



Corrigendum to “Montreal Protocol’s impact on the ozone layer and climate” published in Atmos. Chem. Phys., 23, 5135–5147, 2023

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Published: 24 August 2026

In the published paper an error occurred in Fig. 8A. The scaling factor is indicated as 1×10^{12} instead of 1×10^6 . To avoid misunderstandings we provide the correct Fig. 8 with the correct scaling factor. Figure 8B is not affected by the erroneous label.

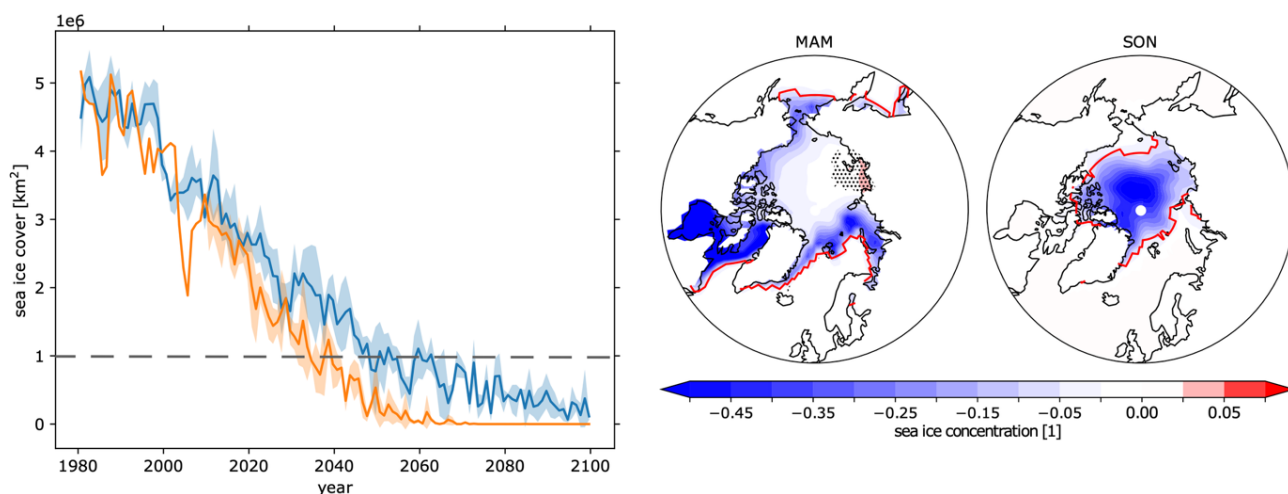


Figure 8. (a) September sea-ice extent time evolution for reference MPA_ssp245 (blue) and for no MPA (orange) cases. (b) Sea-ice loss due to hODSs for 2080–2099; the red line represents sea-ice extent of the reference MPA_ssp245 run. MAM: March–April–May, SON: September–October–November. The dashed line denotes the threshold of an ice-free Arctic.

Furthermore, in the text the sentence “The Arctic would be ice-free (cover less than 1×10^6 km²) in September around 40 years earlier, i.e., around 2050 without MPA compared to 2090 with MPA.” should be “The Arctic would be ice-free (cover less than 1×10^6 km²) in September around 15 years earlier, i.e., around 2035 without MPA compared to around 2050 with MPA.”

Although written in the text that an ice-free Arctic is defined when the sea-ice cover is lower than 1 million km², the years indicated in the published version are the years when the sea-ice cover is close to zero. This is a mistake and the years when the ice-cover is the first time below 1 million km² should be given, i.e., 2035 and 2050.

The values calculated are comparable to the study of England and Polvani (2023), where they also find a delay of 15 years.

The errors corrected here have no other implication on the rest of the manuscript and are not changing the overall conclusions.

Acknowledgements. We thank to Dr. Gabriel Chiodo for bringing this error to our attention.

References

England, M. R. and Polvani, L. M.: The Montreal Protocol is delaying the occurrence of the first ice-free Arctic summer, *P. Natl. Acad. Sci. USA*, 120, e2211432120, <https://doi.org/10.1073/pnas.2211432120>, 2023.