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## Global climate changes during the most recent two millennia

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The past two thousand years is a key interval for climate science because this period encompasses both the era of human-induced global warming and a much longer interval when changes in Earth's climate were governed principally by natural drivers. This earlier 'pre-industrial' period is particularly important for two reasons. Firstly, we now have a growing number of well-dated, climate sensitive proxy data with high temporal resolution that spans the full period. Secondly, the pre-industrial climate provides context for present-day climate change, sets real-world targets against which to evaluate the performance of climate models, and allows us to address other questions of Earth sciences that cannot be answered using only a century and a half of observational data.

Here, we first provide several perspectives on the concept of a 'pre-industrial climate'. Then, we highlight the activities of the PAGES 2k Network, an international collaborative effort focused on global climate change during the past two thousand years. We highlight those aspects of pre-industrial conditions (including both past climate changes and past climate drivers) that are not yet well constrained, and suggest potential areas for research during this period that would be relevant to the evolution of Earth's future climate.