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## Minister of Science visits Abate Molina Scientific Vessel

The ship is a floating laboratory with the capacity to collect scientific information for research in the areas of hydroacoustics, oceanography, plankton, meteorology, fishing, and direct sampling of species.

On Wednesday, July 5th, in Valparaíso, Aisén Etcheverry, Minister of Science, together with Jorge Soto Macrozona Centro (central macro-zone) Seremi, visited scientific vessel Abate Molina, they were received by Gonzalo Pereira Fisheries Development Institute (IFOP) Executive Director, together with a team of professionals and technicians. A tour of the ship was made, the modern facilities and laboratories were shown, and the work and advances in research topics led by Abate Molina today were made known.

The Minister of Science, Aisén Etcheverry explained: "Many people do not know that the State does research. And it does so with two



main objectives: to create new technologies that have public goods characteristics or that the country needs; and to generate research that supports public policies design. A great example of this is Fisheries Development Institute (IFOP). Today I visited Abate Molina Ship, in Valparaíso, which is part of the scientific infrastructure for oceanic research in Chile, managed and operated by IFOP, and I was able to see directly how it contributes to national scientific knowledge, to evidence-based public policies development and to training of ocean research field highly specialized people. The various areas that its scientific infrastructure allows to study, how marine biology, oceanography, fishing, aquaculture and



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many more, allow the country to make informed and sustainable decisions about the management of our ocean”

Gonzalo Pereira, IFOP’s Director, referred to the activity “for us the Sciences Minister’s visit to the scientific vessel is very important, since she was able to see in the field our research work, both fishing and oceanographic, that our institute develops. Pereira also appreciated Jorge Soto macro central zone Seremi’s participation, who was very interested in coordinating activities in conjunction with IFOP and universities in the area ”

Iván Toro, IFOP researcher, explained “our vessel has been operational since 1991 with a project to increase its useful life in 2010, thus improving its technical capabilities and modernizing its scientific equipment. It has an EK60 echosounder used for (Hydroacoustic) assessments of fishery resources. It also has a rosette and CTD that allow evaluating oceanographic variables, plankton equipment, sampling networks and structures, fishing nets to evaluate biology and direct sampling of resources, vision of an important meteorological station in climate change. The abbe makes 7 cruises a year”

## UPLA and IFOP promote sea turtles’s conservation with schoolchildren from Valparaíso

Within the framework of World Sea Turtle Day and Month of the Oceans, Fisheries Development Institute (IFOP) and Universidad de Playa Ancha (UPLA) joined the task of disseminating these, highly migratory and human activity threatened marine reptiles conservation.

At Escuela Pablo Neruda in Valparaíso, in 6th to 8th grade students, teachers and authorities from participating institutions presence, UPLA TV channel presented an audiovisual piece, based on IFOP’s and Costa Rica’s Fundación Marviva, funded by United States National Fish and Wildlife Foundation, aimed at reducing Eastern Pacific leatherbacks incidental capture in the longline fisheries of northern Chile project.

On the occasion, it was highlighted that there are 7 sea turtles species in the world, which Chile and Costa Rica share 5, such as “Laúd” turtle, whose main cause of threat of extinction lies in incidental fishing, oceans pollution, tourism activities and illegal shell trade. This species is born in Costa Rica and travels to Chile to feed and grow for 8 years, and then return to the Caribbean to reproduce.



“That is why it is very relevant that children learn about these animals, what is their importance, ecological role and that, in addition, in Chile we have several species of sea turtles, which are native. Therefore, we also have a responsibility to be able to conserve them”, said Patricia Zárate IFOP head of Ecosystemic Approach of Highly Migratory Resources Monitoring project.

From Universidad de Playa Ancha, Dr. María José Díaz, Environmental HUB researcher coastal ecosystems specialist, who together with Zárate spoke with the audience about sea turtles conservation, highlighted the relationship with schoolchildren. “From its mission, HUB is linked from science to the community and school communities are a fundamental part. One of the projects we have, which is the Environmental Observatory,





## June 19th World Albatross Day this year's theme is "Plastic Pollution"



it motivates us to connect with the territory from our research, in my case from marine ecology and coastal ecosystems in Valparaíso region and throughout Chile”.

### *A playful closeup*

In the activity, Eva Soto Engineering Sciences Sustainability Department Director which belongs to the Engineering Faculty, playfully asked the audience questions about the video's content, bringing students closer to the subject. “Our participation is associated with one of development's priority lines related to natural resources and flora and fauna presence, in this case marine fauna, together with valuing these reptiles that accompany us from Arica to Magallanes, through a playful methodology”.

In this sense, Galileo Martínez from 8th grade, evaluated the activity positively. “I think it's good, because we need to closely approach these instances as children to learn this type of things, about caring for the environment and specifically for turtles.”

Finally, Mariangela Vignolo from school's Technical Unit head, affirmed that shared material and contents opens a huge door to the students knowledge. “That they arrive at the school (the institutions), allows them to get involved and to learn more, it allows them to open up a world of possibilities. So, that IFOP and Universidad de Playa Ancha University arrive at the establishment facilitates the approach to the world, because by themselves it is very difficult to be there directly”.

The meeting with the schoolchildren was attended by Catalina Rojas UPLA's dean, Gonzalo Pereira IFOP's Executive Director and Evelyn Pérez Escuela Pablo Neruda School's director.

The Albatrosses and Petrels Conservation Agreement (ACAP) has chosen the “Plastic Pollution” theme for the fourth World Albatross Day (WAD2023), which is celebrated on June 19th. The annual celebration takes place on the date the Agreement was signed in 2001. Its goal is to raise awareness of the ongoing conservation crisis facing the 31 species of albatrosses, petrels, and shearwaters covered by ACAP.

Albatrosses are affected by a number of pollutants, of which plastics, whether ingested and then fed to chicks or causing entanglement, are by far the most visible and well known to general public. Albatrosses and petrels are exposed to other important pollutants, including heavy metals (such as mercury) and POPs (persistent organic pollutants, such as insecticides).

In addition to the world's 22 albatross species, other procellariiform (“tube-nosed”) seabirds are prone to ingesting bits of plastic they find floating on the sea surface and mistake for food. A notable example is the Patagonian Shearwater, which ingests large amounts of plastic at a breeding site, which has led to at least one new term, “plasticosis”, being coined to describe the damage caused. This species has previously been identified as a possible candidate for listing in ACAP.

Once again, the ACAP World Albatross Day logo was produced in the three official languages of the Agreement: English, French and Spanish, and also in Portuguese. In addition, this is the first year that the logo was also produced in Indonesian, Japanese, Korean, and Simplified and Traditional Chinese to signal the importance of the involvement of Asian high seas fishing fleets in the conservation of albatrosses, petrels, and shearwaters.

A Laysan albatross feeds its chick brightly colored pieces of plastic mistakenly ingested at sea. Artwork by ABUN artist Lyn Lynch, based on a photograph by Chris Jordan.

The theme of this year's World Albatross Day is highlighted through





Pieces of plastic, all taken from the stomach of a footed shearwater that failed to fledge, photo by Adrift Lab.

two albatross species, listed as Globally Endangered: the northern royal albatross, endemic to New Zealand, and the abundant and widespread black-browed albatross. . In addition, the two featured species from last year, the North Pacific Black-footed Albatross and Laysan Albatross, which ingest more plastic than species from the southern hemisphere, have been re-covered.

ACAP has collaborated for the fourth year with the Artists & Biologists Unite for Nature (ABUN) to produce 75 artworks by 31 participating artists depicting the effects of plastic pollution on the four albatross species featured for WAD2023. All of these works were combined with original music to produce a video for this year's World Albatross Day; individual works are also available in an ACAP Facebook album. Six of these works by different ABUN artists were turned into posters in English, French, Portuguese and Spanish.

From photos donated to ACAP by supporters, twelve posters were produced representing the four featured albatross species in the nine language versions mentioned, available on the ACAP website here and in albums in each language on Facebook.

"While by-catch in fisheries and invasive species from breeding sites remain the biggest threats,



"Not My Little Pony." A northern royal albatross chick at Pukekura/Taiaroa Head, New Zealand, avoids eating plastic.

the effects of the massive amounts of plastic debris in our oceans undoubtedly contribute to the conservation crisis they face. Albatross species: cause damage to the digestive tract and probably reduce foraging efficiency, leading to higher mortality rates in populations. The impacts of plastic waste are especially severe on North Pacific albatrosses, where nearly all chicks ingest plastics with the food provided by their parents. However, in the southern hemisphere, the amount of plastic debris is increasing and it is now common to detect plastic in the stomach of albatrosses washed up on the beach."

Dr Mike Double, ACAP Advisory Committee Chairman, Senior Research Scientist, Australian Antarctic Program, Department of Climate Change, Energy, the Environment and Water.

[ACAP Note and Photographs](#)





## WCS Chile launched a book of recipes and stories about Magellan's artisanal fishing

The initiative had the collaboration of 14 restaurants from the four provinces of Magallanes and includes the adventures and misadventures of six fishermen and one fisherwoman from the region.

Punta Arenas, June 15th, 2023. WCS Chile launched a book of recipes and stories about Magellan's artisanal fishing together with representatives of the gastronomic and artisanal fishing world. An initiative that hopes to encourage marine resources responsible consumption among different consumers and seeks to relieve both our sea resources and those who make it possible for shellfish and fish to reach our table: artisanal fishermen.

WCS Chile has been working in Magallanes since 2004 for terrestrial and marine ecosystems conservation, hand in hand with Magellan community, and this book is precisely outcome of one of the efforts made to encourage legal resources purchase, respecting administrative measures such as closed seasons (reproductive and biological) and extraction sizes, among others.

"Among different tools we have to protect our Magellanic community current and future well-being, is marine species and ecosystems care, through, for example, responsible consumption. WCS Chile Marine Program, in collaboration with local actors, including: Zonal Fisheries Directorate, Sernapesca regional office, IFOP, artisanal fishermen, restaurants and chefs in the region, seeks to make visible all the behind extraction of each marine food effort and hard work, as well as art behind each dish preparation, thus contributing to having a more informed community that consumes products extracted respecting current administrative measures", commented Catherine Dougnac. WCS Chile Scientific Director.



The book's launch included the participation of marine resources specialized chef, Manuel Matamala, who gave a workshop and encouraged restaurants association, collaborative work importance and resources efficient use, making the most of the ingredients that are used in the kitchen. Finally, the activity concluded with an agreement signing under the slogan, "I buy consciously, I buy legally", carried out in collaboration with IFOP, which sought to commit the different participants: authorities, chefs, fishermen, students, among others, to consume responsibly our marine resources.

The recipe book was made possible thanks to the generous contribution of 14 restaurants and their respective chefs, who supported the initiative from the four region's provinces with Magallanes extracted shellfish and fish based dishes. On the other hand, the book has the experience of seven fishermen who told a part of their story, whose common point is the tenacity that being an artisanal fisherman in our region demands.

"We are very grateful for the response we have had from the local gastronomic world and the artisanal fishing sector, as we have identified that they are key actors in transmitting the importance of responsible consumption of marine biodiversity to consumers in the region and thus, navigate towards the sustainability of the southern seas and of activities that benefit from it", commented Project Manager Scientific Direction of WCS Chile Belén Guarda.

The book of recipes and stories of artisanal fishing is part of the project "Strengthening oyster and crab fishing in the Magallanes Region sustainable management", executed by WCS Chile, whose main lines of action are: participatory monitoring king crab and oyster; contribute to boosting regional and national market for marine resources extracted in Magallanes; and, finally, to contribute artisanal fishermen leadership capacities and local managers strengthening.





The launch was possible thanks to the generous work of Liceo Raúl Silva Henríquez and its gastronomy students. The book, meanwhile, can be downloaded from the following link: [https://chile.wcs.org/tabid/7090/Default.aspx?Command=Core\\_Download&EntryId=49350](https://chile.wcs.org/tabid/7090/Default.aspx?Command=Core_Download&EntryId=49350).

Text and photos by WCS

## Connecting marine research with coastal towns

IFOP's professionals, Johana Ojeda, Pamela Ramírez and Rodrigo Jaramillo, informed Puerto Gala's Madre de la Divina Providencia school students about IFOP's work in the area, monitoring details and oceanographic equipment use, generating an atmosphere of pleasant interaction with the children and Camila Azócar their teacher, who, familiar from the cradle with their marine environment and fishing activities, had amusing surprise reactions when learning about IFOP's work carried in the vicinity of their beloved island .



During April, May and part of June Johana, Pamela and Rodrigo, from Fisheries Development Institute Aquaculture Division Environment Department, carried out environmental monitoring in Los Lagos and Aysén regions as every year within the framework of " Study of the aquaculture in Chile environmental performance and its effect on local ecosystems" project:

On May 23rd, Josefina Antonia, boat in which sampling was carried out, stopped at Puerto Gala, a fishing cove located in Cisnes commune, Aysén Region. It is an archipelago made up of five islands, its population amounts to about 300 inhabitants, they live from fishing and southern hake and other sea products sales.



The hamlet was established as a consequence of 1980s hake boom, as a set of artisanal fishermen's camps that are installed to store materials and spend the night. Fishermen came from different parts of Chile and worked intensely for 3 or 4 months on the islands and fjords in the area, but over the years it was one of the only settlements that finally became more than just a camp. Today it is known for its picturesque walkways.

Due to a great storm at the time of landing in Puerto Gala, anchorage was extended for 3 days. Taking advantage of the fortuitous stay in the cove and the hospitality of its inhabitants, an outreach activity was organized at the town's Divina Providencia school.

Thus, on May 24th at 11:00 a.m. IFOP professionals Johana Ojeda, Pamela Ramírez and Rodrigo Jaramillo made school students aware of IFOP's work in the area, details of monitoring and use of oceanographic equipment. , generating an atmosphere of pleasant interaction with the school children (Amaral, Krishna, Matías and Nicolás) and the teacher Camila Azócar, who, familiar from their cradle with their ma-





rine environment and fishing activities, had funny surprise reactions at the moment. to learn about the work carried out by IFOP in the vicinity of his beloved island.

## IFOP at UNESCO Intergovernmental Oceanographic Commission Assembly in Paris

Intergovernmental Oceanographic Commission (IOC) assembly is annually held and all member states participate, including Chile. The purpose of the IOC is to coordinate efforts, review different committed programs progress and to concrete agreements on different working groups coming proposals including “International Oceanographic Data and Information Exchange” (IODE) program, “Intergovernmental Panel on Harmful Algae Blooms” (IPHAB), General Bathymetric Chart of the Ocean (GEBCO), Global Ocean Observing System (GOOS) and Global Climate Observing System (GCOS) among others.

The meeting is being held in Paris, between June 19th and 30th, with the Chilean Commission participation, it was made up of; Arturo Oxley Rear Admiral, Rodrigo Waghorn SHOA Director, Dr. Gastón Vidal Chilean Embassy representative in Paris, Dr. Jaime Letelier IFOP’s Environment Department

Head, IFOP’s Oceanography and Environment Department Head.

Fisheries Development Institute (IFOP) representatives contributed to Chile’s declaration before the Assembly preparation and which marks the State’s position regarding different working groups presented reports and proposals.

Additionally, Dr. Vidal and Dr. Letelier generated contacts with The Global Ocean Observing System (GOOS) and International Oceanographic Data and Information Exchange (IODE) working groups and with other delegations with the purpose of promoting our capacities, some of them unknown in the Intergovernmental Oceanographic Commission and that should be considered within UNESCO Decade of the Oceans actions , as well as articulate different areas of inter-institutional collaboration. In this commission they also had the opportunity to meet and share with Jorge Bermúdez Soto Republic’s General Comptroller.

## Blue Whale Watching *Balaenoptera musculus*

CARRIED OUT DURING THE 2023 CAMPAIGN, AQUACULTURE ENVIRONMENTAL PERFORMANCE IN CHILE PROJECT AND ITS EFFECTS ON SITE ECOSYSTEMS

Rodrigo Jaramillo, Johana Ojeda, Pamela Ramírez Fisheries Development Institute professionals. Within Aquaculture in Chile Environmental Assessment and its Impacts on Site Ecosystems project framework, systematic campaigns are carried out that cover an southern archipelagos extensive area. These campaigns are an excellent platform for recording and observing charismatic fauna made up of birds and mammals. During the 2023 campaign, a total of five sightings of the Blue Whale species (*Balaenoptera musculus*) were documented, on different dates.



Blue Whales observations were made following Fisheries Undersecretariat regulations for cetaceans observation. This regulation establishes a minimum distance of 300 meters, constant navigation speed and approach maneuvers from the rear, while possible changes in the animals behavior are guarded. The places where the sightings were made were: Ayacara (4 individuals), Puerto Cisnes (3 individuals), Canal Jacaf (2 individuals), Caleta Gala-Melimollu (3 individuals) and Isla Tac (3 individuals).

Wales identification was carried out by observing the angle of the blow in each breath and photographs of the animals' backs. In addition, videos were taken to confirm later identification.

Also, charismatic birds and mammals observations were made, such as Patos Quetros (*Tachyeres pteneres*), southern dolphins (*Lagenorhynchus australis*), otarids (*Otaria flavescens*), Albatross (*Thalassarche melanophrys*), Fardelas (*Puffinus griseus*), Magellanic penguins (*Spheniscus magellanicus*), carancas (*Chloephaga hybrida*), boobies (*Sula variegata*), pelicans (*Pelecanus thagus*), cormorants (*Phalacrocorax magellanicus* and *Phalacrocorax brasilianus*), South American tern (*Sterna hirsundinacea*) and gulls.



## Preparation of a medium and long-term Strategic Plan for Small-Scale Aquaculture (APE) in Chile

The FIPA 2022-24 Project “Development of a Medium and Long-Term Strategic Plan for Small-Scale Aquaculture (APE) in Chile” is an initiative that was awarded to Fisheries Development Institute, in particular to its Repopulation and Culture Department, and is financed through Fisheries and Aquaculture Research Fund. This project is part of the strategic objectives of Undersecretary of Fisheries and Aquaculture (SUBPESCA) management for this period in matters of planning and positioning of the APE in Chile. Together with Small-Scale Aquaculture Regulation (D.S. Nº. 45/2021) and establishment of a National APE Table, the development of this project will allow the configuration of a roadmap with actions to be implemented and objectives to be met, which will allow to survey to the APE as a national aquaculture sector.

The project bases its operation and the achievement of results through the execution of multiple Workshops. These Workshops are instances of public-private participation, where actors and representatives of public institutions, such as SUBPESCA; SERNAPESCA, IN-DESPA, Regional Governments and representatives of the Academy, together with private actors (small-scale fish farmers) have been called upon to define the main opportunities and gaps currently facing the APE in Chile.

It is important to highlight that this project has a scope throughout the national territory, and in this sense aspires to raise different realities and problems faced by APE aquaculture farmers in Chile, both in Aquaculture Concessions, Management Areas and Benthic Resources Exploitation, private lands that make use of continental waters, as well as the potential crops to be developed in Coastal Marine Areas for Native Peoples and in Fishing Coves. In this way, it will be possible to represent the needs and fulfill



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various purposes to promote APE's development in Chile.

To date, two Workshops cycles have been developed. The first, carried out between the beginning of March and mid-April, was mainly oriented to identify APE's main problems and potentialities in the different territories of the country. The second, in execution, since the beginning of June, focuses on APE's identification of opportunities and gaps, in addition to collecting elements that allow shaping APE's vision and mission for a national territory Strategic Plan.

In the coming months, public and private actors will be convened to define objectives and strategic actions that reflect the realities of the various territories of the country, identifying responsible parties and committed resources, in order to count by the end of 2023 or the beginning of 2024 with a Medium and Long Term Strategic Plan Design for the APE in Chile.

The photos show part of the work carried out in the workshops carried out throughout the national territory, between the months of March and June.



## IFOP professionals attend International Maritime Technical Symposium

Between June 19th and 23rd, INMARTECH (International Marine Technician) symposium was held in Barcelona, in which different conferences on equipment use, development and innovation at all levels different Oceanographic Vessels in the world were presented. INMARTECH was created by IRSO (International Organization of Scientific Vessel Operators) in order to bring together technical operators to exchange experiences in their respective areas of operation. In this way Iván Toro, from operations department, Andrés Varas from Oceanography and Environment Department and Javier Legua from Direct Assessments Researchers Fisheries Development Institute Department, exchanged knowledge with work teams from institutions in US, Spain, Norway, Germany, the United Kingdom, England, South Korea, South Africa, the Netherlands, Canada and Croatia.



During the meetings development, presentations were made in the areas of hydroacoustics, in situ information systems with oceanographic buoys, seismic systems and seabed extraction, winches use and oceanographic cables, unmanned vehicles such as ROVs (Remotely Operated Vehicles), AUV (Autonomous Underwater Vehicle) vehicles, research



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vessel description, DATA management and ship-to-shore transmission and general onboard technical support solutions.

Private companies were also present with technological innovations, producing an optimal synergy with the operational technical teams of the scientific vessels.

These Symposiums are held every 2 years and various innovations are presented in the mentioned areas, which favors our deployment in the operation of equipment in our different vessels such as the B/C Abate Molina.

## Circular and regenerative mussel farming: Cochamó advances industrial activity in territorial practices

Framed in the Pact for a Sustainable and Inclusive Region, the first seminar on Challenges of mussel farming was held in the commune of Cochamó. The activity had the participation of local mussel farmers, the Regional Government and actors from the private world who work for circular and regenerative solutions for this important industry.

This Wednesday, June 28, the first seminar was held: Challenges of mussel farming in the commune of Cochamó in the municipal gym. Mussel farmers from the commune participated in the activity, as well as other agents from Cochamó linked to territorial development, within the framework of the circular and regenerative Mussel Farming Program, promoted by the Regional Government through the Pact for a Sustainable and Inclusive Region of the region of The lakes.

The meeting's objective was to create a training space around associated ecosystems remediation challenges with aquaculture and circular

solutions in mussel farming from a territorial approach.

Organized by GORE in conjunction with local mussel farmers and Cochamó Municipality, the event was attended by Alex Godoy, visiting researcher at Harvard University International Affairs Weatherhead Center. The researcher together with Paulo Jorquera, Environmental Engineer, ChucaoTec remediation manager and expert in aquaculture environmental regulatory matters and Dr. Pablo Leal, Specialist in macroalgae physiology from Fisheries Development Institute (IFOP) participated in "Challenges in remediation of ecosystems associated with aquaculture" panel. Meanwhile, Iván Kripeos, Atando Cabos southern area operations manager Carlos Aubert from Karün, were in charge of exposing circular solutions in mussel farming from a territorial approach, in the second conversation panel.



These instances rise to reflection on the articulations and the importance of the work that is done in an articulated way for communes development.

For Patricio Vallespín Regional Governor: "The objective is to be able to implement a program within the framework of the Pact for a sustainable and inclusive region to develop and strengthen productive capacities of the small mussel industry in the Los Lagos region, through the accompaniment technique to promote the productive development of triple impact, social, environmental and economic".

Meanwhile, Silverio Morales Cochamó's mayor, recognized the importance of mussel farming as an economic development source for the commune. However, he emphasizes that mussel farmers take care of the environment with responsibility and commitment: "The mussel farmer is aware of the importance of caring for the estuary, because it is the source







of life for this entire place. You have to keep the sea pristine and take care of it sacredly. The mussel farmers are interested and take responsibility for keeping the environment as free of contamination as possible”.

For his part, from IFOP, Dr. Francisco Cárcamo, Repopulation and Cultivation Department Head, highlights the relevance of recognizing physical and social environments in economic activities. In this sense, he adds: “When we talk about sustainability over time, it is necessary to add elements such as care for the environment where it develops, as well as elements such as circularity and regeneration. For this reason, these instances allow the opening of collaboration spaces and that mussel farmers can adopt new practices and make their activity sustainable in the future”.

For Mayling Yuen, co-founder and coordinator for Chile of “La ciudad posible”, a foundation that, together with Reversible, supports the program management, this opportunity is beneficial to think about the next steps for mussel farming in the region. “We are sure that this economic activity sustainable growth will allow us to penetrate larger markets by complying with sustainability, circularity and regeneration standards, which increase its competitiveness, and in turn reduce the negative impacts on its natural and social environment.”

The meeting closed with the construction of challenges and opportunities for the sustainable development of mussel farming together with the community, where the mussel farmers valued the possibility of generating spaces for the development of best practices for the sector, making the link with the community an ally. not only for the commune, but for the benefit of local aquaculture.

## IFOP researcher attends “Latin American & Caribbean fisheries congress 2023\_ LACFC”, held in Cancun, Mexico

Ljubitzia Clavijo Gorostiaga scientific researcher, who performs her duties in “Monitoring of Highly Migratory Resources, Ecosystemic Approach (SRAM ECO) project”, led by Patricia Zárate from Oceanography and Environment Department was invited to participate in the 1st Congress of Latin American and Caribbean Fisheries (LACFC) held during May in the city of Cancun, Mexico, which was attended by countries such as United States, Mexico, Peru, Colombia, Argentina, Belize and Chile among others.

The organization of this congress was carried out by The American Fisheries Society, whose beginnings date back to 1948 in North America and which for the first time in its history organized a congress in Latin America and the Caribbean, where fisheries, management and conservation issues were exposed. , in addition to discussing society’s new guidelines and the possibility of establishing working groups focused on Latin America and the Caribbean.

During this instance, the researcher presented on May 17th in Fisheries Bycatch and Discards session: RedCID an Iberoamérica and Caribe Network” the work entitled “Biological analysis of shortfin mako and bluebird fishing in highly migratory fisheries”, which condensed collaborative work results developed between Fisheries Development Institute (IFOP), within “Monitoring of Highly Migratory Resources project’s framework. Ecosystemic Approach (SRAM ECO) and The Nature Conservancy (TNC), carried out between 2019 and 2022. This collaboration made it possible to comprehensively to analyze and integrate the results of objective “synthesis of the state of knowledge of fisheries of highly migratory resources ” (SRAM ECO-IFOP) through Fish-Path (TNC) process, specifically on two species of pelagic sharks caught in Chile, mako shark (*Isurus oxyrinchus*) and blue shark (*Prionace glauca*), work that

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allowed progress in knowledge gaps identification for adequate fisheries management application with an ecosystemic approach.

It should be noted that the interest in presenting these results during the aforementioned session is related to strengthening of collaborative relationships between SRAM ECO-IFOP group and Bycatch and Discard Network (RED CID) carried out in recent years, this latter led by Martin Hall Ibero-American Tropical Tuna Commission senior adviser , where different countries participate (United States, Brazil, Colombia, Argentina, Peru and Chile) and whose discussion focus is each country local problems in relation to bycatch, discards and fisheries in general.

Ljubitza Clavijo's participation was possible thanks to the financial support of TNC Chile, represented by Natalio Godoy, who led the FishPath process for this organization together with the SRAM ECO-IFOP team led by Dr. Patricia Zárate.



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