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## Researcher Marcelo San Martín participates in "Sustainable fisheries and zero discard" virtual talk

IFOP researcher, Marcelo San Martín, participated as a guest speaker in a virtual table called "Sustainable Fisheries and Zero Discard", organized by Uruguayan NGO OceanoSanos. This instance is part of a series of activities organized by that institution, aimed at creating awareness among citizens about marine ecosystems care and fisheries national and world situation. Since its creation in 2017, this NGO has surveyed these issues both in Uruguay and in the Southwest Atlantic area.

Marcelo San Martín presented a global overview of worldwide discards and bycatches problem of their impact on fisheries sustainability, highlighting the chilean experience, explaining the Discard Law implementation context in our country and the process that has been carried out in terms of research, regulation and oversight. Along these lines, San Martín highlighted the importance of monitoring fisheries through scientific observers and the vital need of countries to have on board catches records and not just what is landed; In addition, he gave

Editorial committee Luis Parot D. / Executive Director Gabriela Gutiérrez V. / Journalist

Graphic design Mario Recabal M. / Senior graphic designer



examples of up to date obtained results, on discards and bycatch of demersal fisheries research program that has been carried out by IFOP, and how these have been a fundamental part in discards reduction, from users consciousness changes and subsequent measures adopted at national level by competent institutions.

Regarding his participation in this meeting, Marcelo San Martín commented: "it seems very relevant to me that neighboring countries are making progress in addressing discarding and incidental fishing problem in their fisheries; Without a doubt, it was a pleasure to receive the invitation to share the progress that we have had in the process that we have carried out in Chile. "

In accordance with the above, for IFOP researcher, "this type of instance gives the







possibility of promoting collaborative work –in this case associated with discarding-, contemplating that, although it is true, all fisheries have different realities, there are usually common problems. "It is important to share experiences so that other countries can take the hits and also learn from the mistakes when implementing their own programs aimed at addressing the local problem of the case."

Fishing captain and representative of the Argentine Association of Pilot Captains and Fishing Skippers, Jorge Frías, also participated in the instance, explaining the vision of their union on the subject.

More than 70 listeners linked to the fishing sector and renowned researchers from Uruguay, Argentina, Brazil, Mexico and Chile participated in the virtual table. The conference highlighted the vision and results shown in the Chilean presentation, highlighting the need to rescue the successes when applying them in their respective countries.

### Abate Molina Scientific ship set sail to investigate common hake

On July 25th, Abate Molina scientific ship, from Fisheries Development Institute, set sail from Valparaíso's port to assess common hake stock, through hydroacoustic method, between the northern limit of the Coquimbo Region and the Lagos. The scientific journey will last 42 days, the captain of the ship is Enrique Quiero.

Luis Parot Donoso IFOP Executive Director explained "It is a cruise that uses acoustic methodology which basically is to record via sound waves that are calibrated to identify certain species, in this case common hake, is supported by fishing sets that also allow taking biological samples of the resource, such as; sexual maturity, number of females, males, sizes, ages, which provides us with having the necessary database to then apply the statistical and mathematical models which allow us to recommend conclusions or measures for fisheries management and administration to the sectoral authority "



## New crab fishery work guidelines are planned by INDEP and IFOP

Researchers from both organizations discussed different knowledge areas in which each group is working and looking for joint vision points from which a work agenda will be generated.

In order to continue advancing in a series of workshops on crab fishery (Lithodes santolla) that began in 2017, researchers from National Fisheries Research and Development Institute (INIDEP) and Fisheries Development Institute (IFOP) from Chile, held during the last few hours a virtual meeting.

This cooperation is based on the framework of an existing agreement that has stands for several years between both institutions. In the last days, Benthic Crustacean Fisheries Program members, together

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with Trans-Andean institute scientists, discussed different areas of knowledge in which each group is working and looking for common points from which a work agenda can be generated.

Participant researchers from INIDEP were Lic. Carla Firpo, Ing. Cecilia Mauna and Tec. Valeria Mango, while IFOP was represented by scientists Erik Daza, Eduardo Almonacid, Ruth Hernández and Cristian Vargas.

So far, main research lines focus on fishing gear modifications in order to reduce non-commercial crab discard and marine mammals interaction. In this sense, Benthic Crustacean Fisheries program has carried out numerous experiences and studies on escape rings application in spider crab traps and how their operation notably reduced juveniles and females discard, as well as the accompanying fauna.

Justamente, en el INIDEP se continúan los estudios sobre la efectividad del paño de inactivación de las trampas a fin de evitar la pesca fantasma. Asimismo, existe un convenio del Instituto con la Universidad Nacional de Mar del Plata (UNMDP) que enmarca las acciones tomadas en lo referente a las interacciones con mamíferos marinos.

On their side IFOP, have made progress in some aspects, such as filming displayed seabed performance, an activity that is also planned to take place in Argentina.

Future meetings and research to be carried out in the future show scientists interaction enrichment, in benefit of a common fishery resource for both countries.

News source: INIDEP



# **Ifopino** IFOP Cabo de Hornos vessel conducts a research cruise on southern tail and threefinned hake

Between August 2nd and 31rd a team of professionals and technicians from Fishing Develpment Institute (IFOP) led by Fishing Engineer, Javier Legua, boarded the Chilean Navy scientific ship AGS-61 "Cabo de Hornos", to assess southern, tail and three-fin hake spawning stock in outer waters between Los Lagos and Aysén regions in order to generate biological data, such as size, age, sexual maturity, feeding and accompanying fauna, in addition to the resources's status



Legua explained that one of the procedures that will be used to evaluate these resources is the hydroacoustic method "acoustics, it is a technique that applies sound and its properties in water masses study.

To get information, it uses a device called an echo sounder, which works with a transmitter and receiver for sound signals. This device emits acoustic waves that travel in water, colliding with all the organisms and particles that it finds in its path; each one of these obstacles that sound waves encounter emit an echo that when received and with a data collection program is translated into images called echograms that represent the underwater ecosystem "

IFOP staff is made up of 15 people, 6 Scientific Observers, 3 acoustic researchers, 1 fishing captain and 5 crew plus Chilean Navy.

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# Highly migratory resources monitoringprogram, ecosystemic approach Workshop spread results, year 2019

On August 14th, and for the first time virtually, the Highly Migratory Resources Monitoring Program – Ecosystem Approach results were presented. Dr. Patricia Zárate, project manager, together with researchers Msc. Ilia Cari, Marine Biologist Ljubitza Clavijo and scientific advisers, presented the main results obtained from the analyzes and observations carried out during 2019, thanks to their work team which involves scientific observers, IFOP researchers and advisers from various universities.

Among guests attended by representatives of the Undersecretariat of Fisheries, Technical Scientific Committees, the National Fisheries and Aquaculture Service, national universities, NGOs and Fisheries Development Institute itself. Among main presented results were swordfish and pelagic sharks trajectories from the tagging program, combined with satellite and oceanographic information that provide new details on these species-migration cycles.

In addition, results of highly migratory resource fishery target species stomach content analysis were presented, which have provided information on trophic structure where these species coexist, contributing to an ecosystemic vision of these organisms in the Pacific Ocean. On the other hand, important aspects of the incidental fishing of turtles, birds and marine mammals were analyzed, as well as methodological aspects of abundance estimates of marine mammals that may be affected by fishing activity in the Chilean Exclusive Economic Zone.

Similarly, advances were presented in knowledge integrated analysis of of highly migratory resources based on fishery data, through models such as Ecopath with Ecosim (Ewe) and prediction models of the target species based on the most determining environmental variables. associated with their captures.





# Scientific Observers working in the Field







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# Ifopino



Gabriela Arteaga Fierro from Porvenir







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Álvaro Medina Mayorga from Caleta Barranco Amarillo (Punta Arenas)





# Ifopino



Jaime Vargas Oyarzo from Puerto Williams





