

At least seven Alpine climbers killed and many injured by a glacial avalanche, the result of rapid melting due to global warming

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The increasingly devastating effects of capitalist-created climate change, driven by rapidly accelerating global warming, are being manifested around the world in both geographically widespread and highly localized ways. Among these is the impact on glaciers, which are melting at an alarming rate.

This was dramatically illustrated by the deaths Sunday of at least seven climbers, with 14 still missing, and the injury of eight others in the Italian Dolomites, a section of the Alps in northeastern Italy.

A glacier on Marmolada mountain, the highest in the Dolomites, suddenly underwent a major collapse, also known as calving, in which a large section of ice suddenly breaks off from the main body, sending huge quantities of ice, water and rocks descending in the direction of the climbers at approximately 300 kilometers (186 miles) per hour. The avalanche traveled so quickly that survivors said they had no time to get out of the way.

Rescue efforts, using helicopters, sniffer dogs and heat-sensing equipment, have been mounted, but are hampered by fears of continuing instability in the glacier. Remaining bodies are likely to be trapped under a layer of ice and rock. So far, the searchers have recovered only body parts, hiking equipment and clothing on the surface, indicating the ferocity of the avalanche's impact.

Italy and much of Europe has experienced an unusually warm spring season. On the glacier itself, a record-high temperature of 10 degrees Celsius (50 degrees Fahrenheit) had been recorded at its 3,300-meter (11,000-foot) peak the day before the incident. Meltwater that had accumulated behind a mass of ice reached a critical point, forcing the

collapse, according to glaciologist Renato Colucci.

Incidents such as this, relatively rare in the past, are likely to become more frequent due to the impact of the warming climate. The Marmolada glacier had already lost 30 percent of its volume and 22 percent of its area between 2004 and 2015. At this rate, it is projected to totally disappear within the next 25 to 30 years.

Glaciers are melting not only in the Alps, but around the world, as reported by the United Nations Intergovernmental Panel on Climate Change (IPCC). For example, European Space Agency satellite images show that the San Rafael glacier in the Northern Patagonia region of Chile, part of an ice field that covers 3,500 square kilometers (1,350 square miles), is receding at the astonishing rate of 7.6 kilometers (4.7 miles) per year. Currently, Patagonian glaciers are retreating at the fastest rate in the world. But glacial melting is accelerating in all parts of the planet.

Temperature records are being met or exceeded from Europe to Asia. In Italy, the previous maximum June temperature record in Rome was exceeded when the thermometer reached 40.8 degrees Celsius (105.4 degrees F). Florence and Naples also set new monthly records. At the same time, Italy is also experiencing a severe drought and saw unusually sparse snowfall during the past winter. Ultra-hot air from Africa is being pulled all the way to the Arctic. The city of Inuvik in the far north Arctic region of Canada's Northwest Territories recorded an all-time record high of 31.8 degrees Celsius (87.8 degrees F) on Monday. Extreme temperatures are also being recorded in the US Southwest. These unusually high temperatures are occurring earlier in the year than has been typical.

In March, the IPCC listed melting ice and snow as

one of the 10 major threats to ecosystems and infrastructure resulting from global warming. These threats are not exclusively in the form of catastrophic events, such as the recent tragedy in the Alps.

Over somewhat longer, though still imminent timeframes, adverse impacts to previously stable water supplies for domestic use and irrigation for agriculture in areas reliant on glacial meltwater will be affected by increasing fluctuations in the available supply. The IPCC has found that, “In some glacier-fed rivers, summer and annual runoff have increased due to intensified glacier melt, but decreased where glacier melt water has lessened as glacier area shrinks.”

On a broader scale, the melting of glaciers and of the Antarctic and Greenland ice caps will result in significant sea level rise, inundating coastal areas currently inhabited by billions of people. Not only will the human populations of these areas be severely impacted, causing huge migrations and loss of food resources, but natural biotic communities will also be disrupted, further raising the potential for novel human / animal interactions likely to unleash new zoonotic diseases, similar to what has been experienced with COVID-19.

The loss of glacial ice is creating a positive-feedback (i.e., self-reinforcing) loop. Glaciers, continental ice caps, as well as floating sea ice, are light in color, thus tending to reflect rather than absorb solar radiation. This is known as the albedo effect. Darker surfaces, on the other hand, tend to absorb incoming solar radiation, which is subsequently released as heat. As the surface area of the globe that is covered by ice diminishes, the darker underlying soil, rock and water are exposed, thus allowing more solar radiation to be absorbed and then re-radiated as heat. This compounds global warming and accelerates even further the melting of ice, exposing a greater expanse of dark surface, and so on.

The World Wildlife Fund predicts that more than a third of the world’s remaining glaciers will completely melt away by 2100, despite any efforts, unlikely under capitalism, to significantly reduce emissions from the burning of fossil fuels. The IPCC projects that glaciers in Scandinavia, central Europe and the Caucasus could lose between 60 and 80 percent of their mass by the end of the century.

Furthermore, in addition to above-ground ice melting, permafrost (i.e., permanently frozen soil) in the upper

latitude regions of the northern hemisphere, including vast expanses of Russia and Canada, is also melting at an accelerating rate. Not only will this create huge areas of intractable mud, but the tremendous quantities of vegetation long-frozen in the permafrost will begin to decompose releasing immense amounts of methane, a greenhouse gas 25-times more potent than carbon dioxide, thus amplifying the effects of anthropogenic (human-caused) global warming.

The United Nations World Meteorological Organization is now predicting that it is increasingly likely that the world is on track to exceed the threshold of 1.5 degrees Celsius warming above pre-industrial levels set under the Paris Agreement, beyond which substantial environmental damage is likely.

Despite the imminent and growing threat, the capitalist ruling class has utterly failed to undertake any effective response to the dangers of climate change, just as it has failed to deal with the COVID-19 pandemic. The only feasible way to confront these twin catastrophes is for the international working class to take control of society and institute a scientifically based, socialist program to marshal all globally available resources.



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