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Climate Science: Remaining policy relevant without becoming policy driven

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Climate modelling has been the central element of all comprehensive assessment reports of Working Group I of the Intergovernmental Panel on Climate Change (IPCC) since its first report in 1990. What has started as a one-way relationship characterized by policymakers asking for relevant results and insights, has now become a two-way exchange in which scientists, institutes, and even scientific programs proactively tailor their research to communicated or perceived needs of the policymakers. This is a critical situation for science because it bears the risk that important questions remain unaddressed, that the full range of implications is not explored, or that curiosity-driven research takes second priority. In this keynote I present my personal view of this emerging dilemma as a scientist and past Co-Chair of IPCC. I do this by looking at some instructive examples of paleoclimate simulations and ensemble simulations of future climate change. Finally, I take a critical look at the growing industry of modelling intercomparison projects and "solution-based" research.