



Understanding research on consumption and behaviour in decision making for net zero



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Why need to understand research on consumption and behaviour

- International agreements for SDGs and the Paris Climate Agreement have underscored the importance of meeting human needs and aspirations within the limits of the planet and the atmosphere.
- To date, there has been a paucity of research examining the diverse ways people aspire to live well and how we might meet these international targets while recognizing how diverse values motivate and inform our visions for action.



**AR ANNUAL
REVIEWS**

Annual Review of Environment and Resources

Sustainable Living: Bridging
the North-South Divide
in Lifestyles and
Consumption Debates

Bronwyn Hayward^{1,2} and Joyashree Roy^{3,4}

June 2019



Four broad approaches to sustainable consumption research

Rational consumption approaches

Social consumption approaches

De-growth approaches to consumption

Just consumption approach

We try to highlight the important messages



Rational consumption approaches

Sustainable consumption research usually begins with the individual or business as the unit of analysis,

emphasizes

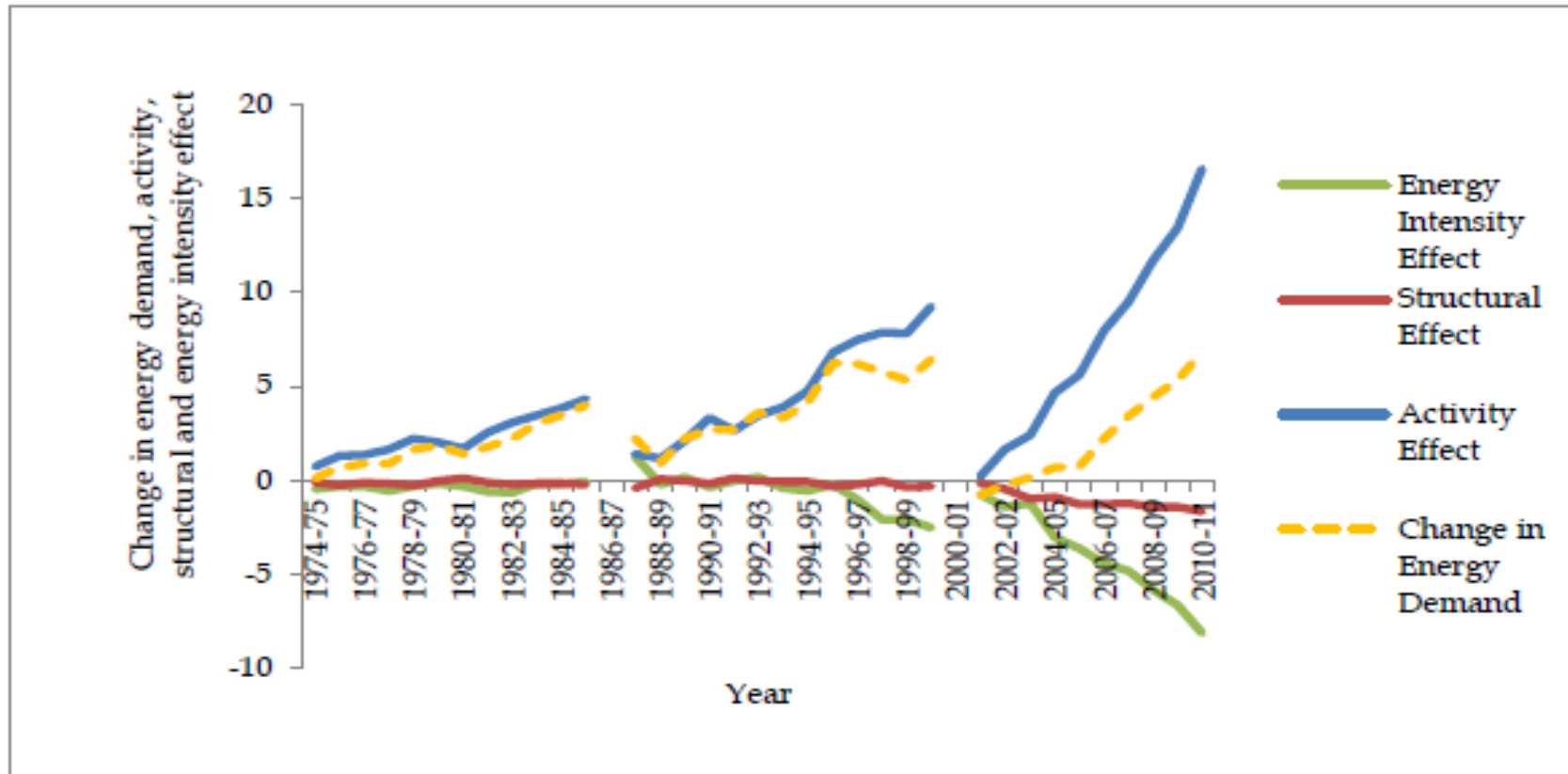
- ✓ efficiency of resource use in production and consumption
- ✓ role of technological innovation requiring behavior change, and supply change
- ✓ rather than 'reduced consumption' per se
- ✓ incrementalism, green wash in market place are commonly observed manifestations



Leadership by Industries: Energy Efficiency



Decomposition of energy demand -Indian manufacturing industries



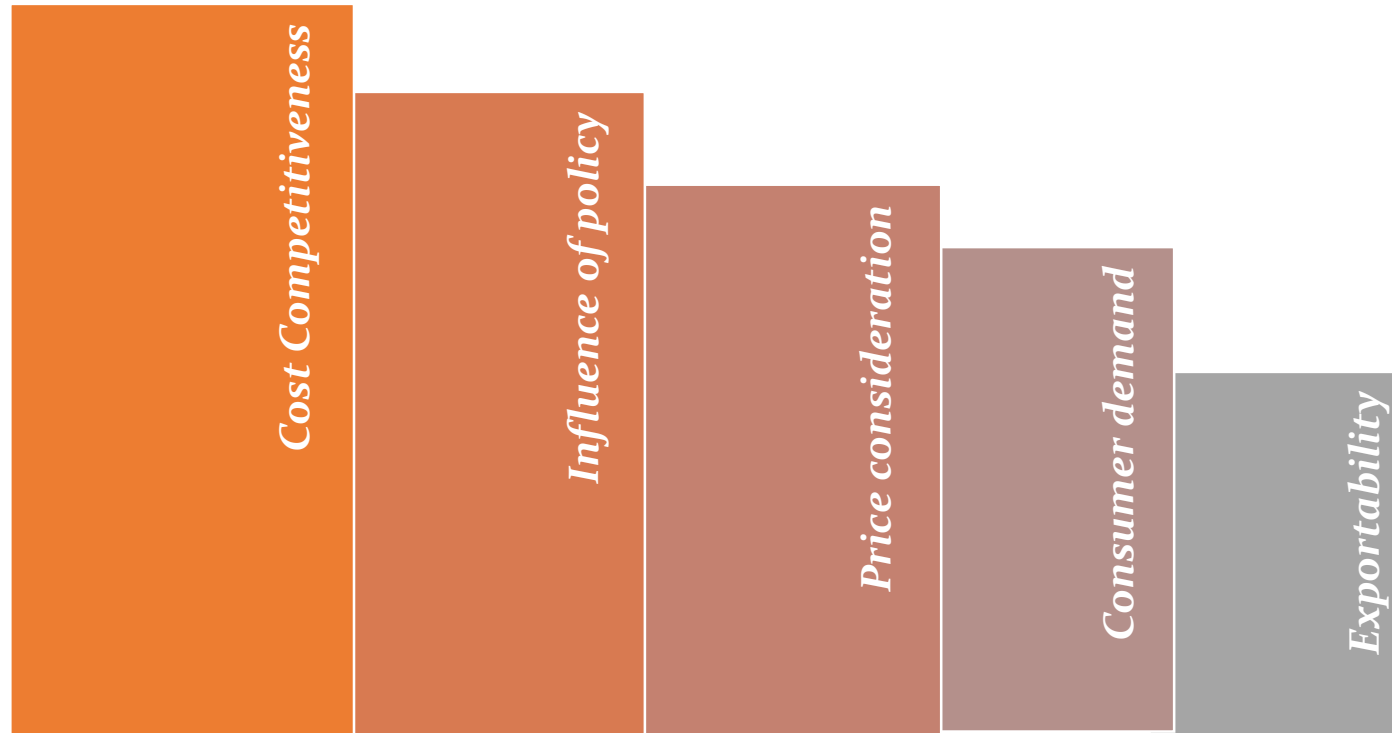
*Based on Annual Survey of Industries, India 1973-74 – 2010-11
Dasgupta and Roy (2016, forthcoming)*



Big Industries acted as leaders : Driving forces behind actions



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Source: Chakraborty & Roy 2012



Social consumption approaches

- sociology, anthropology, and technology studies
- Sustainable consumption literature focuses not only on understanding what individuals **do but also on analyzing why and how individuals, firms, policymakers, consumers, public opinion, and nongovernmental actors all** influence and in turn are influenced by social and political structures and the diffusion of technological innovation.
- examines consumption “practices,” consumption ‘routines’ to identify opportunities to reduce consumption and lessen environmental impact through the action of alternative service provisions.
- Criticism: Socially embedded perspectives run the risk of depoliticizing their accounts of ‘how change happens’.
- “consuming differently” for those with resources and opportunity to be able to make alternative consumption choices rather than “consuming less”



De-growth approaches to consumption

Postgrowth economics, ecological economics, political economy, Just consumption and well living approaches, cross-cultural as well as cross-disciplinary discussion.

- how to reduce consumption and use of energy and material resources while achieving human well-being within the constraints of a finite planet.
- framed as a 'collective political demand rather than an individual consumer action'
- how can the interactions of individual agents and societal institutions reduce consumption .
- addresses how to enable the world's population to flourish more equitably.

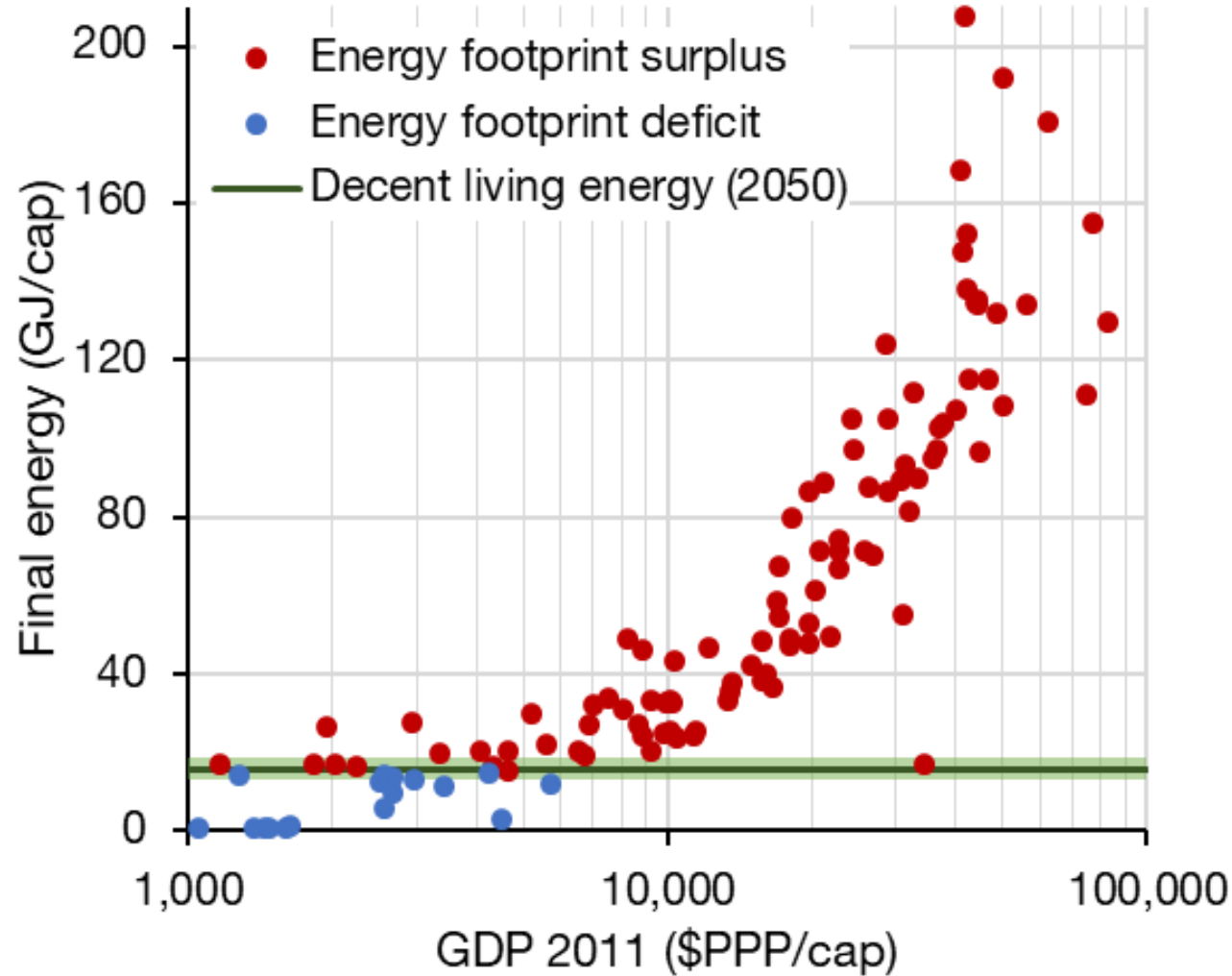


Just consumption approach

- Attentive to **systemic inequalities**, ethical frameworks to assess needs and entitlements, political participation
- Intrinsic or self-transcendental **values** (e.g., concern for others, connection with nature) compared to individual materialistic or extrinsic values based on reward and approval (e.g., financial incentives, social status).
- Feminist approach to **understand oppression** of women. new forms of slavery, informality are maintained in the entwined processes of consumption and production, or the processes by which citizens become trapped by high levels of consumption-related debt
- It raises questions like do people in relatively free and affluent groups/countries have **responsibilities** to try to improve working conditions and wages of workers in far-off parts of the world who produce items for their consumption?



Energy requirements to provide and maintain decent living conditions to all (green line), compared to countries' per capita energy demand (red dots) against per capita GDP.



Source: JM Hopkins et al., 2020.



Just consumption approach

- This approach stands in **contrast to changing sustainable consumption through big technology** transformations managed by few, which diminishes
 - masses into mere users of technology,
 - or incremental planning,
 - where citizens embedded in their complex relationships with each other and nature are reduced to consumers making rational choices.
- **Global action and global cooperation** to advance sustainable consumption needs to be approached by transcending over the North-South divides and through the lens of respect for **diverse values of well-being and sustainable living**.
- Highlights the need for nuanced understanding of **intraregional issues** and differences in experiences of consumption and



Way forward?



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- De-growth research and just consumption research
- Coupled with the insights of 'indigenous' and 'global south scholarly works' on 'sustainable living'
- Provides a variety of solutions and a new way forward for 'low consumption societies' while also achieving socially just and sustainable outcomes.
- Individuals must act consciously to advance sustainability, but nuanced visions of sustainable living informed by local values, sensitive to long-term, collective meaning making, supports sustainable development and offers powerful visions to inspire social change



Why?

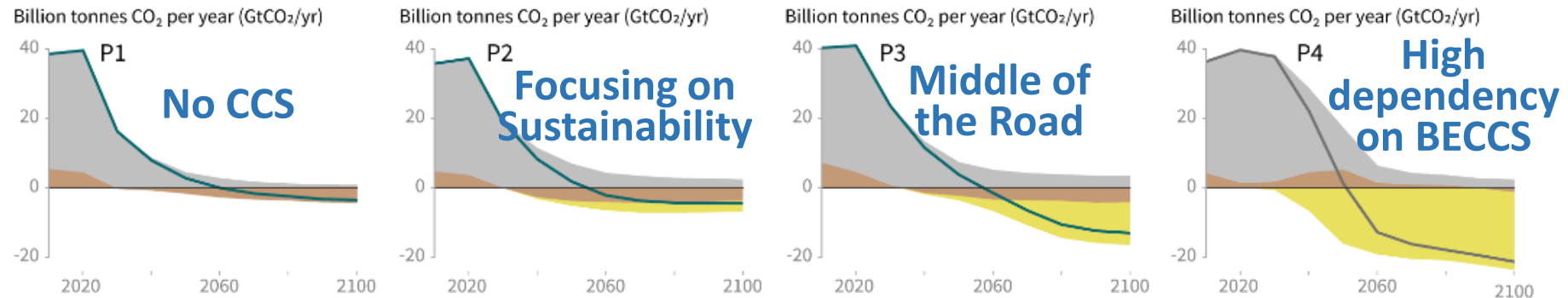
A vast body of literature in various domains of social sciences now exist which can inform climate change response with much broader scope for action towards mitigating climate change given the following imperatives:

- Limiting warming to 1.5° C makes adaptation much easier than at 2° C or above
- Given the limited carbon budget for 1.5° C, if we are seeking for a pathway for going forward with
 - least decarbonization need and
 - least technological uncertainty clearly it is in transformative consumption direction along the Low energy demand pathway (viz., P1).

SPM3b | Characteristics of four illustrative model pathways

Breakdown of contributions to global net CO₂ emissions in four illustrative model pathways

● Fossil fuel and industry ● AFOLU ● BECCS



P1: A scenario in which social, business, and technological innovations result in lower energy demand up to 2050 while living standards rise, especially in the global South. A down-sized energy system enables rapid decarbonisation of energy supply. Afforestation is the only CDR option considered; neither fossil fuels with CCS nor BECCS are used.

P2: A scenario with a broad focus on sustainability including energy intensity, human development, economic convergence and international cooperation, as well as shifts towards sustainable and healthy consumption patterns, low-carbon technology innovation, and well-managed land systems with limited societal acceptability for BECCS.

P3: A middle-of-the-road scenario in which societal as well as technological development follows historical patterns. Emissions reductions are mainly achieved by changing the way in which energy and products are produced, and to a lesser degree by reductions in demand.

P4: A resource and energy-intensive scenario in which economic growth and globalization lead to widespread adoption of greenhouse-gas intensive lifestyles, including high demand for transportation fuels and livestock products. Emissions reductions are mainly achieved through technological means, making strong use of CDR through the deployment of BECCS.



P1 pathway

- has highlighted tensions between the weak sustainable consumption assumptions embedded in approaches of technology, efficient use of resources, and individual behavior change and
- the more far reaching transformations advocated by strong sustainable consumption voices, calling for reductions in the total level of energy consumption and production of goods and services
- with allowance for growth in living standards for poor.



Role of consumption and behavior

Available online at www.sciencedirect.com



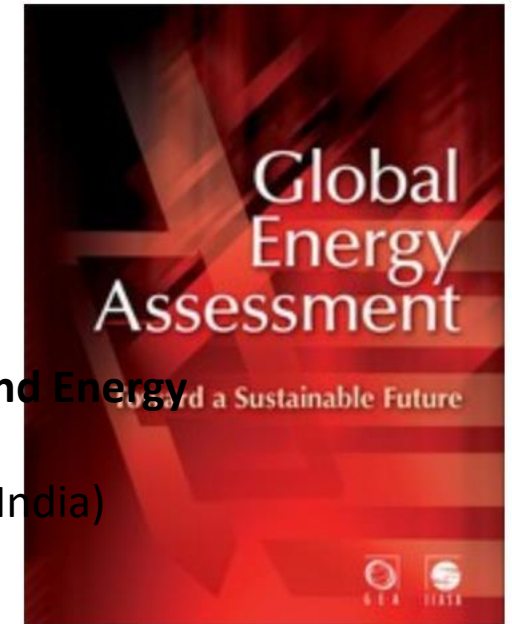
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Lifestyles and climate change: link awaiting activation^S Joyashree Roy¹ and Shamik Pal²

Changes in lifestyles can contribute to achieving low-carbon emission growth that is both equitable and sustainable. Evidence shows that, even after two centuries, technological advances due to the industrial revolution have not touched the life of each and every human life equally. The history of development and the GHG emission load have triggered the sufferer-polluter debate. In the past few decades the 'polluter pays principle' has provided neither a substantial transfer of wealth to those suffering from the effects of pollution nor a reduction in global emissions. In a carbon-constrained world there is an immediate need to free up some space through emission reduction from conspicuous consumption to accommodate survival emission. Lifestyle change is a complementary call for a continuous effort encompassing spread of awareness of sustainable lifestyles, energy concerns, building of synergies between policy, regulation, technology, market forces and ethical imperatives. The focus of change needs to be on patterns of energy consumption. It is important to include this in the global policy discourse. Researchers need to work together to prepare a Global Lifestyle Assessment Report.

tion is not disputed, but the important role of the consumer in facilitating and expediting the transition to sustainability needs to be emphasised. Eco-centric discourse from sources as wide apart as ecological footprint literature and eco-justice literature is coming up with evidence that rising conspicuous consumption in the post-industrial revolution era cannot be sustained. Stern [69] mentions the options beyond technology. The IPCC report [35,36] mentions that lifestyle choice and technology can both help to improve the climate, but it does not go into much detail about how the former can achieve this. The techno-centric cost curves of Mc Kinsey [44] provide the costs of a low-carbon economic growth path through technology deployment. Mc Kinsey's [44] methodology is limited by its world view and simplistic arithmetic approach to the management of complex non-linear feedback systems. Extreme techno-centric analysis is biased by the neoclassical assumption of the possibility of a perfect substitution between technology and natural resources. Evidence shows that, even after two centuries, the benefits of the industrial revolution have not touched



Chapter 21: Lifestyles, Well-Being and Energy Convening Lead Author (CLA)

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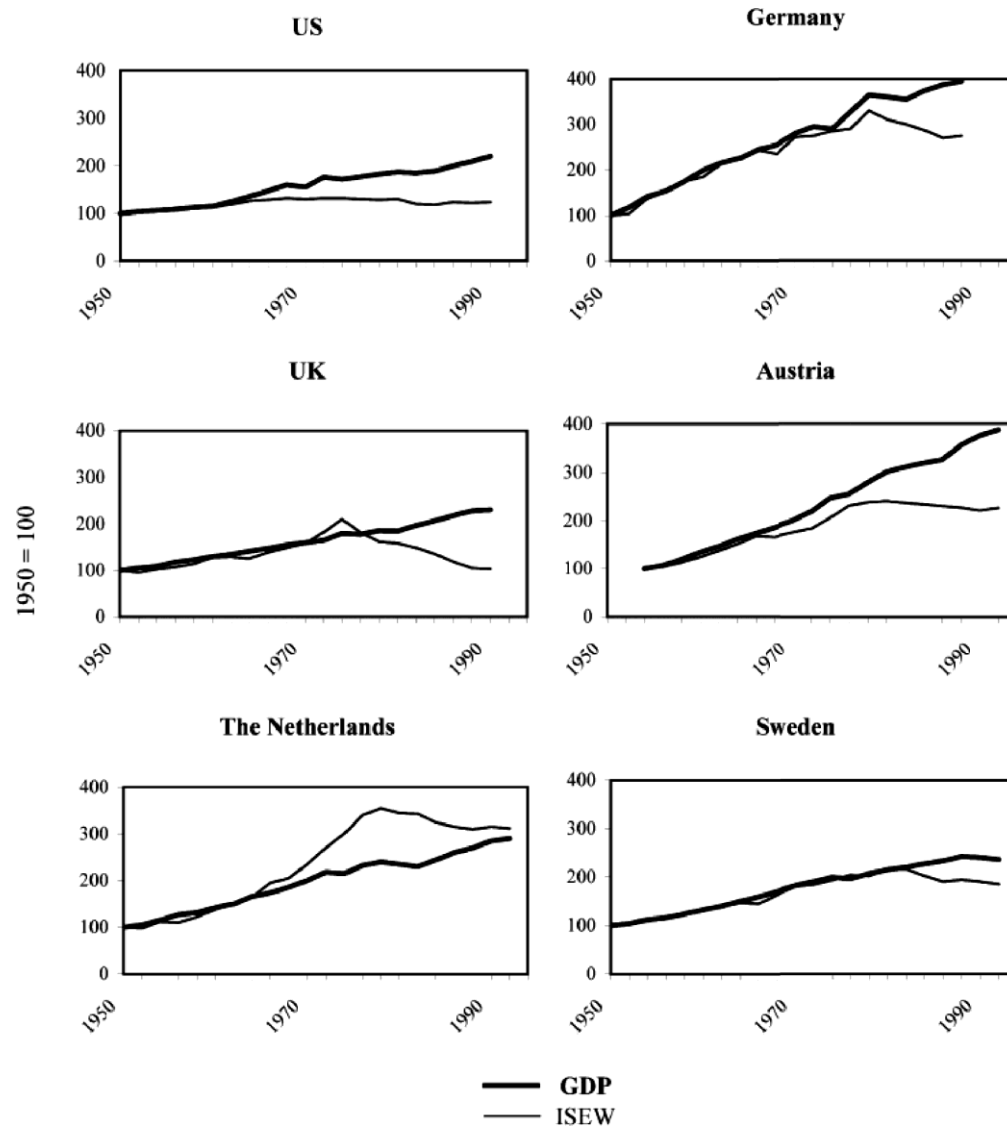
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GDP: the dominant progress indicator



GEA 2012 showed how GDP and Well being Indicators diverge after a threshold of GDP

Figure 21.7 | Comparison of macro indicator: GDP and ISEW for the United States, Germany, United Kingdom, Austria, the Netherlands, and Sweden. Source: Lawn 2003.




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Towards demand-side solutions for mitigating climate change

[Felix Creutzig](#) , [Joyashree Roy](#), [William F. Lamb](#), [Inês M. L. Azevedo](#), [Wändi Bruine de Bruin](#), [Holger Dalkmann](#), [Oreane Y. Edelenbosch](#), [Frank W. Geels](#), [Arnulf Grubler](#), [Cameron Hepburn](#), [Edgar G. Hertwich](#), [Radhika Khosla](#), [Linus Mattauch](#), [Jan C. Minx](#), [Anjali Ramakrishnan](#), [Narasimha D. Rao](#), [Julia K. Steinberger](#), [Massimo Tavoni](#), [Diana Ürge-Vorsatz](#) & [Elke U. Weber](#)

[Nature Climate Change](#) **8**, 260–263(2018) | [Cite this article](#)

4584 [Accesses](#) | **127** [Citations](#) | **128** [Altmetric](#) | [Metrics](#)

Research on climate change mitigation tends to focus on supply-side technology solutions. A better understanding of demand-side solutions is missing. We propose a transdisciplinary approach to identify demand-side climate solutions, investigate their mitigation potential, detail policy measures and assess their implications for well-being.



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A standalone chapter in IPCC AR6 WG III Chapter 5

Behaviour and demand side solutions for mitigation



Need many more research



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Various research gaps have been identified in the above mentioned publications

Most urgent are

- Data on basic services that people need/demand
- to understand what culturally nuanced approaches provide better solutions
- macroeconomic effects of large-scale switches to sufficient lifestyles
- how alternative values might inform a re-distribution of wealth due to shifting preference structures
- how large reductions in consumption could be embedded in everyday life from an ethical perspective.
- benefits of preventive actions, e.g., investment in community health care, and spending on communal well living rather than a narrowly framed deficit focused individual well-being.
- Beyond regulation, policy and governance for such transformations

Established literature shows that of all climate research funding social science aspects still represent only a tiny fraction



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Thank You