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Andrés Couve Minister of Sciences participates in "Challenge of harmful algal blooms in the Aysén region" discussion

On March 19th, in SERNAPESCA Aysén meeting room, Andrés Couve Science, Technology Knowledge and Innovation Minister, participated in "Challenge of harmful algal blooms in the Aysén region" discussion.

Regional authorities and Fisheries Development Institute researchers were present at the Activity.

Dr. Alejandra Lafon, IFOP Aysén base chief, referred to the visit and discussion as "a great opportunity to present monitoring and research work progress on red tide carried out by IFOP in the region since 2006, as well as a valuable instance so that jointly, Minister Couve, and Dr. Pamela Santibáñez, Science Ministry SEREMI, researchers and regional authorities, can exchange ideas and analysis on this problem that impacts both productive, social and health level. public health, identifying possible synergies and actions that allow progress in future alternatives for regional well-being".



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For his part, Dr. Oscar Espinoza González, commented on his presentation in discussion with Dr. Andrés Couve, in which the historical problem generated by Harmful Algal Blooms (FAN) Aysén region, his effect on society and economy, strategies and new tools for HAB detection used by the Center for Harmful Algae Studies (CREAN), phenomenon projection due to climate change and future challenges.

IFOP pays tribute to Aysén fisherwomen

Following Women's Day celebration, Fisheries Development Institute (IFOP) jointly with INDESPA and Aysén Region Fisheries Zonal Directorate, recognized coastal artisanal fisherwomen, through a photographic exhibition of some women from Puerto Raúl Marín Balmaceda, Puerto Puyuhuapi, Puerto Cisnes, Puerto Aysén and Pilcomayo.

The exhibition was held on March 17th, on I. Municipality of Puerto Aysén second floor, a space graciously given by Mayor (S) Felisa Ojeda. It was attended by Luis Campos, zonal fisheries director, Andrea Paillacar from Indespa Aysén.

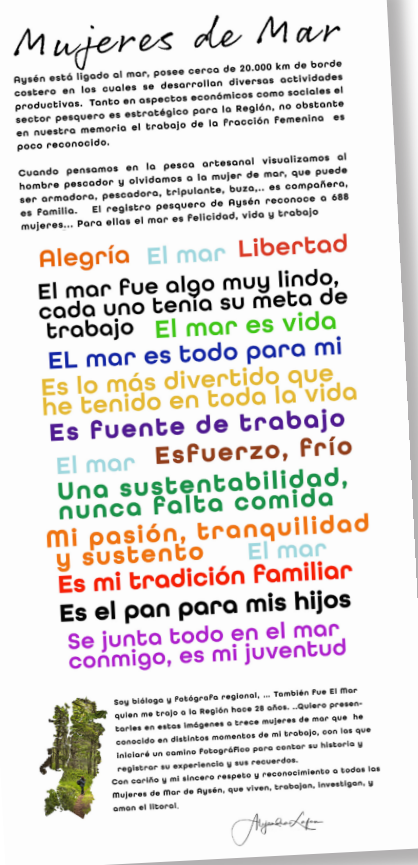
A special recognition was also made to one of the women portrayed who was able to be present at the Eduviges Montiel activity.

The exhibition's objective is to show the feminine side of artisanal fishing that is generally little visible and recognized.

Alejandra Lafon IFOP Aysén base Head and speaker explained "My motivation is to highlight women's presence in Aysén artisanal fishing and also to show their image to be able to visualize them,... close, real, far from stereotypes, we can find ourselves with them on the street, she could be our neighbor, our friend and we do not associate her with work at sea. Although women's participation in fishing records is low (close to 20%), in Aysén are artisanal fishermen that are in fact women, leaders of artisanal fishing organizations, shipowners, divers, women who have small processing plants. Generally, when we think about this activity, we visualize the fisherman and forget the woman of the sea, who is also a family, a companion, and vibrates with that lifestyle.

I am a regional photographer and I would like to show our coastal Women's faces, whom when

asked about the meaning of the sea for them, they speak about joy, passion, tradition, effort and the daily bread for their family



IFOP researcher exhibits at the Chilean Navy citizen training program

It is an unprecedented school project that seeks to deliver educational content to young people, in a playful and fun way, with the aim of contributing to their training as citizens of our country.

Between March 15th and 19th, Chilean Navy jointly with e-Chile Digital, carried out the first citizen training program aimed at teachers and students with presentations by various specialists, aimed at increasing maritime awareness, knowledge of the navy and marine science.



Sernapesca designates “National Reference Laboratory” as IFOP Microbiology Laboratory

According to N° DN 00518/2021 exempt resolution, Fisheries and Aquaculture National Service, designated IFOP Microbiology Laboratory of Hydrobiological Health Department as “National Reference Laboratory”.

Sergio Contreras Lynch, IFOP’s Hydrobiological Health Department Head referred to the nomination “In Sanitary Regulations for Aquaculture (RESA), it establishes that National Fisheries and Aquaculture Service (Sernapesca) will implement one or more National Reference Laboratories for hydrobiological species diseases diagnosis. Being able to differentiate them according to their specialty and experience.

In our case, the designation is associated with the Antimicrobial Susceptibility in Salmoniculture General Surveillance Program, where our Department has generated extensive experience working in susceptibility evaluation of bacterial pathogens of importance in aquaculture, against the most widely used antimicrobials in this sector.

Among other responsibilities, the microbiology laboratory and its team must continue with antimicrobial susceptibility evaluation and standardization of evaluation techniques of bacterial agents prioritized by the authority, confirm and compare obtained evaluation results by diagnostic laboratories when required; to organize and implement training in these matters for professionals who work in diagnostic laboratories, to coordinate comparative tests; to organize interlaboratory rounds, having to report their results to the Service; among others”.

Contreras also explained “This designation is a recognition of the work carried out by the Hydrobiological Health Department, which has worked on this research line since 2007, through different researches and programs.

This task was consolidated through permanent research program execution, called “Surveillance of pathogens resistance to national salmon farming commonly used antimicrobials”, which during 2021 has already begun its stage VIII, and which is fi-



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The week began with the event opening. At the ceremony, authorities were present, such as the Navy Commander-in-Chief, Admiral Julio Leiva; Defense Undersecretariat, Cristián de la Maza, the Japanese Ambassador in Chile, Shibuya Kazuhisa, participated in person, with Minister of Education Raúl Figueroa virtual presence.

On Friday March 19th, was the Energy Efficiency and Marine Research Day, as speaker Dr. Jessica Bonicelli, IFOP oceanography and environment department senior researcher. In her presentation, entitled “Observing the ocean”, Dr. Bonicelli exposes the importance of the oceans, methodologies and equipment used to monitor spatial and environmental conditions temporal variability.

In addition, it reveals some key aspects of the project “Interoperable Information System, which systematizes and integrates fishing, aquaculture and climate change data”, which is being developed by IFOP and whose objective is to make quality public data and information available scientific for medium and long-term



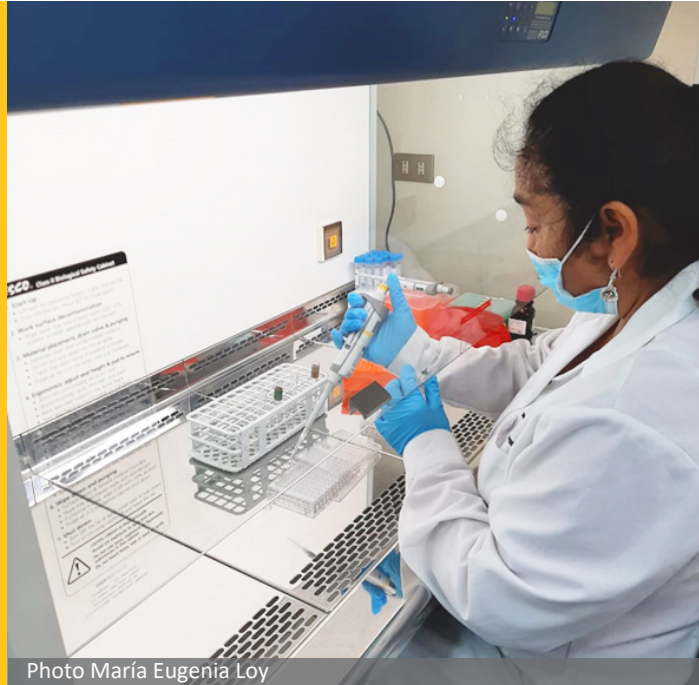


Photo María Eugenia Loy

nanced by the Ministry of Economy and Fisheries and Aquaculture Undersecretariat.

This milestone for our team not only fills us with pride as a Department, but also in my role as a researcher, since this has been my research line for years. It should also be mentioned trust and vision that our Undersecretariat colleagues granted us in our team when we proposed to start this strategic research line for the country and sector, a process that has been consolidated today, so it is also their achievement ” .

Marcela Lara, Sernapesca's Aquaculture sub Director pointed out that the Microbiology Laboratory designation “is also a recognition to the good work performed by this institution for a long time and has highly qualified personnel for this task. For Sernapesca, it is vital to have the widest possible network of reference laboratories, which allows us to confirm detections in a timely and accurate manner, and thus better safeguard the sanitary status of our country ”.

Luis Parot Donoso IFOP Executive Director indicated “Sernapesca designation grants us a source of pride. And it shows our professionals and technicians high performance level, many of them with master's and PhD, with two university degrees, with permanent national and international training, as well as world-renowned scientific journals publications. The Microbiology laboratory has a field group for sampling in cultivation centers, a technologists team who process and perform both microbiological and molecular biology analyzes and professionals who prepare reports and perform data analysis, working in total between 8 and 10 people depending on committed activities ”.

Abate Molina Scientific Vessel sets sail to research horse mackerel between Arica and Valparaíso

On March 31st, Abate Molina IFOP's scientific vessel, set sail from Valparaíso's port, to research horse mackerel between Arica Parinacota and Valparaíso regions. The staff is made up of professionals and technicians from Fisheries Development Institute.

Abate's ship captain is Enrique Quiero and fishing engineer José Córdova is the cruise head

The general objective of the cruise is: to quantify horse mackerel resource biomass, between Arica and Parinacota – Valparaíso Regions, using hydroacoustic method.



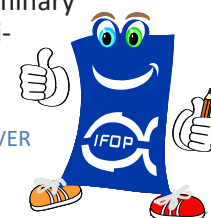
Specific objectives

- To estimate horse mackerel stock size and its spatial distribution.
- To characterize and analyze in a spatial-temporal context, horse mackerel resource demographic composition and interannual variation, using biological indicators.
- To characterize and analyze oceanographic conditions present at research area and their relationship with species spatial distribution.
- To characterize horse mackerel aggregations in research area and period.

Ecosystem information gathering from acoustic cruises to support ecosystem-based fisheries management; analysis of interspecific interrelations from the spatial distributions detected in echograms.

Once the Cruise is finished, a Progress Document will be delivered that will include preliminary results for horse mackerel biomass estimate, as well as its distribution chart in researched area.

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“Photographic exhibition” Women of the sea

Alejandra Lafon



Alicia Rosas / Puerto Raúl Marín Balmaceda



Blanca Taruman / Puerto Cisnes



Eduviges Montiel / Puerto Aysén



Elena Fuentes / Puyuhuapi



Frida Miranda / Pilcomayo



Elizabeth Ovalle / Puerto Raúl Marín Balmaceda



Galicia Saldivia / Puerto Gaviota



Juanita Altamirano / Puyuhuapi



María Ahrens / Puerto Raúl Marín Balmaceda



Nelly Coliboro / Puerto Cisnes



Silvana Nahuelquin / Puerto Aysén



Rosa Vidal / Pilcomayo