MILLENNIUM INSTITUTE **OF NATURAL SCIENCES**

MILLENNIUM INSTITUTE OF **OCEANOGRAPHY - IMO**





The South Pacific Ocean is the planet's largest unexplored marine ecosystem. The inhabitants of its depths are virtually unknown. In addition, phenomena that occur in it impact our daily lives through their effects on, for example, the availability of natural resources, and climate, both locally and globally. But due to human activity such as burning fossil fuels, some physical, chemical and biological properties of the ocean are changing significantly, and we must understand and predict potential impacts. Chile, due to its geographical location and level of scientific development, can become a world power in Oceanographic Research.

The Millennium Institute of Oceanography -comprised of researchers (both established and newcomers), graduate students, technicians and engineers, and a multidisciplinary extension team- is committed to leading oceanographic research and education in the country, as well as to communicate findings and educate decision-makers and society as a whole, so that the relevance of the ocean to human welfare and global climate change can be understood, enabling conservation and responsible use.





- Successful first CONICYT research cruise, Lowphox I, led by the IMO, on board the vessel Cape Horn. This cruise focused on the study of waters with low oxygen and pH of the Eastern South Pacific.
- IMO participated in the CIMAR 21 cruise, which cut across from the coast to Easter Island, aboard the Cape Horn, with three projects led by its researchers. The main objectives of the cruise were to study the physical, biological and biogeochemical conditions of the ecosystem of the Eastern South Pacific basin.
- IMO also participated in the FIP Montes Submarinos cruise in the Juan Fernández Archipelago, directly related to the study of mesoscale processes.
- The ECODIM international course, won the annual prize 2015 for innovation in science education, higher education category, awarded by the Young Science Foundation with support from UNESCO.
- The documentary series "The Force of the Sea", developed by the extension director of IMO, won the Jury Prize at the IX Scientific Film Festival in Athens, Greece.

DIRECTOR: Osvaldo Ulloa

ACTING DIRECTOR:

Rubén Escribano







MAIN ACHIEVEMENTS

Contact email: Communications email: Telephone: Web:

contacto@imo-chile.cl pablo.rosenblatt@imo-chile.cl +56 41 2661266 www.imo-chile.cl

WWW.INICIATIVAMILENIO.CL

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RESEARCHERS

Principal Researcher: Osvaldo Iván Ulloa Quijada

Acting Principal Researcher: Heraclio Rubén Escribano Veloso

Assistant Researchers: Carolina Parada Véliz

Rodrigo De la Iglesia Cabezas Pablo Rosenblatt Guelfenbein Marcelo Oliva Moreno Víctor Villagrán Orellana Aldo Montecinos Gula Ricardo De Pol Holz Pamela del Carmen Hidalgo Díaz

Associate Researchers: Carmen Morales Van De Wyngard Peter von Dassow Wolfgang Schneider Cristián Vargas Galvez Samuel Hormazábal Fritz

Junior Researchers: Víctor Aguilera Ramos Marcela Cornejo D'Ottone Ali Reda Bel Madani Ramiro Riquelme Bugueño

Senior Researchers: Juan Carlos Castilla Zenobi Ger van den Engh

Alejandro Murillo Cordova Alvaro Muñoz Plominsky Pierre-Amael Auger Pedro Echeveste De Miguel Carlos Henríquez Castillo

Post Doctorate Researchers:

Frauke Albrecht Paulina Aguayo Venegas Sara Zamora Terol Deborah Steele

RESEARCH TOPICS

- Mesoscale Processes.
- Oceanic Variability.
- Adapting to a Changing Ocean.
- The Deep Ocean.

NOTED OUTREACH ACTIVITIES

- Itinerant Scientific Audiovisual Show: Exhibition of audiovisual products, alongside practical work for students of all three educational levels (first primary school cycle, second primary school cycle, high school), with the objective of raising awareness and new knowledge in children and young people concerning Marine Sciences, always relating the learning process to national curriculum contents.
- "Plunge: A journey across the Pacific Ocean", web platform on Marine Sciences, for children and youth, where users can access different "rooms," each representing a marine environment. In this way, we hope to motivate and delight audiences with the wonders of the Ocean, always emphasizing those environments associated to our country.
- "Tony Tonina's Scientific Recipe": san animated television series for young children from 6 to 9 years of age, offering scientific content linked to the national curriculum for science in the first primary school cycle.



HOST INSTITUTIONS:



