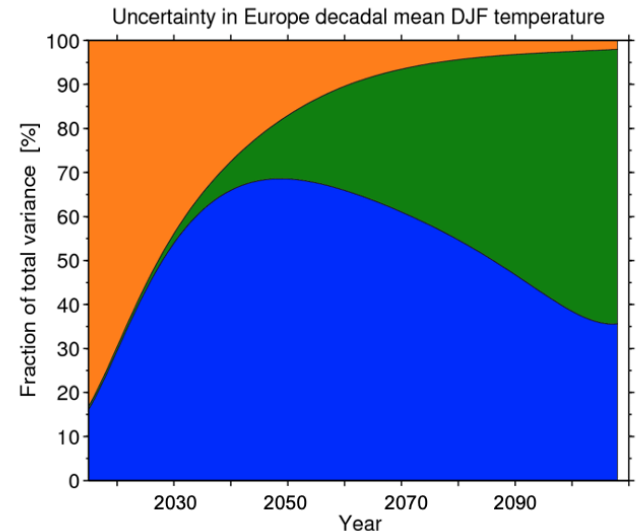


## The Evolving Role of the Ocean and the Atmosphere in Decadal to Multidecadal Modes of Climate Variability

How much of regional climate variability is due to anthropogenic forcing? How will regional climates evolve in the coming decades? Where can improvements be made in narrowing the uncertainty in these projections? This project will address these questions through an examination of the roles of processes internal to the climate system versus the role of external radiative forcing on the dominant modes of variability on decadal to multidecadal timescales in regions around the globe. We will use a hierarchy of climate models to find the signal to noise ratio in models, and how it evolves over time, and to estimate it in nature.



Adapted from Hawkins and Sutton (2009). The relative importance of each source of uncertainty in decadal mean surface temperature projections in DJF for Europe. Green regions represent scenario uncertainty, blue regions represent model uncertainty, and orange regions represent the internal variability component.