

Scott's status update on social science research

Response & reflections

1

“Governance must involve the countries most inclined to geoengineer”

- Yes
- Counter-point to “free driver” (© Wagner & Weitzman 2012, Weitzman 2015; Schelling 1996, Barrett 2008, Victor 2008)

No need for *global* agreement

→ SG “clubs”

- “Free driver” not actually “free”
 - ~\$2-5b/yr (Smith & Wagner 2018; Moriyama et al 2016 get \$10b/yr for 2 W/m²)
 - 30-60 countries with military budgets >\$3-6b/yr (SIPRI 2017)

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“For legitimacy, it should also involve countries most likely to be affected, whether positively or negatively.”

- Yes
- Re “Negative”: “Strong evidence shows that if SG is spatially uniform and adjusted to offset roughly half the RF from GHGs, then the change in important climate variables would be reduced in most locations and increased in only a small percentage of the land surface” (Keith & Irvine update; Irvine et al)
- Re “Positive”...

nature
climate change

ARTICLES
<https://doi.org/10.1038/s41558-018-0282-y>

Country-level social cost of carbon

Katharine Ricke ^{1,2*}, Laurent Drouet ³, Ken Caldeira⁴ and Massimo Tavoni^{3,5}

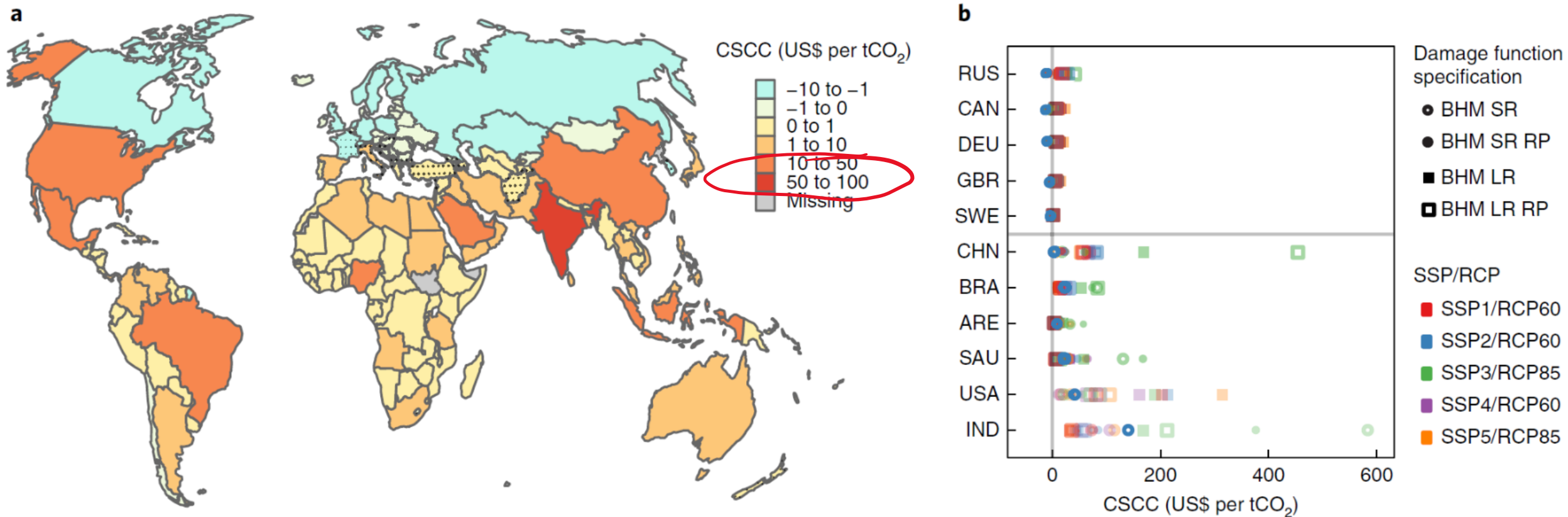
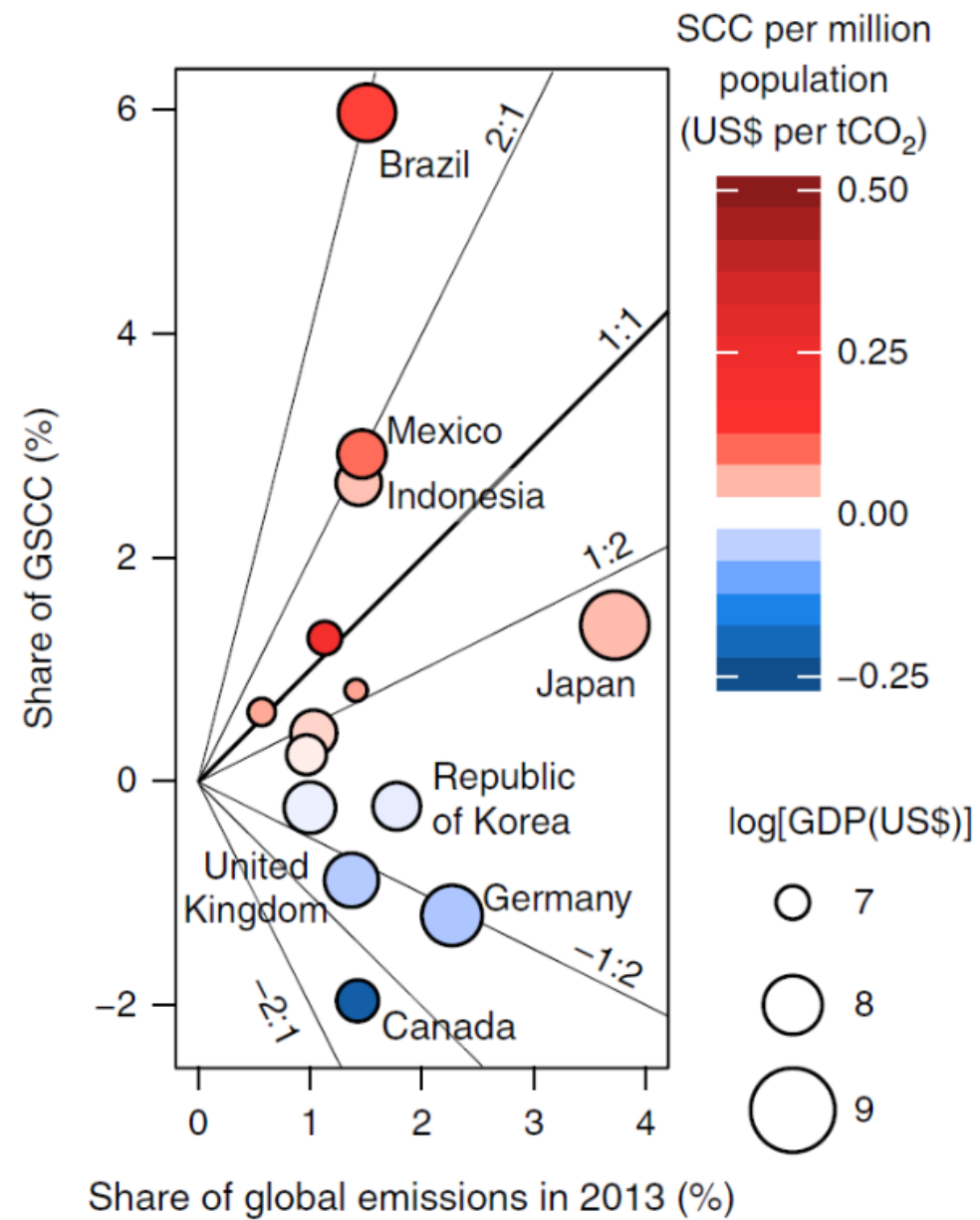
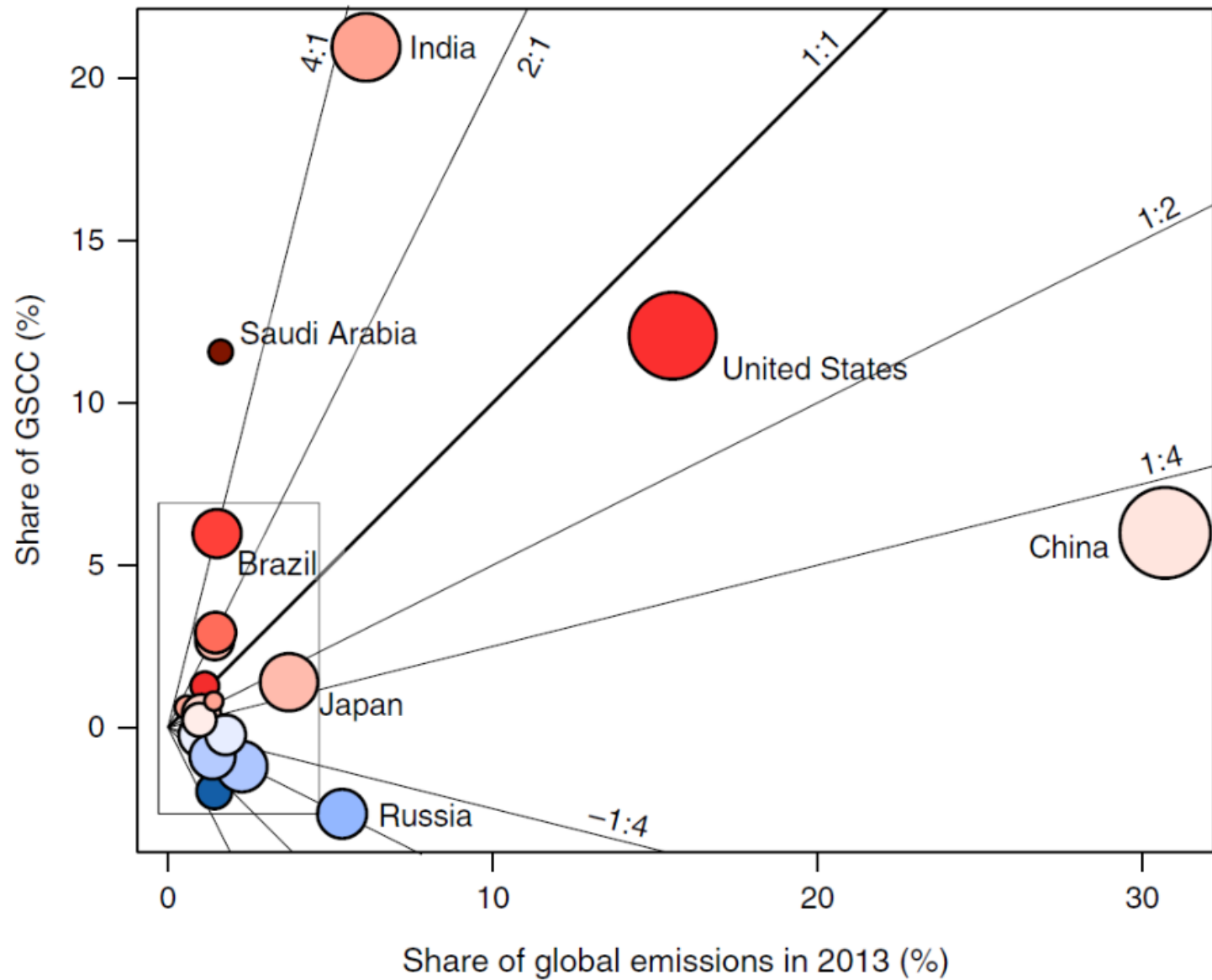


Fig. 2 | CSCCs. **a**, Spatial distribution of median estimates of the CSCCs computed for the reference case of scenario SSP2/RCP6.0, BHM-SR and a growth-adjusted discount rate ($\rho = 2\%$, $\mu = 1.5$). Stippling indicates countries in which BHM damage function is not statistically robust³⁰. **b**, CSCCs for alternative scenarios and damage function specification combinations for the five smallest and six largest CSCCs in the reference case (blue open circles). RUS, Russia; CAN, Canada; DEU, Germany, GBR, Great Britain; SWE, Sweden; CHN, China; BRA, Brazil; ARE, United Arab Emirates; SAU, Saudi Arabia; USA, United States; IND, India.



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SG “clubs” linked to mitigation

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“Moral hazard”

- It's not. If anything, it's “crowding out” of mitigation by (mere talk of) SG
- It's always present; some of it is “rational” (Keith, Wagner, Zabel 2017)
- It's been the core environmentalists' argument against SG (research)
- It isn't new...

DOES GEOENGINEERING PRESENT A MORAL HAZARD?

Albert C. Lin*

Geoengineering, a set of unconventional, untested, and risky proposals for responding to climate change, has attracted growing attention in the wake of our collective failure so far to mitigate greenhouse gas emissions. Geoengineering research and deployment remain highly controversial, however, not only because of the risks involved, but also because of concern that geoengineering might undermine climate mitigation and adaptation efforts. The latter concern, often described as a moral hazard, has been questioned by some but not carefully explored. This Article examines the critical question of whether geoengineering presents a moral hazard by drawing on empirical studies of moral hazard and risk compensation and on the psychology literature of heuristics and cultural cognition. The Article finds it likely that geoengineering efforts will undermine mainstream strategies to combat climate change and suggests potential measures for ameliorating this moral hazard.

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The hazard of environmental morality

By Gernot Wagner & Christine Merk

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“Moral hazard”

Lin (2013); Hale (2009); Burns, Flegal, Keith, Mahajan, Tingley, et al. (2016); Merk et al. (2016)

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“Distributed SG”?! “States, not private actors”?! Victor's (2008) “Greenfinger”?! For \$100, any one of us could deliver ~2kg into stratosphere

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“Distributed SG”?!

Not Victor's (2008) “Greenfinger,” but tens of thousands of activists(?) sending 2kg each into stratosphere