

MILLENNIUM INSTITUTE OF OCEANOGRAPHY IMO

Impact Area: Environment
Speciality: Oceanography

The South Pacific Ocean is the largest and most unexplored marine ecosystem on the planet. The inhabitants of its depths are practically unknown. Moreover, phenomena that occur there affect our everyday life through its defects, such as the availability of natural resources and the weather, local as well as global. However, due to human activity such as burning fossil fuels, some physical, chemical, and biological properties of the ocean are significantly changing, and we need to understand and predict their potential impacts. For its geographic location and scientific development level, Chile can become a world power in Oceanographic research.

The Millennium Institute of Oceanography (IMO) made up of researchers (established and young), graduate students, technicians and engineers, and a multidisciplinary extension team who are committed to leading research and Oceanography education in the country. Furthermore, with the dissemination of findings and educating to those who make decisions and the society as a whole for relevance that has the ocean for the prosperity of the human and the global climate changes to be understood, allowing the conversation and responsible use.

Research lines:

- Oceanic Variability
- The Deep Ocean

Millennium Institute



>> SCIENTIFIC PRODUCTIVITY:

219 high indexing publications.

*Data updated by Millennium
Centers to March 2021





>> CONTACTO

Director:
Osvaldo Ulloa

Deputy Director:
Rubén Escribano

Contact emails:
contacto@imo-chile.cl
pablo.rosenblatt@imo-chile.cl;
aida.granell@imo-chile.cl

Phone:
+5641 266 1266

imo-chile.cl



>> OUTREACH ACTIVITIES:

- Itinerant Scientific Audiovisual Exhibit (ISAE):** activity that arrives in schools with the aim of creating conscience and new knowledge in children and teenagers about the marine sciences.
- Dive in:** web platform that provides interactive multimedia contents with the purpose to make known the different marine environments associated to our country.
- IMO at school:** theoretical and practical workshops on topics associated with marine sciences, responding to the growing interest and concern from the docents to receive talks and workshops by scientists in their schools.
- ExploSub:** Science and Technology for Submarine Exploration: theoretical and practical workshops with students and docents from seventh and ten grade, about underwater robotic for the building of a scale prototype underwater vehicle.
- Tony Tonina's Scientific Recipe (www.tonytonina.cl):** It is a multi-platform project, which has educational animation series for children with an educational video game available to play online through the website; and a puppet show "Tony Tonina: Fins in Action".
- Documentary Film "Atacamex: Exploring the Unknown":** documentary that narrates the extraordinary feat achieved by IMO in 2018 during the homonymous expedition, which descend until the depths of the Atacama Trench. The aforementioned audiovisual piece has successfully travelled prestigious international festivals, obtaining in many of them various awards.
- Explorers, from atom to cosmos:** it is an original and innovative series in co-production with Canal 24 Horas on TVN.
- Ruka's Great Voyages":** it is a children entertainment series, based in the adventures of Ruka, a boy who is attracted by the underwater world.
- Experimenta, Kids Science:** it is a science outreach series where the main characters are children, who conduct interviews and experiments with Chilean scientists to answer scientific questions.

>> RESEARCHERS:

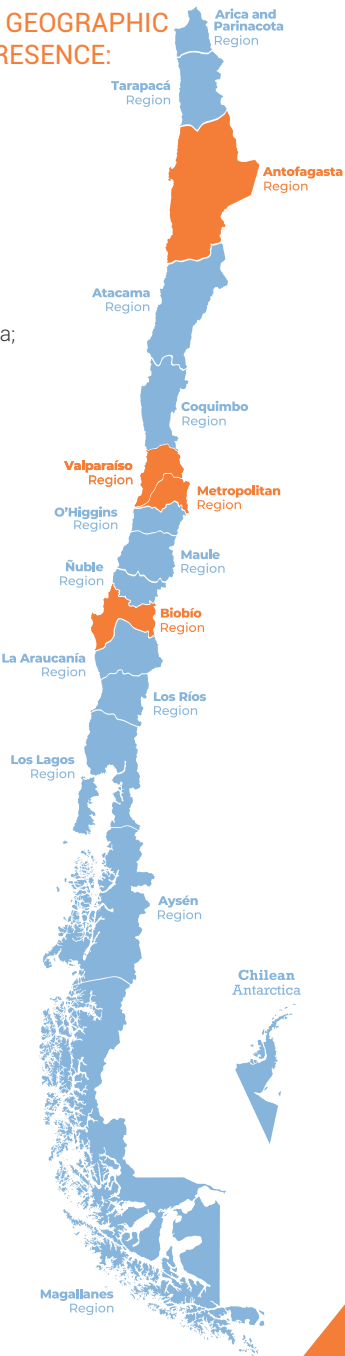
Associate researchers:
Peter von Dassow; Wolfgang Schneider;
Cristián Vargas Gálvez; Oscar Pizarro
Arriagada.

Assistant researchers:
Carolina Parada Véliz; Pablo Rosenblatt
Guelfenbein; Marcelo Oliva Moreno; Ramiro
Riquelme Bugueño; Marcos Moreno; Víctor
Villagrán Orellana; Víctor Aguilera Ramos;
Pamela Hidalgo Díaz; Giancarlo Troní Peralta;
Maija Heller; Julio Sepúlveda Arellano;
Mauricio Urbina Fonerón.

Junior researchers:
Marcela Cornejo D'Ottone; Maija Heller;
Montserrat Aldunate; Matías Castro; Katy
Donoso; Pedro Echeveste; Johana Medellín.

Senior researchers
Juan Carlos Castilla Zenobi; Gerrit Van Den
Eng; Samuel Hormazábal Fritz; Carmen
Morales Van De Wyngard.

>> GEOGRAPHIC PRESENCE:



>> MAIN ACHIEVEMENTS:

- IMO has conducted several oceanography cruises on board the Cape Horn ship, such as Lowphox and Lowphox II. These researchers focused on the study of low oxygen water and pH in the Eastern South Pacific. The participation of IMO in the CIMAR 21 cruise was also prominent, whose objective was studying the physical, biological, and biogeochemical conditions from the ecosystem of the basin of the Eastern South Pacific; and the FIP (Private Investment Fund) seamounts in the Arhipielago de Juan Fernández, related with the study of mesoscale processes.
- At the beginning of 2018, the Atacamex expedition took place, whose objective was the exploration of the Atacama Trench, where they managed to descend until a record depth of 8.081 metres. Moreover, on this same expedition for the first-time zooplankton samples at a depth of more than 5.000 metres was obtained.
- To confront the proposed challenges with Atacamex, IMO acquired unique cutting-edge technology in the whole Southern Cone made up of the lander "Audacity" and the multired "MOCNESS", which has allowed us to make a qualitative leap in its research.
- The platform "Sumérgete" was nominated in the comKids Interactive 2018 festival. Brazil as finalist in the best platform category. Moreover, it was also nominated in the Educación Antártica (Antarctic Education) category by INACH at the Antártica 2018 (Antarctic 2018) gala.
- "Experimenta: Science for Kids" was awarded in the Divercine International Film Festival for Children and Youth, 2018.
- "Ruka's Great Voyages" is ranked among the five most watched programmes by children in Colombia during 2018. Moreover, it obtained the recognition from the Zinetxiki Zinemaldia - International Film Festival for Children and Youth, Spain.