Antarctica ice shelves eaten away by warmer water

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WASHINGTON -- Antarctica's massive ice shelves are shrinking because they are being eaten away from below by warm water, a new study finds. That suggests that future sea levels could rise faster than many scientists have been predicting.

The western chunk of Antarctica is losing 23 feet of its floating ice sheet each year. Until now, scientists weren't exactly sure how it was happening and whether or how man-made global warming might be a factor.

The answer, according to a study published Wednesday in the journal Nature, is that climate change plays an indirect role - but one that has larger repercussions than if Antarctic ice were merely melting from warmer air.

Hamish Pritchard, a glaciologist at the British Antarctic Survey, said research using a NASA satellite showed that warmer air alone couldn't explain what was happening to Antarctica. A more detailed examination found a chain of events that explained the shrinking ice shelves.

Twenty ice shelves showed signs that they were melting from warm water below. Changes in wind currents, which pushed the relatively warm water closer to and beneath the floating ice shelves, were probably caused by a combination of factors, including the ozone hole and man-made greenhouse gases, Pritchard said.