

Radar installed to better watch unstable Mont Blanc glacier

September 26 2019, by Colleen Barry and Charlene Pele



The Planpincieux glacier located in the Alps on the Grande Jorasses peak of the Mont Blanc massif, is seen from Val Ferret, a popular hiking area on the south side of the Mont Blanc, near Courmayeur, northern Italy, Wednesday, Sept. 25, 2019. Italian officials sounded an alarm Wednesday over climate change due to the threat that the fast-moving melting glacier is posing to the picturesque valley near the Alpine town of Courmayeur, the glacier, which spreads 1,327 square kilometers (512 square miles) across the mountain, has been moving up to 50 centimeters (nearly 20 inches) a day (AP Photo/Antonio Calanni)

A radar system has been installed to better monitor a fast-moving glacier on the Italian side of the Mont Blanc massif that risks having a massive section break off into a tourist valley.

The [radar system](#) installed Thursday on the Planpincieux glacier provides constant data on movements of ice even at the sub-millimeter level. That compares with the satellite photo monitoring already in place, which requires clear skies and takes between six to 12 days to get comparative images.

The mayor of the Italian town of Courmayeur, Stevano Miserocchi, has closed a mountain road and blocked access to nearby areas due to the risk that a 250,000-cubic-meter mass of the glacier could collapse into the Val Ferret, a popular hiking area. Experts say the melting has been linked to [climate change](#), which moved the freezing point this summer to above the top of Mont Blanc, western Europe's highest summit.

Scientists and officials sounded the alarm after the glacier saw ice movements of up to 50 centimeters (20 inches) a day were recorded, due to the creation of a deep fissure during higher-than-usual summer temperatures. The movement has slowed to 10 centimeters (4 inches) a day in recent days.

The glacier itself spreads 1,327 square kilometers (512 square miles) across the Grande Jorasses mountain in the Mont Blanc massif, which straddles Italy, France and Switzerland.



In this picture made available Thursday, Sept. 26, 2019, the Planpincieux glacier, top, located in the Alps on the Grande Jorasses peak of the Mont Blanc massif, is seen from Val Ferret, a popular hiking area on the south side of the Mont Blanc, near Courmayeur, northern Italy, Wednesday, Sept. 25, 2019. Italian officials sounded an alarm Wednesday over climate change due to the threat that the fast-moving melting glacier is posing to the picturesque valley near the Alpine town of Courmayeur, the glacier, which spreads 1,327 square kilometers (512 square miles) across the mountain, has been moving up to 50 centimeters (nearly 20 inches) a day. (Moreno Vignolini, Fondazione Montagna Sicura via AP)

Climate change has contributed to a decrease in glacial mass throughout the Alps. A new special report by the Intergovernmental Panel on Climate Change this week said that glacier melt is happening faster than before and is accelerating.

The collapse of the unstable section of the Planpincieux glacier is not inevitable. But if it does fall all at once—the [worst-case scenario](#)—it's projected to reach the valley road that has been closed, said Fabrizio Troilo, a glaciologist with the Safe Mountain Foundation, which has been monitoring the Planpincieux glacier since 2012.

"We hope this big part of the glacier that is destabilized will fall down in [smaller pieces](#)," Troilo said, but added there was no way to forecast if it will happen as a single event or multiple smaller collapses. The mayor said it was also possible that no major break would happen, especially if the winter freeze arrives and stabilizes the glacier's movement.



In this photo dated 2009, risk of part of the Planpincieux glacier breaking off amid climate warming in the Alps has prompted Italian authorities to forbid hikers and tourists from a section of the Val Ferrat area, shown in this June 2009 photo from the famed Tour du Mont Blanc trail outside Courmayeur, Italy. The fast-moving Italian glacier is melting quickly, threatening the picturesque valley near the Alpine town of Courmayeur and prompting Mayor Stefano Miserocchi to close down a mountain road. (AP Photo / Randall Hackley)



A box containing a radar is carried by a helicopter to the Planpincieux glacier located in the Alps on the Grande Jorasses peak of the Mont Blanc massif, above the Val Ferret, a popular hiking area on the south side of the Mont Blanc, near Courmayeur, northern Italy, Wednesday, Sept. 25, 2019. The radar will be used to monitor the glacier after Italian officials sounded an alarm Wednesday for threat that the fast-moving melting glacier is posing to the picturesque valley near the Alpine town of Courmayeur. The glacier, which spreads 1,327 square kilometers (512 square miles) across the mountain, has been moving up to 50

centimeters (nearly 20 inches) a day (AP Photo/Antonio Calanni)



Marco Belfrond holds an old photo the Plancipieux glacier, near Courmayeur, northern Italy, Thursday, Sept. 26, 2019. Italian officials sounded an alarm Wednesday over climate change due to the threat that a fast-moving melting glacier is posing to the picturesque Val Ferret valley near the Alpine town of Courmayeur. The Planpincieux glacier, which spreads 1,327 square kilometers (512 square miles) across the Grande Jorasses peak of the Mont Blanc massif, has been moving up to 50 centimeters (nearly 20 inches) a day (AP Photo/Antonio Calanni)



The Planpincieux glacier, top, located in the Alps on the Grande Jorasses peak of the Mont Blanc massif, is seen from Val Ferret, a popular hiking area on the south side of the Mont Blanc, near Courmayeur, northern Italy, Wednesday, Sept. 25, 2019. Italian officials sounded an alarm Wednesday over climate change due to the threat that the fast-moving melting glacier is posing to the picturesque valley near the Alpine town of Courmayeur, the glacier, which spreads 1,327 square kilometers (512 square miles) across the mountain, has been moving up to 50 centimeters (nearly 20 inches) a day (AP Photo/Antonio Calanni)



Glaciologist of Fondazione Montagna Sicura, Safe Mountain Foundation, Fabrizio Troilo, monitors computer images of the Planpincieux glacier, near Courmayeur, Italy, Thursday, Sept. 26, 2019. Italian officials sounded an alarm Wednesday over climate change due to the threat that the fast-moving melting glacier is posing to the picturesque valley near the Alpine town of Courmayeur. The glacier, which spreads 1,327 square kilometers (512 square miles) across the mountain, has been moving up to 50 centimeters (nearly 20 inches) a day (AP Photo/Antonio Calanni)



Courmayeur's mayor Stefano Miserocchi talks during an interview with The Associated Press, in Courmayeur, northern Italy, Thursday, Sept. 26, 2019. Italian officials sounded an alarm Wednesday over climate change due to the threat that a fast-moving melting glacier is posing to the picturesque Val Ferret valley near the Alpine town of Courmayeur. The Planpincieux glacier, which spreads 1,327 square kilometers (512 square miles) across the Grande Jorasses peak of the Mont Blanc massif, has been moving up to 50 centimeters (nearly 20 inches) a day (AP Photo/Antonio Calanni)



Marco Belfrond holds an old photo the Plancipieux glacier, near Courmayeur, northern Italy, Thursday, Sept. 26, 2019. Italian officials sounded an alarm Wednesday over climate change due to the threat that a fast-moving melting glacier is posing to the picturesque Val Ferret valley near the Alpine town of Courmayeur. The Planpincieux glacier, which spreads 1,327 square kilometers (512 square miles) across the Grande Jorasses peak of the Mont Blanc massif, has been moving up to 50 centimeters (nearly 20 inches) a day (AP Photo/Antonio Calanni)



Barrier block a road that leads to the Planpincieux glacier, in the Alps on the Grande Jorasses peak of the Mont Blanc massif, above the Val Ferret, a popular hiking area on the south side of the Mont Blanc, near Courmayeur, northern Italy, Wednesday, Sept. 25, 2019. Italian officials sounded an alarm Wednesday over climate change due to the threat that the fast-moving melting glacier is posing to the picturesque valley near the Alpine town of Courmayeur. The glacier, which spreads 1,327 square kilometers (512 square miles) across the mountain, has been moving up to 50 centimeters (nearly 20 inches) a day (AP Photo/Antonio Calanni)



This photo taken on Friday, Sept. 20, 2019 shows the massive Planpincieux glacier, located in the Alps on the Grande Jorasses peak of the Mont Blanc massif, which straddles the borders of Italy, France and Switzerland and contains the highest peak in Western Europe. The fast-moving Italian glacier is melting quickly, threatening a picturesque valley near the Alpine town of Courmayeur and prompting the mayor to close down a mountain road. Mayor Stefano Miserocchi has forbidden access to a section of the Val Ferret, outside of Courmayeur, a popular hiking area on the south side of the Mont Blanc massif. (Comune di Courmayeur, Fondazione Montagna Sicura via AP)



Marco Belfrond looks the Plancinieux glacier near Courmayeur, northern Italy, Thursday, Sept. 26, 2019. Italian officials sounded an alarm Wednesday over climate change due to the threat that a fast-moving melting glacier is posing to the picturesque Val Ferret valley near the Alpine town of Courmayeur. The Plancinieux glacier, which spreads 1,327 square kilometers (512 square miles) across the Grande Jorasses peak of the Mont Blanc massif, has been moving up to 50 centimeters (nearly 20 inches) a day (AP Photo/Antonio Calanni)



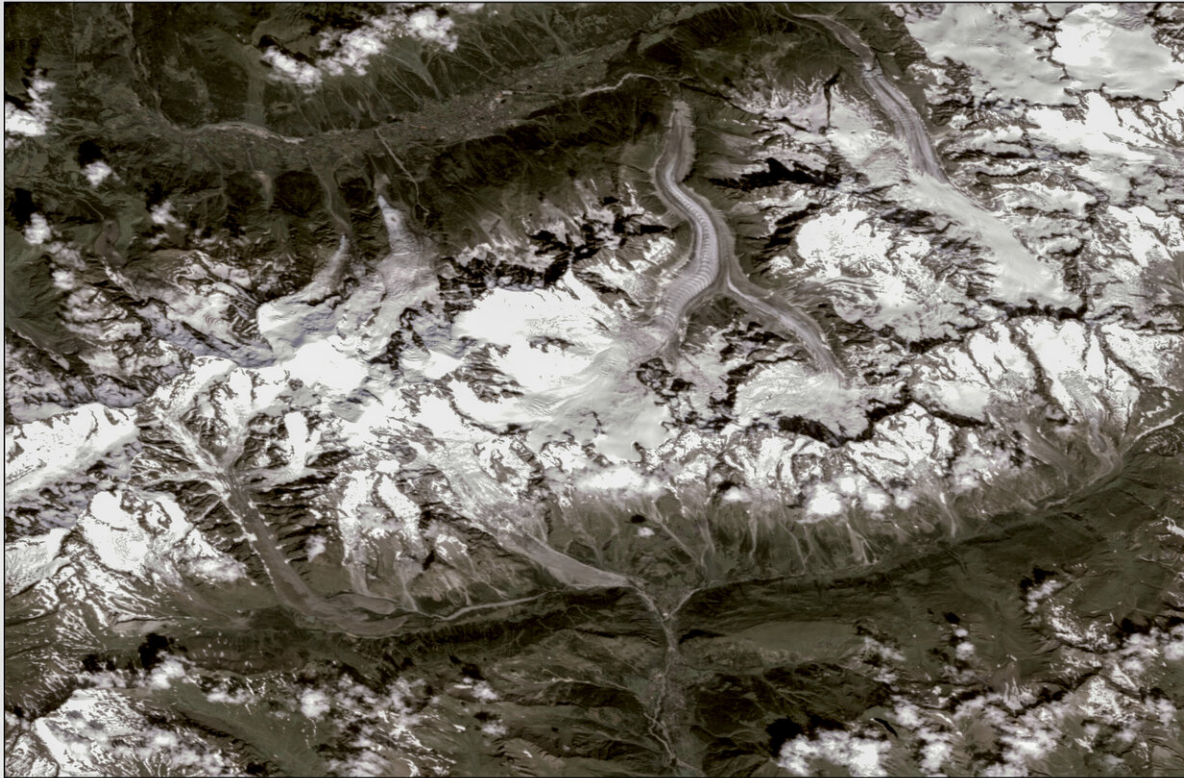
A helicopter flies over the Plancinieux glacier located in the Alps on the Grande Jorasses peak of the Mont Blanc massif, above the Val Ferret, a popular hiking area on the south side of the Mont Blanc, near Courmayeur, northern Italy, Wednesday, Sept. 25, 2019. Italian officials sounded an alarm Wednesday

over climate change due to the threat that the fast-moving melting glacier is posing to the picturesque valley near the Alpine town of Courmayeur, the glacier, which spreads 1,327 square kilometers (512 square miles) across the mountain, has been moving up to 50 centimeters (nearly 20 inches) a day (AP Photo/Antonio Calanni)



In this picture made available Thursday, Sept. 26, 2019, the Planpincieux glacier, located in the Alps on the Grande Jorasses peak of the Mont Blanc massif, is seen from Val Ferret, a popular hiking area on the south side of the Mont Blanc, near Courmayeur, northern Italy, Wednesday, Sept. 25, 2019. Italian officials sounded an alarm Wednesday over climate change due to the threat that the fast-moving melting glacier is posing to the picturesque valley near the Alpine town of Courmayeur, the glacier, which spreads 1,327 square kilometers (512 square miles) across the mountain, has been moving up to 50 centimeters (nearly 20 inches) a day. (Moreno Vignolini, Fondazione Montagna Sicura via AP)

Satellite data: Landsat-7
Acquisition date: 25 July 1999
Copyright: USGS/NASA Landsat
Processing: UNITAR-UNOSAT



This satellite photo provided by UNITAR-UNOSAT, and taken by USGS/NASA on Sunday, July 25, 1999, shows the Mont Blanc massif in the Italian Alps near Courmayeur. Italian officials sounded an alarm Wednesday, Sept. 25, 2019, over climate change due to the threat that a fast-moving melting glacier, located on the Grande Jorasses peak of the massif, is posing to a picturesque valley near the Alpine town of Courmayeur. The glacier, which spreads 1,327 square kilometers (512 square miles) across the mountain, has been moving up to 50 centimeters (nearly 20 inches) a day. (USGS/NASA via AP)

Even though the road is opened up three times for residents, they are growing weary of the precaution.

"I'd say this thing needs to fall. We are waiting for it to fall and we hope it will happen as fast as possible in order to save us all and free us from all this hassle," said Marco Belfrond, owner of the Miravalle hotel in Planpincieux, who has watched the glacier recede over the last 40 years.

Belfrond said his hotel wasn't at risk, but that the road closure was limiting the arrival of guests.

"Thankfully it is low-season, so we don't have much movement. If it had happened in July or August, it would be much worse," he said.

Experts have ruled out using explosives to end the uncertainty.

"Explosives on ice don't work well, and when the ice is fractured, it doesn't work at all. So, it would be a waste of time," Troilo explained.

© 2019 The Associated Press. All rights reserved.

Citation: Radar installed to better watch unstable Mont Blanc glacier (2019, September 26) retrieved 13 March 2024 from <https://phys.org/news/2019-09-radar-unstable-mont-blanc-glacier.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--