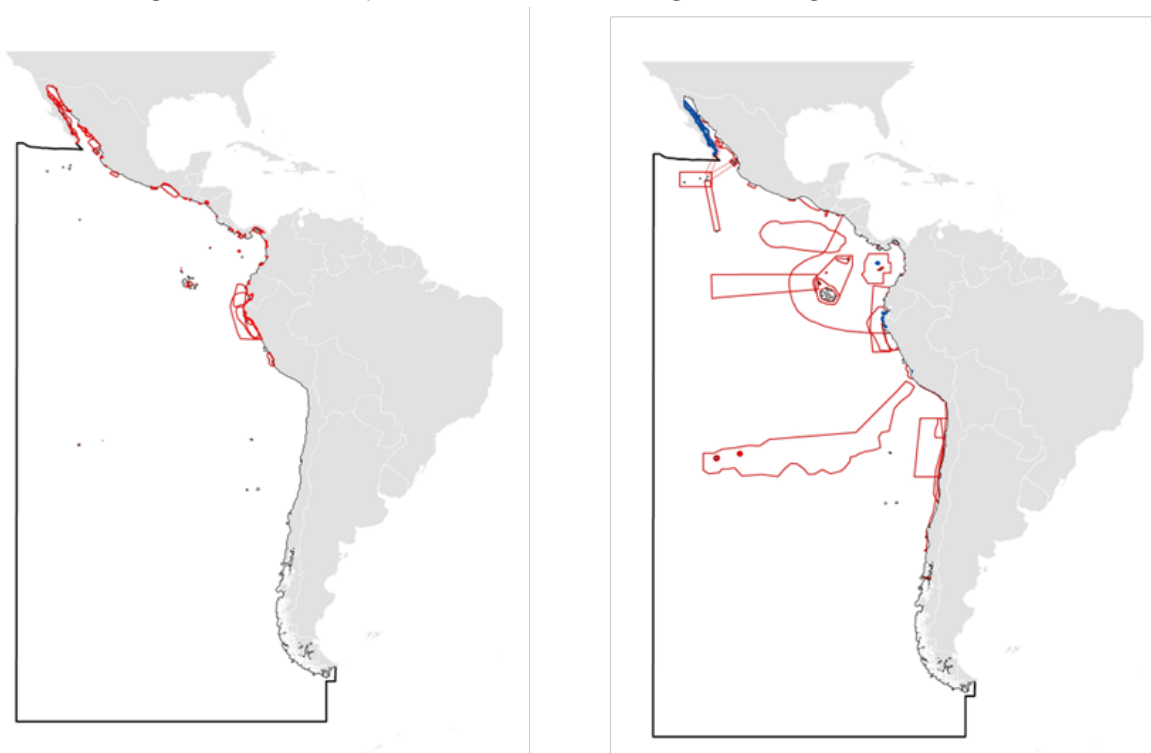


Fig. 1. Spatial representation of the regional expert workshop outcomes. Left: preliminary Areas of Interest (pAol) proposed in advance of the Central and South American Pacific workshop. Right: preliminary results of the regional expert workshop showing the 74 candidate ISRA (cISRA) in red, and five Areas of Interest (Aol) in blue (see Annex I for a complete list).

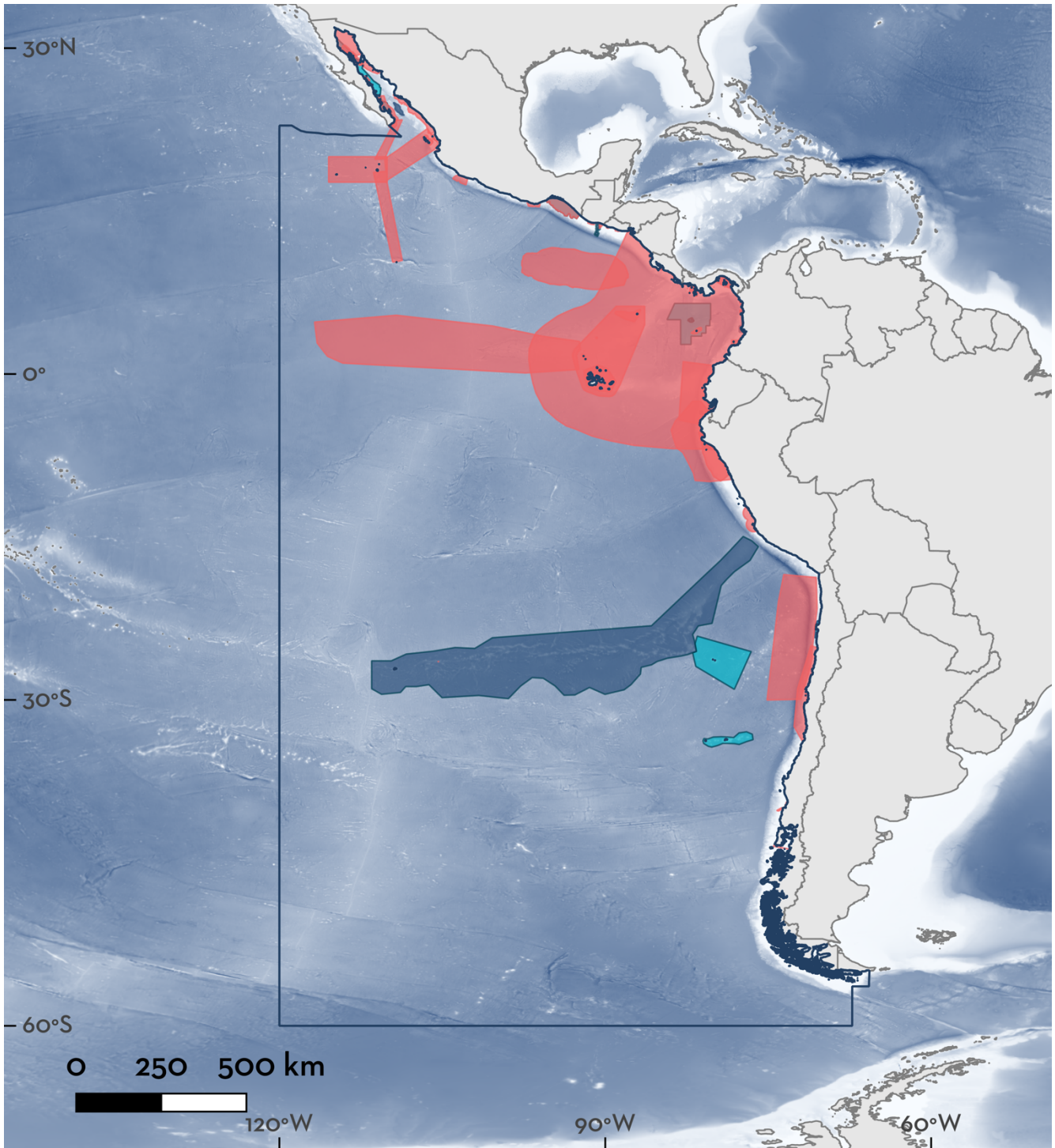
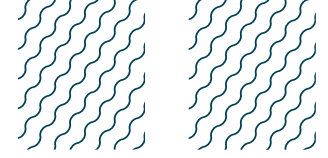
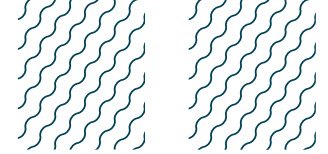


Fig. 2. Spatial representation of the areas approved by the Independent Review Panel highlighting Important Shark and Ray Areas (ISRA - red), candidate ISRAs (dark blue), and Areas of Interest (turquoise) in the Central and South American Pacific region.

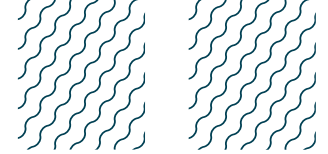


Acknowledgements

The Important Shark and Ray Areas project is funded by the Shark Conservation Fund, a philanthropic collaborative pooling expertise and resources to meet the threats facing the world's sharks and rays. The Shark Conservation Fund is a project of Rockefeller Philanthropy Advisors. We are grateful for their support. The regional expert workshop was coordinated and run by the ISRA team: Amanda Batlle Morera, Ryan Charles, Dr Emiliano Garcia-Rodriguez, Daniel Fernando, Adriana Gonzalez Pestana, Dr Rima Jabado, Dr Peter Kyne, Prof Giuseppe Notarbartolo di Sciara, and Dr Mark Priest. This report was written by Ryan Charles and reviewed by ISRA Team members.

Thanks are due to Mr Fabian Mauricio Caicedo Carrascal (Director, Marine, Coastal and Aquatic Resources - Ministry of Environment and Sustainable Development of the Government of Colombia), Dr Madhu Rao (Chair, IUCN World Commission on Protected Areas), Dr Carlos Polo-Silva (Advisory Committee member, Sharks Memorandum of Understanding under the Convention on the Conservation of Migratory Sharks [CMS]), Dr Oscar Sosa-Nishizaki (Regional Vice Chair, Central America and Caribbean Region, IUCN SSC Shark Specialist Group), Dr Mario Espinoza (Regional Vice Chair, Central America and Caribbean Region, IUCN SSC Shark Specialist Group), and Dr Cecilia Tobar (Latin America Coordinator for Key Biodiversity Areas) for their opening statements and presentations. We are also grateful to the Independent Review Panel (IRP) chaired by Prof Colin Simpfendorfer and composed of Dr Ana Martins, Dr Vanessa Jaiteh, and Dr Ryan Daly for providing valuable feedback that ensured the areas delineated were based on the best available science.

Our deepest thanks go to all the in-person and online participants as well as other contributors to the ISRA process.



INTRODUCTION AND BACKGROUND

The ISRA Initiative

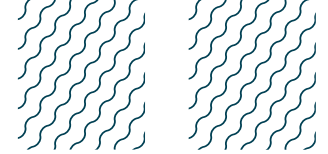
The Important Shark and Ray Area (ISRA) initiative, developed by the International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC) Shark Specialist Group (SSG), is a novel approach developed to support area-based conservation for sharks, rays and chimaeras (hereafter referred to as 'sharks'). This approach is modelled after the Important Marine Mammal Area (IMMA) initiative, which is used to support the conservation of marine mammals (for more information, see *'The Important Marine Mammal Area network: a tool for systematic spatial planning in response to the marine mammal habitat conservation crisis'*). By identifying three-dimensional, discrete, portions of habitat critical to the survival of sharks, the ISRA initiative intends to facilitate better representation of this species group in national, regional, and international conservation efforts.

The identification of ISRAs involves the application of scientific criteria that were developed by a group of experts (for more information, refer to *'Putting sharks on the map: A global standard for improving shark area-based conservation'*). The implementation of the ISRA process is consistent between regions and intended to contribute significantly to the broader global conservation agenda. To do this, ISRAs will inform other area-based conservation initiatives on the habitat use of sharks and highlight why specific areas are critical to their survival and potential recovery. Although the ISRA initiative is a stand-alone approach, it can be used in conjunction with other approaches to protect marine biodiversity through processes such as marine spatial planning. Information and areas delineated through the ISRA process can be included in proposals for other area-based conservation approaches. This includes Ecologically and Biologically Significant Marine Areas (EBSA) proposals under the Convention on Biological Diversity (CBD), which seek to facilitate the conservation of specific areas by promoting awareness of marine biodiversity. ISRAs could also support the creation of Key Biodiversity Areas (KBAs) identified through the IUCN KBA Identification Standard.

The Central and South American Pacific regional expert workshop is the first of thirteen workshops held to identify a worldwide network of ISRAs to enhance the prospects for shark conservation. The ISRA process will be applied within each of these regions with upcoming workshops focused on Polar Waters, European Atlantic, Mediterranean & Black Seas, North American and Caribbean Atlantic, South American Atlantic, African Atlantic, Western Indian Ocean, Australian and Southeast Indian Ocean, Asia, New Zealand and Pacific Islands, North American Pacific, and South American Inland Waters.

Each regional expert workshop is part of a four-stage process that works toward delineating ISRA:

STAGE 1 - Nomination of preliminary Areas of Interest (pAol): Prior to the regional expert workshop, experts are contacted and supplied with various resources to assist in the proposal of pAols. Resources include submission templates alongside documents within an Inventory of Knowledge (IoK) which includes an overview of the *Geographic Ranges of Sharks, Rays, and Chimaeras* within that particular region, a *Summary of Existing Spatial Data* (including key biological and geographical features alongside maps of EBSAs, KBAs, and MPAs found within the region), and a *Regional Species Checklist*. To facilitate the drafting and submission process of pAol during the workshop, experts are presented with a report which collates pAol for each breakout group (e.g., country). Experts are also given the opportunity to propose pAol in the first few days of the workshop. To propose these areas, at least one of the four ISRA Criteria or



associated sub-criteria must be met. However, it is important to note that the exception is if a species meets ISRA Criterion A, it must meet another criterion to be considered a Qualifying Species.

STAGE 2 - Development of candidate ISRA (cISRA)/Area of Interest (Aol): During the workshop, experts are invited to collaborate to develop robust proposals. Each participant contributes their regional knowledge to the development of pAol. Then, after all participants have reviewed the list of pAol, one by one, the pAol may be advanced as cISRA, or retained as Aol. The cISRA proposals are further developed by providing additional evidence to support the proposal, refining the area boundaries, and group discussions involving the standardisation of cISRA names. Ultimately, this is the opportunity for experts to collate knowledge and apply the ISRA Criteria with the assistance of the ISRA team.

STAGE 3 - cISRA Review Process: After a list of cISRA for the region has been agreed on by the workshop participants, the proposals are sent to an Independent Review Panel (IRP) to be reviewed. The outcome of the review will be accepted ISRA, cISRA, Aol, or discarded areas.

STAGE 4 - ISRA Delivery, Reporting, and Publication: The ISRA, cISRA, and Aol are mapped on the ISRA eAtlas, accompanied with a factsheet, and made publicly available on the ISRA website. A regional expert workshop report and regional compendium are also made publicly available on the ISRA website.

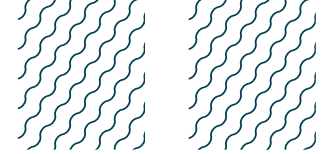
Summary Agenda of the ISRA Regional Expert Workshop

The CSAP workshop was convened as a hybrid meeting with plenary sessions broadcast live to pre-registered participants connected through Zoom. At the workshop, break-out groups were created to allow for country representation as well as transnational discussions.

The general outline of the CSAP workshop program (Annex III) consisted of:

- An introduction to the ISRA regional expert workshop, including presentations from representatives of the local government (i.e., Colombia), the IUCN, and the KBA initiative. The workshop logistics, scope, objectives, and structure were also explained;
- Multiple presentations explaining the ISRA process, criteria, and available ISRA documents including; the ISRA Guidance Document, Inventory of Knowledge, mapping instructions, Existing Knowledge Survey results, the list of the pAol submitted prior to the meeting, and parallels with the IMMA process;
- A plenary session to present and discuss the pAol and to organise the breakout groups;
- Multiple working group sessions to draft and select pAol proposals, and the subsequent cISRA to be proposed;
- A plenary to assess the cISRA list, agree on cISRA, and revise the Aol list (including a standardised naming process); and
- A closing plenary to adopt the results of the workshop, and to discuss regional coordination and implementation of ISRA.



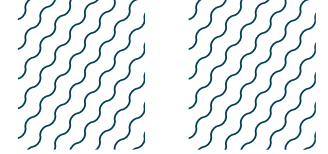


Regional Expert Workshop Resources

Participants were provided with multiple resources to support and facilitate the running of the workshop.

The ISRA [Guidance Document](#) was provided to offer details on each stage of the ISRA process including the selection criteria and examples of how they could be applied. The ISRA team also produced a regional **IoK** which included documents such as the (i) ‘*Geographic Range of Sharks, Rays and Chimaeras*’ that collated information on the distribution of all species on the regional checklist, associated depth ranges, and IUCN Red List of Threatened Species status, and (ii) ‘*Summary of Existing Spatial Data*’ which collated information on key geographic and oceanographic features, alongside maps of pre-existing areas delineated by other approaches e.g., EBSAs, KBAs, and Marine Protected Areas (MPAs). [Video tutorials](#) were also available to visually guide participants through the process. Participants also had access to **country-specific pAol reports** which collated proposals that were submitted prior to the workshop.

Part of the ISRA process involves defining the boundary of the proposed area. The ISRA team provided instructions on how best to define area boundaries. This requires the area to be mapped by the participant, with technical support from the ISRA team. For this process, it was advised to use common geospatial data which can be easily accessed and edited, i.e., ESRI Shapefiles (.shp) and Keyhole Markup Language (.kml) by using the mapping programs [QGIS](#) and [Google Earth](#). This also allowed for areas to be mapped and presented to the participants before being advanced to the next stage. Finally, a submission template form for pAol and cISRA was provided. This could be shared and edited online within breakout groups to facilitate collaboration.



REPORT OF THE REGIONAL EXPERT WORKSHOP

Workshop Day 1 | 3 October 2022

The first day of the workshop began with an introduction to the ISRA initiative and the workshop participants. During the introductory session, there were presentations by Daniel Fernando (Regional Vice-Chair, Indian Ocean Region, IUCN SSC SSG), Dr Rima Jabado (Chair of the IUCN SSC SSG), Prof Giuseppe Notarbartolo di Sciara (co-chair of the IUCN Important Marine Mammal Areas Task Force), Mr Fabian Mauricio Caicedo Carrascal (Director, Marine, Coastal and Aquatic Resources - Ministry of Environment and Sustainable Development of the Government of Colombia), Dr Madhu Rao (Chair of the IUCN World Commission on Protected Areas), Dr Carlos Polo-Silva (Advisory Committee member, Sharks Memorandum of Understanding under the Convention on the Conservation of Migratory Sharks [CMS]), Dr Oscar Sosa-Nishizaki (Regional Vice Chair, Central America and Caribbean Region, IUCN SSC Shark SSG), Dr Mario Espinoza (Regional Vice Chair, Central America and Caribbean Region, IUCN SSC SSG), and Dr Cecilia Tobar (Latin America Coordinator for Key Biodiversity Areas).

Workshop presentations highlighted how beginning to delineate ISRA now, and in the CSAP region, is a timely response to the crisis that sharks are experiencing, and the historic pledges made by countries to achieve the CBD target of designating 30% of Exclusive Economic Zones (EEZs) as MPAs by 2030 (often referred to as the 30 x 30 target). The ISRA initiative was positioned in the context of other area-based management measures including IMMAs, Other Effective Area-based Conservation Measures (OECMs), and KBAs. It was stressed that the biocentric nature of the ISRA approach will ensure its impact. The workshop agenda was adopted.

Presentations led by some of the ISRA team (Ryan Charles, Dr Emiliano Garcia-Rodriguez, Daniel Fernando, Adriana Gonzalez Pestana, Dr Rima Jabado, Dr Peter Kyne, and Dr Mark Priest) focused on the workshop logistics and resources available to participants to facilitate workshop efforts. The history of the ISRA process, and its rationale and scope, was emphasised in the context of implementing solutions where other management approaches such as MPAs can be effective.

Discussions around the ISRA process began, allowing for various clarifications including (i) using the best data available to avoid further delay in shark conservation efforts, (ii) ISRA as a stand-alone approach that can be used as a layer alongside other approaches, or as a guide for others including EBSAs, KBAs, and MPAs, (iii) the ISRA Criteria including discussions on shark movement and diversity, and (iv) how the workshop outputs will highlight data/knowledge gaps, including the results of the Survey of Existing Knowledge. Workshop participants were introduced to the breakout team leaders and began discussing the 54 pAoI which were submitted prior to the workshop (Fig. 3).

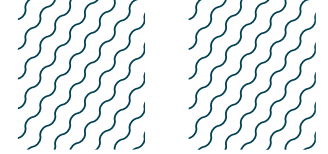


Fig. 3. The 54 preliminary Areas of Interest (pAol) submitted in advance of the Central and South American Pacific workshop.

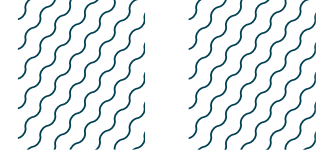
Workshop Day 2 | 4 October 2022

The primary focus of the day was to draft new pAol proposals which had not been submitted before this workshop. This would ensure that there was enough time for countries to develop pAol submissions in a timely manner for their progression to cISRA/Aol. The total number of pAol had risen to 62 and workshop participants continued drafting. To facilitate this, each breakout group considered the MPAs and EBSAs which are found within the region. The value of this was in highlighting the need to identify MPAs which did include sharks in their design and/or implementation, and capturing relevant information. Despite this being only relevant to a small number of MPAs, participants were encouraged to extract and include relevant information in existing pAol submissions and highlight other areas for future research.

Workshop Day 3 | 5 October 2022

At the start of workshop day 3, 76 pAol were being drafted. A 'nested' approach to defining and proposing pAol was presented to the participants. In some cases, the approach of multiple small areas within one submission best allows for the ISRA process to be applied effectively and appropriately in terms of management potential. This is because large areas could potentially





lose precision when multiple shark species are using similar habitats for different purposes. Smaller areas can still be found within a larger pAol which have sufficient connectivity data. This example of fine-scale mapping shark activity may benefit the uptake of ISRA into management strategies, however, it was clarified that the focus should remain on confidently defining boundaries based on the data available on known habitat use, rather than on potential usages of them. The use of modelling data was suggested to be used to fill data gaps, however, those information sources, and others such as fisheries data, may only indicate species presence while the ISRA process requires data on regular and/or predictable occurrence.

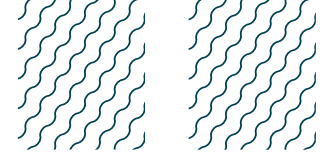
Some workshop participants were set to propose transnational pAol, for example, based on the movement of migratory species. A dedicated discussion started on how best to define these boundaries, which emphasises how this process should not be influenced by human-defined boundaries within the ocean; pAol should be defined based on the biological and ecological aspects of sharks. However, the difficulty in defining areas in the high seas was highlighted. With an additional focus on migratory movements, participants continued to refine boundaries based on tagging and telemetry data, ensuring consideration of any limitations of study methodologies to produce accurate pAol boundaries.

The running total of the pAol proposed was presented to the participants. The next steps were also outlined: standardisation of names, refinement of boundaries, the transition of pAol to cISRA proposals, and review of submissions post-workshop.

Before the final list of pAol was agreed upon, there was a conversation dedicated to MPAs found within the region. This conversation highlighted how the level and nature of protection are not consistent between areas. Further, there are differences between the boundary-drawing process of MPAs and ISRA. For example, in Chile there is an MPA whose boundary was marked to avoid fishing activity. A map showing the pAol and the MPAs displayed how information had been collated on potentially important areas which did not currently overlap with MPAs. It was discussed that for this region, MPAs were not typically designed to inherently protect sharks, highlighting the differences and necessity of the ISRA initiative to provide further guidance to spatial conservation approaches.

Workshop Day 4 | 6 October 2022

At the start of the workshop day, 92 pAol proposals were being drafted as cISRA submissions. After presenting these to the participants, they had the opportunity to merge pAols depending on whether there was evidence of overlap of species and habitat use and or habitat type within a sensible spatial proximity. The pAol names were sequentially standardised in a manner that was accurate yet avoided confusion (i.e., unique, simple, and specific names). The use of English names as a standard was highlighted as important in the broader global scope of the ISRA process. Further, pAol names would not include species name(s) or habitat-use, as to avoid the areas' importance to other species being overlooked. With the adoption of the pAol name and boundaries, the majority of the proposals were agreed to as cISRA. Participants were encouraged to refine the boundaries of their submissions. As ISRA are three-dimensional portions of habitat, there was a focus on accurately defining the depth of each cISRA. The proposed depth range would seek to capture the habitat use of all the Qualifying Species in the cISRA.



Workshop Day 5 | 7 October 2022

On the final day of the workshop, participants continued to finalise cISRA proposals. There was more focus on adding details to pre-existing drafts, including expanding on how Qualifying Species satisfied the ISRA Criteria, with habitat information. Participants were also encouraged to consider if there was information available on habitat use by less-studied species within the cISRA they were proposing. Prior to the close of the workshop, there was an additional opportunity for all participants to review the cISRA and Aol submissions and titles. After these were agreed upon, a map of cISRA and Aol was presented. In sum, 74 cISRA and five Aol were submitted for consideration by the IRP (Fig. 4).

Upon conclusion of the workshop, there were some closing words by participants. This included shared thanks and appreciation for the effort which was invested into the process. Discussions also focused on the next steps: whether a cISRA is accepted as an ISRA, remains an Aol, or is discarded. Here the role of the Regional Vice Chairs to support the implementation of the ISRA initiative was highlighted, though there was strong encouragement for the broader participant group to increase awareness of the ISRA initiative within their respective roles in various regional institutions and organisations.

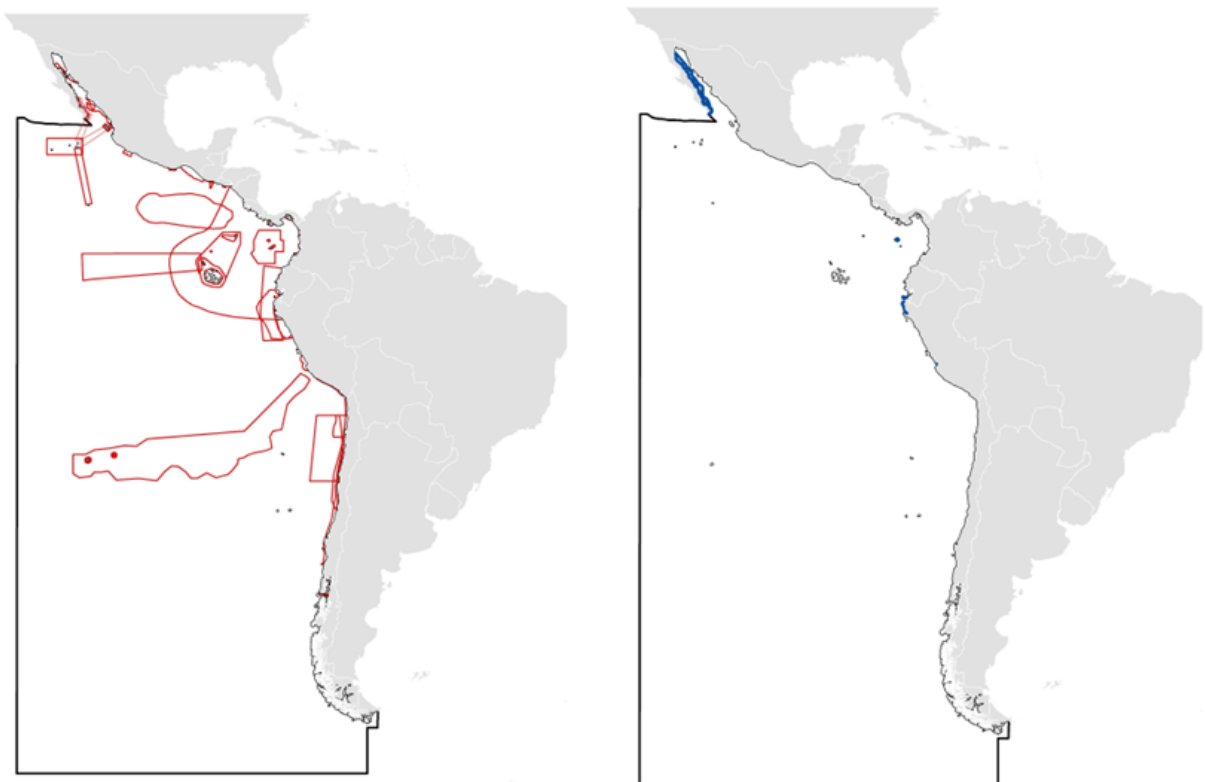
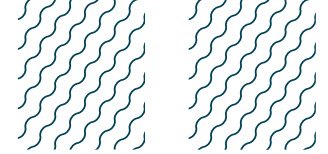


Fig. 4. Map summary showing 74 candidate ISRA (cISRA) in red on the left, and five areas of interest (Aol) in blue on the right, going forward for review.



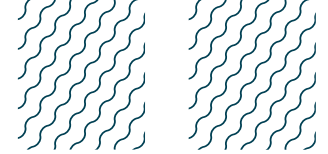
ANNEXES

ANNEX I - LIST OF cISRA AND AoI SELECTED BY WORKSHOP PARTICIPANTS

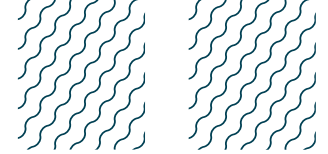
From a total of 92 pAoI submissions, 74 candidate Important Shark and Ray Areas (cISRA) were identified by the experts attending the ISRA regional expert workshop for the Central and South American Pacific. The 74 submissions for ISRA status (listed below) were prepared for review by the IRP. In addition, a total of five AoI were identified. We note that after peer review, the boundaries and names may have changed to reflect comments and suggestions from the IRP. The accepted ISRA, cISRA, and AoI and a summary of the supporting rationale is available via the ISRA eAtlas and other publications available on the ISRA website.

The details of the submissions, alongside the IRP outcome, are as follows (*in alphabetical order by location*):

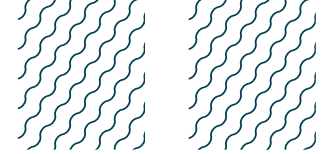
Jurisdiction (number of submissions)	Proposal name	Submission type	Final Status
International waters (1)	Pacific Equatorial Front	cISRA	ISRA
Chile (8)	Mejillones Peninsula and its Bays	cISRA	AoI
	Arica-Atacama	cISRA	ISRA
	Atacama-Valparaíso and Los Ríos	cISRA	ISRA
	Chiloé	cISRA	ISRA
	Rapa Nui	cISRA	cISRA
	Salas y Gómez Island/Motu Motiro Hiva	cISRA	ISRA
	Salas y Gómez and Nazca Ridge	cISRA	cISRA
	Chilean Humboldt Kelp Forest	cISRA	ISRA
Colombia (5)	Naya-Sanquianga	cISRA	ISRA
	Tribugá Gulf	cISRA	ISRA
	Malpelo Ridge	cISRA	ISRA
	Solano Bay	cISRA	ISRA
	Baudó-Málaga	cISRA	cISRA
Costa Rica (11)	Cocos Island	cISRA	Discarded
	Golfo Dulce	cISRA	ISRA
	Caño Island	cISRA	ISRA
	Santa Elena Gulf	cISRA	ISRA
	Térraba-Sierpe	cISRA	ISRA
	Costa Rica Thermal Dome	cISRA	ISRA
	Costa Rica-Cabo Blanco	cISRA	ISRA
	Gulf of Nicoya Mouth	cISRA	ISRA
	Tárcoles	cISRA	ISRA



Jurisdiction (number of submissions)	Proposal name	Submission type	Final Status
	Cocos Island and Seamounts	cISRA	ISRA
	Coyote-Bongo	cISRA	ISRA
Ecuador (8)	Puerto Cabuyal	cISRA	ISRA
	Northern Galápagos Hydrothermal Vents	cISRA	ISRA
	Galápagos Platform	cISRA	ISRA
	Isla de la Plata	cISRA	ISRA
	Galápagos Nursery Complex	cISRA	ISRA
	Darwin-Wolf	cISRA	ISRA
	Galápagos Marine Reserve	cISRA	ISRA
	Paramount Seamount	cISRA	ISRA
El Salvador (2)	Jaltepeque	cISRA	ISRA
	Los Cóbanos - Acajutla	cISRA	ISRA
France (1)	Clipperton	cISRA	ISRA
Guatemala (4)	Tiquisate-Sipacate	cISRA	ISRA
	Guatemala Las Lisas-Hawaii	cISRA	ISRA
	Guatemala San José Canyon	cISRA	cISRA
	Champerico	Aol	Aol
Mexico (n = 19)	Banderas Bay	cISRA	ISRA
	Islas Marías Archipelago	cISRA	ISRA
	Bahía de los Angeles	cISRA	ISRA
	Navidad Bay	cISRA	ISRA
	Michoacán Coast	cISRA	ISRA
	Mesopelagic Northern Gulf of California	cISRA	ISRA
	Sinaloa Coastal Area	cISRA	ISRA
	Costa Chica of Oaxaca	cISRA	ISRA
	La Paz Bay	cISRA	ISRA
	Central Sonora Coast	cISRA	ISRA
	Northern Gulf of California	cISRA	ISRA
	Revillagigedo Archipelago	cISRA	ISRA
	Nayarit Central Coast	cISRA	ISRA
	Cabo San Lucas	cISRA	ISRA
	Cabo Pulmo	cISRA	ISRA
	Mulegé - Santa Rosalía	cISRA	ISRA
	Migration Corridor Loreto - Cabo Pulmo	cISRA	ISRA
Pescador Basin	cISRA	cISRA	
Western Gulf of California	Aol	Aol	
Nicaragua (n = 1)	Las Peñitas-Poneloya	cISRA	ISRA
Panama (n = 6)	Gulf of Montijo	cISRA	ISRA
	Gulf of Chiriquí	cISRA	ISRA
	Northern Gulf of Panama	cISRA	ISRA
	Punta Chame and Panama Bay	cISRA	ISRA
	Panama Muertos Bay	cISRA	ISRA
	Gulf of San Miguel and Tuira River	cISRA	ISRA



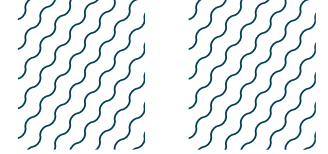
Jurisdiction (number of submissions)	Proposal name	Submission type	Final Status
Peru (n = 7)	Coastal Northern Humboldt Current	cISRA	ISRA
	Humboldt Current and Transition Zone	cISRA	ISRA
	Central Peru Major Upwelling System	cISRA	ISRA
	Peruvian Humboldt Kelp Forest	AoI	AoI
	Peru Virrilá Estuary	AoI	AoI
	Peru Artificial Infrastructures	AoI	AoI
	Banco de Máncora	AoI	AoI
Transnational (n = 9)			
Peru	Peruvian Humboldt Current Kelp Forest	cISRA	AoI
Chile	Peruvian Humboldt Kelp Forest	cISRA	ISRA
Colombia; Panama	Coiba-Malpelo Swimway	cISRA	AoI
Colombia; Panama	Navegador Seamount	AoI	AoI
Colombia; Costa Rica; Ecuador; Nicaragua; Panama; Peru	ETP Marine Corridor	cISRA	ISRA
Costa Rica; Ecuador	Cocos-Galápagos Swimway	cISRA	ISRA
Ecuador; Peru	Ecuador-Peru Shelf Break	cISRA	ISRA
El Salvador; Honduras; Nicaragua	Gulf of Fonseca	cISRA	ISRA
Guatemala; Mexico	Gulf of Tehuantepec	cISRA	ISRA
Guatemala; Mexico	Migration Corridor Gulf of California-Revillagigedo-	cISRA	ISRA



ANNEX II - LIST OF PARTICIPANTS

In-person participants (in alphabetical order)

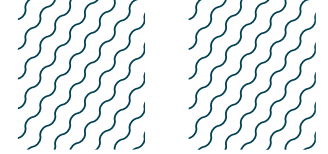
First Name	Surname	Affiliation	Country
Joanna	Alfaro Shigueto	Pro-Delphinus / Universidad Científica del Sur	Peru
Cristopher	Avalos Castillo	Centro de Conservación Marina AGHN	Guatemala
Heins	Bent	Ministerio de Ambiente	Colombia
Andres	Casamac	Ministerio de Ambiente	Colombia
Elpis J.	Chávez Calderon	Saving Our Sharks	Costa Rica
Mario	Espinoza	Universidad de Costa Rica / MigraMar	Costa Rica
Eduardo	Espinoza	Galápagos National Park Services	Ecuador
Felipe	Galvan	Centro Interdisciplinario de Ciencias Marinas del Instituto Politecnico Nacional (CICIMAR-IPN)	Mexico
Ana	Hacohen-Domené	Universidad del Valle de Guatemala	Guatemala
Alex	Hearn	Universidad San Francisco de Quito / MigraMar	Ecuador
Felipe	Ladino	Fundacion Malpelo	Colombia
Frida	Lara Lizardi	Orgcas / MigraMar	Mexico
Carmen	Lopez Anaya	Ministerio de Ambiente	Colombia
Paola	Mejia Falla	Fundación Squalus / Wildlife Conservation Society	Colombia
Jorge	Morales Saldaña	Smithsonian Tropical Research Institute	Panama
Naiti	Morales Serrano	Ecology and Sustainable Management of Oceanic Islands (ESMOI)	Chile
Andres Felipe	Navia Lopez	Fundación Squalus	Colombia
Cesar	Penaherrera-Palma	MigraMar	Ecuador
Francisco	Polanco-Vásquez	Centro Interdisciplinario de Ciencias Marinas del Instituto Politecnico Nacional (CICIMAR-IPN)	Guatemala



First Name	Surname	Affiliation	Country
Yehudi	Rodríguez-Arriatti	Universidad Maritima de Panama	Panama
Salvador	Siu Navarro	Inter-American Tropical Tuna Commission	El Salvador
Oscar	Sosa Nishizaki	Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE)	Mexico
Jenifer	Suarez	Galápagos National Park Services	Ecuador
Javier	Tovar Avila	National Institute of Fisheries and Aquaculture of Mexico (INAPESCSA)	Mexico
Ximena	Velez-Zuazo	Smithsonian Institution	Peru

Online participants *(in alphabetical order)*

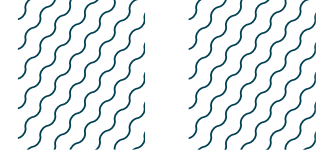
First Name	Surname	Affiliation	Country
Enzo	Acuña	Universidad Católica del Norte	Chile
Montse	Amores	Ocean Blue Tree / National Institute of Biodiversity Ecuador / Secretariat of Higher Education, Science, Technology and Innovation Ecuador	Ecuador
Ely	Augustinus	Bay Islands Conservation Association	Honduras
José Enrique	Barraza Sandoval	Gavidia University	El Salvador
Sandra	Bessudo	Fundacion Malpelo / MigraMar	Colombia
Carlos	Bustamante	Universidad de Antofagasta	Chile
Mariano	Cabanillas	Planeta Oceano	Peru
Diego	Cardeñosa	Florida International University	Colombia
Juan Camilo	Cubillos Moreno	University of Oldenburg in Germany	Colombia
Karla	Garcés García	Universidad Veracruzana	Mexico
José Alberto	González Leiva	Instituto para el Crecimiento Sostenible de la Empresa	El Salvador
Sofia	Green	Galapagos Whale Shark Project	Ecuador
Michel	Guerrero	Marine Megafauna foundation	Ecuador



First Name	Surname	Affiliation	Country
Grettel	Hernandez	Universidad Nacional Autónoma de Nicaragua, UNAN-León	Nicaragua
Maximiliano	Hirschfeld	James Cook University / Galapagos Science Center	Ecuador
Angel	Javier Vega	Universidad de Panamá - Sede Veraguas	Panama
James	Ketchum	Pelagios Kakunja - MigraMar	Mexico
Rossana	Maguiño	ecOceanica	Peru
Fernando	Márquez-Farías	Universidad Autonoma de Sinaloa	Mexico
Alejandra	Mendoza	ecOceanica	Peru
Jessica Johanna	Moreira García	MigraMar	Ecuador
Diana	Pazmiño	Universidad San Francisco de Quito	Ecuador
Kevin	Reyes	Ministerio del Ambiente, Agua y Transición Ecológica, Ecuador	Ecuador
Luz Erandi	Saldaña Ruiz	Ensenada Center for Scientific Research and Higher Education	Mexico
Carolina	Vargas-Caro	Universidad de Antofagasta	Chile
Melany	Villate-Moreno	Fundación MarAdentro	Colombia

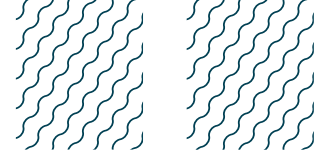
Observers *(in alphabetical order)*

First Name	Surname	Affiliation	Country
Brit	Finucci	National Institute of Water and Atmospheric Research (NIWA)	New Zealand
Shane	Griffiths	Inter-American Tropical Tuna Commission (IATTC)	United States
Chelsea	Stein	IUCN SSC SSG	United States
Cecilia	Tobar	BirdLife International	Ecuador



ISRA Team (in alphabetical order)

First Name	Surname	Affiliation	Country
Amanda	Batlle Morera	IUCN SSC SSG	Spain
Ryan	Charles	IUCN SSC SSG	United Kingdom
Daniel	Fernando	Blue Resources Trust; IUCN SSC SSG	Sri Lanka
Emiliano	Garcia-Rodriguez	IUCN SSC SSG	Mexico
Adriana	Gonzalez-Pestana	Universidad Científica del Sur; IUCN SSC SSG	Peru
Rima	Jabado	Elasmo Project; IUCN SSC SSG	United Arab Emirates
Peter	Kyne	Charles Darwin University; IUCN SSC SSG	Australia
Giuseppe	Notarbartolo di Sciara	IUCN MPA Task Force; IUCN SSC SSG	Italy
Mark	Priest	IUCN SSC SSG	Australia



ANNEX III - WORKSHOP AGENDA
See full document below.

WORKSHOP AGENDA

CENTRAL AND SOUTH AMERICAN PACIFIC REGION



— ISRA WORKSHOP
REGION 12 —
— 3-7 OCTOBER
2022 —
— BOGOTÁ,
COLOMBIA —
—

*Hotel El Dorado Bogota, Cl. 95 #13-66
Tumaco Room, 7th Floor*

Sunday, 2nd October 2022

All day	Arrival of workshop participants.
19:00 - 21:00	Informal dinner @ Restaurante Origen (1 st floor)

DAY 1 | Monday, 3rd October 2022

TIME		
08:30 - 09:00	Registration	
	<p>Welcome and introduction to the ISRA Central and South American Pacific Regional Workshop</p>	
	Dr Rima Jabado	<p>Deputy Chair IUCN Species Survival Commission (SSC)</p> <p>Chair IUCN SSC Shark Specialist Group</p>
	Dr Giuseppe Notarbartolo di Sciara	Co-Chair Important Marine Mammal Areas Taskforce
09:00 - 09:45	Representative from the Ministry TBD	Ministry of Environment and Sustainable Development of the Government of Colombia
	Dr Madhu Rao	Chair IUCN World Commission on Protected Areas
	Dr Carlos Polo-Silva	Appointed Advisory Member - South, Central America and the Caribbean Sharks Memorandum of Understanding on the Conservation of Migratory Sharks
	Dr Oscar Sosa-Nishizaki	Regional Vice-Chairs IUCN SSC Shark Specialist Group Latin America and Caribbean Region
	Dr Mario Espinoza	
	Dr Cecilia Tobar	Regional Coordinator - Latin America Key Biodiversity Areas
09:45 - 10.00	PARTICIPANT INTRODUCTIONS	
TIME	AGENDA ITEM	SPEAKER(S)/FACILITATOR(S)
10.00 - 10.10	<p>Workshop logistics</p> <ul style="list-style-type: none"> Daily schedule 	Daniel Fernando

	<ul style="list-style-type: none"> • Reimbursements • Workshop rules • Adoption of the agenda 	
10:10 – 10:30	Workshop scope, objectives, and structure	Dr Rima Jabado
10:30 – 11:00	Break	
11:00 – 11:10	Putting sharks on the map - what are ISRA?	Dr Rima Jabado
11:10 – 11:20	ISRA Criteria and identification process	Dr Peter Kyne
11:20 – 11:30	Inventory of knowledge - Species Geographic Ranges and Existing Spatial Data	Ryan Charles
11:30 – 11:40	References and documents	Adriana Gonzales Pestana
11:40 – 11:50	Mapping instructions and workshop process	Dr Emiliano Garcia-Rodriguez
11:50 – 12:00	Report on Existing Knowledge Survey	Dr Mark Priest
12:00 – 12:30	Preliminary Areas of Interest (pAol)	Dr Peter Kyne
12:30 – 13:00	Q&A	All
13:00 – 14:15	Lunch	
14:15 – 15:30	PLENARY - discussion on candidate ISRA (cISRA) options, agreement of pAol list for cISRA investigation, and organisation of breakout groups (group leader + GIS expert per table)	Dr Emiliano Garcia-Rodriguez
15:30 – 16:00	Break	
16:00 – 19:00	Personal reading and planning session	All
19:00 – 21:00	Dinner reception @ Terraza Origen (1 st floor of the hotel)	

DAY 2 | Tuesday, 4th October 2022

TIME	AGENDA ITEM	SPEAKER/FACILITATOR(S)
08:30 - 09:00	Breakout group facilitators pre-meeting (if required)	Group leaders
09:00 - 10:30	PLENARY - collation of final pAol and cISRA group assignments	All
10:30 - 11:00	Break	
11:00 - 13:00	BREAKOUT SESSION	All
13:00 - 14:15	Lunch	
14:15 - 16:30	BREAKOUT SESSION	All
16:30 - 17:00	Break	
17:00 - 18:30	PLENARY - assessment of cISRA list <ul style="list-style-type: none"> • Group facilitator reports • Agreement on preliminary cISRA list • Revised Aol list 	Dr Rima Jabado, group leaders
19:00 - 21:00	Informal dinner @ Restaurante Origen (1 st floor)	

DAY 3 | Wednesday, 5th October 2022

TIME	AGENDA ITEMS	SPEAKER/FACILITATOR(S)
09:00 - 10:30	BREAKOUT SESSION	All
10:30 - 11:00	Break	
11:00 - 12:45	<p>PLENARY - assessment of cISRA list</p> <ul style="list-style-type: none"> • Group facilitator reports • Agreement on preliminary cISRA list • Revised AoI list 	All
12:45 - 14:15	Picnic lunch & Group photo @ Parque de la 93 (10-minute walk from the hotel)	
14:15 - 16:00	DRAFTING SESSION - refine pAoI into cISRA standard submission forms	All
16:00 - 16:30	Break	
16:30 - 17:30	PLENARY - Review of cISRA drafting progress	Dr Rima Jabado, group leaders
17:30 - 19:00	<p>Optional Marine Protected Areas (MPA) session</p> <ul style="list-style-type: none"> • Assess the accuracy of our region MPA mapping • Determine whether the designations of "effective" MPAs are correct or not • Identify overlap between current spatial protection and pAoI and cISRA 	Dr Mark Priest
19:00 - 21:00	Informal dinner @ Restaurante Origen (1 st floor)	

DAY 4 | Thursday, 6th October 2022

TIME	AGENDA ITEMS	SPEAKER/FACILITATOR(S)
09:00 - 13:00	DRAFTING SESSION - refine pAol into cISRA standard submission forms (<i>informal break at 10:30</i>)	All
13:00 - 14:15	Lunch	
14:15 - 16:30	DRAFTING SESSION - cISRA submission forms	All
16:30 - 17:00	Break	
17:00 - 17:30	PLENARY - Review of cISRA drafting progress	Dr Rima Jabado, group leaders
19:00 - 21:00	Informal dinner @ Restaurante Origen (1 st floor)	

DAY 5 | Friday, 7th October 2022

TIME	AGENDA ITEMS	SPEAKER/FACILITATOR(S)
09:00 - 13:00	DRAFTING SESSION - refine pAol into cISRA standard submission forms (<i>informal coffee break at 10:30</i>)	All
13:00 - 14:15	Lunch	
14:15 - 16:30	PLENARY - presentation of results and next steps <ul style="list-style-type: none"> • Agreement on final cISRA for review • Agreement on final Aol list • Formal submission of cISRA standard forms 	Dr Rima Jabado, all
16:30 - 17:00	Break	
17:00 - 18:30	CLOSING SESSION <ul style="list-style-type: none"> • Expert groups, regional coordination, and next steps • Implementation of ISRA by workshop participants • Final words and closing 	Dr Rima Jabado, all
19:00 - 21:00	Informal dinner @ Restaurante Origen (1 st floor)	