OPINION

Placing people at the heart of climate action

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Abstract

Profound societal change along with continued technical improvements will be required to meet our climate goals, as well as to improve people's quality of life and ensure thriving economies and ecosystems. Achieving the urgent and necessary transformations laid out in the recently published IPCC report will require placing people at the heart of climate action. Tackling climate change cannot be achieved solely through technological breakthroughs or new climate models. We must build on the strong social science knowledge base and develop a more visible, responsive and interdisciplinary-oriented social science that engages with people and is valued in its diversity by decision-makers from government, industry, civil society and law. Further, we need to design interventions that are both effective at reducing emissions and achieve wider societal goals such as wellbeing, equity, and fairness. Given that all climate solutions will involve people in one way or another, the social sciences have a vital role to play.

Introduction

The new IPCC assessment report makes clear that profound societal change along with continued technical improvements will be required to meet our climate goals, as well as to improve people's quality of life and ensure thriving economies and ecosystems [1]. For the first time, IPCC Working Group III has a dedicated chapter on demand and social aspects of mitigation and a cross-chapter analysis on equity and sustainable development. More social scientists have provided input to the sixth assessment report than ever before and the report synthesizes more social science evidence (see Fig 1), than all previous IPCC assessments *combined*.

If people are at the heart of climate action, then understanding and tackling climate change cannot be done by engineers or natural scientists alone. All disciplines need to work together—not least a range of social sciences including political science, sociology, geography and psychology—to find solutions in ways that achieve wider societal goals. The IPCC report [1] emphasises the importance of individual behaviour change for achieving rapid, deep cuts in emissions, but also recognises that a narrow focus on individuals is insufficient.

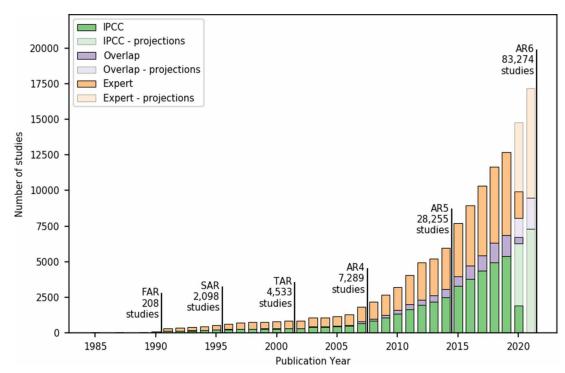


Fig 1. Growth of literature that underpins demand-side and service-related aspects of climate change mitigation [Creutzig, Callaghan, Ramakrishnan, Javaid, Niamir, Minx et al, 2021, [2].

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Transformation requires infrastructure and design choices that are considered systemically as an interplay between individual behaviour, cultural processes, corporate action, institutions and infrastructural change [1].

All climate solutions will involve people in one way or another—as citizens, consumers, employers, employees, leaders, parents, investors, activists, and members of communities. People need both the motivation and the capacity to choose low-carbon technologies in homes and businesses; to make decisions about what their company does and how it does it; to create policies and laws on climate change; to encourage and protect biodiversity; to vote, protest and organise community responses; to change how they travel and what they eat and buy; and to talk to their children or parents about climate change. This means social scientists are critical to achieving 'net zero' and adapting to climate impacts.

The social sciences have already contributed to our understanding of how to achieve the transformation needed. For example, a recent systematic review showed that transformational decarbonisation, where it has occurred, has tended to require a strong role for government and clear, long-term policy; but also involved supportive action by businesses and people [3]. We also know that change requires moving away from reliance on informational and voluntary approaches to behaviour change to a focus on changing high-impact behaviours and high-emitting groups [4]. Interdisciplinary interventions need to address the multiple drivers, barriers and contexts of behaviour, and target moments of change when habits are weaker [5].

We know much about how to engage people with climate change. Knowing your audience's needs and values as a starting point for climate conversations sounds simple, yet can still be challenging [6]. Social science research has much to say on the role of social media in climate communications (and attendant issues of polarisation, misinformation and bad-faith actors, [7]); or how the dominance of certain types of climate visual imagery can shape engagement in

unintended ways [8]. We also know that transformation raises issues of justice and equity [9]. Negative impacts among the rural poor, women, children, and indigenous groups can be particularly stark [10]. A carefully managed 'just transition' involves respect for vulnerable groups, creation of decent jobs, employment rights, fairness in energy access and use, and democratic consultation. Social science insights about democratic consultation indicate how consensus can be reached on controversial aspects of climate action across whole societies. Deliberative engagement, via citizens assemblies, which involve representative samples of people in climate policy making, can unlock new solutions and increase the legitimacy of difficult policy actions [11].

However, there is much more potential for social science contributions. We need to rethink how social science and policy interacts, to improve social science knowledge production and policy formation, and to broaden the range of social science disciplines that inform policy.

On the one hand, social science should be more accessible to people and other academic disciplines. A collaborative approach is required that involves citizens, consumers and stakeholders in setting research agendas [12]. Social science researchers need to be equipped with the skills and capacities to participate in and lead interdisciplinary research teams, and to work within policy as well as academic contexts. Research projects need to be more agile, responding quickly to fast-changing stakeholder evidence needs or societal disruptions.

On the other hand, policy making could be supported and equipped to draw more explicitly upon social science disciplines so decision-makers develop a better understanding of and effective response to climate change. Policy making that is currently centered on scientific or economic advice would benefit from a broader conception of expertise and evidence [13]. Greater equity could be given to social science theory and method (notably qualitative approaches) as well as other forms of knowledge, including indigenous and lay people's knowledges [14]. The structures and timing of social science advice to policy makers should be more consistent across government [15]. There needs to be better recognition in policy of diversity across social science disciplines, what each can offer to climate policy making, and the different roles social science can play, including critical as well as applied social science.

To conclude, achieving the urgent and necessary transformations laid out in the IPCC report will require placing people at the heart of climate action. We must build on the strong social science knowledge base and develop a more visible, responsive and interdisciplinary-oriented social science that engages with people and is valued by decision-makers from government, industry, civil society and law. Tackling climate change cannot be achieved solely through technological breakthroughs or new climate models. Further, we need to design interventions that are both effective at reducing emissions and achieve wider societal goals such as wellbeing, equity, and fairness. Given that all climate solutions will involve people in one way or another, the social sciences have a vital role to play.

References

- Shukla PR, Skea J, Slade R, Al Khourdajie A, van Diemen R, McCollum D, et al., editors. IPCC, 2022: Climate change 2022: mitigation of climate change. Contribution of working group III to the sixth assessment report of the intergovernmental panel on climate change. Cambridge, UK and New York, USA: Cambridge University Press; 2022. https://doi.org/10.1017/9781009157926
- Creutzig F, Callaghan M, Ramakrishnan A, Javaid A, Niamir L, Minx J, et al. Reviewing the scope and thematic focus of 100 000 publications on energy consumption, services and social aspects of climate change: a big data approach to demand-side mitigation. Environ. Res. Lett. 2021; 16(3) 033001. https://doi.org/10.1088/1748-9326/abd78b
- Moore B, Verfuerth C, Minas AM, Tipping C, Mander S, Lorenzoni I, et al. Transformations for climate change mitigation: a systematic review of terminology, concepts, and characteristics. Wiley Interdiscip Rev Clim Change. 2021; 12(6):1–25. e738. https://doi.org/10.1002/wcc.738

- 4. Ivanova D, Wood R. The unequal distribution of household carbon footprints in Europe and its link to sustainability. Glob Sustain. 2020; 3. e18. https://doi.org/10.1017/sus.2020.12
- Whitmarsh L, Poortinga W, Capstick S. Behaviour change to address climate change. Curr Opin Psychol. 2021 Dec; 42: 76–81. https://doi.org/10.1016/j.copsyc.2021.04.002 PMID: 33991862
- Pathak M, Roy J, Patel S, Some S, Vyas P, Das N, et al. Communicating climate change findings from IPCC reports: insights from outreach events in India. Clim Change. 2021; 168(3–4):23. https://doi.org/10.1007/s10584-021-03224-8 PMID: 34703067
- Treen KMD, Williams HTP, O'Neill SJ. Online misinformation about climate change. WIREs Clim Change. 2020;11. e665. https://doi.org/10.1002/wcc.665
- O'Neill SJ, Smith N. Climate change and visual imagery. Wiley Interdiscip Rev Clim Change. 2014; 5

 (1): 73–87. https://doi.org/10.1002/wcc.249
- McCauley D, Heffron R. Just transition: integrating climate, energy and environmental justice. Energy Policy. 2018; 119: 1–7. https://doi.org/10.1016/j.enpol.2018.04.014
- Sovacool BK. Who are the victims of low-carbon transitions? Towards a political ecology of climate change mitigation. Energy Res Soc Sci. 2021; 73 101916. https://doi.org/10.1016/j.erss.2021.101916
- Sandover R, Moseley A, Devine-Wright P. Contrasting views of citizen's assemblies: exploring stakeholder perceptions of deliberative public engagement on climate change. Politics Gov. 2021; 9; 76–86. https://doi.org/10.17645/pag.v9i2.4019
- Welsh C, Pike L, Elliott J, Bailey J, Quintin-Baxendale R, Billington J, et al. Why is it so hard to enact responsible change? Scientists need to work more closely with other social groups to implement sustainable innovation. EMBO Reports. 2020 Apr 3; 21(4). e49493. https://doi.org/10.15252/embr. 201949493 PMID: 32147905
- SAPEA, Science Advice for Policy by European Academies. Making sense of science for policy under conditions of complexity and uncertainty. Berlin: SAPEA; 2019. https://doi.org/10.26356/MASOS
- 14. Pörtner HO, Roberts DC, Tignor M, Poloczanska ES, Mintenbeck K, Alegría A, et al., editors. IPCC, 2022: Climate change 2022: impacts, adaptation, and vulnerability. Contribution of working group II to the sixth assessment report of the intergovernmental panel on climate change. Cambridge, UK and New York, USA: Cambridge University Press; 2022. In Press.
- Owens S. Knowledge, policy, and expertise: the UK royal commission on environmental pollution 1970–2011. Oxford, UK: Oxford University Press; 2015. https://doi.org/10.1093/acprof:oso/9780198294658.001.0001