MAPBIOMAS
[WATER]

WATER CONNECTS US

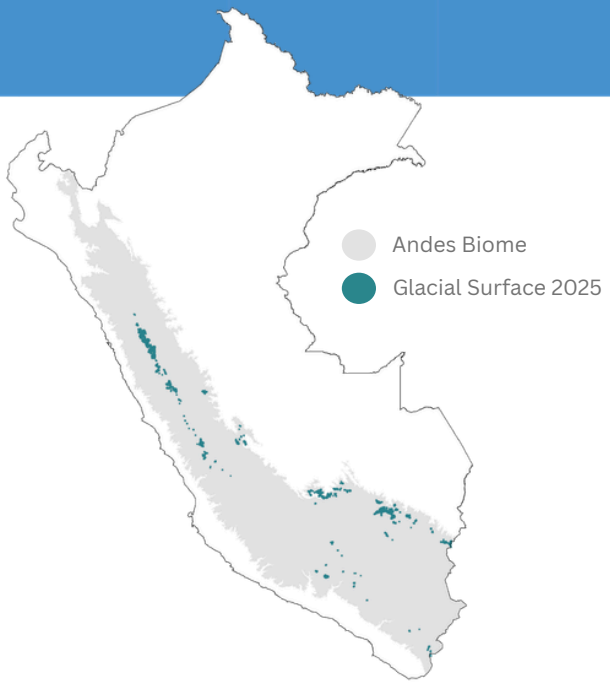
COLLECTION 4

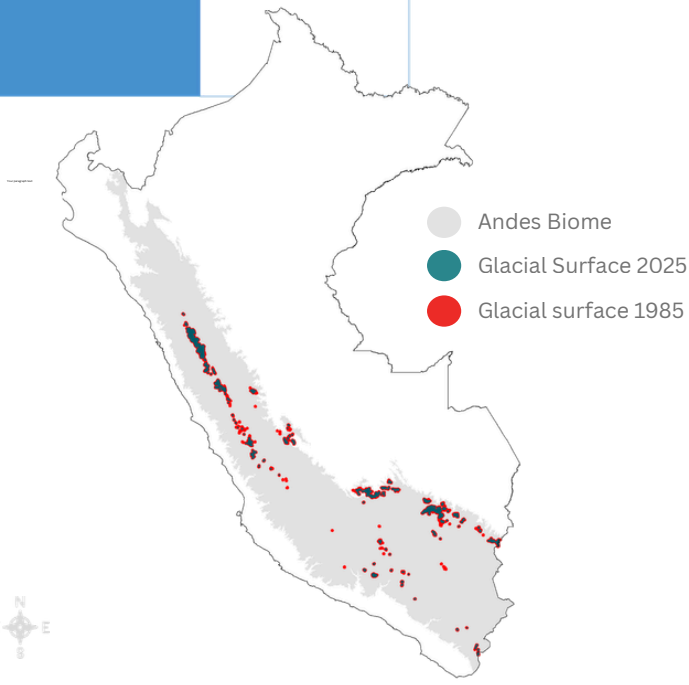
Annual Data on Snow and Glacier Cover in Peru (1985–2025)

For more information:
peru.mapbiomas.org

Glacier area in Peru in 2025 is

94,873 ha



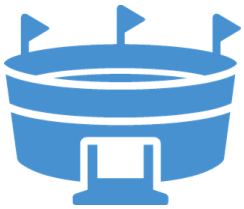


Between 1985 and 2024, more than

-111 mil ha

glacier coverage

→

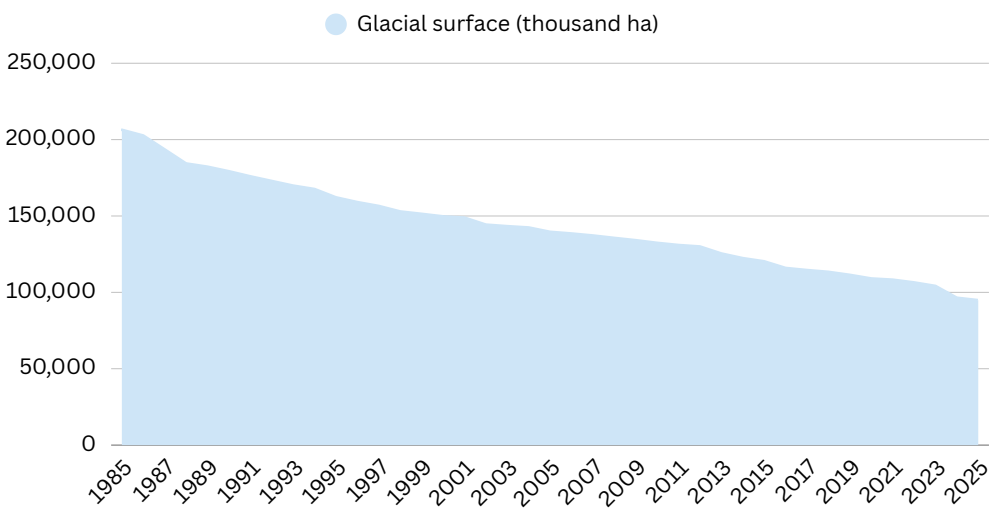


equivalent

22,307

National Stadiums

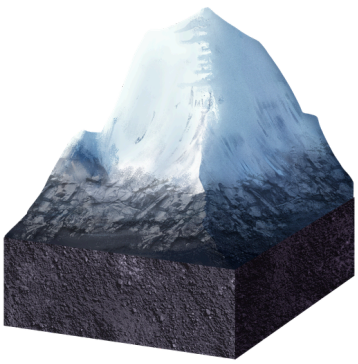
Time series of glacier surface area



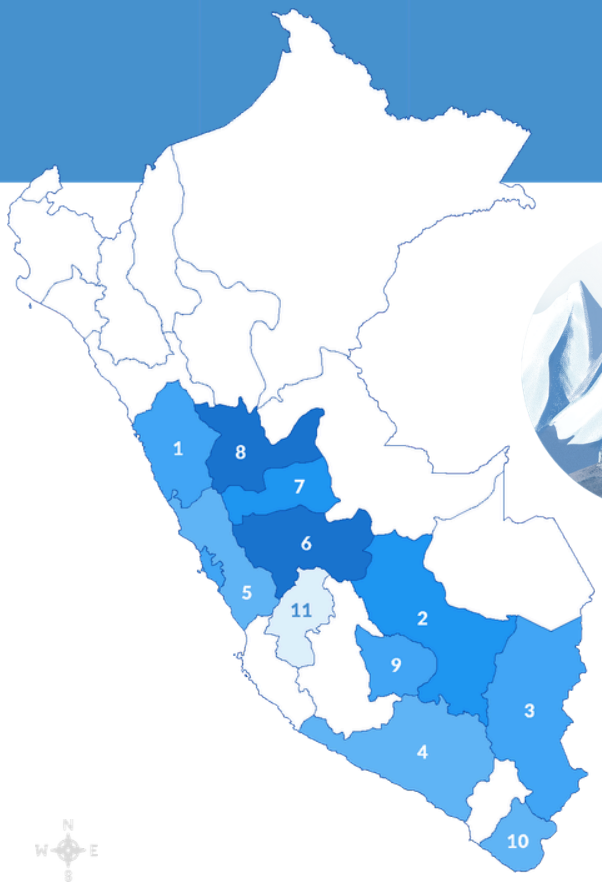
In 41 years, Peru lost the

54.04%

of its total glacier area

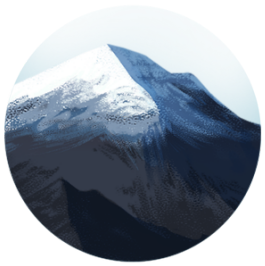


Glacier area by department in 2024



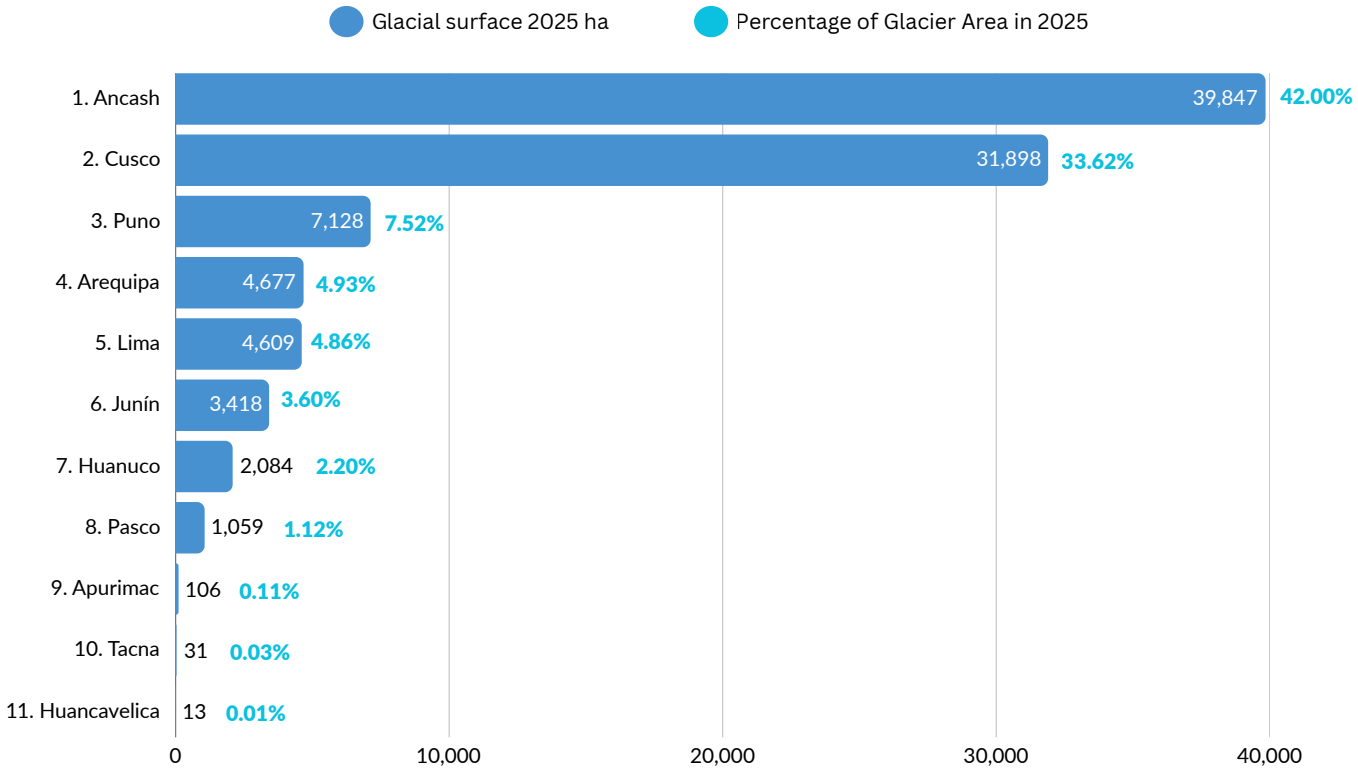
Ancash is the department with the **greatest glacier coverage**, with

39,847 ha



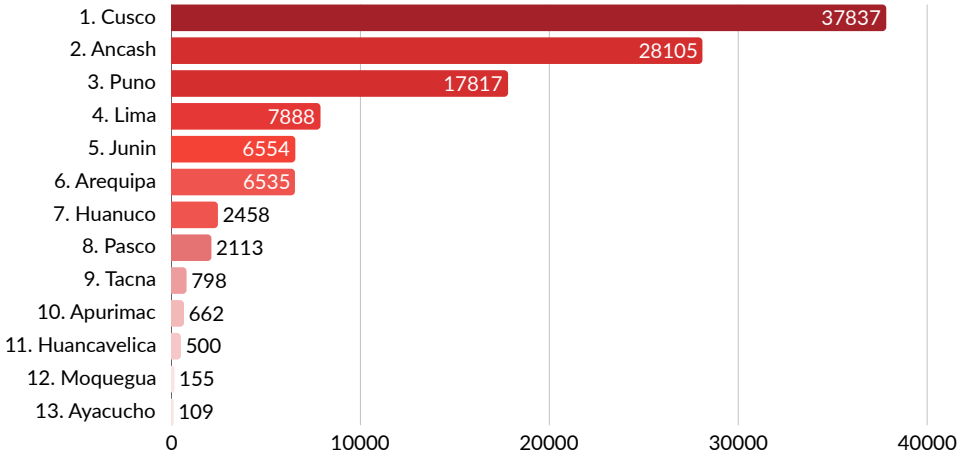
The glacier area in **Huancavelica** is a cause for concern due to its small size of

13 ha

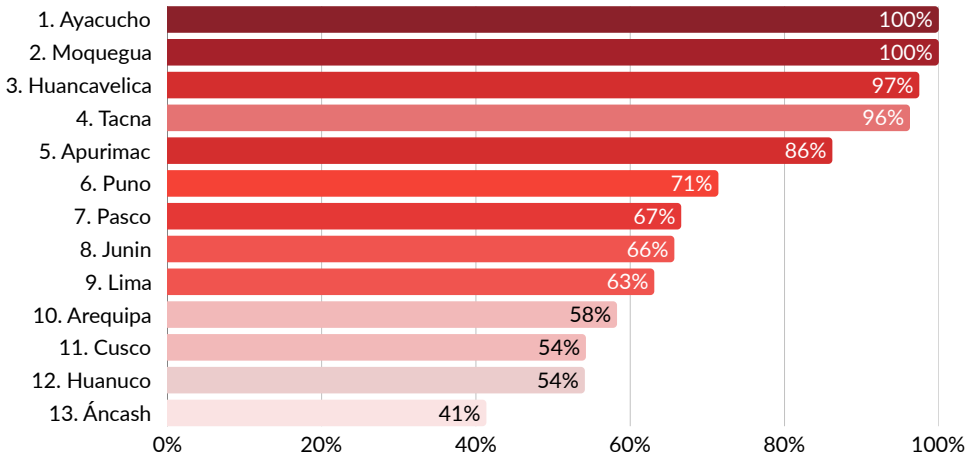


Loss of glacier area by department between 1995 and 2025

Glacier Area Loss by Department (ha)



Glacier Area Loss by Department (%)



Áncash y Cusco

They have the largest glacier area, but they are also the ones that have lost the most glacier area over the past 41 years.

Moquegua

It lost 100% of its glacier area in 1991.

Ayacucho

It lost 100% of its glacier area in 2006.

Glacier area by mountain range in 2025 (ha)

Peru has

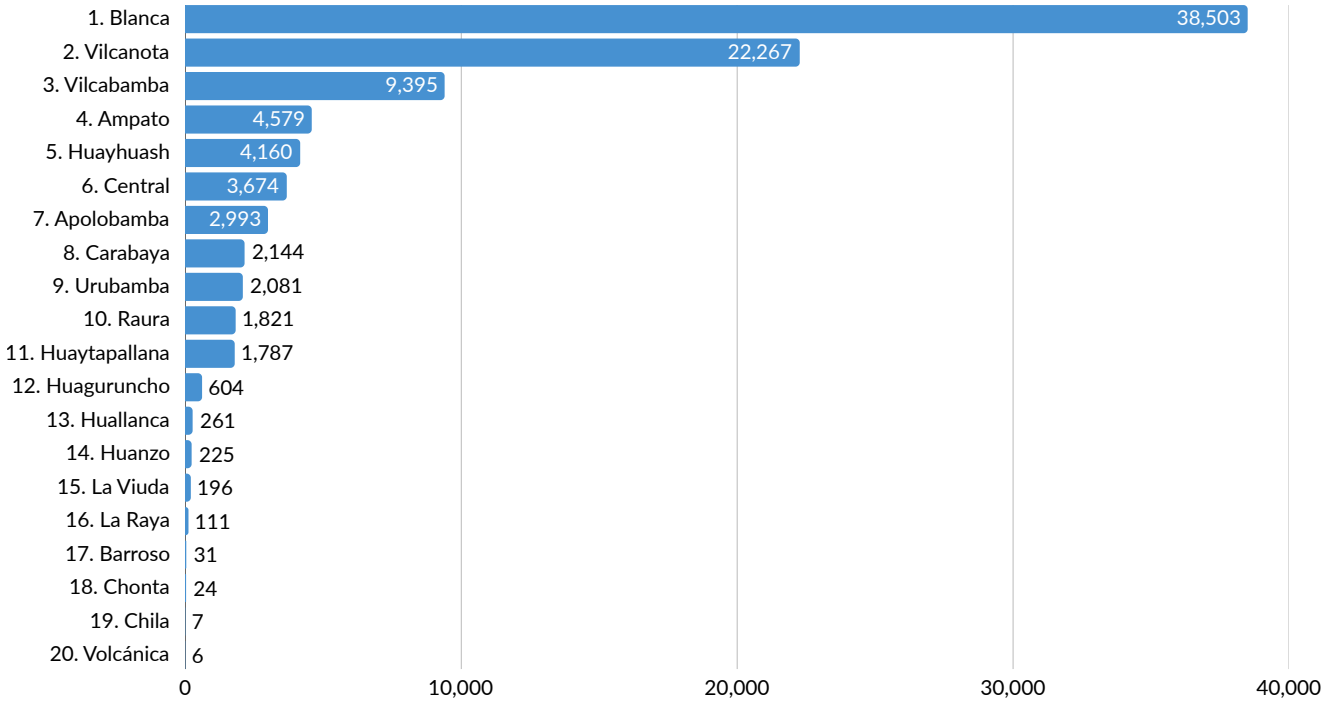
20 mountain ranges with glaciers

The **Cordillera Blanca** has the largest glacier coverage with

38,503 ha

The Volcanic Mountain Range has the least glacial coverage with

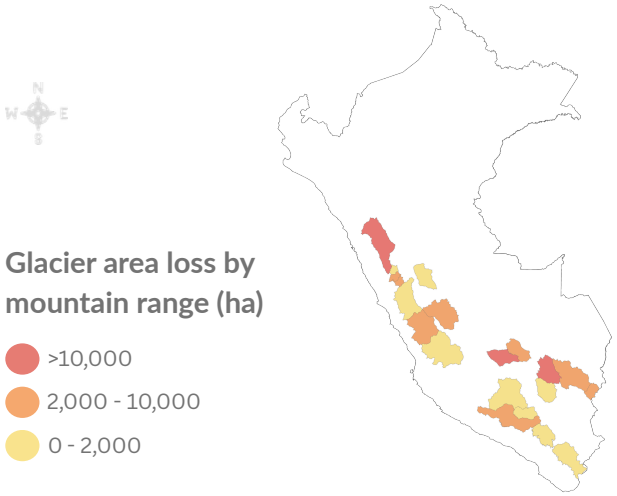
6 ha

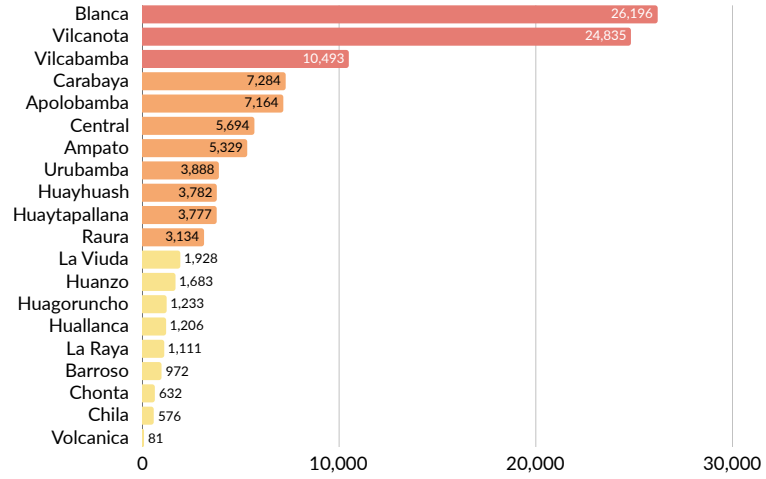


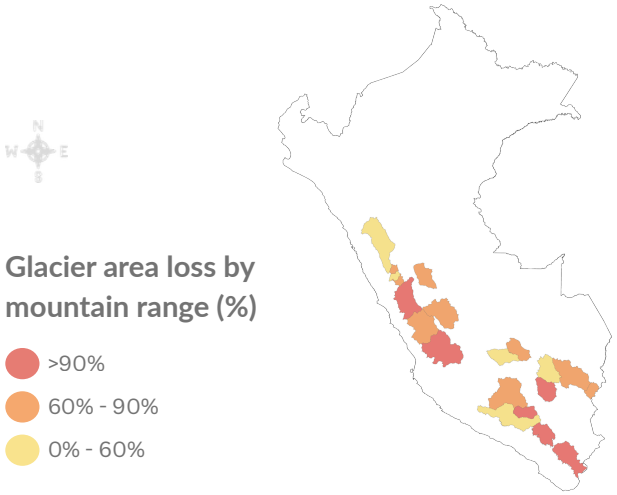
Glacier Area Loss by Mountain Range (1985–2025)

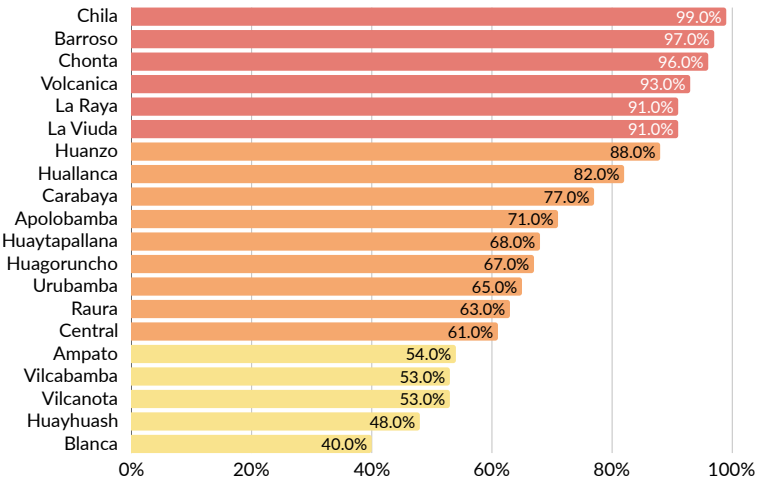
The mountain ranges with the greatest loss of glacial area are the

Blanca y Vilcanota





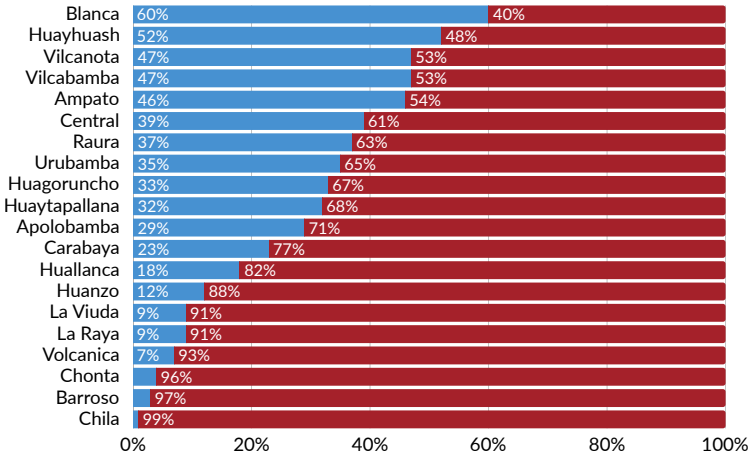




Percentage of Glaciers and Losses (1985–2025)

6/20

Mountain ranges experienced a loss of **more than 90% of their glacier cover**

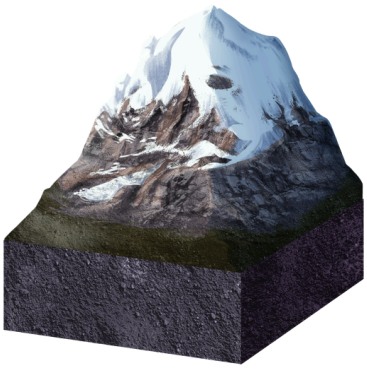


Glacier Area Loss by Latitudinal Zone (1985–2025)

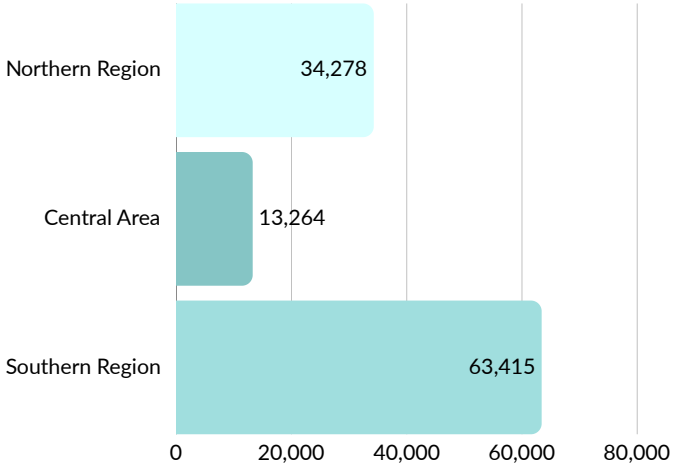
	En 1985	En 2025
C. North	81 048 ha	46 770 ha
C. Center	19 550 ha	6 286 ha
C. South	107 254 ha	43 839 ha

The regions **most affected** by the loss of glacial cover are **central and southern Peru.**

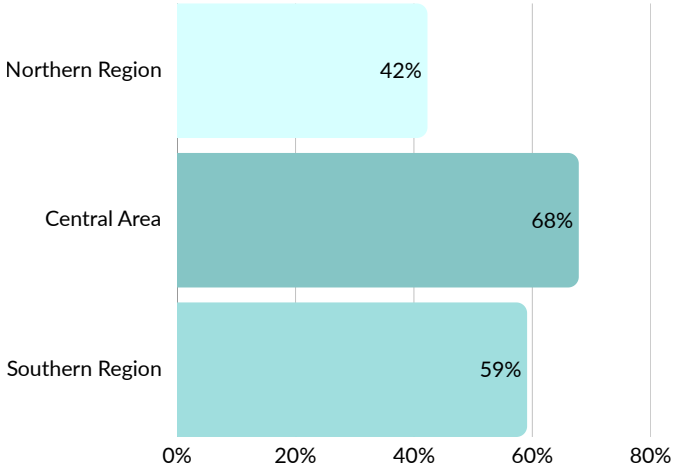
More than **50% of the glaciers** in **central and southern Peru** have been lost.



Glacier area loss by latitudinal zone between 1985 and 2025 (ha)



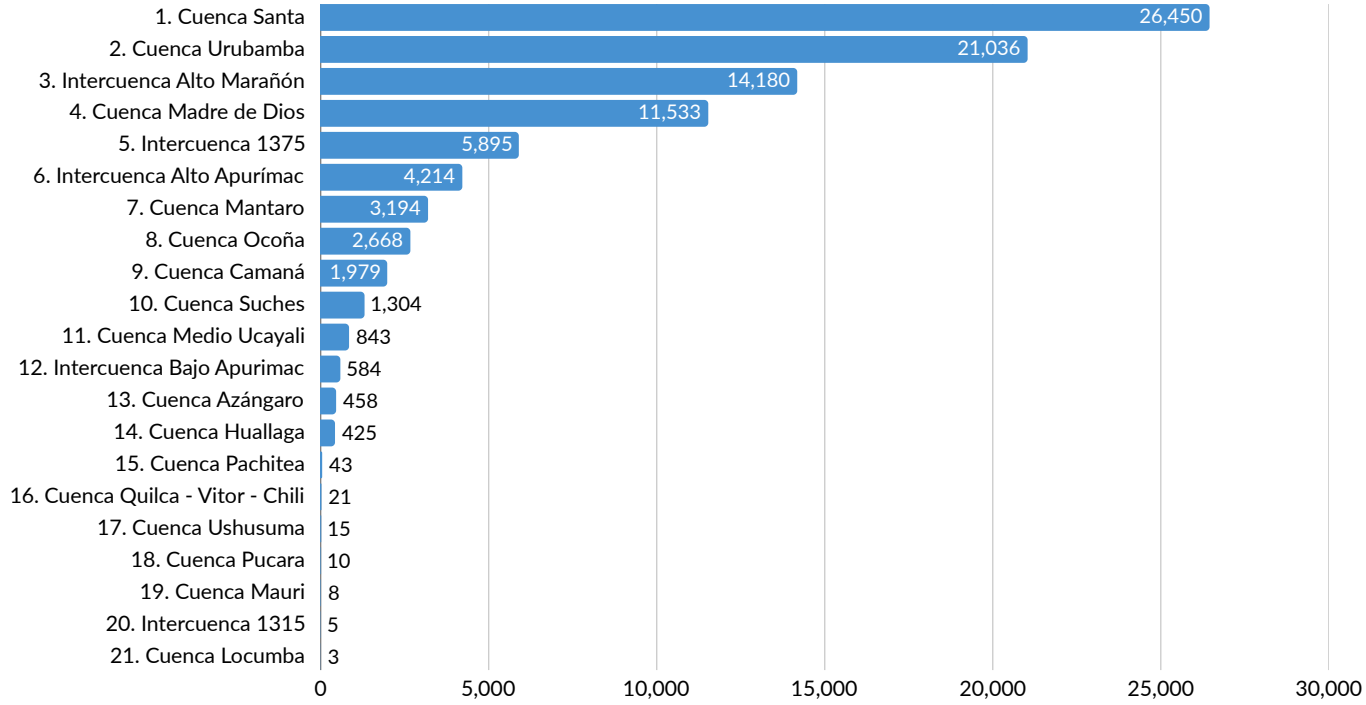
Glacier area loss by latitudinal zone between 1985 and 2025 (%)



Glacier Area by Watershed (Level 4) in 2025

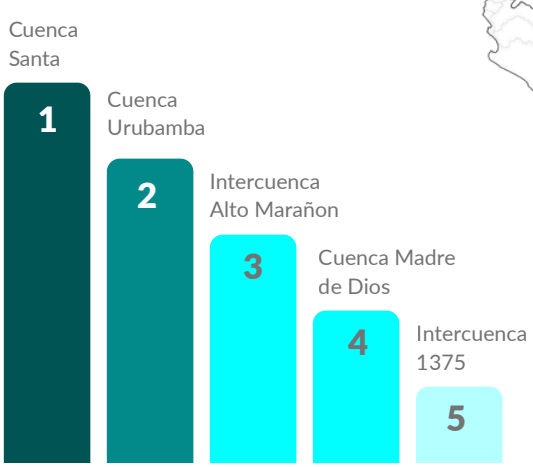
Only 21 out of 73 watersheds

in Peru, they have glacier coverage through 2025



Glacial surface by basins

Top 5

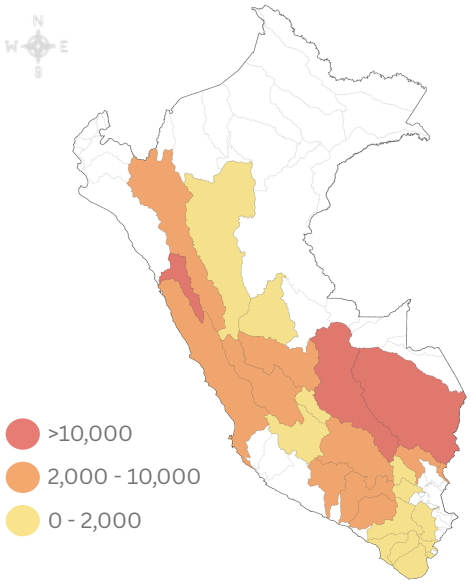


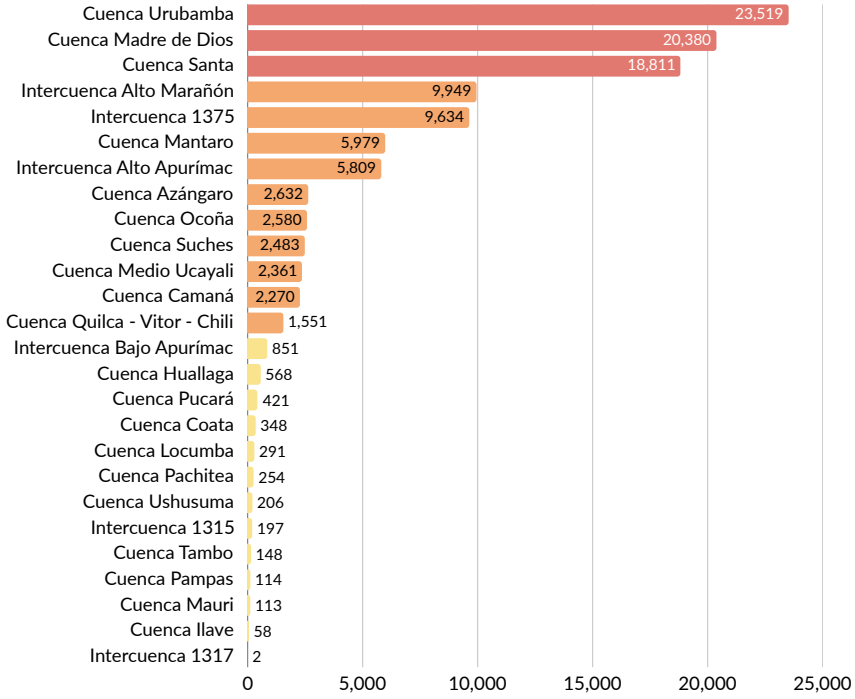
The Santa and Urubamba

basins basins have the largest glacial areas in the country

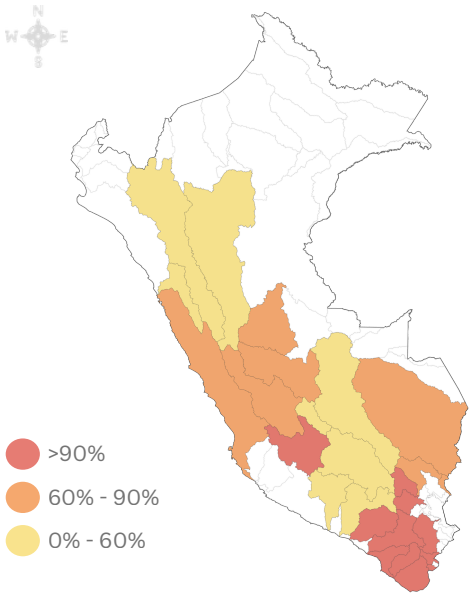
Glacier Area Loss by Watershed (Level 4) between 1985 and 2025

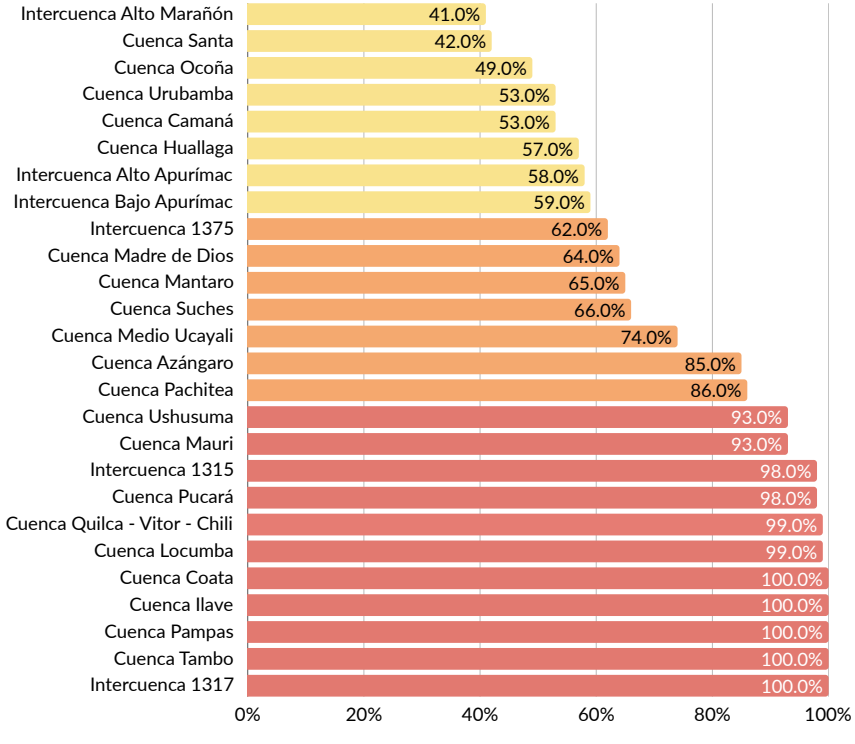
Glacier area loss by mountain range (ha)





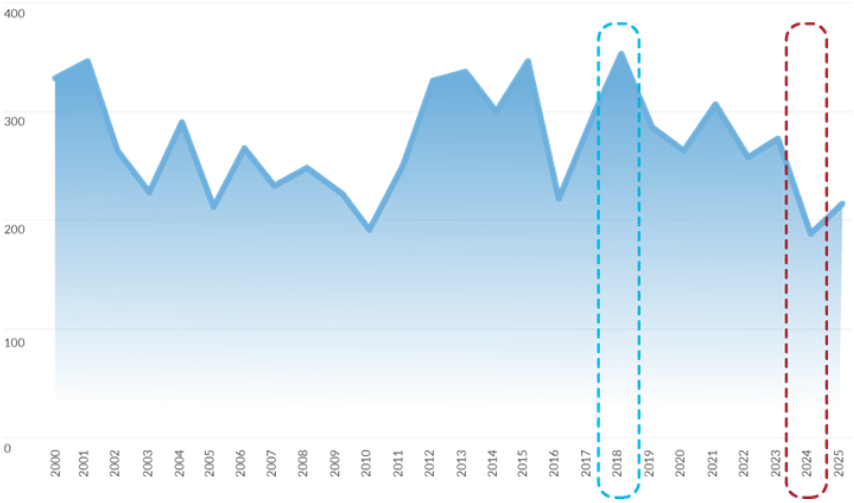
Glacier area loss by mountain range (%)





Snow Cover in Peru (2000–2025)

Annual Snow Cover in Peru



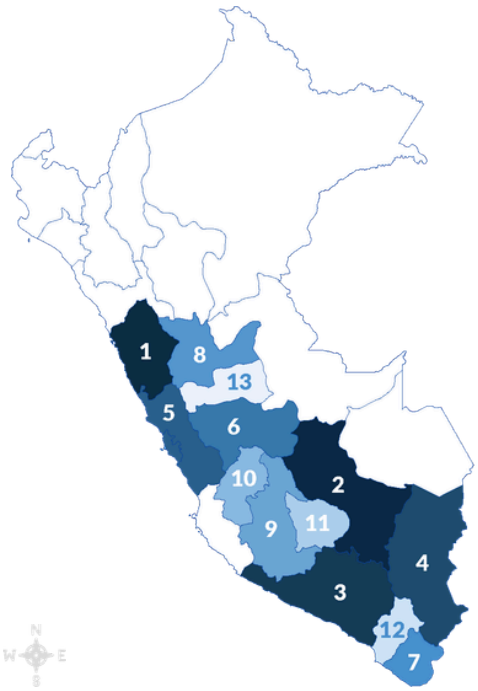
Unlike glacial area, which tends to decrease, **snow cover varies greatly from year to year.**

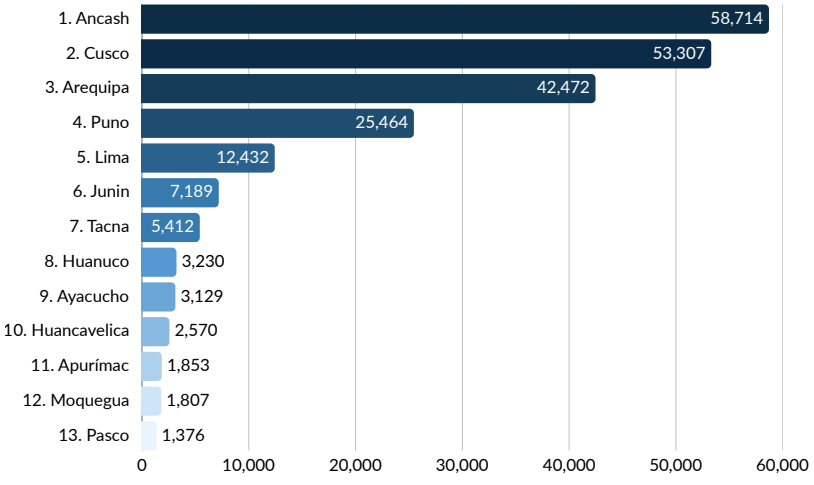
2018 was the year with the largest snow cover area in Peru, at **357,000 ha.**

2024 was one of the years with the smallest snow cover area, at **189,000 ha.**

In 2025, 219,000 ha of snow were mapped throughout Peru.

Snow Cover by Department in 2025



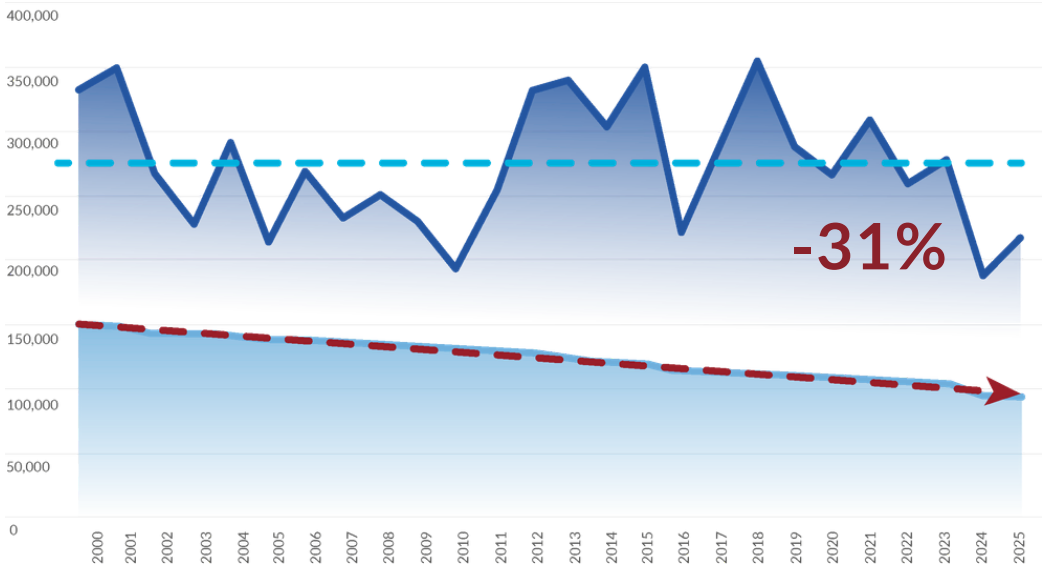


As of 2025, snow cover has been detected in **13 departments.**

Ayacucho and Moquegua are departments with extinct glaciers but where snow cover is present.

Glacier and snow surface (2000 - 2025)

Annual Glacier and Snow Cover in Peru



As of 2025, the following were mapped

219 mil ha

snowfall throughout Peru

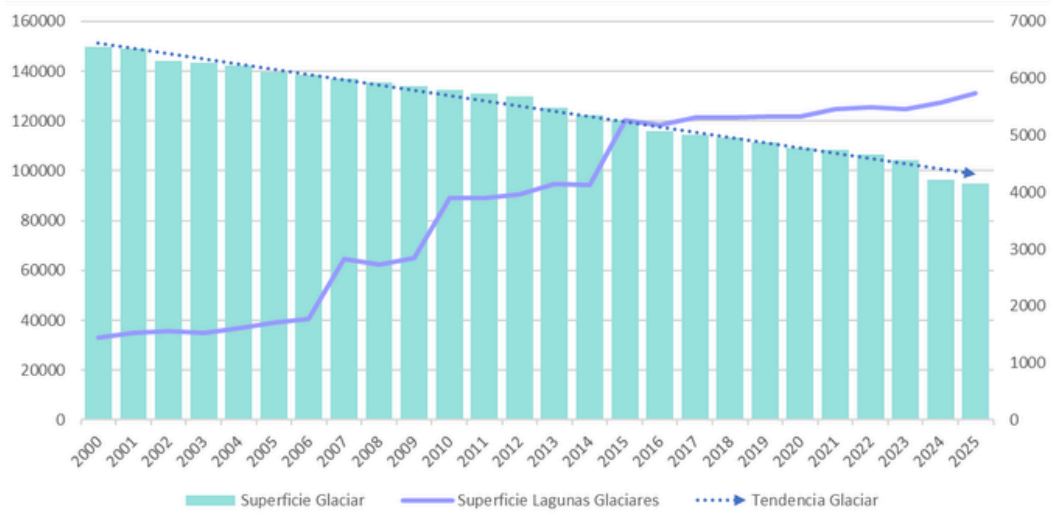
Equivalent to

2.3 veces

Glacier area as of 2025 (94,873 ha)

- Snow Surface
- Glacier Surface
- Average
- Linear (Glacial Surface)

Annual glacier and glacier lakes surface in Perú

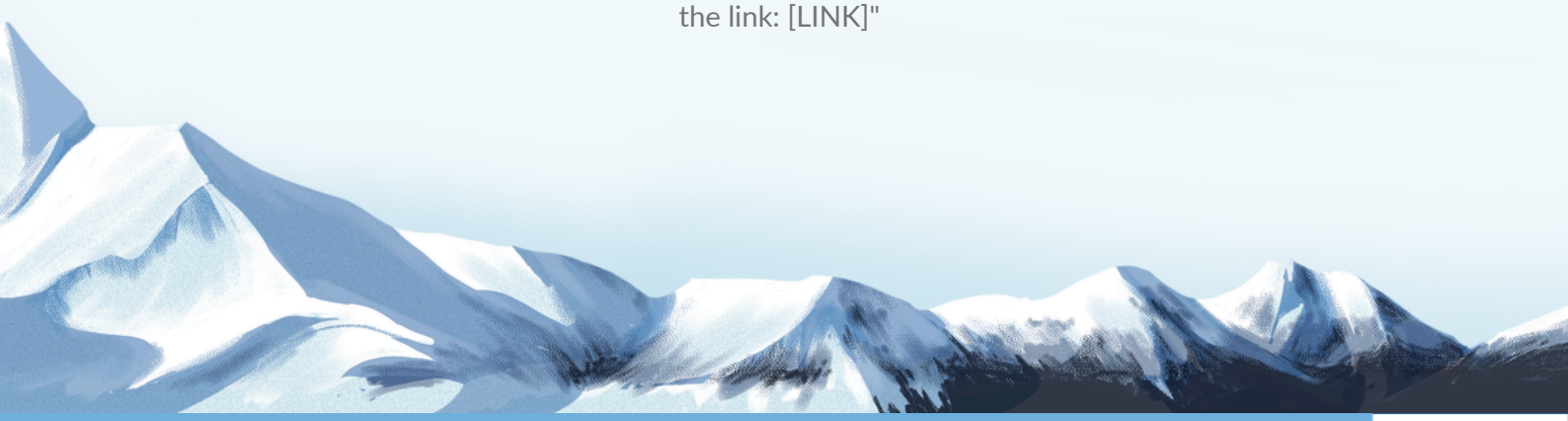


The area of glacial lakes increases as glacier cover decreases.

From 2000 to 2025, the area of glacial lakes increased by 50%.

MAPBIOMAS
[AGUA]

MapBiomas Agua Perú is a collaborative initiative to monitor the dynamics of surface water, glaciers, and snow. Surface water and glacier areas were assessed for the period 1985–2025, while snow cover was assessed for the period 2000–2025.

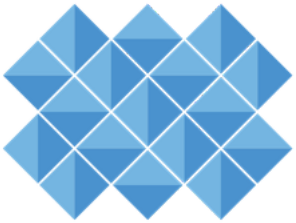


Key Features of the Methodology

Collaborative networking among researchers, universities, NGOs, and companies across the continent, with local scale and expertise.

Pixel-by-pixel processing of Landsat L2 images from programs 4, 5, 7, 8, and 9.

Cloud processing using artificial intelligence algorithms via the **Google Earth Engine platform.**



MAPBIOMAS
[WATER]

For more information:
peru.mapbiomas.org