



ISRA

IMPORTANT SHARK
AND RAY AREAS

—
CENTRAL AND SOUTH AMERICAN PACIFIC

A REGIONAL COMPENDIUM OF
IMPORTANT SHARK AND RAY AREAS

—
IUCN SSC SHARK SPECIALIST GROUP

—
MARCH 2023
—

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Shark Specialist Group, 2023

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Citation
Jabado RW, García-Rodríguez E, Kyne PM, Charles R, Gonzalez Pestana A, Priest MA, Battle-Morera A, Notarbartolo di Sciara G. 2023. Central and South American Pacific: A regional compendium of Important Shark and Ray Areas. Dubai: IUCN SSC Shark Specialist Group.

Cover photo © Pelayo Salinas

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Shark
Conservation
Fund

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.

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

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.



Amanda Cotton | Ocean Image Bank

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, 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). Representatives of each country proposed areas they considered critical for the survival of sharks, rays, and chimaeras (hereafter

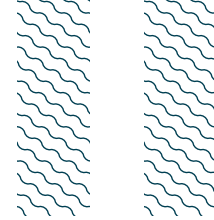
‘sharks’). In many cases, experts had experience working in multiple countries across the region and/or had already been working collaboratively through the International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC) Shark Specialist Group (SSG) network of members or various regional initiatives (e.g., MigraMar).

This scientific collaboration amongst regional and global experts resulted in the identification of 65 Important Shark and Ray Areas, 5 candidate ISRAs, and 11 Areas of Interest. Identified ISRAs range in size from small underwater areas of 1.59 km² at depths of 1,650–1,700 m (Northern Galápagos Hydrothermal Vents ISRA) to large areas of 3,191,603 km² (Eastern Tropical Pacific Marine Corridor ISRA) from surface waters to a depth of 1,928 m.

A comprehensive workshop report, along with relevant materials related to the ISRA process, criteria, and regions, can be found at www.sharkrayareas.org



**Bogotá,
Colombia |**
Central and
South American
Pacific regional
expert workshop
participants,
October 2022



CENTRAL AND SOUTH PACIFIC REGION

The Central and South American Pacific Region (ISRA Region 12) covers a large area of the Eastern Pacific. It ranges from the Gulf of California, Mexico, through Central and South America to southern Chile. This area incorporates all or part of the Pacific Exclusive Economic Zones of Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, Peru, and Chile. It includes many oceanic islands such as Revillagigedo Archipelago (Mexico), Clipperton Island (an overseas state private property of France), Cocos Island (Costa Rica), Malpelo Island (Colombia), Galápagos Islands (Ecuador), and Rapa Nui (Chile).

The coastal zone of the region is covered by three Large Marine Ecosystems (LMEs): Gulf of California LME, Pacific Central-American Coastal LME, and Humboldt Current LME. The Gulf of California is a long (1,130 km) and narrow (80-290 km), semi-enclosed LME bordered by the Baja California Peninsula and mainland Mexico, in which around 900 islands are distributed. The northern part of the Gulf is relatively shallow, while the southern part has several deep basins (to 3,600 m depth).

The Pacific Central-American Coastal LME extends from Mexico to Ecuador. It is influenced by the seasonal movements of the Inter-tropical Convergence Zone and by El Niño-Southern Oscillation (ENSO) conditions. Climate drives a dry period during the winter months, and a rainy season from May to September, in which rivers discharge freshwater and suspended solids into coastal areas. Extreme ocean depths are reached

very close to the coast due to a narrow continental shelf.

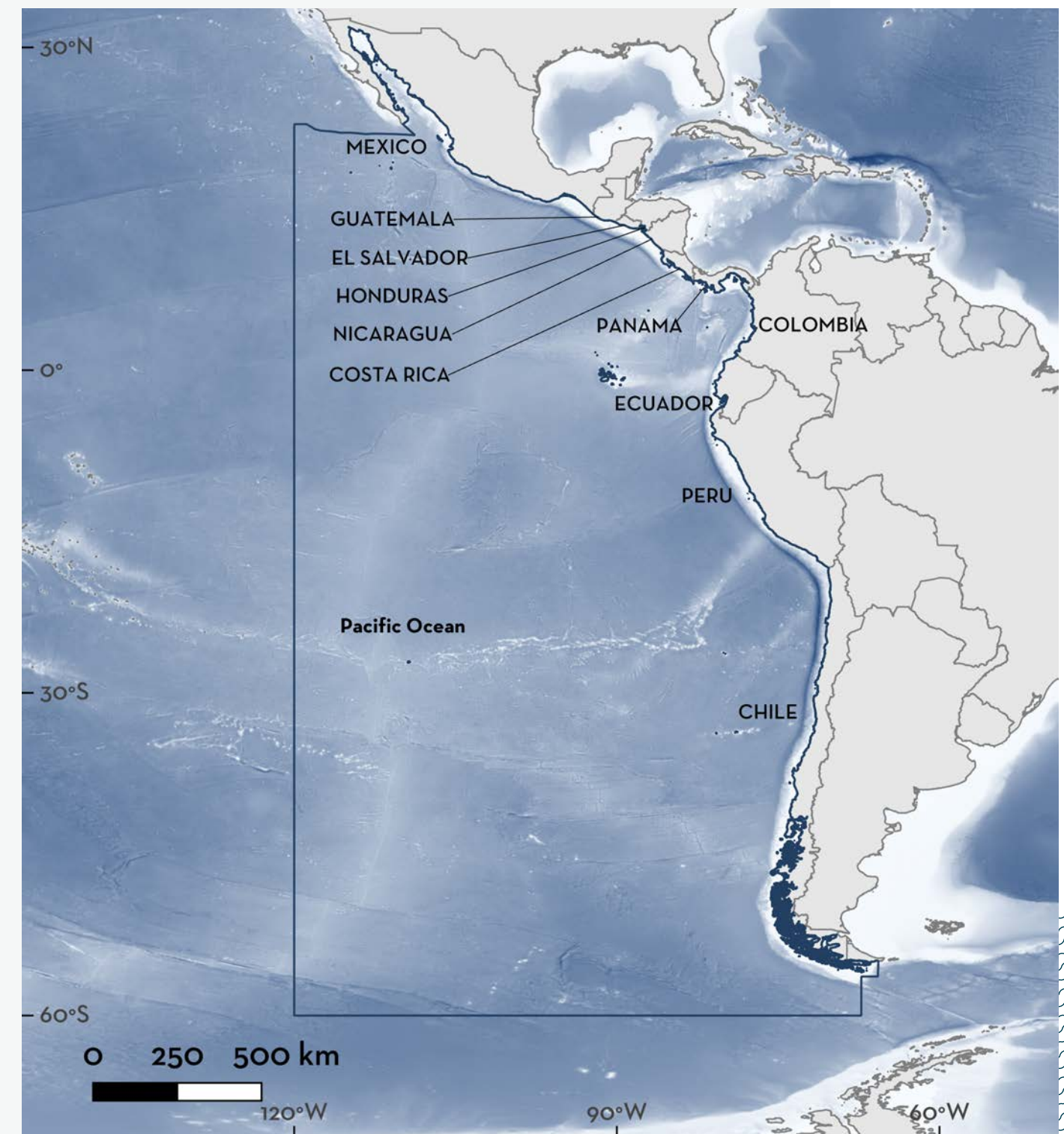
The Humboldt Current LME extends along the coasts of Peru and Chile. This area is characterised by the world's largest coastal upwelling system causing high marine productivity. High climatic and oceanographic variability is associated with seasonal, interannual, decadal, and longer-term changes. This area is influenced by ENSO conditions in which cold nutrient waters are replaced by warm, clear oceanic waters from the west and north.

Two major ocean surface currents occur in this region. The Equatorial Counter Current flows west-to-east with a pronounced seasonal cycle, reaching maximum strength in the late boreal summer and fall and minimum strength in late winter and spring. This current becomes stronger during warm ENSO periods. The Humboldt Current is a cold, low-salinity, ocean current that flows north from Chile to Peru and is characterised by an upwelling that brings nutrients to the surface enhancing productivity that supports abundant marine life.

Given the vast expanse of the region, a variety of habitats are encompassed. Coastal and shelf habitats utilised by sharks in the northern tropical parts of the region include rivers, shallow estuaries, mangrove forests, brackish lagoons, sandy beaches, seagrass beds, and coral reefs. In the southern temperate parts of the region, the coastal zone is characterised by kelp forests, large gulfs, and fjords.

ISRA Region 12 |

The Central and South American Pacific - the blue boundary indicates the area within the scope of the workshop

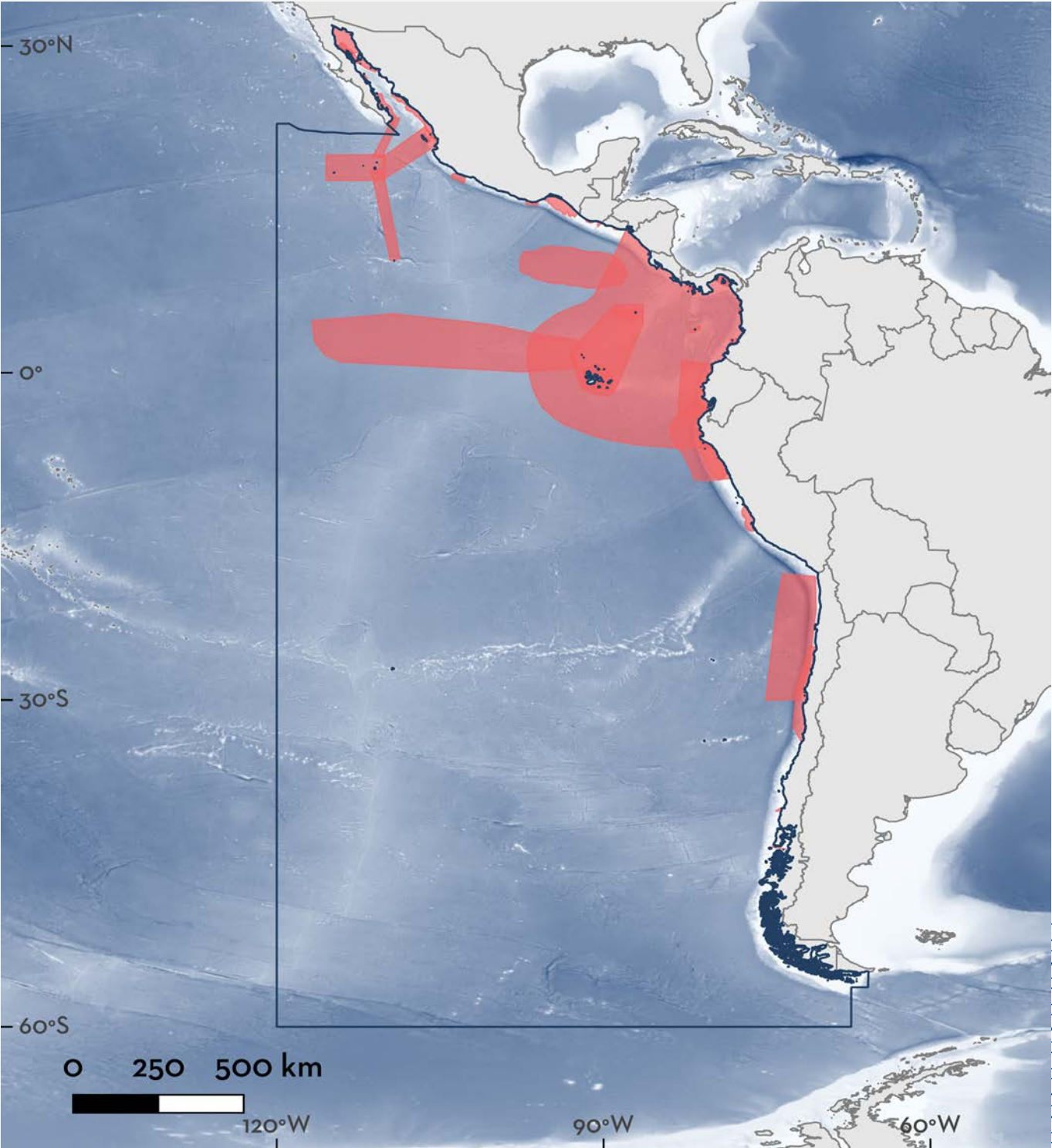


IMPORTANT SHARK AND RAY AREAS (ISRA)

Important Shark and Ray Areas are ‘discrete, three-dimensional portions of habitat, important for one or more shark species, that are delineated and have the potential to be managed for conservation’. Colored areas on the map below represent those described as meeting the ISRA Criteria.

12 COUNTRIES

65 ISRA



/P	JURISDICTION	ISRA NAME	CONTRIBUTORS
21	Mexico	Bahía de La Paz	Felipe Galván-Magaña, Luz Erandi Saldaña-Ruiz, Marta D. Palacios, Giuseppe Notarbartolo di Sciara, Melissa Cronin, Nerea Lezama-Ochoa, Clara Calatayud, Rogelio González-Armas, Donald A. Croll, Kelly A. Zilliacus, Kathryn A. Ayres, Abel Trejo-Ramírez, Oscar Sosa-Nishizaki, Jennifer Espinoza-Hernández, Emiliano García-Rodríguez, James T. Ketchum, Frida Lara-Lizardi, and Javier Tovar-Ávila
22	Mexico	Bahía de los Ángeles	Luz Erandi Saldaña Ruiz, Emiliano García, Oscar Sosa Nishizaki, Jennifer Espinoza Hernández, Felipe Galván-Magaña, Frida Lara-Lizardi, and Javier Tovar-Ávila
23	Mexico	Banderas Bay	Javier Tovar-Ávila, José Alberto Rodríguez-Madrigal, Aldo Alfonso Zavala-Jiménez, Alejandra Patricia Castelo-Corona, Iliana Araceli Fonseca-Ponce, Emiliano García-Rodríguez, Oscar Sosa-Nishizaki, James T. Ketchum, Frida Lara-Lizardi, and Felipe Galván Magaña
24	Mexico	Cabo Pulmo	Frida Lara-Lizardi, James T. Ketchum, Mauricio Hoyos-Padilla, Katherine Ayres, Felipe Galván-Magaña, Emiliano García-Rodríguez, Oscar Sosa-Nishizaki, and Javier Tovar-Ávila
25	Mexico	Cabo San Lucas	Felipe Galván-Magaña, Frida Lara-Lizardi, James T. Ketchum, Emiliano García-Rodríguez, Oscar Sosa-Nishizaki, and Javier Tovar-Ávila

26	Mexico	Central Sonora Coast	Oscar Sosa-Nishizaki, Luz Erandi Saldaña-Ruiz, Emiliano García Rodríguez, Javier Tovar-Ávila, Felipe Galván-Magaña, and Frida Lara-Lizardi
27	Mexico	Costa Chica of Oaxaca	Emiliano García-Rodríguez, Luz Erandi Saldaña-Ruiz, Felipe Galván-Magaña, Frida Lara-Lizardi, Oscar Sosa-Nishizaki, and Javier Tovar-Ávila
28	Mexico	Deep Benthic Midriff Islands	Emiliano García-Rodríguez, Luz Erandi Saldaña-Ruiz, Felipe Galván-Magaña, Frida Lara-Lizardi, Oscar Sosa-Nishizaki, and Javier Tovar-Ávila
29	Mexico	Gulf of Tehuantepec	Felipe Galván-Magaña, Emiliano García-Rodríguez, Frida Lara-Lizardi, Luz Erandi Saldaña-Ruiz, Oscar Sosa-Nishizaki, and Javier Tovar-Ávila
30	Mexico	Islas Marías Archipelago	Karla C. Garcés-García, José Alberto Rodríguez-Madrigal, Javier Tovar-Ávila, Felipe Galván-Magaña, Emiliano García-Rodríguez, Frida Lara-Lizardi, and Oscar Sosa-Nishizaki
31	Mexico	Michoacán Coast	Emiliano García-Rodríguez, Luz Erandi Saldaña-Ruiz, Felipe Galván-Magaña, Frida Lara-Lizardi, Oscar Sosa-Nishizaki, and Javier Tovar-Ávila
32	Mexico	Migration Corridor Loreto-Cabo Pulmo	James T. Ketchum, Mauricio Hoyos-Padilla, Abel Trejo-Ramírez, Miguel Gómez-García, Frida Lara-Lizardi, Felipe Galván-Magaña, Emiliano García-Rodríguez, Oscar Sosa-Nishizaki, and Javier Tovar-Ávila
33	Mexico	Mulegé-Santa Rosalía	Felipe Galván-Magaña, Emiliano García-Rodríguez, James T. Ketchum, Frida Lara-Lizardi, Luz Erandi Saldaña-Ruiz, Oscar Sosa-Nishizaki, and Javier Tovar-Ávila

34	Mexico	Navidad Bay	Emiliano García-Rodríguez, Felipe Galván-Magaña, Frida Lara-Lizardi, Luz Erandi Saldaña-Ruiz, Oscar Sosa-Nishizaki, and Javier Tovar-Ávila
35	Mexico	Nayarit Central Coast	Javier Tovar-Ávila, Frida Lara-Lizardi, James T. Ketchum, Emiliano García-Rodríguez, Felipe Galván-Magaña, Oscar Sosa-Nishizaki, and Karla Garcés-García
36	Mexico	Northern Gulf of California	Oscar Sosa-Nishizaki, Emiliano García-Rodríguez, Luz Erandi Saldaña-Ruiz, Carmen Rodríguez-Medrano, Javier Tovar-Ávila, Felipe Galván-Magaña, and Frida Lara-Lizardi
37	Mexico	Revillagigedo Archipelago	Frida Lara-Lizardi, Felipe Galván-Magaña, Emiliano García-Rodríguez, James T. Ketchum, Andrea Nicolás-Chavez, Luz Erandi Saldaña-Ruiz, Oscar Sosa-Nishizaki, and Javier Tovar-Ávila
38	Mexico	Sinaloa Coastal Area	Luz Erandi Saldaña-Ruiz, Emiliano García-Rodríguez, Felipe Galván-Magaña, Karla C. Garcés-García, Frida Lara-Lizardi, Oscar Sosa-Nishizaki, and Javier Tovar-Ávila
40	France	Clipperton	Mark Priest
43	Guatemala	Guatemala Las Lisas-Hawaii	Cristopher Ávalos-Castillo, Ana Hacohe-Domené, Francisco Polanco-Vásquez, Pilar Velásquez-Jofre, Manuel de Jesus Ixquiac Cabrera, and Jennifer Michelle Hernández Murall
44	Guatemala	Tiquisate-Sipacate	Ana Hacohe-Domené, Cristopher Ávalos-Castillo, Francisco Polanco-Vásquez, and Emiliano García-Rodríguez
46	El Salvador	Jaltapeque	Mark Priest and Amanda Battle Morera

47	El Salvador	Los Cóbanos-Acajutla	José Alberto Gonzalez Leiva, José Enrique Barraza, Mark Priest, and Amanda Battle Morera
49	Nicaragua	Las Peñitas and Poneloya	Grettel Marisol Hernández Fernández and Ryan Charles
52	Costa Rica	Caño Island	Mario Espinoza, Elpis J. Chávez, and Ryan Charles
53	Costa Rica	Cocos Island and Seamounts	Elpis J. Chávez, Randall Arauz, Jeffry Madrigal-Mesén; Mario Espinoza, and Ryan Charles
54	Costa Rica	Coyote-Bongo	Elpis J. Chávez, Randall Arauz, Jeffry Madrigal-Mesén, Mario Espinoza, and Ryan Charles
55	Costa Rica	Costa Rica- Cabo Blanco	Elpis J. Chávez, Randall Arauz, Jeffry Madrigal-Mesén, Mario Espinoza, and Ryan Charles
56	Costa Rica	Golfo Dulce	Ilена Zanella, Mario Espinoza, Elpis J. Chávez, and Ryan Charles
57	Costa Rica	Gulf of Nicoya Mouth	Mario Espinoza, Elpis J. Chávez, and Ryan Charles
58	Costa Rica	Santa Elena Gulf	Mario Espinoza, Ilена Zanella, Elpis J. Chávez, and Ryan Charles
59	Costa Rica	Tárcoles	Ilена Zanella, Mario Espinoza, Elpis J. Chávez, and Ryan Charles
60	Costa Rica	Térraba-Sierpe	Mario Espinoza, Elpis J. Chávez, and Ryan Charles
63	Panama	Gulf of Chiriquí	Jorge Manuel Morales-Saldaña, Yehudi N. Rodríguez-Arriatti, Ángel J. Vega, and Peter M. Kyne

64	Panama	Gulf of Montijo	Jorge Manuel Morales-Saldaña, Yehudi N. Rodríguez Arriatti, Ángel J. Vega, Juan Camilo Cubillos-M, Juliana López-Angarita, and Peter M. Kyne
65	Panama	Gulf of San Miguel and Taira River	Peter M. Kyne, Jorge Manuel Morales-Saldaña, Yehudi N. Rodríguez-Arriatti, Yaliana Chichaco, Ángel J. Vega, Juan Camilo Cubillos-M., and Juliana López-Angarita
66	Panama	Northern Gulf of Panama	Jorge Manuel Morales-Saldaña, Yehudi N. Rodríguez-Arriatti, Yaliana Chichaco, Ángel J. Vega, and Peter M. Kyne
67	Panama	Panama Muertos Bay	Peter M. Kyne, Jorge Manuel Morales-Saldaña, Yehudi N. Rodríguez-Arriatti, Ángel J. Vega, Juan Camilo Cubillos-M., and Juliana López-Angarita
68	Panama	Punta Chame and Panama Bay	Yehudi N. Rodríguez-Arriatti, Jorge Manuel Morales-Saldaña, Ángel J. Vega, and Peter M. Kyne
70	Colombia	Malpelo Ridge	Felipe Ladino-Archila, Sandra Bessudo, Andrés F. Navia, Paola A. Mejía-Falla, Heins Bent-Hooker, Andrea Ocampo, Carmen López, Andrés Casama, and Peter M. Kyne
71	Colombia	Naya-Sanquianga	Andrés F. Navia, Colombo Estupiñán Montaña, Paola A. Mejía-Falla, Felipe Ladino, Heins Bent-Hooker, Andrés Casama, Carmen López, and Peter M. Kyne
72	Colombia	Solano Bay	Melany Villate-Moreno, Andrés F. Navia, Paola A. Mejía-Falla, Heins Bent-Hooker, Andrés Casama, Carmen López, Sandra Bessudo, and Peter M. Kyne

73	Colombia	Tribugá Gulf	Paola A. Mejía-Falla, Andrés F. Navia, Felipe Ladino-Archila, Andrea Ocampo, Melany Villate-Moreno, Diego Cardeñoso, Sandra Bessudo, Heins Bent-Hooker, Carmen López, Andrés Casama, and Peter M. Kyne
75	Ecuador	Darwin-Wolf	Alex Hearn, César Peñaherrera, Eduardo Espinoza, Jenifer Suárez, and Mark Priest
76	Ecuador	Galápagos Nursery Complex	Jenifer Suarez, Eduardo Espinoza, Alex Hearn, Diana Pazmiño, César Peñaherrera, Maximilian Hirschfeld, and Mark Priest
77	Ecuador	Galápagos Platform	Eduardo Espinoza, Jenifer Suarez, Diana Pazmiño, Michel Guerrero, César Peñaherrera, Mark Priest, and Alex Hearn
78	Ecuador	Isla de la Plata	Mark Priest, César Peñaherrera, Eduardo Espinoza, Jenifer Suárez, Michel Guerrero, and Alex Hearn
79	Ecuador	Northern Galápagos Hydrothermal Vents	Mark Priest, César Peñaherrera, Eduardo Espinoza, Jenifer Suárez, and Alex Hearn
80	Ecuador	Paramount Seamount	Alex Hearn; César Peñaherrera; Eduardo Espinoza; Jenifer Suárez; and Mark Priest
81	Ecuador	Puerto Cabuyal	Jessica Johanna Moreira García, Eduardo Espinoza Herrera, Kevin Reyes, Montse Amores, and Mark Priest
84	Peru	Central Peru Major Upwelling System	Ximena Velez-Zuazo, Joanna Alfaro-Shigueto, Francisco Córdova-Zavaleta, and Adriana Gonzalez Pestana
85	Peru	Coastal Northern Humboldt Current	Ximena Velez-Zuazo, Joanna Alfaro-Shigueto, Francisco Córdova-Zavaleta, and Adriana Gonzalez Pestana

86	Peru	Humboldt Current and Transition Zone	Joanna Alfaro-Shigueto, Francisco Córdova-Zavaleta, Ximena Velez-Zuazo, Adriana Gonzalez-Pestana
89	Chile	Arica-Atacama	Adriana Gonzalez-Pestana and Naití Morales Serrano
90	Chile	Atacama-Valparaíso and Los Rios	Naití Morales Serrano, Adriana Gonzalez-Pestana
91	Chile	Chilean Humboldt Kelp Forest	Ximena Velez-Zuazo, Joanna Alfaro-Shigueto, Enzo Acuña, Carlos Bustamante, Francisco Concha, Naiti Morales Serrano, Carolina Vargas-Caro, and Adriana Gonzalez Pestana
92	Chile	Chiloé	Naití Morales Serrano, Adriana Gonzalez-Pestana, Carlos Bustamante, Enzo Acuña, and Carolina Vargas-Caro
93	Chile	Salas y Gómez/Motu Motiro Hiva	Naití Morales Serrano, Adriana Gonzalez-Pestana, and Enzo Acuña
96	Guatemala, El Salvador, Nicaragua, Costa Rica, ABNJ	Costa Rica Thermal Dome	Mario Espinoza, Cristopher Avalos-Castillo, Ana Hacoheñ-Domené, Francisco Polanco-Vasquez, Elpis J. Chávez, and Ryan Charles
97	Costa Rica, Ecuador	Cocos-Galápagos Swimway	César Peñaherrera-Palma, Elpis J. Chávez, Randall Arauz, Mario Espinoza, Alex Hearn, and Ryan Charles
98	Ecuador, Peru	Ecuador-Peru Shelf Break	Alex Hearn, Eduardo Espinoza, Jenifer Suarez, César Peñaherrera, Michel Guerrero, Alejandra Mendoza, Rossana Maguiño, Mariano Cabanillas, Mark Priest, and Adriana González-Pestana

99	Honduras, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, Peru, ABNJ	Eastern Tropical Pacific Marine Corridor	César R. Peñaherrera-Palma, Elpis J. Chávez, Randall Arauz, Mario Espinoza, Jenifer Suarez, Felipe Ladino, and Mark Priest
100	Mexico, France	Gulf of California-Revillagigedo-Clipperton Migration Corridor	James T. Ketchum, Mauricio Hoyos-Padilla , Frida Lara-Lizardi, Abel Trejo-Ramírez , and Emiliano García-Rodríguez
101	El Salvador, Honduras, Nicaragua	Gulf of Fonseca	Ely Augustinus, Gabriela Ochoa, Grettel Hernández, and Amanda Batlle Morera
102	Ecuador, ABNJ	Pacific Equatorial Front	Alex Hearn, Cesar Peñaherrera, Eduardo Espinoza, Jenifer Suárez, Sofía Green, Jonathan Green, and Mark Priest

The following sections of the compendium provide a country level summary of each ISRA identified in the Central and South American Pacific Region. Each page includes the name of the ISRA, jurisdiction (including Areas Beyond National Jurisdiction (ABNJ), depth (in meters), surface area (in km²), a brief description of the habitat, the ISRA Criteria met, and example of the species meeting the criteria within the delineated area. Maps are also provided to illustrate the area with blue lines indicating the area meeting the ISRA Criteria and dashed lines indicating the suggested buffer for use in the development of appropriate place-based conservation measures.

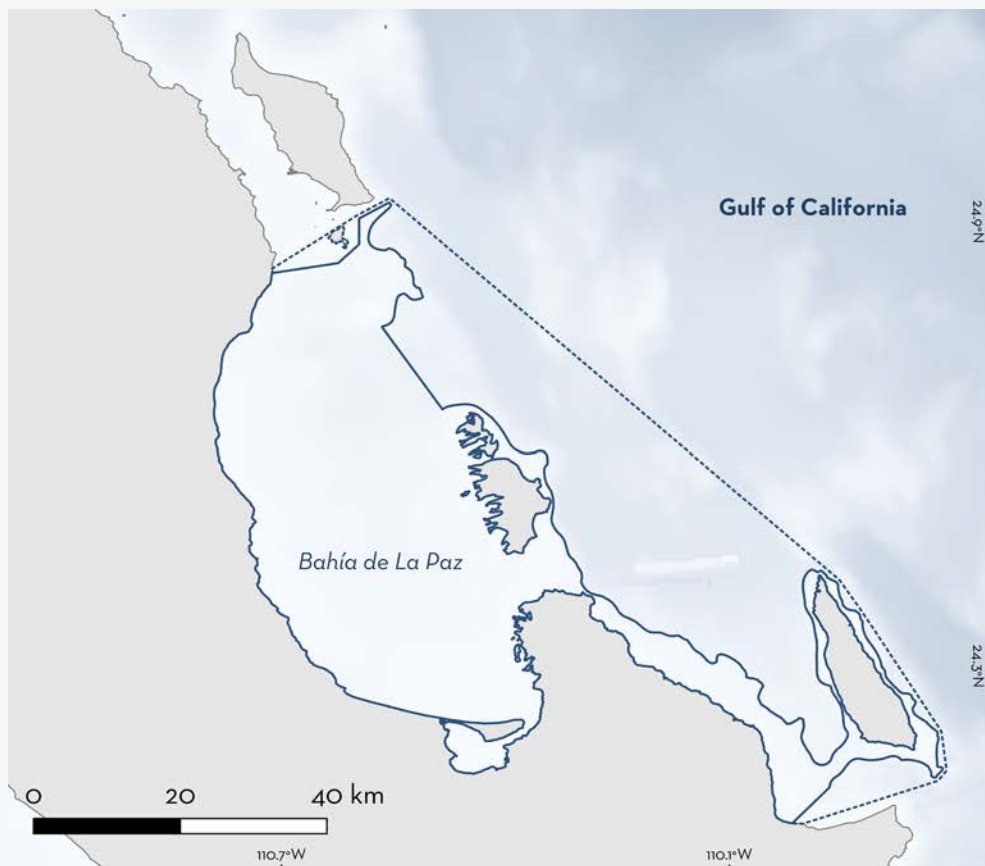
Comprehensive factsheets for each ISRA are available on the ISRA website (www.sharkrayareas.org/resources/isra-factsheets/) along with options to request spatial layers for each area, country, or region (www.sharkrayareas.org/resources/isra-spatial-layers/). All ISRA factsheets have undergone review by the ISRA Independent Review Panel prior to their publication.

For further information, please contact the ISRA Team: info@sharkrayareas.org





MEXICO



BAHÍA DE LA PAZ ISRA

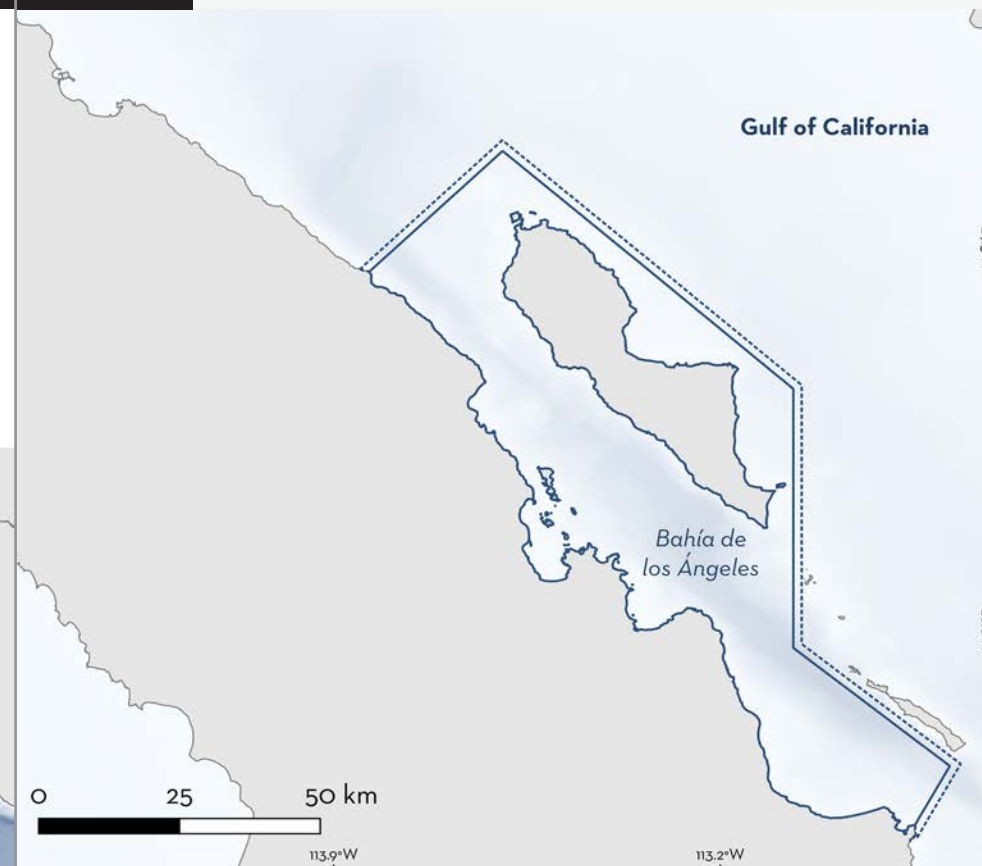
SUMMARY

Bahía de La Paz is located in the southwest coast of the Gulf of California, Mexico. This bay has maximum depths ranging from 50 to 200 m with diverse habitats including rocky shores, sandy substrates, mangrove ecosystems, and coral reefs with high primary productivity. The area also includes several islands including Espiritu Santo and Cerralvo. It overlaps with two Wetlands of International Importance (Ramsar sites) and two Key Biodiversity Areas. Within the area there are: **threatened species** (e.g., Pacific Sharpnose Shark *Rhizoprionodon longurio*); **reproductive areas** (e.g., Munk's Pygmy Devil Ray *Mobula munkiana*); **feeding areas** (e.g., Whale Shark *Rhincodon typus*); areas important for **movement** (Whale Shark); and **undefined aggregations** (e.g., Oceanic Manta Ray *Mobula birostris*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas; Sub-criterion C4 - Movement; Sub-criterion C5 - Undefined Aggregations

— —
MEXICO
 — —
0-200 metres
 — —
4,244 km²
 — —



BAHÍA DE LOS ÁNGELES ISRA

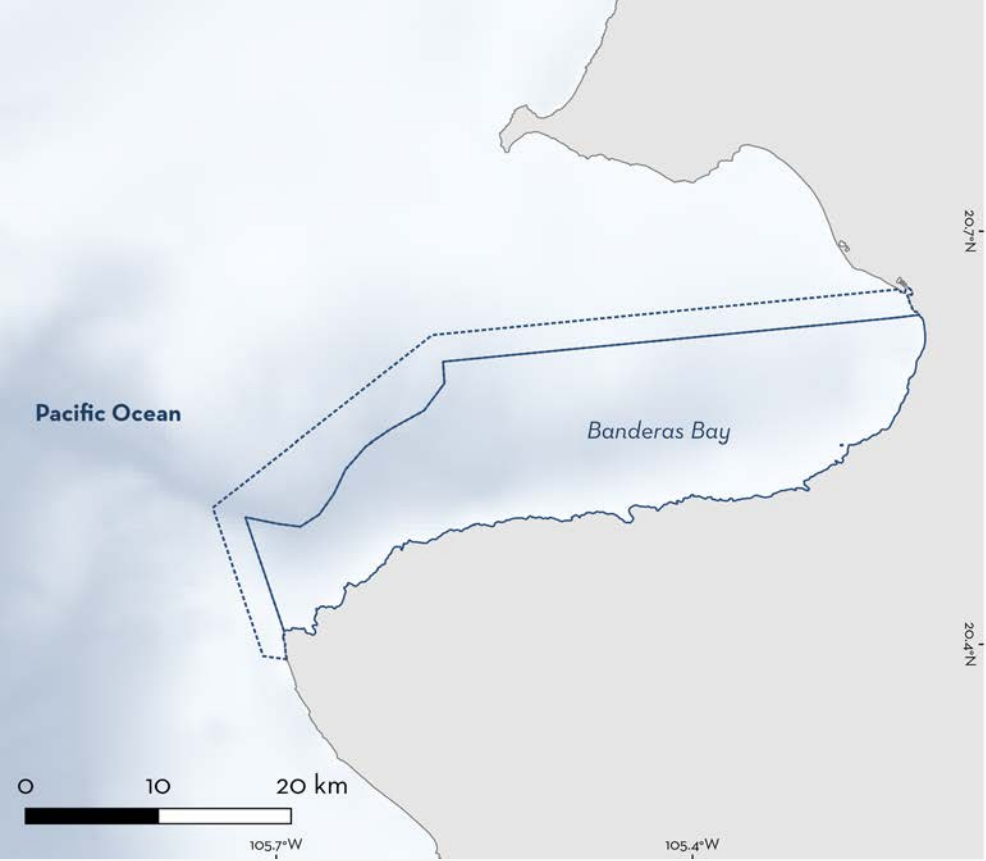
SUMMARY

Bahía de los Ángeles is located in the Gulf of California Midriff Island region on the eastern coast of the Baja California peninsula, Mexico. The area includes a shallow main bay of <40 m depth with around 17 islands, and the Ballenas and Salsipuedes channels, which have irregular bathymetry with depths >1,000 m. Habitats include other inlets, wetlands, mangroves, and sandy and rocky benthos. The area has high primary productivity due to water exchange between the bay and the channels that allow the mixing of cold, nutrient-rich water with the warmer waters within the bay. Within this area there are: **threatened species** (e.g., Blacktip Shark *Carcharhinus limbatus*); **range-restricted species** (e.g., California Butterfly Ray *Gymnura marmorata*); **reproductive areas** (e.g., Pacific Angelshark *Squatina californica*); **feeding areas** (Whale Shark *Rhincodon typus*); areas important for **movement** (Whale Shark); and **undefined aggregations** (e.g., Haller's Round Ray *Urobatis halleri*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas Sub-criterion C4 - Movement; Sub-criterion C5 - Undefined Aggregations

— —
MEXICO
 — —
0-1,928 metres
 — —
4,205 km²
 — —



BANDERAS BAY ISRA

SUMMARY

Banderas Bay is located at the entrance of the Gulf of California in Mexico. The area is a transition zone where three oceanic currents merge, namely, the temperate water California Current, the warm Mexican Coastal Current, and the warm high salinity Gulf of California water mass. The area has diverse ecosystems such as rocky reefs, coral communities, extensive sandy beaches, and mangroves. Within the area there are: **threatened species** (e.g., Silky Shark *Carcharhinus falciformis*); **reproductive areas** (e.g., Pacific Eagle Ray *Aetobatus laticeps*); and **feeding areas** (e.g., Oceanic Manta Ray *Mobula birostris*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas

— —
MEXICO
— —
0-339 metres
— —
761.18 km²
— —

CABO PULMO ISRA

SUMMARY

Cabo Pulmo is located in the southern Gulf of California, in the state of Baja California Sur, Mexico. It is considered the northernmost coral reef in the Eastern Pacific. The seabed in this area is mostly coarse sand, although there are some rocky portions. This area includes a Wetland of International Importance (Ramsar site) and the National Park Cabo Pulmo, one of the few fully protected areas in Mexico. Within this area there are: **threatened species** (e.g., Bull Shark *Carcharhinus leucas*); **reproductive areas** (Bull Shark); and **undefined aggregations** (Blacktip Shark *C. limbatus*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C5 - Undefined Aggregations

— —
MEXICO
— —
0-450 metres
— —
95.88 km²
— —



CABO SAN LUCAS ISRA

SUMMARY

Cabo San Lucas is located at the tip of the Baja California Peninsula in Mexico. The area includes one protected area, the Protection Area of Fauna and Flora Cabo San Lucas. The coastal landscape around Cabo San Lucas is a succession of sandy beaches, rocky cliffs, and mangrove ecosystems. The continental shelf in the area is narrow with the continental slope rapidly descending to 1,000 m depth towards an area of canyons, such as the San Lucas submarine canyon and the Vinorama canyon that ends in the Banco Gordo seamount. Within this area there are: **threatened species** (e.g., Silky Shark *Carcharhinus falciformis*); areas important for **movement** (e.g., Spinetail Devil Ray *Mobula mobular*); and **undefined aggregations** (e.g., Whale Shark *Rhincodon typus*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C4 - Movement; Sub-criterion C5 - Undefined Aggregations

— —
MEXICO
 — —
0-1,928 metres
 — —
3,779 km²
 — —

CENTRAL SONORA COAST ISRA

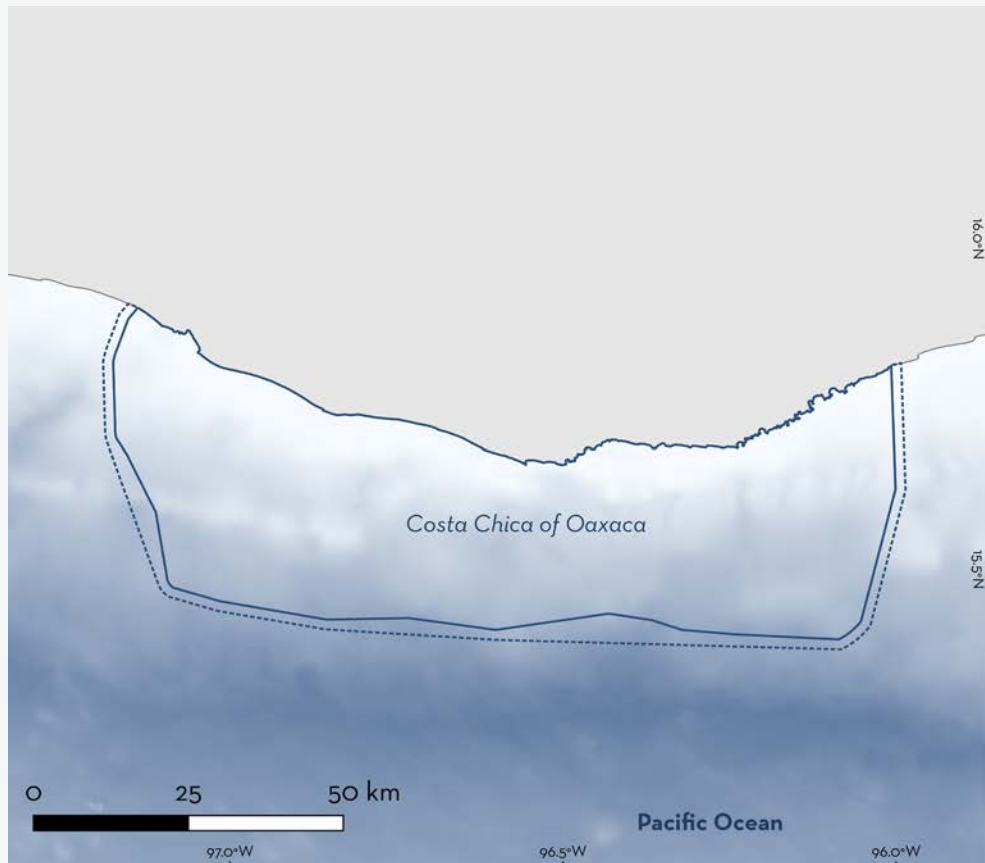
SUMMARY

Central Sonora Coast is located along the coastline and offshore of the Mexican state of Sonora and is situated within an Ecologically or Biologically Significant Marine Area, the Midriff Islands Region. This area also includes two protected areas, two Wetlands of International Importance (Ramsar sites), and seven Key Biodiversity Areas. It includes the largest island in the Gulf of California: Tiburón Island, and smaller ones such as Turón Island, Patos Island, San Pedro Martir Island, and San Pedro Nolasco Island. The area has a narrow continental shelf between 5-10 km, mostly composed of sandy bottoms. Within the area there are: **threatened species** (e.g., Cortez Numbfish *Narcine entemedor*); **range-restricted species** (Banded Guitarfish *Zapteryx exasperata*); **reproductive areas** (e.g., Grey-spotted Guitarfish *Pseudobatos glaucostigmus*); and the area sustains a **high diversity of sharks** (20 species).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion D2 - Diversity

— —
MEXICO
 — —
0-200 metres
 — —
11,365 km²
 — —



COSTA CHICA OF OAXACA ISRA

SUMMARY

Costa Chica of Oaxaca is located between Bahía de Huatulco and Puerto Escondido in Mexico. It includes the mouths of three main rivers that input freshwater and is characterised by mangroves and multiple bays along the coast with sand and muddy benthos. The area is highly productive due to the influence of distinctive strong-winds ('tehuanos') that produce upwelling events and the input of freshwater during the rainy season. Within this area there are: **threatened species** (e.g., Scalloped Hammerhead *Sphyrna lewini*); and **reproductive areas** (e.g., Silky Shark *Carcharhinus falciformis*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas

— —
MEXICO
 — —
0-100 metres
 — —
4,605 km²
 — —

DEEP BENTHIC MIDRIFF ISLANDS ISRA

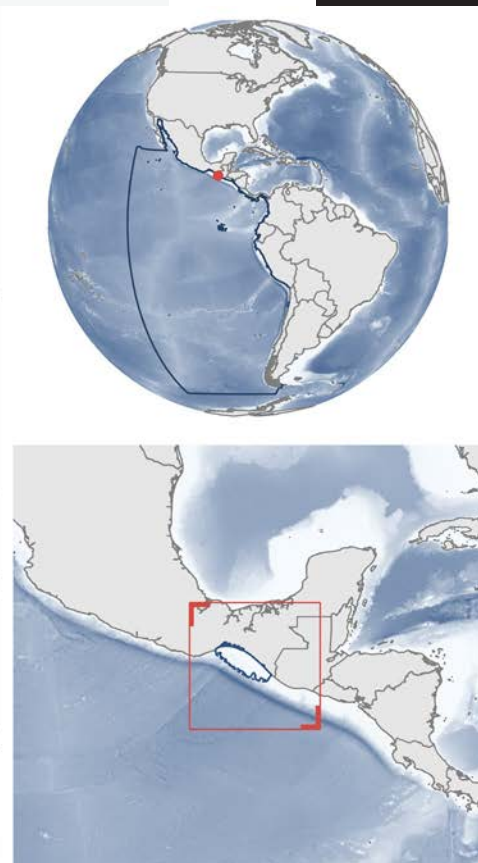
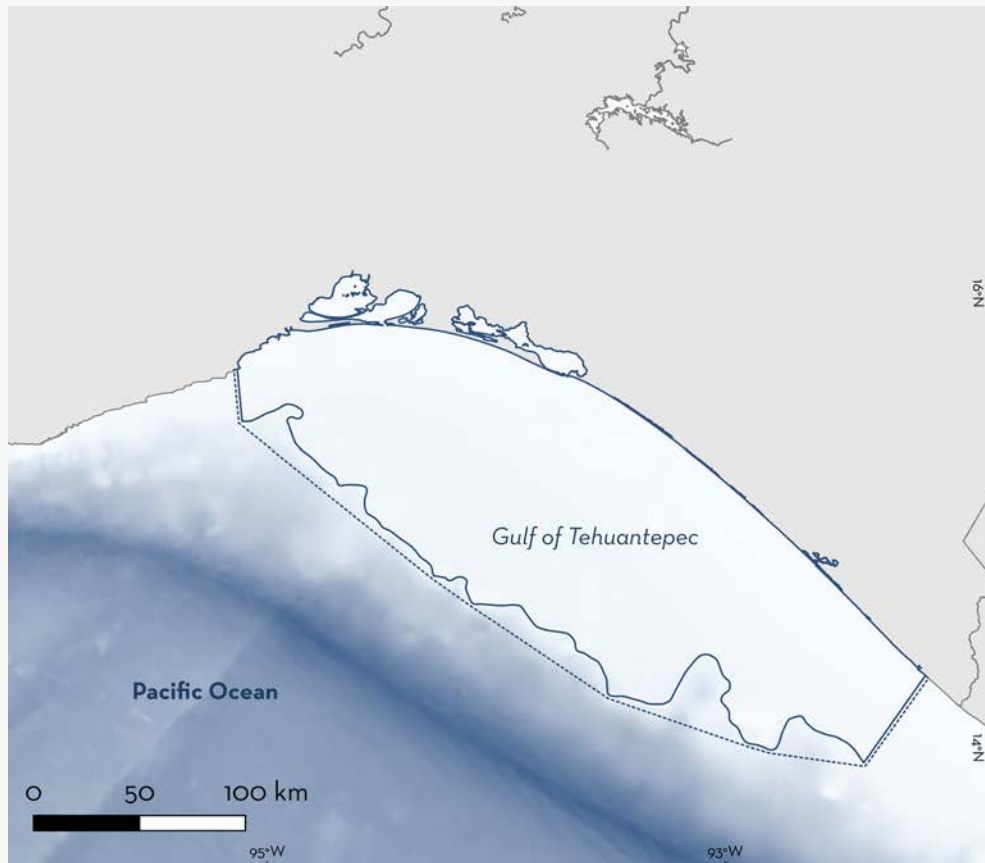
SUMMARY

Deep Benthic Midriff Islands is located in the central-northern part of the Gulf of California in Mexico. This area encompasses benthic waters near Tiburón Island and San Lorenzo Island in the southern part to areas north of Angel de la Guarda Island, in the Delfín and Salsipuedes basins. These basins have a maximum depth of ~1,450 m restricting the circulation between the northern and central gulf and serve as a place where very strong tidal currents produce intense mixing. This mixing also produces areas of high temperatures, salinities, and oxygen at great depths compared to other basins in the gulf at similar depths. Within this area there are **range-restricted species** (e.g., Peppered Catshark *Galeus piperatus*).

CRITERIA

Criterion B - Range Restricted

— —
MEXICO
 — —
90-847 metres
 — —
11,774 km²
 — —



GULF OF TEHUANTEPEC ISRA

SUMMARY

Gulf of Tehuantepec is located between Salina Cruz and Puerto Madero, Mexico. This area is characterised by a narrow continental shelf in the east, which widens towards the west of the area, extending ~40-80 km from the shore. Due to the presence of high-speed winds ('tehuanos'), seasonal upwellings generate high productivity within the area. This area encompasses coastal lagoons, wetlands, mangroves, estuaries, sandy beaches, and river mouths. Within this area there are: **threatened species** (e.g., Whitesnout Guitarfish *Pseudobatos leucorhynchus*); **range-restricted species** (e.g., Southern Banded Guitarfish *Zapteryx xyster*); **reproductive areas** (e.g., Scalloped Hammerhead *Sphyrna lewini*); **feeding areas** (e.g., Blotched Round Ray *Urotrygon chilensis*); and the area sustains a **high diversity** of sharks (24 species).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas; Sub-criterion D2 - Diversity

— —
MEXICO
 — —
0-200 metres
 — —
35,405.6 km²
 — —

ISLAS MARÍAS ARCHIPELAGO ISRA

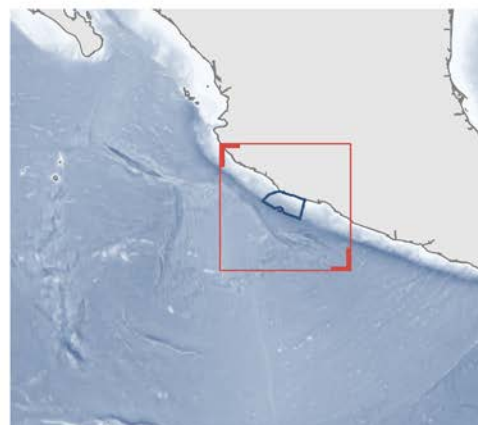
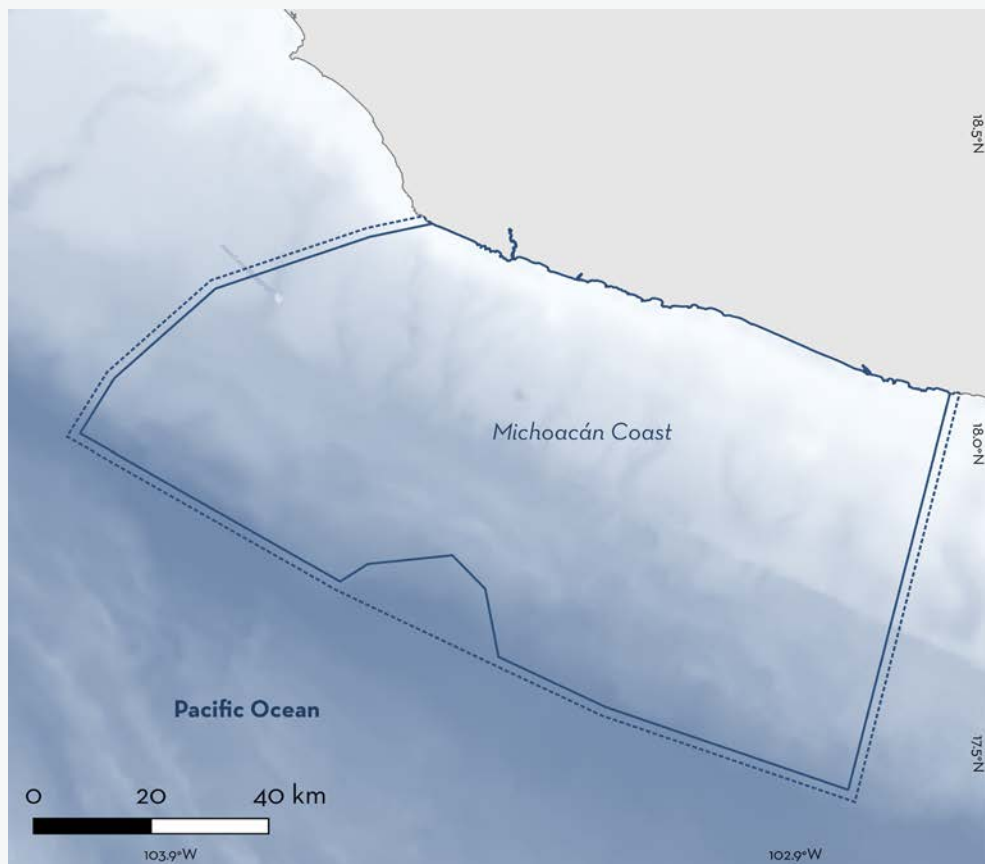
SUMMARY

Islas Marías Archipelago is located at the entrance of the Gulf of California in Mexico. The archipelago is formed by four islands of volcanic origin, about 120 km from the coast of the state of Nayarit. The islands are separated by shallow water channels (<30 m deep). The platform around the islands is very narrow. Due to the high levels of marine and terrestrial biodiversity and endemism, the archipelago was categorised as a Biosphere Reserve by the Mexican government in 2007 and then as a World Heritage Site by UNESCO. Within the area there are: **threatened species** (e.g., Smooth Hammerhead *Sphyrna zygaena*) and **undefined aggregations** (e.g., Silky Shark *Carcharhinus falciformis*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C5 - Undefined Aggregations

— —
MEXICO
 — —
0-1,000 metres
 — —
5,500.8 km²
 — —



MICHOACÁN COAST ISRA

SUMMARY

Michoacán Coast is located in the Mexican Central Pacific. It extends from the mouth of the Nexpa River in the east to the Maruata region in the west and is heavily influenced by river discharge. Combined with mixing produced by upwellings during late boreal spring (May-June), this discharge leads to an area that is highly productive. Common habitats within the area include sandy beaches, small estuaries, and rocky reefs. This area includes three Wetlands of International Importance (Ramsar sites), Playa de Maruata, Playa de Colola, and Playón Mexiquillo. Within the area, there are: **threatened species**, **reproductive areas**, and **feeding areas** (Scalloped Hammerhead *Sphyrna lewini*).

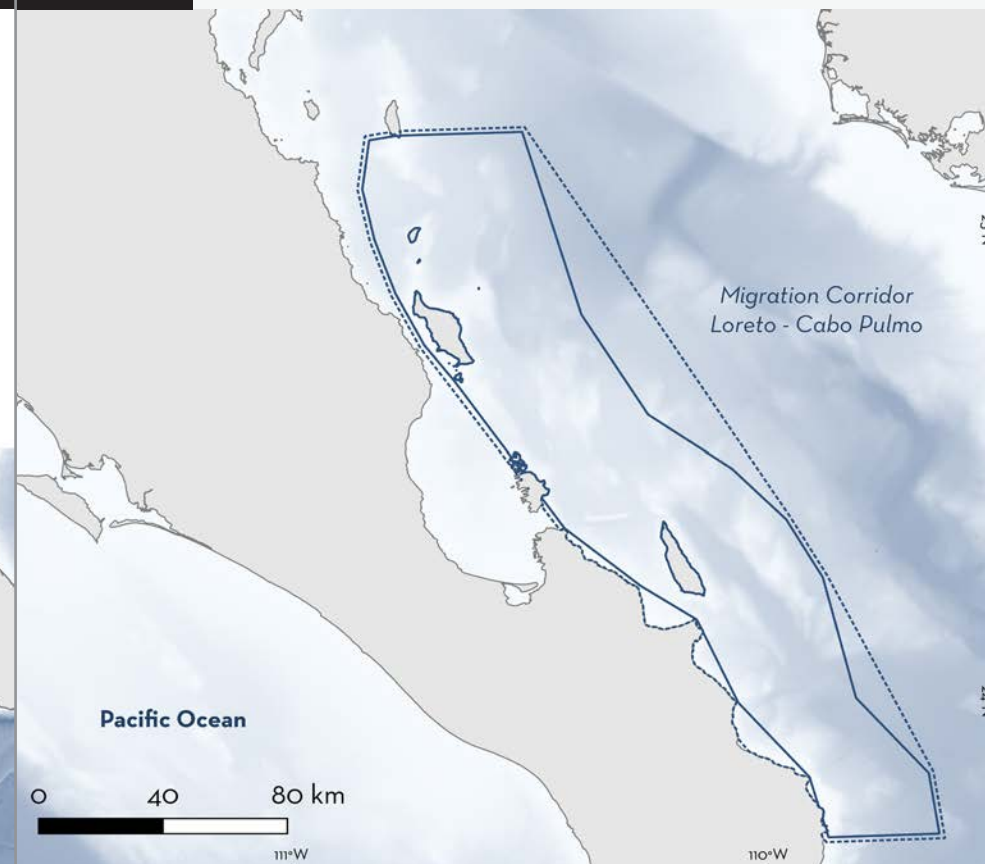
MEXICO

0-100 metres

8,985 km²

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas



MIGRATION CORRIDOR LORETO - CABO PULMO ISRA

SUMMARY

The Migration Corridor Loreto-Cabo Pulmo extends 268 km along the south-eastern coast of the Baja California Peninsula, Mexico. This area includes four protected areas, four Key Biodiversity Areas, and two Wetlands of International Importance (Ramsar sites). The area is characterised by diverse habitats including seamounts, mangroves, rocky shores, boulders, black corals, algal communities, coral reefs, and rocky reefs. Several islands occur in the area including Espíritu Santo, Cerralvo, San José, San Diego, and Santa Cruz Islands. This area has defined seasonal productivity, which is higher during the boreal spring and summer due to upwellings, wind-driven currents, tidal mixing, and thermohaline circulation. Within this area there are: **threatened species** (e.g., Scalloped Hammerhead *Sphyrna lewini*) and areas important for **movement** (e.g., Blacktip Shark *Carcharhinus limbatus*).

MEXICO

0-1,928 metres

16,127.8 km²

CRITERIA

Criterion A - Vulnerability; Sub-criterion C4 - Movement



MULEGÉ-SANTA ROSALÍA ISRA

SUMMARY

Mulegé-Santa Rosalía is located in the central Gulf of California, Mexico. This area has a very narrow continental shelf with rocky shores, sandy substrates, and mangrove ecosystems. It includes one Key Biodiversity Area and one Marine Protected Area. Within this area there are: **threatened species** (e.g., Spadenose Guitarfish *Pseudobatos buthi*); **range-restricted species** (e.g., Grey Smoothhound *Mustelus californicus*); and **reproductive areas** (e.g., Grey-spotted Guitarfish *P. glaucostigmus*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas



NAVIDAD BAY ISRA

SUMMARY

Navidad Bay is located along the coast of Jalisco state, Mexico. This area includes two river mouths and is characterised by sandy substrates, permanent freshwater input, and seasonal input of nutrients and sediments in the river mouths. This produces turbid waters within the small bays and high-energy beaches of the area, which are seasonally connected to the sea. Within this area there are: **threatened species** (e.g., Grey-spotted Guitarfish *Pseudobatos glaucostigmus*); **range-restricted species** (e.g., California Butterfly Ray *Gymnura marmorata*); **reproductive areas** (Scalloped Hammerhead *Sphyrna lewini*); and **feeding areas** (e.g., Haller's Round Ray *Urobatis halleri*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas



NAYARIT CENTRAL COAST ISRA

SUMMARY

Nayarit Central Coast is located at the entrance to the Gulf of California, Mexico. It contains remarkable biodiversity due to the variety of environments and geological features such as Isabel Island (an island of volcanic origin), mangroves, estuaries (e.g., Boca de Camichín), and sandy bays (e.g., Matanchen Bay located to the south of the port of San Blas). The area is influenced by three oceanic currents: the temperate water California Current, the warm high salinity Gulf of California Current, and the warm water Mexican Coastal Current. The seasonal changes in current and temperature produces a highly productive area. This area includes a protected area, Ramsar site, and Key Biodiversity Area. Within this area there are: **threatened species** (e.g., Pacific Sharpnose Shark *Rhizoprionodon longurio*); **reproductive areas** (e.g., Scalloped Hammerhead *Sphyrna lewini*); **feeding areas** (e.g., Whale Shark *Rhincodon typus*); and areas important for **movement** (Pacific Sharpnose Shark).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas; Sub-criterion C4 - Movement

— —
MEXICO
 — —
0-200 metres
 — —
3,360.6 km²
 — —



NORTHERN GULF OF CALIFORNIA ISRA

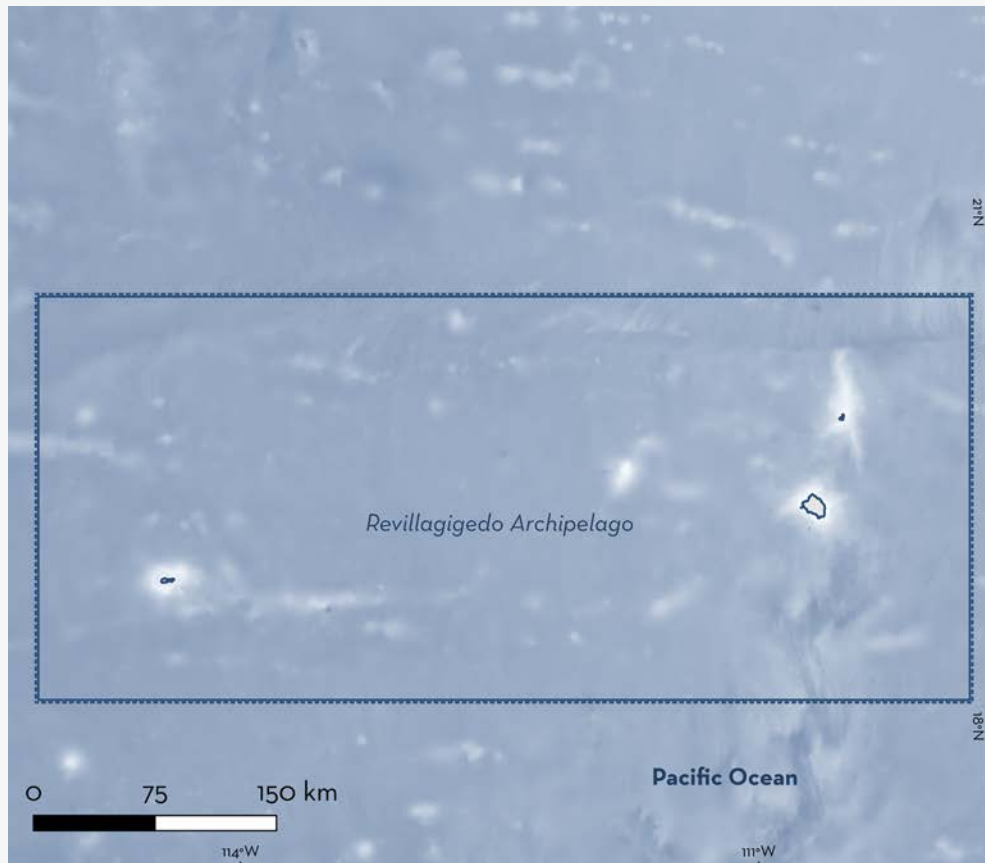
SUMMARY

Northern Gulf of California is located on the Pacific coast of Mexico. Situated at the northern end of the gulf, it extends from the Colorado River Delta in the north to the large islands of Tiburón and Angel de la Guarda in the south. The area overlaps with an Ecologically or Biologically Significant Marine Area and includes one protected area, three Ramsar sites, and three Key Biodiversity Areas. The area has a broad continental platform mostly composed of sandy substrates. The shallow waters are constantly influenced by extreme tides, strong winds, and upwellings to create the most productive region in the entire gulf. Within this area there are: **threatened species** (Whale Shark *Rhincodon typus*); **range-restricted species** (e.g., Peppered Catshark *Galeus piperatus*); **reproductive areas** (e.g., Brown Smoothhound *Mustelus henlei*); **feeding areas** (e.g., Shovelnose Guitarfish *Pseudobatos productus*); and areas important for **movement** (e.g., Whale Shark).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas Sub-criterion C4 - Movement

— —
MEXICO
 — —
0-281 metres
 — —
37,900 km²
 — —



REVILLAGIGEDO ARCHIPELAGO ISRA

SUMMARY

Revillagigedo Archipelago is located in the Eastern Tropical Pacific, 400 km south of Baja California state, Mexico. This area is part of a Marine Protected Area (National Park Revillagigedo) and is a UNESCO World Heritage Site due to its high biodiversity and species endemism. The archipelago is composed of four islands: Socorro, Clarion, San Benedicto, and Roca Partida and is characterised by rocky habitats and domes near the islands as well as sandy and silt bottoms, and hydrothermal vents. Within this area there are: **threatened species** (e.g., Silky Shark *Carcharhinus falciformis*); **reproductive areas** (e.g., Galápagos Shark *Carcharhinus galapagensis*); **feeding areas** (e.g., Silvertip Shark *Carcharhinus albimarginatus*); **resting areas** (Whitetip Reef Shark *Triaenodon obesus*); areas important for **movement** (e.g., Whale Shark *Rhincodon typus*); and **distinctive attributes** (e.g., Tiger Shark *Galeocerdo cuvier*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas; Sub-criterion C3 - Resting Areas; Sub-criterion C4 - Movement; Sub-criterion D1 - Distinctiveness

MEXICO

0-1,928 metres

159,647.5 km²

SINALOA COASTAL AREA ISRA

SUMMARY

Sinaloa Coastal Area is located in the southern Gulf of California, within the Mexican state of Sinaloa. This area is characterised by a narrow continental shelf and includes sandy beaches, coastal lagoons, muddy bays, estuaries, and marshes. The area has year-round high productivity due to the convergence of three different currents (California Current, Costa Rica Current, and Gulf of California Internal Current), the presence of coastal upwellings during the boreal winter, and the high input of freshwater and terrestrial nutrients during the rainy season. Within the area there are: **threatened species** (e.g., Diamond Stingray *Hypanus dipterurus*); **range-restricted species** (e.g., Spotted Round Ray *Urobatis maculatus*); **reproductive areas** (e.g., Pacific Sharpnose Shark *Rhizoprionodon longurio*); **feeding areas** (e.g., Grey-spotted Guitarfish *Pseudobatos glaucostigmus*); and the area sustains a **high diversity of sharks** (19 species).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas; Sub-criterion D2 - Diversity

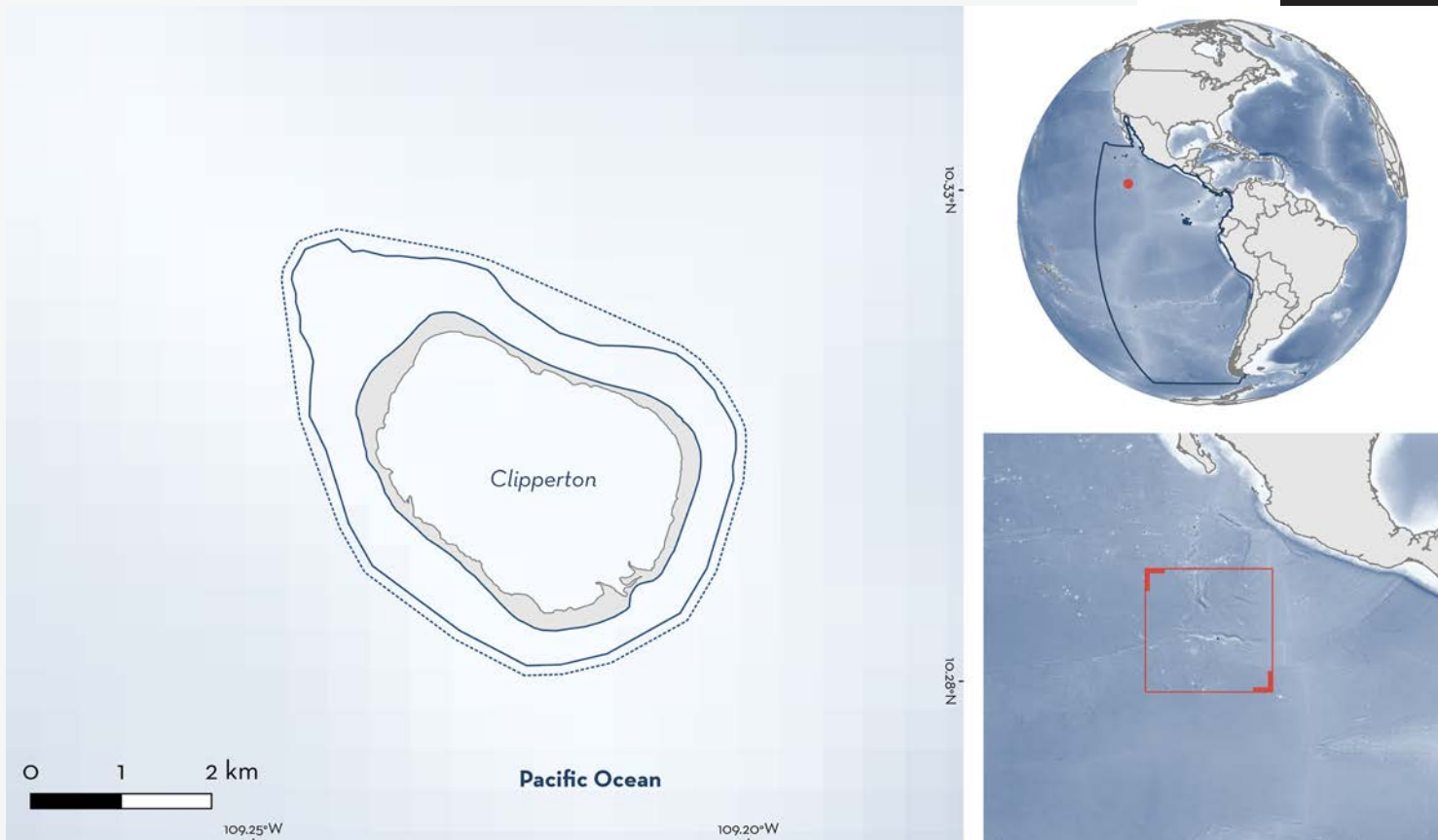
MEXICO

0-200 metres

33,989 km²



FRANCE



CLIPPERTON ISRA

SUMMARY

Clipperton is an atoll in the eastern Pacific, under the authority of the French government, approximately 1,100 km southwest of Mexico. It is the most westerly coral reef in the Eastern Tropical Pacific and is designated an Ecologically or Biologically Significant Marine Area (EBSA). The atoll comprises an enclosed stagnant freshwater lagoon and is surrounded by well-developed coral reefs that descend rapidly to deeper water (~70 m). Within the area there are: **threatened species** (Silvertip Shark *Carcharhinus albimarginatus*); and **reproductive areas** (e.g., Galapagos Shark *Carcharhinus galapagensis*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas

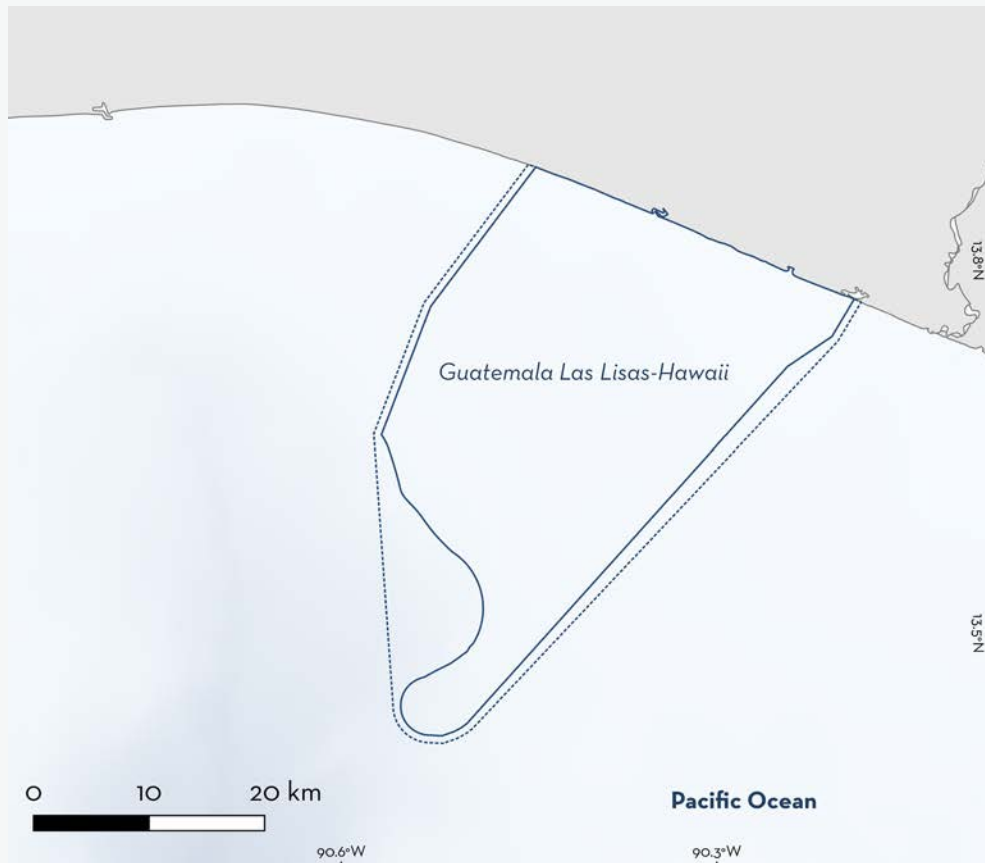
— —
FRANCE
 — —
0-100 metres
 — —
9.35 km²
 — —



Michel Garcia

GUATEMALA





GUATEMALA LAS LISAS-HAWAII ISRA

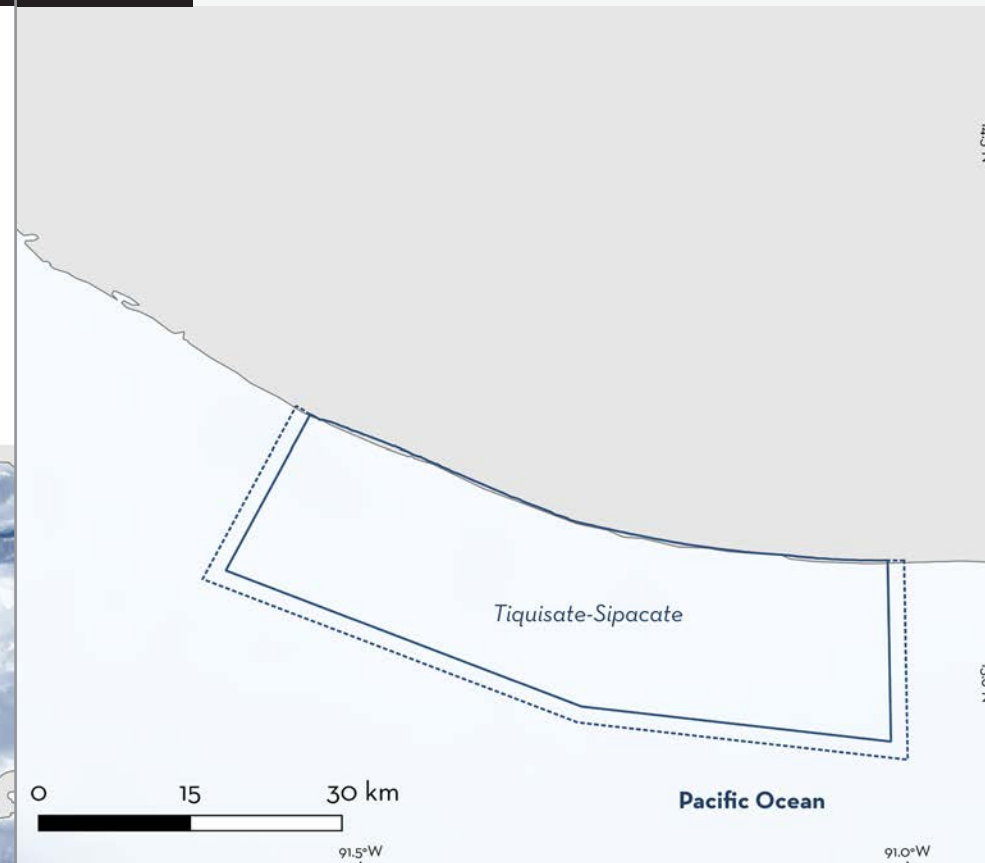
SUMMARY

Guatemala Las Lisas-Hawaii is located in the western part of the Pacific coast of Guatemala near the border with El Salvador. This area includes one protected area and one Key Biodiversity Area. It is characterised by a variety of habitats, including coastal wetlands, mangroves, estuaries, volcanic sand beaches, and river mouths (including El Jiote and El Chapeton). Within this area there are: **threatened species** (e.g., Silky shark *Carcharhinus falciformis*); **range-restricted species** (Vermiculate Numbfish *Narcine vermiculatus*); **reproductive areas** (e.g., Scalloped Hammerhead *Sphyrna lewini*); and **feeding areas** (Scalloped Hammerhead).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas

— —
GUATEMALA
 — —
0-200 metres
 — —
1,172.7 km²
 — —



TIQUISATE-SIPACATE ISRA

SUMMARY

Tiquisate-Sipacate is located in the Escuintla department of the Guatemalan Pacific. This area is within an Ecologically or Biologically Significant Marine Area, the Sipacate-Cañón San José Marine Ecosystem, and includes a protected area. It encompasses coastal wetlands, mangroves, dunes, estuaries, volcanic sand beaches, and two river mouths. Within this area there are: **threatened species** (e.g., Longtail Stingray *Hypanus longus*); **range-restricted species** (Pacific Chupare *Styracura pacifica*); and **reproductive areas** (e.g., Scalloped Hammerhead *Sphyrna lewini*).

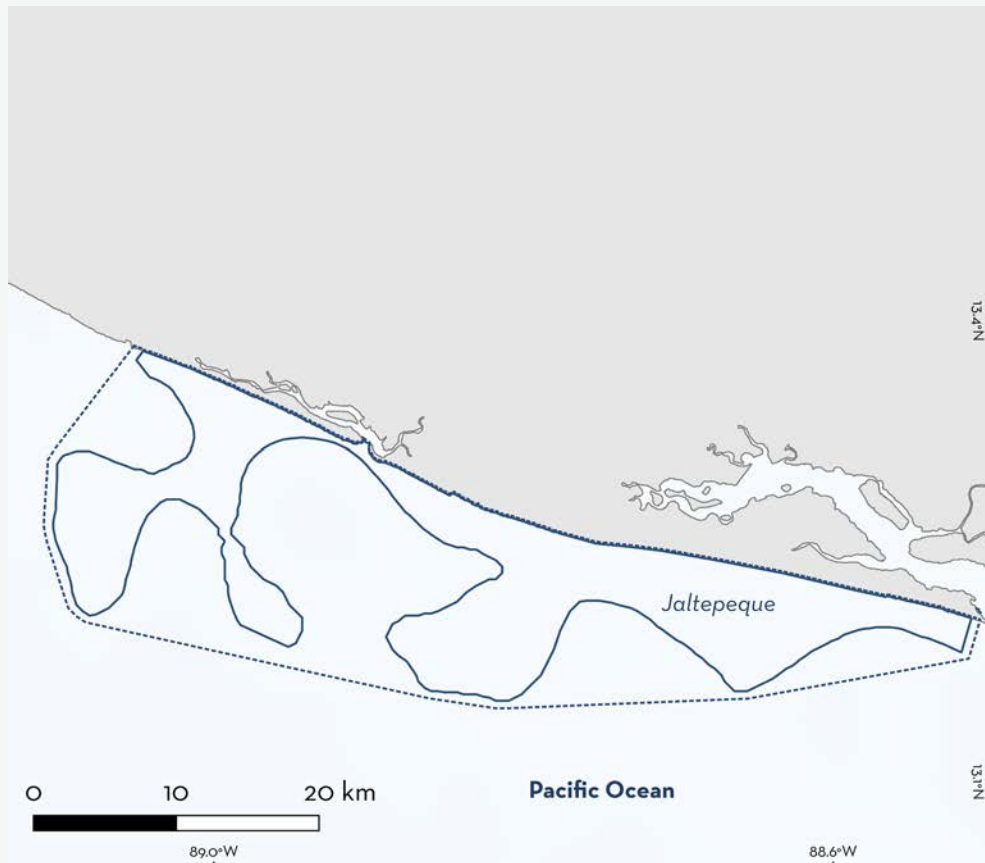
— —
GUATEMALA
 — —
0-100 metres
 — —
1,319.8 km²
 — —

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas

EL SALVADOR





JALTEPEQUE ISRA

SUMMARY

Jaltepeque is located on the Pacific coast of El Salvador, extending approximately 10 km offshore from the Estero de Jaltepeque, and the mouth of the Rio Lempa. The area includes shallow estuarine areas, the marine portion of the Complejo Jaltepeque Ramsar site, and extends out to marine continental shelf habitat to 20 m depth. Habitats include seasonally flooded mangroves, brackish lagoons, sandy beaches, and sentiment-rich benthos. Within this area there are: **threatened species** and **reproductive areas** (Scalloped Hammerhead *Sphyrna lewini*).

— —
EL SALVADOR
 — —
0-20 metres
 — —
850.5 km²
 — —

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas



LOS CÓBANOS-ACAJUTLA ISRA

SUMMARY

Los Cóbános-Acajutla is located in El Salvador, adjacent to the villages of Acajutla and Los Cóbános. This area includes the coastal Wetland of International Important (Ramsar site) Complejo los Cobános. The area is unique to the region as the only patch of coastal coral reef habitat from Costa Rica to Baja California. The area is also characterised by other habitats including volcanic beaches, mangroves, and estuaries. Within this area there are: **threatened species** and **reproductive areas** (Scalloped Hammerhead *Sphyrna lewini*).

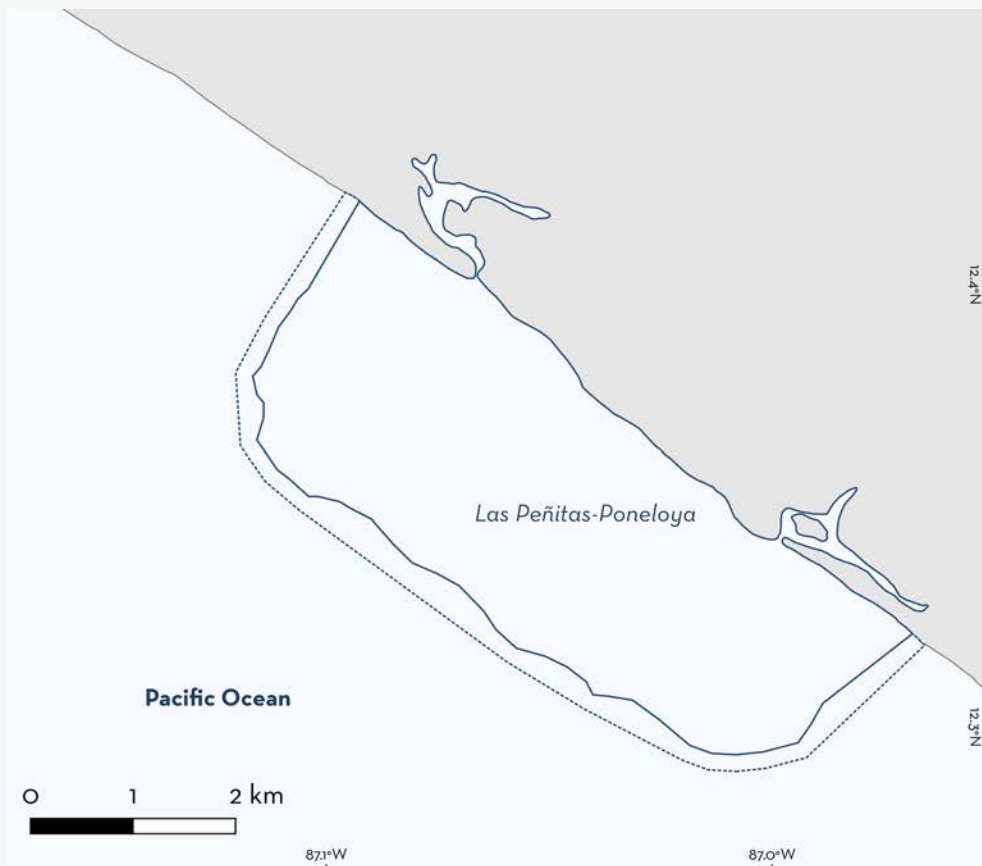
— —
EL SALVADOR
 — —
0-60 metres
 — —
424 km²
 — —

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas

NICARAGUA





LAS PEÑITAS AND PONELOYA ISRA

SUMMARY

Las Peñitas and Poneloya is located in the Pacific coast of Nicaragua. The area includes the Juan Venado Island Nature Reserve and is characterised by diverse coastal and benthic habitats including sandy beaches, mangrove forests, estuaries, and river mouths. Within this area there are: **threatened species** and **reproductive areas** (Scalloped Hammerhead *Sphyrna lewini*).

— —
NICARAGUA
 — —
0-25 metres
 — —
18.21 km²
 — —

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas



COSTA RICA





CAÑO ISLAND ISRA

SUMMARY

Caño Island is located around an inshore island 15 km off the coast of Costa Rica in the Eastern Tropical Pacific. It is a Biological Reserve with a marine no-take area. The area includes one of the most diverse coral reef formations on the Pacific coast of Costa Rica, characterised by five fringing coral reef flats. In this area there are: **threatened species** (Whitetip Reef Shark *Triaenodon obesus*); **range restricted species** (Leopard Round Ray *Urobatis pardalis*); and **resting areas** (Whitetip Reef Shark).

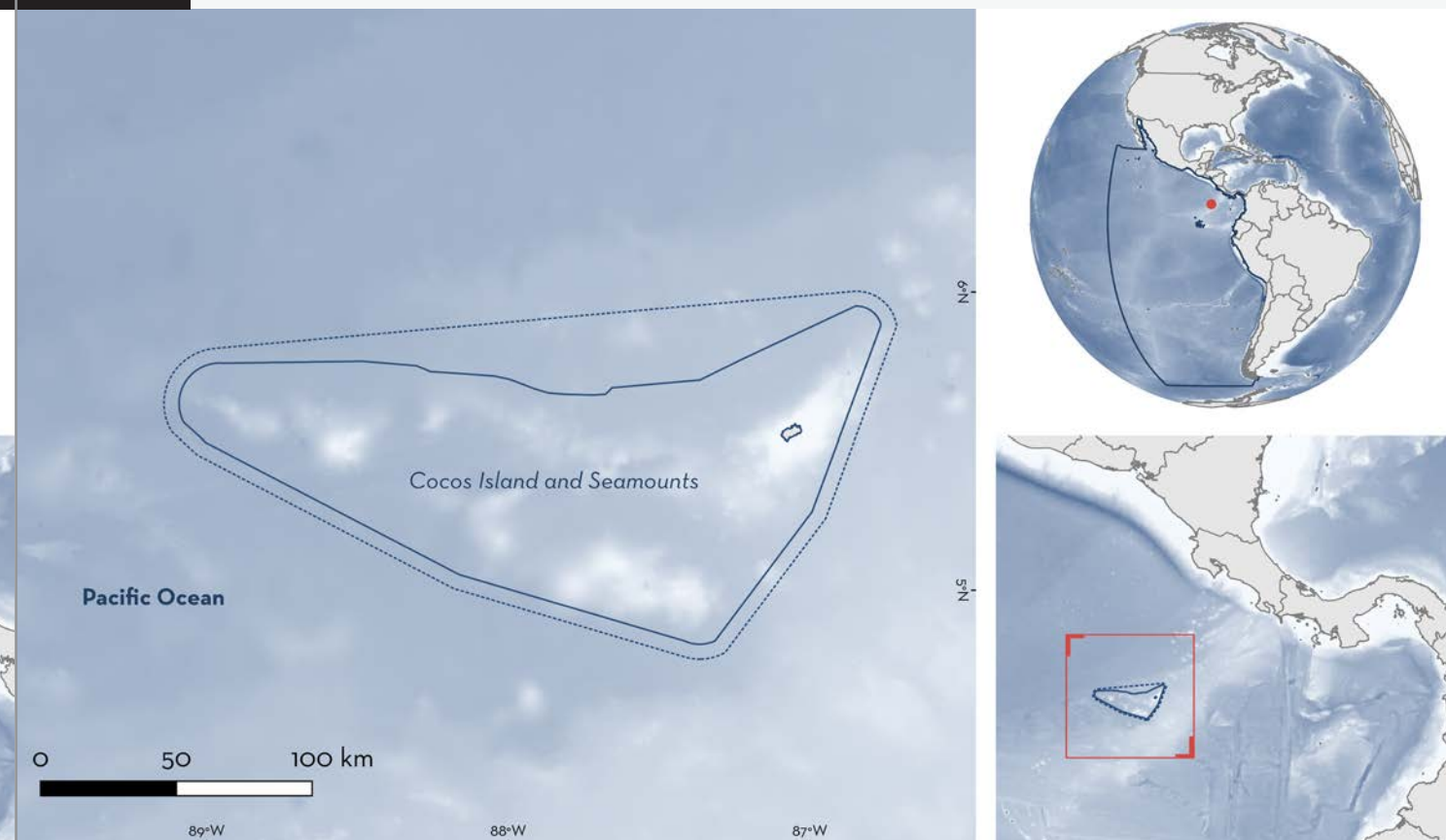
CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C3 - Resting Areas

COSTA RICA

0-40 metres

67.98 km²



COCOS ISLAND AND SEAMOUNTS ISRA

SUMMARY

Cocos Island and Seamounts is an oceanic area located within the Exclusive Economic Zone of Costa Rica. The area includes the connection of Cocos Island and seamounts found along the Cocos Ridge: Las Gemelas and West Cocos. It is characterised by diverse habitats comprising a complex benthic morphology with soft and hard substrates, rich benthic habitats in deep waters, and extensive coral reefs and coral communities at shallow depths. Islets and rocky pinnacles around the island promote highly productive habitats by increasing vertical nutrient-rich fluxes and material retention. Within this area there are: **threatened species** (e.g., Reef Manta Ray *Mobula alfredi*); **reproductive areas** (e.g., Silvertip Shark *Carcharhinus albimarginatus*); **resting areas** (Whitetip Reef Shark *Triaenodon obesus*); areas important for **movement** (e.g., Whale Shark *Rhincodon typus*); **undefined aggregations** (e.g., Scalloped Hammerhead *Sphyrna lewini*); and **distinctive attributes** (e.g., Galápagos Shark *Carcharhinus galapagensis*).

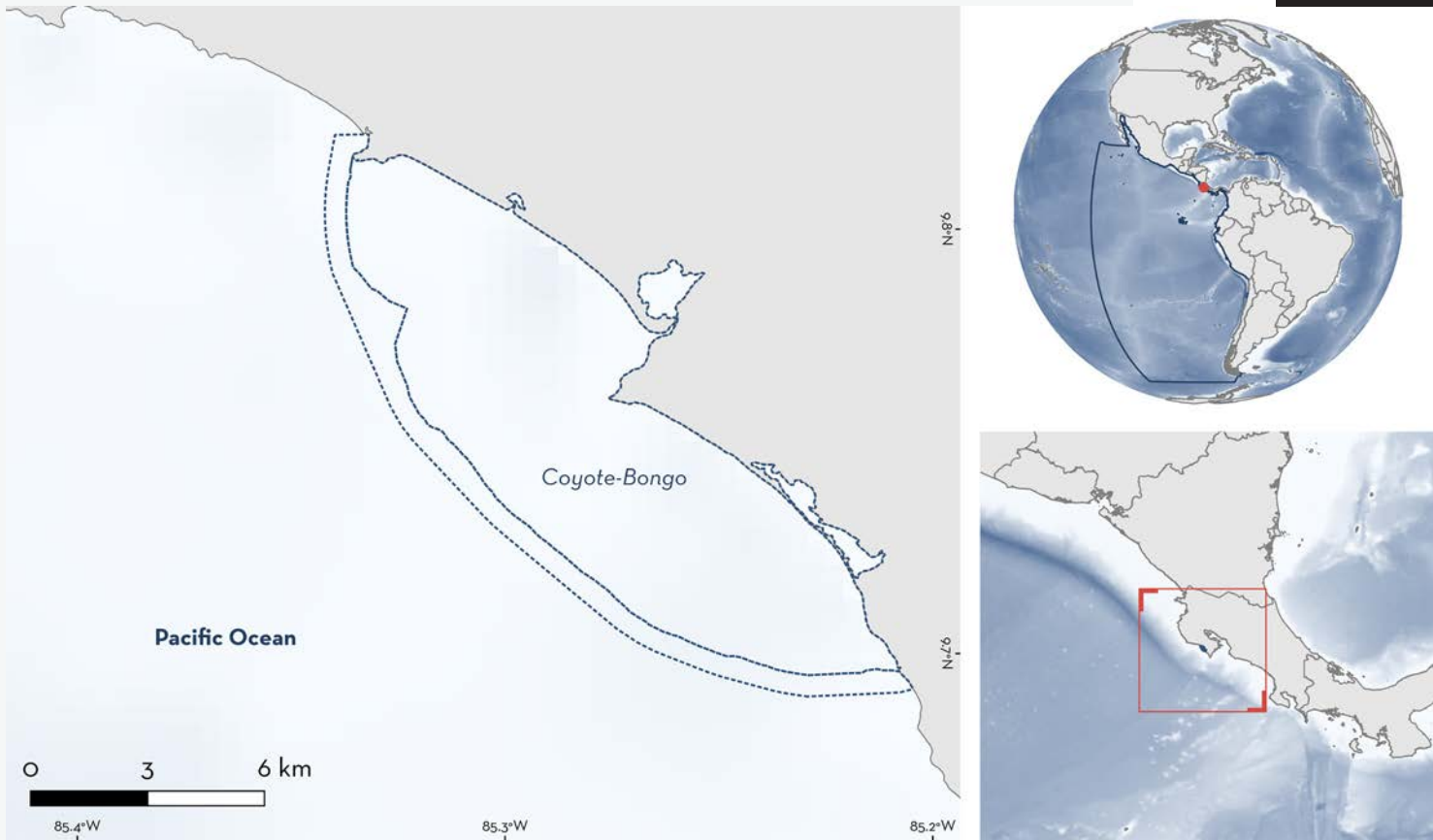
CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C3 - Resting Areas; Sub-criterion C4 - Movement; Sub-criterion C5 - Undefined Aggregations; Sub-criterion D1 - Distinctiveness

COSTA RICA

0-1,043 metres

23,430 km²



COYOTE-BONGO ISRA

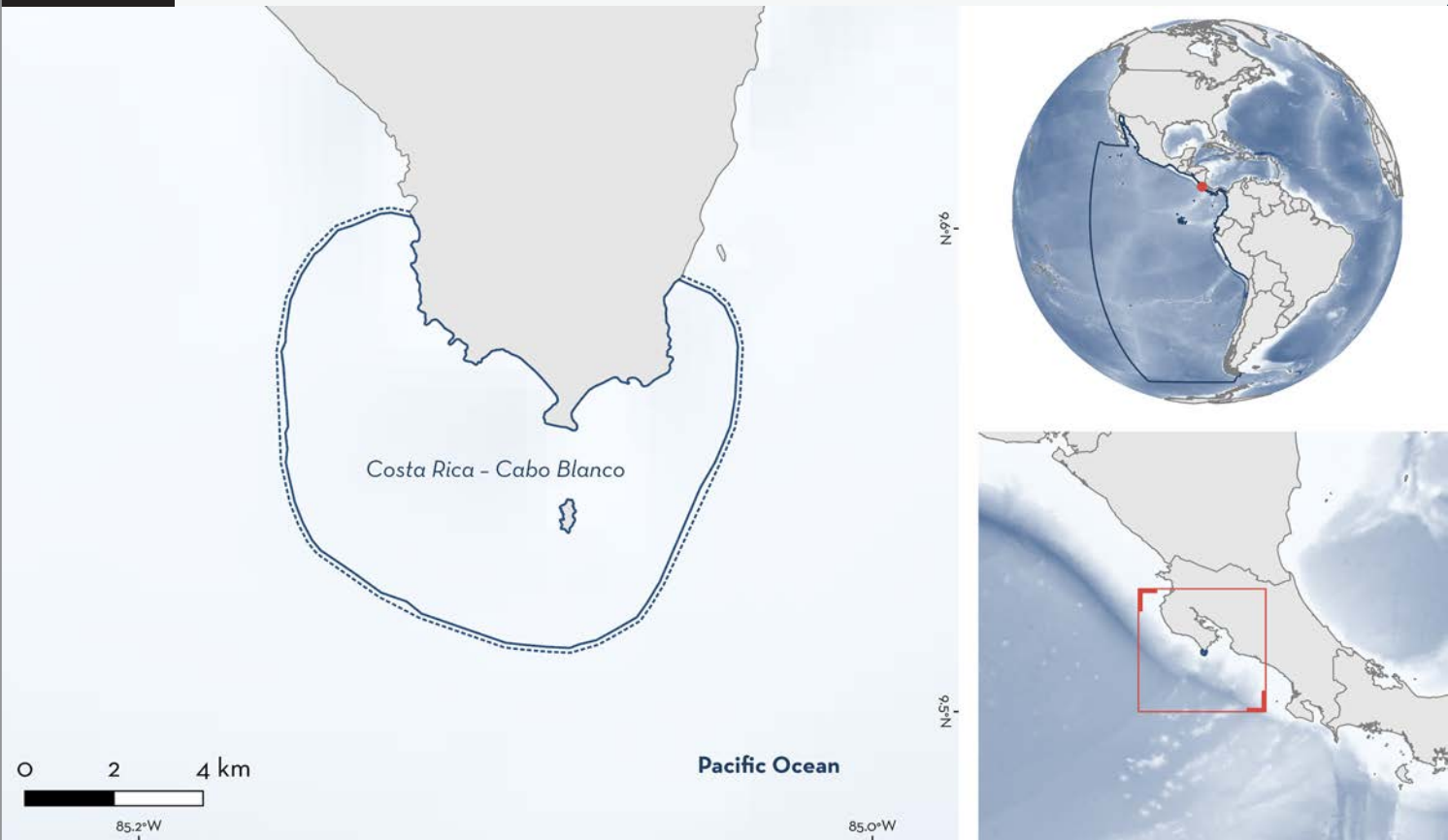
SUMMARY

Coyote-Bongo is located in the southern Nicoya Peninsula on the north Pacific coast of Costa Rica. It includes the coastal waters of the Caletas-Ario Marine Protected Area (MPA) and those between the Caletas-Ario and Camaronal MPAs. The area encompasses a diversity of habitats including sandy beaches, rocky reefs, tidepools, and highly dynamic estuarine systems surrounded by mangrove forests. The climate across this area is influenced by dry (December to April) and rainy (May to November) seasons. Within this area there are: **threatened species** (e.g., Blacktip Shark *Carcharhinus limbatus*); **range-restricted species** (Pacific Chupare *Styracura pacifica*); **reproductive areas** (e.g., Scalloped Hammerhead *Sphyrna lewini*); and areas important for **movement** (Bull Shark *Carcharhinus leucas*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion C4 - Movement

— —
COSTA RICA
 — —
0-30 metres
 — —
95.4 km²
 — —



COSTA RICA - CABO BLANCO ISRA

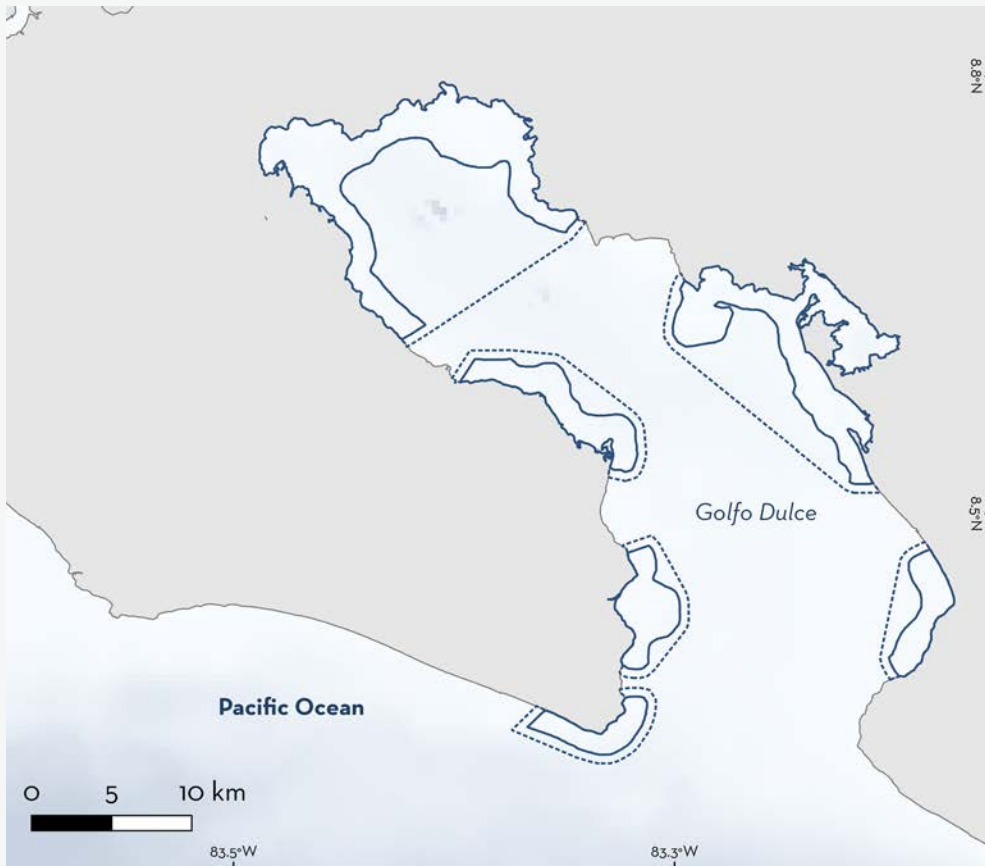
SUMMARY

Cabo Blanco is located at the southern end of the Nicoya Peninsula in north Pacific Costa Rica. The area includes the Absolute Natural Reserve and the Marine Management Area of Cabo Blanco. There are diverse habitats including coral and rocky reefs, sandy bottoms, and tidal pools. Within this area there are: **threatened species** (e.g., Bull Shark *Carcharhinus leucas*); **range-restricted species** (Pacific Chupare *Styracura pacifica*); **resting areas** (Pacific Nurse Shark *Ginglymostoma unami*); and areas important for **movement** (e.g., the Oceanic Manta Ray *Mobula birostris*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C3 - Resting Areas; Sub-criterion C4 - Movement

— —
COSTA RICA
 — —
0-40 metres
 — —
65.5 km²
 — —



GOLFO DULCE ISRA

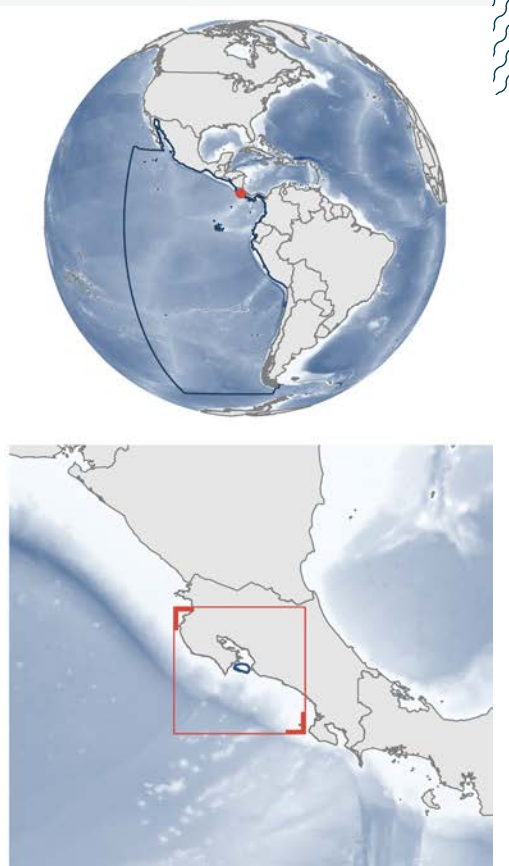
SUMMARY

Golfo Dulce is a large tropical inlet located on the southern Pacific coast of Costa Rica. It encompasses an area that is approximately 50 km in length and 10-15 km wide with an effective sill of about 60 m at the entrance to the gulf. The inner basin area is deep (to 215 m) with an anoxic bottom, whereas the coastline has a shallow platform surrounded by diverse habitats including rainforest, mangroves, sandy beaches, soft-mud bottoms, seagrasses, and coral reefs. Local geomorphological features make this area one of the few low-circulation tropical systems known globally. Within this area there are: **threatened species** (e.g., Whale Shark *Rhincodon typus*); **reproductive areas** (Scalloped Hammerhead *Sphyrna lewini*); **feeding areas** (Whale Shark); and areas important for **movement** (Scalloped Hammerhead).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas; Sub-criterion C4 - Movement

— —
COSTA RICA
 — —
0-30 metres
 — —
388 km²
 — —



GULF OF NICOYA MOUTH ISRA

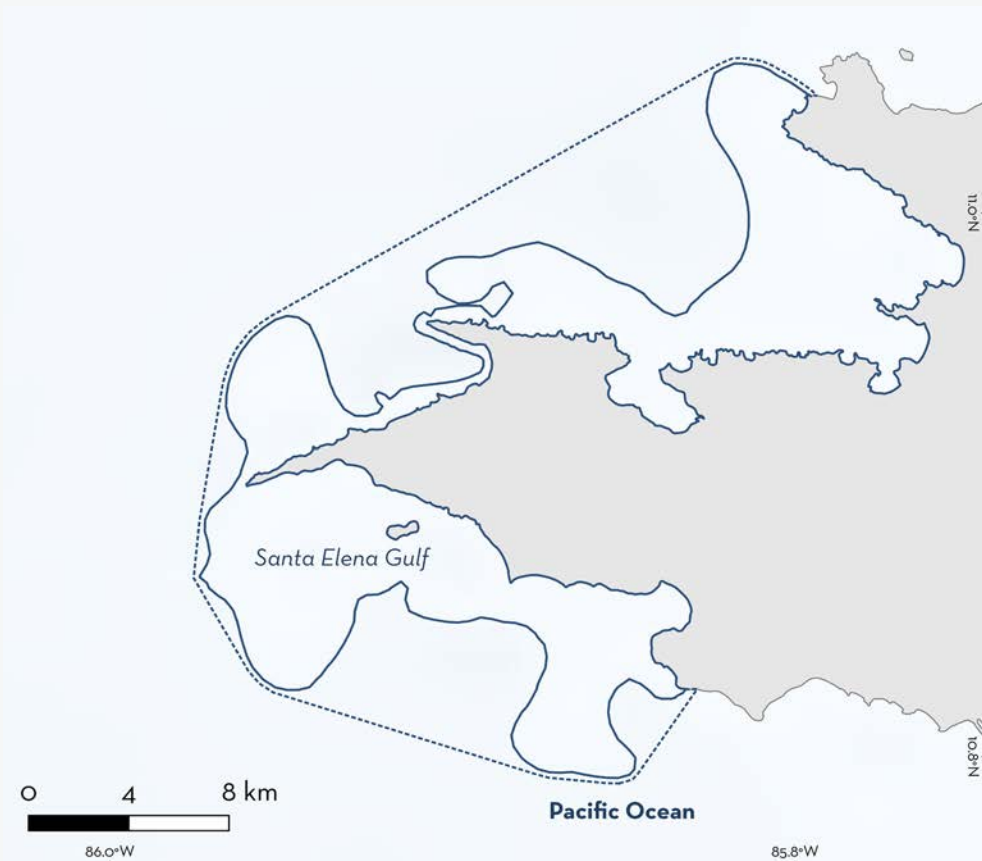
SUMMARY

Gulf of Nicoya Mouth is located at the entrance of the Gulf of Nicoya on the central Pacific coast of Costa Rica. The Gulf of Nicoya is a large tropical estuary with 150 km of coastline. This area has a demersal soft, muddy habitat and is influenced by alluvial input from numerous rivers, which creates one of the most productive and diverse areas in Costa Rica. Within this area there are: **threatened species** (e.g., Rasptail Skate *Rostroraja velezi*); **range-restricted species** (Southern Banded Guitarfish *Zapteryx xyster*); and **reproductive areas** (e.g., Brown Smoothhound *Mustelus henlei*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas

— —
COSTA RICA
 — —
0-100 metres
 — —
333.4 km²
 — —



SANTA ELENA GULF ISRA

SUMMARY

Santa Elena Gulf is located in the north Pacific coast of Costa Rica. This area is influenced by the Costa Rica Thermal Dome (a dynamic area with strong currents, cold nutrient-rich waters, and coastal wind jets), and is subject to a strong seasonal coastal upwelling due to trade winds. Santa Elena Gulf has diverse habitats including a complex rocky platform, sand and mudflats, mangroves, and coral reefs. Within this area there are: **threatened species** (e.g., Largetooth Sawfish *Pristis pristis*); **range-restricted species** (e.g., Pacific Chupare *Styracura pacifica*); **reproductive areas** (Scalloped Hammerhead *Sphyrna lewini*); **resting areas** (e.g., Whitetip Reef Shark *Triaenodon obesus*); **undefined aggregations** (e.g., Munk's Pygmy Devil Ray *Mobula munkiana*); **distinctive attributes** (e.g., Bull Shark *Carcharhinus leucas*); and this area sustains a **high diversity** of sharks (24 species).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion C3 - Resting Areas; Sub-criterion C5 - Undefined Aggregations; Sub-criterion D1 - Distinctiveness; Sub-criterion D2 - Diversity

COSTA RICA

0-40 metres

396.1 km²

TÁRCOLES ISRA

SUMMARY

Tárcoles is located in the southeast portion of the Gulf of Nicoya, on the central Pacific coast of Costa Rica. The Gulf of Nicoya is a large tropical estuary (609 km²) with 150 km of coastline, of which 112 km is fringed with mangroves. The area includes the Tárcoles River Basin where high nutrient levels facilitate prey persistence, and turbid waters provide refuge. Within this area there are: **threatened species** and **reproductive areas** (Scalloped Hammerhead *Sphyrna lewini*).

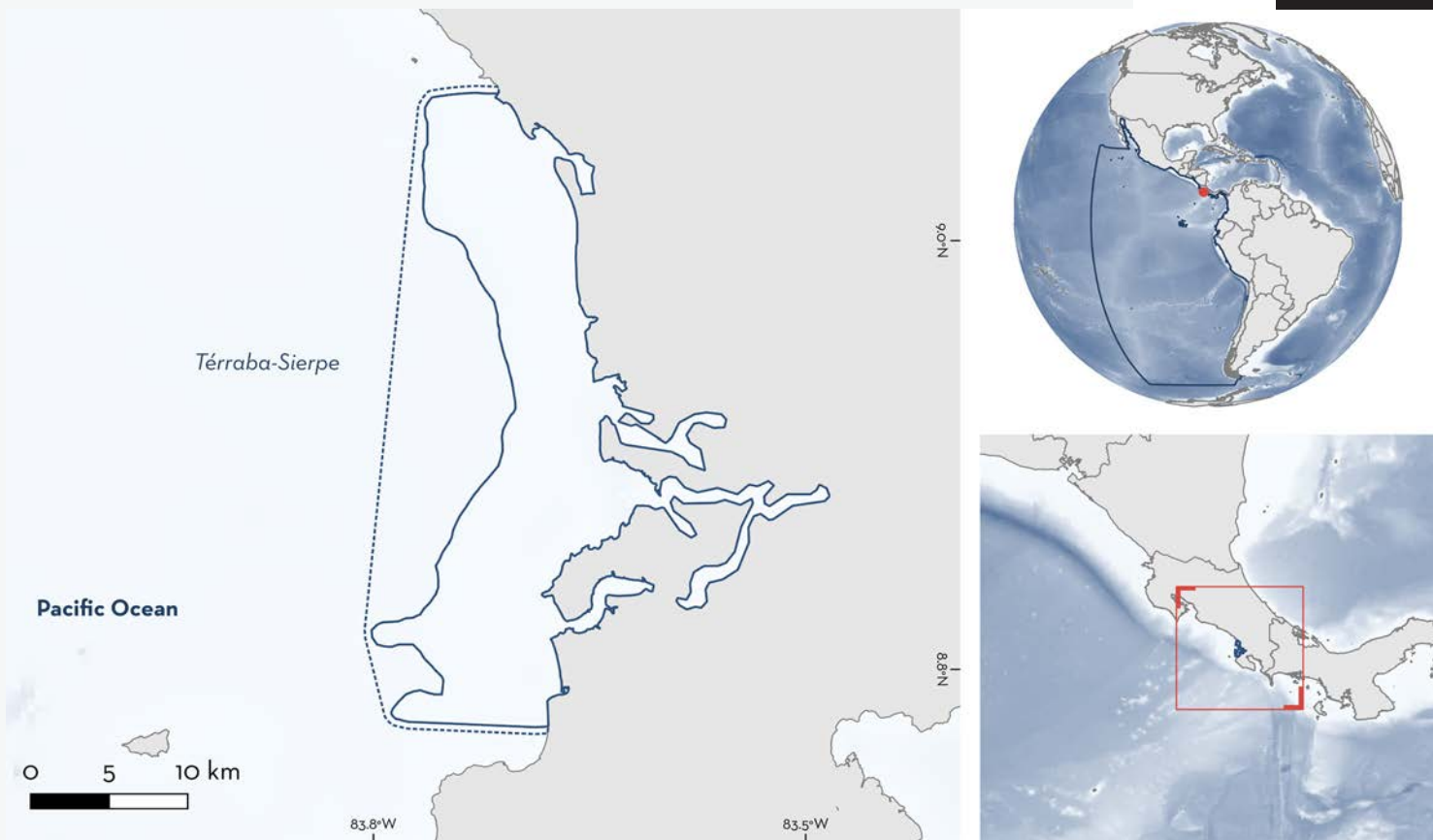
CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas

COSTA RICA

0-30 metres

38.03 km²



TÉRRABA-SIERPE ISRA

SUMMARY

Térraba-Sierpe is located on the southern Pacific coast of Costa Rica. This productive area includes the Humedal Nacional Térraba-Sierpe, one of the largest wetland systems in Central America, a Forest Reserve, and a Wetland of International Importance (Ramsar site). This area is characterised by important coastal and estuarine habitats. Its productivity is influenced by the rainy season which increases river flow, nutrient input, and primary productivity. Within this area there are: **threatened species** (e.g., Largetooth Sawfish *Pristis pristis*); **range-restricted species** (e.g., Pacific Chupare *Styracura pacifica*); **reproductive areas** (e.g., Brown Smoothhound *Mustelus henlei*); and this area sustains a **high diversity** of sharks (18 species).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion D2 - Diversity

COSTA RICA

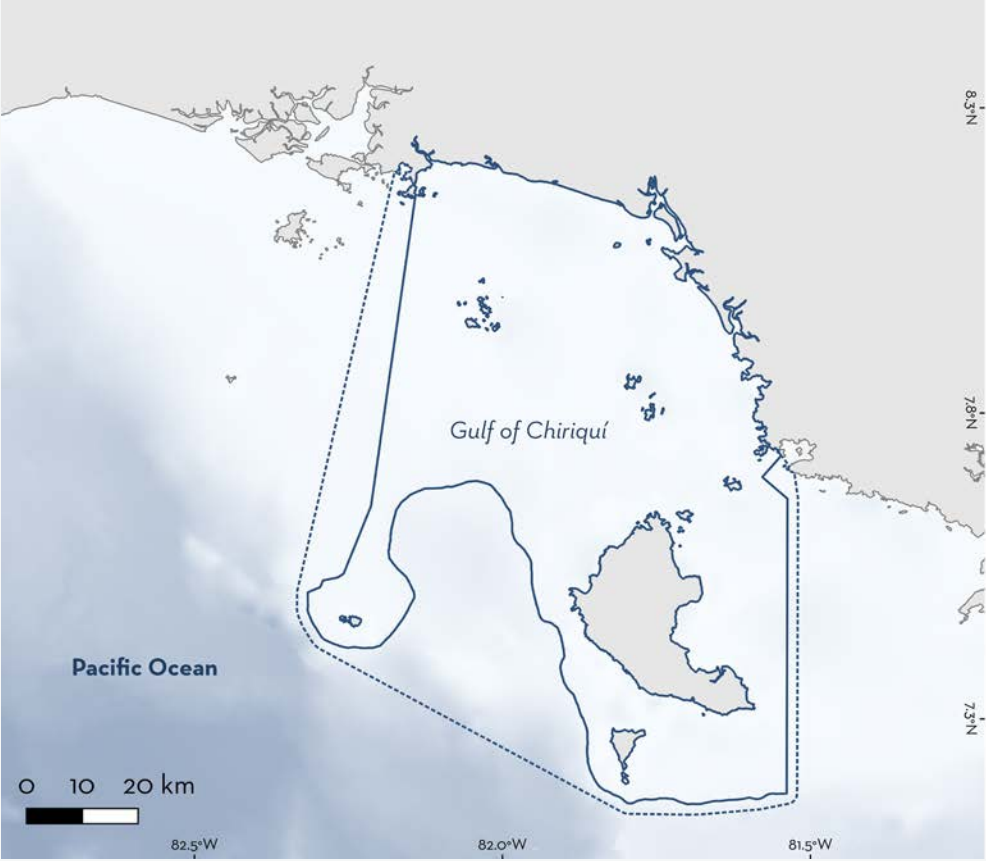
0-60 metres

537.5 km²





PANAMA



GULF OF CHIRIQUÍ ISRA

SUMMARY

Gulf of Chiriquí covers a large portion of the continental shelf in western Pacific Panama. It includes Coiba National Park and its special zone of marine protection which is a World Heritage Site. The area encompasses 38 islands, including Coiba Island, the largest island in the Pacific Central-American Coastal Large Marine Ecosystem, with a diversity of coastal and benthic habitats. These include rocky shores, sandy substrates, mangrove ecosystems, coral reefs, pelagic waters, and a prominent seamount. Within this area there are: **threatened species** (e.g., Pacific Smalltail Shark *Carcharhinus cerdale*); **reproductive areas** (e.g., Scalloped Hammerhead *Sphyrna lewini*); **feeding areas** (Whale Shark *Rhincodon typus*); **resting areas** (Whitetip Reef Shark *Triaenodon obesus*); areas important for **movement** (Whale Shark); and the area sustains a **high diversity** of sharks (22 species).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas; Sub-criterion C3 - Resting Areas; Sub-criterion C4 - Movement; Sub-criterion D2 - Diversity

PANAMA
0-1,000 metres
7,394 km²

GULF OF MONTIJO ISRA

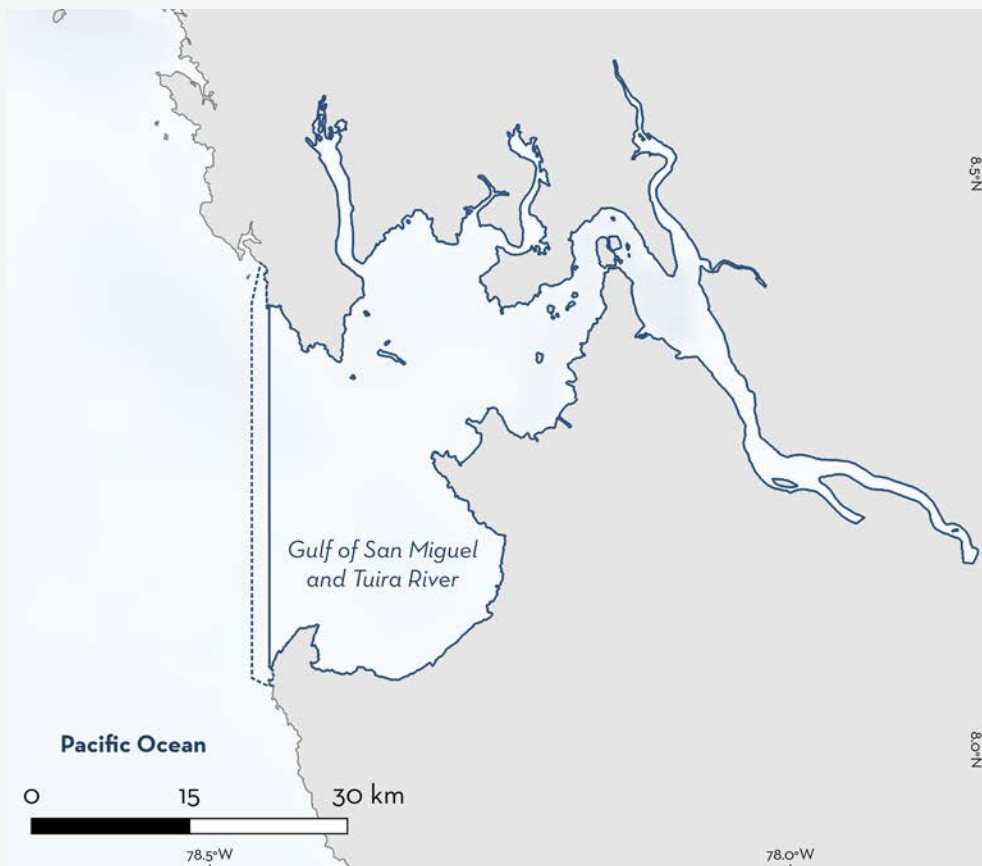
SUMMARY

Gulf of Montijo is located within Veraguas Province on the Pacific coast of Panama. It is considered a Wetland of International Importance (a Ramsar site) and is included in Panama's protected areas system. The Gulf of Montijo is a complex shallow gulf (generally <10 m depth) with significant wetlands, several rivers, deltas, rocky shores, mudflats, and several species of mangroves. The area contains ~190 km² of mangrove forest, considered one of the most important in Panama for its size (the fourth largest mangrove area in the country) and productivity. Within this area there are: **threatened species** (e.g., Largetooth Sawfish *Pristis pristis*) and **reproductive areas** (e.g., Scalloped Bonnethead *Sphyrna corona*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas

PANAMA
0-50 metres
868.3 km²



GULF OF SAN MIGUEL AND TUIRA RIVER ISRA

SUMMARY

Gulf of San Miguel and Tuira River is located in Darién Province in the eastern region of Panama. The area includes Punta Patiño, a Wetland of International Importance (Ramsar site). The area has significant expanses of intact habitat, such as a complex system of rivers, deltas, mudflats, and extensive mangrove forest. Rivers include the Tuira River and several tributaries (Sabanas, Chucunaque, Tupisa, Chico, and Balsas rivers), and the Tuquesa River, a tributary of the Chucunaque River. These rivers are narrow, highly turbid, remote, and in largely pristine condition. Most areas are shallow waters of <10 m depth including in the rivers and tributaries. Within this area there are: **threatened species** and **reproductive areas** (Largetooth Sawfish *Pristis pristis*).

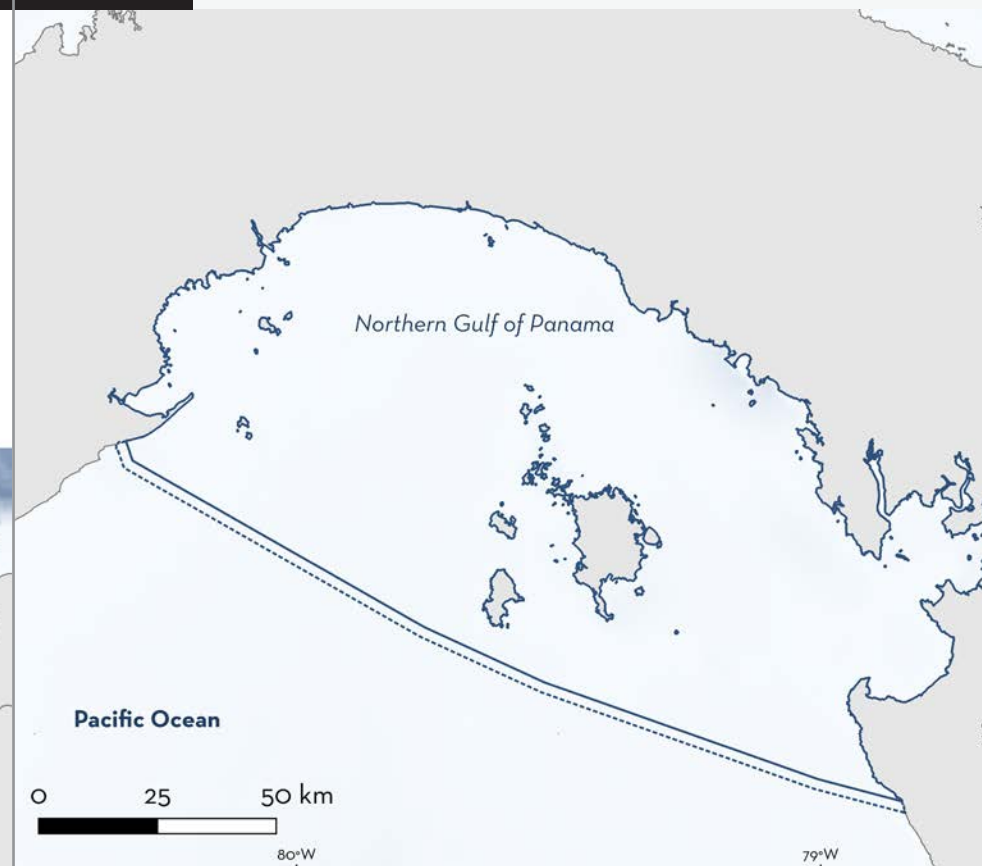
PANAMA

0-40 metres

1,153.3 km²

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas



NORTHERN GULF OF PANAMA ISRA

SUMMARY

Northern Gulf of Panama covers waters of the Panama provinces of Panamá Oeste, Darién, and Panamá. It encompasses diverse coastal, shelf, and insular habitats including coral reefs, muddy substrates, rocky shores, rivers, and mangrove ecosystems along with oceanographic features which promote high levels of primary productivity including seasonal upwellings. It includes crucial biological reserves including Wetlands of International Importance, a national mangrove-estuaries protected area, and Las Perlas Archipelago, a cluster of 255 islands, which represents the second largest archipelago in the Eastern Tropical Pacific. Within the area there are: **threatened species** (e.g., Whitesnout Guitarfish *Pseudobatos leucorhynchus*); **range-restricted species** (e.g., Southern Banded Guitarfish *Zapteryx xyster*); **reproductive areas** (e.g., Scalloped Hammerhead *Sphyrna lewini*); **feeding areas** (Whale Shark *Rhincodon typus*); and the area sustains a **high diversity** of sharks (21 species).

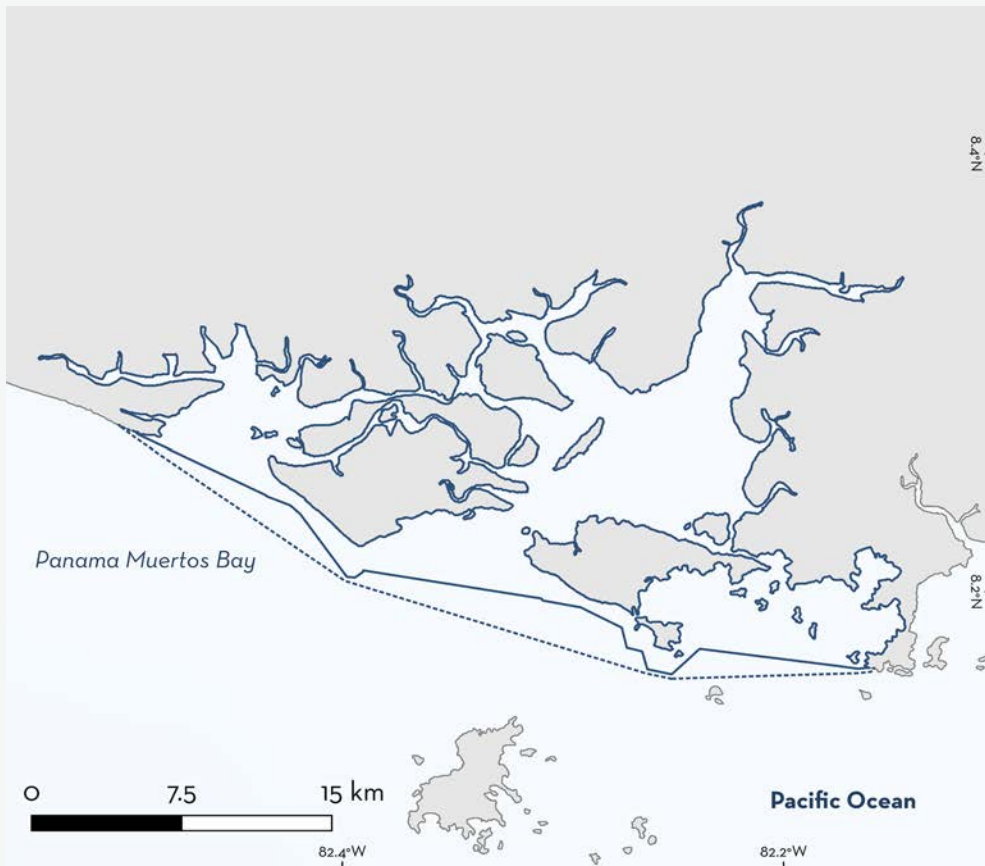
PANAMA

0-125 metres

12,721 km²

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted;
Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas
Sub-criterion D2 - Diversity



PANAMA MUERTOS BAY ISRA

SUMMARY

Panama Muertos Bay is a large estuarine and riverine area within the Gulf of Chiriquí in western Pacific Panama. It partially falls within the Eastern Tropical Pacific Marine Corridor Ecologically or Biologically Significant Marine Area (EBSA). The area has a diversity of marine, estuarine, and freshwater habitats including sandy beaches, mudflats, islands, rivers, and importantly, extensive mangrove forests in good ecological condition. The area is primarily shallow (<10 m depth) with large areas of exposed mudflats at low tide. Within this area there are: **threatened species** (e.g., Bonnethead Shark *Sphyrna tiburo*) and **reproductive areas** (e.g., Pacific Smalltail Shark *Carcharhinus cerdale*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas

PANAMA
O-33 metres
304.41 km²

PUNTA CHAME AND PANAMA BAY ISRA

SUMMARY

Punta Chame and Panama Bay comprises two distinct sections in the northern Gulf of Panama which are separated by Panama City and the Panama Canal. This area includes the Panama Bay Wetland of International Importance (Ramsar site) and a diversity of habitats including coastal mangroves and extensive mudflats with corresponding high fish diversity. Oceanographic features strongly influence the area, including periods of coastal upwelling which produce seasonal fluctuations in marine productivity. Within this area there are: **threatened species** (e.g., Southern Banded Guitarfish *Zapteryx zyster*); **range-restricted species** (Southern Banded Guitarfish); and **reproductive areas** (Scalloped Hammerhead *Sphyrna lewini*).

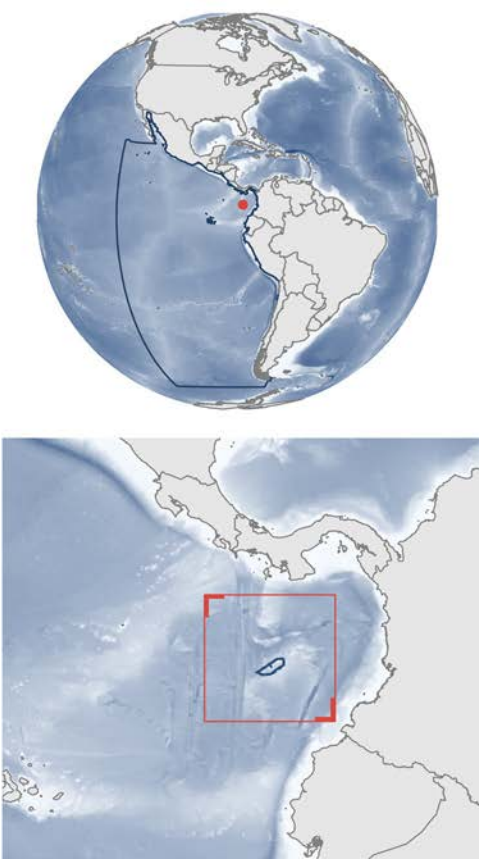
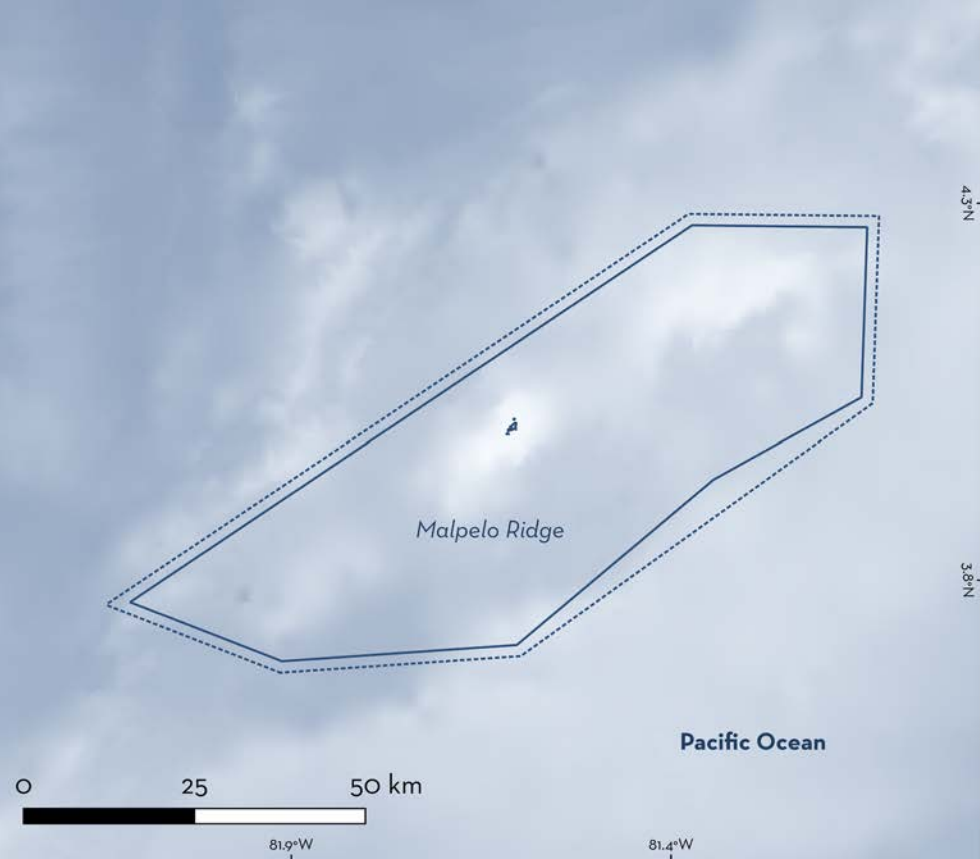
CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas

PANAMA
O-30 metres
2,623 km²

COLOMBIA





MALPELO RIDGE ISRA

SUMMARY

Malpelo Ridge is a volcanic submarine ridge off Colombia. The area is within the Malpelo Fauna and Flora Sanctuary Marine Protected Area. The ridge rises ~4,000 m from the ocean floor and includes several seamounts with depths <600 m, although Malpelo Island is the only emergent feature of the ridge. Within this area there are: **threatened species** (e.g., Scalloped Hammerhead *Sphyrna lewini*); **reproductive areas** (e.g., Pacific Eagle Ray *Aetobatus laticeps*); **feeding areas** (e.g., Silky Shark *Carcharhinus falciformis*); **resting areas** (Whitetip Reef Shark *Triaenodon obesus*); areas important for **movement** (e.g., Whale Shark *Rhincodon typus*); **undefined aggregations** (Smalltooth Sand Tiger *Odontaspis ferox*); **distinctive attributes** (e.g., Galápagos Shark *Carcharhinus galapagensis*); and the area sustains a **high diversity** of sharks (21 species).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas; Sub-criterion C3 - Resting Areas; Sub-criterion C4 - Movement; Sub-criterion C5 - Undefined Aggregations; Sub-criterion D1 - Distinctiveness; Sub-criterion D2 - Diversity

— —
COLOMBIA
— —
0-1,928 metres
— —
3,863 km²
— —

NAYA-SANQUIANGA ISRA

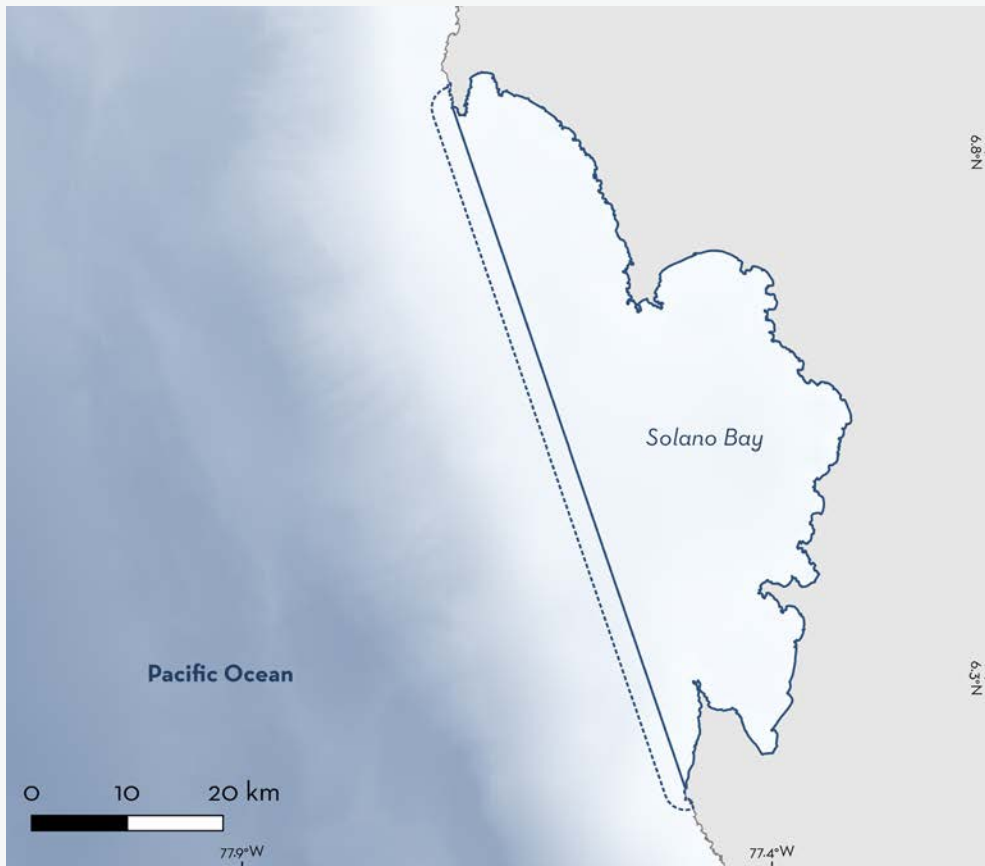
SUMMARY

Naya-Sanquianga covers a large area of continental shelf in the Colombian central Pacific. It includes two Key Biodiversity Areas and all or part of three protected areas. There are diverse habitats including large and well-preserved coastal mangrove forests with muddy-sand bottoms, sandy and rocky substrates, and coral reefs around Gorgona Island. Within the area there are: **threatened species** (e.g., Largetooth Sawfish *Pristis pristis*); **range-restricted species** (e.g., Gorgona Guitarfish *Pseudobatos prahli*); **reproductive areas** (e.g., Longtail Stingray *Hypanus longus*); **resting areas** (Whitetip Reef Shark *Triaenodon obesus*); areas important for **movement** (e.g., Whale Shark *Rhincodon typus*); **undefined aggregations** (Scalloped Hammerhead *Sphyrna lewini*); and the area sustains a **high diversity** of sharks (37 species).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion C3 - Resting Areas; Sub-criterion C4 - Movement; Sub-criterion C5 - Undefined Aggregations; Sub-criterion D2 - Diversity

— —
COLOMBIA
— —
0-1,129 metres
— —
4,262 km²
— —



SOLANO BAY ISRA

SUMMARY

Solano Bay is located on the northern Colombian Pacific coast. The area is characterised by a large bay formed by the Gulf of Cupica and several smaller bays. Habitats include rocky and sandy beaches with coral formations and patches of mangrove forest. The region has high rainfall, and the salinity of the area is influenced by freshwater input. Within this area there are: **threatened species** (e.g., Pacific Nurse Shark *Ginglymostoma unami*); **range-restricted species** (Chilean Angelshark *Squatina armata*); **reproductive areas** (e.g., Scoophead Shark *Sphyrna media*); **feeding areas** (e.g., Whale Shark *Rhincodon typus*); **undefined aggregations** (Oceanic Manta Ray *Mobula birostris*); and the area sustains a **high diversity** of sharks (21 species).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas; Sub-criterion C5 - Undefined Aggregations; Sub-criterion D2 - Diversity

— —
COLOMBIA
 — —
0-240 metres
 — —
1,498 km²
 — —

TRIBUGÁ GULF ISRA

SUMMARY

Tribugá Gulf is located on the northern Colombian Pacific coast. It overlaps with the Golfo de Tribugá-Cabo Corrientes Marine Protected Area (MPA) and is located between the Utría MPA and the Ecanto de Manglares del Bajo Baudó MPA. The area is characterised by sandy beaches and rocky formations with patches of mangrove forest. The continental shelf is relatively narrow with a rapid decline to 200-300 m close to shore (~3 km). Within this area there are: **threatened species** (e.g., Largetooth Sawfish *Pristis pristis*); **reproductive areas** (e.g., Pacific Smalltail Shark *Carcharhinus cerdale*); **feeding areas** (Whale Shark *Rhincodon typus*); areas important for **movement** (Scalloped Hammerhead *Sphyrna lewini*); and the area sustains a **high diversity** of sharks (22 species).

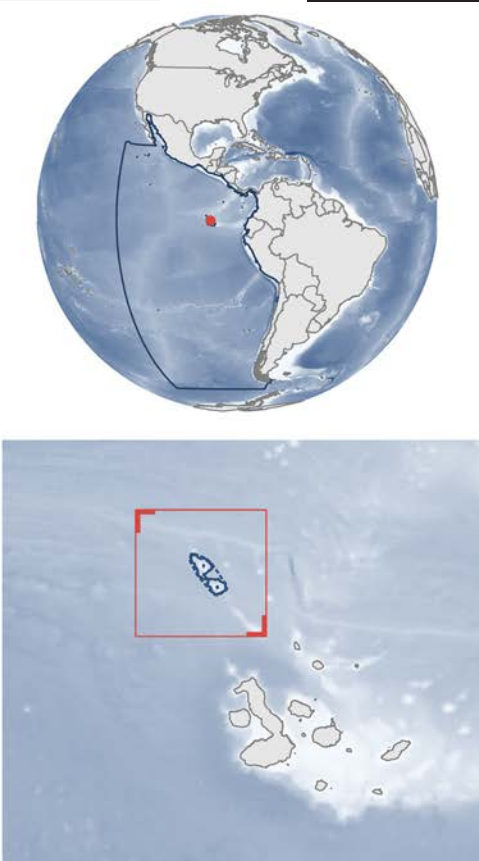
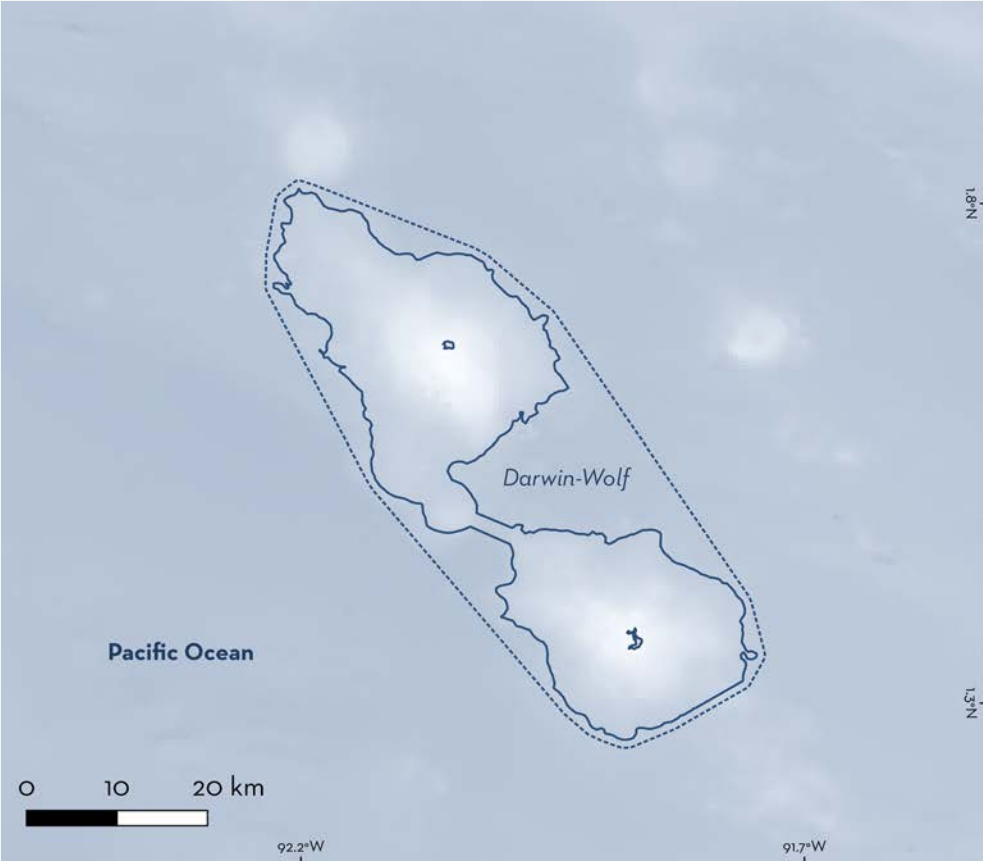
CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas; Sub-criterion C4 - Movement; Sub-criterion D2 - Diversity

— —
COLOMBIA
 — —
0-300 metres
 — —
1,410.5 km²
 — —

ECUADOR





DARWIN-WOLF ISRA

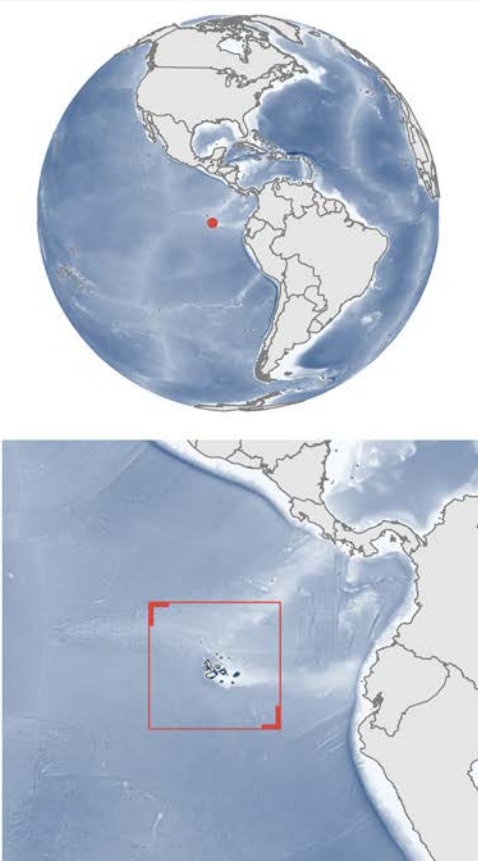
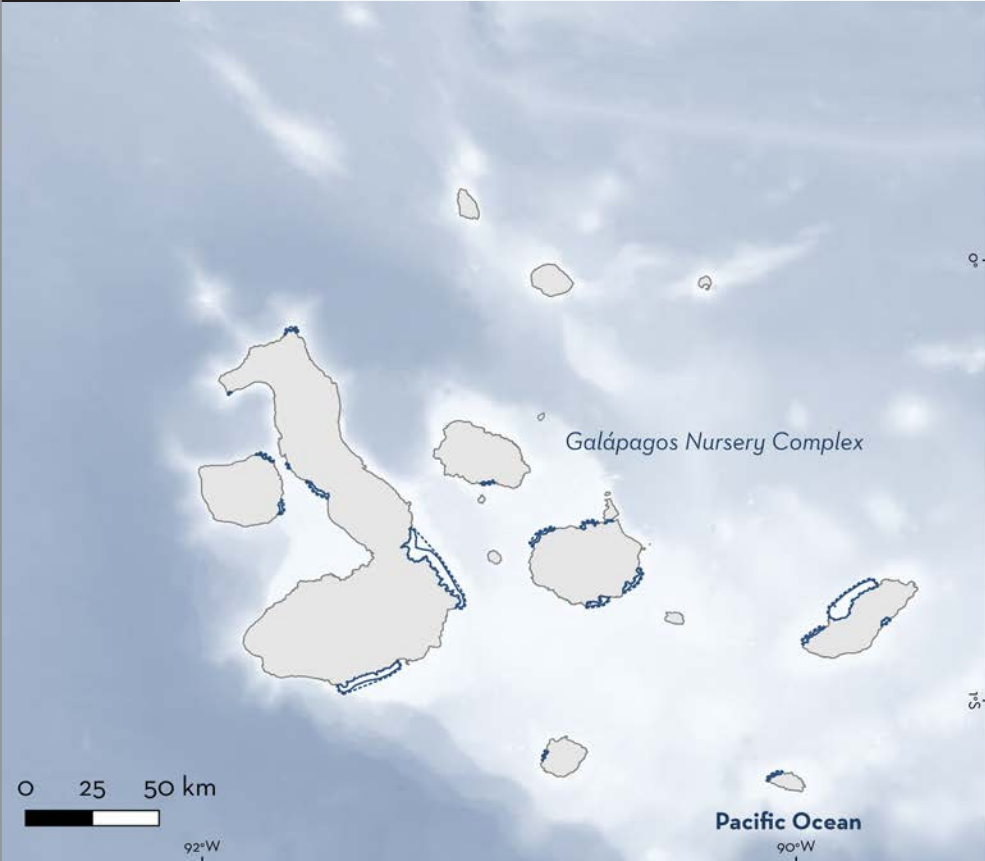
SUMMARY

Darwin-Wolf is part of the Galápagos Archipelago, located ~950 km west of mainland Ecuador, and just off the southern edge of the Cocos Ridge. The area is within the Galápagos Marine Reserve - a designated UNESCO World Heritage Site and Biosphere Reserve, and two Ecologically or Biologically Significant Marine Areas. The area includes two oceanic islands, approximately 35 km apart, separated by deepwater. Habitats include exposed rocky shores, sand and rock substrates, and coral reefs. Within this area there are: **threatened species** (e.g., Silky Shark *Carcharhinus falciformis*); areas important for **movement** (e.g., Scalloped Hammerhead *Sphyrna lewini*); and **undefined aggregations** (e.g., Whale Shark *Rhincodon typus*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C4 - Movement; Sub-criterion C5 - Undefined Aggregations

— —
ECUADOR
— —
0-1,928 metres
— —
1,673.3 km²
— —



GALÁPAGOS NURSERY COMPLEX ISRA

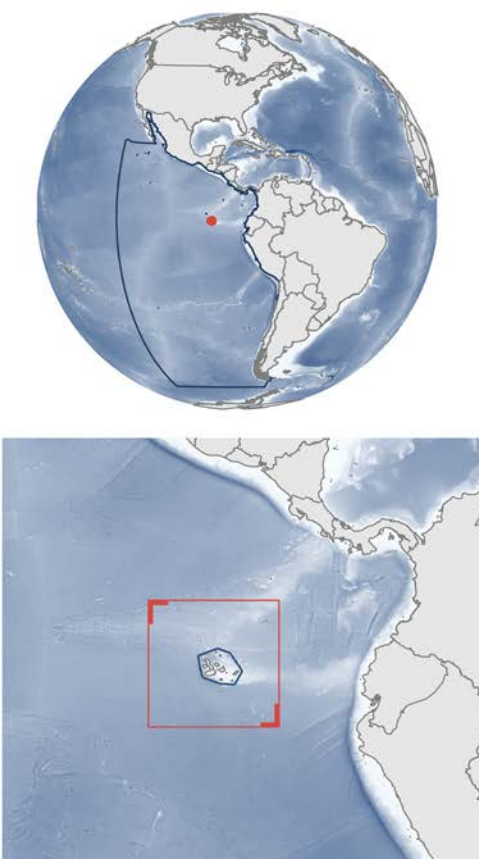
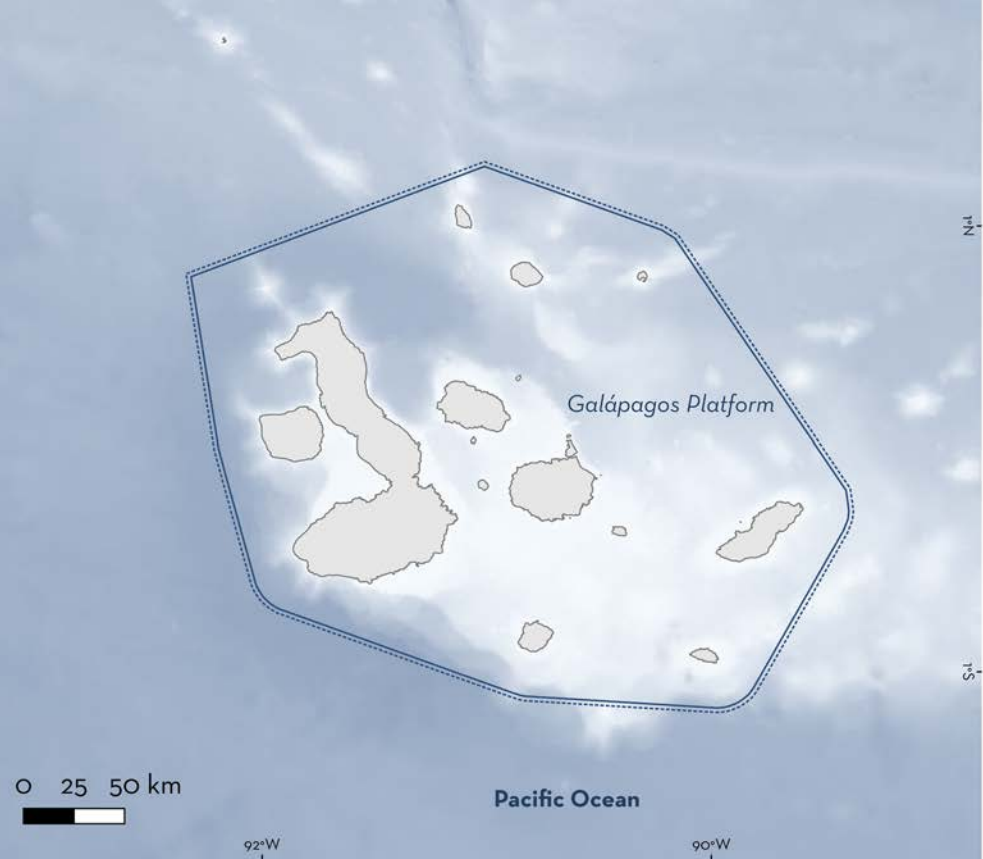
SUMMARY

Galápagos Nursery Complex is located in shallow coastal waters of the Galápagos islands in Ecuador. These islands are situated ~950 km from the Central and South American mainland. The area is situated within the Galápagos Marine Reserve, which has been designated a UNESCO World Heritage Site and Biosphere Reserve, and within two Ecologically or Biologically Significant Marine Areas. Galápagos Nursery Complex includes multiple disjunct areas distributed along the coasts of five islands of the archipelago. These areas are generally shallow with sandy bottoms or a combination of sand and rock, often within mangrove-fringed bays. Within this area there are: **threatened species** (e.g., Blacktip Shark *Carcharhinus limbatus*); **range-restricted species** (Galápagos Bullhead Shark *Heterodontus quoyi*); and **reproductive areas** (e.g., Diamond Stingray *Hypanus dipterurus*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas

— —
ECUADOR
— —
0-30 metres
— —
521.85 km²
— —



GALÁPAGOS PLATFORM ISRA

SUMMARY

Galápagos Platform is located approximately 950 km from the Central and South American mainland. It is situated within the Galápagos Marine Reserve, which has been designated a UNESCO World Heritage Site and Biosphere Reserve, and within two Ecologically or Biologically Significant Marine Areas. The area includes all the main islands of the archipelago (except Darwin and Wolf) and includes over 100 islets and emergent rocks, encompassing a variety of marine habitats. These include rocky and coral reefs, sandy bays, mangroves, kelp forests, shallow seamounts, and deeper waters. Within this area there are: **threatened species** (e.g., Peruvian Eagle Ray *Myliobatis peruvianus*); **range-restricted species** (e.g., Whitespot Ghostshark *Hydrolagus albus*); **feeding areas** (Tiger Shark *Galeocerdo cuvier*); **undefined aggregations** (e.g., Oceanic Manta Ray *Mobula birostris*); and the area sustains a **high diversity** of sharks (29 species).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C2 - Feeding Areas; Sub-criterion C5 - Undefined Aggregations; Sub-criterion D2 - Diversity

— —
ECUADOR
— —
0-1,928 metres
— —
64,760 km²
— —

ISLA DE LA PLATA ISRA

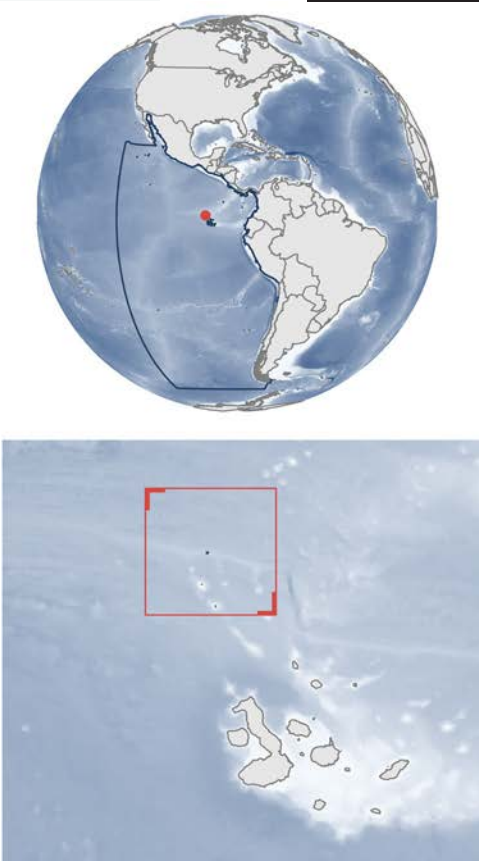
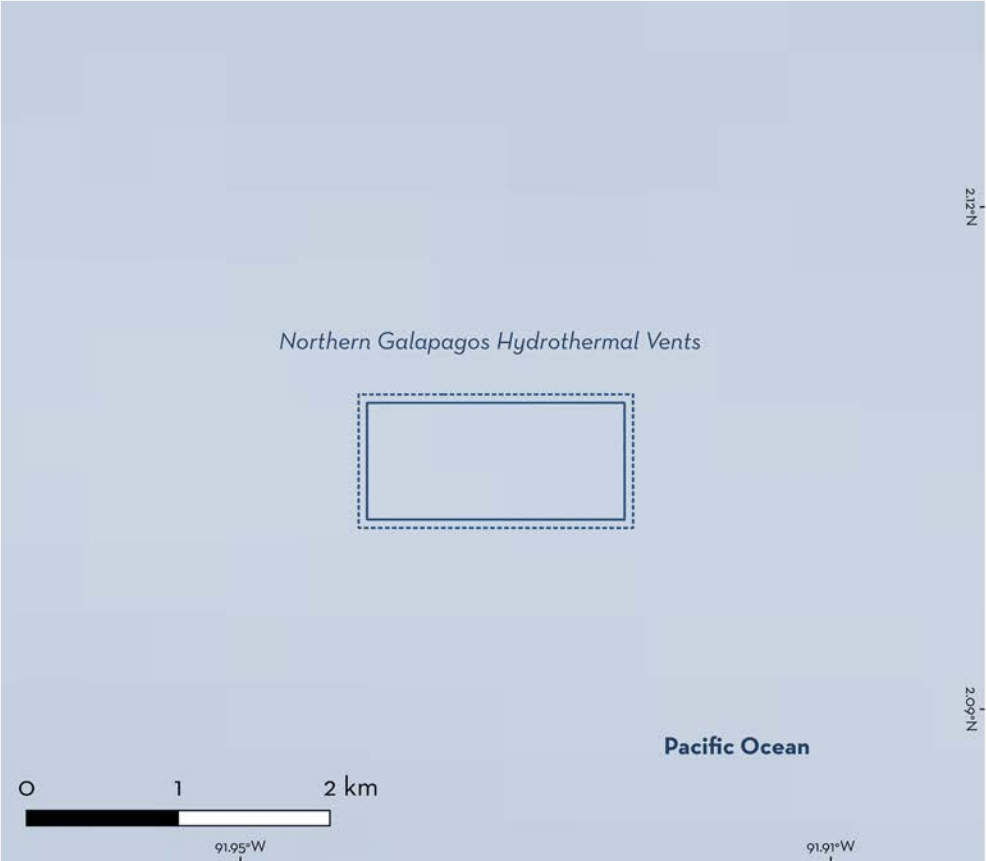
SUMMARY

Isla de la Plata is a small island located ~25 km from mainland Ecuador within the Pacific Central-American Coastal Large Marine Ecosystem. It is situated within the Parque Nacional Machalilla and overlaps with an Ecologically or Biologically Significant Marine Area, the Carnegie Range-Equatorial Front. The area is located on the continental shelf, with surrounding waters characterised by sandy benthos with coral and rocky reef patches to around 30 m depth. In this area there are: **threatened species** and **undefined aggregations** (Oceanic Manta Ray *Mobula birostris*).

CRITERIA

Criterion A - Vulnerability; Sub-Criterion C5 - Undefined Aggregations

— —
ECUADOR
— —
0-109 metres
— —
27.24 km²
— —



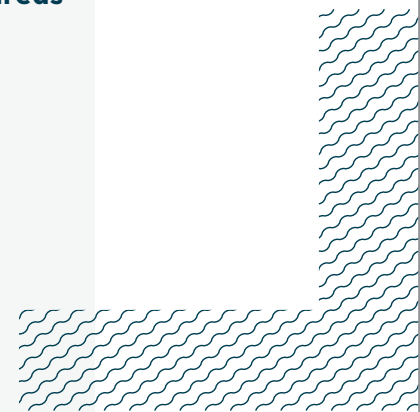
NORTHERN GALÁPAGOS HYDROTHERMAL VENTS ISRA

SUMMARY

Northern Galápagos Hydrothermal Vents are located at the Iguanas-Pinguinos site on the Galápagos Platform, approximately 45 km north of Darwin Island off the Ecuadorian mainland. The area is within the Galápagos Marine Reserve, a designated UNESCO World Heritage Site and Biosphere Reserve, and overlaps with two Ecologically or Biologically Significant Marine Areas. The area is part of the Galápagos Spreading Centre, a mid-ocean ridge formed by the diverging Cocos and Nazca lithospheric plates and contains deep hydrothermal vents and basaltic ridges. The main habitat encompassed in this area is characterised by active venting and dispersing clouds of ‘black-smoker’ hydrothermal plumes. Within the area there are: **reproductive areas** and **distinctive attributes** (Pacific White Skate *Bathyrāja spinosissima*).

CRITERIA

Sub-criterion C1 – Reproductive Areas; Sub-criterion D1 – Distinctiveness



— —
ECUADOR
— —
1,650-1,700 metres
— —
1.59 km²
— —

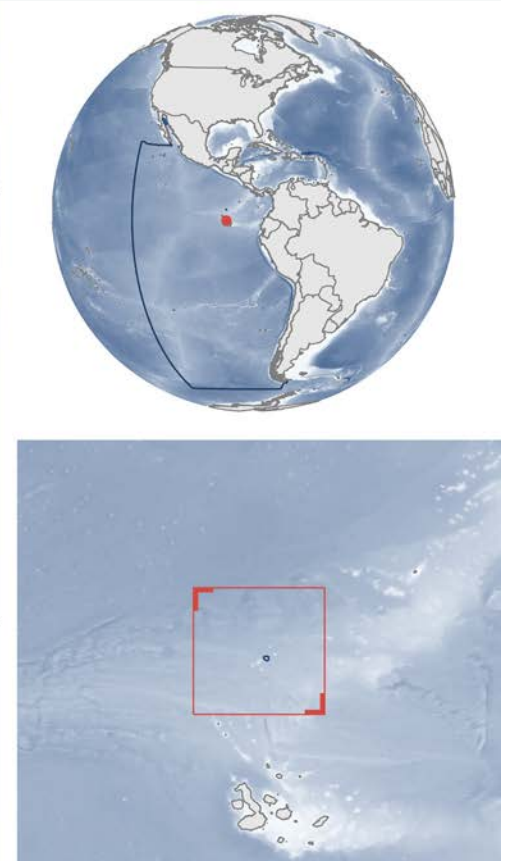
PARAMOUNT SEAMOUNT ISRA

SUMMARY

Paramount Seamount is located north of the Galápagos Islands, within the Ecuador Economic Exclusive Zone (EEZ), approximately 230 km northeast of Darwin Island. The area includes the only shallow seamount in the northern region of the oceanic Ecuadorian EEZ with its shallowest point at a depth of approximately 188 m. Within the area there are: **threatened species**; areas important for **movement**; and **undefined aggregations** (Scalloped Hammerhead *Sphyrna lewini*).

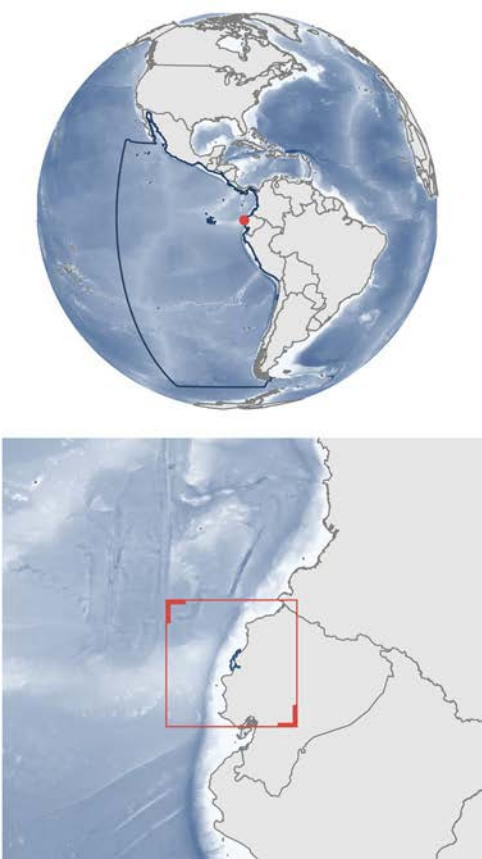
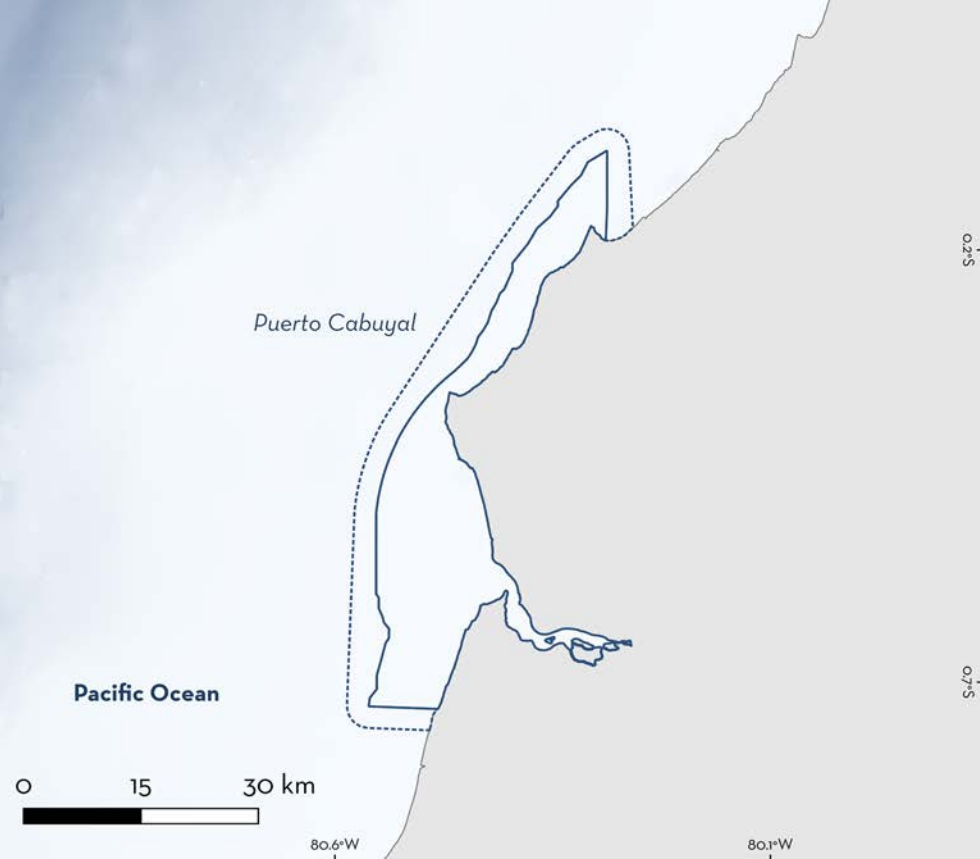
CRITERIA

Criterion A – Vulnerability; Sub-criterion C4 – Movement; Sub-criterion C5 – Undefined Aggregations



— —
ECUADOR
— —
0-1,043 metres
— —
161.1 km²
— —





PUERTO CABUYAL ISRA

SUMMARY

Puerto Cabuyal is located in coastal mainland Ecuador and comprises the Puerto Cabuyal-Punta San Clemente Marine Reserve. The area is situated in the Equatorial Front and is characterised as a transition zone that separates cold waters rich in nutrients from warmer waters, generating a zone of high productivity. It contains a variety of habitats, including soft, hard, and mixed benthos, rocky shallows, and coral formations to 30 m depth. Within the area there are: **threatened species** (e.g., Scoophead Shark *Sphyrna media*) and **reproductive areas** (e.g., Smooth Hammerhead *Sphyrna zygaena*).

CRITERIA

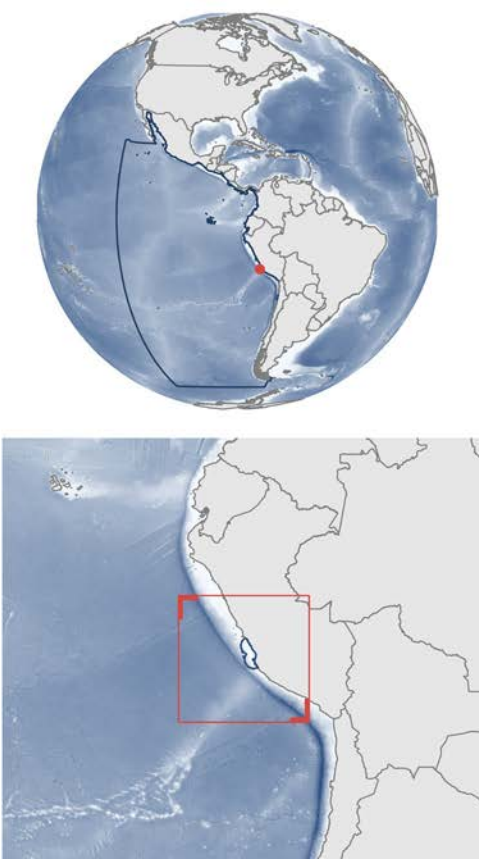
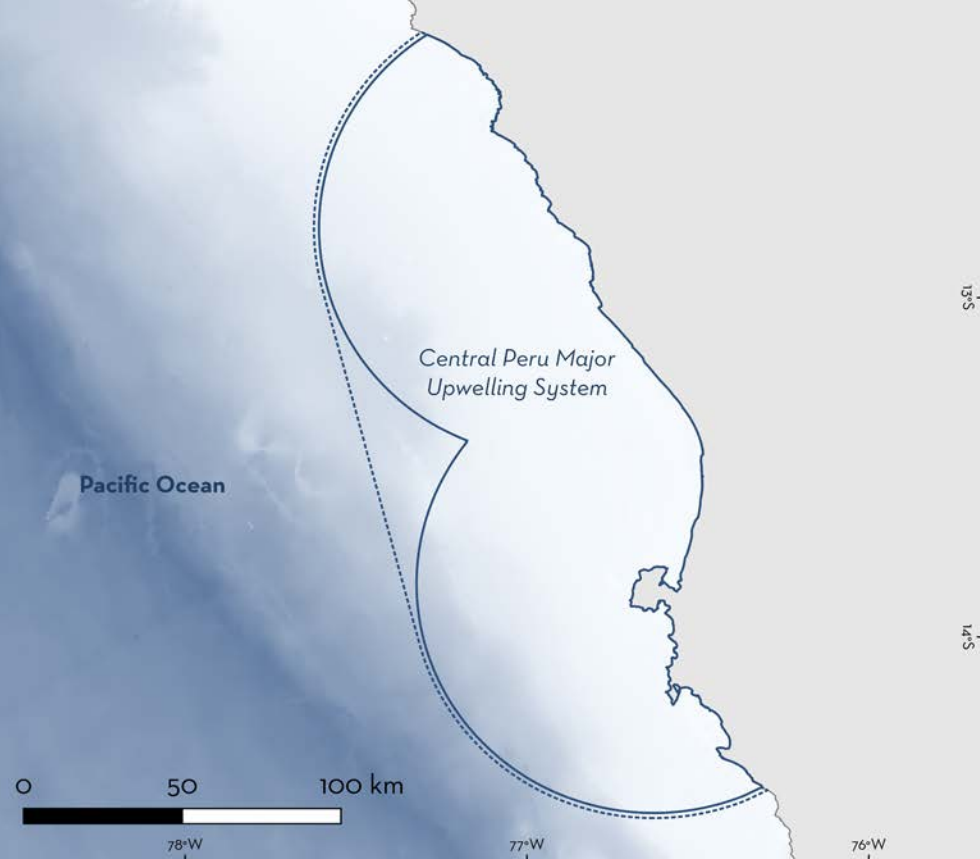
Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas

— —
ECUADOR
— —
0-30 metres
— —
992.2 km²
— —



PERU





CENTRAL PERU MAJOR UPWELLING SYSTEM ISRA

SUMMARY

Central Peru Major Upwelling System ranges from southern Lima to central Ica and is located within the Northern Humboldt Current System, a highly productive marine ecosystem due to coastal upwelling. The area overlaps with two major upwelling centres that generate high productivity year-round and are crucial for the Northern Humboldt Current System to re-establish itself after a warming event (i.e., El Niño). The area is characterised by large sediment flats and subtidal rocky reefs that sustain a diverse and abundant assemblage of pelagic and demersal fishes and benthic macroinvertebrates. Within this area there are: **threatened species** (e.g., Diamond Stingray *Hypanus dipterus*); **range-restricted species** (e.g., Peruvian Eagle Ray *Myliobatis peruvianus*); **feeding areas** (e.g., Pacific Guitarfish *Pseudobatos planiceps*); and **distinctive attributes** (Chilean Eagle Ray *Myliobatis chilensis*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C2 - Feeding Areas; Sub-criterion D1 - Distinctiveness

— —
PERU
— —
0-20 metres
— —
20,012 km²
— —

COASTAL NORTHERN HUMBOLDT CURRENT ISRA

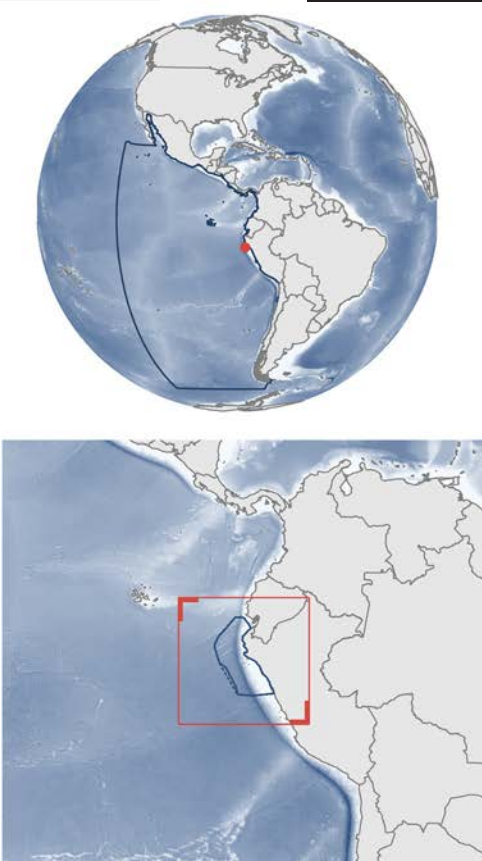
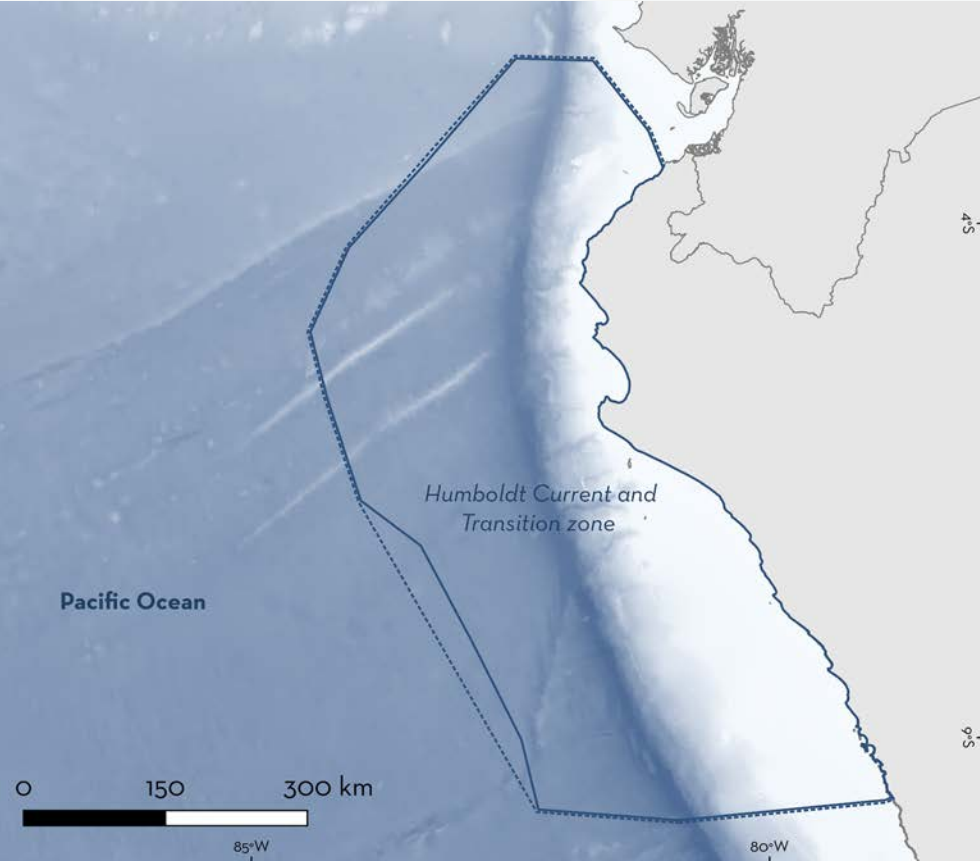
SUMMARY

Coastal Northern Humboldt Current extends from the southern Piura region to northern La Libertad region in Peru. It is located within the Northern Humboldt Current System, one of the most productive marine systems in the world and overlaps with major upwelling centres. The area overlaps with Lobos de Tierra and Lobos de Afuera islands, a marine protected area system which are both Key Biodiversity Areas. The area has exceptional marine productivity and a variety of habitats dominated by rocky shores and sandy substrates. Within this area there are: **threatened species** (e.g., Spotted Houndshark *Triakis maculata*); **range-restricted species** (e.g., Humpback Smoothhound *Mustelus whitneyi*); **reproductive areas** (e.g., Smooth Hammerhead *Sphyrna zygaena*); **feeding areas** (e.g., Chilean Eagle Ray *Myliobatis chilensis*); and the area sustains a **high diversity** of sharks (17 species).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas Sub-criterion D2 - Diversity

— —
PERU
— —
0-1,000 metres
— —
63,598.5 km²
— —



HUMBOLDT CURRENT AND TRANSITION ZONE ISRA

SUMMARY

Humboldt Current and Transition Zone extends from southern Ecuador to northern Peru. The area includes several oceanographic features, including the Equatorial Front and the Northern Humboldt Current System, in which major upwelling centres are located. It also overlaps with the Gulf of Guayaquil which constitutes the most important estuary associated to the largest fluvial system of the entire western slope of the Andes. Habitats include estuarine and oceanic waters that are characterised by exceptionally high marine productivity. Within this area there are: **threatened species** (e.g., Spinetail Devil Ray *Mobula mobular*); **reproductive areas** (Spinetail Devil Ray); and **feeding areas** (e.g., Common Thresher *Alopias vulpinus*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas

-	-
PERU	
-	-
O-1,112 metres	
-	-
261,539.7 km²	
-	-



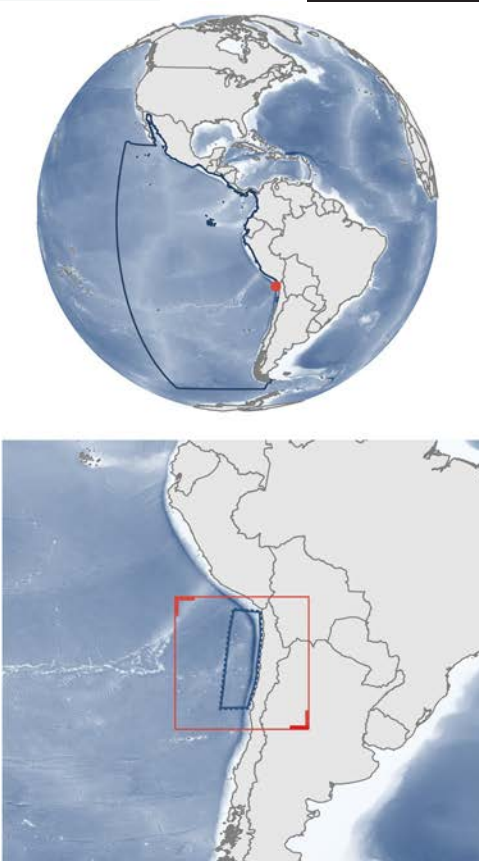
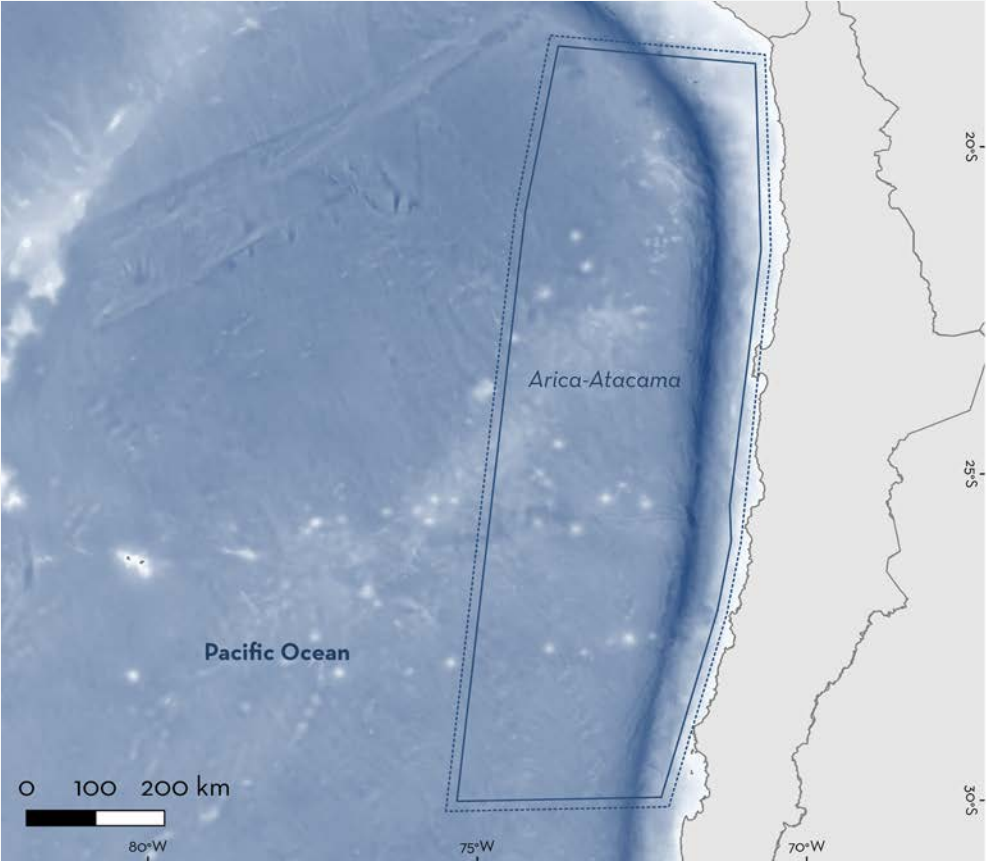
Adriana Gonzalez



Roberto Uribe

CHILE





ARICA-ATACAMA ISRA

SUMMARY

Arica-Atacama is located in northern Chile within the Humboldt Current Upwelling System along a 1,200 km stretch of coastline. This area overlaps with an Ecologically or Biologically Significant Marine Area, the Northern Chile Humboldt Current Upwelling System, which is characterised by a dynamic and highly productive ecosystem. Most of the biological production within the area is restricted to a very narrow continental shelf, where upwellings may occur year-round, even during El Niño conditions. The main habitat encompassed in this area are epipelagic waters. Within the area there are: **threatened species** (Shortfin Mako *Isurus oxyrinchus*) and **reproductive areas** (e.g., Blue Shark *Prionace glauca*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas

CHILE
O-40 metres
498,647 km²

ATACAMA-VALPARAÍSO AND LOS RÍOS ISRA

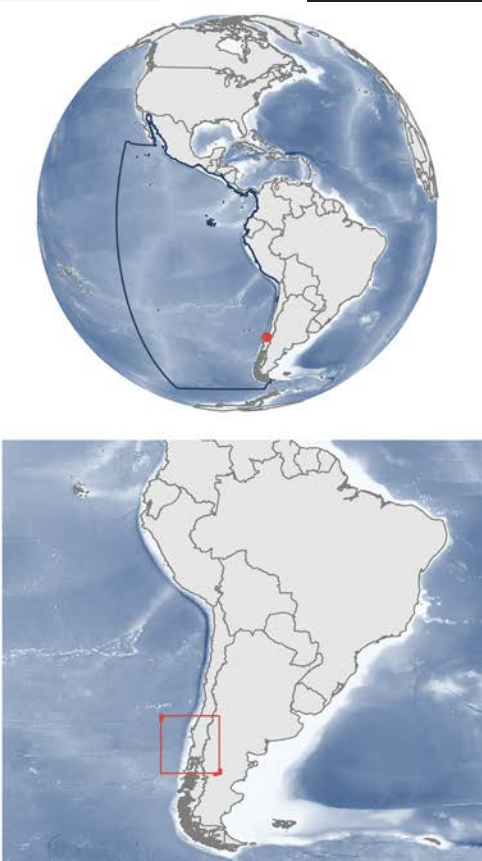
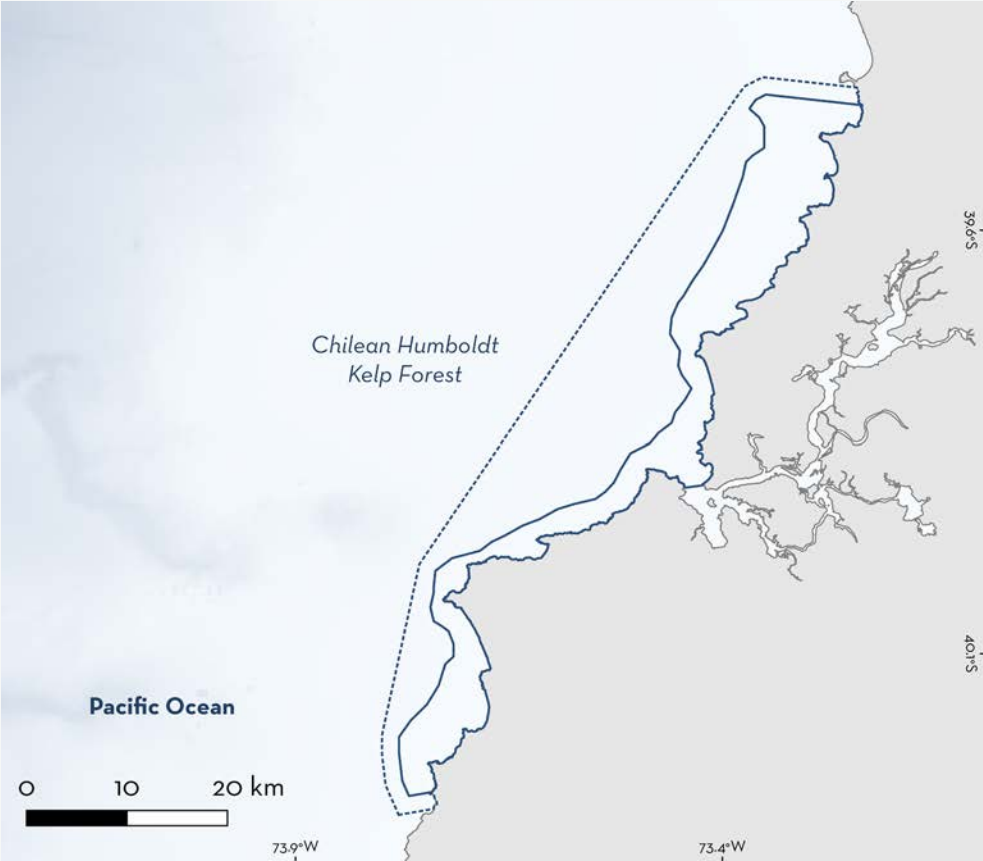
SUMMARY

Atacama-Valparaíso and Los Ríos are located off the central coast of Chile. This deep benthic area overlaps with two Ecologically or Biologically Significant Marine Areas, the Central and Southern Chile Humboldt Current Upwelling Systems. The area includes outer continental shelves, upper slopes, and marine canyons, and is characterised by the presence of fine clay and silt sediments, methane leaks, and deep-sea corals. Within this area there are: **threatened species** (e.g., Yellownose Skate *Dipturus chilensis*); **range-restricted species** (e.g., Yellownose Skate); **reproductive areas** (Dusky Catshark *Bythaelurus canescens*); and **feeding areas** (e.g., Dusky Finless Skate *Gurgesiella furvescens*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted
Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas

CHILE
140-652 metres
87,297 km²



CHILEAN HUMBOLDT KELP FOREST ISRA

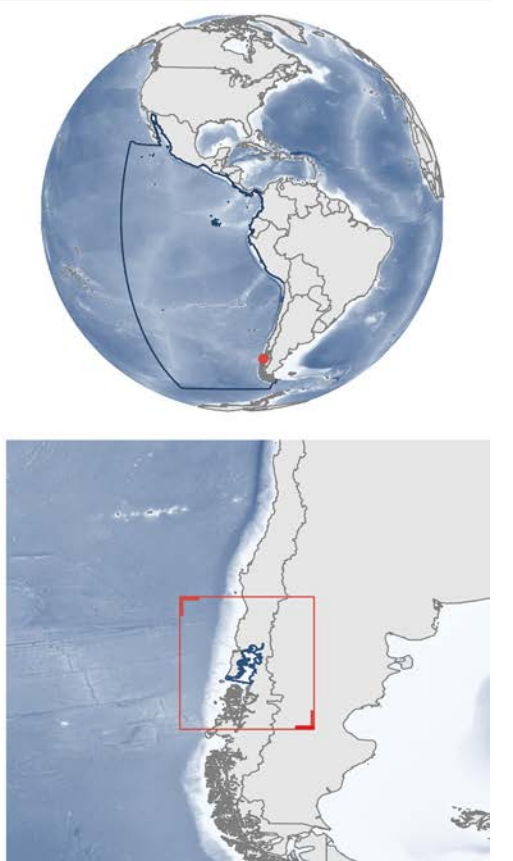
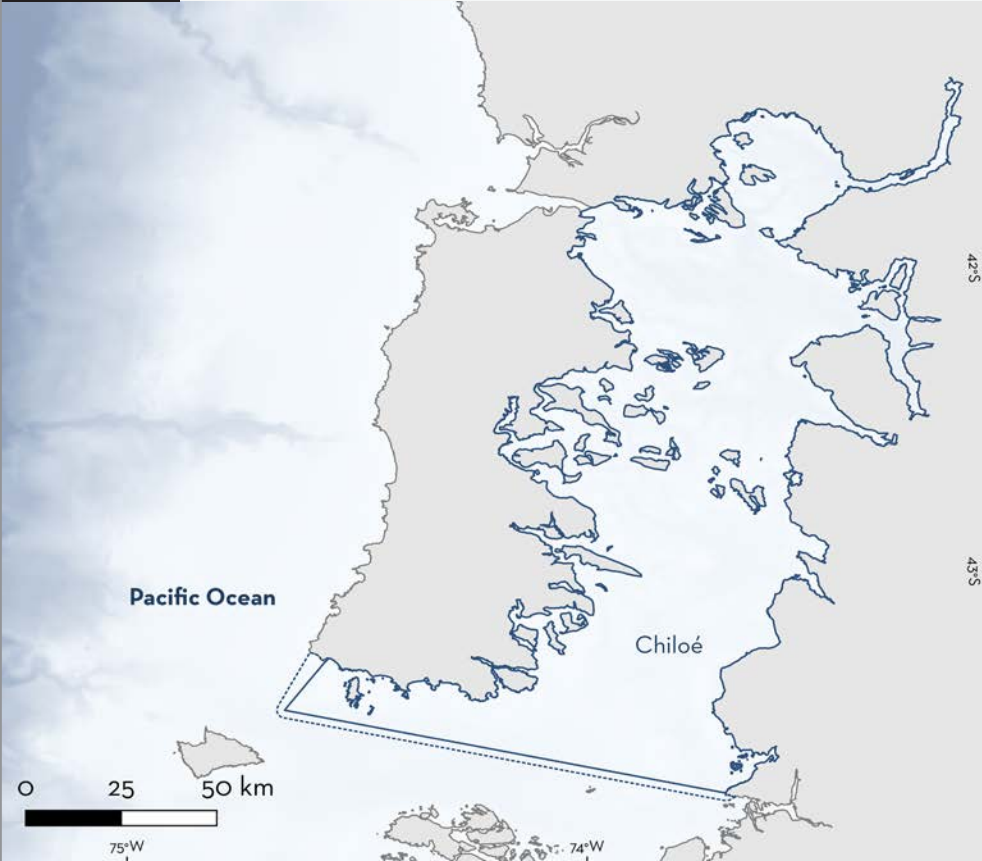
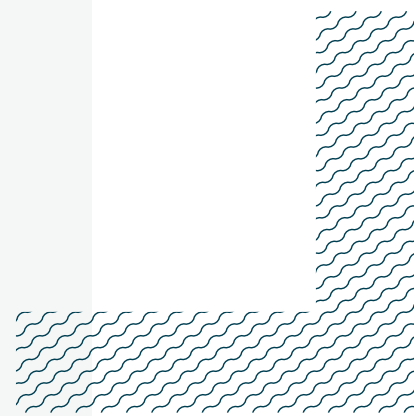
SUMMARY

Chilean Humboldt Kelp Forest is located in the coastal region of Los Rios in south-central Chile, in the Southeast Pacific. Oceanographic conditions allow kelp forests to thrive with cold and nutrient-rich waters drawn to the surface by coastal upwelling. Kelp forests are mainly composed of one range-restricted intertidal or subtidal kelp species *Lessonia trabeculata* in a habitat dominated by large rocks and boulders. This creates structurally complex habitat that sustains high biodiversity. Within this area there are **reproductive areas** (Chilean Catshark *Schroederichthys chilensis*).

CRITERIA

Sub-criterion C1 - Reproductive Areas

— —
CHILE
— —
0-35 metres
— —
1,345.34 km²
— —



CHILOÉ ISRA

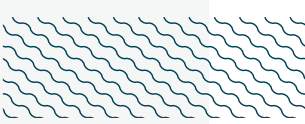
SUMMARY

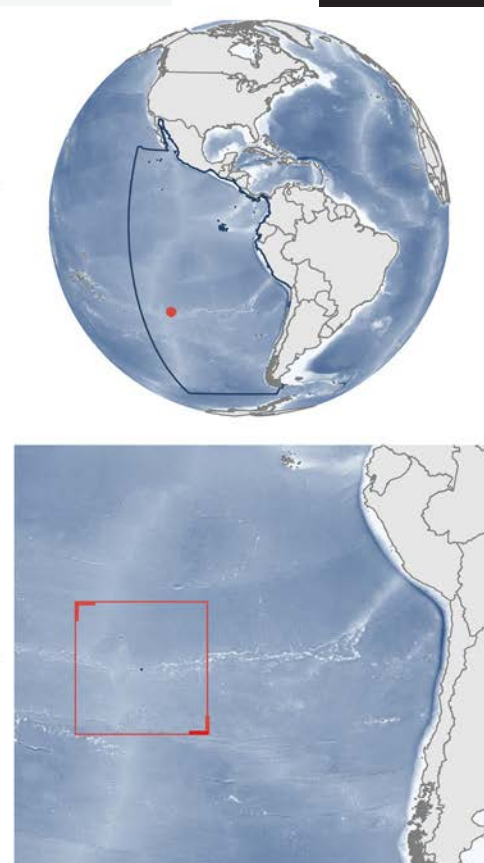
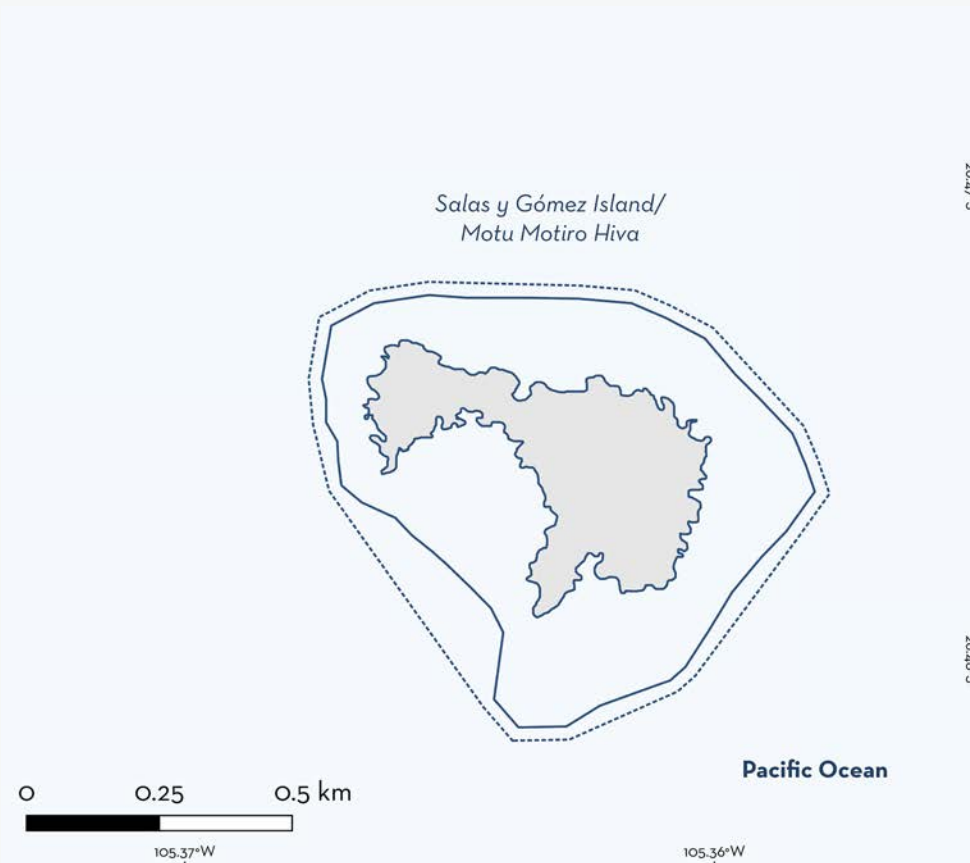
Chiloé is located in the Los Lagos region of southern Chile within the Cold-Temperate South America Province, also known as the Chiloense Ecoregion. This area overlaps with an Ecologically or Biologically Significant Marine Area, the West Wind Drift Convergence. The area has unique environmental features with the West Wind Drift striking the South American continent in a southeast direction and bringing cold waters to the coast. Habitats within the area include an intricate array of inner seas, archipelagos, channels, and fjords, and serve in many aspects like a large estuary with very high levels of primary productivity during the austral summer and autumn. Within this area there are: **threatened species** (e.g., Yellownose Skate *Dipturus chilensis*); **range restricted species** (e.g., Roughskin Skate *Dipturus trachyderma*); **reproductive** and **feeding areas** (Spiny Dogfish *Squalus acanthias*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted;
Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas

— —
CHILE
— —
0-480 metres
— —
15,560 km²
— —





SALAS Y GÓMEZ/MOTU MOTIRO HIVA ISRA

SUMMARY

Salas y Gómez/Motu Motiro Hiva is located in the Southeast Pacific Ocean, 400 km west of Rapa Nui (Easter Island) of Chile. It falls within the Motu Motiro Hiva Marine Park and is a designated Ecologically or Biologically Significant Marine Area. The area contains the nearshore waters around Salas y Gómez Island. Salas y Gómez Island and Rapa Nui, along with several dozen seamounts, are part of the Salas y Gómez Ridge. The marine habitat around the island is characterised by the presence of rocky reefs with crustose coralline algae and coral species (e.g., cauliflower corals *Pocillopora* spp.). Within this area there are: **reproductive areas** (Galápagos Shark *Carcharhinus galapagensis*).

- CHILE —
- O-200 metres —
- 0.5 km² —

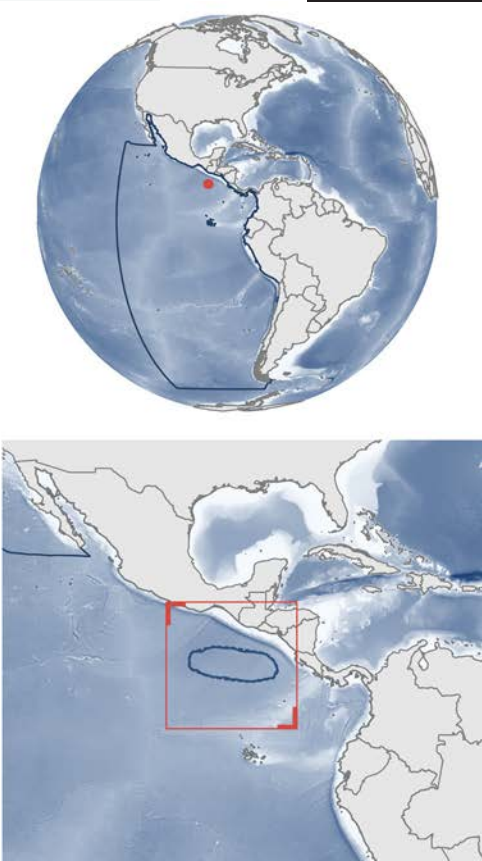
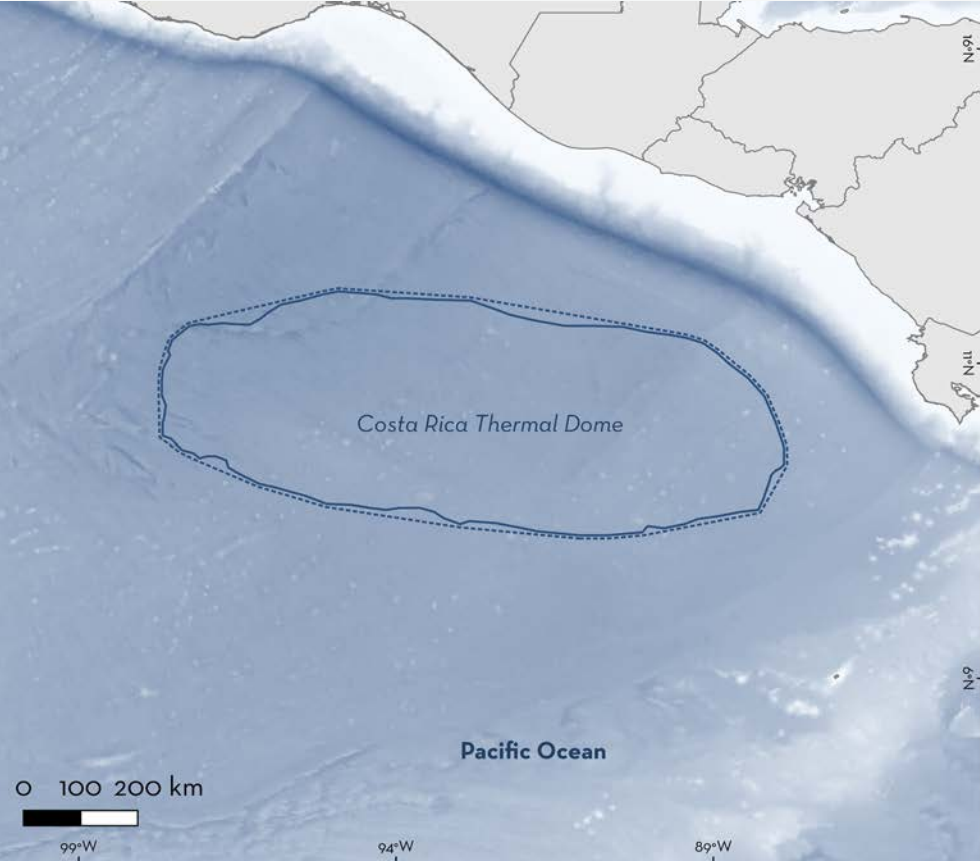
CRITERIA

Sub-criterion C1 - Reproductive Areas



TRANSBOUNDARY





COSTA RICA THERMAL DOME ISRA

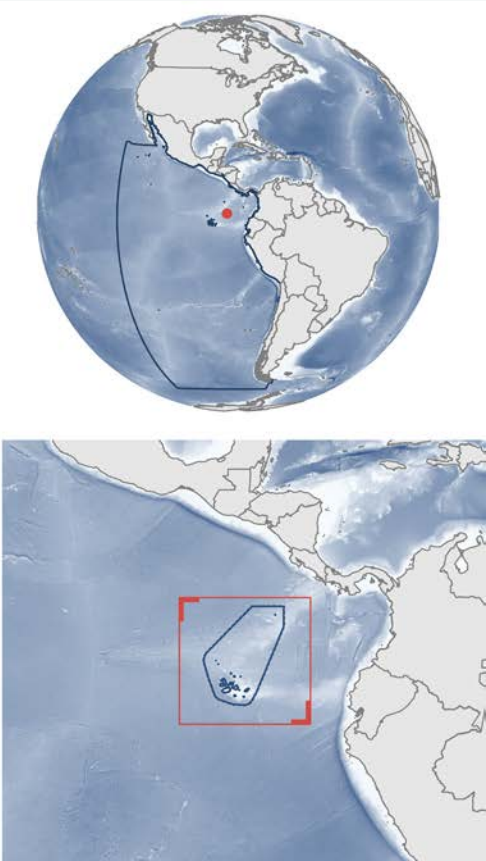
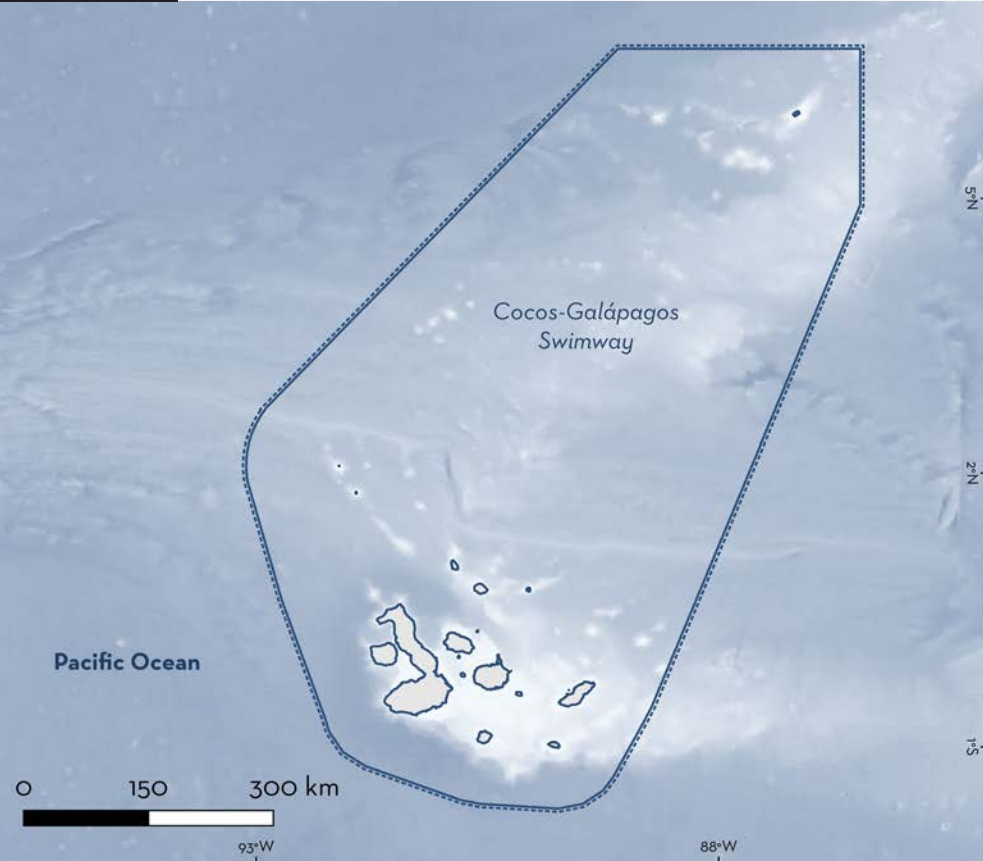
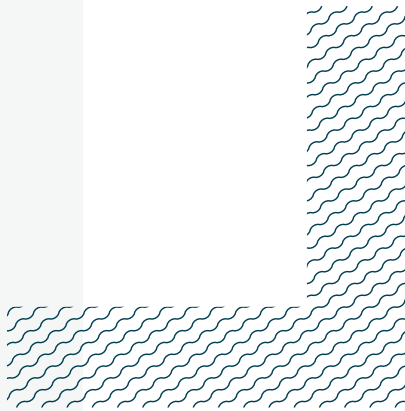
SUMMARY

Costa Rica Thermal Dome is located in the Eastern Tropical Pacific covering part of Costa Rica, Nicaragua, El Salvador, Guatemala, and Areas Beyond National Jurisdiction (ABNJ). This area overlaps with the Papagayo Ecological or Biological Significant Marine Area. It includes a productive and oceanographically dynamic offshore upwelling system and plays an important role as a significant carbon sink with a high concentration of nutrients. Within this area there are: **threatened species** (e.g., Munk’s Pygmy Devil Ray *Mobula munkiana*); **feeding areas** (e.g., Spinetail Devil Ray *Mobula mobular*); and **undefined aggregations** (Silky Shark *Carcharhinus falciformis*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C2 - Feeding Areas
Sub-criterion C5 - Undefined Aggregations

-
-
- GUATEMALA
- EL SALVADOR
- NICARAGUA
- COSTA RICA
- ABNJ
-
-
- O-500 metres
-
-
- 379,118 km²
-
-



COCOS-GALÁPAGOS SWIMWAY ISRA

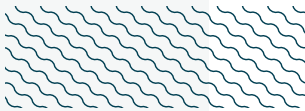
SUMMARY

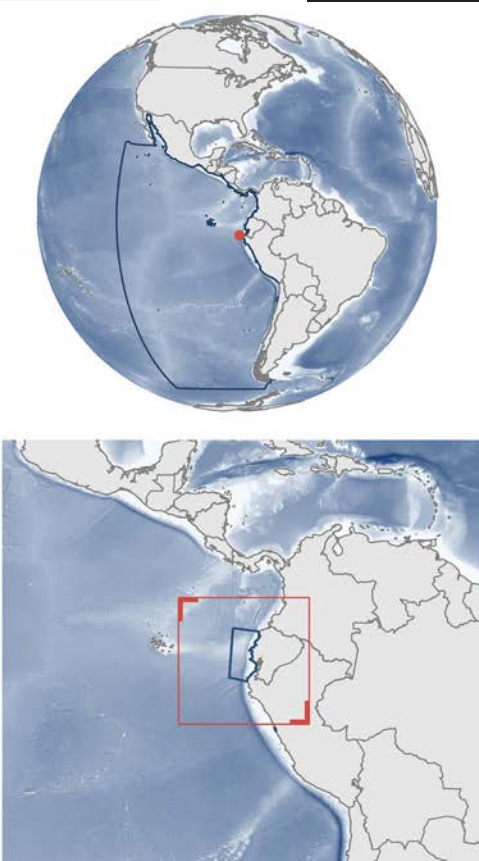
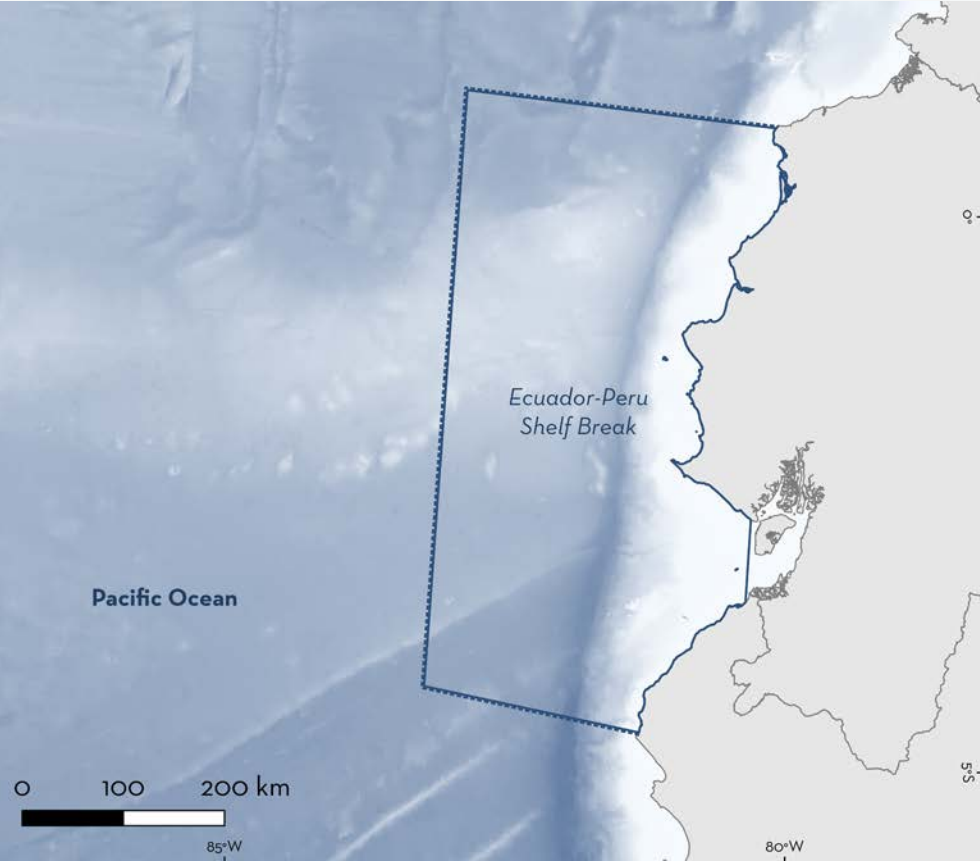
Cocos-Galápagos Swimway encompasses a large area of oceanic waters of the Eastern Tropical Pacific linking Cocos Island (Costa Rica) and the Galápagos Islands (Ecuador). The Cocos part of this area includes Cocos Island National Park and Bicentenario Marine Managed Area, a World Marine Heritage Site. The Galápagos part of this area includes Ramsar sites, the Hermandad Marine Reserve, a World Marine Heritage Site, a UNESCO Biosphere Reserve, and an Ecologically or Biologically Significant Marine Area. This area is an important marine biological corridor given the high levels of connectivity observed between these islands and a significant overlap in the migratory movements of several shark species. Within this area there are: **threatened species** (e.g., Pelagic Thresher *Alopias pelagicus*); **reproductive areas** (e.g., Scalloped Hammerhead *Sphyrna lewini*); areas important for **movement** (e.g., Whale Shark *Rhincodon typus*); and **undefined aggregations** (Oceanic Manta Ray *Mobula birostris*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas;
Sub-criterion C4 - Movement; Sub-criterion C5 - Undefined Aggregations

-
-
- COSTA RICA
- ECUADOR
-
-
- O-1,928 metres
-
-
- 431,156 km²
-
-





ECUADOR-PERU SHELF BREAK ISRA

SUMMARY

Ecuador-Peru Shelf Break stretches from Atacames in northern Ecuador to Punta Balcones in northern Peru. The shelf break runs along the entire area, with the widest part of the shelf off Machala in Ecuador and its narrowest off Cabo Blanco in Peru. The area includes two Ecologically or Biologically Significant Marine Areas, 10 marine protected areas, two Key Biodiversity Areas, and two Wetland of International Importance (Ramsar sites). It contains unique oceanographic and bathymetric conditions resulting in high biodiversity and exceptionally high marine productivity. Within this area there are: **threatened species** (e.g., Whale Shark *Rhincodon typus*); **feeding areas** (Whale Shark); areas important for **movement** (Oceanic Manta Ray *Mobula birostris*), and **undefined aggregations** (Oceanic Manta Ray).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C2 - Feeding Areas; Sub-criterion C4 - Movement; Sub-criterion C5 - Undefined Aggregations

— —
ECUADOR
PERU
— —
0-1,928 metres
— —
186,691.3 km²
— —

EASTERN TROPICAL PACIFIC MARINE CORRIDOR ISRA

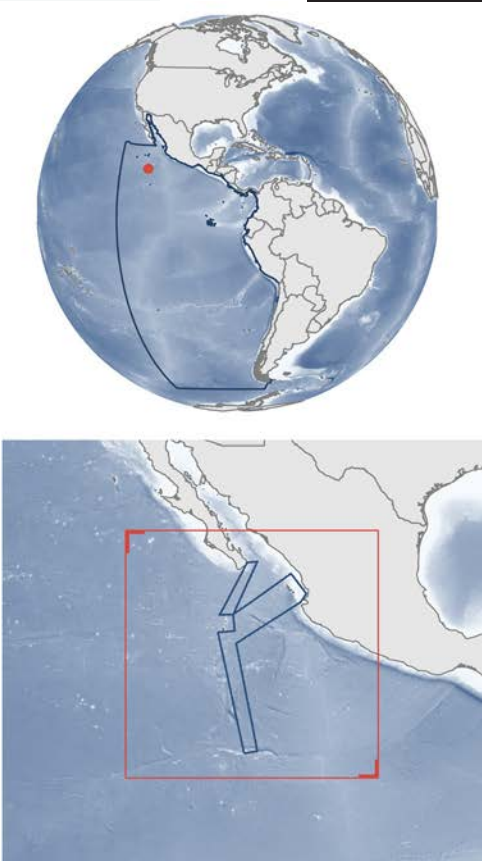
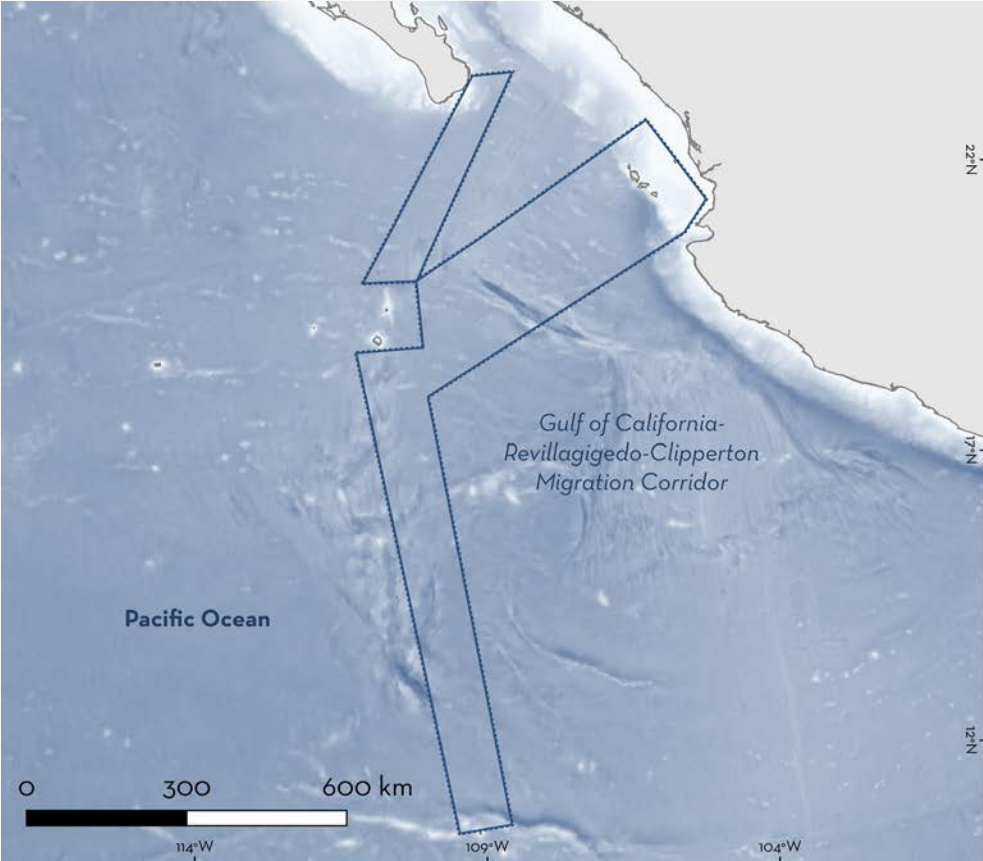
SUMMARY

The Eastern Tropical Pacific Marine Corridor covers a large area of the south-central Eastern Tropical Pacific Ocean. This area encompasses the exclusive economic zones of Costa Rica, Panama, Colombia, Nicaragua, Honduras, and Ecuador, along with part of northern Peru and extends seaward into Areas Beyond National Jurisdiction (ABNJ). This area contains five World Heritage Sites, four Biosphere Reserves, multiple protected areas, Ecologically or Biologically Significant Marine Areas (EBSA), and Wetlands of International Importance (Ramsar sites). This area includes several warm and cold-water habitat types, from coastal to pelagic, benthic, seamounts, and abyssal plains, with the area structurally connected via three underwater ridges. Within this area there are: **threatened species** (e.g., Pelagic Thresher *Alopias pelagicus*); **reproductive areas** (e.g., Scalloped Hammerhead *Sphyrna lewini*); **feeding areas** (e.g., Tiger Shark *Galeocerdo cuvier*); and areas important for **movement** (e.g., Silky Shark *Carcharhinus falciformis*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas; Sub-criterion C2 - Feeding Areas; Sub-criterion C4 - Movement

— —
HONDURAS
NICARAGUA
COSTA RICA
PANAMA
COLOMBIA
ECUADOR
PERU
ABNJ
— —
0-1,928 metres
— —
3,191,603 km²
— —



GULF OF CALIFORNIA-REVILLAGIGEDO-CLIPPERTON MIGRATION CORRIDOR ISRA

SUMMARY

The Gulf of California-Revillagigedo-Clipperton Migration Corridor, also known as the Mexican Migravía, includes areas near the entrance of the Gulf of California (Cabo Pulmo, Banderas Bay, and Islas Marías), Revillagigedo Archipelago, Clipperton Atoll, and Areas Beyond National Jurisdiction (ABNJ). The area has a variety of marine habitats and ecosystems, such as deep ocean basins, continental slopes and platforms, coastal and oceanic islands, mangrove estuaries, and coral and rocky reefs. The area also includes one Ecologically or Biologically Significant Marine Area, four protected areas, and four Key Biodiversity Areas. Within this area there are: **threatened species** (e.g., Silky Shark *Carcharhinus falciformis*); and areas important for **movement** (e.g., Tiger Shark *Galeocerdo cuvier*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C4 - Movement

— —
MEXICO
FRANCE
ABNJ
— —
0-1,928 metres
— —
252,225 km²
— —

GULF OF FONSECA ISRA

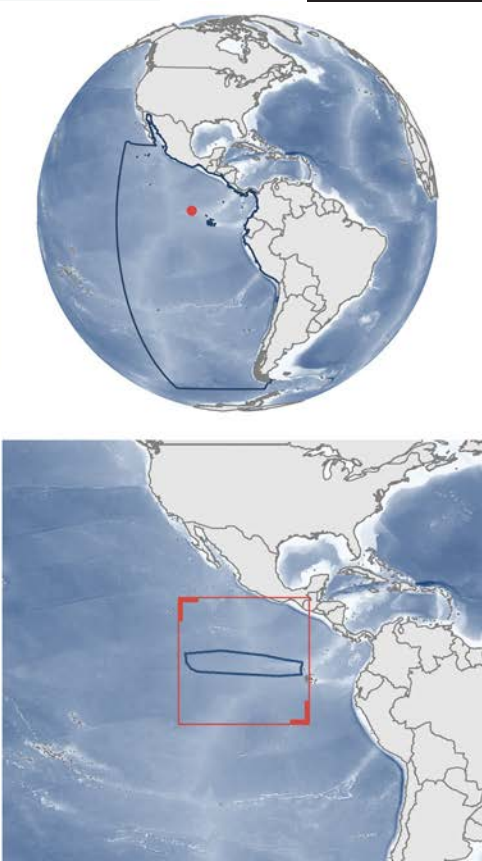
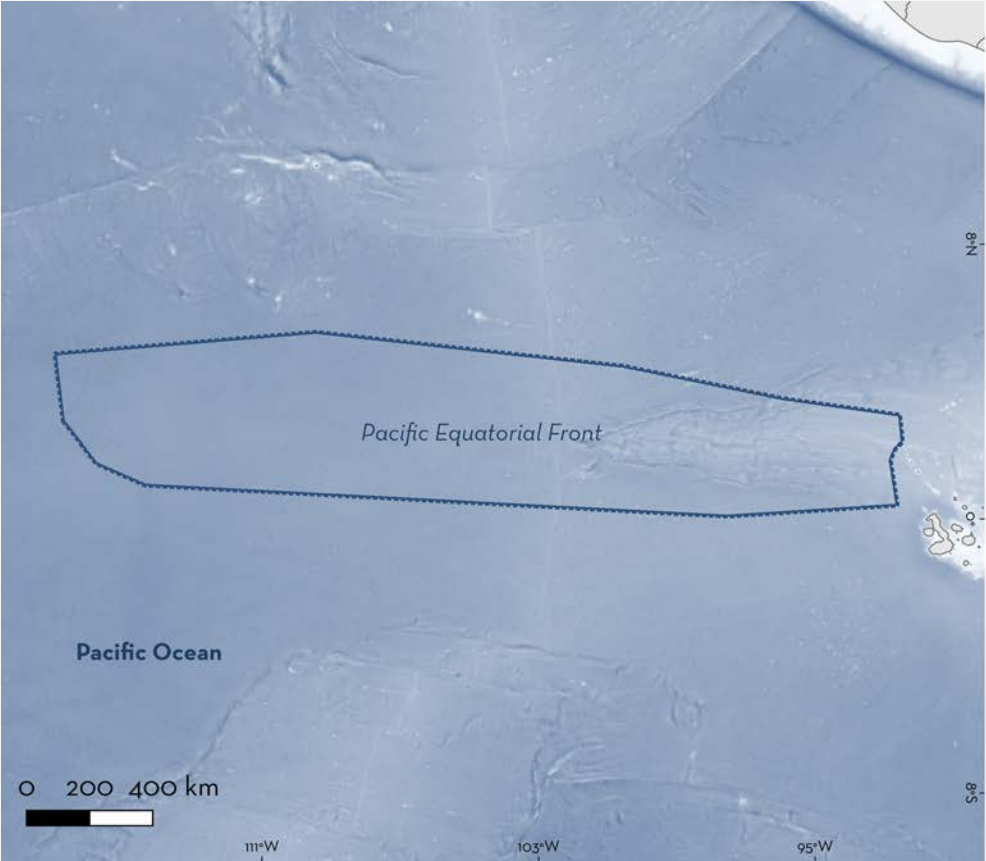
SUMMARY

Gulf of Fonseca is a transboundary shallow sedimentary estuarine ecosystem under the jurisdiction of El Salvador, Honduras, and Nicaragua. The area includes 33 islands and 30 Marine Protected Areas. The key coastal habitats are wetlands and mangrove forests, which have supported the declaration of the area as a Wetland of International Importance (Ramsar site). Its ecological importance is linked to the size of the estuarine complex, mangrove zone, and its proximity to areas with high concentrations of nutrients (seasonal upwellings and seamounts). Within this area there are: **threatened species** (e.g., Scalloped Hammerhead *Sphyrna lewini*); **range-restricted species** (Pacific Chupare *Styracura pacifica*); **reproductive areas** (Scalloped Hammerhead); and **undefined aggregations** (Pacific Cownose Ray *Rhinoptera steindachneri*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted;
Sub-criterion C1 - Reproductive Areas; Sub-criterion C5 - Undefined Aggregations

— —
EL SALVADOR
HONDURAS
NICARAGUA
— —
0-35 metres
— —
2,124 km²
— —



PACIFIC EQUATORIAL FRONT ISRA

SUMMARY

The Pacific Equatorial Front is located in the Eastern Tropical Pacific. It is an oceanic area mostly in Areas Beyond National Jurisdiction (ABNJ), although the eastern portion is within the Ecuadorian Galápagos Exclusive Economic Zone. The area overlaps with an Ecologically or Biologically Significant Marine Area, the Equatorial High Productivity Zone. The area includes the boundary of the South Equatorial Current containing a strong temperature gradient and tropical instability waves that propagate along the front, concentrating plankton. Habitats include planktonic-rich oceanic waters oceanic. Within this area there are: **threatened species**; **feeding areas**; and areas important for **movement** (Whale Shark *Rhincodon typus*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C2 - Feeding Areas; Sub-criterion C4 - Movement

— —
ECUADOR
ABNJ
— —
0-200 metres
— —
1,208,561 km²
— —



An aerial photograph of a mangrove forest. A large, irregularly shaped body of water, likely a lagoon or a large pond, is the central feature. The water has a brownish-green hue, suggesting sediment or algae. The surrounding land is covered in dense, lush green mangrove trees. The forest extends to the edges of the frame, with some areas showing more open ground or different types of vegetation. The overall scene is a natural, undisturbed landscape.

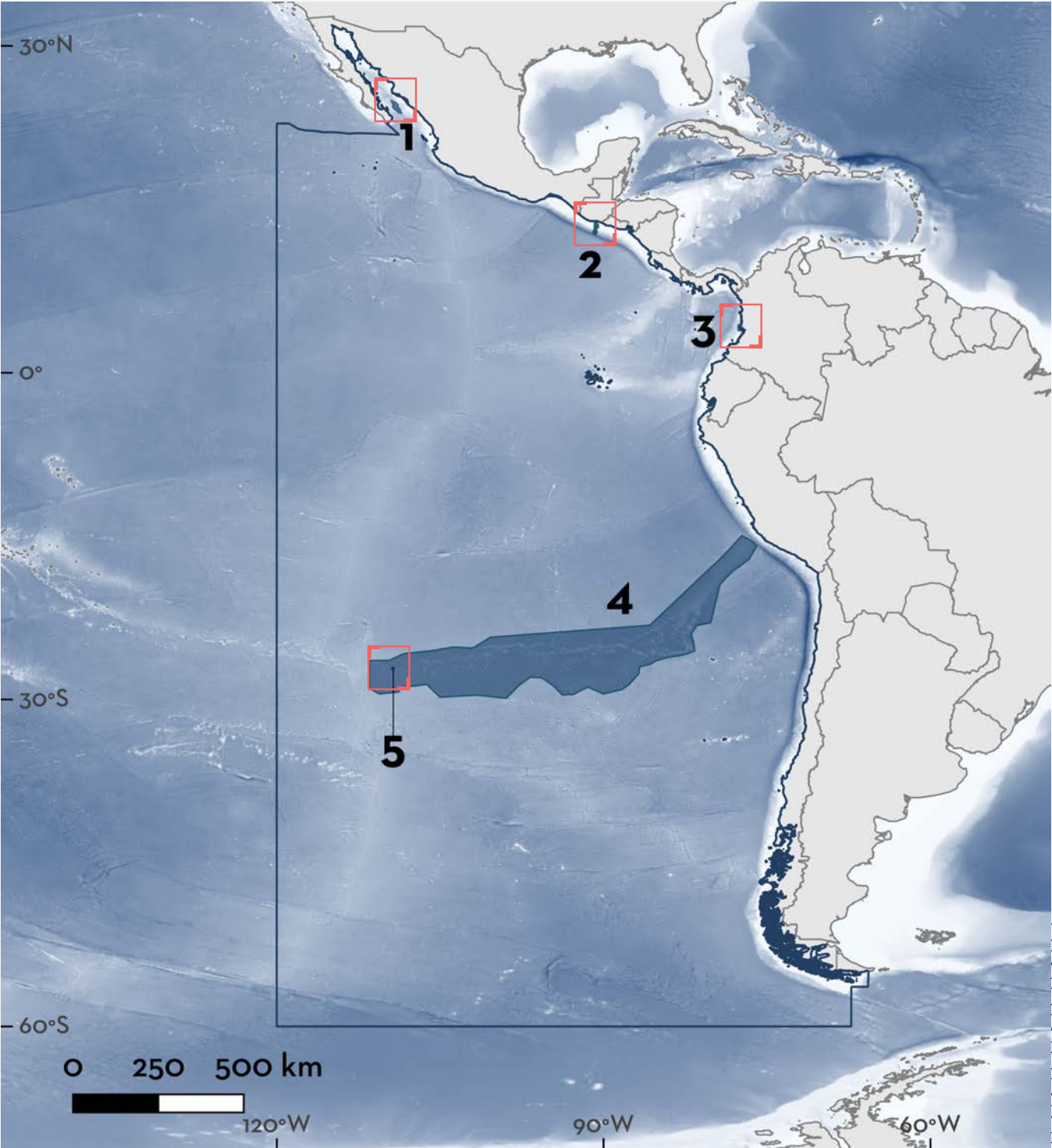
CANDIDATE ISRAS & AREAS OF INTEREST

CANDIDATE IMPORTANT SHARK AND RAY AREAS (cISRA)

A candidate ISRA (cISRA) nominated during a regional workshop which does not have sufficient information to become an ISRA can remain a cISRA with the potential to be re-assessed in the future and become an ISRA when more information is available.

5 COUNTRIES

5 cISRA



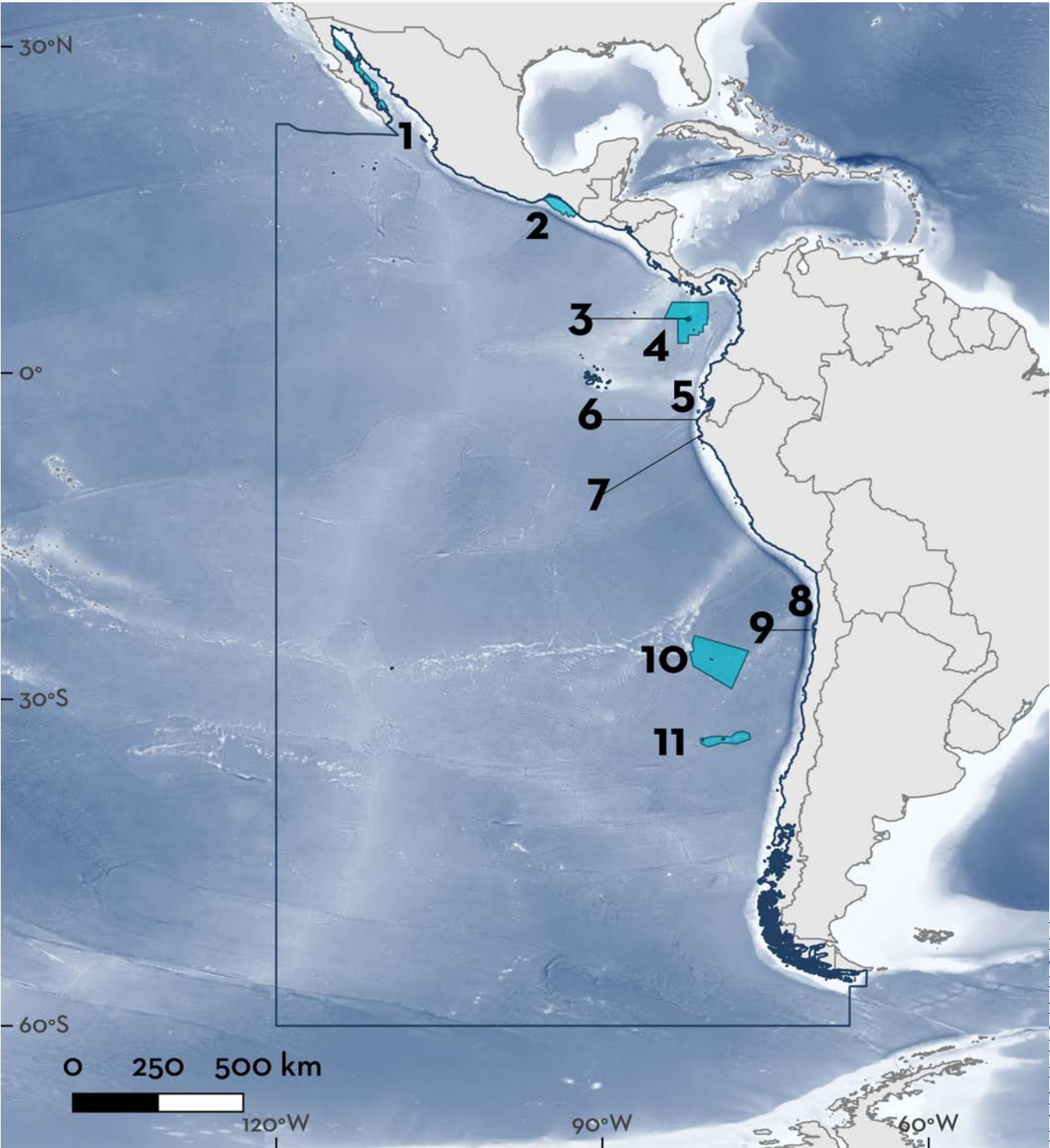
	JURISDICTION	cISRA NAME	CONTRIBUTORS
1	Mexico	Pescadero Basin	Emiliano García-Rodríguez, Luz Erandi Saldaña-Ruiz, Felipe Galván-Magaña, Frida Lara-Lizardi, Oscar Sosa-Nishizaki, Javier Tovar-Ávila
2	Guatemala	Guatemala San Jose Canyon	Ana Hacoheh-Domené, Francisco Polanco-Vásquez, Cristopher Avalos-Castillo
3	Colombia	Baudó-Málaga	Paola A. Mejía-Falla, Andrés F. Navia, Diego Cardeñoso, Heins Bent-Hooker, Felipe Ladino-Archila, Carmen López, Andrés Casama, Carlos Ballesteros, Peter M. Kyne
4	Peru and Chile	Salaz y Gomez and Nasca Ridge	Naíti Morales Serrano, Adriana Gonzalez-Pestana
5	Chile	Rapa Nui	Naití Morales Serrano, Adriana Gonzalez-Pestana, Enzo Acuña

AREAS OF INTEREST (AoI)

An Area of Interest (AoI) is considered during a regional workshop but found to have insufficient information to satisfy the ISRA Criteria and therefore does not become a candidate ISRA (cISRA).

6 COUNTRIES

11 AoI



	JURISDICTION	AoI NAME	CONTRIBUTORS
1	Mexico	Western Gulf of California	Marta D. Palacios, Felipe Galvan-Magaña, Giuseppe Notarbartolo di Sciara, Melissa Cronin, Nerea Lezama-Ochoa, Clara Calatayud, Rogelio González-Armas, Donald A. Croll, Kelly A. Ziliacus, Kathryn A. Ayres, Abel Trejo-Ramírez
2	Guatemala	Champerico	Ana Hacohe-Domené, Francisco Polanco-Vásquez, Cristopher Avalos-Castillo
3	Colombia and Panama	Navegador Seamount	Felipe Ladino-Archila, Peter M. Kyne
4	Colombia and Panama	Coiba-Malpelo Swimway	César Peñaherrera-Palma, Elpis J. Chávez, Felipe Ladino, Sandra Bessudo, Randall Arauz
5	Peru	Peruvian Artificial Infrastructures	Ximena Velez-Zuazo, Joanna Alfaro, Adriana Gonzalez-Pestana
6	Peru	Banco de Mancora	Francisco Cordova, Ximena Velez-Zuazo, Joanna Alfaro, Adriana Gonzalez-Pestana
7	Peru	Virrilá Estuary	Adriana Gonzalez-Pestana, Ximena Velez-Zuazo, Joanna Alfaro
8	Peru	Peruvian Humboldt Kelp Forest	Ximena Velez-Zuazo, Joanna Alfaro-Shigueto, Enzo Acuña, Carlos Bustamante, Francisco Concha, Naiti Morales Serrano, Carolina Vargas-Caro, Adriana González Pestana
9	Chile	Mejillones Peninsula and its Bays	Carlos Bustamante, Enzo Acuña, Carolina Vargas-Caro, Naití Morales Serrano, Adriana Gonzalez-Pestana
10	Chile	Desventuradas Islands	Naití Morales Serrano, Adriana Gonzalez-Pestana
11	Chile	Juan Fernandez Archipelago	Naití Morales Serrano, Adriana Gonzalez-Pestana

CONTRIBUTORS

The IUCN SSC Shark Specialist Group would like to thank all those who contributed their time and knowledge to the description of areas in the Central and South American Pacific region. Names and affiliations of experts who contributed to the delineation of ISRAs, cISRAs, and Aols are listed in alphabetical order by country in which areas were delineated (note that some names might appear more than once if contributors worked on submissions for multiple countries.) The ISRA Team provided input and contributed to all countries.

MEXICO

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ACKNOWLEDGMENTS

This project was 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 appreciate their generous financial assistance.

The IUCN SSC Shark Specialist Group is fiscally sponsored by Re:wild, a US 501(c)(3) non-profit organization (Tax ID 26-2887967). We are grateful for their ongoing support which has made this project possible.

We would like to express our appreciation to the Independent Review Panel chaired by Prof Colin Simpfendorfer and comprised of Dr Ryan Daly, Dr Ana Martins, and Dr Vanessa Jaiteh, for their feedback and support which have ensured that the ISRA process is based on the best available science.

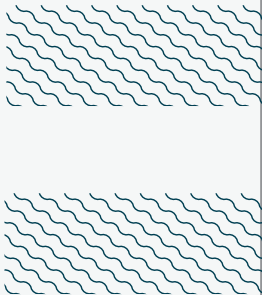
Special thanks go to the following individuals without whom this work would not have been possible: Elena Politi, our web developer who has made our eAtlas come to life; Daniel Fernando, our workshop coordinator; and the team from the Important Marine Mammal Areas initiative within the Marine Mammal Protected Areas Task Force of the IUCN who continue to provide us with support when and where needed.

Thanks are also 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 support with workshop implementation and sharing their knowledge.

We would like to acknowledge the individual photographers who have kindly and graciously shared their pictures to allow us to showcase the diversity and beauty of sharks and rays in the Central and South American Pacific region. We thank (*in alphabetical order*): Fabian Brondi, Simone Caprodossi (www.sundive.com.au), Phillip Colla (www.oceanlight.com), Jay Clue (Dive Ninja Expeditions), Ben Fiscella, Edna De La Llata, Michel Garcia, Adriana Gonzalez, Pelayo Salinas, Roberto Uribe, and Manuel Yopez.

Special thanks to all photographers who made their pictures available on Ocean Image Bank or Unsplash: Enrique Alarcon, Amanda Cotton, Lenin Estrada, Kimberly Jeffries, Hannes Klausterman, Azzedine Rouichi, Cassandra Scott, and Franz Schafer.



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