Evolution of Global Mean Surface Temperature
1.5° C and 2° C warmer worlds

Trends in intensity and frequency of some climate and weather extremes have been detected over time spans during which about 0.5°C of global warming occurred (medium confidence)
Cumulative emissions of CO$_2$ and future non-CO$_2$ radiative forcing determine the probability of limiting warming to 1.5°C

a) Observed global temperature change and modeled responses to stylized anthropogenic emission and forcing pathways
1.5°C and 2°C warmer worlds

Climate models project robust differences in regional climate between present-day and global warming up to 1.5°C, and between 1.5°C and 2°C (high confidence), depending on the variable and region in question (high confidence). Large, robust and widespread differences are expected for temperature extremes (high confidence).

Global warming of 2°C for mean temperature based on RCP8.5 scenario simulations

© Seneviratne, et al, 2016, doi:10.1038/nature16542
1.5°C and 2°C warmer worlds

There is no single ‘1.5°C warmer world’ (high confidence)

Seneviratne et al. 2018
Occurrence of 1985-2005 T Max
% of Years in Each Period

Diffenbaugh 2012
How the level of global warming affects impacts and/or risks for selected natural, managed, and human systems

**Purple** indicates very high risks of severe impacts/risks and the presence of significant irreversibility or the persistence of climate-related hazards, combined with limited ability to adapt due to the nature of the hazard or impacts/risks.

**Red** indicates severe and widespread impacts/risks.

**Yellow** indicates impacts/risks are detectable and attributable to climate change with at least medium confidence.

**White** indicates that no impacts are detectable and attributable to climate change.
Risks of occupational heat exposure in the shade during the hottest part of the day, averaged over the hottest month

Andrews et al. 2018