Climate Policy and Human Well-Being

Well-Being Outcomes Need to be a Central Consideration for Climate and Sustainability Policy

Research paper

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The Global Solutions Initiative (GSI) works towards a global economic system that benefits people and planet. Rooted in research, GSI brings together policy, academia, civil society, and the private sector to generate insights for better global governance. Founded in 2017, the Berlin-based independent, non-profit organization annually convenes the Global Solutions Summit, which serves as a steppingstone to the G20 and G7 Summits. GSI is led by Dennis J. Snower, Markus Engels, and Christian Kastrop.

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Climate change has fundamental repercussions on our current societal structures. Simply put, the transformation needed to reduce emissions to avoid catastrophic impacts requires fundamental changes in our economic system and lifestyles to achieve the transition to net zero. If emissions and temperatures continue to rise, impacts are projected to become increasingly catastrophic (Lenton et al., 2023; McKay et al., 2021; O'Neill et al., 2022). Transformational change is therefore not a choice as such: the choice lies between an orderly transition to climate-resilient and sustainable conditions or a disorderly and forced transition through increasingly catastrophic changes. The recent Intergovernmental Panel on Climate Change (IPCC) assessment reports on this in very clear terms: the costs of inactions for society, economy, and ecosystems far outweigh the costs of action (IPCC, 2023).

Recognition that the current economic focus on growth and GDP is a narrow representation of welfare and is therefore not a suitable measure for progress has been growing for decades (see e.g. Costanza et al., 2009; Hoekstra, 2019). As a result, different initiatives—from research to governments across all world regions and different levels of decision-making—have engaged in developing more inclusive measures of prosperity and human well-being and in outlining alternative economic paradigms, focused on human well-being (Hoekstra, 2019). The challenges arising from the current economic system are manifold and have led to many concurrent crises, such as poverty and inequality as well as increasing polarization or ecosystem degradation and biodiversity loss. Climate change is one of the most immediate and potentially catastrophic outcomes of the current socio-economic system and paradigm and the urgency of addressing the climate crisis through decarbonization cannot be understated (IPCC, 2022a).

»Solutions to the climate crisis need to be measured against broader societal outcomes.«

A change in the socio-economic paradigm that ensures human and ecosystem well-being is put into focus is an essential ingredient in ensuring this transformation is socially just and environmentally sustainable. Solutions to the climate crisis need to be measured against broader societal outcomes to enable a transition that is cognizant of the polycrisis landscape (Homer-Dixon et al., 2021). Other global challenges that contribute to the current polycrisis equally require an urgent shift in the economic paradigm (Henig & Knight, 2023; Homer-Dixon et al., 2015, 2021).

G20 agendas over the past years have started to reflect the urgency of ambitious and sustained emission reductions and the energy transition; the number and coverage of climate policies within G20 countries have significantly increased over the last decades (Nascimento et al., 2022). While gaps in coverage remain and

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current policies and commitments do not deliver on the global goal of limiting temperatures to 1.5°C (Fyson et al., 2021), the direction is clear. G20 priorities continue to focus on increasing ambition to tackle the climate crisis. The current Brazilian presidency also continues along this path and recognizes the importance of addressing questions of inequality and food security in this context, setting the scene for engagement in climate action across a broader spectrum of areas relevant to the socio-economic transformation. These G20 priorities also translate into the topical priorities addressed by the Brazilian Think20 (T20), where considerations of a shift in socio-economic boundary conditions for more sustainable development pathways feature centrally across all six Task Forces.[1]

A common framing of well-being and progress that goes beyond purely economic considerations is essential to find adequate solutions to the current polycrisis and to inform the required economic paradigm shift. A focus on multidimensional concepts of human well-being provides an essential interface to ensure consistency across the solution space to tackle the multiple crises we are facing. This is also the case for the different policy areas relevant to tackling the climate crisis. While emission reductions are key to ensure temperatures are limited to 1.5°C, investing in adaptation is becoming increasingly relevant, as impacts start to manifest in increasing intensity across the globe.

CONTEXT AND CONSIDERATIONS FOR BETTER REPRESENTING HUMAN WELL-BEING FOR EFFECTIVE CLIMATE POLICY

As a policy field that requires robust information about future outcomes of current decisions, climate policy is in a unique way responding to climate research and in particular also model outputs.

The different areas of climate research employ different (e)valuation and outcome measures, which are often difficult to reconcile. Where economic valuation, including GDP as a central measure, continues to dominate the Integrated Assessment Modeling (IAM) community (Markandya & González-Eguino, 2019), climate impacts are measured with a variety of different sector-specific measures (Byers et al., 2018) and results of economic impact valuation are characterized by a huge value spread (O'Neill et al., 2022). Neither of the two broader strands of model-based climate research is currently representing effects on environmental or well-being in a multi-dimensional manner.

Approaches to developing better measurements of prosperity have been on the rise over the last decades and a plethora of indices, theories, and policy concepts have been developed from as early as the 1950s (Hoekstra, 2019, 2022). Government initiatives to shift to multi-dimensional measures of progress are emerging across the globe, from national measurement approaches to EU and UN-led initiatives.[2] Many approaches build on the Capabilities Approach, first developed by Sen and further developed by Nussbaum, which also provided the basis for the Human Development Index (Anand et al., 2005, 2009; Nussbaum, 2002, 2003). Measures of human well-being have been proposed in various climate and sustainability communities (see, for example, Creutzig et al., 2022, 2023; Lissner et al., 2015). The Years of Good Life (YoGL) approach focuses on good life years, following the tradition of disability-adjusted life years, but assessing years out of poverty and with positive life satisfaction. It adds a dynamic dimension to perspectives of well-being that could – combined with an agreed framework – add further value (Lutz et al., 2021).

Despite these initial studies and the recognition that the current representation of societal outcomes in modeling is insufficient (Andrijevic et al., 2023; Schipper et al., 2022; Van Maanen et al., 2023), there is limited progress in advancing the quantitative representation of human well-being in climate science.

Recent scholarship highlights the need for consideration of alternative economic systems that shift focus on positive outcomes and basic needs, such as health care or education, rather than economic growth as the primary measure of progress (see for example Fitzpatrick et al., 2022; Keyßer & Lenzen, n.d.; Lima de Miranda & Snower, 2020; Raworth, 2017; Steinberger & Roberts, 2010, amongst many others). A focus on well-being outcomes also highlights how the increasing inequality observed across the world and across different dimensions of the socio-economic system can manifest itself in differential access to key resources that provide the basis for human flourishing. For example, higher within-country inequality also leads to overall higher damages from natural disasters and increases the number of people affected, highlighting again the interrelation between human well-being and climate (Cappelli et al., 2021).

The importance of situating responses to the climate crises within the wider set of socio-economic challenges is also highlighted in the latest IPCC report with the concept of climate-resilient development pathways, which describe *"trajectories that strengthen sustainable development and efforts to eradicate poverty and reduce inequalities while promoting fair and cross-scalar adaptation to and resilience in a changing climate. They raise the ethics, equity, and feasibility aspects of the deep societal transformation needed to drastically reduce emissions to limit global warming (e.g., to well below 2°C) and achieve desirable and liveable futures and wellbeing for all." (IPCC, 2022b).*

The quality of responses to the climate crisis is inherently linked to how well we can assess and quantify potential futures across world regions, as the effects are both unequally distributed as well as time-lagged and appear with a delay of years to decades (Schleussner et al., 2021). While approaches to model biophysical outcomes can project impacts at increasing spatial and temporal granularity, linking those impacts to societal outcomes is in its infancy and we are therefore also unable to understand the effects of policy interventions in a complex societal system.

A COMMON FRAMEWORK OF HUMAN WELL-BEING FOR GLOBAL INTEGRATION AND ITS RELEVANCE FOR POLICYMAKING

With the increasing urgency of addressing several critical crisis points, it is essential that policies can be assessed against broader societal outcomes, including environmental and human well-being, as time and resources are limited. Different strands of research are essential building blocks to inform different policy areas, but due to the complexity of the questions they are addressing, outcomes can lead to conflicting recommendations.

The global applicability of indices to represent universal values has been an issue of debate across research communities well beyond considerations on climate action for many decades. In the context of basic needs, Max-Neef (1992) proposed the important distinction between universally applicable *fundamental needs*, such as access to nutritious food or positive social relations, but distinguishes this from *satisfiers*, which can differ according to preference or resource availability. Similarly, the capabilities approach highlights the need to access different functions, which allows one to put into practice individual preferences (Anand et al., 2009). Such differentiation is essential when thinking about global applicability while recognizing different preferences on the one hand and well as dynamic conditions on the other. For the case of climate action and the required societal transformation towards a low-carbon and resilient economy, fundamental shifts in how we can satisfy needs will no doubt be required. Such a differentiation between universally applicable needs and the various choices available to satisfy them can make visible the different pathways for substitution that would allow this transition while ensuring basic needs for human well-being are met.

As climate change impacts are becoming visible across the globe, in particular, the areas of adaptation Global Goal on Adaptation (GGA) and Loss & Damage (L&D) have recently gained increasing attention in the international climate negotiations. The focus of L&D negotiations has been on funding in particular, with a recent breakthrough with an agreement on the Loss and Damage Fund. While monetary resources are essential to cope with mounting L&D, the debate also urgently requires better measures of broader societal consequences: much of the anticipated and reported losses are non-economic, but cultural, for example. Representing such losses therefore requires more granular representations of well-being and progress, which can capture the multi-dimensional nature, but are still comparable across the globe under a global agreement. Similarly, adequately representing the needs for and effectiveness of adaptation in a globally comparable manner requires a systematic representation of a broader societal value system that goes beyond monetary valuation.

As Creutzig et al. (2022) have shown for the area of demand-side solutions, an integrated and multi-dimensional representation of well-being can identify the multiple benefits of specific policy choices. While targeted at emission reductions, tested options also achieved benefits across many well-being dimensions. Such an approach would also be applicable to identify trade-offs and co-benefits between policies, in relation to adaptation and mitigation but also beyond.

CONCLUSION

Inadequate representation of societal outcomes in quantitative climate models is concerning and potentially detrimental for several reasons, as these models are at the heart of informing climate policy and their future effects. Firstly, the lack of representation underestimates the full cost of consequences for people and the planet, which are already substantial today. A focus on GDP provides indications of the monetary impacts, but it masks the scale of human and environmental suffering that is already experienced today and will continue to increase. At the same time, the lack of consideration of broader societal outcomes and well-being may overestimate the potential for coping with the consequences of climate change itself, as well as the policies put in place to address it.

Secondly, it masks the distributional effects of both, the measures taken for a transition to net zero across sectors as well as the distributional and cross-sectoral effects of climate impacts, which manifest in many ways in addition to purely economic costs. Ensuring that the social acceptability and overall outcomes of climate policies are equally distributed in terms of costs and consequences is essential for long-term effective climate policy and societal trust in decision-making. Ensuring that policies can be evaluated against a broader set of outcomes is therefore essential. Finally, and maybe most importantly, when looking at the scale of the challenge and the need for proactive solutions, one-dimensional measures disguise pathways that would be beneficial for a range of positive environmental and societal outcomes required to address the multiple crises we face. Transformation is not a choice and we need to address the effects of different transition pathways head-on and understand implications within a common framework, centered around measurement that fully account for human and ecosystem well-being. The economic systems then need to follow from that.

»There is limited progress in advancing the quantitative representation of human flourishing and well-being in climate science.«

Even within climate science, there is a disconnect between different areas of action - mitigation and adaptation. Climate mitigation and the associated required transformation are often talked about as mostly a cost factor - this is a problematic and also inaccurate account for several reasons. A focus on mitigation costs neglects the level of suffering climate impacts already cause today, particularly for the most vulnerable. Amongst other things, this is evidenced by impacts on key areas of well-being, often not reflected in economic terms. So even though we already see major negative effects on human well-being, the current lack of metrics to assess this leaves these effects largely unaccounted for. A purely economic lens also

»Focusing on well-being metrics provides a huge opportunity for climate resilient development that also reduces inequalities and poverty across the globe.«

distorts the distribution of climate impacts to indicate those with higher incomes may suffer the most, but they only stand to lose more due to their higher incomes. Focusing on well-being metrics that allow for assessing the costs and benefits of different policies more holistically provides a huge opportunity for climate-resilient development - a development that curbs emissions, responds to changes in the system through adaptation, and builds resilience by reducing inequalities and poverty across the globe.

By not employing better metrics for progress, we run the risk of missing out on huge opportunities to reshape our global society, focused on a wider set of aspects to assess human well-being while embarking on the transformation we need. Making visible the scale of the potential, but also the scale of the consequences of climate action or inaction on human well-being, would immediately show that bending the emissions curve in this critical decade would come with huge benefits for human well-being and prosperity for all.

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