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## Studying Atlantic Water heat in the Arctic Ocean using the CESM Large Ensemble

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Atlantic Water is the most significant source of oceanic heat in the Arctic Ocean, isolated from the surface by a strong halocline across much of the region. However, an increase in Atlantic Water temperatures and a decrease in eastern Arctic stratification are thought to have contributed to Arctic sea-ice loss in recent decades. Investigating how Atlantic Water heat is likely to change and affect the upper ocean during the coming decades is therefore an important part of understanding the future Arctic. In this study, data from the Community Earth System Model (CESM) large ensemble are used to investigate forced trends and natural variability in the Atlantic Water layer properties and heat fluxes over the period 1920-2100, under an RCP 8.5 scenario from 2006.