

# Kingfisher News

As we enter the new year, the temperature in the morning and evening has become even colder. However, daytime temperatures can temporarily reach March-warm temperatures, making the climate increasingly unstable.

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

## Topic

### Phenomena thought to be caused by temperature rise (2)

This time, we will talk about the causes of sea level rise.

According to the Global Environmental Research Center, the causes of sea level rise due to global warming are "thermal expansion of the ocean" and "melting of mountain glaciers and ice sheets."

Water has the property of expanding when heated. As ocean temperatures rise, the interior of the ocean expands and the water level rises, leading to sea level rise. For example, the volume of seawater at 20°C expands by approximately 0.025% for every 1°C rise, and if the water depth rises by 2°C at a depth of 500 m, the water level will rise by 25 m.

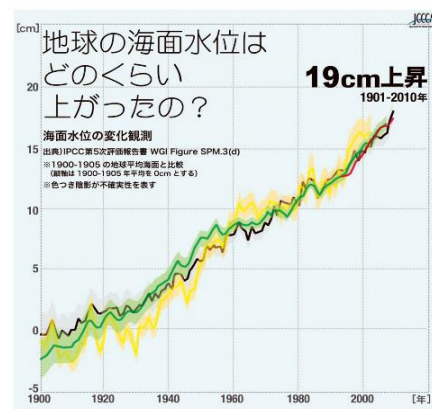
A mountain glacier is a mass of ice that hardens from snow that has fallen in polar regions. Due to global warming, ice cubes melt and flow into the ocean, increasing the amount of water and causing sea levels to rise. An ice sheet is a thick mass of ice that has developed to cover a vast continent, and exists on Earth in Antarctica and Greenland. Its average thickness is 2.45 km, and it is 4 km at its thickest point.

Greenland has been hit by a record heat wave in recent years, with average temperatures more than 10 degrees Celsius higher than usual, and about 8 billion tons of glaciers melting every day. Some researchers have announced that if the Greenland ice sheet were to disappear, sea levels would rise by 6 to 7 meters.

Furthermore, if all the glaciers in Antarctica were to disappear, sea levels are expected to rise by 40 to 70 meters from present levels.

## 気温上昇が原因と考えられる現象 (2)

### 海面上昇が起きる原因



### 「海洋の熱膨張」による海面上昇

水は熱せられると膨らむ特性があります。海水温が上がることで、海洋内部が膨らんで水位が上がります。海面上昇につながります。  
例えば20°Cの海水は1°C上がると体積は約0.025%膨張し、水深500mで2°C上がると水位が25cm上昇します。

### 「山岳氷河や氷床の融解」による海面上昇

グリーンランドでは近年、記録的な熱波に見舞われ平均気温が例年より10度以上高く、1日あたり約80億トンの氷床が溶けています。グリーンランドの氷床がすべて消滅した場合、海面は6〜7m高くなると発表している研究者がいます。  
南極には、氷床の崩壊をせき止める氷河が存在しますが、温暖化の影響により消滅の危機にさらされています。もし南極の氷河がなくなり、これまで守られてきた氷床が崩壊した場合、現在より40〜70m海面上昇すると考えられています。

## Activity schedule

The 22nd Panel Exhibition: April 5-18, 2024 Fuji Grand Midorii 4th Floor Gallery "Passage"

## Activity report

The 21th Global Warming Prevention Panel Exhibition:

August 24-30, 2023 AEON Mall Hiroshima Gion 2nd floor in front of AEON STYLE

The 20th Global Warming Prevention Panel Exhibition:

July 1-17, 2023 Fukuya Dept. Hiroshima Ekimae branch 11th floor Rest Space



特定非営利活動法人  
Environment NGO

Kingfisher



TEL: (082) 548-8822 FAX: (082) 548-8833

e-mail: [information@ngo-kingfisher.or.jp](mailto:information@ngo-kingfisher.or.jp)

<https://ngo-kingfisher.or.jp>