



COLOMBIAN ANTARCTIC PROGRAM

The Colombian Antarctic Program (PAC) is coordinated by the Colombian Ocean Commission (CCO) with the advisory of the National Technical Committee for Antarctic Issues (CTN AA). The role of the Program is to guide Colombia's actions in Antarctica towards research, protection and preservation, while maintaining the peace in the White Continent as well as in the surrounding Austral Ocean, through international collaboration, technical transfer, and the exchange of scientific information.

 VICEPRESIDENCIA



Some activities of Colombia in the Antarctic Treaty

1981

Colombia attends the third Special Antarctic Treaty Consultative Meeting-ATCM

1982

First researcher visits Antarctica with international cooperation

1989

Non-Consultive entry into force, Antarctic Treaty

1990

Creation of the National Commission for Antarctic Issues

1993-1997

Group of scientists visit Antarctica with international cooperation

2013-2016

Colombia participates in:
XXXVI ATCM XVI CEP XXXVIII
ATCM XVIII CEP
XXXIX ATCM XIX CEP

2014-2015

Austral Summer
I Scientific Expedition "Caldas"
on a Colombian Navy vessel

2015-2016

Austral Summer
II Scientific Expedition
"Lemaitre" with the
international cooperation

2016-2017

Austral Summer
III Scientific Expedition "Padilla"
on a Colombian Navy vessel, and with
international cooperation



Guide Documents

2016

Congress Bill N° 049-16
"Madrid Protocol" filed

2016

Member of the IHO and the
Hydrographic Commission on
Antarctica (HCA)

2016

Accepted as an Associate Member
by the Scientific Committee on
Antarctic Research, SCAR, on its
biennial meeting



Roadmap of the political, administrative and logistical aspects of the Colombian Antarctic Program



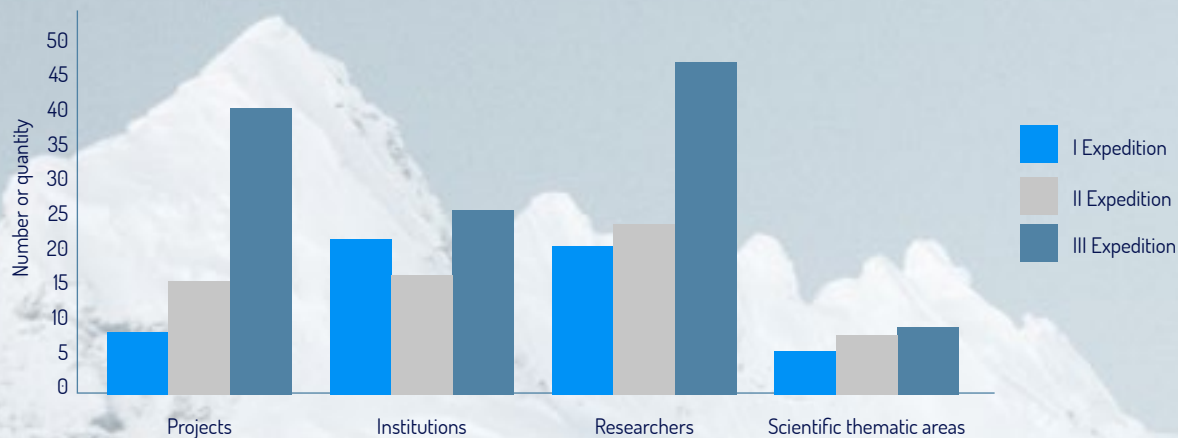
Roadmap to the research over the next two decades of the Colombian Antarctic Program



Guide for Colombian researchers visiting the southern polar regions following the Antarctic Treaty and the Madrid Protocol

<http://www.cco.gov.co/cco/publicaciones.html>

Development and prospective of growth 2014 - 2016



Geography,
Hydrography,
Oceanography

Maritime Safety

Relations South
America and Antarctica

Ecosystems and
connectivity

Climate change

Use and evaluation

Environment and
Antarctic logistics

Human Biology and
Medicine Antarctica

Biodiversity

III Colombian Antarctic Scientific Expedition “Admiral Padilla”

Austral Summer 2016–2017

37 Research projects to develop
(18 are continuation of past expeditions)

51 Researchers visiting Antarctica (31 onboard a Colombian vessel; 20 through international cooperation).

8 Countries have given their cooperation

1 Pre Antarctic course was imparted to the Colombian expedition (August 2016)

AT Antarctic Treaty

Pre-season information submitted. Madrid Protocol procedures and environmental impact assessments for each project

SCAR

Scientific
Priorities

Define the
global reach
of the Antarctic
atmosphere and
the Southern
Ocean

Colombian Antarctic Program PAC Thematic Areas

COLOMBIAN PROJECTS:

Analysis of sea-level variation between Colombian Caribbean-Pacific seas and Antarctic ocean

Connection between Niño Southern Oscillation and Climate Change in Antarctica

Hydrodynamic of water masses between South Pacific Colombian Sea and Antarctic waters

Influence of low and high latitudes forcings in circumpolar deep water and its effect on Antarctic and tropical environments

COLOMBIAN RESEARCHERS:

Ph.D Ricardo Torres Oceanography
Colombian Navy

Ph.D Nancy Villegas. Physical Sciences
and Mathematics
National University of Colombia

M. Sc Jose Payares. Oceanography
Colombian Navy

Ph.D Constanza Ricaurte. Oceanography
Marine and Coastal Research Institute
Colombia

Observe space
and the Universe

COLOMBIAN PROJECTS:

Radiometry and atmospheric characteristics of the Antarctic Aviation Area

COLOMBIAN RESEARCHERS:

Ph.D Julián Salamanca. Physic
University Distrital Colombia

Edwin Casallas. Engineer.
Air Force Colombia

Reveal Antarctica's history

COLOMBIAN PROJECTS:

Geological study of natural materials from Gerlache strait and other Antarctic ecosystems

COLOMBIAN RESEARCHERS:

Ph.D Hernando Dueñas. Geologist
Colombian Academy of Sciences

Learn how Antarctic life evolved and survived

COLOMBIAN PROJECTS:

Climate Change impact on marine invertebrates comparing deep waters of the Pacific Colombian Ocean and shallow waters of Antarctic

Antarctic extreme environment microorganisms as a potential source of compounds with applications

Origin and biogeography of marine benthic life considering some areas in the Antarctic

COLOMBIAN RESEARCHERS:

Ph.D Mario Londoño. Ecologist
University of Antioquia Colombia

Ph.D Lizzete Quan
Ecology and Sustainable Development
University CES Colombia

Ph.D Luz Marina Melgarejo. Chemical
Sciences Plant Biochemistry
National University of Colombia

Ph.D Edison Tello Camacho. Science
Chemistry
University of Sabana Colombia

Ph.D Juan Armando Sanchez. Biological
Sciences
University of Andes Colombia

B. Sc Christian Diaz. Marine Biologist
Colombian Ocean Commission

Learn how
Antarctic life
evolved and
survived

COLOMBIAN PROJECTS:

Tardigrades of Antarctica

Structural composition of the plankton community associated with the latitudinal gradient from the Colombian Pacific Ocean to the Antarctic

Colombian Antarctic research program in marine mammals

Comparison of the expression of heat shock proteins and detoxifying enzymes in tropical and Antarctic under stress polychaetes

COLOMBIAN RESEARCHERS:

Ph.D Rosa Acevedo. Environmental Toxicology
University Bolivar Technological

Ph. D Andres Franco. Oceanography
University Jorge Tadeo Lozano Colombia

M. Sc. Sandra Bessudo. Life sciences and earth
Fundation Malpelo and other ecosystems

M. Sc. Maria Diaz Granados. Ecology
International Conservation Colombia

B. Sc Diego Mojica. Marine Biologist
Colombian Ocean Commission

Ph.D Jean Delgado. Molecular biologist
University of Antioquia Colombia

Ph.D Idalyd Fonseca. Biologist
University of Antioquia Colombia

Recognize and
mitigate human
influences

COLOMBIAN PROJECTS:

Marine scientific research for maritime safety in Antarctica I.C.E.M.A.N

The history of the present time as a strategy for the dissemination of the Colombian Antarctic Program

COLOMBIAN RESEARCHERS:

M. Sc Ricardo Molares. Coastal marine engineering and management
Colombian Navy

B. Sc Natalia Jaramillo. Historian
University of Andes Colombia

Understand
how, where
and why ice
sheets lose
mass

COLOMBIAN PROJECTS:

Study of attenuation of sea surf under ice sheets dynamic

First stage in an exploration of the implications of climate change on Colombian glaciers and their comparison to Antarctic ecosystems

COLOMBIAN RESEARCHERS:

M. Sc Diana Quintana. Oceanography
Colombian Navy

Ph.D Oscar Ramos. Natural Sciences
La Salle University Colombia

Contacts

oceano@cco.gov.co
jinternacional@cco.gov.co
asuntosantarticos@cco.gov.co
asuntosantarticos2@cco.gov.co


www.cco.gov.co
Phones (+57+1) 315 85 20
(+57+1) 315 82 14
Bogotá D.C., Colombia

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