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Fisheries Undersecretariat formally received Dr. Barbieri vessel

Yesterday, March 12, in Valdivia Dra. Barbieri scientific vessel was formally handed over by ASENAV shipyard, to the Fisheries Undersecretariat represented in this event by Mr. Julio Salas Fisheries Undersecretariat.

Delivery Record signing was carried out in Fisheries Development Institute Executive Director (IFOP)Gonzalo Pereira's presence. This institution will be in charge of the vessel's operation; 10 ship's crew members; Subpesca personnel and in charge shipyard's construction engineers. Among the ship's crew, Miss Ailyn Miranda stands out, who will serve as Ship's Pilot, being the first woman to perform these functions at IFOP.



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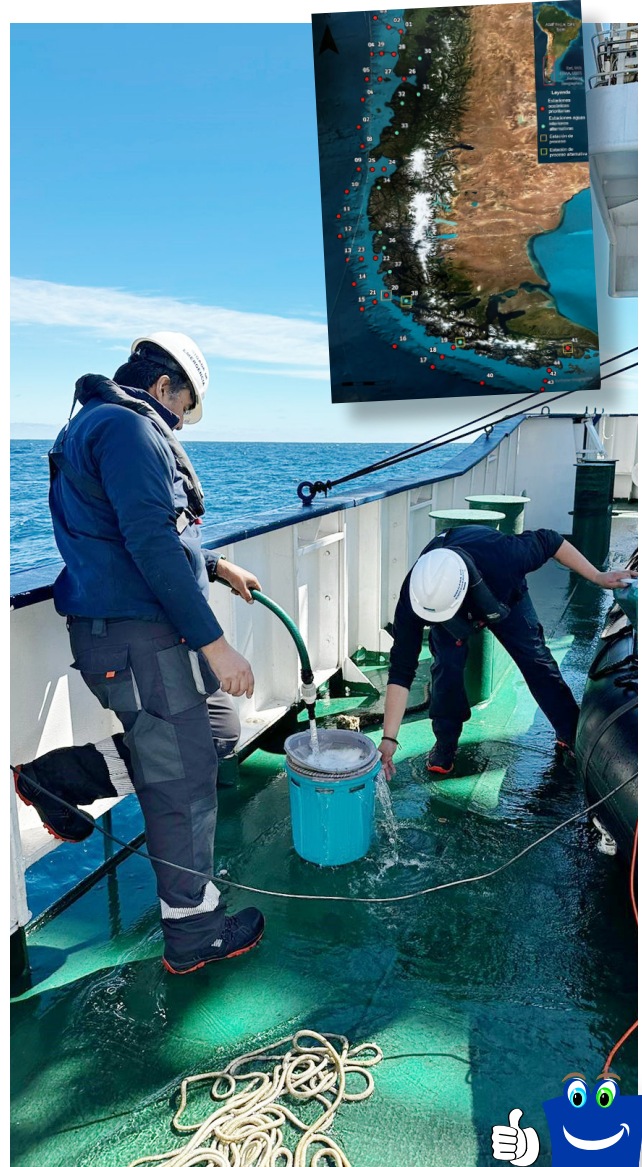
IFOP participates in CIMAR 29 Fjords Cruise

Marine Scientific Research Cruise in Remote Areas (CIMAR) is being carried out aboard the AGS-61 “Cabo de Hornos” ship of the Chilean Navy, covering this year the area located between Chacao Channel in Los Lagos Region and Cape Horn in Magallanes region and Chilean Antarctica.

IFOP is present with “Diversity, abundance and distribution of harmful microalgae (mobile cells and cysts) on south-austral continental shelf between Chacao Channel and Cape Horn associ’s workers who are on board carrying out the activities on the ground are: Roberto Rai-



“Dr. Barbieri”, is the first scientific vessel built entirely in a national shipyard in a process that met all established deadlines, in a Subpesca coordinated work, shipyard and IFOP staff. The signing of the Delivery Certificate is one of the last stages before the vessel’s operations start by IFOP. It is planned to arrive in the city of Valparaíso in the first half of April 2024.



Dr. Carlos Montenegro Silva, IFOP Fisheries Research Division Head, participated in the World Fisheries Congress, 2024 in Seattle, USA

Dr. Carlos Montenegro Silva, IFOP Fisheries Research Division Head, participated in “World Fisheries Congress, 2024” in Seattle, USA and in “Helping Science Advance Policy in Ocean Conservation” Workshop, organized by University of Washington (UW), particularly Aquatic and Fisheries Science School (SAFS). The first is the ninth world fisheries congress, which is held every four years and is organized mainly by the World Council of Fisheries Societies. This took place between March 3rd and 7th, 2024, at the Hyatt Regency hotel in Seattle and included four plenary sessions, expert panels, round tables and of course presentations by scientists from all continents.



mapo, Pablo Salgado, César Alarcón, from the Aquaculture Research Division and the Center for Harmful Algae Studies (CREAN) from IFOP’s Magallanes group”.

The project led by Dr. Pablo Salgado, will study Harmful Algal Blooms in the oceanic part of Los Lagos, Aysén and Magallanes, regions with the main objective of “Contributing to diversity, abundance and distribution microalgae assemblages knowledge, both in their planktonic and benthic forms (cysts), with emphasis on FAN species and their toxins, on continental shelf between Chacao Channel and Cape Horn and their relationship with environmental conditions.



In the second event, which took place on March 2nd and 3rd, 2024, at UW SAFS facilities, a smaller group of scientists participated, in which Dr. Montenegro offered “Status of the main fisheries of Chile in 2023” presentation. This conference purpose was not only to present an status overview of main national fisheries, but also challenges presented by fishing resource populations study in Chile and also those aspects associated with their dissemination and dissemination among different fishing system actors.

On this visit Dr. Montenegro had meetings with new SAFS Director Dr. Tim Essington and UW Sustaining Seafood Center Director, Dr. Christopher Anderson. Strategies were discussed with both to continue deepening SAFS and IFOP interaction.

This activity was carried out thanks to RAM Legacy Stock Assessment Database project funding, led by Dr. Ray Hilborn.



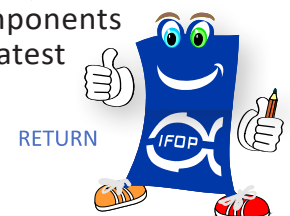
In Colombia, IFOP participates as a national counterpart in a regional project on stressors that affects coastal marine ecosystem sustainable management

In Santa Marta, Colombia, between March 4th and 8th, 2024, ARCAL RLA2022007 project first coordination meeting was held – Strengthening regional capabilities on nuclear and isotopic techniques application to increase knowledge about stressors that affect marine and coastal sustainable management sponsored by International Atomic Energy Agency (IAEA) for a period of 4 years. The project is made up of 18 countries and IFOP is the Chilean counterpart in this project.



The project aims to generate regional technical capacities in the following components; communication, ocean acidification, microplastics, harmful algal blooms and biotoxins, pollution and blue carbon, using isotopic dating tools in sediments as an essential tool for achieving this last component.

This initiative will provide opportunities for our researchers to specialize and form collaboration networks in each of the components contained in the project and also the opportunity to build capabilities in other countries in the components in which we present greatest strengths.



Unpublished cuttlefish marking project, led by IFOP and GEF Humboldt II project, in Coquimbo Region

Within the execution of Cuttlefish Biological Research Program in Chile framework (GEF Humboldt II – IFOP), between March 13th and 17th, the marking activity of cuttlefish specimens was carried out on Coquimbo Region’s coasts, in Guanaqueros port.

The program’s general objective is to establish a cuttlefish in Chile biological research program in sectors outside fishery, emphasizing on renewal and growth rates, complementary to carried out monitoring project studies .



Among different specific objectives there is cuttlefish migratory patterns research through a mark and recapture study. In this context, 50 cuttlefish were marked with spaghetti-type external marks and two squid marked with satellite transmitters. This activity relevance lies in obtaining information on in situ cuttlefish distribution, such as horizontal and vertical migration that this cephalopod carries out on our coasts.

The first satellite transmitters obtained results are expected in the next 15 and 30 days. If positive results are obtained, this would be the first successful experience in our country related to these animals marking.

Project Manager’s words: “We are very happy and excited to have carried out the first of these experiences with a great work team. Having this type of satellite information is of utmost importance to complement biological aspects of this species on our coast. Currently, cuttlefish migration in Chile is an enigma, therefore, marks and



satellite data return help us better understand this cephalopod habitat.

The team that worked on shipments is: MSc. Karen Belmar Salinas (Project Manager), Dr. Patricia Zarate (Researcher) and José Durán, Semi-senior scientific observer.

“Los Castillo” Artisanal Fishermen Organization made its first sale of Japanese oysters from small-scale aquaculture

On March 14th, in Chungungo town in La Higuera, Coquimbo region, Devora García, president of “Tongoy Mujeres Acuipisca Cooperative, bought part of the Japanese oyster (*Crassostrea gigas*) harvest, from small-scale aquaculture (APE) of artisanal fishermen organization (OPA) Los Castillo, chaired by Flor Castillo.

Within stage VIII of “Comprehensive Aquaculture Development Program for Artisanal Fishermen and Small-Scale Aquaculturists” framework . IFOP





repopulation and cultivation team sought to fulfill its objectives of developing pilot crops for Small Scale Aquaculture (SSA); and carry out dissemination and transfer actions to support the development of the APE, through technical assistance to the artisanal fishermen organization “Los Castillo”.

On January 20th, 2023, 12,000 Japanese oyster seeds of approximately 0.5 cm in length were sown (photograph below). These seeds were produced by Cultivos NANAKU of Tongoy and then transferred to Chungungo, where they were initially sown in cultivation lanterns with a 4 mm mesh opening due to the size of the seed. These lanterns were transferred to management area cultivation lines (AMERB) Chungungo B, where monitoring has been carried out in which the same members of artisanal fishermen’s organization keep track of variables, through instruments. measurement purchase.

On February 27th, 2024, a split was carried out to give the last increase in growth to oysters, in search of a buyer, fortunately due to repopulation and cultivation management team, contact was made with Devora García, she is an APE aquaculturist with more than 20 years

of experience and who presides over a cooperative made up of women in Tongoy. She attended Caleta Chungungo where the artisanal fishermen’s organization was waiting for her. Devora gave a lecture on farming, transforming it into a technology transfer and an enjoyable associative activity between entrepreneurial women and presidents of organizations of artisanal fishermen with small-scale aquaculture.

The meeting, an example of associativity in small-scale aquaculture, culminated in the purchase of 2,000 oysters, a sale of oyster seed for Los Castillo and a visit to the Devora Cooperative farm was discussed, in addition, the Castillos distributed among their partners a part of their harvest, so that they could make use of them.

The researcher in charge, Msc. Denisse Torres indicated “we are happy for the end of the cultivation cycle, it was a support that was better than the first stage, female leadership was noticeable, there was more participation and empowerment of the organization of artisanal fishermen, even being awarded projects in parallel to the development of this culture, managing to demarcate its AMERB with buoys and even a boat for small-scale aquaculture”.

Abate Molina Scientific Vessel set sail to investigate anchovy between Atacama and Coquimbo regions

Yesterday, February 13th, Abate Molina scientific vessel set sail from Valparaíso’s port to evaluate anchovy stock between Atacama and Coquimbo regions.

Francisco Leiva cruise leader and José Echeverría is the ship’s captain. They, together with IFOP professionals and technicians, will work for 27 days to find out the state of anchovy.



The cruise's specific objectives are:

- To carry out 44 acoustic transects between parallel 25°00'S (Paposo roadstead), in Antofagasta Region, to parallel 32° 10'S (Pichidanguí), southern limit of Coquimbo Region.
- To evaluate shore bias in front of Caldera and Coquimbo.
- To carry out a sufficient number of reconnaissance fishing hauls to characterize anchovy stock
- To create study area oceanographic stations.

IFOP'S oceanographic buoys online monitoring program launching at AQUASUR

At AQUASUR, the largest southern hemisphere aquaculture fair, IFOP jointly with Fisheries and Aquaculture Undersecretariat presented oceanographic and environmental data center program in Chilean southern austral zone. The project considers oceanographic buoys

progressive installation in each of the salmon concession groups, currently there are 6 buoys in full operation and during 2024 3 additional buoys will be installed, in the medium term the installation of an approximate total of 60 buoys.

The buoys are acquired and managed by each concessions group and data is transmitted to IFOP's computer servers. Data is validated and stored by IFOP, this entire process had a 3 years proof timing. During the program launching in AQUASUR, data was released and from now on it will be an open platform with universal access. To access you must go to chonos.ifop.cl and then to its Data Center application.



This monitoring system provides meteorological and oceanographic data (currents, pH, temperature, salinity and turbidity), data that will be relevant for aquaculture activity administration and sustainability. For IFOP, each buoy represents a calibration point of domain of our operational oceanographic and atmospheric forecast model (MOSA), over time it will become more robust, improve knowledge of our ecosystems and facilitate decision making not only because data will be able to be projected spatially within the model domain but can also be projected temporally and thereby address eventual climatic change effects.

AQUASUR's presentation was made by the following people: Marisol Álvarez, Susana Giglio both from Subpesca, Jurleys Velljín and Gastón Vidal from IFOP.



Ship Abate Molina, set sail to investigate Horse mackerel between Arica and Valparaíso regions

On Sunday, March 17th, Abate Molina scientific vessel set sail from Valparaíso's port to characterize and evaluate horse mackerel, present between Arica and Parinacota Regions and Valparaíso Region , using hydroacoustic methods.

The head of the cruise is fishing engineer Víctor Catasti Barraza and as ship's captain is José Echeverría, who, accompanied by an expert team of professionals, technicians and ship's crew, will carry out studies related to horse mackerel for 40 days.

Specific objectives

- To characterize horse mackerel population's structure and its spatial distribution, considering attributes such as: abundance, bio-

mass, sex, size and age, stages (juveniles and adults), among others.

- To characterize horse mackerel aggregations in the area, research period and environment, also specifying accompanying fauna and its relative importance in identification hauls.
- Characterization of the food supply of horse mackerel based on auxiliary information, such as environmental variables, echograms and plankton sampling in the study area.



RETURN