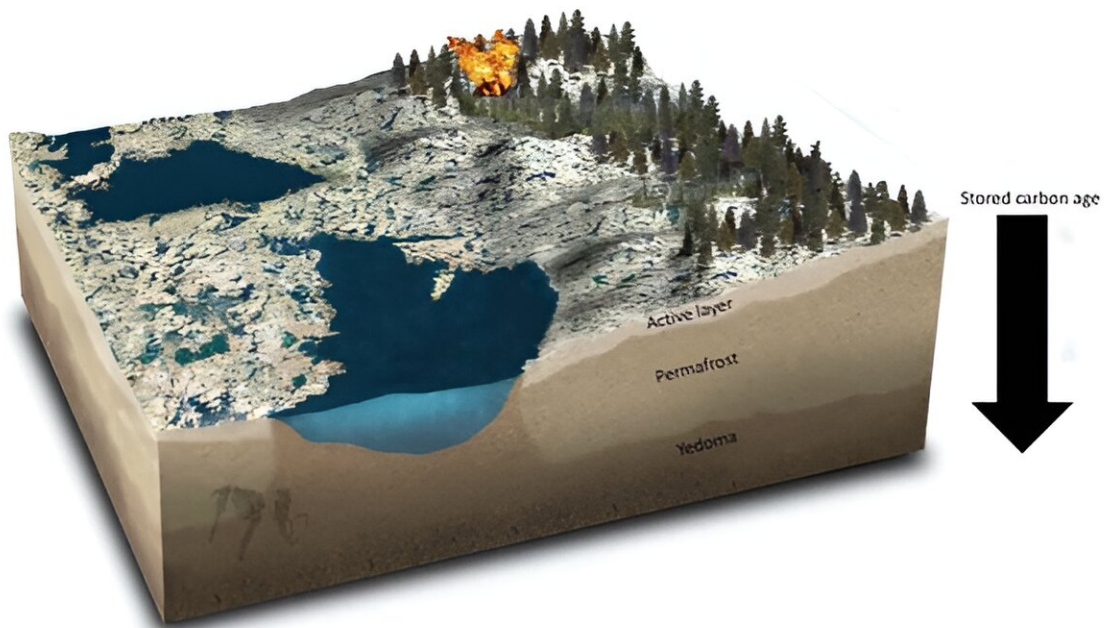


Video: Permafrost thaw: A silent menace

December 12 2023



Credit: European Space Agency

Ice is without doubt one of the first casualties of climate change, but the effects of our warming world are not only limited to ice melting on Earth's surface. Ground that has been frozen for thousands of years, called permafrost, is thawing—adding to the climate crisis and causing serious issues for local communities.

Scientists estimate that the world's permafrost holds almost double the

amount of carbon that is currently in the atmosphere. When permafrost warms and thaws, it releases methane and carbon dioxide, adding these [greenhouse gases](#) to the atmosphere and making global warming even worse.

While permafrost cannot be directly observed from space, a lot of different types of satellite data, along with [ground measurements](#) and modeling, allow scientists to paint a picture of permafrost ground conditions.

Provided by European Space Agency

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