Brazil and the Arctic

Opportunities for Brazilian-Russian cooperation

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e
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Brazilian scientific interests in the Arctic

1) Polar climatic processes and Tropics-Polar teleconnections

Investigation of the role of the ice masses in the environmental system focused on:

- Investigation of the impact of climate change on glaciers and the implications for the mean sea level
- Paleoclimatic reconstruction using ice cores exploring Pole-Tropics teleconnections
- Implications of the fast Arctic sea ice retreat for the South Atlantic tropics? Is there teleconnections with the Amazon region climatic changes?
- Sensitivity and increased response to climate change of the axis between the Barents Sea and northeastern Greenland. Abrupt climatic changes and variations during the recent past (Quaternary) and present.

2) Biodiversity of the Arctic, impact of climate changes and comparison the Antarctic biota

I emphasize that the Brazilian scientific community is interested in joining the International Arctic Science Science Committee (IASC) as soon as possible.

Recent actions by Brazil in relation to the Arctic
Toward a Bipolar Research Program

2024 A proposal for the country to join and sign the Svalbard Treaty was sent to the Brazilian National Congress.

The basic reason for this resolution was the rapid environmental changes in the Arctic and the associated new political and economic scenarios, which will have global impacts.

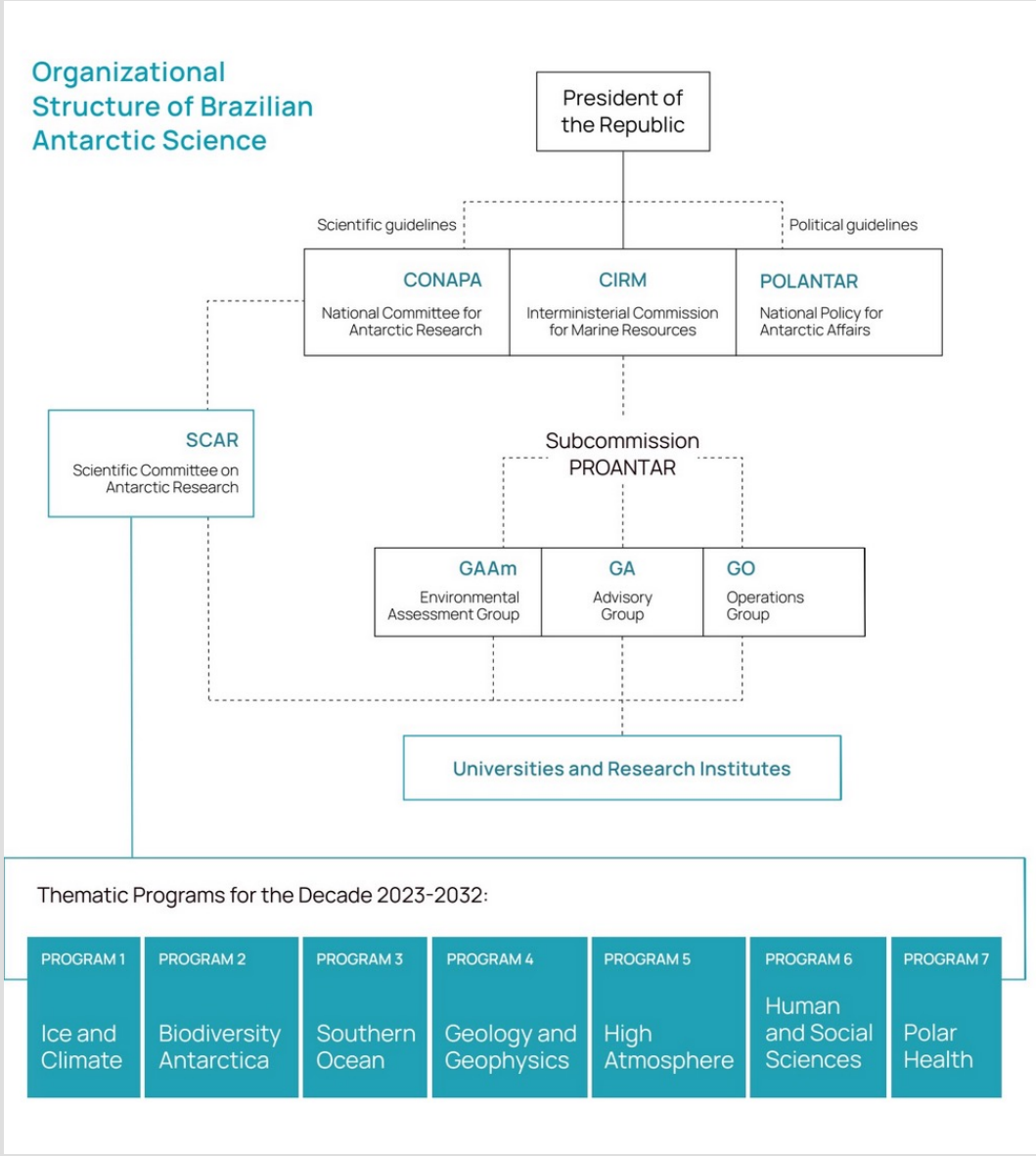
2023 Prof. Jefferson Simões (UFRGS) and Prof. Anastasia Ljovkina (Tyumen State University) begin discutions to have a MOU for Arctic research.

2023 For the first time, a section dedicated to the Arctic in the Brazilian National Action Plan for Antarctic Science.

2023 The Brazilian National Council for Scientific and Technological Development (CNPq) lauched a call for Antarctic proposlas incluinding the Arctic!


Ten-Year
Plan for
ANTARCTIC
SCIENCE
in Brazil
2023
2032
Ministry of Science, Technology,
and Innovation – MCTI


ARCTIC
"The effects of Arctic sea-ice loss are not limited to the northern high latitudes, and reach deep into the tropics."
Mark R. England, Lorenzo M. Polvani, Lantao Sun and Clara Deser
Nature Geoscience | VOL 13 | April 2020 | 275–281


Organizational Structure of Brazilian Antarctic Science
President of the Republic
Scientific guidelines
Political guidelines
CONAPA
National Committee for Antarctic Research
CIRM
Interministerial Commission for Marine Resources
POLANTAR
National Policy for Antarctic Affairs
SCAR
Scientific Committee on Antarctic Research
Subcommission PROANTAR
GAAm
Environmental Assessment Group
GA
Advisory Group
GO
Operations Group
Universities and Research Institutes
Thematic Programs for the Decade 2023-2032:
PROGRAM 1
Ice and Climate
PROGRAM 2
Biodiversity Antarctica
PROGRAM 3
Southern Ocean
PROGRAM 4
Geology and Geophysics
PROGRAM 5
High Atmosphere
PROGRAM 6
Human and Social Sciences
PROGRAM 7
Polar Health

Summer 2024/2025

Second Antarctica Circumnavegation Expedition

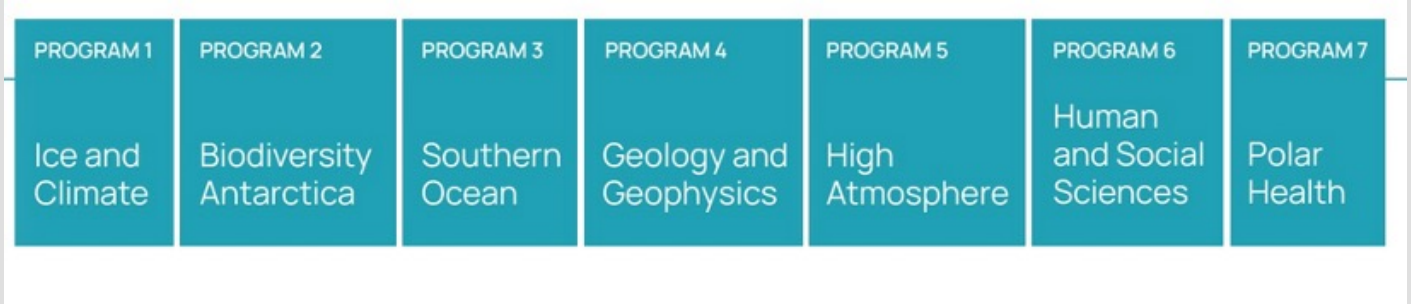
Ship — Akademik Treshnikov
Arctic and Antarctic Research Institute, Saint Petersburg

Financing — Swiss Polar Institute
Fondation Albédo pour la Cryosphère
Brazilian National Research Council for Scientific and Tecnological Development (CNPq)

Scientific Leader — Prof. Jefferson C.Simões (UFRGS)

Participation of 80 BRICS scientists and other countries

Brazilian Antarctic Research Programmes



http://cienciaantartica.mcti.gov.br/wp-content/uploads/2023/08/Plano-Decenal-210x250-ENGLISH-Retrato.pdf

29 research projects (2024–2027)

Oportunities for Antarctic Cooperation

SCAR Research Programmes
Scientific Research Programmes (SRPs)

Near-term Variability and Prediction of the Antarctic Climate System (AntClim^{now})

AntClim^{now} will investigate the prediction of near-term conditions in the Antarctic climate system on timescales of years to multiple decades. They will take an integrated approach, looking beyond climate projections of the physical system to consider the Antarctic environment as a whole.

Integrated Science to Inform Antarctic and Southern Ocean Conservation (Ant-ICON)

The Ant-ICON SRP will answer fundamental science questions (as identified by the SCAR Horizon Scan), relating to the conservation and management of Antarctica and the Southern Ocean and focus on research to drive and inform international decision-making and policy change.

INStabilities and Thresholds in ANTarctica (INSTANT)

The INSTANT SRP will address a first-order question about Antarctica's contribution to sea level. It encompasses geoscience, physical sciences and biological sciences, of the way in which interactions between the ocean, atmosphere and cryosphere have influenced ice-sheets in the past, and what expectations will be in the future with a special focus on quantifying the contributions to global sea level change. They aim to quantify the Antarctic ice sheet's contribution to past and future global sea-level change.

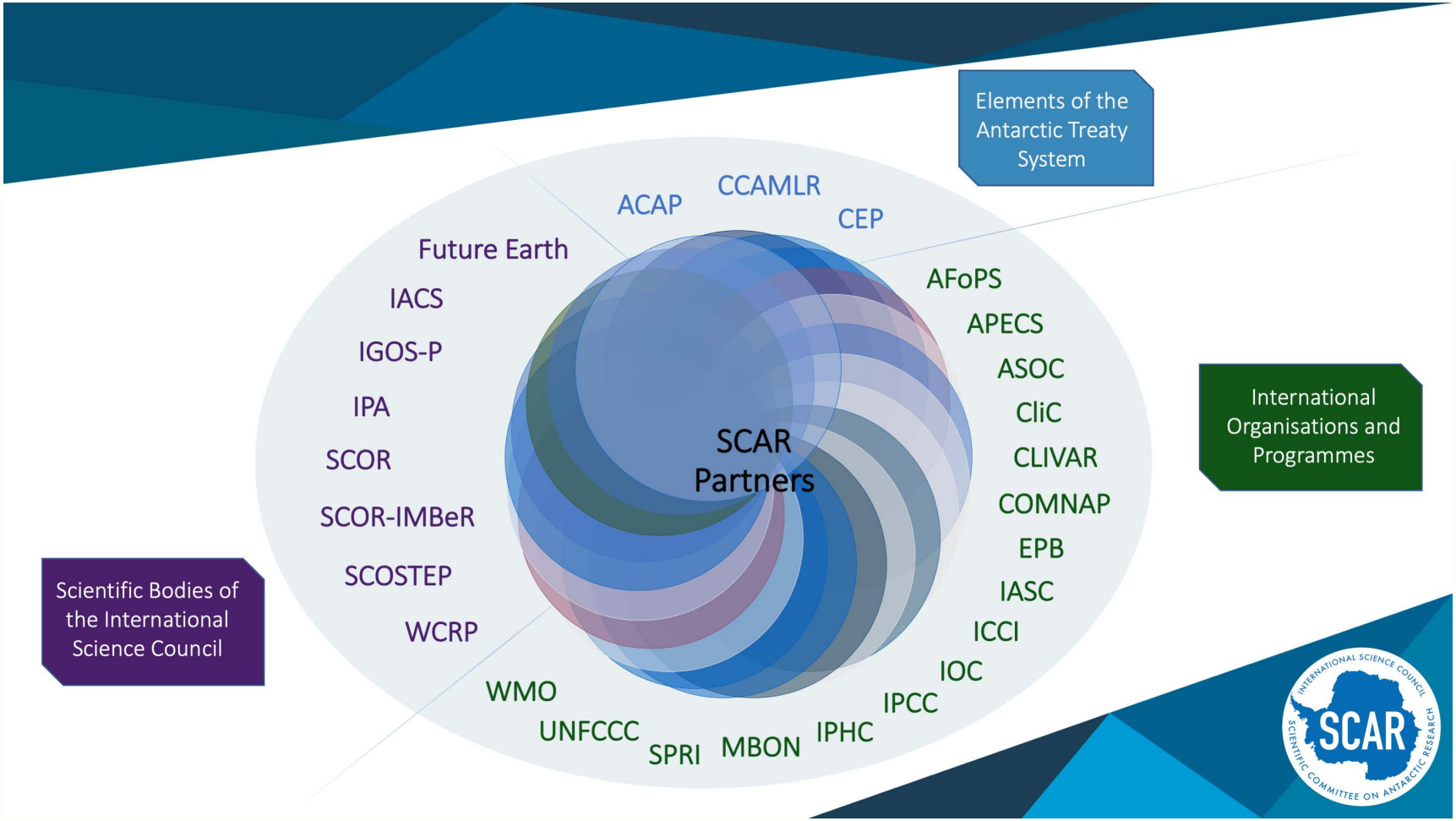


Figure 1. SCAR's partners. Partnerships with complementary organizations bring added value to SCAR's activities. SCAR partners with ISC bodies, advisory bodies to the ATS, organizations with polar missions, and programmes with polar interests. Partnerships support SCAR's goals to provide authoritative scientific advice to policymakers, expand its advisory sphere of influence on global issues, develop the capacity of students and early career scientists, and encourage cooperation with Arctic counterparts (for acronyms see page 45).

Fellowships

Early-career Fellowships enable early-career researchers to join a project team from another country, opening up new opportunities and often creating partnerships that last many years and over many Antarctic research seasons.

Eligibility: Current PhD researchers or within 5 years of finishing a PhD, visiting a facility in or run by a SCAR member country, whose research contributes to SCAR's objectives as embodied in the Science Groups and Scientific Research Programmes.**Fellowships**

Visiting scholarships

The Visiting Scholar Awards are directed at researchers and academics whose work contributes to the research objectives of SCAR, offering the opportunity for them to undertake a short-term visit to another SCAR member country to provide training and mentoring.

Eligibility: The scheme is for any scientists and academics (more than five years after completing their PhD), whose research contributes to SCAR's objectives as embodied in the Science Groups and Scientific Research Programmes. Eligibility: Current PhD researchers or within 5 years of finishing a PhD, visiting a facility in or run by a SCAR member country, whose research contributes to SCAR's objectives as embodied in the Science Groups and Scientific Research Programmes.

SCAR Fellowships & Award Schemes

For more information visit www.scar.org

For Early or Mid-Career Researchers

SCAR Fellowship Programme

- To undertake a research project in another SCAR member country
- 4-5 Fellows, up to USD $15,000 per award
- Applications will open in 2024

Science Group Fellowships

- To encourage the active involvement of EMCRs in the work of our three disciplinary Science Groups
- Three fellows funded for two years; USD $10,000 per year
- Applications for 2024 are now closed

Ant-ICON | SC-ATS Science-Policy Fellowships

- To gain experience in the science-policy interface
- Two Fellows, funding to attend CCAMLR or ATCM meetings
- Applications for 2024 are now closed

For researchers later in their career

Visiting Scholar Scheme

- To build capacity in countries with smaller or less-developed Antarctic research programmes
- Awards of up to USD $5,000
- Applications will open in 2024

SCAR Medals

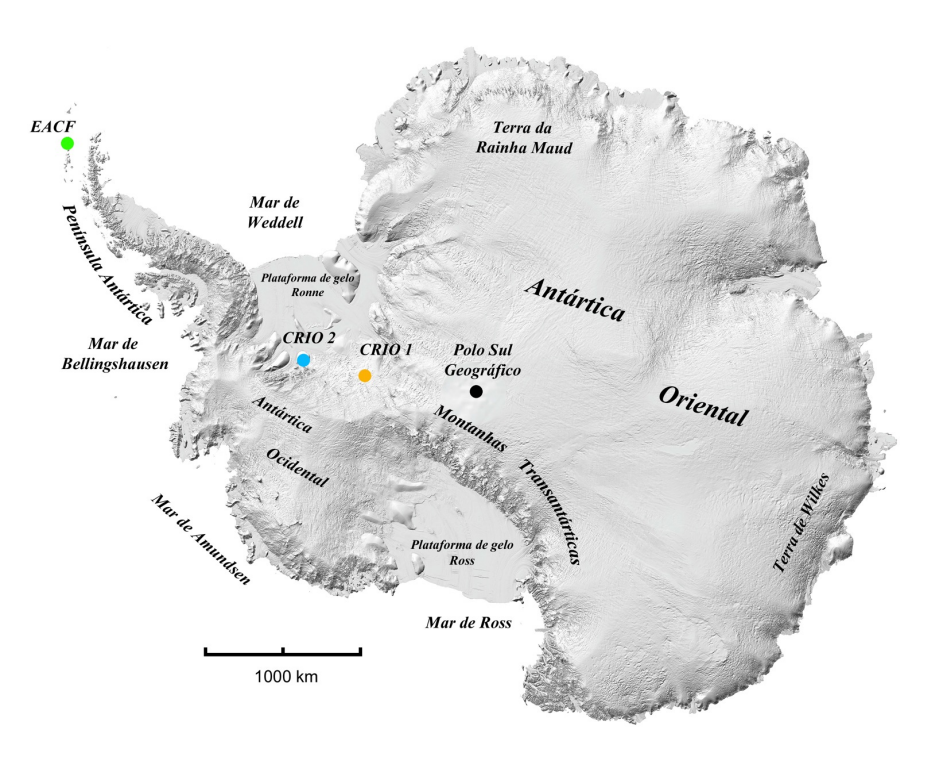
- To recognise excellence in research and outstanding service
- Three medals, selected by nomination
- Applications close **15 May 2024**

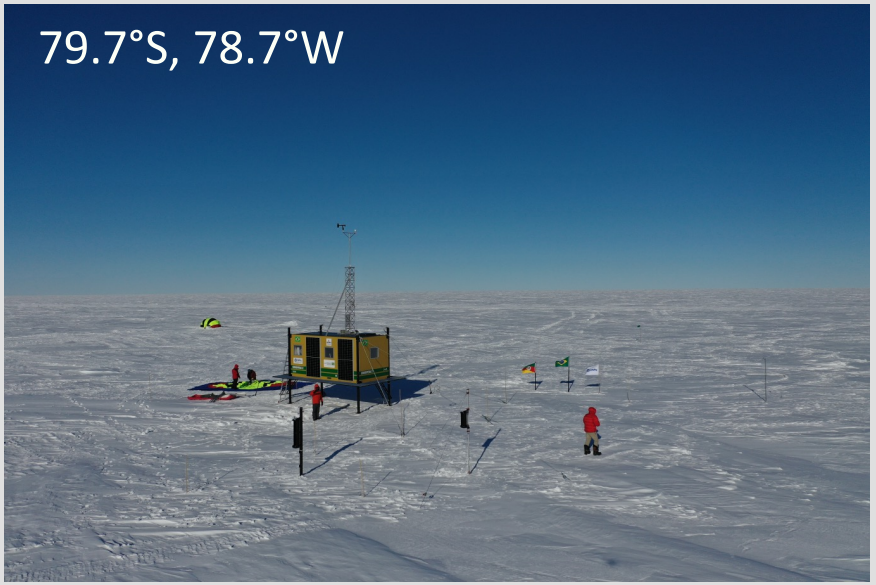
Brazilian Infracture for Antarctic Research

Brazilian Antarctic Station
Commander Ferraz
King George Island

Polar Ship Maximiano

Automatic Scientific Labs
Criosfera 1 and 2





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Thanks!

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