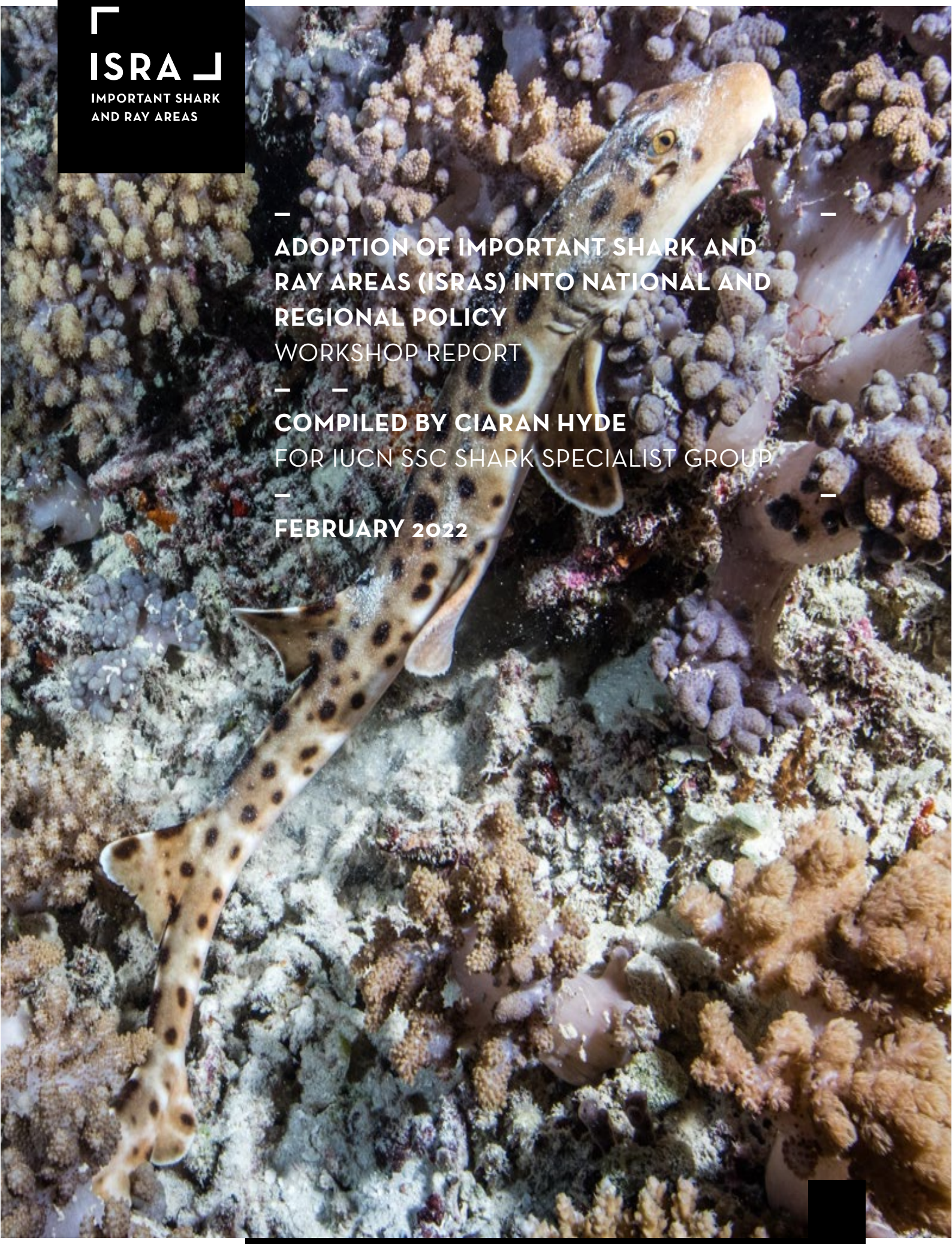
ISRA
IMPORTANT SHARK AND RAY AREAS



ADOPTION OF IMPORTANT SHARK AND RAY AREAS (ISRAS) INTO NATIONAL AND REGIONAL POLICY

WORKSHOP REPORT

COMPILED BY CIARAN HYDE
FOR IUCN SSC SHARK SPECIALIST GROUP

FEBRUARY 2022

VISION AND MISSION

ISRAS ARE DISCRETE, TRI-DIMENSIONAL PORTIONS OF HABITAT, IMPORTANT FOR ONE OR MORE SHARK SPECIES, THAT HAVE THE POTENTIAL TO BE DELINEATED AND MANAGED FOR CONSERVATION.

VISION

ENHANCED CONSERVATION OF ALL SHARK, RAY, AND CHIMAERA SPECIES THROUGH THE IMPLEMENTATION OF A SYSTEMATIC PLACE-BASED APPROACH, SUPPORTED BY THE IDENTIFICATION OF ISRAS THROUGHOUT THESE SPECIES' RANGES.

MISSION

TO MOBILIZE SCIENTISTS AND CONSERVATIONISTS TO ENSURE THE RANGES OF ALL KNOWN SHARK, RAY, AND CHIMAERA SPECIES ARE GLOBALLY INVESTIGATED, SO THAT ISRAS ARE IDENTIFIED WITHIN SUCH RANGES AND MAPPED, AND PROVIDE DECISION-MAKERS AND OTHER RELEVANT STAKEHOLDERS WITH ACTIONABLE KNOWLEDGE NECESSARY FOR THE IMPLEMENTATION OF ADEQUATE SYSTEMATIC PLACE-BASED CONSERVATION.

TABLE OF CONTENTS

Suggested citation: Hyde CA, Sorrentino L, Notarbartolo di Sciara G, Leurs G, and Jabado RW. 2022. Report of the second workshop on adoption of Important Shark and Ray Areas (ISRAs) into national and regional policy. IUCN Species Survival Commission Shark Specialist Group and IUCN Ocean Team. 23 February 2022. 31 p.

ACRONYMS

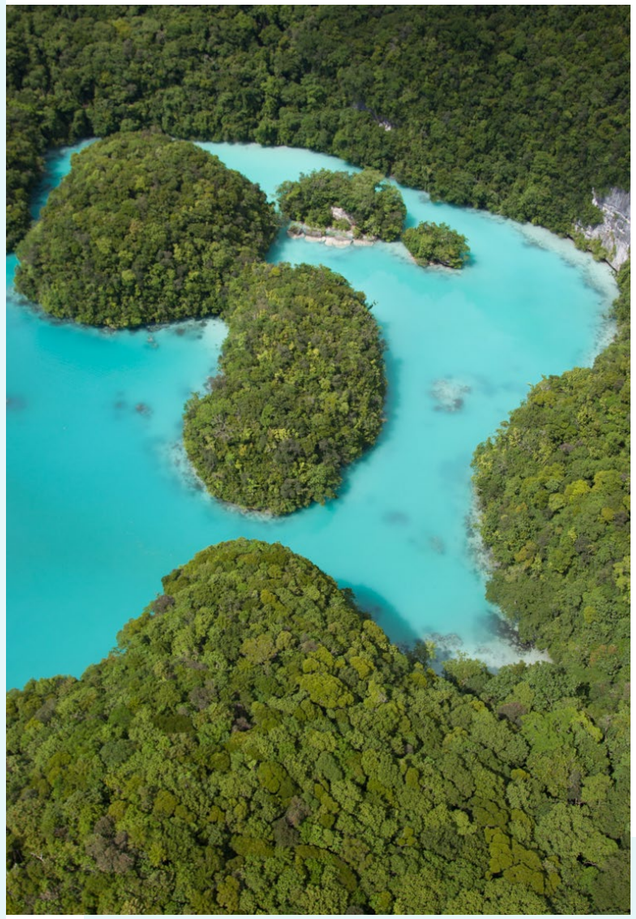
CBD	Convention on Biological Diversity
CITES	Convention on the International Trade in Endangered Species of Flora and Fauna
CMS	Convention on the Conservation of Migratory Species of Wild Animals
COFI	FAO Committee on Fisheries
EBSA	Ecologically or Biologically Significant Area
FAO	Food and Agriculture Organisation of the United Nations
IMMA	Important Marine Mammal Area
ISRA	Important Shark and Ray Area
IUCN	International Union for Conservation of Nature
KBA	Key Biodiversity Area
MPA	Marine Protected Area
NEAFC	Northeast Atlantic Fisheries Commission
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
RFMO	Regional Fisheries Management Organisation
SOSF	Save Our Seas Foundation
SSC	Species Survival Commission
SSG	IUCN SSC Shark Specialist Group

WORKSHOP SUMMARY

On February 23rd 2022, the IUCN SSC Shark Specialist Group (SSG), with support from the IUCN Ocean Team and the IUCN Task Force on Marine Mammal Protected Areas, ran an online workshop session focused on understanding appropriate methods and approaches to engage with decision makers to ensure adoption of the Important Shark and Ray Area (ISRA) approach. The goal was to gain understanding of key considerations needed to ensure the uptake of ISRAs into policy initiatives to further conservation and management of sharks.

Fifty-seven participants from around the world representing a variety of organisations (see Annex A – List of Participants) attended the workshop. They were presented with information on the background and rationale for ISRAs, the process for science-based policy and decision making as recognised in the Important Marine Mammal Area (IMMA) process, a brief overview of the workshop survey responses submitted during the workshop registration (Annex B), along with policy relevant information on misconceptions versus realities of ISRAs. Following these discussions, an open comment, question, and answer session was held for an hour and a half.

The term 'sharks' refers to Class Chondrichthyes comprising all species of sharks, rays, and chimaeras.



WORKSHOP PROCEEDINGS

The two-hour workshop commenced at 08:00h CET (See Annex C – Agenda). Lynn Sorrentino, Marine Program Officer, IUCN Ocean Team, welcomed participants and gave an overview of the agenda, aims, and desired outcomes of the workshop, before introducing the three speakers who delivered presentations as summarised below:

1. Dr Rima Jabado, Chair, IUCN SSC Shark Specialist Group (SSG) presented on the vision and goals of ISRAs before outlining the main threats and conservation challenges facing sharks as well as briefly touching on some current initiatives and governance in place to encourage their conservation. The global coverage of Marine Protected Areas (MPAs) was addressed, along with the aims and potential strategies to encompass sharks in future MPAs design and spatial planning approaches by identifying ISRAs. Current spatial approaches (KBAs, EBSAs, and Shark Sanctuaries) which consider sharks were noted along with their limited number, and highlighting that most current MPAs are considered to have limited effectiveness for many species of sharks (especially migratory species). It was outlined that ISRAs would be a useful tool in supporting conservation by complementing and feeding into current approaches and providing strategic guidance in the creation of representative networks of MPAs that consider sharks during the planning phases. It was also highlighted that ISRAs are an independent process, removed from political and socio-economic concerns, and that they were not MPA designations (Annex D).
2. Dr Giuseppe Notorbartolo di Sciara, Co-Chair, IUCN Marine Mammal Protected Areas Task Force gave an overview on what ISRAs are (i.e., not MPAs, but rather taxon-based areas with scientifically based data available to decision makers), as well as outlined how ISRAs can use the Important Marine Mammal Area (IMMA) design process and proven success as a guide. A brief overview of the ISRA Regional Identification Process was provided (Annex E).

3. Ciaran Hyde, ISRA Researcher, briefly outlined the current misconceptions in relation to ISRAs and the realities of what ISRAs are and aim to do, before highlighting the key responses given by participants in the registration survey which would be useful to guide ISRAs into policy uptake (Annex F).

Following the presentations, the workshop was an open discussion forum where participants were able to provide input based on their experience and expertise in policy adoption methods to ensure ISRAs could also be considered for integration into future management and conservation strategies. The workshop was closed by Lynn Sorrentino following thanks.

MAIN DISCUSSION POINTS

Discussions presented in the workshop centered around three main topics: (1) relevance and/or integration of ISRAs into current policy and conservation initiatives; (2) communication and stakeholder engagement, and (3) scientific basis and credibility. An overview of key points discussed is provided below.

— Relevance and/or integration of ISRAs into current policy and conservation initiatives

Participants noted that the success or integration of ISRAs into current or future MPA (or similar) designs, may be facilitated by the alignment of the ISRA criteria with current environmental, biodiversity, or conservation commitments and targets in any region. Where there are similar projects or management approaches relating to sharks being implemented, ISRAs can be guided by their success in terms of how to approach decision-makers, what information may be useful to provide, and how to facilitate discussions with key stakeholders. For example, in some regions where EBSA criteria have been used by national or

regional governments, alignment to EBSA criteria may then support ISRA adoption into policy. Similarly, for KBAs where ISRAs show alignment to KBA criteria, this could facilitate their integration with the national KBA process and can be used by governments as a useful source of information to guide MPAs and the inclusion of sharks into management initiatives. Alignment with KBAs or EBSAs would assist in uniting governing bodies and allow ISRAs to be seen as a complementary approach rather than a separate initiative. Similarly, as the IMMA approach has been adopted by Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and more recently acknowledged by the Convention on Biological Diversity (CBD), alignment to the IMMA process and criteria may equally assist governments and organisations in recognising ISRAs. It was noted that familiarising policy-makers with the criteria as much as possible will assist in the adoption of this approach, ensuring ISRAs become part of conservation discussions and processes, especially if they are to support the design of MPAs and marine spatial planning.

Participants noted that every country and/or region where ISRAs are delineated, may be at different stages in terms of shark conservation, and where possible an ISRA should be framed in the local context with local stakeholders. It was suggested that aligning the introduction of this concept to policy within the time frame of government processes (i.e., when legislations might be under review) would be useful, as many have set targets for when this occurs for policy and legislative plans. To assist in this, identifying regional champions familiar with local issues, policy, and government processes and stakeholders, could assist in the momentum of introducing and moving an ISRA forward to policy. These individuals can work at the interface of policy with regional decision-makers and assist with ISRA recognition. This process has been facilitated in the IMMA approach through post workshop establishment of regional groups of experts with one or more regional coordinators. Establishing such local coordination is also now recognised as an important aspect of driving uptake and policy integration by KBAs. The KBA program noted its work to establish National Coordination Groups to support their program and follow up with their identification,

monitoring, research, and conservation. ISRAs could use these groups to assist with uptake, particularly where regional groups can maintain the scientific credibility and basis of the ISRA, an important consideration when developing legislative plans and working on spatial planning. It was noted that not all ISRAs would align with KBA (or EBSA) criteria, but in cases where ISRAs meet KBA threshold criteria, integration into a KBA can then be facilitated by the regional coordination group which can support the monitoring and conservation of the site. Dr Rima Jabado stated that the SSG network can be useful in this manner, being currently spread across nine regions with members who can act as regional coordinators and help present ISRA information in the right languages and structure (including cultural sensitivity) and maintain their consistency once identified.

Other discussions around the relevance of ISRAs and their integration into policy and management noted that within governing bodies there are usually several different institutions overseeing marine species or spatial management including environmental, conservation, or fisheries ministries. In these instances, an institution or department which works on protected areas and/or species may therefore work on KBAs, whereas shark management more commonly falls under fisheries. Each of these entities may also have different priorities, mandates, and/or jurisdictions, therefore ISRA representatives should determine which ministry most closely aligns with the overall goal for support. Recognising the key directives of each department and its associated legislative targets would also be a key consideration for the adoption of ISRAs on a region-by-region basis, since as was noted above, some countries may have taken more initiative on shark management than others.

Another key point addressed by several participants, is that for ISRAs to be integrated into future policy, they need time to mature and be recognised for what they are (areas of importance to sharks), and for the type of purposes they may serve (e.g., a resource for governments). To convince decision-makers, it was noted that ISRAs need to become credible and visible at national and global levels to a point where authorities see ISRAs as not just a solution

to assist management strategies, but an established and therefore easily integrated solution. This can be assisted by the Regional Identification Process, allowing governments to recognise the systematic methodology of identifying and delineating an ISRA and the credibility behind it, otherwise the scope for managing sharks can become too large for one department or organisation. Cohesion across governments, regions and other management and biodiversity approaches will assist by triggering a mechanism of wider community involvement and in turn support national and regional policy uptake of ISRAs.

— Communication and Stakeholder Engagement

Participants noted that coordination, communication, and availability of comprehensive and clear information for stakeholders has assisted in uptake of similar approaches, and the availability of this information on the ISRA website (or other) for governing bodies to access would be a key component of their successful integration into policy. The Angel Shark Project (www.angelsharknetwork.com), for example, collected data on Angel Sharks (*Squatina* spp.) within the Canary Islands, Spain, and mapped their distribution, habitats, movements, and abundance. This provided critical information on the species which was made available to assist with future management and conservation, as well as to communicate the project to government stakeholders through extensive documentation and other supporting materials including maps, reports, videography, brochures and in person meetings. It was noted that despite the availability of this information, it was still required to ensure that their process was presented in a clear and simplified manner so that it was understood by all meeting participants who were representatives of different scientific and non-scientific fields.

Having a clear communication and marketing strategy was suggested as an important aspect for the ISRA project to consider to allow stakeholders within different regions to become aware of the project, as well as ensuring that any ISRA documentation is comprehensive, clearly communicated,

and easily accessible, for those same stakeholders to refer to. Having ISRA 'champions' within a region can help to facilitate this by having one or more persons locally based who understand the species found there, the key environmental or conservation needs and priorities of the region, and the ability to take the time to explain the ISRA process in alignment with these to not only government stakeholders, but additionally to the local scientific community, non-government organisations (NGOs) and other interested parties. Additionally, it was suggested that having ISRA documentation and data sources translated into other languages and formats would be a critical component to ensuring wider communication and national or regional engagement in the future.

Other factors to consider to ensure ISRAs are recognised by governments and incorporated into policy considerations would be to attend key conferences or meetings (e.g., FAO Committee on Fisheries (COFI), Regional Fisheries Management Organisations (RFMOs), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) or Convention on the Conservation of Migratory Species of Wild Animals (CMS)), as this would allow for marketing of the ISRA project as well as the opportunity to coordinate with the national and regional priorities of each group in terms of shark conservation and management. It was noted that the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) and the North East Atlantic Fisheries Commission (NEAFC) have a 'Collective Arrangement' (i.e., opportunities for structured dialogue) where sharks have been a common topic, and which would be an additional forum in which to raise awareness of ISRAs and the project goals. Additionally, these meetings could be used to market the ISRA process as a 'tool kit' for the development of management strategies under regional and national priorities for both biodiversity and fisheries management.

Discussions around communications towards stakeholders noted that the messaging of the ISRA project needed to focus on the value of the process

and its importance to shark conservation. The availability and application of the data used to identify an ISRA (including their qualifying species and relevant criteria), should additionally be easily accessible and understandable to governing bodies so that integration into policy decisions and future management strategies by these entities is straightforward, comprehensive, and credible. The information should also be in easily transferable formats for use within any government (or other) department to allow for easy coordination and communication between these (e.g., fisheries versus environmental departments), as information can sometimes be lost in translation between departments which have different mandates or priorities. This would additionally be useful for any engagement with the ISRA project by stakeholders where an ISRA may occur across regions where boundaries span multiple countries and therefore require additional international delegation or management. Having a database of knowledge which allows for inter-departmental governments to work together towards the common goal of ISRA adoption into policy would streamline the process and facilitate greater involvement.

— Scientific Basis and Credibility

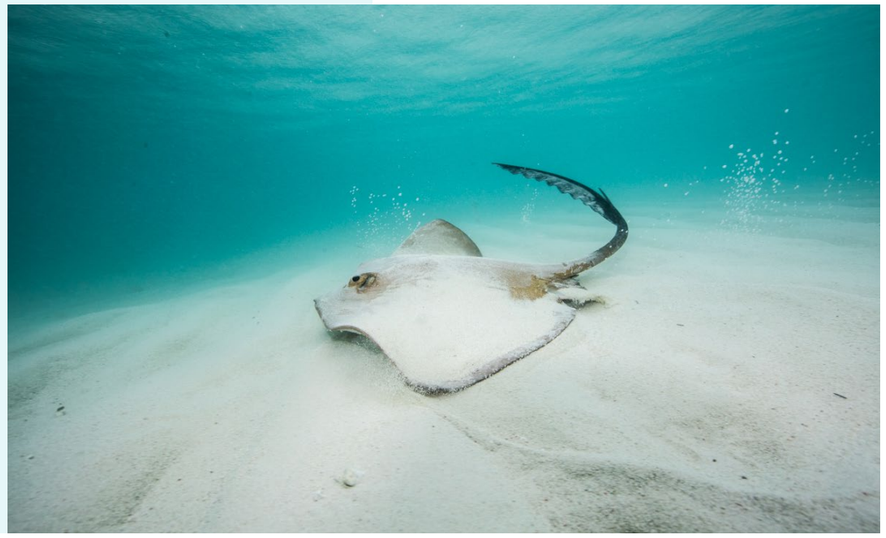
One of the main points of discussion during the workshop was that for ISRAs to be recognised and therefore useful to decision-makers and governments, the science behind their development and identification needs to be credible and robust. Having a solid scientific basis to start will assist uptake of ISRAs since the research will come under intense scrutiny by governing bodies before being applied to policy or management. This was considered to be especially true of the ISRA criteria which needs to be seen as credible and therefore justifiable if the areas identified are to become MPAs in the future. A concern was raised over the use of qualitative data over quantitative, where it was noted that qualitative data may get lost in translation in governments who want quantitative thresholds and may then delay the process of moving ISRAs into policy applications until it becomes available. Dr Guiseppe

Notarbartolo di Sciara and Ciaran Hyde both addressed this, stating that quantitative data are not available for many species and waiting for this to become available would see continuing pressure on sharks. Furthermore, the IMMA criteria are qualitative and therefore can be looked at to support the criteria defined for ISRAs and in turn support the credibility of the project. Having a strongly supported scientific reputation will be critical for governments to refer to when assessing the suitability of an ISRA for uptake into policy.

Other discussions regarding the scientific aspect of ISRAs, was to ensure that the movement of an ISRA into policy can additionally show the regional involvement aspect, and this is where identification of local champions and experts can be beneficial, providing or directing the ISRA project to regionally based studies (during the Regional Identification Process) as well as to remain involved and maintain the credibility and applicability of an ISRA once it has been identified and delineated. Additionally, the information and knowledge created by the identification of an ISRA should be readily and easily accessible to governments, organisations and researchers so that these can assist and guide policy and management decisions. Having the data freely available and being simple, clear, and easily understood whilst portraying all the complexities of ISRAs, will be highly useful to decision makers. It was noted that coarsely defined information can make the problem of shark management look too big to manage whereas detailed, regionally specific data (e.g., maps) will be easier to transfer into management strategies. Dr Rima Jabado noted this was a priority for ISRAs and such information will be available on the ISRA website and eAtlas once delineation has occurred.

Other discussions regarding the scientific basis or credibility of an ISRA again related to the alignment it could have to other conservation planning and biodiversity tools in any region through the ISRA selection and review criteria

developed. Being able to show the scientific rationale behind the criteria, and the relevant evidence to support their applicability, will be a key aspect of what governments will look for particularly if those governments have also worked with KBAs, EBSAs, or IMMAs. Having transversality across the different approaches may help decision-makers see where ISRAs will succeed if similar approaches have before. This would be particularly useful in the early stages of ISRAs to help justify the process and thereby support their identification and greater recognition.



RECOMMENDATIONS FOR ISRAS

From the discussions and points raised by the participants in the workshop, several recommendations for ISRAs were suggested which would assist in their uptake into national and regional policy in the future, those being:

1. Clear and concise communications plan and supporting materials;
2. Alignment with current government and policy priorities, targets, and objectives;
3. Credible scientific basis;
4. Identification of national, regional and/or local ISRA champions;
5. Alignment to other conservation and biodiversity spatial-based approaches; and
6. Coordination with relevant ministries and department stakeholders who support shark management.

NEXT STEPS

1. Identifying and engaging with persons interested in championing for ISRAs once each region is targeted;
2. Developing a clear and concise communications plan to market ISRAs to stakeholders;
3. Identifying meetings and/or conferences beneficial to disseminate information on the ISRA process; and
4. Investigating aligning projects to guide ISRAs into policy uptake and spatial management design.

LINK TO RELEVANT WEBSITES

Convention on Biological Diversity (CBD) www.cbd.int

Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) www.ospar.org

FAO Committee on Fisheries (COFI) www.fao.org/3/cb3767en/cb3767en.pdf

Ecologically or Biologically Significant Areas (EBSA) www.cbd.int/ebsa/

Important Marine Mammal Areas (IMMAs) www.marinemammalhabitat.org/immas

Important Shark and Ray Areas (ISRAs) www.sharkrayareas.org

IUCN SSC Shark Specialist Group (SSG) www.iucnssg.org

Key Biodiversity Areas (KBAs) www.keybiodiversityareas.org

North East Atlantic Fisheries Commission (NEAFC) www.neafc.org

Regional Fisheries Management Organisations (RFMOs) www.iucnssg.org/rfmos.html

Save Our Seas Foundation (SOSF) www.saveourseas.com

ANNEX A
LIST OF PARTICIPANTS

First name	Last name	Organization	Country
Serena	Adam	WWF-Malaysia	Malaysia
Minerva	Alonso	CEDEPESCA	Mexico
Joe	Appiott	CBD Secretariat	Canada
Gonzalo	Araujo	Marine Research and Conservation Foundation	United Kingdom
Nabegh	Asswad	International Fund for Animal Welfare (IFAW)	United Kingdom
Ashleigh	Bandimere	Oceanic Society/ State of the World's Sea Turtles	United States
Chris	Barrio	Global Ocean Biodiversity Initiative	United Kingdom
Rhett	Bennett	WCS	United States
Maria del Pilar	Blanco Parra	CONACYT-UQRoo	Mexico
Ramon	Bonfil	Oceános Vivientes AC	Mexico
Charlotte	Boyd	IUCN, Conservation International	United States
Robert	Bullock	Save Our Seas Foundation	Seychelles
John	Carlson	National Marine Fisheries Service	United States
Lawrence	Chlebeck	Humane Society International	Australia
Andy	Cornish	WWF	Hong Kong SAR
Angel	Diaz	CeDePesca	Argentina
Justine	Dossa	Oceans5	United States

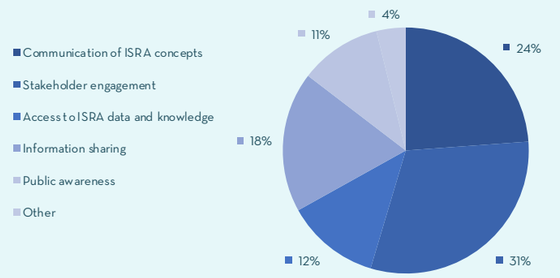
First name	Last name	Organization	Country
Eleuterio	Duarte	WCS	Mozambique
Mathieu	Ducrocq	RAMPAO	Senegal
Elisabeth	Fahrni Mansur	IUCN SSG	Bangladesh
Caio	Faro	WWF-Brazil	Brazil
Cécile	Fattebert	IUCN	Switzerland
Stela	Fernando	National Institute of Fishery Research	Mozambique
Daniel	Fernando	Blue Resources Trust	Sri Lanka
Brit	Finucci	NIWA	New Zealand
Sarah	Fowler	Save our Seas Foundation	United Kingdom
Ernesto	Godelman	CeDePesca	Panama
Matt	Gollock	ZSL	United States
Leonardo	Guida	Australian Marine Conservation Society	Australia
Vikki	Gunn	Seascape/GOBI	United Kingdom
Louis	Hadjioannou	Cyprus Marine and Maritime Institute	Cyprus
Abdul	Halik	WWF Singapore	Singapore
Allifa	Haque	University of Oxford	United Kingdom
Ali	Hood	Shark Trust	United Kingdom
Mira	Husseini	IUCN	Lebanon
Charlie	Huveneers	Flinders University	Australia
David	Johnson	Global Ocean Biodiversity Initiative	United Kingdom
Muhammad Moazzam	Khan	WWF-Pakistan	Pakistan
Eva	Meyers	Angel Shark Project	Germany
Jose	Musmeci	Fundación Patagonia Natural	Argentina
Maria del Mar	Otero	IUCN	United Kingdom
Andrea	Pauly	UNEP/CMS	Germany

First name	Last name	Organization	Country
Riley	Pollom	Indianapolis Zoo	United States
Carlos	Polo	Coastal Marine Education and Research Acade-my	United States
Maria	Pozo Montoro	CMS / Sharks MOU	Germany
Cristina	Rodriguez-Cabello	Spanish Institute of Oceanography (IEO)	Spain
David	Ruiz García	University of Valencia	Spain
Oliver	Schall	BMUV Federal Ministry for Environment & Consumer Protection	Germany
Michael	Scholl	IUCN SSC Shark Specialist Group (SSG)	Switzerland
Fabrizio	Serena	CNR-IRBIM / IUCN-SSG	Italy
Esmail	Shakman	Tripoli University	Libya
Jorge J.	Sitoe	WCS - MOZAMBIQUE PROGRAM	Mozambique
Nicolas	Straube	University Museum Bergen	Norway
Akanbi	Williams	Nigerians Institute for Oceanography and Marine Research	Nigeria
Fenella	Wood	CMS	United Kingdom
Kendyl	Wright	WildOceans	South Africa
Filimoni	Yaya	IUCN	Fiji

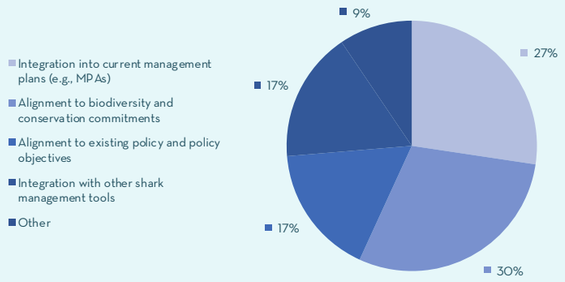
ANNEX B
WORKSHOP REGISTRATION SURVEY RESPONSES

Upon registration, the fifty-seven participants were asked to provide three examples or concepts from their own experience which they believed ISRAs would need to ensure uptake into national and regional policy. The main themes of the responses are summarised in the below charts:

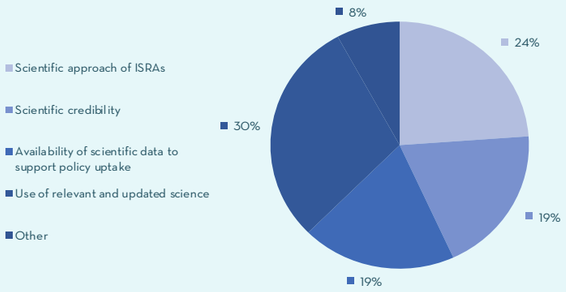
COMMUNICATION AND ENGAGEMENT



RELEVANCE AND/OR INTEGRATION OF ISRAS



SCIENTIFIC BASIS OF ISRAS



ANNEX C
AGENDA

— **Welcome to the meeting** – Lynn Sorrentino, IUCN, 2 mins.

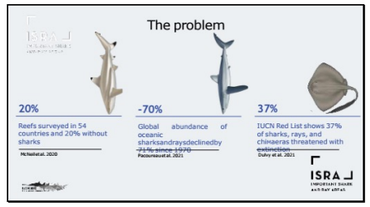
— **Introduction to ISRAs** – Dr Rima W Jabado, IUCN SSC Shark Specialist Group Chair, 5 mins.

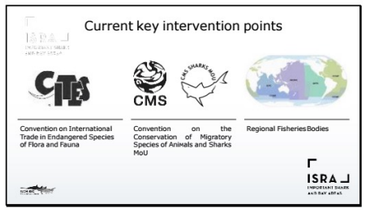
— **The robust process for science-based policy/decision making** – Dr Giuseppe Notarbartolo di Sciara, Important Marine Mammal Protected Areas Task Force Co-Chair, 5 mins.

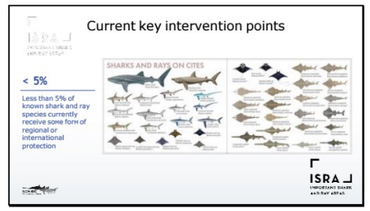
— **Overview of participant replies to the question** 'Based on your experience, what are three things that will be needed to ensure national and regional uptake of ISRAs?' – Ciaran Hyde, ISRA Researcher, 5 mins.

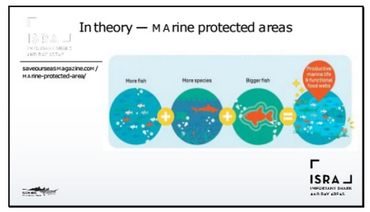
— **Open discussion on the topic** – 'What is required to ensure national and regional uptake of ISRAs? What are the key methods to engage with decision makers to ensure ISRAs are taken up to move the shark, ray, and chimaera conservation agenda forward?, 100 mins.

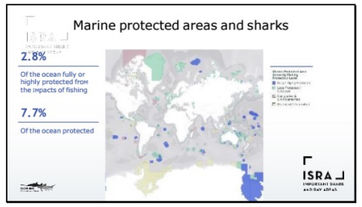
ANNEX D
IMPORTANT SHARK AND RAY AREAS – A NEW TOOL
PRESENTATION BY DR. RIMA JABADO

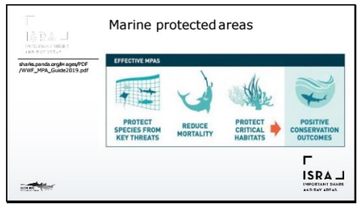


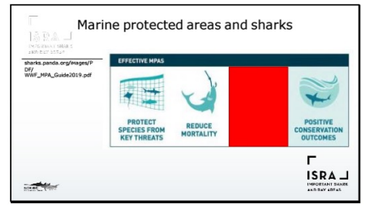


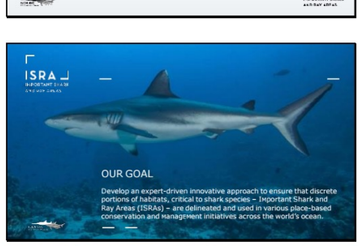


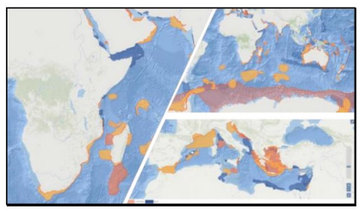


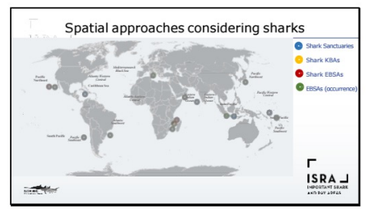


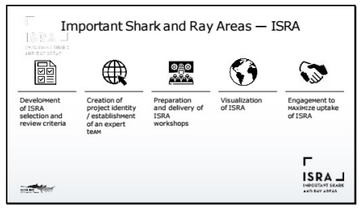






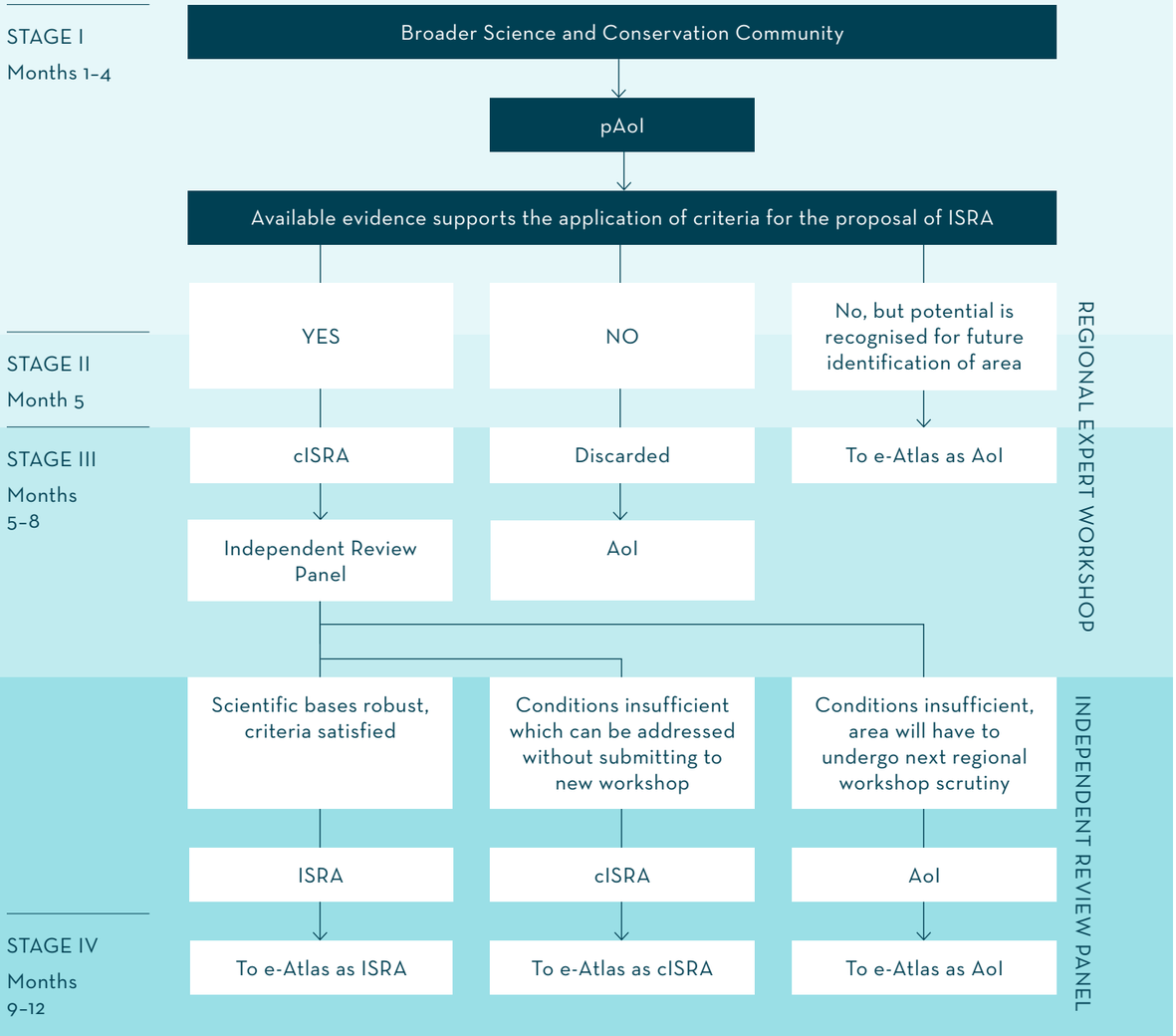






ANNEX E
ISRA IMPLEMENTATION PLAN

THE PROCESS FLOWCHART FROM PRELIMINARY AREA OF INTEREST TO IMPORTANT SHARK AND RAY AREA



pAoI: preliminary Area of Interest; AoI: Area of Interest; cISRA: candidate Important Shark and Ray Area; ISRA: Important Shark and Ray Area.

ANNEX F
MISCONCEPTIONS AND REALITIES OF ISRAS

MISCONCEPTIONS	REALITY
ISRAs will be Marine Protected Areas (MPAs)	The goal of ISRAs is not to develop MPAs or similar spatial approaches but to provide a source of information and a tool for guiding the design and development of these in the future should governing bodies wish to access information on critical habitats to sharks when developing strategic measures.
ISRAs will be a governance and compliance tool to regulate areas, fisheries, and threatening processes	ISRAs are not a management or compliance tool, but rather a scientifically-based biocentric tool solely focusing on identifying important areas for sharks. Databases can be used by governments, organisations or researchers to determine overlap of threats.
ISRAs will have a legal mandate	The identification of an ISRA in a region does not make that region legally obligated to provide management and governance.
ISRAs will be flexible in design and identification of priority species/regions	ISRAs will have clearly defined (and justifiable) scientifically-based criteria to ensure the defensible nomination or application of an ISRA to a region.
ISRAs are collecting data to define areas and evaluate effectiveness of MPAs for sharks	ISRAs are not the moment in which you investigate species and start data collection, they are the moment that you use accumulated knowledge previously col-collected to justify an ISRA. The influence of threatening pressures on ISRAs would not be considered as ISRAs are to be based solely on the needs of species in that area.
ISRAs will be based on the needs of fishers and/or communities	ISRAs will be completely biocentric, based only on animal needs without considering downstream consequences.

ACKNOWLEDGMENTS

The workshop was organized by IUCN SSC Shark Specialist Group and IUCN Ocean Team. The ISRA work has been supported through funds from the Save Our Seas Foundation and the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (Federal Republic of Germany). We are extremely grateful for the contributions by the IUCN Marine Mammal Protected Areas Task Force and input provided by all the workshop participants.

IUCN SSC Shark Specialist Group

IUCN

save our seas foundation

Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection

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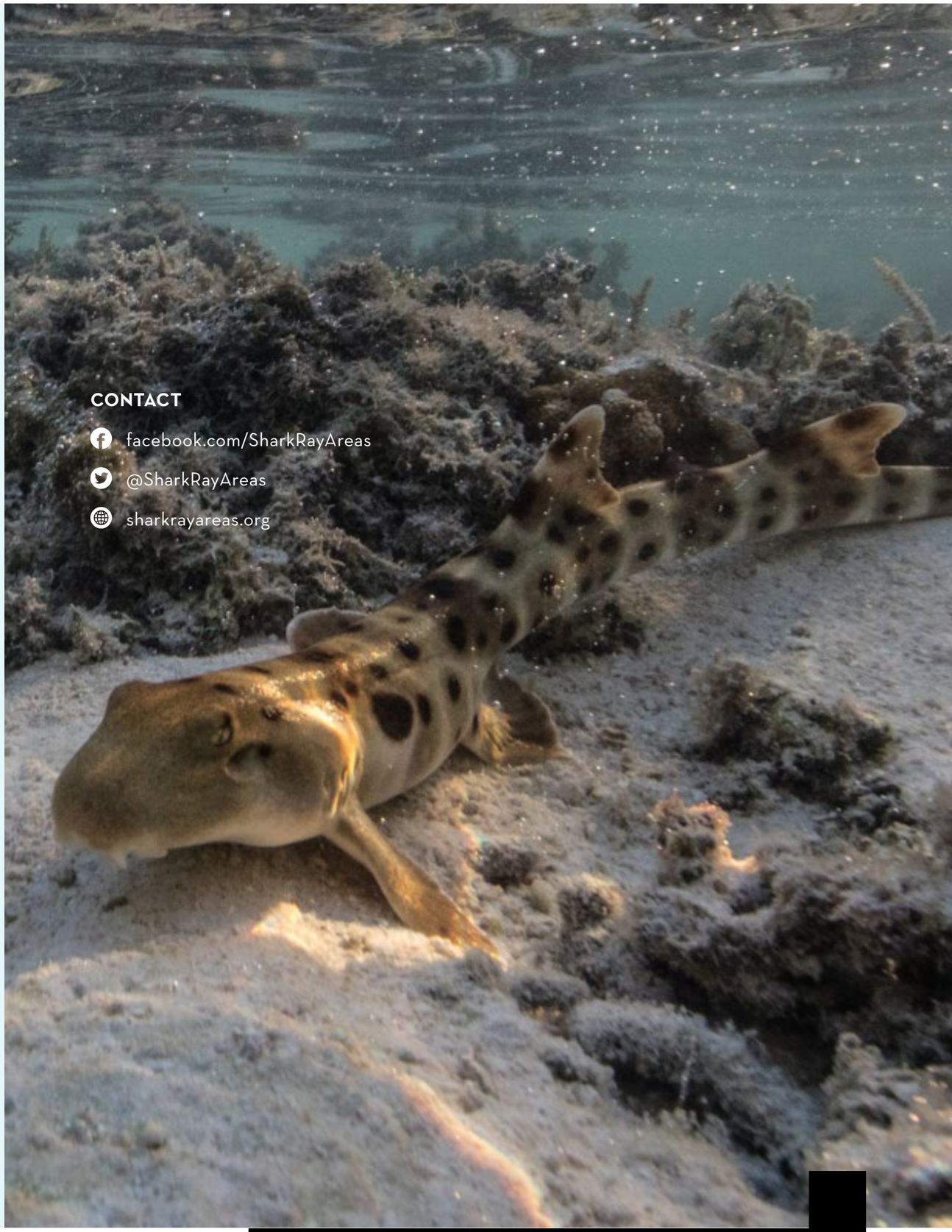

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