

EXECUTIVE SUMMARY

HERMANDAD

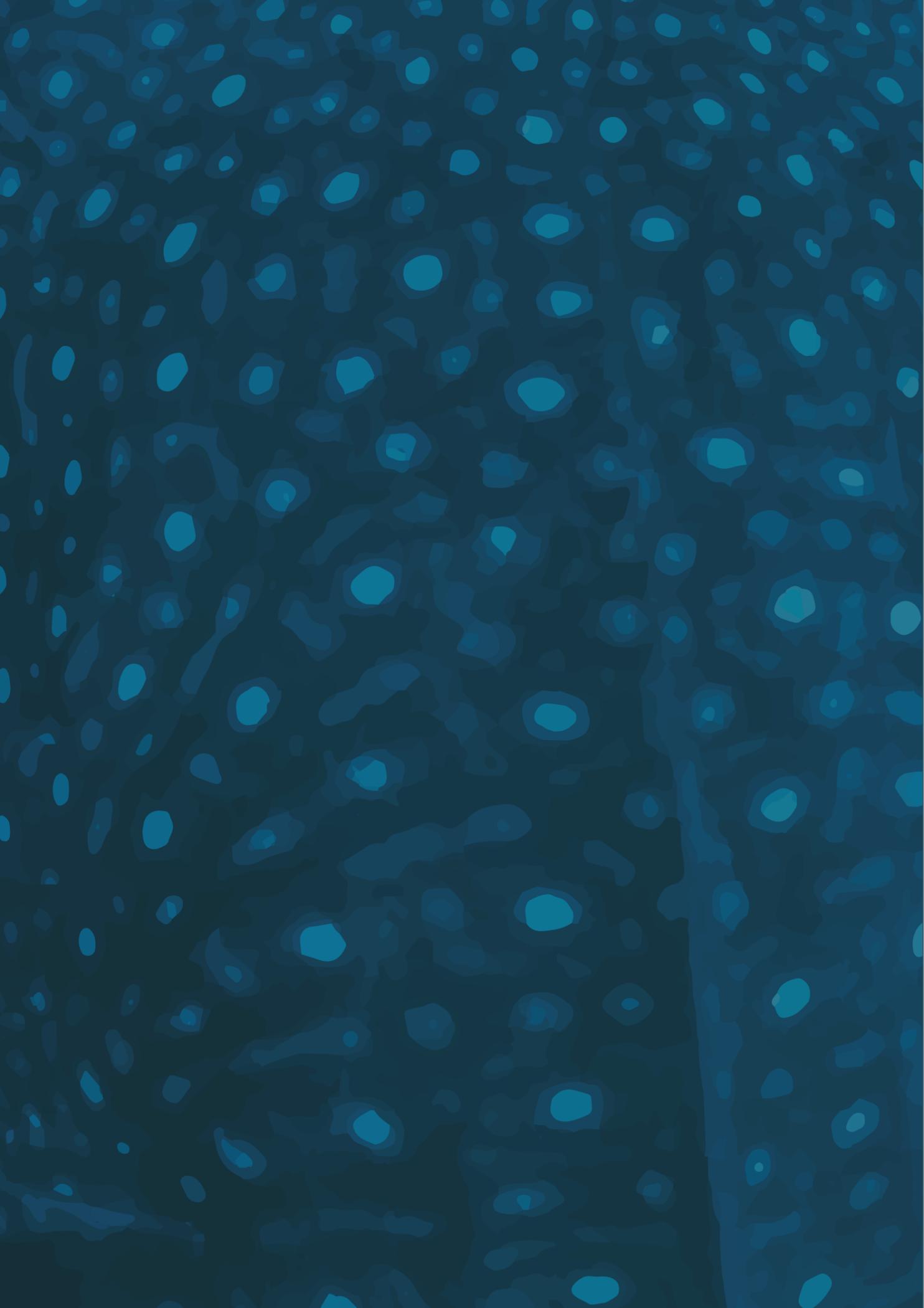
MARINE RESERVE MANAGEMENT PLAN

2023

Ministerio del Ambiente, Agua
y Transición Ecológica



Parque Nacional
GALÁPAGOS
Ecuador



HERMANDAD MARINE RESERVE
MANAGEMENT PLAN
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Directorate of Protected Areas and Other Forms of Conservation of the Sub-secretariat of Natural Heritage (DAPOFC-SPN) of MAATE.

Galapagos National Park Directorate.

With the participation of the institutions and organizations comprising the Core Group:

Ministry of Environment, Water, and Ecological Transition (MAATE).
Ministry of Production, Trade, Foreign Investments, and Fisheries (MPCEIP).
Ministry of National Defense (MIDENA).
Ministry of Foreign Affairs and Human Mobility (MREMH).
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National Federation of Fishing Cooperatives of Ecuador (FENACOPEC).
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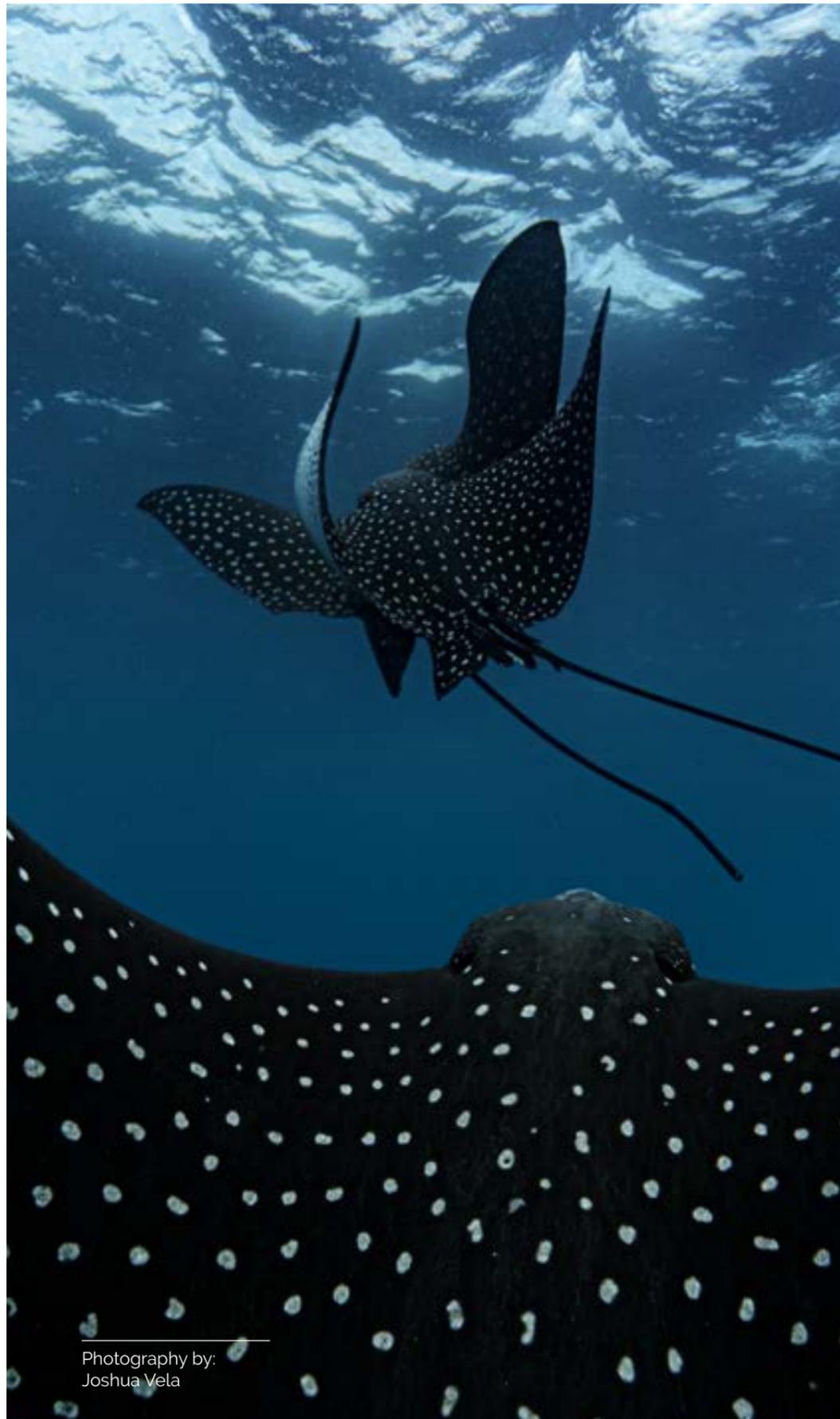


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ACRONYM LIST

CGS:	Cocos – Galapagos Swimway.
CMAR:	Marine Corridor of the Eastern Tropical Pacific.
ECEP:	Environmental communication, education and participation
EEZ:	Exclusive Economic Zone.
ETP:	Eastern Tropical Pacific.
FIP:	Fisheries Improvement Projects.
GMR:	Galapagos Marine Reserve.
GNPD:	Galapagos National Park Directorate.
HMR:	Hermandad Marine Reserve.
IUU:	Illegal, Unreported, Unregulated Fishing.
MAATE:	Ministry of Environment, Water and Ecological Transition of Ecuador.
MPA:	Marine Protected Area.
MPCEIP:	Ministry of Production, Foreign Trade, Investment and Fisheries.
SNAP:	National System of Protected Areas.

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PRESENTATION

The creation of the Hermandad Marine Reserve marks a historic milestone for conservation at both national and international levels. Made official through Executive Decree No. 319 on January 14, 2022, by the Government of the Republic of Ecuador, the reserve spans 60,000 km² in the open waters of the insular Exclusive Economic Zone (EEZ), northwest of the Galapagos Marine Reserve. It represents the first achievement in establishing a regional oceanic reserve, increasing the nationally protected marine area by 5.5%.

"Hermandad" reflects the efforts of various local, national, and regional stakeholders to advance our strong commitment to strengthening the conservation of the Eastern Tropical Pacific Marine Corridor. The protected area encompasses submarine mounts and pelagic environments crucial for the life and migration of threatened and commercially valuable species. Preserving it is essential to ensure the integrity of ecosystem services, food security, and long-term social and economic well-being. However, the reserve faces significant challenges, including climate change, pollution, and illegal, unreported, and unregulated (IUU) fishing, jeopardizing the sustainability of its resources.

This management plan is the outcome of a participatory and transparent process involving different stakeholders and users of the protected area. This document constitutes a robust strategy for mitigating and eliminating threats, guiding the coordinated management of the reserve through clear objectives. Based on an ecosystem-based and precautionary approach, as well as consultation and participation from key stakeholders, this plan aims to make the Hermandad Marine Reserve a regional and global reference for ecological connectivity and international cooperation in the conservation of our marine ecosystems.

The implementation of management programs, covering aspects such as biodiversity conservation, control and surveillance, science and technological innovation, environmental communication and education, and administrative planning, will be crucial for achieving the vision by 2032. To fulfill this purpose, the reserve will require continuous efforts in institutional strengthening, adequate funding, and effective coordination among the various actors responsible for its conservation. Only through committed and collaborative management can we preserve this marine treasure for future generations and ensure the resilience of our oceans to current and future challenges.

José Antonio Dávalos
Minister of Environment, Water, and
Ecological Transition

Danny Rueda
Director of the Galapagos
National Park

POLITICAL DECISION AND IMPORTANCE OF HERMANDAD

The Government of the Republic of Ecuador, through Executive Decree No. 319, January 14th, 2022, officially declares the historic decision to establish the new Hermandad Marine Reserve (HRM), located in open waters of Ecuador's insular Exclusive Economic Zone (EEZ), northwest of the Galapagos Marine Reserve (GMR), with a total surface of 60,000 km².

Its creation aims to protect critical oceanic ecosystems, migratory routes and feeding areas of threatened marine species, as well as to maintain a responsible fishing zone, excluding fishing activities that involve the use of longlines. In this context, Hermandad was declared a marine reserve by the Ministry of Environment, Water and Ecological Transition of Ecuador (MAATE) through Agreement No MAATE-2022-019, published in the Official Registry No. 32 on March 30th, 2022.

At a regional level, the HRM (Hermandad Marine Reserve) is incorporated into the Eastern Tropical Pacific Marine Corridor (CMAR), which includes the Galapagos Islands, Cocos, Coiba, Malpelo, and Gorgona. This alliance is driven by the governments of Ecuador, Colombia, Panama, and Costa Rica. Fundamentally, Hermandad connects the Galapagos Marine Reserve with the Bicentennial Marine Management Area of Costa Rica, which includes the Cocos Island National Park, through the Cocos-Galapagos Swimway (CGS) (Figure 1).

These conditions have demanded that the analysis and management of Hermandad should be based on a more holistic and ecosystemic vision, with a regional scope and magnitude.

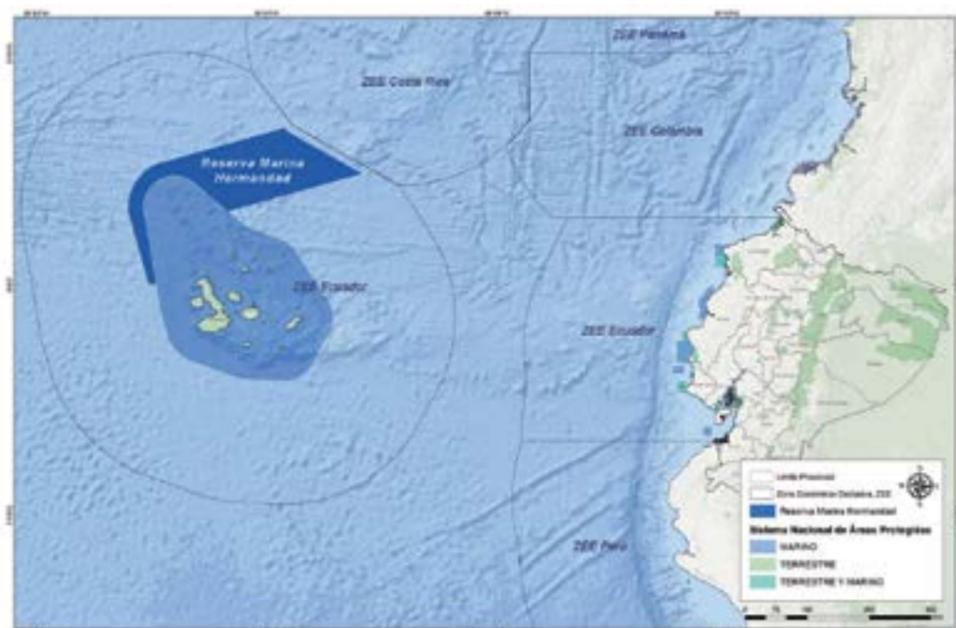


Figure 1. Map showing the location of the Hermandad Marine Reserve in relation to the mainland of Ecuador and international maritime spaces.

METHODOLOGY AND WORK INPUTS

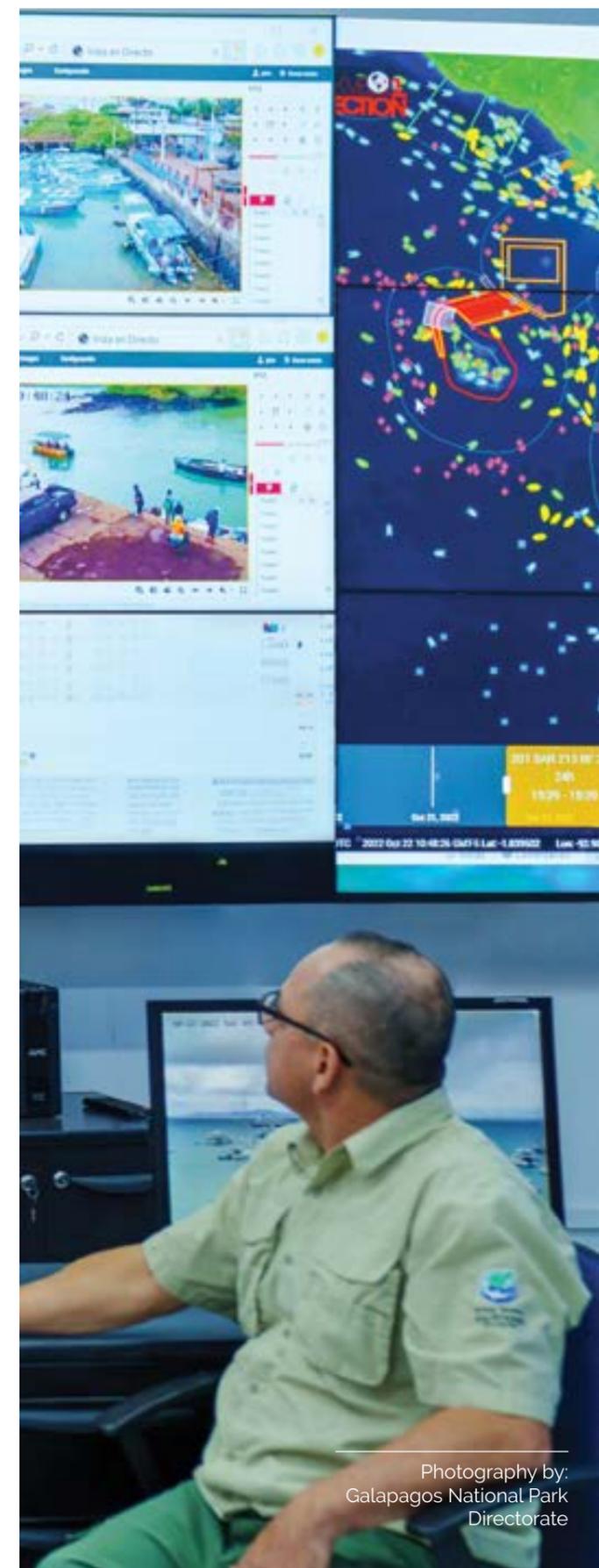
The management plan of the HRM, methodologically and structurally, aligns with the Manual for the Operational Management of Protected Areas prepared by the Ministry of Environment of Ecuador in 2013 and the Guidelines for the Construction and/or Update of Management Plans for Protected Areas, established by MAATE in 2017.

The construction of the management plan has involved a thorough analysis of scientific and technical information of a high academic standard, primarily focusing on Ecuador's insular EEZ and the Eastern Tropical Pacific (ETP) region. This approach has been guided by an ecosystemic and precautionary approach, as well as extensive consultation and participation in several meetings and workshops involving both public and private stakeholders who interact within this marine area. The aim has been to achieve coordinated interinstitutional and intersectoral management.

The process began with the identification and characterization of the conservation values and uses of the marine reserve, as well as the threats to the integrity of the protected area. Based on this information, management objectives were defined, from which the desired outcomes, indicators, and necessary activities for area management were determined. These were complemented by the establishment of objectives for sustainable use and the identification of management strengthening needs for the protected area.

CONSERVATION VALUES, USE AND MANAGEMENT OF BIODIVERSITY

The fundamental aspect of this protected oceanic area lies in its conservation values determined at a broad level, such as pelagic environments and seamounts. These ecosystems shelter important natural aggregation sites and migratory nav-



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Directorate



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igation points for threatened and commercial species, as well as key areas for fishing productivity. They also play a key role in the functioning and sustainability of the ecosystemic services, food security, and in the generation of long-term social and economic benefits.

Specifically, on the MS01 seamount known as Paramount (latitude 3,349; longitude -90,781) now protected by Hermandad, the highest abundances of large pelagic species (e.g., elasmobranchs, bony fishes and marine mammals) have been recorded, including the highest values for the scalloped hammerhead shark (*Sphyrna lewini*) and mahi-mahi (*Coryphaena hippurus*), which supports the decision to protect these conservation targets.

At a finer level, the scalloped hammerhead shark (*Sphyrna spp*) and leatherback turtle (*Dermochelys coriacea*) were selected as flagship species. This selection was made since Hermandad, as well as the CGS and CMAR, are part of the distribution and feeding areas for the two species. They are migratory and threatened, with a critically endanger status. Through conservation actions and scientific monitoring, these species can act as sentinels, providing early warnings of undesirable ecological scenarios.

After assessing the social and economic function of the HMR, the following have been identified as its main use values: a) fisheries resources for provisions and food supply, b) carbon absorption services, c) connectivity and essential ecological processes for scientific research, and d) opportunities to promote learning and participation in MPA conservation through communication, education, and environmental engagement. Overall, the reserve will generate opportunities to foster awareness and encourage active involvement in conservation.

THREATS TO THE INTEGRITY OF HERMANDAD

One of the main threats to the conservation and use values of the HMR is climate change, which affects the integrity of ecosystem services and essential ecological processes at the ETP (Eastern Tropical Pacific) region level. This can potentially alter the distribution and abundance of marine species, and marine fisheries productivity, through gradual and acute variations in temperature.

Similarly, Illegal, Unreported and Unregulated Fishing (IUU) affects, among other aspects, the abundance of large pelagic species such as tuna and sharks within and beyond the island EEZ, as well as the social and economic benefits of fishing. Abandoned, lost or discarded fishing gear and nets can result in entanglements of vulnerable marine species, bycatch, alterations of the benthic environment (e.g. seamounts), and impacts on the marine biodiversity food web due to the consumption of microplastics generated by the degradation of such debris.

Another type of threat includes aspects related to contamination by solid waste (mainly plastics) and discharges (e.g., sewage, hydrocarbons and other hazardous substances) from maritime activities (e.g., cargo ships and fishing boats). Figure 2 presents the process carried out for the characterization and integral diagnosis of the HMR, the identification and justification of its conservation and use values, and the main threats to its integrity.

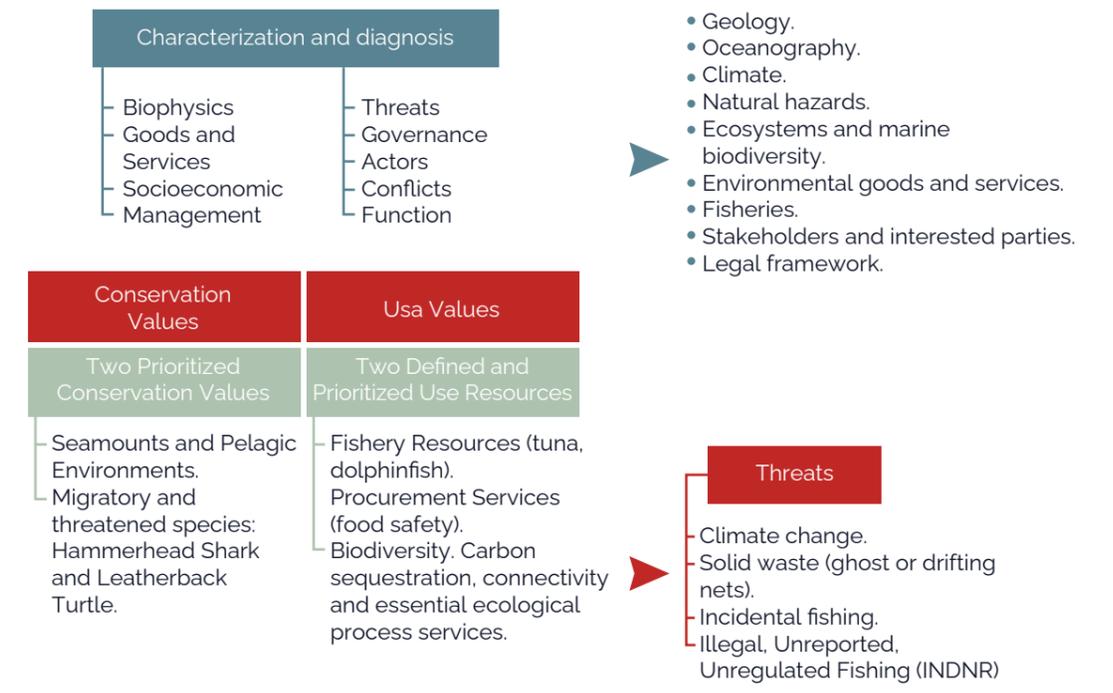


Figure 2. Relation between the characterization and diagnostic processes that support conservation and use values, and the threats to the integrity of the Hermandad Marine Reserve.



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Diego Cocha

VISION OF THE HERMANDAD MARINE RESERVE

Given the above, the development of the management plan for the HMR focused on establishing objectives and strategies to mitigate and/or eliminate the threats to the attributes (e.g., size, condition and landscape) of the protected area. Based on this exercise, a shared vision was defined by all the stakeholders of the marine protected area, within a 10-year timeframe:

By 2032, the Hermandad Marine Reserve in Ecuador's insular Exclusive Economic Zone has successfully become a regional and global benchmark for ecological connectivity and international cooperation for conservation of vital marine ecosystems, which are fundamental to the sustainability of highly migratory, threatened and commercially important species.

OBJECTIVES OF THE MARINE PROTECTED AREA

The Hermandad's strategic framework consists of five objectives: two management objectives, two usage objectives, and one internal or administrative objective.

Management	OBJECTIVE 1: To conserve the seamounts and pelagic environments of the Hermandad Marine Reserve.
	OBJECTIVE 2: To conserve migratory and threatened species (e.g., hammerhead sharks and leatherback turtles) found in the Hermandad Marine Reserve, which are connected to the Galapagos Marine Reserve and the Cocos-Galapagos Swimway.
Usage	OBJECTIVE 3: To contribute to the conservation of commercially important migratory species (e.g., tuna) found in the Hermandad Marine Reserve, which are connected to the Galapagos Marine Reserve and the Cocos-Galapagos Swimway.
	OBJECTIVE 4: To strengthen interdisciplinary technical scientific knowledge in the management of the Hermandad Marine Reserve.
Internal	OBJECTIVE 5: To strengthen Hermandad Marine Reserve management.

ZONING

Hermandad's zoning includes two areas. A 30,000 km² No Take or Protection Area, where extractive activities are not permitted, and critical marine ecosystems, migratory routes and feeding zones of threatened marine species are conserved. The No Take zone protects well-conserved marine ecosystems and species facing threats to their long-term sustainability. This zone is essential for the ecological connectivity of highly migratory and threatened species, as well as for the breeding and nursery areas of species of conservation and commercial interest. This zone must remain free of economic activity or human alterations to ensure the perpetuation of its natural condition (i.e., biodiversity, ecological processes, and ecosystem services).

The second zone is the Responsible Fishing or Sustainable Use Area, which extends along the northwestern border of the GMR to the equator. In this area, fishing activities are permitted, except those involving the use of longlines. This zone consists of two polygons of 22,000 and 8,000 km², making a total of 30,000 km² (Figure 3).

The Responsible Fishing Zone contributes to the conservation of marine biodiversity through the sustainable management and use of its fishery resources. In addition to these two zones, the Management Plan establishes the open waters of Ecuador's insular EEZ as a Marine Reserve Buffer Zone. This zone is managed by the National Maritime Authority and the Ecuadorian Navy, while fisheries-related issues are overseen by the Inter-American Tropical Tuna Commission and the Vice Ministry of Aquaculture and Fisheries of the MPCEIP.



Figure 3. Map zoning the Hermandad Marine Reserve according to Ministerial Agreement No MAATE-2022-041 dated April 14th, 2022.

STRATEGIC PLANNING

From the conception of the strategic framework of Hermandad, structured and built on the basis of the vision and the five objectives of the marine reserve, six management programs have been designed to guide the management of the protected area.

However, given the particularity of Hermandad as the first eminently oceanic marine reserve, which is part of the National System of Protected Areas of Ecuador (SNAP), as well as its regional connotation as part of CMAR and CGS, the management programs were defined based on the established dispositions of the Environmental Organic Code. Additionally, other detail applicable to these characteristics was incorporated, in accordance with the lessons learned in the implementation of the management programs of the GMR.

In order to achieve the management objectives and impact indicators defined on the basis of the strategic framework matrix, 41 extensive activities have been defined. These activities are grouped into six programs, each of which details the general results, impact indicators for three periods (five, three and one year), verification sources, annual schedule and reference budget, and are presented as follows:

1. BIODIVERSITY MANAGEMENT

As mentioned above, one of the identified threats to Hermandad relates to the impact of climate change on the ecosystem services and essential ecological processes of the marine reserve. In this context, within the framework of Objective 1, this program aims to develop a roadmap for climate change adaptation based on a methodological and systematic monitoring of biological and oceanographic parameters. This monitoring will generate periodic information on the performance

of the environmental services provided within the protected area. With this information, management measures can be adjusted based on the best available knowledge.

Another threat that will be addressed through this program is the incidental catch of migratory and endangered species. In this regard, it is proposed to integrate and include the fishing activities that are carried out within the responsible fishing zone of the new reserve into the biological, fisheries and socio-economic monitoring system implemented by the GNPD.

Given the high costs involved in deploying the minimum logistics and human resources for timely monitoring of activities in the protected area, it is proposed to adapt the model to a cost-efficient participatory scheme. This involves including the industrial and artisanal fishing sector in the registration and submission of data (logbooks) to the National Fishing Authority, since each vessel's catch is recorded on the mainland. The GNPD will have access to this information in real-time to update its databases, ensuring that all authorities have access to the same figures.

In addition to data collection and reporting, the adaptation of the biological, fisheries, and socio-economic monitoring system requires the fishing sector and the National Fisheries Authority to provide feedback on the results. This participation aims to support decision-making processes to reduce the capture of non-target species, with a particular emphasis on migratory and threatened species.

The program prioritizes the conservation and monitoring activities for two flagship species, the hammerhead shark and the leatherback turtle. These species are considered representative conservation indicators as their population health reflects the overall health of the marine ecosystem in which they reside.

In the field of interdisciplinary technical

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scientific knowledge applied to management, this program aims to conduct baseline studies on the characterization of fishing activity in the new reserve. These studies will take into consideration the zoning and authorized use regulations in the responsible fishing area of the protected space, with technical support from the National Fisheries Authority. This biological, fishery and socioeconomic information will make it possible to determine and adjust the necessary management measures for the conservation of Hermandad's biodiversity, including the species of commercial interest.

The implementation of this program has an estimated budget of USD \$ 2,674,419.58, which represents 5.8% of the total budget of the management plan in its first five years of execution.



2. CONTROL AND SURVEILLANCE

This program addresses two potential threats: marine pollution and IUU fishing, including incidental catch. Due to the lack of baseline information surrounding marine pollution, it is proposed to begin with the characterization of solid waste and discharges, in order to identify the sources of contamination. Based on this diagnosis, periodic analysis of control and surveillance reports on solid waste and discharges management will be conducted to inform management decision-making.

With respect to IUU fishing and incidental catch, this program establishes the development and implementation of an interinstitutional methodological protocol for control and surveillance of the HMR. The protocol aims to define the roles of each authority involved based on legally established competencies. It is anticipated that this protocol will enable the periodic analysis of interinstitutional technical reports on control and surveillance, providing support for management decision-making processes.

It is important to note that control and surveillance patrols in the HMR will be conducted in coordination with the Ecuadorian Navy, acting as the Maritime Police, and in accordance with applicable laws. This includes compliance with the Organic Law on National Defense, the Organic Law on Navigation, Management of Maritime and River Security and Protection in Aquatic Spaces, the Organic Law on Aquaculture and Fisheries Development, and MAATE's responsibilities related to the SNAP.

Surveillance is an integral part of control, a power granted to the National Environmental Authority by law for the conservation of biodiversity. In this regard, the program envisions significant investment to strengthen the interinstitutional protocols and activities related to control and surveillance. This includes acquiring and upgrading multipurpose vessels, equipment, and cutting-edge technological systems for the GNPD.

The implementation of this program has an estimated budget of USD \$ 37,011,856.52, which represents 80.1% of the total budget of the management plan in its first five years of execution.



3. SCIENCE AND TECHNOLOGICAL INNOVATION

All the objectives of the management plan must be supported by scientific studies and applied research projects. Many of these projects are interdisciplinary, combining natural, social, and technological sciences to provide the necessary knowledge for implementing the programs. Consequently, this specific program plays a vital role across the strategic framework of the management plan.

As a starting point, the program highlights the importance of establishing a participatory process to develop and validate a scientific research agenda for the HMR. The information and knowledge generated through this agenda will enable the systematic tracking and evaluation of scientific research conducted within the HMR, as well as the implementation of management recommendations.

Along these lines, the program aims to develop and implement protocols for monitoring regional oceanographic and climatological parameters of the ETP, with emphasis on the HMR. It also includes the evaluation of the outcomes of implementing adaptation measures and management recommendations (i.e., adaptive management).

The program starts by characterizing spatial and temporal data from various sectors and scientific disciplines, focusing on changes in conservation values and the economic and social resources of the HMR, as well as the underlying causes. To achieve this, the program includes the development and implementation of an information system for querying and downloading HMR reports, regular monitoring and evaluation of data quality and system functionality, and the implementation of recommended enhancements.

In parallel, this program proposes the identification and implementation of technological alternatives for the recovery and use of solid waste, and the containment and treatment of discharges into the sea.

Furthermore, it aims to develop processes for traceability (certification) and fisheries improvement projects. Specifically, this program focuses on contributing to the sus-

tainability of commercial fishing of pelagic species in the ETP region. It emphasizes the need to promote the implementation of technological prototypes and fishing equipment that increase the successful capture of target species and improve catch efficiency.

As part of the research agenda outlined in this program, one of the priorities is to conduct sampling of large pelagic species within the HMR. The aim is to differentiate between the area of protection (no-take) from the responsible fishing area (non-long-line), including sampling of adjacent areas. This will help determine the actual effectiveness of the marine reserve zoning.

The estimated budget for implementing this program is \$ 4,166,843.50, which accounts for 9.0% of the total budget of the management plan in its initial five years of execution.



4. ENVIRONMENTAL COMMUNICATION, EDUCATION AND PARTICIPATION (ECEP)

This program includes strategies and systematic ECEP mechanisms to improve the knowledge and effective engagement of the multiple stakeholders of Hermandad and the GMR, along with users of the CMAR, CGS, and the ETP region, regarding the new marine reserve, the environmental goods and services it provides, and the social and economic benefits it generates.

Processes for monitoring and evaluating the effectiveness of the HMR management plan include strategies and ECEP mechanisms to facilitate the assessment of the performance and impacts of the reserve management.

This program also includes the establishment of baselines and the identification of national and international institutions, organizations and groups that support the conservation of the HMR, CMAR and CGS. Moreover, it involves creating the necessary platforms to facilitate the exchange of experience and knowledge sharing related to planned conservation, monitoring, and research activities outlined in the Hermandad Management Plan.

The implementation of this program has an estimated budget of USD \$ 1,898,000.00, which represents 4.1% of the total budget of the management plan in its initial five years of execution.



5. ADMINISTRATION AND PLANNING

The program proposes, firstly, to strengthen legal-administrative processes for crimes related to IUU fishing in the HMR and, secondly, to discourage their occurrence through exemplary sanctions.

In order to strengthen the management capacities of the marine reserve, the program foresees the development of formal mechanisms for participatory management and decision-making in management and planning that facilitate its governance. In this regard, this program is responsible for coordinating the external evaluation of management effectiveness of the marine reserve and implementing recommendations for improvement, under the implementation of adaptive management principles.

In coordination with the Science and Technological Innovation Program, a portfolio of technical scientific research projects will be developed, categorized, prioritized and made available to national and international organizations, and to agencies that cooperate and provide technical assistance, for transparency of information demands and management needs for the conservation of the new marine reserve.

The implementation of this program has an estimated budget of USD \$ 273,000.00, which represents 0.6% of the total budget of the management plan in its first five years of execution.



6. INTERNATIONAL RELATIONS AND COOPERATION

Under the scope of this program and in coordination with the actions foreseen in the Administration and Planning program, the development of a portfolio of technical and scientific research projects is envisaged, which will be categorized, prioritized and available for national and international organizations and agencies that provide cooperation and technical assistance.

This program is intended to lead the implementation and distribution of the agenda and portfolio of scientific research projects of the HMR in the context of CMAR and CGS, as well as to manage the specialized technical assistance and financing of these projects to achieve the objectives of the management plan.

Through this program, Hermandad aims to contribute to the regional net conservation effort, to strengthen and systematize the application of innovative technologies and mechanisms for cooperation and mutual training among the MPAs of the ETP region, for better understanding, management, control and governance.

In addition, the program will develop inter-institutional coordination mechanisms for the implementation and reporting on compliance with the State's international commitments regarding marine protected areas, with an emphasis on the HMR.

Finally, it will identify and implement a mechanism that is clear and transparent to attract resources and/or technical assistance that will contribute to increasing the functionality and socio-ecological resilience of the HMR and the GMR, as well as its integration into the regional strategies of the Marine Corridor and the network of protected areas of the ETP.

The implementation of this program has an estimated budget of USD \$205,000.00, which represents 0.4% of the total budget of the management plan for the first five years.



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Diego Añasco



FINANCIAL SUSTAINABILITY

The complexity of managing a new ocean area such as Hermandad requires sustained processes of institutional strengthening, funding, and management mechanisms that integrate and coordinate all the actors responsible for its conservation.

The management of Hermandad estimates a budget of USD \$ 46,229,119.59 for its first five years. As it is part of the National Register of Protected Areas, Hermandad will be financed mainly by government funds, so this mechanism may be considered together with other complementary sources of financing such as international cooperation and technical assistance, and the academic sector (Figure 4).

However, among other sources of funding that can contribute financial resources to the management of the HMR is the development of Fishery Improvement Projects (FIPs).

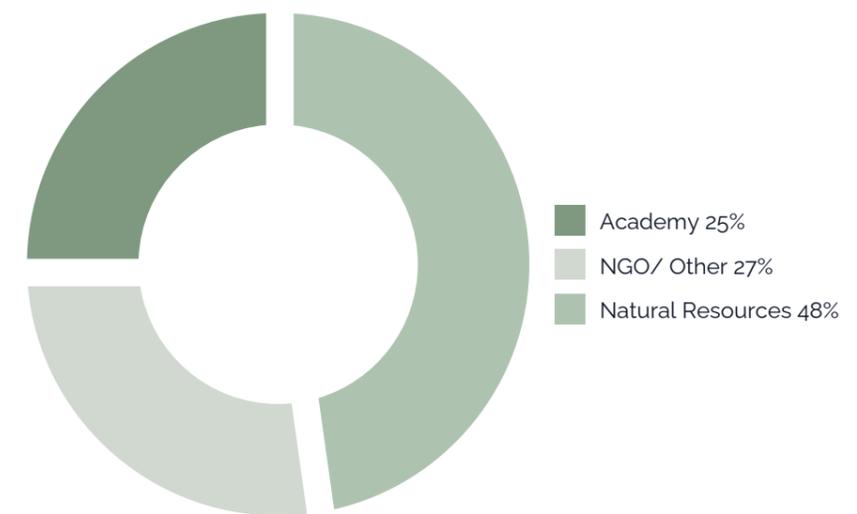


Figure 4. Budget for the Hermandad Marine Reserve management plan distributed according to potential funding sources.

FIPs are one of the main tools to achieve the necessary performance levels that comply with the sustainability standards required by fishery certifications. Some other complementary options are summarized in Table 1.

Table 1. Other potential sources and mechanisms of financing through international cooperation for the implementation of management actions in the Hermandad Marine Reserve.

Program / Project / Organization	Cooperation Source	Financing Options
Development Bank of Latin America, CAF (implementing agency) / WWF / FAO (2023 - 2027)	Global Climate Fund	Funding to combat climate change, with assessment and restoration studies in Galapagos.
Galapagos Invasive Species Control Fund, FEIG (2023-permanent)	Funds for the marine reserve	Fund created with the support of NGOs and the government, managed by FEIG to finance GMR needs that would undoubtedly benefit the HMR, including control and surveillance.

WildAid	Funding for control and surveillance of the GMR	Organization that permanently cooperates with the GMR management / control and surveillance.
Jocotoco Foundation (2023-2024)	Cooperation funds of Re:Wild and Pew Bertarelli Fund	Funds to support the implementation of management projects in the Galapagos and Hermandad marine reserves.
Charles Darwin Foundation	Funding for research and sustainable fishing	Research for GMR and HMR, studies of marine ecosystems and seamounts.
San Francisco de Quito University	Research funds	To study sharks and migratory species in the two Marine Protected Areas and the surrounding region.
Conservation International	Management projects funds	Marine contamination and sustainable fishing projects.
Eastern Tropical Pacific Marine Corridor, CMAR.	Fundraising through international cooperation and NGOs	Implement joint regional government strategies to conserve biodiversity and promote the sustainable use of marine resources in the EEZ of member countries.

To implement the management plan, it is estimated that US\$20,087,995 will be required in the first year; US\$7,210,507.32 in the second year; US\$6,020,388.31 in the third year; US\$6,048,030.68 in the fourth year; and US\$6,862,198.29 in the fifth year. The first year of implementation of the management plan is the highest because it includes the acquisition of equipment, inputs and technology.

Looking at type of expenditure compared to the overall budget, the highest percentage of funds is allocated to investments (44.7%), followed by operating expenses (38.1%).

Current spending, that is, the salaries of the minimum personnel required to manage the HMR, represents 10.6% of the budget. The remaining budget allocation is 4.2% for the implementation of monitoring and evaluation activities in the five programs, and 2.4% for consultancy and specialized studies (Table 2).

Table 2. Hermandad Marine Reserve Management Plan Benchmark Budget by Expenditure Type.

Type of expenses	Budget (USD \$)
Investment	21'892.000,00
Operating	17'629.840,00
Current	4'918.279,59
Implementation of activities	1'930.000,00
Consultancy	1'101.000,00
TOTAL	USD \$ 47'471.119,59

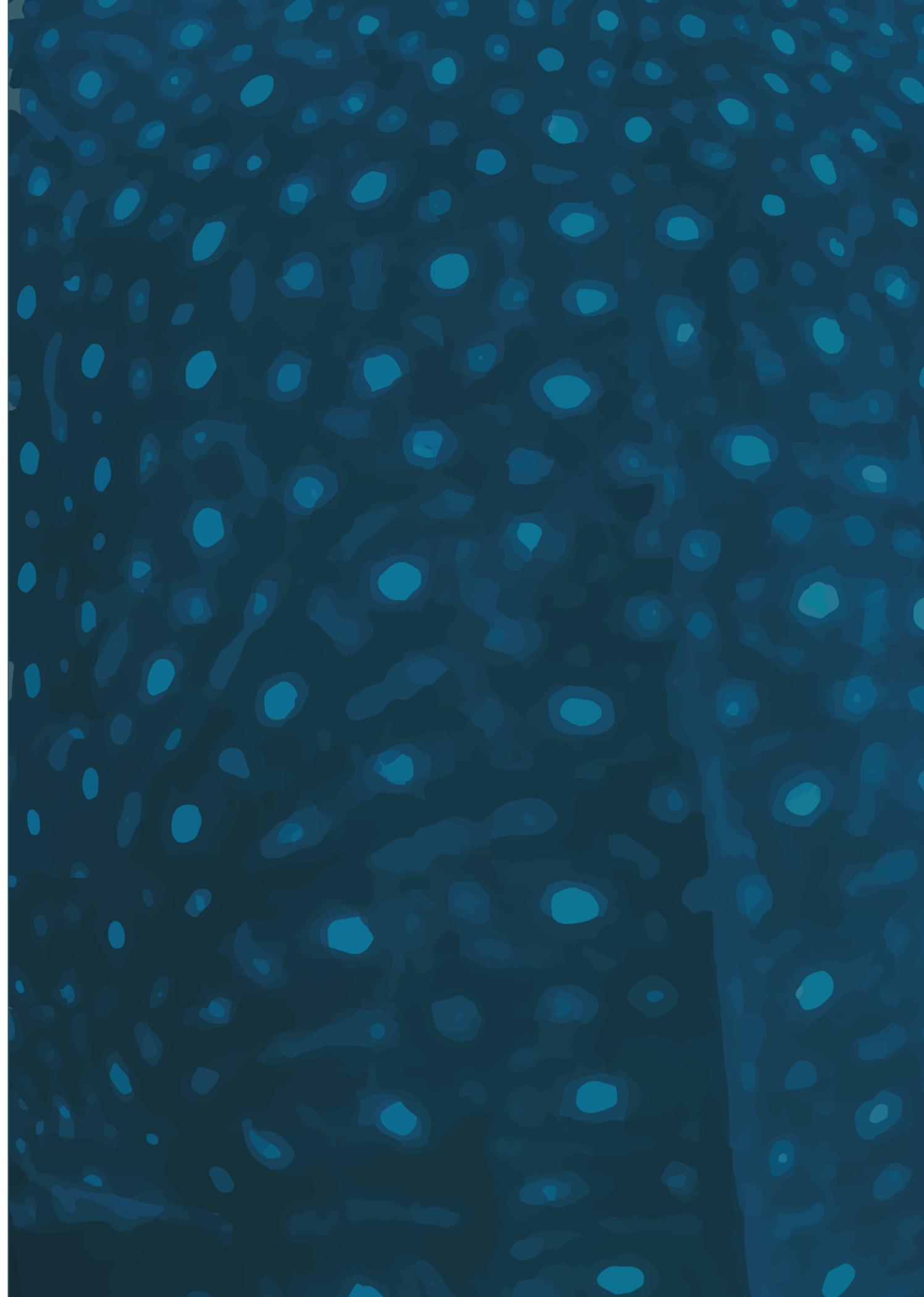
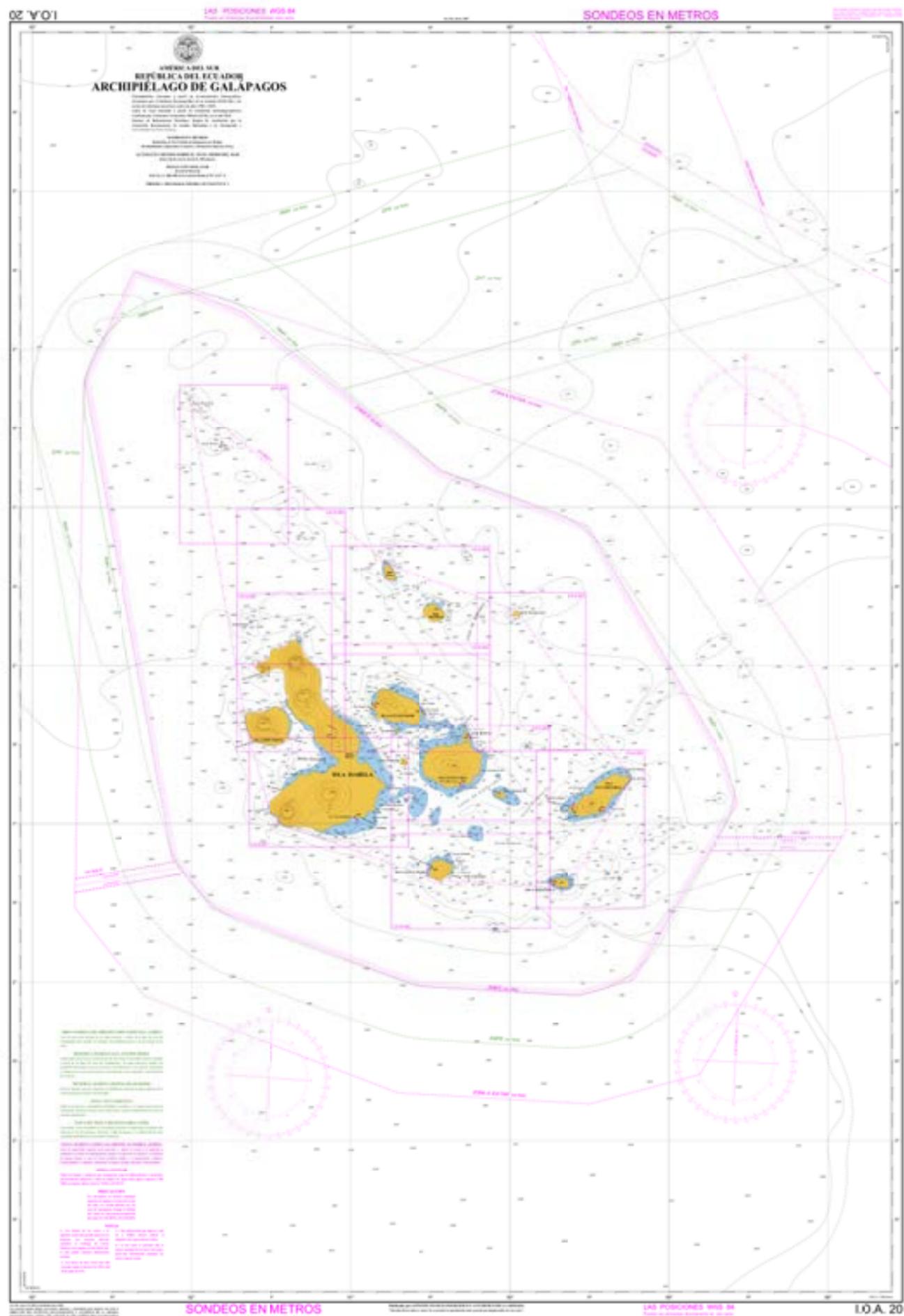
The control and surveillance program accounts for 80.1% of the budget, most of which will cover significant investment needs for the acquisition of multipurpose equipment (e.g., an ocean-going vessel, an interceptor vessel, a small aircraft), supplies (e.g., drones and technological systems) and basic human resources to allow the execution of control, surveillance, monitoring and research activities during the

first five years. The remaining budget is distributed across the programs as follows: science and technological innovation, 9.0%, biodiversity management, 5.8%, communication, 4.1%, administration and international cooperation, 1%.

MANAGEMENT PLAN FEASIBILITY

Based on the results of the feasibility analysis, it is considered that this management plan is highly feasible under the conditions present in the current scenario and will become a highly relevant and useful tool for the management of the new marine reserve.

Finally, it should be emphasized that, in addition to MAATE, other government ministries will contribute to the management of the HMR according to their competencies, in compliance with the provisions of Executive Decree No. 319, Second Transitional Disposition. To this end, the inter-ministerial procedures that will be defined in the joint working groups will be the technical and regulatory instruments through which the national authorities of Defense, Fisheries, Foreign Affairs and Finance will communicate with MAATE through the GNPD, as the entity responsible for the administration of the protected area, in order to achieve the management objectives of Hermandad.



An underwater photograph showing a diver in the lower left and a large shark swimming towards the right. The water is clear blue with many small fish scattered throughout.

HERMANDAD MARINE RESERVE MANAGEMENT PLAN 2023

EXECUTED BY:



IN COLLABORATION WITH:

