

Global warming: a glacial warning

Dubbed ‘the Mountains of the Moon’, the East African Rwenzori Mountains are well-known for their uniqueness. It is rare to find snow on the equator and trekkers eagerly follow rugged and steep routes to nearly 5000 metres above sea level, just to catch a glimpse of the breathtaking glaciers at the top.

So when geographer Dr. Richard Taylor, of University College London, stood at the foot of Speke Glacier and measured it, he was shocked to discover that it might not be there for much longer. “We were judging the distance that it had retreated in ten years, and it was a *lot*. That’s when we realised things were dramatic,” he recalls. “We had tracked that it had moved 311 metres, so we’re looking at around 30 metres a year.”

Dr. Taylor and his colleagues have calculated that the Rwenzori glaciers are likely to disappear within two decades, since less than 1000 square metres of glacier ice currently remains. Taylor believes that the shrinkage is caused by increasing air temperature due to global warming. He also expects that, worryingly, it is already too advanced to halt. “Even if we stopped emitting greenhouse gases tomorrow, we’d still have a lag-time of increasing air temperature over the next few decades,” Taylor explains. “I don’t think that there is any real hope that we can ever do anything more for these glaciers, but we now need to recognise that we’re changing the climate.”

The region just beneath the glaciers, called the Afroalpine vegetation zone, has rare plants that only occur at specific elevations in East African highlands. These plants rely on glacial river water and there were concerns that there wouldn’t be enough water. But Taylor and his colleagues have found that the glaciers are already so small that their disappearance will barely affect the flow of alpine rivers. However, the receding glaciers certainly act as a warning for more direct consequences of global warming. “The vegetation might move upwards in elevation as temperature increases and plants at high elevations could run into trouble,” warns Taylor, before adding: “But vegetation responds pretty slowly – the glaciers are much more sensitive than vegetation to changes in air temperature.”

The most damaging effects of the glacial loss, ironically, are likely to be on indigenous mountain communities, like the BaKonzo people, who produce virtually no greenhouse gases.

The glaciers give the BaKonzo their cultural identity, protect them from tropical diseases, storms and hostile tribes, and provide medicinal plants. BaKonzo oral legends speak of a spirit, “Kitasamba”, who is the son of Snow, “Nzururu”, and lives in the glacial areas to take care of the BaKonzo. Now they fear that Kitasamba is angry at them for abandoning their cultural traditions, and that he is melting the glaciers to punish them.

The BaKonzo’s tourism economy will also suffer when the glaciers disappear, since mountaineers and trekkers will be less inclined to visit. There will no longer be snow on the equator, and the loss of the glaciers will forfeit this unique quality that the Mountains of the Moon hold.