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## IFOP stands out at EXPO Quellón 2026: Fisheries Science at the Service of the Community

The Fisheries Development Institute (IFOP) actively participated in EXPO Quellón 2026, organized by the Illustrious Municipality of Quellón. This event highlighted the importance of fishing and aquaculture activities in the southern austral region of Chile.

### IFOP Participation

The Municipality of Quellón invited IFOP to present a sample of its scientific work. In this regard, Field Coordinator Leslie Figueroa, along with Scientific Observers Daniel Triviño and Manuel Aillapán, presented the “Sustainable Catch Scientific Observation Program,” which collects on-board data to protect hydrobiological resources of commercial importance through direct sampling. Additionally, Semi-Senior Researcher Cristian Segura presented the “Mytilid Environ-



mental and Larval Monitoring Program,” which provides data on larval abundance, phytoplankton, and environmental variables for sustainable mussel (*Mytilus chilensis*) seed collection, promoting efficient mussel farming via platforms such as Semilla Endémica.

### Recognition and Interaction with Attendees

The Municipality of Quellón presented a special recognition for IFOP’s participation in the event. A large number of attendees visited the IFOP stand to inquire about its activities, receiving various outreach materials and



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The Fisheries Development Institute (IFOP) held the IV Workshop on Chondrichthyan Biology and Anatomy, aimed at scientific observers participating in the monitoring of highly migratory resource fisheries. The training took place at the IFOP headquarters in San Antonio, combining theoretical sessions with practical activities oriented toward field work.



The workshop aimed to reinforce knowledge in the biology and anatomy of sharks, rays, and chimaeras, as well as to strengthen competencies in species identification, conventional tagging, and biological monitoring—fundamental aspects to ensure the quality and consistency of the information collected on board.

In this regard, Dr. Patricia Zárate, the workshop instructor, noted that “anatomical knowledge and correct species identification are key to conducting reliable field observations, especially in groups such as chondrichthyans, which present high diversity and particular challenges for fisheries monitoring.”

During the activity, content on external and internal anatomy by systems, taxonomy, reproductive strategies, and handling protocols was addressed, along with practical exercises in identifying diagnostic characters, biological sampling, and spaghetti tagging. Likewise, the biological monitoring requirements defined for the year 2026 within the framework of the Monitoring Program for Main National Fisheries were reviewed.



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learning about the relevance of regional mussel farming, especially regarding mytilid seeds.

### Demonstrative Activities

Demonstrations were held on various pelagic resources of commercial importance subject to commercial fishing, and educational activities were conducted with mussels, showing their internal morphology such as gills and their ability to capture and concentrate food like microalgae. These microalgae can occasionally contain toxins that may affect human health (e.g., Red Tide – Paralytic Shellfish Poisoning); therefore, shellfish consumption should always take place in established locations authorized by the Health Authority (Health Service).

IFOP, with more than 60 years of supporting sustainable fisheries and aquaculture development, reaffirms its commitment to the community, together with the Undersecretariat for Fisheries and Aquaculture.

## IFOP conducted a workshop on the Biology and Anatomy of Chondrichthyes for scientific observers

The activity strengthened the technical capacities of scientific observers involved in the monitoring of highly migratory resource fisheries, addressing theoretical and practical content in anatomy, species identification, and biological monitoring.

scientific institutions from Argentina, Chile, Colombia, Mexico, and Peru:

- Lic. Ailin Monti | National Institute for Fisheries Research and Development (INIDEP), Argentina.
- M.Sc. Andrea Angélica Araya Arriagada | Fisheries Development Institute (IFOP), Chile.
- Dr. Luisa Fernanda Espinosa Díaz | “José Benito Vives de Andrés” Marine and Coastal Research Institute (INVEMAR), Colombia.
- Dr. María Teresa Gaspar | Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS), Mexico.
- M.Sc. Sarita Campo | Marine Institute of Peru (IMARPE), Peru.



Dr. Zárate highlighted that “the practical session allowed for the direct application of the reviewed content, strengthening essential skills for the shipboard and dockside work of scientific observers in highly migratory resource fisheries.”

The activity concluded with theoretical and practical evaluations, the delivery of certificates, and a feedback session, contributing to the strengthening of the technical capacities of scientific observers and the support that IFOP provides to the research, evaluation, and conservation of chondrichthyans in Chilean waters.

## Women’s Leadership in Marine Sciences: IIAP-AP Network Holds Successful Regional Forum on Gender Equality

Valparaíso, February 16, 2026. — As part of its agenda of activities for the current year, the Network of Aquaculture and Fisheries Research Institutes of the Pacific Alliance (Red IIAP-AP) held the webinar “Challenges and Opportunities for Women in Science” last Thursday, February 12. The meeting established itself as a high-level space for exchanging experiences and sharing common ground regarding the gender gaps that persist in marine scientific research across the region.

The discussion panel featured prominent researchers and academics representing leading



### Networks and Institutional Transformation

During the forum, the experts analyzed the current landscape of female participation in the sciences, agreeing that while there is a gradual shift toward greater inclusion, critical challenges remain in





achieving parity in management positions and leadership of strategic projects.

The panelists emphasized that creating collaborative networks is the most powerful tool for breaking institutional “glass ceilings.” Likewise, local experiences aimed at fostering scientific vocation from childhood were shared, highlighting projects that involve girls in ocean-related environmental research, thus ensuring a sustainable future for marine sciences.

### Regional Commitment

The exchange of views allowed for the identification of common gaps in the region and the proposal of more robust institutional policies. For IFOP, the participation of M.Sc. Andrea Araya reaffirms the institution’s commitment to the National Policy for Gender Equality in Science, Technology, Knowledge, and Innovation (CTCI).

With this activity, the Red IIAP-AP reaffirms its role as an articulator of a more equitable scientific ecosystem, where female talent serves as the engine for fisheries and aquaculture innovation throughout Latin America.

## IFOP brings marine research to teachers at the ¡Explora VA! camp in Arica and Parinacota

Within the framework of the Explora Va! Camp, aimed at preschool, elementary, and high school teachers from the Arica and Parinacota region, researchers and scientific observers from the Fisheries Development Institute (IFOP), the Center for Harmful Algal Studies (CREAN), and IFOP Arica conducted a training session titled “Resear-

chable Oceans,” designed to strengthen the link between science, territory, and school education.

The activity, organized in late January by the Explora Regional Associative Program of the University of Tarapacá, included a field trip during the morning session aboard a passenger vessel, where teachers from different communes of Arica and Parinacota toured the regional coastal sector. During the navigation, IFOP professionals addressed content related to oceanography, coastal dynamics, climate change, algal blooms, and marine environment observation, in addition to performing a demonstrative sampling of marine phytoplankton, allowing participants to learn firsthand how these types of field studies are conducted.

During the afternoon, the collected samples were analyzed under microscopy, providing an opportunity for teachers to observe and identify various phytoplankton species and understand



their ecological relevance. The session also included a remote lecture given by CREAN researchers from Puerto Montt, focusing on the role of phytoplankton and harmful algae in marine ecosystems, the importance of permanent monitoring, and the need to address these events from a preventive and educational perspective.

The activity featured participation from CREAN researchers Javier Paredes, Pamela Carbonell, and Delfina Aguiar, along with the IFOP Arica team, led by Regional Base Head Hernán Padilla, and scientific observers Miguel Navea and Camilo Reyes, who were in charge of the demonstrative phytoplankton sampling and technical support for the teachers.

This unprecedented initiative in the region allowed teachers to live a practical marine research experience,



The session, held between 10:00 AM and 2:00 PM, aimed to activate a participatory process to identify key actors, priority zones, and initial agreements oriented toward the restoration of Chilean mussel beds (*Mytilus chilensis*) and the promotion of coastal well-being as a common good. During the morning, collaborative work was carried out using fjord cartography, addressing different thematic layers. This allowed for the development of diagnoses, challenges, and territorial projections, while strengthening the link between academia, public institutions, and the local community.

Representing the Fisheries Development Institute (IFOP), the event was attended by researcher Macarena Herrera Abaroa from the Aquaculture Research Division, who provided insights from the Department of Environment and the Mytilid Larval Monitoring Program. Also present from the Repopulation and Cultivation Department were Dr. Francisco Cárcamo, Dr. Luis Henríquez, and researcher M.Sc. (c) Sebastián Cook, who contributed significant perspectives regarding the future execution of the mussel bed repopulation proposal.

providing them with tools and knowledge that can be replicated in the classroom, contributing to the social appropriation of science and the strengthening of scientific education with territorial relevance in the Arica and Parinacota region.

## Workshop brought together IFOP, academia and local actors in Río Puelo to restore mussel beds in the Reloncaví Fjord

At the Municipal Library of Río Puelo, in the commune of Cochamó, the Integrated Workshop “Co-producing knowledge to restore mussel beds and Re-imagining common coastal well-being in the Reloncaví Fjord” took place. This event brought together academics, researchers, institutional representatives, and local stakeholders to focus on ecological restoration and the strengthening of sustainable mitiliculture in the territory.



Within the framework of the SHELS-NBS Ring Project, Dr. María José Martínez presented the main pillars of the initiative, which focuses on Collaborative Science as a tool to strengthen the socio-ecological sustainability of mussel farming. Academics Nelson Lagos and Begoña Peceño presented the development of structures made

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## IFOP stood out with its educational participation in the Giant Curanto of Calbuco, before more than 8,000 attendees

On Sunday, January 25, 2026, with a massive attendance of over 8,000 people, the traditional Giant Curanto of Calbuco took place. This activity has established itself as one of the main summer milestones in the Los Lagos Region, strengthening cultural identity, local tourism, and the commune's historical link with the sea.



The event, held at the Rubén Cárdenas Gómez Municipal Park, was led by the commune's mayor, Marco Andrés Silva Maldonado, who extended the invitation to authorities, institutions, and the general community, highlighting the value of the curanto as an expression of collaborative work, gastronomic heritage, and the deep maritime roots that characterize Calbuco.

In this context, the Fisheries Development Institute (IFOP) had a prominent participation through the Aquaculture Research Division (DIA) and the Department of Environment via the Mytilid Larval Monitoring Program, represented by researcher Macarena Herrera Abaroa, along with the representative of the Calbuco Shellfish Growers Trade Association (Asociación Gremial de Cultivadores de Moluscos A.G.), Claudio Torres.

Starting at 9:00 a.m., an educational and interactive stand was set up, ge-



from concrete and crushed shells, designed with various concentrations, grain sizes, textures, and shapes to favor the settlement of mytilid larvae. Additionally, results from studies on post-larval settlement preferences were shared, along with projections for sectors where these structures are planned to be installed under a collaborative agreement with the Municipality of Cochamó.

Among the key territorial actors participating in the meeting was Rodrigo Makalusso, representative of the Development, Fisheries, and Tourism Unit of the Municipality of Cochamó, who will serve as a fundamental coordinator in the implementation of the agreed actions. Furthermore, artisanal fishers, mussel farmers, and shore gatherers participated as strategic actors for the co-construction, validation, and sustainability of the proposed restoration model.

On behalf of the SECOS Millennium Group, researcher Fernanda Oyarzún presented muralism experiences developed in various coastal towns in Chile. These projects link art, history, culture, and coastal use to highlight local socio-economic activities and strengthen ties with children, adolescents, and educational communities.

During the workshop, an illustrated poster integrating the mussel production chain was also presented. Developed by scientific illustrators from the Millennium Group in collaboration with local stakeholders, the poster involves the community in conceptualizing activities and actions linked to the restoration model and the enhancement of coastal well-being.

The gathering allowed for a collective approach to the challenges, complexities, and opportunities of restoring natural mussel beds in the Reloncaví Fjord, consolidating collaboration networks aimed at promoting more sustainable, participatory, and integrated coastal development for the commune of Cochamó.

The Giant Curanto of Calbuco thus reaffirmed its character as an identity celebration, integrating tradition, science, and community in a day that showcased coastal-marine heritage and IFOP's institutional commitment to sustainable development, environmental education, and the strengthening of local mitiliculture.

## The research vessel Dra. Barbieri set sail to investigate anchovy in the Arica and Parinacota Region and the Antofagasta Region

On January 21, the research vessel Dra. Barbieri departed from the Port of Valparaíso. For 27 days, IFOP professionals and technicians will monitor the anchovy recruitment process during the closed season between the Arica and Parinacota Region and the Antofagasta Region.

The ship's captain is Jorge Acevedo, and the cruise leader is fisheries engineer Francisco Leiva.

### Specific Objectives:

- Measure the size structure (cm) of the anchovy sampled during the closed season.
- Determine the percentage of recruited anchovy specimens ( $\leq 11.5$  cm total length (TL)) in the surveyed area during the closed season.
- Identify and delimit the areas with the highest presence of recruit anchovy specimens in the surveyed area during the closed season.



nerating a high impact among attendees and becoming one of the most visited spaces of the day. The public showed great interest in observing mytilid larvae through magnifying glass aquariums, as well as in educational games and sensory material in 2D and 3D formats specially prepared for the occasion, bringing scientific knowledge closer to children and families.

The Giant Curanto represents much more than a culinary tradition, as its preparation brings together various benthic resources of high commercial and cultural importance for the commune and the Los Lagos Region. Notable among them are the ribbed mussel (cholga), the clam, and the iconic Chilean mussel (chorito, *Mytilus chilensis*), a species that constitutes the main pillar of national mitiliculture and the central focus of the Mytilid Larval Monitoring Program developed by IFOP.

This scientific program aims to understand the spatial and temporal dynamics of larval settlement, which is key information for the sustainability of the mussel farming industry. Its results are recorded and made available to the public through the "Semilla Endémica" (Endemic Seed) interactive platform, a tool that allows for online visualization of monitoring data and strengthens decision-making, transparency, and the link between science, the territory, and the productive sector.

The educational proposal developed by IFOP strengthened public understanding of the relationship between marine ecosystems, productive activity, and local culture, promoting an integrated view of the territory and highlighting the importance of moving toward the sustainable management of benthic resources.

Furthermore, the joint participation between IFOP and the Calbuco Shellfish Growers Trade Association highlighted the importance of collaborative work between the public sector, the productive sector, and the community, strengthening territorial dialogue and the transfer of applied scientific knowledge.

## Research Vessel Abate Molina Begins the Year Investigating Anchovy and Common Sardine Between the Valparaíso and Los Lagos Regions

On January 6, the research vessel Abate Molina set sail from the Port of Valparaíso. For 28 days, IFOP (Fisheries Development Institute) professionals and technicians will be characterizing and evaluating the anchovy and common sardine stocks between the Valparaíso and Los Lagos Regions using hydroacoustic methods during the peak recruitment period and the following autumn.

The vessel's captain is José Echeverría, and the research cruise leader is fisheries engineer René Vargas.

### Specific Objectives

- To estimate the size of the anchovy and common sardine stocks and their spatial distribution during the peak recruitment period in the study area.
- To characterize and analyze, within a spatiotemporal context, the demographic composition and interannual variation of the evaluated stocks using biological indicators. Characterize and analyze the bio-oceanographic conditions present in the study area and their relationship to the spatial distribution of resources.
- Characterize the aggregations of anchovy and common sardine resources in the study area.
- Implement the Continuous Improvement Plan for hydroacoustic assessment studies of pelagic resources: anchovy, common sardine, southern sardine, and jack mackerel, as appropriate, according to the priorities identified in the plan's development and the available budget.



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