MILLENNIUM NUCLEUS OF NATURAL SCIENCES

MILLENNIUM NUCLEUS CENTER OF ECOLOGY AND SUSTAINABLE MANAGEMENT OF OCEANIC ISLANDS - **ESMOI**





The Millennium Nucleus Center of Ecology and Sustainable Management of Oceanic Islands (ESMOI) expects to generate the scientific basis necessary to strengthen a strategy of sustainable management and biodiversity conservation in the Easter Island ecoregion, including Easter island and Salas y Gómez island (Rapa Nui and Motu Motiro Hiva in rapanui language).

Rapa Nui and Motu Motiro Hiva are the most remote islands in the South Pacific Ocean. Oceanic islands and undersea mountain ranges have great strategic importance for Chile and the country's development because of its potential for tourism, fishing and the existence of unique biological resources.

This center studies the functioning of marine ecosystems in this ecoregion and its biodiversity, identifying the main threats. This is done with a multidisciplinary approach that includes studies in physical oceanography, biology, deep and shallow benthos, deep sea, predatory limits, population genetics, management and conservation, and citizen science. ESMOI researchers work hand in hand with the community to discover the secrets of the Rapa Nui Sea and propose strategies for resource management and conservation of marine ecosystems based on their worldview, the rapanui.





- Scientific advice for the creation of the Nazca-Desventuradas Marine Park following a Government decree issued in October 2015.
- First explorations to Sea Mounts and deep within the Ecoregion of Easter Island.
- Findings of new species for science on Sea Mounts Apollo and Pukao.
- Evidence of the impact of litter on marine ecosystems Ecoregion.
- First evidence of oceanographic and genetic connectivity between Motu Moriro Hiva and Rapa Nui.
- Pinpoint the highest levels of endemism ever known for any marine ecosystem on the planet in Desventuradas Islands.
- Research on traditional knowledge of the Tapu (ancestral regulations) for reimplementation in Rapa Nui.

MAIN ACHIEVEMENTS

DIRECTOR:

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MILLENNIUM NUCLEUS OF NATURAL SCIENCES

RESEARCHERS

Principal Researcher: Carlos Gaymer

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Associate Researchers: Enzo Acuña Javier Sellanes Martín Thiel Marcel Ramos David Véliz Beatriz Yannicelli Erasmo Macaya Senior Researchers: George Boehlert Wolfgang Stotz Alex Rogers

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- Oceanography and connectivity.
- Marine ecology of the oceanic islands.
- Marine management and conservation.

NOTED OUTREACH ACTIVITIES

- Book "He'a'amu o te kahi räua ko te korohu'a hï ika e tahi, a story between seamounts": contemporary text that mixes science and fishing culture of the Rapa Nui island and aims to promote interest for knowing and protecting the sea, along with rescuing ancestral rapanui practices and worldviews.
- Scientific seminar of marine ecosystems of Rapa Nui: directed at decision makers with the objective of transferring scientific knowledge for the application of sustainable management of marine ecosystems and resources of the Easter Island ecoregion.
- Itinerant Exhibition: knowing and learning about Rapa Nui marine ecosystems and the Humboldt Current (implemented in 2016)
- Workshops of Mediation and Distribution a Children's Tale of the Rapa Nui Sea.

