

BRAZIL IN ANTARCTICA: THE SCIENTIFIC AND GEOPOLITICAL IMPORTANCE OF PROANTAR IN THE BRAZILIAN STRATEGIC SURROUNDING AREA**Israel de Oliveira Andrade**

Researcher at Ipea.

Leonardo Faria de Mattos

Professor of Geopolitics at Brazilian Naval War College (EGN).

Andrea Cancela da Cruz-Kaled

Coordinator of the Department of Sea, Antarctica and Mineral Resources at Ministry of Science, Technology, Innovation and Communications (MCTIC).

Giovanni Roriz Lyra Hillebrand

Researcher in the National Development Research Program (PNPD) at Ipea.

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Antarctica is the most inhospitable continent of the planet. The region presents extremely low temperatures – it registered the lowest temperature in the world, -94.7°C –, and more than 90% of the land is covered in ice. The total ice stored in Antarctica equals to 25 million cubic kilometers, which represents 70% of the world's potable water. Antarctica is also the driest continent – based on average rainfall – and the highest – on average altitude – of the Earth.

Such harsh characteristics contribute to an almost mystical vision of the Antarctic continent. However, Antarctica's importance for Brazil's foreign policy has not been much discussed in non-specialized environments and in the national media; thus, this subject is mostly unknown to the Brazilian society. With Antarctica included by the 2012 National Defense Policy in the strategic surrounding area of the country, the Brazilian performance in this continent, through its presence and scientific research, is also a strategic component. This action deepened the international insertion of Brazil and gave visibility to the great relevance of scientific studies developed within the Antarctic region.

This text aims to present the main aspects of the Brazilian Antarctic Program (PROANTAR), which is the instrument of execution of the National Policy for Antarctic Affairs (POLANTAR). To this end, we emphasize the importance of this continent to Brazil by presenting the country's strategic activities and interests in the region, as well as the contribution of the program to national scientific and technological development.

Throughout its sections, this paper analyzes different dimensions of PROANTAR, not only focusing on the scientific character, but also on the geopolitical relevance of Brazilian presence in the Antarctic continent. It highlights that the main route to access Antarctica is in the South Atlantic, where there are several commercial, touristic and communication routes and mineral resource reservoirs, such as in the pre-salt layer. In addition, the connection between Antarctica and geopolitical issues is strengthened by the existence of strategic global resources in this continent and in the Southern Ocean, as well as by the relationship between the Antarctic climate and aspects of water and energy security across the globe.

This work identified that the current Brazilian priority in Antarctica has been to rebuild the Comandante Ferraz Antarctic Station – which went on fire in 2012 –, in order to continue the scientific research activities carried out and expand them. However, it should be noted that, even during the construction, the research continued to be conducted in emergency modules installed for this purpose, as well as on board of Brazilian polar ships and in cooperation projects with other countries, in their vessels and camps, for example.

The research carried out in this work also pointed out important advances in the development of national Antarctic science, such as the systematization made through documents like the "National Strategy for Science, Technology and Innovation" and the action plan "Antarctic Science for Brazil" for 2013-2022. The scientific activity undertaken in the Antarctic continent

contributes to Brazilian science and technology progress and to the continuity and strengthening of the country's performance regarding the instruments of the Antarctic regime. Thus, continuous and regular investments are essential to maintain studies in the region and to ensure an effective planning of the actions to be developed by Brazil.

With regard to public policies focused on Antarctic research, it is important to provide training grants dedicated to polar issues and to continue and deepen the integration between PROANTAR and other national scientific programs. Besides, this paper pointed out the importance of the recently issued call for proposals to select and fund scientific projects within PROANTAR and the necessity of regular calls related to this program – at the risk of discontinuing research. Considering that, the Brazilian presence in Antarctica is relevant regarding scientific and strategic aspects, so that public policies and investments in this environment should be addressed as long-term issues, in order to ensure more predictability and certainty to the national Antarctic activities.

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