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## IFOP Director makes an exposition in the Senate Extreme Zones Commission

THE EXPOSITION AIMS TO REQUEST THE EXTREME ZONE BONUS RECOGNITION FOR THE INSTITUTION'S WORKERS

On July 22nd at Santiago's former National Congress, where the Senate Extreme Zones commission session was held, in which IFOP was represented by its Executive Director Luis Parot Donoso and institutional union leaders, all of whom agreed to request Senators the workers desire that is to be able to obtain the extreme zone bonus.

Luis Parot explained "We were invited to make a presentation of IFOP requirements first; an old request for workers to recognize allocation, zone which is common in public officials, but Fisheries Development Institute which operates as a private law corporation of the Chilean State whose budget at 98% is obtained by state contribution, the only way you can obtain this recognition is to authorize it to be incorporated into the budget expenses. Se-



cond, for the interest of the commission to know research requirements associated with Antarctic extreme areas, especially with the development strategy that Chile is opting against international progress existing in the Antarctic territories, which are the planet natural reserve areas and that have a special logistics and agreements to address it".

Senator Kenneth Pugh added, "We have to understand that people who work in extreme areas need to have a differentiated salary and the state has worried about it, so there are extreme zone bonuses for public officials, we don't want differences, people's expectations are to be able to work well and that is why we have to take care of

**1**

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## IFOP researcher presented an exposition about anagement areas at an international event in England

THE ENVIRONMENTAL ECONOMISTS AND RESOURCES EUROPEAN ASSOCIATION (EERE) ANNUAL CONFERENCE IS ONE OF THE MAIN GLOBAL MEETINGS ON THE SUBJECT, AND BRINGS TOGETHER MORE THAN 700 ECONOMISTS FROM FIVE CONTINENTS, RAISING CURRENT ISSUES AND METHODOLOGY APPLIED IN RESOURCES AND ENVIRONMENTAL ECONOMIC ANALYZES

Between June 26th and 30th, Pedro Romero, IFOP researcher, participated in the 24th European Association Environmental and Resource Economists Annual Conference (EERE), held in Manchester, England. Together with Professor Oscar Melo, from Pontificia Universidad Católica de Santiago, they presented the topic entitled: Can the management model based on Territorial Use Rights (DUT) make a difference in fishing communities? AMERB in Chile. which, through the application of counterfactual models (Difference matching), evaluated administrative measure's impact on the generation of economic benefits that encourage benthic resources rational use and conservation.

Pedro Romero is a Fishing Engineer, Master in Aquatic Resources Management, Fisheries and Aquaculture Economics, and Master in Economics of Agricultural and Environmental Resources. In recent years he has worked as a researcher at the Management Areas department, mainly focusing on economic, socioeconomic and organizational analysis and evaluation performance of administrative measures, previously mentioned.



the living costs that are much higher in the extreme areas, what we are looking for is a formula in such a way to reach an adjustment and thus be able to balance and that all remain in the same conditions, besides the work carried out by IFOP is irreplaceable Chile needs more quality fisheries research we have to understand that there are foods at sea that allow us to better feed the population”.

Senator Carolina Goic commented “In extreme areas we have a higher cost of living, we have been recognizing it for some levels a few years ago for the universities of the council of rectors that are located at extreme areas in the north and south, in education and for public officials the percentage of extreme areas is recognized so we wonder why for people who work at IFOP it cannot be contemplated.

It is to recognize the importance of research and the challenges of climatic change, global challenges and oceans value, fisheries research, the whole issue of ocean protection that our country leads and that is not possible without the professionals behind it”.

Alejandra Valdevenito, IFOP, United Regions Union president added “We are very happy that the commission can listen to us today, the main arguments of the petition are to strengthen our institution and to shorten existing gaps as workers in extreme areas due to the high cost of life rent, food transport that makes life more expensive”.

Lorena Canales, the National Workers' Union President, declared “Today I represent 334 IFOP workers as we have an alliance with the Puerto Montt union with whom we bargain collectively and together we are asking since years ago that our partners recognize the benefits of the Extreme Zone Law in both the north and south of our country, we also hope that the extreme zone bonus can be delivered as soon as possible”.



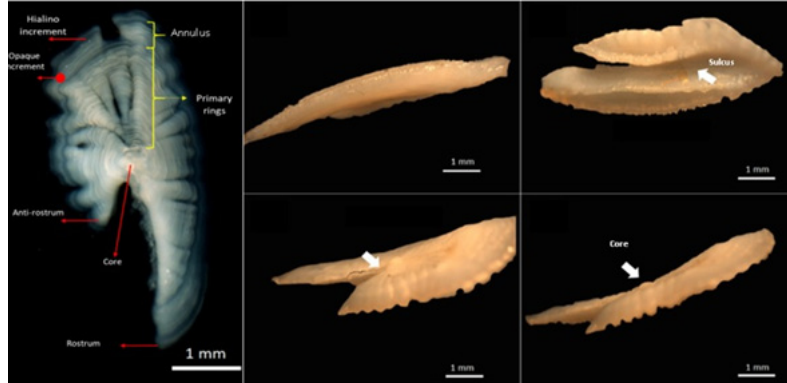
# IFOP is part of Sclerochronology International Conference in Croatia

SCLEROCHRONOLOGY IS THE STUDY OF PHYSICAL AND CHEMICAL VARIATIONS IN HARD TISSUES OF ORGANISMS, SUCH AS; MOLLUSCS, CORALS AND OTOLITHS IN FISH AND THE TEMPORAL CONTEXT IN WHICH THEY WERE FORMED. ITS MAIN RESEARCH FOCUSES ON GROWTH BANDS AND THEIR RELATIONSHIP WITH ENVIRONMENTAL FORCING AT DIFFERENT TIME SCALES

Entre el 16 y el 21 de junio del 2019 se realizó la Between June 16th and 21st, 2019, the Fifth International Sclerochronology Conference was held at Split – Croatia. From Chile the Fishing Development Institute professionals Guillermo Moyano and Lizandro Muñoz presented their work “Age and growth of the fish: Reineta (*Brama australis*) in the south-central area of Chile” by Guillermo Moyano. “Stereoscopic vision of otoliths through micro-photogrammetry” by Lizandro Muñoz. Being the only participating South American delegation.

“Among the Conference main activities, was to know the latest techniques of otoliths samples preparation and analysis , valves and corals, in addition to statistical methods used in each of the exposed works. Ideas were exchanged and cooperation was generated with other laboratories, in order to acquire new tools to develop at IFOP age and growth laboratory “explained Moyano.

Lizandro Muñoz stressed “another objective was to disseminate and encourage attendees participation to the next” Otoliths International Symposium



“to be held in Chile in 2022, which will be organized entirely by the Fisheries Development Institute”.

Guillermo Moyano and Lizandro Muñoz belong to IFOP age and growth section where they perform analysis and research functions in age and growth for different Chilean fishery resources in the Comprehensive Advisory Programs for Decision Making in Fisheries and Aquaculture.

## Global study in artisanal fisheries will provide vital information according to the United Nations

THE PROJECT IN CHILE IS LED BY THE HEAD OF THE IFOP ECONOMICS SECTION, ELIZABETH PALTA AND RESEARCHERS ANDREA ARAYA AND JOHANNA ROJAS

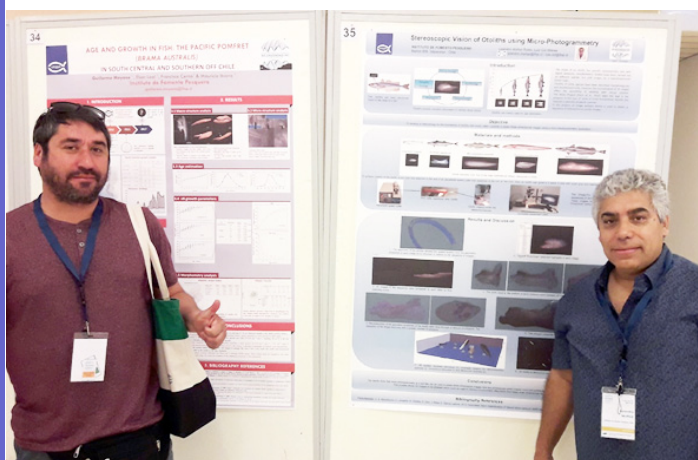
The study entitled “Illuminating Hidden Harvests” is being prepared by Duke University, FAO and WorldFish, while the Chilean component is developed by the Fisheries Development Institute.

The UN report states that, through a better understanding of small-scale fisheries, the study “Illuminating Hidden Harvests” will promote policies and programs that will build resilience in the sector to face the dual challenge of globalization and climate change. Therefore, it is critical to ensure that small-scale fisheries – which employ 90% of global fishworkers, many of them in developing countries – are carried out in a productive, sustainable and equitable manner.

The study is expected to be “the most extensive collection of information available up to date on the various contributions of small-scale fisheries in communities and countries around the world,” says the United Nations report. This will help fill cri-



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tical knowledge gaps about small-scale fisheries, particularly in relation to their economic, environmental, social and governance contributions.

Precisely, “in the case of Chile, surveying national artisanal fisheries contributions in the framework of environmental, social and governance aspects is a matter that has not been addressed with a systemic vision and with a documented methodology. IFOP contribution to this study, therefore, will have a specific value for national fisheries policies,” says Elizabeth Palta, head of Fisheries Economics section of IFOP. Meanwhile, Carlos Montenegro, head of Fisheries Assessment Department added “In addition, this study will provide relevant information to support the implementation of Voluntary Guidelines to achieve FAO small-scale fisheries sustainability.

## IFOP: Presented Anchovy and Common Sardine Eggs Stock Spawning and Biomass Results of in Chile

On June 28th, at Valparaíso’s Natural History Museum auditorium, the Fisheries Development Institute Oceanography and Environment Department, presented results of three spawning stock evaluation projects through the anchovy eggs production daily method between Arica and Valdivia and common sardine between Valparaíso and Valdivia.

It counted with the presence of exhibitors from Fisheries Development Institute, Universidad Arturo Prat, Universidad de Concepción, Universidad de Valparaíso and Pontificia Universidad Católica de Valparaíso. Among the attendees were representatives Economy Ministry, Fisheries Undersecretary, Scientific Committees and Management Com-

mittees. These projects bring together the work of more than 50 people, including researchers, technologists, laboratory analysts, crew members and marine biology and oceanography undergraduate and postgraduate students. In addition, it is important to highlight the important sampling effort involved in these projects, since the operation of research and fishing vessels covered almost simultaneously more than 185,000 km<sup>2</sup> in the EEZ, where 1653 oceanographic stations and egg collection were carried out, while that in parallel fishing vessels made 120 scientific fishing hauls whose samples did not exceed 4 kg per set.



The main results showed that spawning period (August-October) of 2018 occurred under normal or neutral local environmental conditions, after an intense El Niño Event 2015/2016 and a subsequent event La niña 2017. In the North zone (Arica -Coquimbo) the biomass of spawning stock and eggs of anchoveta recovered with respect to what was observed in 2017 and reached levels as important as those observed only 6 years ago (2012), although with anchovies of smaller size compared to the historical average, situation that it has been repeated since 2007. On the other hand, in the south-central zone (Valparaíso-Valdivia), the recovery of anchoveta spawning abundance was consolidated in localized foci, although in general there was a decrease in common sardine eggs abundance. These projects are part of Strategic Projects Portfolio executed by IFOP for Chilean State within the framework of “ Fisheries and Aquaculture Comprehensive Advisory for Decision Making” (ASIPA) and its importance lies in establishing a health state of small





pelagic populations, a key resource that sustains part of the national extractive activity.

Within this context and with the advancement of knowledge, these evaluation projects have been incorporating necessary elements of scientific research to understand environmental changes distribution and abundance of these important resources. In fact, the head of the Department of Oceanography and Environment, Dr. Jaime Letelier, said that "it is vital to consider these resources as organisms whose life cycle occurs within ecosystems that are being affected by long-term environmental processes such as Climatic Change, which would have a long impact on the present and future sustainability of the Industrial and Artisanal fishing activity.

## IFOP conducts talks with schoolchildren from Caleta Andrade and Puerto Aysén

IN CARLOS CONDELL AND SANTA TERESA SCHOOLS

A team of professionals from Fishing Development Institute traveled four hours on a catamaran from Aysén to Caleta Andrade, to give a talk at Carlos Condell school, about Aysén region's coastline characteristics from different points of view: its richness in species, geomorphological, oceanographic aspects and its commercial activities.

Yessica Robles, IFOP researcher spoke with children about the island's marine fauna "Many times when we talk about marine fauna, we only think of fish and aquatic organisms, however, there is a great diversity of other species, the invitation was to expand focus by observing what surrounds us".

María Fernanda Cornejo, a marine biologist from the Institute, talked with the students about diffe-



rent economic activities that take place in Huichas area around the sea, and how scientific research is done to improve the way these activities are carried out in a sustainable manner. minimizing impacts.

Romanet Seguel Rojas, added "I told them about our Aysenino coastline particularities , with emphasis on the region geography formation, what they are and how fjords and channels were formed, what are their differences and characteristics from circulation point of view and about biodiversity found in these areas. The reception of the students and the professors was positive, which granted us the possibility of taking advantage of this instance, offering the talk about our coast also to the faculty".

"We appreciate your effort to move to this place so far away from urban centers, to share with our educational community at Carlos Condell School, along with the professional experience of their discipline, it helps us to understand our place from a broader perspective" added Carolina González, Teacher of the environmental committee, Carlos Condell School.

Another talk was held at Santa Teresa School in Puerto Aysén, " Fjords what they are?". "In the instance we talked about how our region was formed and what characteristics make it particular, its importance in species biodiversity and productive development impact on these ecosystems.

In this way Fisheries Development Institute contributes to Aysén commune and the coast to bring scientific knowledge to the community "concluded Romanet Seguel.



# IFOP Talcahuano develops workshop for scientific observers

THE ACTIVITY WAS ATTENDED BY SCIENTISTS FROM UNIVERSIDAD DE CONCEPCIÓN

During two days at IFOP headquarters in Talcahuano, a workshop was held for its workers in order to share experiences, update knowledge of scientific observers and researchers.

Jorge Cornejo, head of Talcahuano headquarters explained: "Due to the need of continuously innovate and improve in areas related to dissemination and training in fisheries, environment issues for scientific observers and all the existing staff, the Scientific-Technical Development (CODECITEC) Committee is created at Talcahuano headquarters. This committee is made up of 15 people, including scientific, administrative, and scientific observers, and is directed by Danilo Oro, Judith Castillo and Aldo Poblete. The organization of the scientific-technical workshop is among this committee's objectives.

The workshop first day, scientific exhibitions were held, while the second day, classes and workshops were held about different fishing fields of interest. While the activity was done attendees were able to enjoy, an exhibition about marine animals activity that was facilitated by Universidad de Concepción zoology museum.

Danilo Oro, committee's chairman, points out "it is a continuous effort, where we can say that in our workshop fourth version things have improved remarkably, establishing links with other institutions. This has been generated by the participation and teamwork of the people who make up the committee and the availability of Talcahuano headquarters to collaborate in this type of activities".

Universidad de Concepción guests were, Margarita Marchant, Dean of Natural and Oceanographic Sciences Faculty, with a talk about foraminifera and its importance as indicator organisms; and Profes-



sor Eduardo Tarifeño, who presented the history of technical and university education in marine sciences and shared his experience as a permanent member of the National Fisheries Commission.

The presentations of Talcahuano IFOP headquarters workers were an excellent opportunity to disseminate the work done in the institute. The speakers included researchers, field coordinators; scientific observers; Ruth Hernández, Cristian Villouta, Camilo Mardones, Aldo Poblete, Heraldo Álvarez, Hans Rojas, Judith Castillo, Danilo Oro, Braulio Acuña.

Classes and workshops were developed in different topics focused on marine species identification (fish, mammals, birds, mollusks, crustaceans and reptiles) and description of main resources closures in our area. These topics are fundamental for our scientific observers formation and continuous improvement. Finally, the workshop ended with a review of our headquarters updated emergency plan".

A Photography contest was held during the workshop, as part of the activities scheduled for the 55th IFOP Anniversary Celebration. The photographic contest consisted of three categories: nature, work in the field and playful work. The photographs will be kept on permanent display in the IFOP building in Talcahuano.

Finally, Cornejo added "I congratulate our workers from Talcahuano headquarters, who, through the formation of the organizing committee, have managed and carried out the workshops successfully. I thank all the participants for sharing their work. In the future we will send information to organize the V version of the Talcahuano IFOP Internal Workshop, to which we will invite the entire IFOP community to participate".

