

Arctic Ice

October 3, 2022 • vajiramandravi.com



About:

- The team of researchers identified a strong correlation between the accelerated rate of melting ice and the rate of ocean acidification.
- Scientists have predicted that by 2050, Arctic sea ice in this region will no longer survive the increasingly warm summers.
- As a result, the ocean's chemistry will grow more acidic, creating life-threatening problems for the diverse population of sea creatures, plants and other living things that depend on a healthy ocean. Crabs, for example, live in a crusty shell built from the calcium carbonate prevalent in ocean water.
- Seawater is normally alkaline, with a pH value of around 8.1.
- The researchers point to sea-ice melt as the key mechanism to explain this rapid pH decrease, because it changes surface water in three primary ways.

- First, the water under the sea ice, which had a deficit of carbon dioxide, now is exposed to the atmospheric carbon dioxide and can take it up freely.
- The seawater mixed with meltwater is light and can't mix easily into deeper waters, which means the carbon dioxide is concentrated at the surface.
- The meltwater dilutes the carbonate ion concentration in the seawater, weakening its ability to neutralise the carbon dioxide into bicarbonate and rapidly decreasing ocean pH.

Source : Indian Express

Source: <https://vajiramandravi.com/current-affairs/arctic-ice/>

© Vajiram & Ravi. For personal use only.