

The newly found ice surfaces are included within the first glacier inventory of Cordillera Darwin. The CECs glaciology team also made precise measurements of glacier retreat at this icefield, located in Chile's Southern Austral region.

The published work by CECs glaciologists [Francisca Bown](#) , [Andrés Rivera](#) y [Claudio Bravo](#) , together with Pablo Zenteno and Fiona Cawkwell, provides a cadastre of glaciers of the major mountain centres south of the Strait of Magellan (54°S). This includes Cordillera Darwin and Monte Sarmiento (both on the main island, Isla Grande of Tierra del Fuego), Santa Inés Island and Hoste Island.

A total of 1,681 glaciers were accounted in the inventory, amounting to a total ice cover of 3,289.5 km². Previous estimates in this region indicated an ice cover of only 2,500 km², which implies an additional finding of 789 square kilometres of glaciers. This is not attributable to glacier advance, but is a result of more precise glacier delineation as explained in this research, published as book chapter in “ [GLIMS: Global Land Ice Measurements from Space](#) ”, which is based on modern satellite images unlike previous studies where former data collection techniques were employed. Satellite imagery also reveals glacier trends in this region. A striking example is Marinelli Glacier (Figure 1) which has undergone a 15 km-retreat since 1913. Retreats are also registered for Conway and Schiaparelli glaciers, which were photographed by young Charles Darwin during his voyage onboard the HMS Adventure and Beagle between 1826 and 1836.

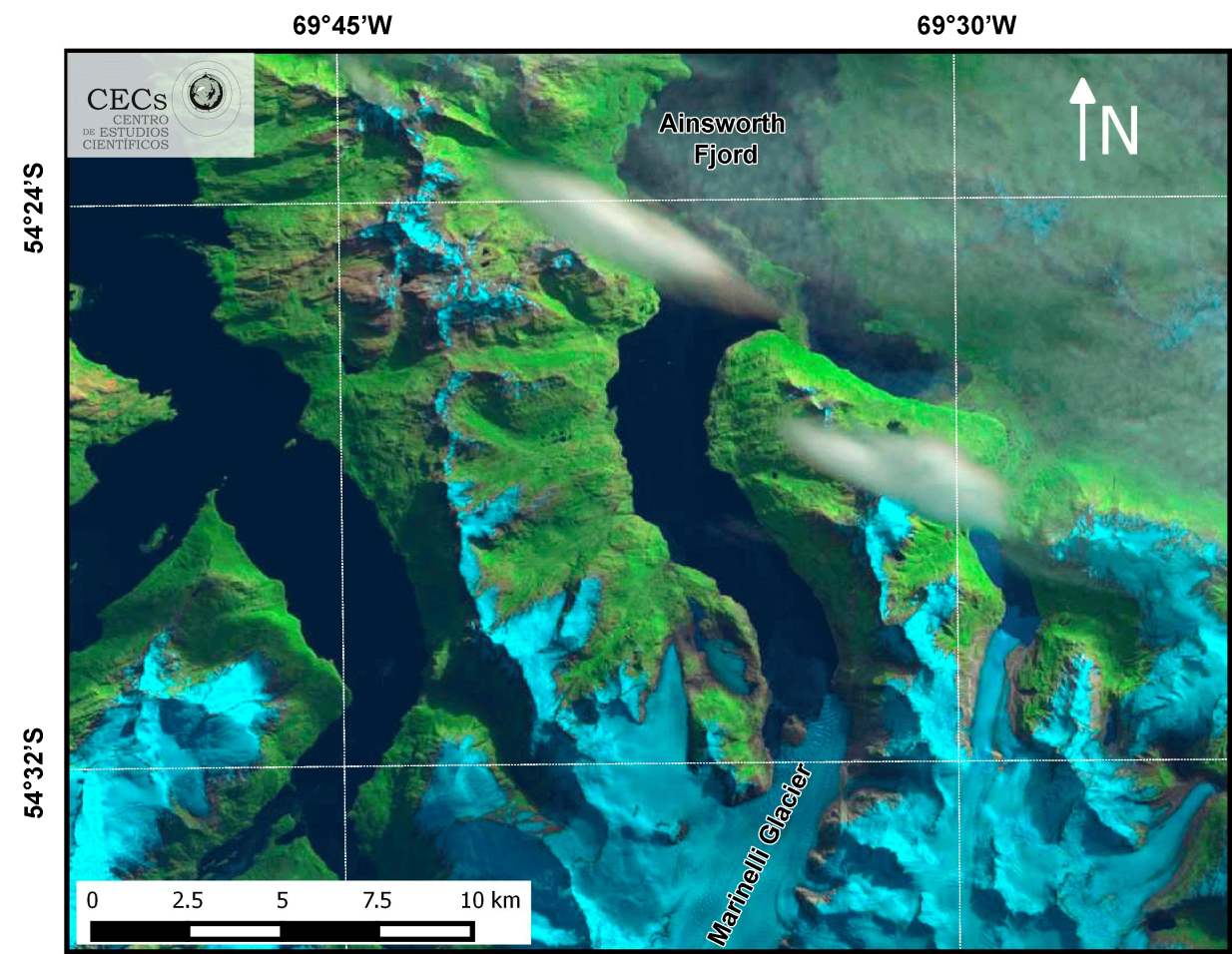


Figure 1. Full Greenland map showing the location of Marinelli Glacier in the north-eastern part of the island. The map is a composite of satellite images from the Landsat and Sentinel-2 satellites, showing the glacier's extent and surrounding terrain. The map is overlaid with a grid showing coordinates: 69°45'W and 69°30'W along the top, and 54°24'S and 54°32'S along the left. The CECs logo is in the top left corner. The map uses a color scale where blue and white represent ice, and green and brown represent land and vegetation.