

TOWARDS CLIMATE SYSTEM JUSTICE

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KEY MESSAGES

1. Without climate justice, the climate problem cannot be solved
2. Justice is conceptualized to include transformative, recognition and epistemic justice; interspecies, intergenerational and intragenerational justice; procedural; and substantive justice
3. Justice operationalized includes just ends (just boundaries and foundations) and just means (just transformation)

INTRODUCTION: WITHOUT CLIMATE JUSTICE, THE CLIMATE PROBLEM CANNOT BE SOLVED

Policy brief 4 explained the cumulative climate injustices. Here, we argue that without climate justice, the climate problem cannot be addressed; and we propose a climate system justice framework, which guides the policies that emerge from this project (Gupta et al., 2025).

The climate problem cannot be addressed without accounting for justice since: (a) if an orchestrated, policy-driven, whole-of-society approach to the energy transformation is not adopted in the Global North, it will be impossible for these societies to leave fossil fuels underground in the time-frame necessary. Today, most renewable energy subsidies go to rich people to buy solar panels, heat pumps and electric cars; the poor are left out of the transition (Kolmaš, 2023). Moreover, when the rich do this, the grid becomes a bottleneck as it cannot keep pace. Additionally, this would lead to an explosion of private cars, which, in itself, is not a sustainable transport option (see PB 38). Furthermore, fossil fuel subsidies go to businesses to keep them competitive. If the poorer people and SMEs are left out of the energy transition, they become easy prey to disinformation (see PB 14, 15) and will vote for governments that do not believe in climate change, hampering the transition. (b) Low-/Middle-Income Countries (LMICs) may be tempted to use their fossil fuel reserves, given that 78% of the remaining fossil fuel is located here, if these countries are not helped to find an alternative affordable source of energy, and if their debt to rich countries (see PB 20) is not reduced (Heras et al., 2025). In fact, if they would only use the fossil fuel needed to meet basic needs, that would have increased emissions by 26% (Rammelt et al., 2022). This means that even basic needs must be met through non-fossil energy (UNEP, 2024). (c) Addressing climate change and other environmental issues implies a restraint on individual freedom and markets; this requires regulatory, suasive and infrastructural mechanisms to enable the whole of society to make the massive transformations needed (Schoenefeld et al., 2025). A market-based individualist deregulatory approach will fail to make the mark (Hans, 2023).

Building on 'Earth System Justice', this PB both conceptualizes and operationalizes Climate System Justice (CSJ).

CONCEPTUALIZING CLIMATE SYSTEM JUSTICE

Block 1 - Ideal, recognition, epistemic and data justice: Incremental market-based approaches cannot address the climate challenges and leave fossil fuels underground in time to limit irreversible impacts setting in (Gupta, Chen, et al., 2024). We need more transformative approaches that account for social (e.g., gender, Indigenous People & local communities), ecological and relational inclusion (inclusive development) and this implies adopting recognition (recognizing and prioritizing the other), epistemic (respecting and making space for other ways of knowing) and data (recognizing that lack of appropriate data may exacerbate injustice) justice (Gupta et al., 2025). This implies that CEOs of companies should not just account for shareholders but also stakeholders; that politicians should not just focus on politically feasible measures that promote GDP growth (e.g., through fossil fuel use), but also their impacts of that on people (e.g., air pollution, climate change) (cf. Rempel & Gupta, 2022).

Block 2 - Interspecies and Earth system stability, intergenerational and intra-generational justice: The above implies accounting for the 3I's of justice (respect for other species and their needs) and Earth System Stability (ensuring that the Earth's processes can continue to flourish as they have to ensure stability to ecosystems and human systems); intergenerational justice (between past, present and future) and intragenerational justice (between generations, sexes, communities, accounting also for intersectional injustice). Such justice requires, for example, that the climate temperature target and its related fossil fuel use is chosen to balance between the 3Is (Gupta, Chen, et al., 2024).

Block 3 - Procedural justice: Justice also requires that all people in society have access to elements of procedural justice. This means they must be well informed about the problem – an issue that has been scarcely undertaken in rich and poor countries alike. Instead, misinformation and disinformation have spread widely (see PB 14, 15) and content control has been limited to prevent the manipulation of people (Gupta et al., 2025). Based on being informed, people need to be able to participate in decision-making. However, if either participation in decision-making is limited, or allowed but without proper information, then the decision-making becomes exclusive or manipulative (Zhou & Shen, 2022). Third, procedural justice implies access to civic space – which means people should be able to protest about decisions made or not made. But world-wide we see a shrinking civic space with climate activists being put under pressure. And finally, procedural justice implies access to judicial remedy. Although this has been a slow process, there are hundreds of court cases in national courts and three international advisory opinions from three different international courts (see PB 25) that are promising in supporting many of the ideas in this policy brief.

Block 4 - Substantive justice: The above ingredients can then be incorporated into a conceptualization of substantive justice. This implies: (a) addressing not the symptoms of the problem but the causes of climate change, fossil fuel use and inequality; and the allocation of: (b) risk/harm through liability/insurance for harm

caused (corrective justice), restoring nature (restorative justice) and enabling a just transition for labour in obsolete sectors (United Nations Environment Programme, 2025); (c) the remaining Carbon budget accounting for stranded assets (Matthews et al., 2020); and (d) responsibilities.

OPERATIONALIZING CLIMATE SYSTEM JUSTICE

Operationalizing climate system justice can be undertaken through ends and means. We define ends in terms of boundaries and foundations; and means in terms of addressing drivers and allocating risk/harm, remaining carbon budget and responsibilities.

Ends – Boundaries: In collaboration with the Earth Commission, we have defined safe climate boundaries as 1.5°C; beyond that we can trigger tipping elements that can make the system unstable. Furthermore, we have defined 1.0°C as a just boundary that minimizes significant harm (Rockström et al. 2023). The ICJ (2025) recognizes the principle of minimizing significant harm, but sees 1.5°C as the legally binding objective. Today we are beyond the just boundary and on the verge of crossing the safe boundary and this requires a rapid reduction of our fossil fuel use (Gupta, Chen, et al., 2024; see PB 7).

Ends – Foundations: The Sustainable Development Goals require meeting many basic needs, as do human rights agreements. Meeting such basic needs/human rights, such as energy access, using the energy mix of 2018 can lead to crossing the boundaries further (Rammelt et al. 2022). This implies that such basic needs must be met through affordable alternatives to fossil fuel. Moreover, given that the boundaries delimit the carbon budget (Matthews et al., 2020), which we are already crossing, the Earth Commission proposes deducting the energy needed for all basic needs/human rights from the entire budget to determine the carbon ‘corridor’ that is available for sharing between all people (Gupta, Bai, et al., 2024; see PB 7).

Means – Addressing drivers and system: In terms of means, an ideal, recognition, epistemic justice approach requires addressing the root causes of climate change and fossil fuel use (e.g., GDP and profit maximization, investment strategies of large funders; debt; fossil fuel lobby and ‘petroculture’, disinformation; and the diverse fossil-fuel lock-ins); and inequality (e.g., tax injustice, non-prioritization of public and merit goods) (see PB 22, 23).

Means – Liability/just transition: Moreover, corrective justice requires those who have over-polluted and caused significant harm to others to be held accountable through liability, polluter pays and other related frameworks. Restorative justice requires that damaged (e.g., fossil fuel polluted) areas are restored. Transitional justice requires accountability for damage to human rights. Just transition requires that those who lose their jobs in obsolete sectors are helped to adapt to new circumstances (Gupta et al., 2025; see PBs 24, 25, 26).

Means – Sharing carbon budget: The remaining carbon budget needs to be shared accounting for past, present and future emission rights as well as stranded assets (Matthews et al., 2020).

Means – Sharing responsibility: Finally, in sharing responsibilities, it is important to think in terms of just principles (for sharing responsibilities), just instruments (that align with the just principles), just finance (see PB 30) and technologies, and just partnerships (see PB 36).

CONCLUSION

The Climate System Justice framework and operationalization aim to create a framework that can enable just transformation.

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