

# The world in 2100:

## Scenarios for climate change

### RCPs: Scenarios for Global Warming

We have begun to experience the effects of climate change, however, the extent to which these effects will ultimately progress is still uncertain. The main source of this uncertainty, particularly regarding the climate in the second half of this century, comes from the as yet unknown human response to climate change. In order to represent these different responses and their impact on climate change, the IPCC uses Representative Concentration Pathways.

The scenarios range from the best case, RCP 2.6, to the worst case, RCP 8.5. The number of each pathway is the radiative forcing value at the end of the century in each scenario. Radiative forcing values measure the proportion of the sun's energy absorbed into the earth instead of radiating back into space, and are dependent upon the concentration of greenhouse gasses in the atmosphere.

The scenario that becomes reality will be dependent upon our net greenhouse gas emissions over the coming decades. If we quickly stabilize and then lower our emissions we will end up in a lower radiative forcing value scenario, but if we continue to increase our emissions at the current rate, we will quickly end up in the

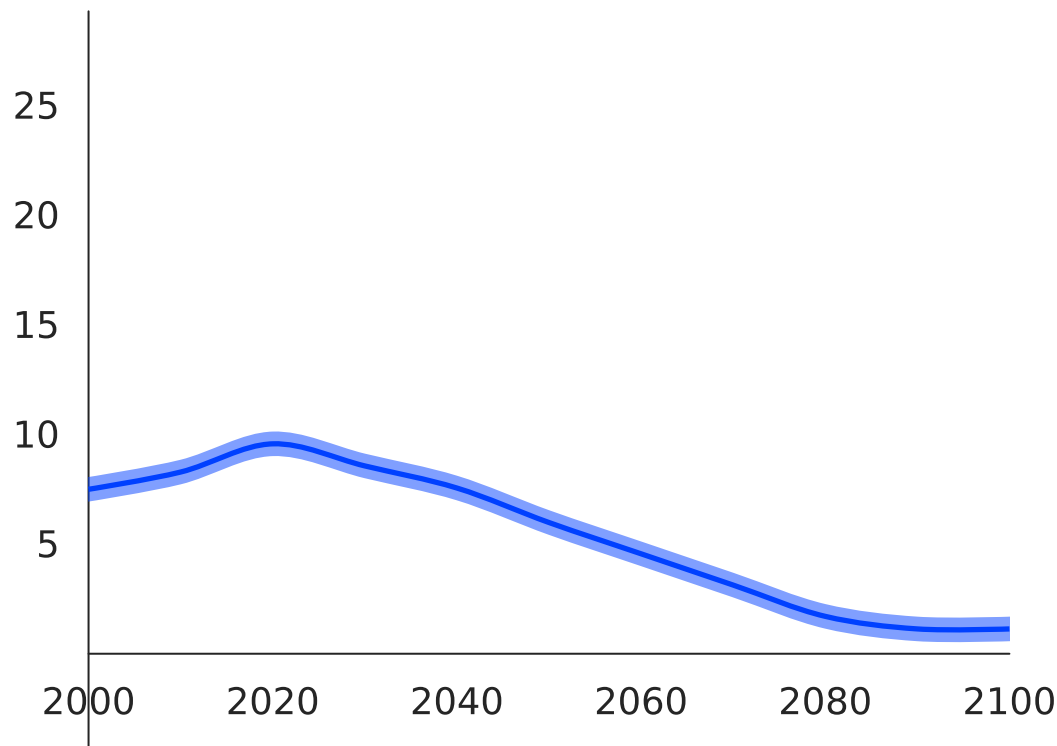
worst case scenario.

Use the slider at the bottom of the page to adjust the scenario for climate change that is shown. Each graph shows the predicted value over the remainder of the century of an important measurement related to climate change. The shaded area represents the uncertainty associated with each prediction. After exploring the different scenarios for climate change read below about the green new deal, a proposal that would prevent the worst scenarios for climate change from occurring.

3.4



### C02 Emissions (GtC)



### Green House Gas Emissions

Greenhouse gas emissions are the most important control we have over climate change. The most important greenhouse gas is carbon dioxide, but other gasses such as methane or sulfur dioxide also contribute. One important metric to pay attention to is when our emissions will reach their peak and begin declining. In the current scenario, emissions will peak around 2020.

### C02 C<sup>3.4</sup>centration (ppm)



3.4

