3 million Tonnes of Ice Disappears from Antarctica!

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Antarctic ice melting at a far faster rate than previously observed

ICE is melting at an alarming rate in Antarctica, far faster than previously thought, and scientists are fearful that could turbocharge sea level rises.



Antarctica is on the retreat with a new study showing the continent's ice sheet is melting far faster than expected.

Almost three trillion tonnes of ice has disappeared from Antarctica in the past 25 years and the rate is increasing.

This in turn is pushing global sea levels up by 0.6mm a year, three times the rate seen in 2012. Globally sea levels are rising by about 3mm a year. The ice sheets of Antarctica hold enough water to raise global sea levels by 58 metres.

A study published in science journal Nature said Antarctica was now shedding on average 219 billion tonnes of ice per year. Back in 2012, when the previous study was done, that figure was 76 billion tonnes.

A trillion-tonne iceberg, one of the biggest on record and twice the size of the ACT, snapped off the Larsen C West Antarctic ice shelf in July last year.

Until now, Antarctica has only played a small part in the increase in sea levels because it was insulated from warmer water by the Southern Ocean. But warmer water is now finding its way to particularly the west of the continent melting glaciers as they reach the ocean, said Dr Steve Rintoul, a Physical Oceanographer with the CSIRO.

"The largest mass loss is observed where relatively warm ocean waters are melting floating ice shelves from below. As the ice shelves thin and weaken, they provide less resistance to ice flow from the continent to the sea. This increases the rate of mass loss from the Antarctic Ice Sheet and therefore the rate of sea level rise.

"A critical question for the future is how ocean-driven melting of Antarctic ice shelves will change as

the earth warms. If more warm ocean waters reach Antarctica, this will further accelerate sea level rise."

The West Antarctic region is losing around 160 billion tonnes of ice each year, up from around 53 billion tonnes. The Antarctic Peninsula is also seeing ice melt.

The Eastern Antarctic ice sheet, which is more protected from the ocean, has actually seen a slight rise in its coverage by about 5 billion tonnes. But this is more than offset by the losses elsewhere. Australia's Antarctica Territory is on the eastern side of the continent.

The research was led by Andrew Shepherd of the University of Leeds and Erik Ivins of NASA.

"I was quite surprised to see a three-fold increase in the rate of ice loss from Antarctica," said Prof Shepherd.

"There has been a step increase in ice losses from Antarctica during the past decade, and the continent is causing sea levels to rise faster today than at any time in the past 25 years. This has to be a concern for the governments we trust to protect our coastal cities and communities."

Professor Helen Amanda Fricker, from the Institute of Marine and Antarctic Studies at the University of Tasmania said: "The next few years will be a pivotal period for decision making with regard to Antarctica.

"As we observe the system for longer, we see more and more changes of the type we feared could happen as the climate warms. Depending on what is decided, we could be looking at significant and irreversible changes over the next 50 years."

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