

Editorial

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Speeding up state-of-the-art assessments on global sustainability: introducing the Cambridge Sustainability Commissions

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We are now deep into the Anthropocene, 70 years after the start of the Great Acceleration (Steffen et al., 2015), and we start to seriously feel the pain – with rising social-ecological turbulence across the world and extreme climate events hitting societies. But this is merely one side of the life-support coin. On the other, rests the stability and resilience of the entire system, the risk that we irreversibly push the Earth system away from a state conducive with human development along our aspirational ‘SDG future’. The rising risks of irreversible commitments and of crossing critical tipping points, which would commit all future generations to worse life conditions on Earth than previous generations, are laid out clearer than ever (IPCC, 2021). Simultaneously with this rising planetary emergency (Dixon-Declève et al., 2020), we experience (not surprisingly) an upsurge of inter-disciplinary sustainability science, ranging from community justice and equity research to science on planetary health. The growth rate in sustainable science publications is exponential, with a compound annual growth rate well above that for all research fields in the period of 2015–2019 (Agnew et al., 2020).

The global climate and ecological crises require transformative action at a pace and scale exceeding anything we have experienced to date, which needs to be matched by faster and comprehensive ways of assessing the state of science, which in itself is advancing at exponential speed. This leads to the conclusion that we need more scientific efforts of synthesizing the latest state of knowledge that complement large global assessments, such as the IPCC¹ and IPBES.² The rising number of special, more fast-track assessment reports, such as the IPCC SREX (IPCC, 2012), SR1.5 (IPCC, 2018) reports and the iPES FOOD reports on sustainable agriculture,³ and the Lancet commission reports,⁴ are all examples responding to the rising demand for, and availability of, new scientific insights. In concrete terms, the rapidly rising needs, access to, and possibilities of synthesizing new knowledge necessitate a complement to the slower global assessments occurring perhaps every 5th year, to provide more rapid and flexible science syntheses at sub-annual to annual intervals. To use a sports analogy, we have for too long focused our scientific efforts only in Olympic Games, and we must now also run world and regional championships.

Digital technology advancements further drive the potential of generating more frequent syntheses, horizon-scans, and meta-analyses across different disciplines and themes. Systematic reviews that use big data and machine learning methodologies to trawl through vast volumes of scientific production are increasingly applied in the efforts of accelerating state-of-the-art science assessments, so far particularly in biomedical research (e.g. the BMC Journal Systematic Reviews),⁵ but also in integrated analyses, for example, the Lancet Pathfinder Commission on co-benefits between climate mitigation and human health (Haines et al., 2021).

Put together, this calls for new scientific mechanisms and outlets that allow for rapid scientific assessments on critical topics on the global sustainability arena. The Cambridge Sustainability Commissions (CSC) are an attempt of doing just that. Inspired by the Lancet commissions, a CSC engages leading experts and scholars to carry out a scientific assessment of global sustainability issues of high relevance pertaining to planetary and societal resilience, or different approaches in the pursuit of societal transformation. A Cambridge commission is launched only after the evaluation by Cambridge University Press and approval by the Editorial leadership of *Global Sustainability*. Outlets are a commission report and a peer-reviewed synthesis paper in the Journal.⁶

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¹<https://www.ipcc.ch/>

²<https://ipbes.net/>

³<http://www.ipes-food.org/>

⁴<https://www.thelancet.com/commissions>

⁵<https://systematicreviewsjournal.biomedcentral.com/>

⁶<https://www.cambridge.org/core/journals/global-sustainability/cambridge-sustainability-commissions>

1. The case of ‘scaling behavioral change’

The results of the first Cambridge Sustainability Commission are now being published,⁷ on the extremely relevant and complex topic of what do we know about ways of scaling behavioral change in our efforts to address the climate crisis. Led by Peter Newell and 30 colleagues from different disciplines, the CSC report on scaling behavioral change (Newell et al., 2021a) and the synthesis paper in *Global Sustainability* (Newell et al., 2021b) are scientifically sobering assessments of what we have learnt so far on what works, and what does not work, regarding the often much inflated hope directed to individuals’ behavioral change as a panacea for a sustainable zero-carbon future. For starters, and this is my interpretation of the commission results, they conclude that the often hyped practice of ‘nudging’ – the belief that small more-or-less painless shifts in individual behavior can trigger wider knock-on effects toward broader system shifts – simply has no support (as a scalable solution on its own) from empirical evidence. The commission concludes that nudging will not take us through social transformations, which are necessary for us to have any chance of landing within a safe operating space for climate stability on Earth within the coming decades.

Instead the commission, gathering leading scholars on behavioral change across different disciplines, from political science to psychology, concludes that the scientific evidence today shows that the best way to intervene through behavioral change to solve the climate crisis requires putting questions of power, politics, and social justice at the center. Changing our ways – as individuals – on flying habits, powering our houses, and on what we eat, cannot be ‘nudged’ through awareness and perception alone, but need ‘strong sustainability’ measures as boundary conditions that include rethinking income, inequality, infrastructure, just transitions, and systemic changes. This is justified by the challenge of achieving rapid scaling – a strong focus of the commission, which is necessary if we are to achieve a 50% reduction of global emissions of greenhouse gases each decade from 2020 onwards (required to have an at least 2/3rd chance of landing the Paris climate agreement). As the commission highlights, this translates to coupling citizens’ engagement with policies, laws, and institutions, and they identify five key spheres of action: a ‘strong’ sustainability pathway; pursuing just transitions (via changes to work, income, and infrastructure); rebalancing political institutions to expand spaces for citizens vis-à-vis incumbents; focusing on high polluting actors and activities; and supporting social mobilization.

Social transformations toward a sustainable future can only be successful if they scale across the entire world and offer deep

transformations, that is, essentially exponential pace of change (e.g. >6–7% global emission reductions per year) and systematic shifts (e.g. from the combustion engine to electric power trains with transition in behavior from private to shared mobility). And these transformations, the commission concludes, require social movements along ‘spirals of sustainability’, that is, essentially socially self-reinforcing journeys toward sustainable lifestyles. These limitations, opportunities, and system dimensions associated with scaling behavioral change – the current state of knowledge of which is so well mapped in the Cambridge Sustainability Commission report – are key, for us to know where to put our efforts and investments, if we are to succeed in transforming our world within a stable and resilient space on Earth.

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⁷<https://www.cambridge.org/core/journals/global-sustainability/cambridge-sustainability-commissions/changing-our-ways>