

# DOE PI/CCTP Impact Activities and Needs

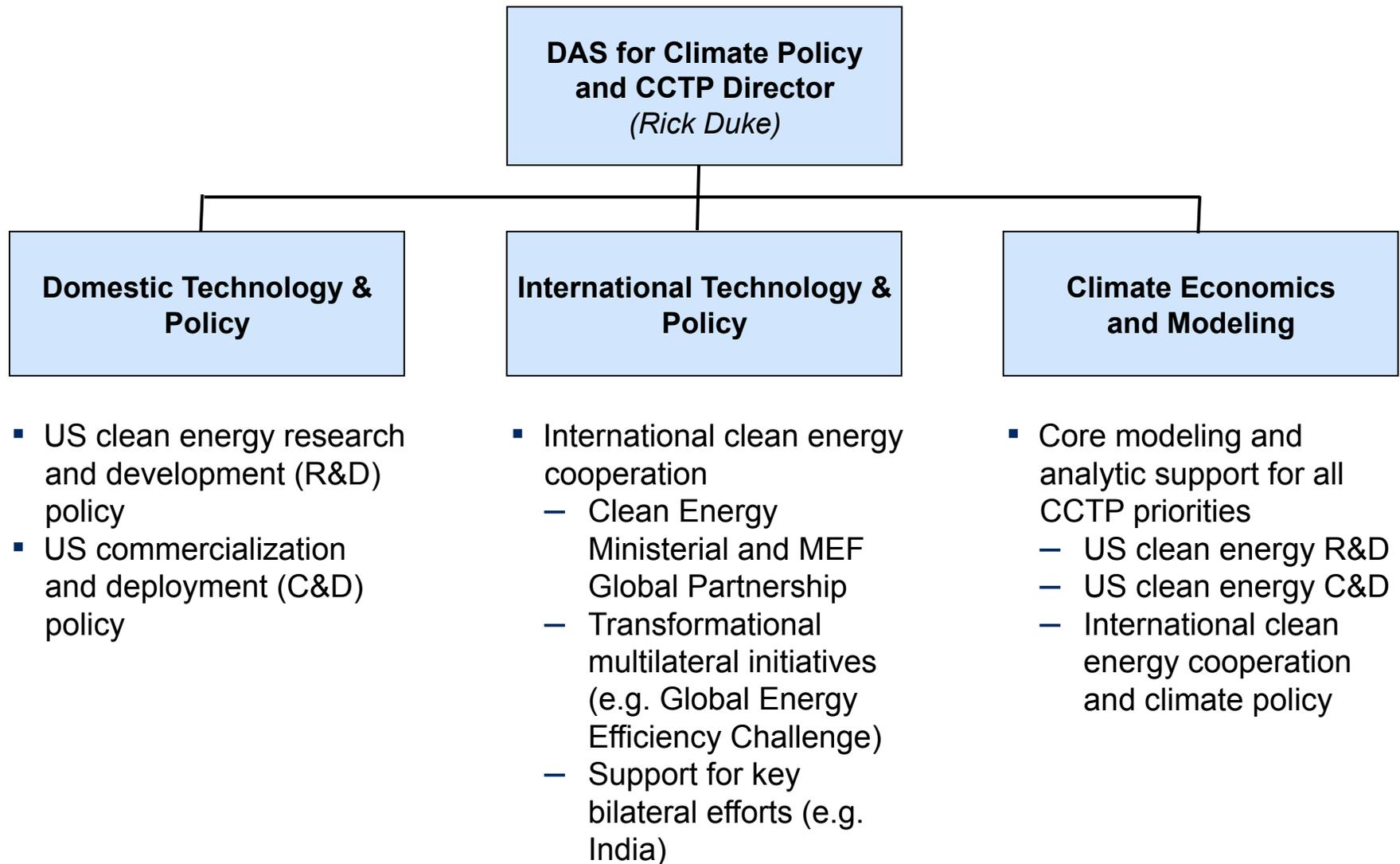


**Bob Kopp**  
AAAS Science & Technology Policy Fellow

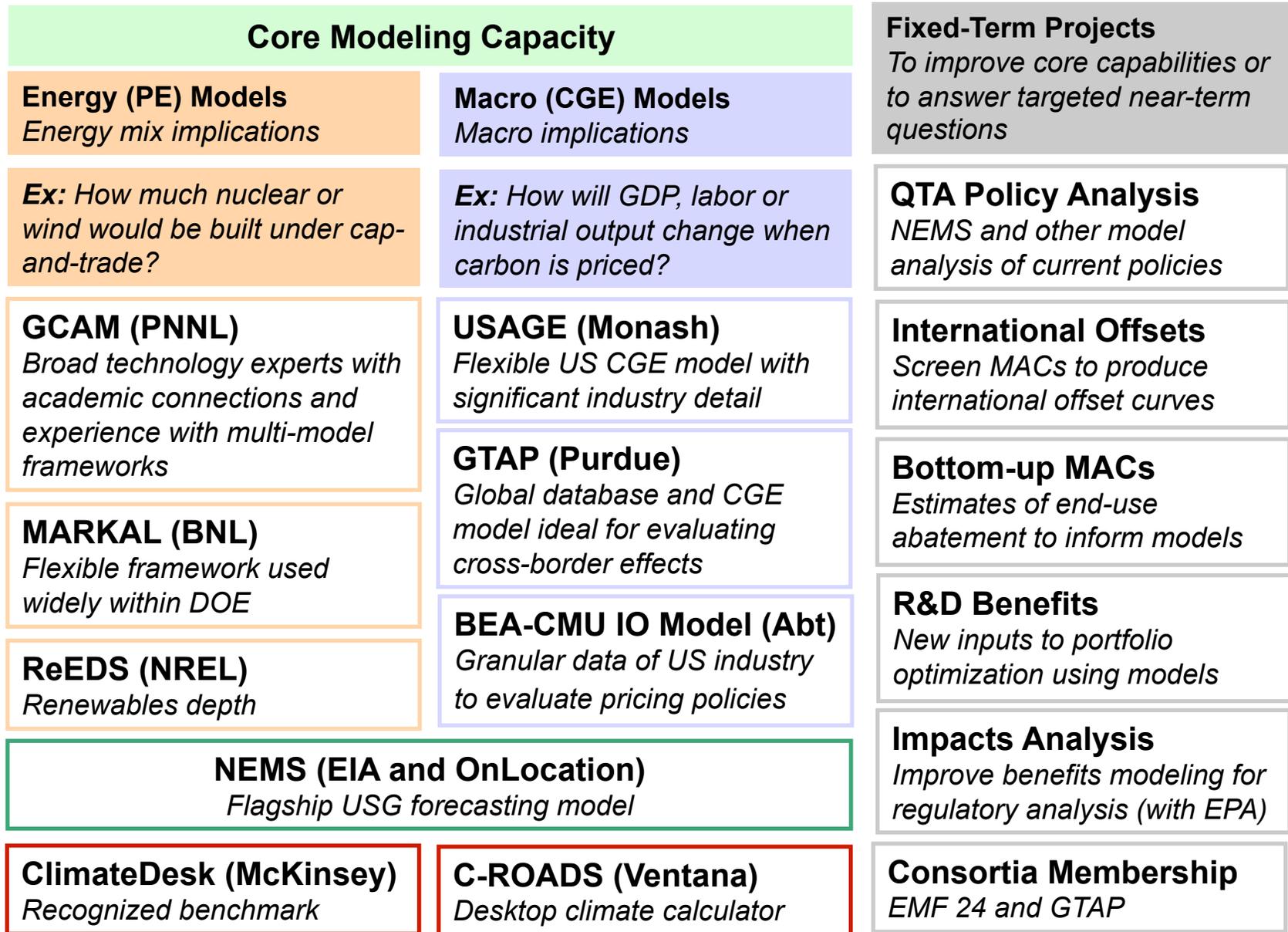
Office of Policy & International Affairs  
US Department of Energy

Workshop on Climate Change Impacts and Integrated Assessment  
Snowmass, CO / July 27, 2010

## Priority areas for CCTP



# PI/CCTP Core modeling infrastructure: Models and supporting activities



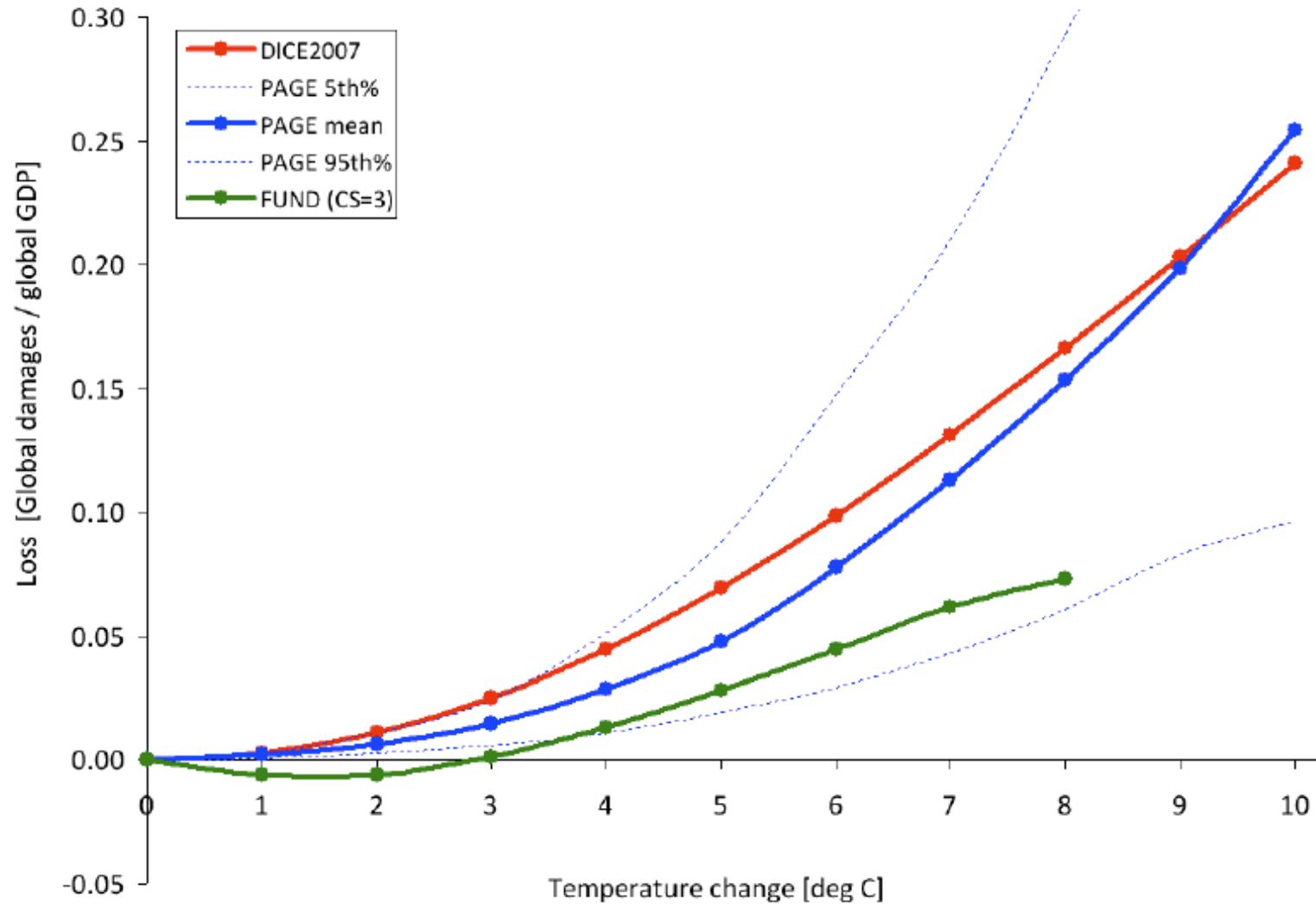
# Social cost of carbon

Under Executive Order 12866, agencies are required, to the extent permitted by law, “to assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs.” The purpose of the “social cost of carbon” (SCC) estimates presented here is to allow agencies to incorporate the social benefits of reducing carbon dioxide (CO<sub>2</sub>) emissions into cost-benefit analyses of regulatory actions that have small, or “marginal,” impacts on cumulative global emissions. The estimates are presented with an acknowledgement of the many uncertainties involved and with a clear understanding that they should be updated over time to reflect increasing knowledge of the science and economics of climate impacts.

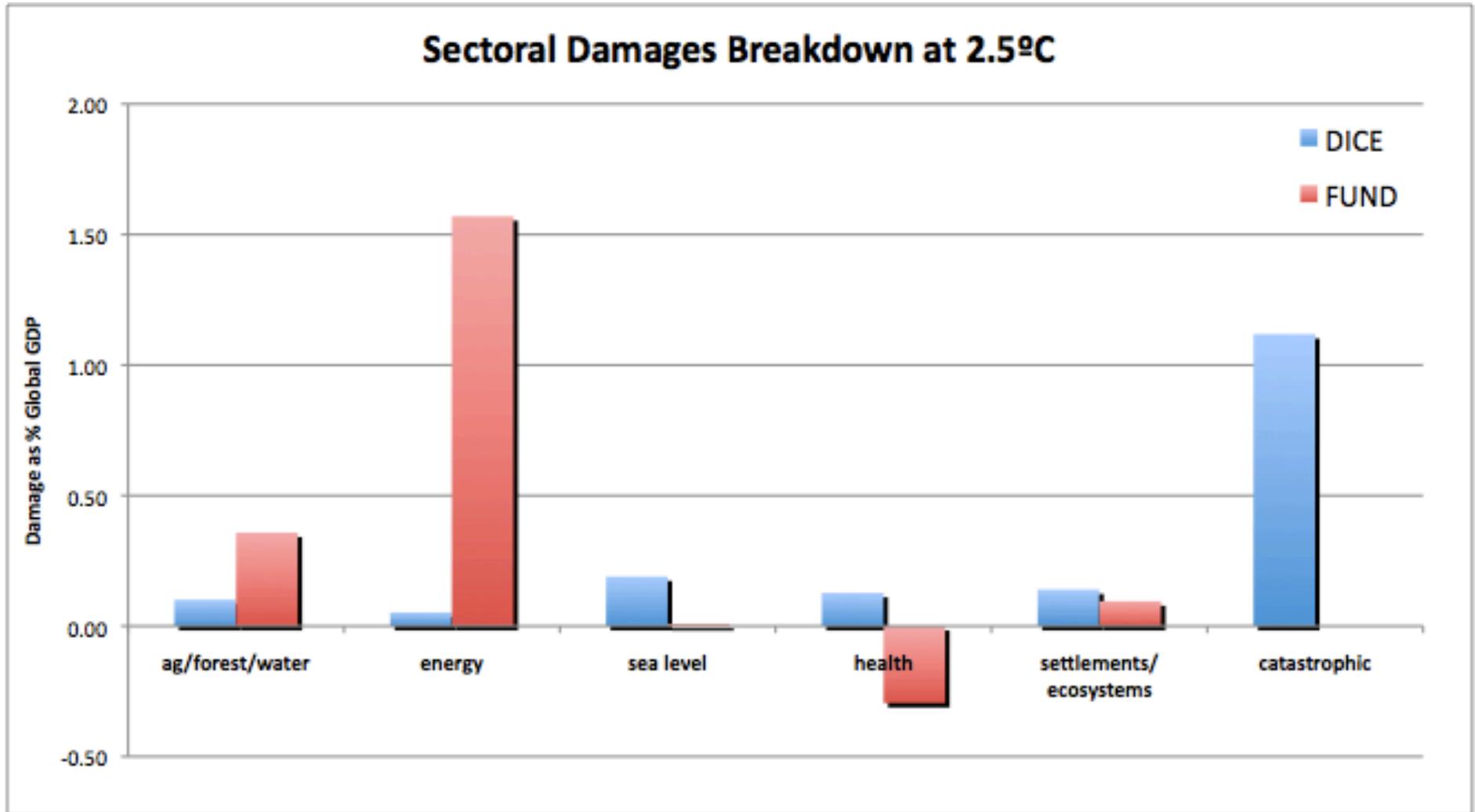
- “Social Cost of Carbon for Regulatory Analysis under Executive Order 12866”, March 2010

<http://bit.ly/usg-scc2010>

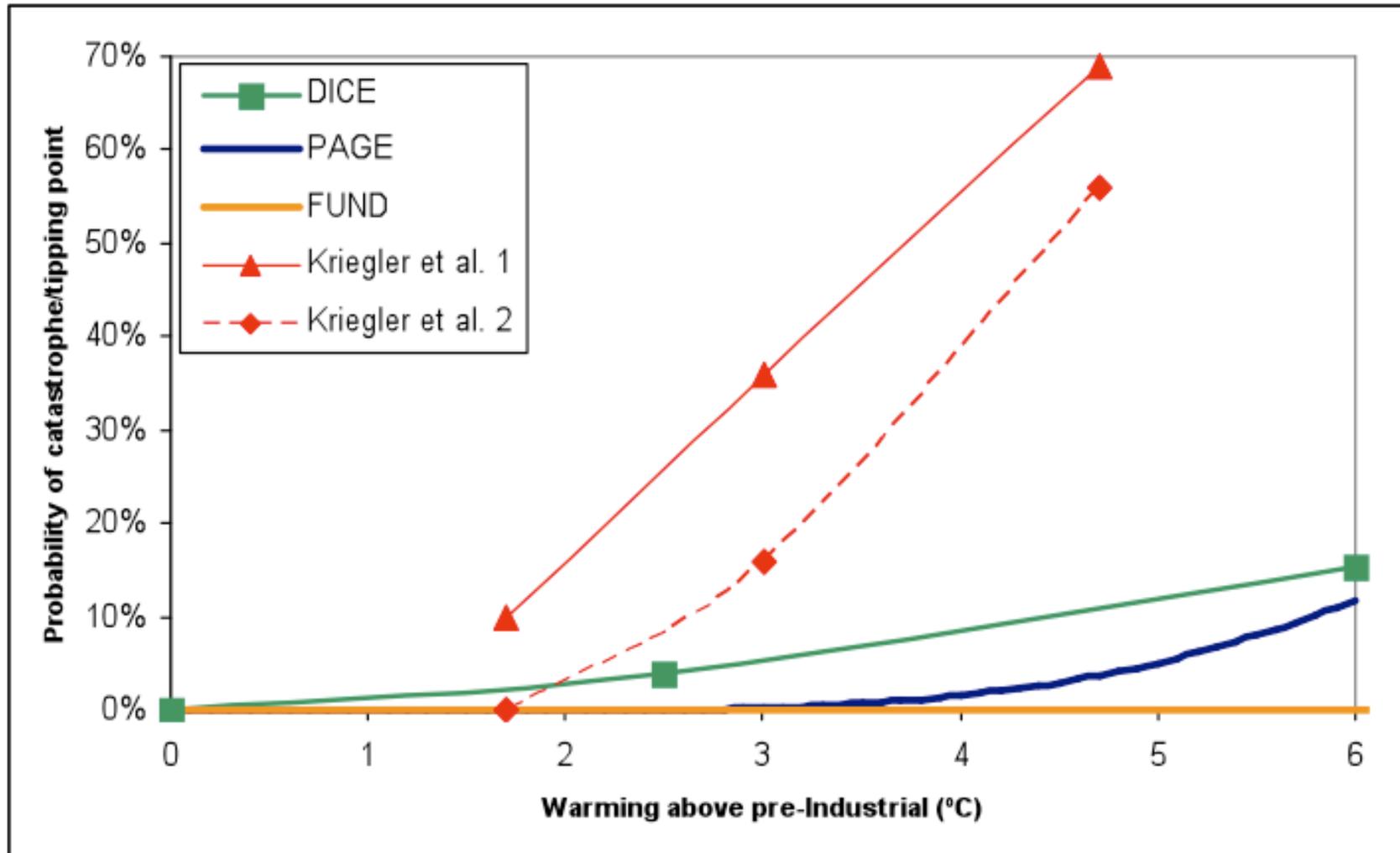
**Figure 1A: Annual Consumption Loss as a Fraction of Global GDP in 2100 Due to an Increase in Annual Global Temperature in the DICE, FUND, and PAGE models<sup>5</sup>**



# Lack of agreement in reduced-form IAMs on sectoral effects



## IAM probabilities of catastrophic climate change compared to expert elicitation on tipping point probability



***In addition, the socio-economic literature on tipping point impacts is quite weak.***