

Tuesday 25 August 2020

---

The melting of the Antarctic Ice Sheet could contribute half a metre of sea-level rise in the coming century, a significant increase to estimates from just five years ago, a new study has found.

The [research published in Reviews of Geophysics](#) found that Antarctic Ice Sheet change is particularly driven by the interaction between ice shelves and ocean conditions.

Lead author and IMAS lecturer

"Using data and modelling for past warm periods, the assessment suggests that Antarctic ice melt alone will plausibly contribute around half a metre of sea-level rise per century, in response to ongoing global warming.

"Meanwhile, the input of meltwater to the surrounding Southern Ocean has implications for the global climate, through changes in sea ice cover and ocean circulation, and this can amplify the melting of Antarctic ice shelves," Dr Noble said.

Co-author Professor Eelco Rohling, from the Australian National University, stressed the importance of the compiled information for improving the accuracy of projections of Antarctic variability and its role in global climate change.

"To validate the models used for such projections, we require a deep understanding of all the different drivers of ice sheet change," Prof Rohling said.

"This includes timeseries data of past changes in the ice and surrounding environments.

"Field-studies in and around Antarctica are challenged by hostile conditions, but it is only through a combination of modelling and data-based reconstructions that progress can be