



UNIVERSIDAD DE LOS LAGOS

RESEARCH PRIORITY AREAS OF UNIVERSITY OF LOS LAGOS-CHILE

The design of a model for developing meaningful, relevant, and high-quality research is the result of a reflective process that ended in the definition of priority research áreas (APIS). A first element of assessment was the analysis of those knowledge areas where the institution has existing capacities, which in turn, are defined as the competencies held by a group of academics that allow them to conduct competitive research.

The indicator used in this analysis was the academic staff's ability to obtain projects from the national research system (CONICYT) and publish in mainstream journals (WOS, Scopus, Scielo).

Area 1: Disturbances and Risks in Coastal Socio-Ecological Systems

It develops scientific and technological research which allows evaluation and quantification of the impacts of future disturbances and potential risks in coastal socio-ecological systems in southern Chile.

The creation of an interdisciplinary scientific cooperation network for the study of harmful algae blooms has become specially relevant, an effort led by Dr. Patricio Díaz. Within this context, the research "Red Tide and Adaptive Capacity in Small-Scale Benthic Fisher Communities in the Los Ríos Region," by Dr. Andrés Marín has been developed and the "Impact of Anthropogenic Disturbances on the Cultivation of Macroalgae for Human Consumption," by Dr. Alejandro Buschmann and Carolina Cammus.

Area 2: Sustainable Agri-food System, Climate Change, and Biodiversity

It addresses the challenges of climate change, sustainability, mitigation, and production that is environmentally friendly production. Also, the associativity among producers, the revitalization of cooperativism, and the revaluation of family farming take part in this área.

The research "Gene Editing of Perennial Ryegrass to Improve Its Resistance to Water Stress" by Dr. Ivan Valic stands out; the unprecedented diagnosis of rural drinking water in the province of Osorno, led by Dr. Norka Fuentes; and the integration of ULagos into the Eighth International Congress "Chilelacteo."

Area 3: Sustainable Aquaculture Production

The University of Los Lagos takes on the challenge to contribute to the renewed Aquaculture creation being responsible for the complex socio-ecological ecosystem in which it develops.

The most significant research projects of this research area are "Environmental Adaptability of Benthic Marine Organisms" by Dr. Alex Gonzales; "Development of a Bioelectrochemical System for the Remediation of Marine Sediments under Intensive Salmon Farming Installations" by Dr. Carlos Aranda; and the joint research with Japanese and Chilean universities by Dr. Gonzalo Gajardo, titled "Development of Monitoring Methods and Prediction Systems for Harmful Algal Blooms, for Sustainable Aquaculture and Fishing in Chile."

Area 4: Quality of Life and Human Well-being

The misión of this area is to contribute to the well-being of regional population through the generation of research related to sports, physical exercise, and their effects on improving sports performance, as well as the preventive and therapeutic effects they have on health, human well-being, and quality of life at all stages of a person's life.

Important research has been conducted such as "Effects on Health of Atmospheric Pollution in Osorno" by Dr. Ricardo Fernández; "Impact of Physical Exercise on the Treatment of Cardiometabolic Diseases (obesity, diabetes, hypertension, among others)" by Dr. Cristián Álvarez, and "Strength Physical Training and its Effect on Health and Body Composition in Advanced Age" by Dr. Rodrigo Ramírez.

Area 5: Global change, sociopolitical construction of territories, and local innovation systems

This research area has explored the study of the complexity of global change and the adaptability of local communities, who manage to face its impacts in their different expressions and scales, encouraging transitions towards sustainable ways of life.