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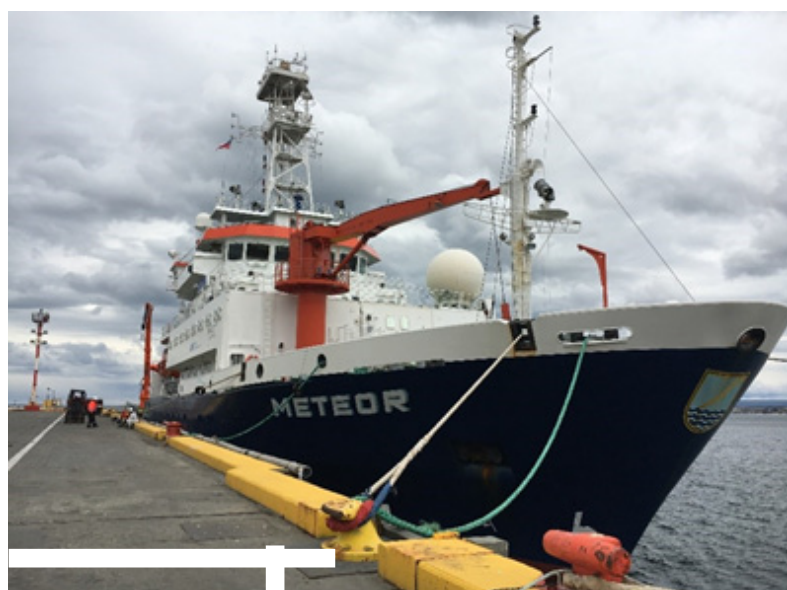


IFOP participates in Meteor scientific ship cruise

IFOP participates in German oceanographic ship METEOR expedition whose research topic is "Glacial melting and human impact on Southern Patagonia fjord ecosystem dynamic effects, including Beagle Channel". The expedition is scheduled to be carried out between mid-January and mid-February 2022.

Researcher Gemita Pizarro points out: "IFOP's work on this cruise is to collaborate with microalgae that make up phytoplankton at different depths of the water column species identification, marine toxins and microalgae associated with their production, and to collect and to analyze sediments in order to identify and quantify cysts of dinoflagellates producing red tides.

During the cruise, other research activities will also be carried out, such as bioptics,



plankton, seston, benthos, molecular analysis of microorganisms, greenhouse gases effect (carbon cycle), nutrient cycles (nitrogen, phosphorus), sediment ecology, and seabed.

In this context, this international cruise is an opportunity to carry out a fjord and glacier system ecosystemic study in a ship equipped with technology, equipment and experienced work groups and Young researchers in training, difficult to



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bring together for an expedition in the extreme south of Patagonia and remote geographical sectors of difficult access for smaller vessels”.

In this expedition, Chilean researchers from Universities: Universidad Austral-IDEAL, Universidad de Concepción, Universidad Mayor, and Research Institutes such as CIEP and IFOP, as well as Argentine and German researchers, the latter from the Alfred Wegener Institute (AWI), led by Dr. Bernd Krock, marine chemist, who is the chief scientist for this cruise ship.

Chile and Costa Rica join efforts for sea turtles conservation

The binacional project first trip “Leatherback turtles fisheries bycatch reduction in eastern Pacific in Northern Chile” ends. This project jointly developed between IFOP and MarViva (Costa Rica) aims to evaluate circle hook effectiveness to reduce sea turtles capture and mortality in Chile. The trip that began on January 17th and ended on January 24th, aboard a vessel belonging to a longline fleet that captures deep-sea dorado in Arica, made a total of 12 experimental sets in oceanic waters at parallel 18° S and between the 70°

and 71° W meridians. In these fishing hauls, biological monitoring was carried out to high altitude dorado, known locally as “palometa” and of the sea turtles caught incidentally.

IFOP technical team participating in this trip was Dr. Patricia Zárate, Head of Highly Migratory Resources Monitoring Project. Ecosystemic Approach and expedition leader marine



biologist, Ilia Cari Oceanography Master and researcher at the same project, both belonging to Oceanography and Environment department, and Oscar Contreras Management and Sampling Department Scientific Observer.

Dr. Zárate commented “on this first trip we were able to verify the presence of two species of sea turtles associated with high altitude Dorado, Chelonia mydas green turtle and Caretta Caretta loggerhead turtle, both Pacific Ocean extinction threatened species. These specimens corresponded to juveniles, some of them had hooks in their mouths and in other parts of their



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bodies, but all of them were alive and were released in good condition". Zárate adds, "Circle hooks have been successful as a mitigation measure to reduce sea turtles capture and mortality in other parts of the Pacific because they engage more superficially causing less damage compared to traditional "J" hooks. , commonly used by fishermen. In addition to the circle hooks, there are other mitigation measures that will also be considered by this project in medium term".

Researcher Ilia Cari adds "this experiment is a good opportunity to get closer to artisanal fishing sector and deliver tools for correct handling and release not only of turtles but of other marine animals, as well as their correct identification. Additionally, we are compiling oceanographic information in the area of the fishing sets that will be associated these species preferred areas.

Oscar Contreras Scientific observer, who has also frequently worked in artisanal fleets fishing monitoring , commented "the experience in this project first trip has been of great personal benefit since I was able to learn new techniques such as taking blood in sea turtles. It should be noted that artisanal fleets of Arica are characterized by being small vessels with

a reduced number of crew members, offering a challenge for research activities such as those carried out on this trip, which is why Oscar highlighted collaboration offered by their skipper and all crew members collaborating in this project.

This project, financed with funds from the National Fish and Wildlife Foundation (United States), is motivated by leatherback turtle, one of the species of sea turtles that has been mainly affected by incidental capture in the Pacific, its population size has seen drastically reduced and as a consequence the number of females that return to nest on the beaches does not exceed 30 specimens. If mitigation measures and good fishing practices are not applied, the species will face imminent extinction in the medium term.

The project will carry out a total of 6 fishing trips between January and March to test this mitigation measure effectiveness which corresponds to the first evaluation of its kind in this fishery and on these marine species.



IFOP begins bidding process for a modern scientific vessel design and construction

THE NEW SHIP WILL REPLACE LEGENDARY ABATE MOLINA

On Friday, January 7th, IFOP, Institute which advises Chilean State on fishing, aquaculture, oceanography and climatic change matters,



uploaded to Public Market Portal the requirements proposal that will allow contracting national or international advice for a new and modern ship for applied research in fishing and aquaculture design and subsequent construction of.

This bid, which was entrusted expressly in the 2022 Budget Law to IFOP, represents a great technical and professional challenge to technically update research platforms with cutting-edge technologies available worldwide and have several units to meet the country's research requirements, necessary for fishery resources management based on scientific information. In this way, progress is being made in meeting long-standing expectations of the scientific community, for national fishing-oceanographic research fleet improvement.

This new unit, when it comes into operation, will replace BC Abate Molina, which has been operating uninterrupted for more than 30 years

This first stage expires on January 21st, where offers will be received from national and international consultants who finally participate.

Luis Parot IFOP Executive Director explained "the idea is that the budget for the year 2023 contemplates required resources for the ship's construction and that it has to be ready by the end of 2024

The technical team in charge of designing the ship is made up of fishing engineers, Jorge Castillo and Patricio Herrera".

More information at

<https://www.mercadopublico.cl/Procurement/Modules/RFB/DetailsAcquisition.aspx?q=bt5v+mHacpfn027M4S/VKQ==>



IFOP invites to "Farming systems and technologies for Small-Scale Aquaculture development" seminar

On Monday, January 10th from 2:30 p.m., "Farming systems and technologies for Small-Scale Aquaculture development" seminar will be held through Google Meet platform, an activity that is part of "Comprehensive Aquaculture Development Program for Artisanal Fishermen and Small-Scale Aquaculturists. Stage V ", research performed by IFOP, being its scientific-technical counterpart Fisheries and Aquaculture Undersecretariat .

The seminar's objectives are: to present "Manual of farming systems for aquaculturists APE" book, preparation led by Francisco Galleguillos, semi-senior researcher of IFOP Repopulation and Culture Department, and to learn about advances and challenges from culture sys-

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tems and technologies perspective to develop EPA in Chile, both in coastal and inland waters. For the latter, there will be the participation of the following exhibitors and presentations:

Gabriel Salvo (Fundación Acuiponía Chile)

"Acuiponía as an alternative for APE".

Carlos Muñoz (Aquaculture Consultant)

"Production of bivalve seeds in hatchery, tailored to APE".

Joseba Abaroa (APE Aquaculture)

"Macroalgae culture systems".

Felipe Hurtado and Jean Pierre Toledo
(Laboratory of Technology in Fisheries
and Aquaculture – Pontificia Universidad
Católica de Valparaíso)

"Modeling in suspended culture APE systems".

