



IN THIS NUMBER

Deputy Minister Daniel Mas Visits the Historic Scientific Vessel Abate Molina in Valparaíso **1**

Fisheries Biology Students from the Catholic University of the Holy Conception Visit IFOP Talcahuano Headquarters **2**

IFOP Participation in the TRACK-HAB Campaign Aboard the German Vessel METEOR **3**

IFOP Talcahuano Participates in Marine Month Fair at Penco High School **4**

IFOP Researcher Attends International Workshop: How to Address Changes in Small Pelagic Fish Communities: Climate, Ecosystems, and Sustainable Fisheries? **5**

IFOP Conducts Science Outreach Activities During Marine Month in Arica **6**

Submerged Aysén 2026: The Sea as Memory, Development, and Regional Future **7**

Research Institutes from Chile and Peru Meet to Standardize Spawning Biomass Estimation Protocol for Anchovy **8**

IFOP Strengthens Ties with Artisanal High Seas Fishermen in Arica at Information Session on Oceanographic Conditions and Fisheries **9**



Deputy Minister Daniel Mas Visits the Historic Scientific Vessel Abate Molina in Valparaíso

The Deputy Minister of Economy and Mining, Daniel Mas, visited the Scientific Research Vessel (BIC) Abate Molina in Valparaíso, accompanied by the Undersecretary of Fisheries and Aquaculture, Osvaldo Urrutia, and the Executive Director of IFOP, Luis Parot.

During the visit, the officials discussed the current status of the vessel, which is undergoing repairs, emphasizing the urgency of advancing the necessary procedures and work to ensure its prompt return to service, given its strategic importance for the country's marine and fisheries research.

Operated by the Fisheries Development Institute (IFOP), the Abate Molina is one of Chile's main scientific platforms. It was built at the MIHO shipyards in Japan thanks to a donation from the Japanese government, arriving in the



country in March 1991. Its name honors the Jesuit priest Juan Ignacio Molina y González, recognized as Chile's first scientist.

In over three decades of operation, the vessel has sailed more than 700,000 nautical miles and conducts an average of seven scientific cruises per year, traversing the coast from Arica to the Chacao Channel and even beyond 200 nautical miles.

The Abate Molina plays a key role in scientific bio-



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Fisheries Biology Students from the Catholic University of the Holy Conception Visit IFOP Talcahuano Headquarters

A group of Fisheries Biology students from the Catholic University of the Holy Conception visited the IFOP Talcahuano headquarters, where they toured the laboratories, spoke with scientific observers, and learned firsthand about the important work IFOP carries out throughout the country.

This visit, requested by the university and held in recent years, enhances the students' knowledge and future performance.



Fabián Guzmán, the course instructor and head of the delegation, emphasized that “these visits are fundamental to the students’ training because they allow them to experience the real work of professionals in the field. This helps them better understand the importance of the technical and scientific work that IFOP carries out nationwide. Without a doubt, the work IFOP does is valuable and necessary,” the professor concluded.

Third-year student and member of the delegation, Paz Bascuñán, highlighted “how enriching the experience was, interacting directly with IFOP staff and participating in practical activities (biological sampling of species composition) of the main pelagic species landed in the region. She noted that they were able to observe the work with common



RETURN



mass studies and assessments of the state of national fisheries, using acoustic technology and trawling nets to monitor resources. It also carries out oceanographic research and analyses on the impact of climate change on marine ecosystems.

“We were aboard the Abate Molina Research Vessel, a key vessel for fisheries research and for determining fishery resources to support the entire fishing sector nationwide. We spoke with its crew, and it’s very interesting to learn about everything you do on board and its importance for Chile,” explained the Deputy Minister of Economy and Mining, Daniel Mas.

The Undersecretary of Fisheries and Aquaculture, Osvaldo Urrutia, emphasized that “the Abate Molina is a strategic tool for Chile, because it provides essential scientific information for making responsible decisions about our marine resources and the future of fishing. Despite its age, the IFOP team makes a daily effort to meet the necessary schedule and enable the management of such important fisheries as sardines, anchovies, jack mackerel, and hake.”

For his part, the Executive Director of IFOP, Luis Parot, stated that “this vessel has been a symbol of national fisheries and oceanographic research for decades. Today, there is a full awareness of the need to move quickly with its restoration so that it can once again fulfill its mission at sea.”

The research campaigns carried out by this vessel generate essential information for decision-making based on scientific evidence and for strengthening the sustainability of Chile’s marine resources.

experience that allowed researchers to address relevant questions and gain a better understanding of the interaction between microalgal assemblages and the biological, physical, and chemical variables of the area.



Furthermore, this opportunity fosters collaborative work between Chilean scientists with extensive experience studying harmful algal blooms (HABs) in our country, and between German and Chilean researchers, enabling the exchange of knowledge, scientific progress, and fraternity between citizens of both countries.

Scientific Basis for Understanding HABs in Chile

Throughout this expedition, 82 sampling stations were collected in the fjords and channels of southernmost Patagonia, as well as in the open ocean, reaching distances of 50-60 nautical miles and maximum depths of up to 2760 meters. A comprehensive set of measurements will allow for a detailed analysis of the structural and functional diversity of microbial communities, with particular attention to phytoplankton species in the water column and sediments, and the hydrographic and biogeochemical conditions of the water masses that host these communities. This will enable us to better understand and explain the emergence of these communities in their specific environments.

IFOP's Participation

Participating in this expedition was a valuable experience, allowing us to share the work of the entire Red Tide team with national and international colleagues. We highlighted the importance of the monitoring programs carried out between the Biobío and Magallanes regions, emphasizing the coverage area, number of stations, sampling frequency, monitored variables, and the recent incorporation of digital tools to provide timely information to communities. At the end of this expedition, a com-



RETURN



sardine, anchovy, jack mackerel, and mackerel, thus bringing scientific work closer to our class."

Sergio Flores Claramunt, Regional Director of IFOP in Biobío, emphasized "these types of activities enhance our institution by sharing with future professionals in the field the work our institute carries out in the Biobío Region and the rest of the country."

IFOP Participation in the TRACK-HAB Campaign Aboard the German Vessel METEOR

From April 2nd to May 6th, 2026, Pamela Carbo-nell A., a researcher at the Center for the Study of Harmful Algae (CREAN) of the Aquaculture Division based in Puerto Montt, participated in the scientific expedition aboard the German vessel METEOR. The expedition covered a 2,500-nautical-mile transect, departing from Punta Arenas and calling at the port of San Vicente in the Biobío Region.

The expedition, identified as TRACK-HAB ("Tracking the footprint of an extreme harmful algal bloom event"), campaign M218, was a unique

prehensive qualitative and quantitative analysis of dinoflagellate cysts will be conducted along this transect, yielding unprecedented data from underexplored areas. This analysis will be carried out by Pablo Salgado, a researcher at CREAN-Punta Arenas, in collaboration with Gemita Pizarro, a researcher at the same institution.

Acknowledgments

We would like to acknowledge the tremendous support of so many colleagues, which made this expedition possible without incident. My thanks to Pablo Salgado, Gemita Pizarro, Roberto Raimapo, Claudia Zamora, Marcela Jaramillo, Luis Molina, César Alarcón, Héctor Tardón, Erik Daza, Oscar Espinoza and Sergio Flores.

IFOP Talcahuano Participates in Marine Month Fair at Penco High School

On May 13th, the Marine Month Fair was held at the Penco High School. An IFOP team attended, as in previous years. Regarding the event, Cristián Villouta, Field Coordinator of the pelagic project, which includes an outreach component, stated that the objective of their participation was to show the high school students the work carried out by their scientific observers, who could be future sources of employment. The workshop delved into the work carried out on board artisanal and industrial fishing vessels, as well as the bycatch visible during the unloading of the main pelagic resources of our region.

Gabriel Guzmán, Coordinator of the Aquaculture program at the Liceo Pencopolitano, expressed his gratitude to the regional office team for their participation and the quality of the materials presented at the 2026 Sea Month Fair organized by the school. He noted the fair's relevance, highlighting the main fisheries of the region and how this connects to the creation of scientific content on fisheries and aquaculture for educational institutions.



IFOP Researcher Attends International Workshop: How to Address Changes in Small Pelagic Fish Communities: Climate, Ecosystems, and Sustainable Fisheries?

From May 4 to 8, 2026, the international symposium on small pelagic fish, "Navigating Changes in Small Pelagic and Forage Fish Communities: Climate, Ecosystems and Sustainable Fisheries" (SPF-2026), was held in La Paz. This scientific meeting brought together specialists from various countries to address the effects of climate variability, ecosystem changes, and the challenges associated with the sustainable management of small pelagic fish.

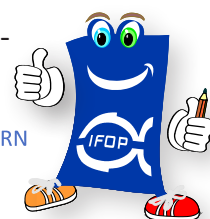


Sergio Flores Claramunt, Regional Director of IFOP in Biobío, emphasized the long-standing relationship with the Liceo Pencopolitano, noting that several members of the scientific observation team are alumni of the school. He added that two of their students are currently completing their internships at IFOP facilities. "We hope to continue strengthening this collaborative work," Flores concluded.



Chile was represented by researchers from the Pontifical Catholic University of Valparaíso (PUCV), the University of Concepción (UDEc), the University of Santiago (USACH), the National Fisheries Institute (INPESCA), and the Fisheries Development Institute (IFOP), who presented scientific advances related to ecology, population dynamics, and fisheries management in the Humboldt Current System.

In this context, researcher Carolina Hernández, from the Fisheries



Development Institute, presented the exhibition entitled “Environmental Forcing and Phenological Shifts in the Spawning Dynamics of Anchoveta (*Engraulis ringens*) in Northern Chile”, where she addressed the recent changes in the reproductive phenology of the anchoveta of northern Chile and its relationship with environmental variability, highlighting the transition from a historical pattern of a single reproductive peak to a system with two main spawning periods.

IFOP Conducts Science Outreach Activities During Marine Month in Arica

As part of Marine Month, staff from the Fisheries Development Institute (IFOP) conducted various science outreach activities to bring knowledge of the marine ecosystem closer to the community of the Arica and Parinacota region.

The first activity took place on Friday, May 15, at the Ricardo Olea Guerra Special School in Arica, where students participated in an educational exhibit about marine species found along the northern coast of Chile. Through taxidermied specimens, the children were able to observe and learn about various marine species, particularly sharks and rays, which sparked great interest among the students. During the event, IFOP scientific observers explained characteristics of the species and answered questions from the attendees.

The school principal praised the initiative, highlighting that “Our school seeks to develop an inclusive education, and one of our hallmarks is environmental stewardship. We fully agree with IFOP on this, and we are deeply grateful for this opportunity that allowed our students to learn, be amazed, and enjoy discovering our sea,” she stated.

Later, on Friday, May 23, IFOP participated in the Maritime Fair organized by the Chilean Navy at Mall Plaza Arica. This event brought

together institutions linked to the regional maritime and fishing sectors, including Ser-napesca (National Fisheries Service), Empresa Portuaria Arica (Arica Port Authority), the Museum of the Sea, and the Yacht Club.

At the fair, IFOP presented an exhibit of marine fish from its collection, focusing on species that can enter the northern coast of Chile during El Niño events, an oceanographic phenomenon that alters marine environmental conditions.

The institute’s professionals explained how rising sea surface temperatures favor the presence of tropical and more oceanic species in coastal areas, a topic especially relevant given projections of an intensified El Niño event in Chile during the upcoming spring and summer.

IFOP emphasized that these initiatives are part of its institutional commitment to scientific outreach, environmental education, and community engagement, promoting knowledge and appreciation of regional marine biodiversity through open and inclusive educational experiences for the community.



RETURN



Submerged Aysén 2026: The Sea as Memory, Development, and Regional Future

As part of the commemoration of “Sea Month,” the third edition of “Submerged Aysén” was held with a large turnout. This initiative was organized by the Fisheries Development Institute (IFOP), the Aysén Regional Fisheries Directorate, and a broad network of public institutions, social organizations, educational establishments, companies linked to the regional maritime sector, and local artists Pablo Lema and Romanet Seguel-Rojas (painting and dance).

The main objective of the event was to bring the community closer to the invaluable maritime heritage of Aysén, promoting knowledge, appreciation, and reflection on the strategic, cultural, economic, and environmental importance of the sea for the present and future development of the region. The event also provided an opportunity to showcase the work carried out by various public and private institutions related to the Aysén coastline, scientific research and monitoring programs, sustainability, and the protection of marine resources.

Aysén, a region of fjords, channels, archipelagos, and an extensive inland coastline, finds in the sea not only a source of productive development but also an essential part of its identity and collective memory. Precisely for this reason, the “Aysén Submerged” fair has become a space for community gathering that seeks to reconnect people with the ocean, its ecosystems, and the many human stories that are born and develop along the coast. This year, 23 organizations, 19 educational institutions, and a renowned local painter participated, sharing knowledge, experiences, learning, artistic expressions, and interactive activities with the community, fostering a close and educational connection with the hundreds of people who came to the Puerto Aysén Cultural Center to be part of this true celebration of the sea.

The Regional Secretary of Economy, Development, and Tourism for the Aysén Region, Rodrigo Aguilera Silva, highlighted the importance of this initiative for the region and especially for younger generations: “This fair is tremendously im-



portant because it allows us to showcase all the stakeholders involved in and working with our sea, contributing to its sustainable development. Something very significant we’ve observed this year is the strong participation from schools. It is essential that our children and young people learn about, understand, and appreciate the enormous importance of the Aysén sea for the future development of our region.”

For her part, Alejandra Lafon Vilugrón, head of IFOP Aysén, praised the high turnout and the collaborative work behind this third edition: “We’ve had a spectacular turnout. This year we had 12 stands from educational establishments, ranging from preschool to technical high schools, and 24 stands run by public institutions, research institutions, NGOs, the painter Pablo Lema, and three important regional companies: Mowi, Friosur, and AquaChile. Aysén Sumergido is an initiative built on a deep affection for the community, thanks to a large collaborative network that highlights the value of our region’s sea and allows us to showcase what we are doing today in our inland sea, in science, development, and conservation.”

The Regional Director of Fisheries for the Aysén Region; Luis Cam-



RETURN

pos Joost emphasized the importance of these spaces, highlighting the collaborative efforts of the institutions involved in the maritime territory: “It is important for the community to understand the functions and actions carried out daily by public institutions regarding the sustainable use and harmony of both the coastline and the maritime territory. Furthermore, it is crucial to recognize the importance of the private sector in terms of productivity, ensuring the sustainability of resources, and, of course, with a special focus on protecting the maritime territory. Finally, I want to emphasize the participation of the local educational communities, who will be the inheritors of the actions taken related to our sea.”

Consolidating its position year after year, “Aysén Sumergido” reaffirms its role in 2026 as a key platform for bringing science, art, environmental education, and maritime culture closer to the public. It also strengthens the collaboration between the public, private, and community sectors to learn about the work being done in our inland sea and to project a sustainable and conscious development of the Aysén coastline.

Research Institutes from Chile and Peru Meet to Standardize Spawning Biomass Estimation Protocol for Anchovy

Within the framework of the Humboldt II project, implemented by the United Nations Development Programme (UNDP), the workshop “Standardization of the Spawning Biomass Estimation Protocol for the Anchovy (*Engraulis ringens*) Stock in Southern Peru–Northern Chile Using the Daily Egg Production Method (DEP)” was held at IFOP headquarters in Valparaíso from May 25 to 27, 2026.

Participants included members of the DEP Subgroup of the Binational Technical Group for Direct Assessments: from IFOP (Jessica Bonicelli, Katty Donoso, Catherine Grendi, Hernán Reyes,



and Jorge Castillo) and from IMARPE (Patricia Ayón, Katia Aronés, Elda Pinedo, and Roberto Quesquén). Also in attendance were MPDH expert Gabriel Claramunt and Jaime Letelier, head of the Oceanography and Environment Department at IFOP.

IFOP Executive Director Luis Parot opened the workshop, highlighting the importance of partnerships and collaboration between IFOP and IMARPE for a better understanding and management of this shared resource.

During the workshop, sampling methodologies and procedures for estimating egg parameters (daily egg production and spawning areas), adult parameters (spawning fraction, fecundity, sex ratio, and weight), and biomass estimation using MPDH were presented and compared. Working groups were also formed to calculate egg parameters based on data collected during research cruises conducted by IMARPE and IFOP in October 2024. For the first time, spawning areas were estimated by combining data from both countries, representing a historic milestone for regional fisheries biology.

The workshop strengthened technical cooperation between the Fisheries Development Institute (IFOP) and the Peruvian Marine Institute (IMARPE) through the review and standardization of protocols, and allowed for the definition of strategies to obtain comparable results in future evaluations.



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