

## Preface

Climate change and its most salient effect, the rise of the global average surface temperature, is mainly caused by increased emissions of greenhouse gases (GHG) such as carbon dioxide and methane. Human (economic) activities—predominantly fossil fuel combustion in industrial processes—are responsible for these increased emissions. This expert report on climate justice is predicated on the near universal scientific consensus concerning the causal relation between human activities and fundamental changes of the climate system. Therefore, this expert report does not include a section elaborating on the scientific basis of climate change but rather focuses on its normative dimension.

The section on the ethical aspects of climate justice begins by identifying climate change as an issue of *justice*. The prevailing framework broadly construes climate change as an issue of distributive justice, focusing on the equitable distribution of the finite capacity of the atmosphere to absorb GHGs. More specifically, this concerns the distribution of the costs of climate action, i.e. the burdens associated with efforts to slow down climate change (mitigation) and the costs associated with efforts to address occurring changes (adaptation). Given the long-term dimension of its impacts, climate change is also frequently characterised as a phenomenon raising issues of justice towards persons who will be born in the distant future (intergenerational justice). Finally, climate change is closely linked to questions of global and international justice since climate action requires a fair division of responsibilities for climate mitigation and adaptation, particularly between states as the main political actors.

However, this conception of climate justice with its emphasis on distributive, intergenerational, and international aspects has been criticised from various philosophical perspectives and faces external as well as internal criticism. External criticism has been produced by utilitarian accounts of morality, for example, which argue for climate

action without invoking the controversial concept of justice. Instead, utilitarians explore the impact of climate change on the overall normative goal of maximizing happiness for all, including present and future people. Within the »justice paradigm«, the prevailing framework of climate justice also faces internal criticism regarding its (political) feasibility and its ability to enable all affected persons to actively participate in the decision-making process on climate action. Also, the scope of justice has been questioned in view of the insufficiently addressed forms of injustice rooted in non-recognition, in particular the underestimation of negative impacts of climate change on women and Indigenous People, but also on the environment.

Given their importance within the academic philosophical debate, this expert report focuses on the intergenerational and distributive dimensions of climate change in more detail in separate sections.

Whether obligations towards future generations can be established at all is the subject of an ongoing philosophical debate. Justifying and specifying the obligations of present generations towards future generations in the context of climate change faces profound conceptual challenges. To name but two: first, if the notion of justice involves reciprocal relationships between persons, then it may prove difficult to establish obligations of justice between non-overlapping generations (the so-called non-reciprocity challenge). Second, the large-scale societal effects of different climate policies implemented by present generations may cause different sets of individuals to exist in the distant future. But how, then, could future generations claim to have been harmed by unambitious climate policies in the past if they would owe their existence to those very policies (the so-called non-identity challenge)? This expert report therefore offers a discussion of the most prominent challenges for intergenerational justice in the context of climate change.

Climate change conceived of primarily as an issue of distributive justice is also fundamentally concerned with how the benefits and burdens of climate action, which in turn result from the economic activities causing GHG emissions, ought to be distributed. For expository purposes, principles that have been developed to distribute emissions entitlements and the remaining carbon budget (»justice in emissions«) such as *Emissions Egalitarianism* are discussed first, after which principles that have been developed to guide the distri-

bution of burdens (»justice in burdens«) resulting from climate action such as the *Polluter Pays Principle* will be addressed. However, the distribution of burdens also includes the debate about how the costs of adaptation to those aspects of climate change that cannot or will not be avoided ought to be distributed. In addition, considerations of compensation are outlined because there are states (most of which are in the Global South) who are responsible for only a fraction of past emissions but suffer disproportionately from the adverse effects of climate change.

The subsequent section on policy aspects of climate justice begins with a broad understanding of justice in the face of climate change. The preceding analysis of the ethical aspects of climate justice is complemented by an examination of governmental agreements and policies and their respective connection to climate justice. The United Nations Framework Convention on Climate Change (UNFCCC), adopted in 1992, contains various considerations of justice issues such as the principle of »common but differentiated responsibilities« regarding climate action or the primary commitment of only »Annex I Parties« to the establishment of mitigation policies and the reduction of GHG emissions. Whereas the subsequent Kyoto Protocol and the Paris Agreement also include considerations of justice, the Paris Agreement is the first to directly refer to both intergenerational justice and to climate justice. This analysis of governmental agreements thus traces the development of the concept of climate justice within political discourse.

In addition to the direct inclusion of justice considerations, the agreements and policies can also be assessed in terms of their own implications (positive or negative) for the realisation of justice. For example, the possibility of prioritising (economic) development over mitigation for countries in the Global South can be seen as both promoting justice and as hindering justice, as the implicit delay of climate action may have an overall impact on intergenerational justice issues. Similarly, mitigation strategies and policies derived from the UNFCCC, such as the carbon market rules (cf. CDM) or policies regarding deforestation (cf. REDD+) aim to combat climate change and thus promote one of the goals of climate justice, but have also been shown to have an impact on human rights, e.g. of Indigenous People, and thus to jeopardise other dimensions of climate justice. Closely related to this assessment of mitigation policies and

agreements from a human rights perspective is the issue of loss and damage and the controversy surrounding issues of compensation for vulnerable states.

Besides figuring in normative theories and policies, the concept of climate justice has also been incorporated into social movements within civil society. Here, climate justice is used as an umbrella term for social movements that either demand improvements in climate policies within established institutions and the economic order, or, in more radical interpretations, urge to end capitalism as the main cause of climate change and related injustices. The growing importance of civil society in demanding climate justice can also be seen in the increasing number of climate litigation cases. Landmark climate litigation cases, such as *Neubauer v. Germany* in 2021, are presented and evaluated through the lens of climate justice.

This expert report maps and analyses the complex justice issues that arise in the context of climate change and evaluates policy responses to the impacts of climate change from a climate justice perspective.

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