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IFOP sadly informs of Maida Díaz disease, she was pre-shipment department head

Maida Díaz, joined IFOP on November 15th, 1977, she turned 44 years of service at IFOP. She was a very responsible person, a pioneer woman in the field of certification and research processes on fishmeal, very technological, advanced, modern for her time, when studying at the university was not very common among women.

She was born in Iquique, graduated as a University of Chile laboratory chemist, at IFOP she was in charge of the chemical technology laboratory, working on analytical methodologies associated with research projects assembly and execution.

She was part of the oceanography department, where she trained as a researcher participating in execution of projects and cruises, between Arica and Antarctica, and in nu-



merous advanced courses and seminars. In 1982, through a JICA scholarship, she attended the physical oceanography course at the Tokyo Institute of Technology in Japan and a chemical analysis and instrumentation course organized by the OAS, in cooperation with the National Fisheries Institute of Ecuador.

She is the first and only IFOP woman to participate in a research cruise to Chilean Antarctic.

She was in charge of control and quality department chemical laboratory, she was a pre-shipment technical advisor, currently she was working as pre-shipment department head.

Maida dear we will fondly remember you.



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Abate Molina Scientific Vessel, suspends its operations for 5 months due to its remodeling process

PUERTO MONTT'S DETROIT SHIPYARD WON A PUBLIC BID CARRIED OUT BY IFOP. WORKS WILL BEGIN ON FRIDAY, NOVEMBER 5TH.

In order to modernize its premises, extend its useful life and to improve workers habitability Abate Molina ship enters a remodeling that includes; cabins, bathrooms, dining rooms, laboratories, entrances and wheelhouse.

While the ship is out of service. Scientific research cruises will be carried out with leased vessels, and with Subpesca aim in searching financing that is around \$ 1,150 million. According to IFOP Executive Director, Luis Parot , "despite the budgetary restrictions to which we are subjected, we will do everything in our hands to carry out these

cruises, to the extent that investigation quality is guaranteed."

Patricio Herrera, IFOP's Marine Operations Department head explained "The objective is to improve facilities comfort and to add elements that allow crew and researchers to be able to carry out more comfortable and adequate navigations to what is a modern scientific ship. This is in order to achieve a five years ship's useful life extension.

Public bid was granted to Puerto Montt Detroit's Shipyard for a project worth MM\$996. It will starts at the beggining of november and it will last for 150 days".

In general, projected improvements are:

- **Government bridge:** It will be completely remodeled with adequate and functional furniture to contain electronic equipment; ceiling, walls and floor will be changed, a captain's chair will be installed; The old electrical connector box will be modified reducing its size and retrofitting detection equipment.
- **Cabins:** Remodeling consists of changing floors, ceiling and walls, furniture renovation and bunk beds; installation of 21 "TV screens, USB port and AM / FM radio in each berth, plus air conditioning duct and new LED lighting. 4 cabins for 6 people in total will be built on the upper deck, in the place of the current officers chamber.
- **Corridors and entrances:** floors, ceiling, LED lights and walls will be completely renovated.
- **Bathrooms:** Its remodeling consists of sanitary fixtures change, ceiling, floor, walls and lights. Additionally, two full bathrooms will be



built on the upper deck at the site of the officers' chamber. Thus, on boat availability is increased from 4 to 6 bathrooms and from 3 to 7 showers. They will be separated into exclusive men and women bathrooms.

- **Dining rooms or officers and investigators chambers:** Crew chamber will be built on the main deck in the the old bathroom place, with full equipment, table, chairs, living room with cafeteria, satellite TV and AM / FM radio.

The old crew dining room will be completely remodeled with a change in its facilities, equipping it with satellite TV and a cafeteria.

- **Kitchen:** The kitchen area is expanded, allowing its facilities redistribution, making more functional furniture and everything in stainless steel, both furniture and walls; storage room is installed. The extracting air and vapors system to the outside will be improved.
- **Laboratories:** all the ceiling, floor and walls will be changed; New, more functional furniture will be built to contain research equipment and instruments; new screens will be installed; stainless steel counters will be installed for sampling.
- **Ship maintenance and hull:** A hull will be made with cleaning and hull travel, anode renewal, revision of the side, main and rudder propeller, general painting; trawl gate trawl and calibration; bottom valve travel; gray water and black water circuits renovation; disused electrical and electronic circuits removal; there will be a tour of mast antennas; increase in satellite internet capacity for greater navigation coverage in remote areas of the coast. Closed



circuit television with 5 cameras will be installed for on board activities safety. Precision equipment such as CTDs, oceanographic blocks and rosettes will be sent for repair.

During ship's dry stay other equipment evaluation for general maintenance will be made.

In Aysén, IFOP Director met with regional authorities

In order to coordinate and deepen collaborative work, Luis Parot Director of IFOP held a series of protocol meetings with authorities of the Region; with Senator Ximena Órdenes, with Regional Governor (s) Óscar del Solar, with the Seremi of Economy Carlos Pacheco, of National Assets Ana María Mora, of Environment Mónica Saldías de la Guarda. They were joined by Puerto Aysén Mayor Julio Uribe, Ser-



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napesca Regional Director Cristián Hudson, Fisheries Zonal Director Luis Campos, María Angélica Tocornal head of the public health and environmental laboratory of Seremi de Salud, Aysén Regional Government Francisco Lara head of Biodiversity Planning and Development Division Carol Alvarado (environment undersecretariat) Seremi de Medio Ambiente professional .

At the meetings it was agreed to strengthen ties, in science and research field , in addition to promoting IFOP regional work carried out on issues of fisheries, aquaculture and climate change.



Luis Parot explained "IFOP is the State's advisor in matters of fishing, aquaculture and climate change by law, therefore all these meetings are very important, since they allow us to make known to regional and local authorities, the work of the Institute in the field of fishing, aquaculture and climate change, organize joint activities, contribute to the environmental needs of the region and be part of the dissemination to the community in respecting and caring for our marine ecosystems".

Alejandra Lafon, IFOP Aysén Head of Base, referred to the meetings as "a fundamental instance to discuss specific research and monitoring needs related to the regional fishing-aquaculture activity and the characteristics of its ecosystems, which are currently not being covered. for the initiatives under development, and to discuss our capacities and potential to face this demand for regional knowledge".

Alejandra also explained that "during this period of pandemic we have continued to work regularly in all

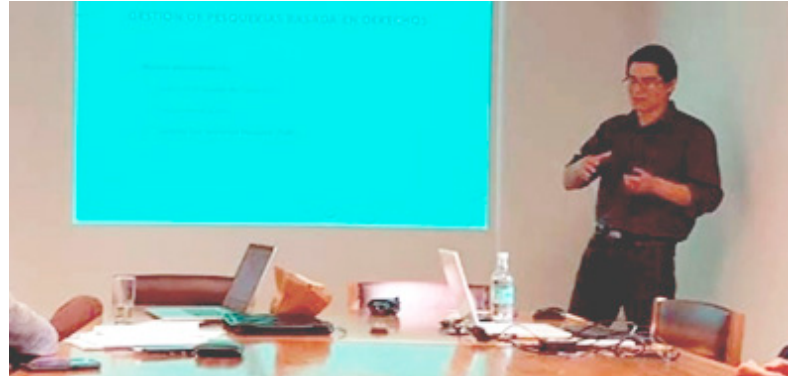


of our operations including face-to-face and field activities, for which we have promoted self-care and prevention measures for the spread of COVID in our staff, and implemented the protocols established by the health authority since its inception. It has been a great effort and teamwork, since for us the safety of our workers and their family group is fundamental. Currently, the Headquarters has the Covid-19 Seal, granted by the Chilean Security Association, recognition that certifies compliance with the requirements established by the Ministry of Health and Superintendency of Social Security and the recommendations of specialists in the security and safety area. occupational health of the ACHs according to the work step by step".



IFOP participates in the Research in Environmental Economics and Natural Resources.seventh annual meeting

Researchers Camilo Torres (Economics Section) and Pedro Romero (Management



Areas Section) participated in the Seventh Annual Research Meeting on Environmental Economics and Natural Resources, held between October 14th and 15th in virtual mode, organized by Environment for Development (EfD), <https://sites.google.com/view/nenre-efdchile/inicio>.

The workshop purpose was to review research advances being carried out in Chile, in Fisheries and Aquaculture Economics, Environmental Economics and Energy, Ecosystems Conservation and Climatic Change, Atmospheric Pollution

Economics and in Fisheries Regulation and Price Formation in Markets of Marine Products areas. In this instance, Fisheries and Aquaculture Undersecretariat (SSPA), Environment Ministry, also participated University of Gothenburg, Sweden, Duke University, USA and Universidad Catolica de Chile cities of Chile, Concepción, and Talca, among others.

On this occasion, Msc Camilo Torres fisheries economics researcher presented the work entitled "Bioeconomic modeling of the objective management strategy in the south-central Chilean small pelagic fishery", where current management strategy was modeled, considering both target species: anchovy (*Engraulis ringens*) and common sardine (*Strangomera bentincki*), identifying proposed policy possible



economic consequences. Simulations were performed using FLBEIA integrated bioeconomic model, an FLR library encoded in statistical language R, under a Management Strategy Evaluation (MSE) framework.

While the researcher MSc. Pedro Romero presented “Evaluation ex – before mitigation measures for incidental capture of mammalian species for the swordfish fishery with gillnet”, where an ex-before micro simulation process was carried out in order to assess economic and internalization capacity of the externalities associated with bycatch for different deterrents to be used in the swordfish fishery effects; thus contributing to public decision-making on ideal device to be implemented and the level of public financing required to minimize economic and social effects.

ICHA 21st international conference on harmful algae in October 2025 will be organized by CHILE

ICHA brings together leading global researchers on harmful algal blooms and marine toxins topic, in meetings attended by between 500-600 people, and is the opportunity to learn about state of knowledge and which are the most important guidelines in harmful algal blooms research. The meeting is not only important for researchers, it is also conducive to decision makers, politicians, journalists, educators, and the community at large.

Between October 11th and 15th, the nineteenth international meeting on harmful algae (ICHA according to its acronym in English) was held, which this time was held via telematics from

La Paz, Mexico. ICHA is held every two years, using different venues that are selected at least 4 years in advance. As in previous meetings, the activity carried out in Mexico, on its first day, included an International Scientific Society on Harmful Algae (ISSHA) meeting under Dr. Vera Trainer presidency from NOAA, to address different aspects related to his management during the last three years, occasion in which the decision to select the country responsible for the twenty-first meeting to be held in October 2025 organization was also addressed, given that the venue for the next meeting has already been established, Hiroshima Japan, which will be held in November 2023. The decision adopted was to accept Chile’s proposal, in the sense that granting the responsibility of organizing the twenty-first meeting of the international conference on harmful algae, which will be held between the days October 13th and 17th, 2025, in Punta Arenas city of, at the southern end of the fjords and national channels.

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Chile drew up a proposal to host the event in October 2025, for which it set up a committee, which was in charge of drawing it up according to the conference’s rules, in addition to presenting a video and a text, which included not only reasons that support the interest and capacities

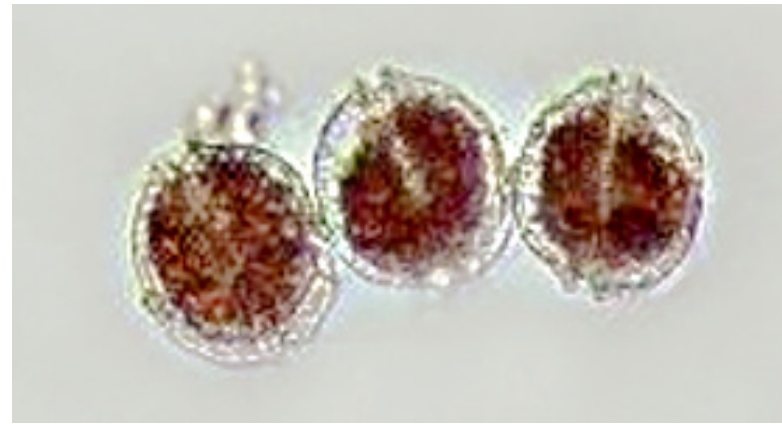


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to organize a conference of this nature, but also to select the place to hold the event. Chile is known globally for the effects produced in recent years by harmful blooms of great impact on productive activities, but there have also been effects on public health, in addition to the interest of a growing national scientific community, which addresses these events research and monitoring. For the occasion, it had Fisheries Development Institute sponsorship, Magallanes Regional Government and Chilean Antarctica, National Oceanographic Committee, Universidad de Chile, Universidad Católica del Norte, Universidad de Concepción, Universidad de los Lagos and Universidad de Magallanes, Fisheries and Aquaculture Undersecretariat, Public Health Undersecretariat, National Fisheries and Aquaculture Service, Marine Sciences Scientific Society, Salmon Chile and AMI Chile through Salmon Technological Institute and Mitiliculture Technological Institute, respectively. This committee was made up of the following people:

- Leonardo Guzmán, Fisheries Development Institute (IFOP) (President).
- Máximo Frangópulos, Universidad de Magallanes (UMAG)
- Gonzalo Álvarez, Universidad Católica del Norte (UCN)



- Paulina Vera, Fisheries and Aquaculture Undersecretariat (SUBPESCA)
- Juan Fierro, National Oceanographic Committee (CONA)
- Benjamín Suárez, Universidad de Chile (UCHILE)
- Andrea Rivera, Public Health Undersecretariat (SSP)
- Allison Astuya, Universidad Concepción (UDEC)
- Patricio Díaz, Universidad de Los Lagos (ULAGOS)
- Ximena Rojas, Salmon Technological Institute (INTESAL)
- Cristián Segura, Mitiliculture Technological Institute (INTEMIT)
- Oscar Espinoza, Harmful Algae Research Center (CREAN IFOP)
- Pamela Carbonell, Harmful Algae Research Center (CREAN IFOP)

The organizing committee publicly appreciates the support received, which made it possible to bring the organization of such an important conference to Chile, this being the third time that this conference will be held in Latin America, Brazil in 2016, Mexico in 2021 and Chile, it will have that honor in 2025.



IFOP invites to Mitilidae Larvae Monitoring Program Results Dissemination Workshop

This Monitoring Program has been carried out since 2013 and its main mission is to describe and understand supply of larval larvae that supplies Los Lagos region mussel industry.

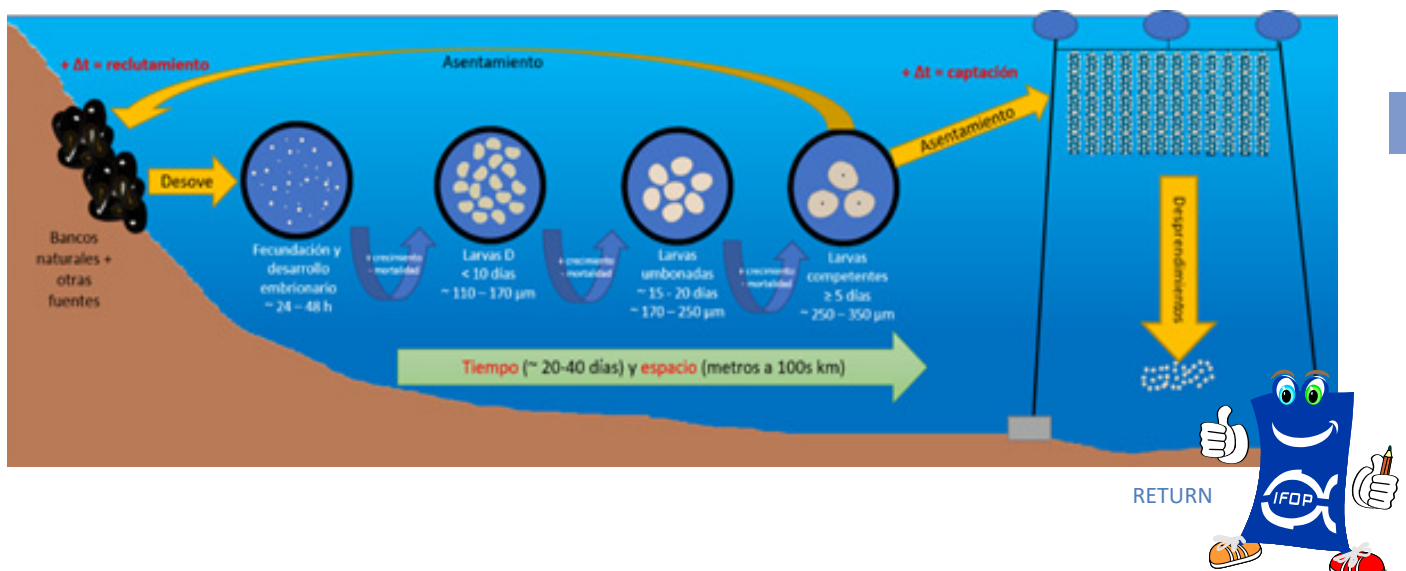
This Friday, November 26th, from 9:30 a.m. to 12:30 p.m., Fisheries Development Institute (IFOP) Aquaculture Research Division (DIA) will hold the Research Results Dissemination "Monitoring and Surveillance Program on larval availability of mitilids for aquaculture activity sustainability in south southern zone of Chile, Stage VIII (2020-21) Workshop ", which is part of Undersecretariat of Fisheries and Aquaculture (SUBPESCA) permanent research program defined by and executed by IFOP.

The monitoring program has been carried out since 2013 and in this workshop main results obtained up to date will be presented. The workshop will open with Dr. Leonardo Guzmán welcoming words, followed by SUBPESCA research program presentation by Paulina Vera, professional from the Sanitary and Pest Management Unit,

and research's technical counterpart. Subsequently, there will be 4 presentations by research work team in charge .

The first presentation, by researcher Cristina Stuardo, is entitled "Introduction to Monitoring Program: Justification, objectives and methodologies" and will focus on describing research activities carried out, which include environmental monitoring and larvae of mitilidae in different geographical sectors, the annual application of surveys to around 100 mussel farmers in Los Lagos region, monthly monitoring of the uptake of seeds in collectors of sites with contrasting hydrographic characteristics, and finally, dissemination activities and dissemination obtained results.

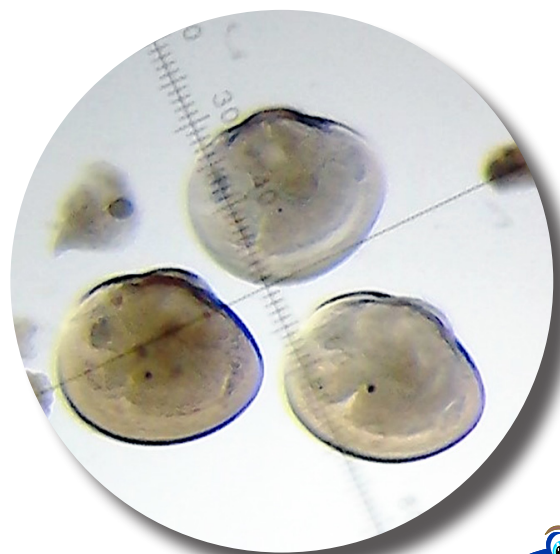
After the introductory presentation, it will be the turn of researcher Macarena Herrera, who will present the work entitled "Capture of mitilidae seeds in Los Lagos region: A description from the application of surveys to mitiliculturists." In this exhibition, results obtained from surveys application to mussel farmers linked to the activity of seeds capturing in Los Lagos region will be presented, and which allow a description and diagnosis of the status of the activity in recent years.



Then it will be the turn of the researcher Marina Oyarzún, who will present the work entitled “Is the abundance of competent larvae of mitilidae a good indicator for seeds uptake?”, And which will focus on the results obtained from the monthly monitoring of the uptake of Mytilidae seeds in collectors, and especially in the relative importance of competent larvae abundance and seeds losses from collectors.

Finally, researcher David Opazo will present the work entitled “Lessons learned after 8 years of monitoring supply of larvae of mitilidae in Los Lagos region inland sea”, which will present some of main results obtained from abundance of mytilid larvae monitoring, with an emphasis on results that can be used for decision-making by mussel farming sector and authorities in charge of capturing mytilid seeds activity administration and regulation.

The workshop will be held online and those interested in attending can request more information by writing to carolina.barrientos@ifop.cl



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