



Global projections and climate stabilisation targets

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The Summary for policy makers of the 5th Assessment Report of the Working Group 1 of IPCC has a figure that has no equivalent in previous IPCC assessment reports. This new figure shows the change in global average surface temperature as a function of cumulative anthropogenic emissions of CO₂. In this talk I will describe how the concept of transient climate response to cumulative emissions (TCRE) that supports that figure emerged from the literature over the recent years and what are the fundamental physical and biogeochemical processes that explain this relationship and its linearity. I will also explore the implication of TCRE for long-term climate change and mitigation strategies as well as the limitations of the concept of TCRE.