
Highlights from the IPCC 2021 climate report ‘The physical science basis of climate change’

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Abstract

This talk will present key findings of the Working Group I (WGI) contribution to the IPCC’s Sixth Assessment Report (AR6) on the physical science basis of climate change. The report shows that climate change is widespread, rapid and intensifying. It addresses the most up-to-date physical understanding of the climate system and climate change, bringing together the latest advances in climate science, and combining multiple lines of evidence from paleoclimate, observations, process understanding, and global and regional climate simulations. With this talk, insights will be provided on the understanding of the current state of the climate, including how it is changing and the role of human influence, the state of knowledge about possible climate futures, climate information relevant to regions and sectors, and limiting human-induced climate change. For the first time, the Sixth Assessment Report provides a more detailed regional assessment of climate change, including a focus on useful information that can inform risk assessment, adaptation, and other decision-making, and a new framework that helps translate physical changes in the climate – heat, cold, rain, drought, snow, wind, coastal flooding and more – into what they mean for society and ecosystems. Hence, this talk will also draw on key messages on how climate change is already affecting every region on Earth, in multiple ways, and on how the changes we experience will increase with additional warming.

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