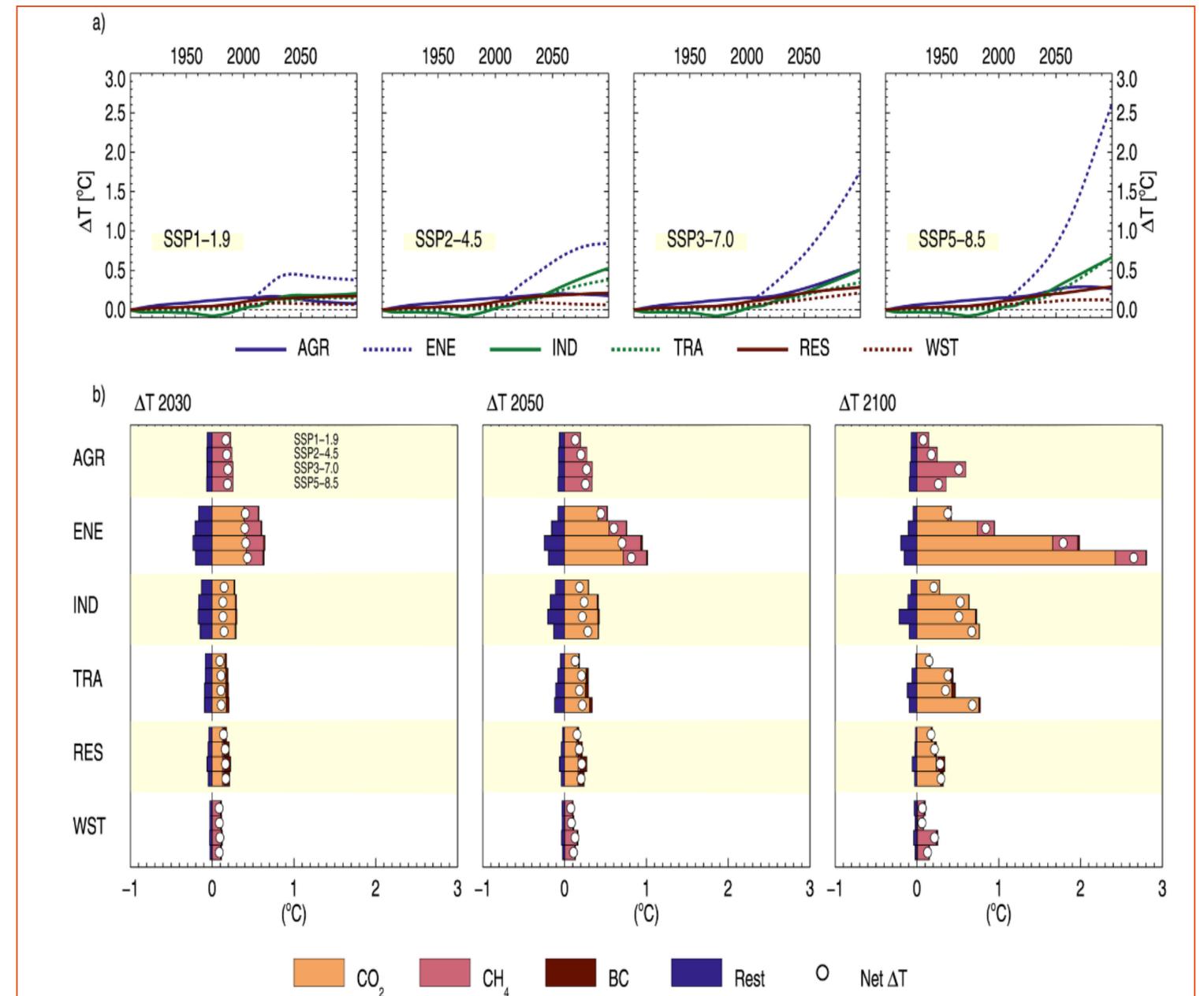
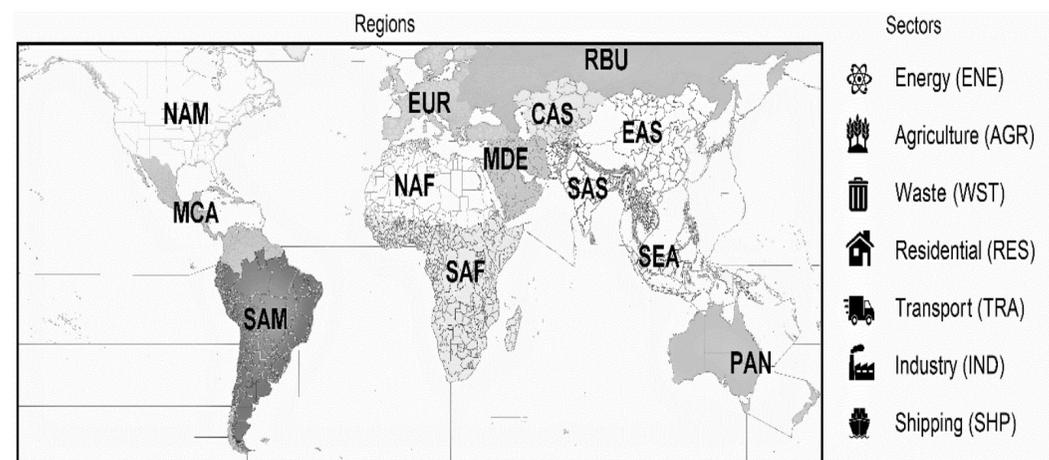


# A continued role of Short-Lived Climate Forcers under the Shared Socioeconomic Pathways

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Emission scenarios in line with the Paris Agreement ambition of keeping global-mean surface temperature well below 2°C require both near-zero levels of long-lived greenhouse gases and deep cuts in emissions of short-lived climate forcers (SLCFs), including methane and black carbon. Designing efficient mitigation strategies at the sectoral and regional level requires detailed knowledge about the mix of emissions from individual sources, their timescales of climate response, and benefits and trade-offs of emission reductions. Here we quantify near- and long-term global temperature impacts by SLCF and CO<sub>2</sub> emissions from 7 economic sectors in 13 world regions using the most recent present-day global inventory and future scenarios, providing a detailed dataset for further assessments of regional and sectoral emission changes.



**Figure SI 1 from Lund et al. (2020):** Global mean temperature response to historical emissions and future SSP pathways: a) Net (i.e., sum over all species and regions) response over the period 1900 to 2100 for each sector and scenario and b) net response in 2030, 2050 and 2100 to emissions in six of our seven sectors (excluding shipping, which remains much smaller than the rest), broken down by contributions from CO<sub>2</sub>, BC, methane and the sum of SO<sub>2</sub>, OC, NH<sub>3</sub> and ozone precursors (“Rest”).