ESA image: Tropical thaw: Quelccaya ice cap, Peru

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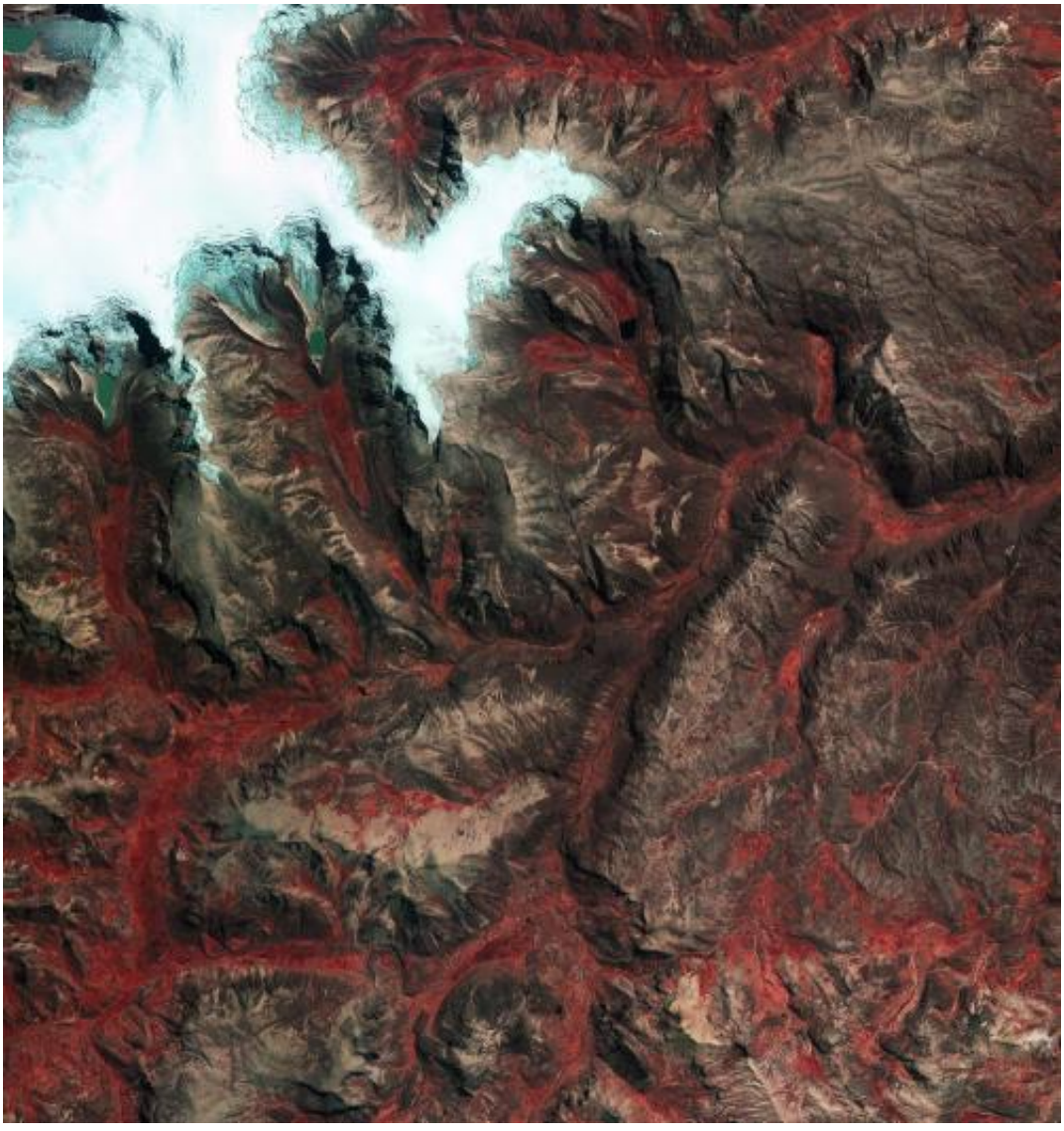

Credit: KARI/ESA

This image features Peru's Quelccaya ice cap, the largest in the Tropics.

Resting high up in the Cordillera Oriental of the Peruvian Andes, the ice cap has been shrinking due to rising temperatures in the region, losing over 20% of its area since the 1970s.

Downstream communities rely on this water source for drinking and electricity in this dry region, but some estimates show that the ice cap will vanish in a matter of decades, draining the water supply for millions of people.

In the far upper-left corner of the image, we can see the Qori Kalis Glacier, the ice cap's main outlet. This glacier is retreating – and this retreat has accelerated in recent years – losing about 50% of its total length since the 1960s.

As a result of the glacier's melting, a lake began to form in late 1980s and has grown over the years.

Other smaller lakes have also formed around the ice cap. Meltwater lakes are generally lighter in colour through the presence of fine particles produced by the grinding of the ice over bedrock – called 'rock flour'. When this 'flour' turns the water white or cloudy, it is referred to as 'glacial milk'.

The false-colour of this image makes vegetation appear bright red, and we can clearly see how vegetation grows mainly in the valleys and along the paths of water runoff.

This image, also featured on the Earth from Space video programme, was acquired on 29 June 2009 by the Korea Aerospace Research Institute's Kompsat-2 satellite.

Provided by European Space Agency