

Interactive comment on “Ideas: a simple proposal to improve the contribution of IPCC WG1 to the assessment and communication of climate change risks” by Rowan T. Sutton

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This is a well-intentioned call-to-arms but I wonder if it is misdirected? Yes policy makers need assessments of risk, coupled with assessments of vulnerability, but are IPCC WG1 scientists are best placed to provide this?

WG1 scientists and authors can assess the impacts on the physical climate system of high-end scenarios and sensitivities, abrupt changes etc. Certainly, more could certainly be done in this area as there are numerous gaps in the literature. However, providing a full assessment of physical risks, the risks to human and natural systems, the vulnerability of those human and natural systems to risks and assessments of

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techniques to mitigate impacts, arguably requires input from all three IPCC working groups. (This is part of the rationale for the cross-working-group special reports which are currently being written.)

I think what the author might better argue for is greater working between scientists from the different working groups to produce more coordinated literature upon which such syntheses are made. And for community-coordinated projects such as CMIP to provide the infrastructure to underpin such syntheses.

The variable the author chooses to illustrate the argument raises an interesting side point. The AR5 assesses the equilibrium climate sensitivity as being extremely unlikely less than 1°C (high confidence), and very unlikely greater than 6°C (medium confidence). Yet, there are no models in the CMIP5 archive with such low and high climate sensitivities. Should modellers be seeking to produce models that sample more the tails of such distributions? Should MIPS be seeking to produce more extreme model response such as AMOC collapse or mega-tropical cyclones? Perhaps that is another discussion article.

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