

Correction Summary - Carbon budgets for 1.5 and 2°C targets lowered by natural wetland and permafrost feedbacks

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We would like to report that an error has been found in the above manuscript. This was due to a parallelisation coding problem, which meant that a subset of the model grid-cells were receiving erroneous updating of atmospheric gas concentrations. Unfortunately this resulted in an incorrect calculation of the atmospheric CO₂ for these grid-cells, and therefore an underestimation of the carbon uptake by land through vegetation growth and eventual increases to soil carbon stocks.

We have re-run our simulations and find that the original estimates of the impact of the natural wetland methane feedback are over estimated. We now find the permafrost and natural wetland methane feedback strength to lower permissible emissions by 9-15% to achieve climate stabilisation at 1.5°C, compared to the original published estimate of 17-23%. The overall message of the article is still valid. That is, the strength of the feedbacks are significant and need inclusion in climate policy, and that they are non-linear with global warming.

We provide a revised manuscript, with tracked updates to the text, Table 1 and Figure 3. The text changes are generally only to the quoted numerical values, rather than descriptive text. This is because we find that the main conclusions are still valid. We have removed several superlatives and revise a statement regarding the differences between the two 1.5 °C scenarios as the original text is no longer supported (lines 199-204). We also provide a revised supplement with several figure which have been reproduced with the corrected model output.

In addition, we provide a typographical corrections found post publication on lines 123-124 and in Table 1.