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How is climate change endangering indigenous Andean cultures?

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Melting Glaciers Threaten Indigenous Cultures

Indigenous Andeans Need Security from Climate Change

PRESENTER:
Eliezer Ugarte

Risk of *deadly floods* and overall *depletion of water supply* increase as the *Andean glaciers* disappear, threatening the survival of both the *indigenous peoples* living there and their *culture*.

Lake Palcacocha, a glacial-melt run-off lake

| Year | Size (m ²) | Volume (m ³) | Max. Depth (m) |
|------|------------------------|--------------------------|----------------|
| 1972 | 66,800 | 579,400 | 14 |
| 1974 | 62,800 | 514,800 | 13 |
| 2003 | 342,332 | 3,959,776 | 14 |
| 2009 | 518,426 | 17,325,206 | 73 |

Safe depth: 58 m

Safe volume: 7,000,000 m³

Beyond these maximum safety dimensions of Lake Palcacocha, the neighboring village cannot be properly protected from floods.



These blocks detached from the glacier due to melting caused by higher temperatures

40% in 40 years

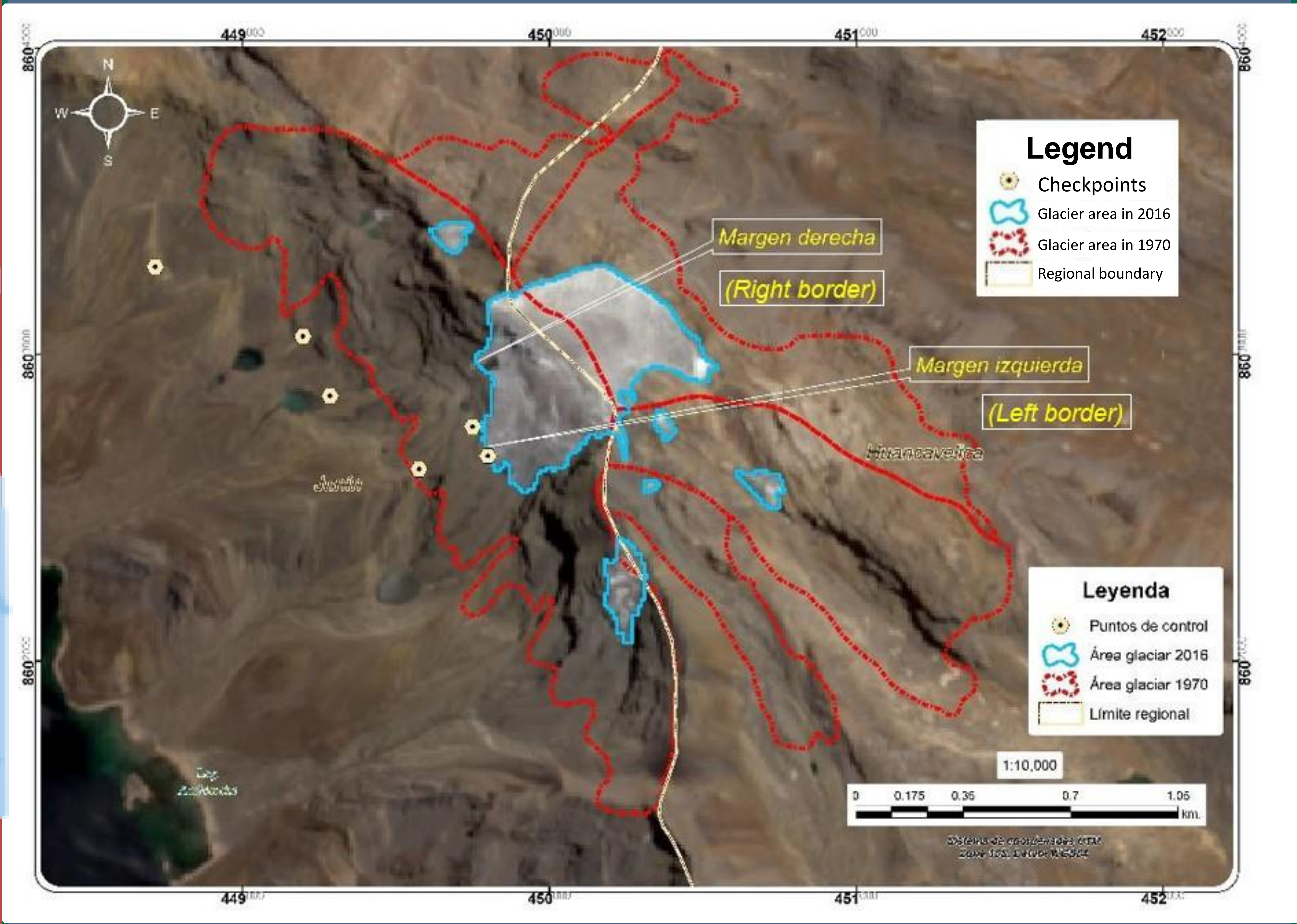
The reported tropical glacier decrease in the Peruvian Andes

Glaciers, formed centuries ago, advance and retreat with the seasons, melting and filling glacial lakes and rivers then freezing again

Quechua peoples, living alongside these glaciers for generations, rely on the glacial lakes as their primary water source in the high altitude of the Andes. The glaciers play an important culture role for these communities.

Global warming has disrupted the glacial melting and freezing cycle. As a result, glaciers shrink while the glacial lakes grow to dangerous levels, but the glaciers are unable to freeze and advance sufficiently to replace the volume lost.

Currently, the overabundance of water leads to floods, but eventually, as the glaciers disappear, so to will the primary water source of the indigenous peoples living there.



Translations of legend and map labels provided by presenter



Scan QR code for legal analysis, abstract, and full bibliography.

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