

CHILE: A NATURAL LAB FOR THE EXTREMES OF SCIENCE

A conversation with **MYRIAM GÓMEZ**, executive director of Brand Chile



Chile is among the world's narrowest and longest countries. Its unique geography ranges from the driest desert on Earth in the north, Atacama, to the fjords and glaciers of the Patagonia and the Antarctic in the south, along a 4,000 km Pacific Ocean coastline and the world's longest continental mountain range, the Andes. This makes the country an exceptional natural lab that could hold answers to some of the most pressing scientific questions.

What makes Chile an attractive destination for worldwide researchers?

Chile's geography is an open invitation to explore the diversity of our planet in a single place. This diversity makes it a fascinating destination for worldwide researchers, a true natural laboratory that will underpin advances in astronomy, seismology, oceanography, volcanology and glaciology, amongst many others. Chile has the potential to become a key nation that contributes to finding solutions to global challenges.

What are some of Chile's competitive advantages over other South American countries, Europe and the United States?

Our country has everything necessary to generate strong long-term international scientific work, as reflected by the sustained investment that the most prestigious European astronomical institutions have placed here. They rely on Chile to install the main observatories on Earth due to our political and economic stability. We have proved a reliable partner when it comes to commitments, and our position in the Global Entrepreneurship, Innovation and Logistic Performance indexes is proof of this. China has also committed to building a telescope in the north of Chile, one of the first outside Asia.

Regarding Europe and the

US, we can offer a unique place for astronomers to decode and discover the Universe, due to the dryness of our desert, clear skies and the lack of light pollution. We also have pristine areas in Cape Horn, located in the extreme southern part of the hemisphere, which includes the remote subantarctic rainforest in the Magellanic region, making it an ideal place to study climate change.

What are the natural conditions that make Chile such an exceptional place?

The Atacama Desert is the area with the highest sun radiation on Earth. In the south, Chile has several uncommon ecoregions relevant to less common research areas. It has some of the highest numbers of endemic species in Latin America and ecoregions of global importance due to their biodiversity.

Our territory extends over several ecoregions, including the subtropical forest of Rapa Nui, Sala and Gómez islands and the temperate forest of the Juan Fernández archipelago. These ecoregions include unique plants and fauna, due to their isolation. Likewise, the recently created Nazca-Desventuradas Marine Park represents the largest reserve of its kind on the American continent. This means an area of 297,000 square kilometers is now protected.

Chile also has 139 active volcanoes, and 75% of the total glacier surface in South

America. It has 24,093 glaciers, the third largest reservoir of freshwater on the planet.

There are 15,790 lakes and 3094 islands and small islands in the country.

The country has registered some of the strongest earthquakes on record, resulting in the national development of some of the most innovative anti-seismic solutions. These technologies have sparked interest among other countries and have been exported to Peru and New Zealand, for example.

How is Chile developing a scientific infrastructure that could attract international researchers?

The country is becoming increasingly aware of its potential in scientific matters and the specific conditions that can be developed. For example, in Magallanes (Patagonia), the regional government is considering investing US\$120 million to install the Biomedicine, Antarctic International, Remote Sensing and Sub-Antarctic centers, which should be built between 2018 and 2021, respectively. This region hopes to provide key knowledge about climate change as well as build a network of more than a thousand scientists from around the world.

How are Chile's pristine areas being protected?

This year we have seen a lot of progress in this area. Chile's

government recently announced the creation of the National Parks of Patagonia Network, which will protect 4.5 million hectares of biodiversity, equivalent to the size of Switzerland.

Cape Horn and the Juan Fernández archipelago will soon become ocean parks, which will increase the country's marine protected area to more than a million square kilometers. This milestone will place Chile fifth worldwide, according to data from the International Union for Conservation of Nature (IUCN).

What are Brand Chile's objectives in science?

Chile has become the world astronomy hub thanks to our ideal star-gazing conditions. We also stand out for the fast development of renewable energies and advances in environmental protection, which will continue to increase in the future.

This potential is an important part of our national identity. We are showcasing this to the world through our digital strategy, media activity and visual material, spreading the message that Chile is a place that could offer cutting-edge solutions to global challenges.



Chile a natural laboratory

When you combine a variety of dramatic landscapes with nature's great challenges, you wind up with Chile: a gathering point for astronomers, seismologists and scientific innovators.



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