

Kingfisher News

After the rainy season ended, midsummer temperatures have been observed across the country, and extremely hot days have also been observed consecutively. The climate has become increasingly unstable, and heavy rains occurring in many areas.

Continuing from last time, we would like to introduce a panel on the theme of "phenomena thought to be caused by temperature rise" that was produced with the help of a grant from Hiroshima Prefecture to promote global warming countermeasure activities.

Topic

Phenomena thought to be caused by temperature rise (4)

This time, the topic is "A giant crater appears in the Siberian tundra."

It is believed that the crater was formed when extremely hot days continued in the Arctic, causing the permafrost, which acted as a "lid," to melt, causing gas (mainly methane) that had accumulated underneath to erupt and explode. Methane is said to have a greenhouse effect 20 times greater than carbon dioxide.

Permafrost is ground where the temperature remains below 0°C for more than two consecutive years. It is estimated that it contains an estimated 1.7 trillion tons of carbon trapped in the form of frozen organic matter, roughly twice the amount of carbon in the Earth's entire atmosphere.

Over a long period, this organic matter decomposes and turns into a substance called methane hydrate. It is said that if the permafrost melts, methane hydrate will melt and methane and other gases will be released into the atmosphere, accelerating global warming.

Another concern with melting permafrost is the risk that unknown viruses and pathogens to which modern people have no immunity will become activated due to global warming and spread around the world. In fact, in 2016, anthrax (a type of bacteria) spread from a reindeer carcass that had thawed from the frozen soil in Siberia, infecting more than 2,000 reindeer and claiming the life of one young boy. For this reason, melting permafrost is even being called a "time bomb for infectious diseases."

Activity schedule

The 26th Panel Exhibition: August 2-29, 2024 Fuji Grand Midorii 5th Floor Gallery "Passage"

Activity report

The 25th Panel Exhibition: July 5-24, 2024 Fukuya Dept. Hiroshima Ekimae branch 11th floor Rest Space

The 24th Panel Exhibition: Jun 7-24, 2024 LECT 2nd Floor in front of CAINZ

The 23rd Panel Exhibition: April 20-May15, 2024 Fuji Grand Hiroshima 2nd Floor Wood Court

気温上昇が原因と考えられる現象(4)

シベリアのツンドラ地帯に巨大クレーター出現



ツンドラ地帯に出現した巨大クレーターを上空から撮影/Evgeny Chuvilin

北極圏で異常に暑い夏が続いたため、「ふた」の役割を果たしてきた永久凍土が溶け、その下に溜まっていたガス(主にメタン)が噴出して爆発を引き起こし、その結果クレーターが形成されたと考えられています。メタンは、二酸化炭素の20倍以上の温室効果があるとされています。



クレーター出現は、北極圏の中でもツンドラ地帯に特有の現象である /Vasily Bogoyavlensky/AFP/Getty Images

永久凍土とは、2年以上継続して温度が0°C以下となる地盤のことで、推定1.7兆トンの炭素が凍結した有機物の形で閉じ込められており、地球大気全体の約2倍もの炭素が保持されていると試算されています。これらの有機物は時間をかけて分解され、メタンハイドレートという物質に変わります。永久凍土が溶けた場合、メタンハイドレートが融解してメタンなどが大気に放出され、温暖化を加速させると言われています。

