



The 2 degree target and climate sensitivity uncertainty

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The European Union has declared a target of limiting climate change to 2°C above preindustrial. While it would be straightforward to determine permissible GHG emissions if we were certain about the climate system, uncertainties in the climate system response to GHG forcing changes strongly influence our ability to determine permissible emissions.

By employing the probabilistic Tolerable Windows Approach, an approach in the integrated assessment of climate change, that allows the consideration of climate system uncertainty in the assessment process, we can consider these uncertainties. We will investigate the consequences of uncertainty, expressed as probability distributions over the climate sensitivity, for the EU's 2°C target.

As a result of the analysis, emission corridors will be presented for various probability distributions of climate sensitivity, as well as different probabilities of reaching the target. These emission corridors give the allowable GHG emissions, if the 2°C target is not to be violated.