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## Assembly briefing

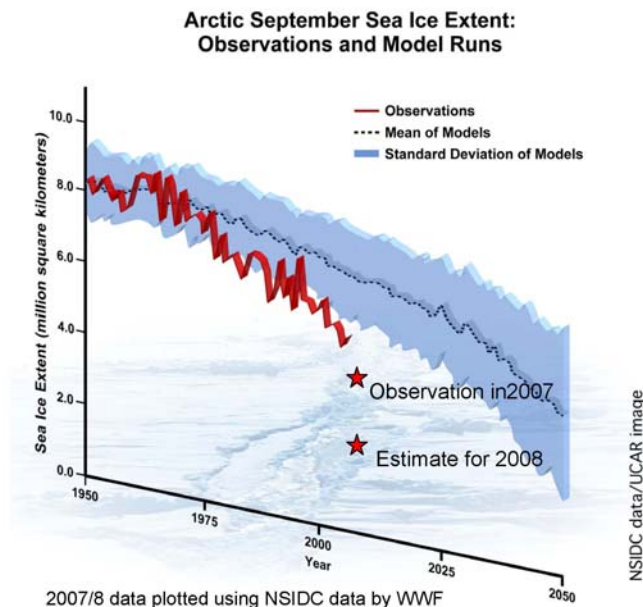
# The Arctic "canary in the cage" Reaching the first major tipping point

This year we will witness the first major tipping point in the Earth's climate system - a total (and probably irreversible) collapse in Arctic summer sea ice.

Attached is a graph which illustrates the dramatic nature of the collapse. The blue band shows what all the climate models from a year or two ago predicted - a steady decline over the course of this century. Observed data for 2007, and confident predictions for 2008, show that in fact the ice has gone - and we will have an ice-free North Pole within a year or two at best.

Why does this matter? The Arctic is clearly a hugely important and iconic ecosystem in its own right and faces devastating impacts. Melting of the Arctic will also further accelerate global warming through feedback loops - such as the loss of white snow and ice which reflects the sun's heat, and the release of methane gas from the permafrost. Sea ice also acts as a "cork" for the Greenland glaciers - as it melts, the rate of melting of Greenland is expected to accelerate with potentially huge consequences for global sea level rise (seven metres for a complete meltdown - more if we lose parts of Antarctica).

The bad news from the Arctic should force us to redouble our efforts to secure strong and urgent action at UK, EU and global levels - unless global emissions are rapidly put onto a steep downward curve, we will cross many more irreversible tipping points. The world's climate is not a smooth, predictable system - and the more we put it under pressure the greater the risk of huge and rapid step changes like that in the Arctic.



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