



IN THIS NUMBER

- 1990-1994 Former IFOP's Director Patricio Bernal passed away **1**
- IFOP Director visits Puerto Montt, Aysén and Punta Arenas headquarters **2**
- Brilliant participation of Chilean delegation in sea turtles international activity **3**
- Socializing and improving technological tools for scientific information transfer to monitor Climatic Change and its effects on small-scale fisheries and aquaculture **4**
- Fisheries Development Institute will build new headquarters in Iquique **5**
- IFOP Arica has an outstanding participation in the 2022 science and innovation fair **6**
- IFOP Scientific researchers visit to Japan **7**
- IFOP participates in the 2022 Science Festival in the Magallanes Region **8**
- IFOP attends sharks, rays and chimaeras international meeting **9**

1990-1994 Former IFOP's Director Patricio Bernal passed away

With deep sadness, Our IFOP family bids farewell today to whoever was its Executive Director, between the years 1990-1994, a prominent marine biologist and oceanographer, his IFOP colleagues; We remember him as a very intelligent, charismatic and, above all, hard-working man, always aware of everything he had to do with the progress of marine science research.

Generous in his knowledge, professor of many professionals who today work in the area of fisheries and aquaculture research, his closest ones remember him as a very cheerful and supportive man.

A brilliant professional, recognized by his peers, he held various relevant positions, he was Undersecretary of Fisheries and Aquaculture, professor at Pontificia Uni-



versidad Católica de Chile, in the United Nations he was Deputy Director General of UNESCO and Intergovernmental Oceanographic Commission Executive Secretariat, External Member of the Academy of Sciences of the Russian Federation, for his contributions to the study of the El Niño phenomenon

He was working as Scientific Advisor (2019-2022) for the Oceans and Atmosphere team of CSIRO Chile.

Don Patricio, boss, teacher, colleague and friend, we will remember you forever, for the enormous work you did in our Institution.



Editorial committee

Gonzalo Pereira P. / Executive Director
Gabriela Gutiérrez V. / Journalist

Graphic design

Mario Recabal M. / Senior graphic designer

IFOP Director visits Puerto Montt, Aysén and Punta Arenas headquarters

From September 28th to 30th, IFOP Director, Gonzalo Pereira Puchy, toured IFOP's Puerto Montt, Aysén and Punta Arenas headquarters; on the occasion, IFOP's highest authority held meetings with the institution's workers and with regional authorities.

The Board of Directors was held in Puerto Montt, in which the head of the Aquaculture Research Division, Dr. Leonardo Guzmán, presented to councilors the division's current development, gaps and medium-term projections. In addition, the council became aware of the facilities and means available to address institutional tasks, councilors visited the land on which the new IFOP Puerto Montt headquarters will be built.

Gonzalo Pereira, with Claudio Maggi, President of IFOP Council, met with IFOP Puerto Montt Union leaders.

In Aysén he met with; Aysén Presidential Delegate, Dr. Rodrigo Araya Morales, Oscar Henríquez Sepúlveda, Zonal Fisheries Director, Jorge Salfate, Aysén Provincial Presidential Delegate, and Puerto Aysén Mayor Julio Uribe, to coordinate joint pro-



jects and research for Aysén region linked to our institution's work.

In Aysén, an agreement was also signed to create a photobook, called Mujeres de Mar, which highlights women's work in artisanal fishing with photographs.

In Punta Arenas, the workers, together with Erik Daza headquarters's head held a presentation called: "Strengthening Strategic Research for Fisheries and Aquaculture Sustainable Development Challenge in Magallanes and Chilean Antarctic Regions, Fisheries Development Institute role". The objective was to show a diagnosis of the current state of fishing, aquaculture, Marine Protected Areas and the systematic research work that IFOP has carried out during the last 10 years in the region through the application for competitive funds (FIPA, FNDR, FONDEMA, WALTON) and the ASIPA Program, including a vision regarding human capital, strengthening, infrastructure and linkage. In this instance, professionals from Puerto Natales and Porvenir were also able to participate electronically, generating a conversation with Executive Director Gonzalo Pereira, Assistant Executive Directorate for Cooperation and International Affairs Daniela Díaz and Head of Information Technology Department Jaime González.



Brilliant participation of Chilean delegation in sea turtles international activity

THIS ACTIVITY WAS HELD IN ECUADOR, IFOP ATTENDED REPRESENTED BY DR. PATRICIA ZÁRATE IN HER CAPACITY AS A MEMBER OF THE TECHNICAL SCIENTIFIC COMMITTEE OF SEA TURTLES OF SOUTHEAST PACIFIC OF SOUTH PACIFIC PERMANENT COMMISSION (CPPS)

These activities will bring together technical scientific committees delegates from Panama, Colombia, Ecuador, Peru and Chile.

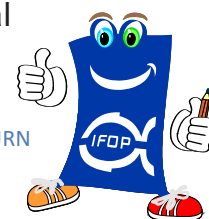
Regional Workshop “Marking of Sea Turtles in the Southeast Pacific” was held on October 3rd and 4th, at Pachoche Coastal Marine Wildlife Refuge, in Manabí Province Ecuador.

Dr. Zárate explains that the workshop’s objective is to have a standardized marking methodology for the region. The marking itself consists of placing an identification mark, which can be external, such as a metallic mark, or an internal one, such as a microchip, of the same type that is placed on pets. Currently, not all the projects that are being carried out do the marking in the same way, as an example, there are those who install the external marks on the front fins and others on the rear ones, which implies that on some occasions it could be thought that a turtle is unmarked if only the front flippers are checked, and the same can happen with a microchip placed in a different location.



In addition to the work that we will do to review each country used techniques and to determine methodology standard, we will have the opportunity to visit San Lorenzo nesting beach where we will put this methodology into practice on its sea turtles population which are nesting there, thus being able to determinate its possible problems or effects. It is extremely important, mentions Dr. Zárate, to have same tagging methodology in the region, considering that we want to evaluate the population trends of each species of sea turtle and their connectivity.

Dr. Zárate mentions “the second activity to be held on October 5th in Manta is the IV Technical Scientific Committee Meeting for the 2022-2023 biennium. “This committee represents the technical advisory body to implement the Southeast Pacific Regional Program for Sea Turtles Conservation and in this session



the tagging workshop results and guidelines to be followed will be evaluated and discussed, which should consider potential problems and recommendations for collecting minimum tagging data at regional level. Another aspect of the agenda considers a regional database creation where each party country will register their tags used in each species monitored in their country, whether in feeding or nesting areas. Dr. Zárate adds “the creation of this regional database will help us improve our current knowledge regarding the connectivity of sea turtles in the region of the commission”.

Socializing and improving technological tools for scientific information transfer to monitor Climatic Change and its effects on small-scale fisheries and aquaculture

THIS SUCCESSFUL WORKSHOP WAS ORGANIZED BY EDF AT PALACIO ASTORECA MONTEALEGRE HOTEL, LOCATED AT CERRO ALEGRE 149, VALPARAÍSO, ON OCTOBER 5TH AND 6TH, 2022, VALPARAÍSO, CHILE.

Within the framework of Learning Network, Artisanal Fishing -Chile “The sea and fishing challenges facing climatic change (CC)” 8th Workshop. Dr. Jaime Letelier, Fishing Development Institute’s Oceanography and Environment Department’s head showed advances of “An ocean war-



ning, prediction and observation system”. This IFOP’s developed system contributes to public data integration from Eastern South Pacific for CC monitoring in such a way as to deliver complementary scientific information to fishermen and sector decision makers. In addition, it favors a gap reduction in integrated environmental and biofisheries information access. On the other hand, IFOP CC Monitoring System contributes to and is an active part of a multinational system “Warning, Prediction and Observation System (S.A.P.O.) for fisheries resilient to climatic change in Humboldt Current Great Marine Ecosystem” that It is coordinated by the Environmental Defense Fund (EDF), and in which, in addition to IFOP, Peru Sea Institute (IMARPE) and Ecuador’s Aquaculture and Fisheries Research Public Institute.

The workshop was attended by representatives from Subpesca, Sernapesca, IFOP, CONAPACH, CONFEPACH, Artisanal Fishermen Organizations, Leaders, NGOs, Consultants, Academia and others, and gave the opportunity for potential users to give their opinion and generate a current system improvement instance projecting the new system utilities.





Fisheries Development Institute will build new headquarters in Iquique

IT WILL BE A MODERN 2-STORY BUILDING OF 951.52M², LABORATORIES FOR PRE-SHIPMENT ANALYSIS OF FISHMEAL, ICHTHYOLOGY AND OCEANOGRAPHY LABORATORIES.

The new regional headquarters of the Fisheries Development Institute will be located in the Primeras Piedras sector, Iquique. It is a maritime concession located on a plot of 3,285.44 m², which was delivered by the Maritime Authority to the Fisheries Development Institute until December 31st, 2041.

Gonzalo Pereira Puchy, IFOP's Executive Director traveled to the region to talk with the IFOP Iquique headquarters's workers and to learn about the physical space in which the new regional headquarters will be installed.

Roxana Urrutia Lemus, IFOP Infrastructure Section Head, explained the project's objectives: "To build the new IFOP facilities in Iquique, with appropriate infrastructure for research development in fisheries and aquaculture field. To promote fishing activity's sustainable development. To advise different entities on fishing activity".

Project description;

Construction of a 2-story building of 951.52m², including a side well for scientific equipment use

of 851.52m² approx. and beach equipment on the first level and 100m², on a plot of 3,285.44m²

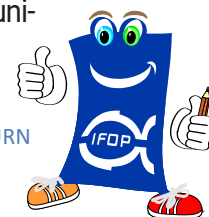
Facilities such as; guard area, reception, dining room, bathrooms, wet laboratories and fishmeal, plankton, chemical and ichthyology analysis; preparation room, work spaces, meeting rooms, common spaces, areas designed for the community, multipurpose room, terraces, among others.

Eliana Escudero IFOP Head in Iquique's headquarters commented "We are very happy as Iquique headquarters, since we will finally have a space in accordance with our activities. The staffing of both researchers and Scientific Observers has increased in recent years, which is why more space is required for our laboratories and thus cover other lines of research.

spaces, areas designed for the community, multipurpose room, terraces, among others.

Eliana Escudero IFOP Head in Iquique's headquarters commented "We are very happy as Iquique headquarters, since we will finally have a space in accordance with our activities. The staffing of both researchers and Scientific Observers has increased in recent years, which is why more space is required for our laboratories and thus cover other lines of research.

We will have state-of-the-art laboratories, professionals in Oceanography and the Environment area and spaces to integrate the community since we will be part of the project that the Illustrious Municipality of Iquique has for that sector".



IFOP Arica has an outstanding participation in the 2022 science and innovation fair

Within the framework of a new version of the Science Festival, organized by the Explora Arica and Parinacota Regional Associative Project (PAR), the Science and Innovation Fair was held on October 7th in Punta Norte Park, whose motto this year It was “Every drop counts”.

This instance, which every year brings together in one place different institutions linked to scientific, technological and educational activities, during its inauguration was attended by the North Macrozone’s Sciences SEREMI Mr. Rubén Moraga, along with other regional authorities They welcomed the attendees and thanked the different institutions that participated in the activity, including the Universidad de Tarapacá, CONAF, SERNAPESCA, IFOP, Arica Municipality and various civil society groups.

The aforementioned institutions, through interactive stands, sought to bring science, knowledge and innovation closer to the attendees in an entertaining and playful way. The Fair received a large number of visitors, mainly represented by elementary and middle school students from various schools in the region, and was also attended by neighbors from the northern sector of the Arica commune.

During the activity, Fisheries Development Institute (IFOP) stood out with an interesting and striking stand, which included audiovisual material and samples of various hydrobiological species, which surprised children, youth and adults. The stand was in charge of researchers and scientific observers from



the Regional Headquarters, who, together with announcing a sample with some species present in the region and explaining relevant aspects of their morphology, behavior and advances in monitoring technologies, also highlighted the important role that we all have, in caring for the environment and especially our water resources. Since the latter, depending on their availability and quality, enable the ecological balance in the different ecosystems, which provide the necessary sustenance for life, even in extremely fragile environments such as rivers and lakes located in arid zones and also in systems highly dynamic and productive, such as the coastal areas of northern Chile.



IFOP Scientific researchers visit to Japan

ALSO AS PART OF THE TOUR, THE DELEGATION HAD THE OPPORTUNITY TO PRESENT THEIR EXPERIENCE OF JOINT WORK BETWEEN CHILE AND JAPAN TO THE CHILEAN AMBASSADOR IN THAT COUNTRY, RICARDO ROJAS, HIGHLIGHTING RELEVANT ASPECTS OF MACH'S RESEARCH.

Between September 30th and October 9th, integrating a delegation that also included Universities of Antofagasta, La Frontera and Los Lagos academics, researchers Drs. Leonardo Guzmán and Oscar Espinoza, Fisheries Development Institute (IFOP) Aquaculture Research Division and the Harmful Algae Research Center heads, respectively, made a scientific visit to the University of Hiroshima and Japan Fisheries Agency in Yokohama, in addition to holding working meetings with executives from Japan's International Cooperation Agency (JICA) and Japan Science and Technology Agency (JST).



The visit was made within Monitoring of Harmful Algae in Chile (MACH) research framework and with JICA contribution. The opportunity was propitious to know research's progress status which is in its final phase, and which ends in March 2023. The hosts of this scientific visit were Japanese researchers Dr. Fumito Maruyama from the University of Hiroshima, Dr. Shoko Ueki of Okayama University and Dr. Satoshi Nagai of the Japan Fisheries Agency.

As part of carried out activities there was the opportunity to participate in two seminars, in which Drs. Guzmán and Espinoza, presented contributions related to the work that is being carried out in Chile in relation to harmful algal blooms (HAB) issue as well as exchanged experiences with researchers from visited centers and regarding their work orientation on their current activity on Fan and marine toxins themes in Chile.

During the stay at University of Hiroshima, the opportunity was used to evaluate joint work 's potential with Dr. Saori Kashimi, Planetary Health and Science for Innovation Center Director (PHIS).

RETURN



IFOP participates in the 2022 Science Festival in the Magallanes Region

The Science, Technology, Knowledge and Innovation Austral Macrozone Seremi ministerial secretariat organized the Science Festival (FECI), a national, public and free celebration that aimed to position science, technology, knowledge and innovation in collective imagination as part of culture, also promoting its appropriation. This year the central theme was “Climatic Change”, with special emphasis on water, and the inaugural milestone was held in Punta Arenas.

On Sunday, October 2nd, starting at 10 a.m., the first “Plogging of Magellan, Running with Science through the Strait” was carried out, a massive family activity, which included a 4 km tour of one of the eastern beaches of the Strait of Magellan with the aim of collecting waste along the circuit. Once the bullfight was over, the attending public was able to visit the stands of knowledge-generating institutions in the Magallanes and Chilean Antarctica regions.

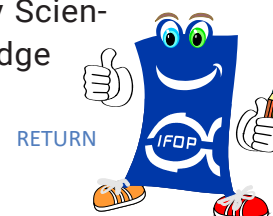
Fisheries Development Institute (IFOP), presented an interactive exhibition with its research programs in the region, with the aim of disseminating recent years generated knowledge on topics such as harmful algal blooms and emblematic fishing resources monitoring from the region such as spider crab, sea urchin and deep-sea cod.

Researcher Hernán Pacheco, Laboratory Analysts Carolina Toro, César Alarcón, Field Coordinators Alejandra Valdebenito, Jacqueline Parada and Scientific Obser-



ver Moisés Alegría actively participated in this instance.

In this regard, IFOP Magallanes Headquarters's Head Erik Daza stated: “I value IFOP team's that has participated in this instance willingness and professionalism, after more than 2 years we are once again participating in a face-to-face activity in which we can share with the Magallanic community IFOP's strategic research that has been carried out in this southern region, this initiative led by Science, Technology, Knowledge and Innovation Ministry”.



IFOP attends sharks, rays and chimaeras international meeting

IT REVIEWS REGIONAL ACTION PLAN THESE RESOURCES CONSERVATION AND MANAGEMENT.

The Regional Action Plan (PAR) for sharks, rays and chimaeras in the Southeast Pacific Scientific Technical Committee (CTC) XVI annual meeting was held in Bogotá cityf, Colombia, organized by the South Pacific Permanent Commission (CPPS), in which scientists and technicians from Chile, Colombia, Ecuador and Peru participated.

The meeting aims to facilitate knowledge and experiences exchange and to learn about member countries regional progress on RAP-Shark Regional Action Plan application. In addition, the link between CPPS and international organizations such as Inter-American Tropical Tuna Commission (IATTC) and South Pacific Regional Fisheries Management Organization (SPRFMO) was strengthened. In this regard, during this year there have been significant advances in the work of understanding and cooperation memorandum between these organizations. This meeting was attended by the Chilean delegation made up by Leslie Camila Bustos from Fisheries and Aquaculture Undersecretariat and Patricio Barría, Fisheries Development Institute researcher .

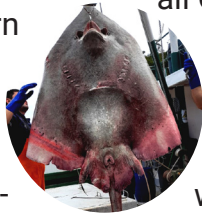
The Chilean delegation presented a memorandum of understanding and cooperation between the CPPS and the IATTC Work Plan proposal to initiate macro-scale South Pacific tile shark stock assessment. A joint



research that will have a five years duration period. This initiative was accepted and approved by the CTC-PAR-Shark assembly and considers participation of multidisciplinary teams of researchers and technicians from all CPPS countries and IATTC scientists.

During the annual meeting, the 2021-2022 period Regional Action Plan for Sharks was reviewed, by strategic line where new methodologies were announced to specify and optimize results; In addition, each of the countries presented their advances and progress. The strategic lines analyzed were: Research for planning and conservation; Fisheries management, species and ecosystems conservation and/or protection; Control and surveillance; Social and economic aspects; Training, communication and dissemination and strategic alliances.

Finally, Scientific Technical Committee's delegates recognized Shark PAR's significant progress and its impact on the various countries, as a mechanism for the conservation and management of sharks, rays and chimaeras, and their habitats in the region.



RETURN