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THEMED INTERVENTION

# Crisis of imagination/(re)imaginations for a (climate) crisis

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## Abstract

This themed intervention emerges from a Chair's Plenary during the Royal Geographical Society (with IBG) Annual Conference 2023 on the theme of 'Climate Changed Geographies' and addresses geographers and allied social scientists. Drawing on Amitav Ghosh's provocation, it asks if our work on climate change is facing a crisis of imagination. Human geography has historically framed climate change as primarily an environmental problem and fallen short of imagining it as a concern central to the discipline. This, in turn, has prevented human geography from becoming a concern central to climate change. Human geographers have been relegated to primarily being analysts of societal responses rather than their organisers. Following Ghosh, this themed intervention frames climate change as a crisis of imagination and brings together seven scholars to offer some (re)imaginations for this (climate) crisis. The intervention identifies Western hegemony, and a continuing desire to maintain and extend it, as a central cause for this crisis, and makes space mainly for scholars from/of the Global South. Emerging from a varied set of positionalities, they raise three main points. First, historical injustices are central to defining the climate change problem and devising its solutions. Second, the question of coloniality – legitimacy of diverse knowledges, extraction of knowledges, hegemony of knowledges – and a need for pushback against structures of knowledge production that maintain Western hegemony, stays prominent. Third, the idea of reimagining relationships based on solidarity, shared but differential vulnerabilities, responsibilities and care becomes prominent. Scholarly work is unquestionably structured by and sometimes props up the systems of racism, imperialism, violence and hierarchies of power. A profound and radical response to climate change can only come through systems change, and our job is to analyse, initiate, and accelerate those justice-oriented systems changes which will most effectively deaccelerate climate change.

**KEYWORDS**
climate change, colonialism, crisis, geographies, imagination, narratives, vulnerability

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# 1 | CRISIS OF IMAGINATION/(RE)IMAGINATIONS FOR A (CLIMATE) CRISIS: INTRODUCTION TO THE THEMED INTERVENTION

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## 1.1 | Introduction

This themed issue emerges from a Chair's Plenary organised as part of the Royal Geographical Society (with IBG) Annual Conference 2023 on the theme of Climate Changed Geographies. The plenary and this collection address geographers and other social scientists from allied disciplines and question if our individual and collective works on climate change are facing a crisis of imagination. In this sense, the 'we' used in the following paragraphs addresses geographers and allied social scientists working on and thinking of climate change. Interventions in this collection emerge from a varied set of positionalities and attempt to tease out different facets of a climate crisis of imagination and propose some ways forward. In this way, the interventions are not necessarily in sync or in agreement with each other, beyond the fact that they all attempt to strike a blow at a collective crisis of imagination.

This section acts as an introduction to the set of interventions that follow. It provides a justification and explanation of the theme: Crisis of Imagination/(re)Imaginations for (climate) crisis. In doing so, this contribution asks, do we need to (re)imagine how we, as social scientists, do things in a climate-changed world? What is the role of geographers and

social scientists in getting the world out of a crisis of imagination? If we do need (re)imaginations for a (climate) crisis, then how might geographers, who are experts in Earth-Writing, respond with new stories of/for 'the Earth'?

In addressing these questions, first, this introduction explicates how climate change has led to a crisis of imagination. After this, it briefly explicates geographical literature on imaginations and re-imaginations to set the stage for a discussion on some ways in which the contributions in this intervention push re-imaginations out of a climate crisis of imagination. Taking a lead from Escobar's argument that 'work being undertaken at the onto-epistemic and social margins and peripheries' of the hegemonic world is central to the project of reimagining the world(s), this themed intervention makes space primarily for scholars from/of the Global South who reflect on this crisis of imagination from their situated positions (Escobar et al., 2022, p. 115).

## 1.2 | A climate crisis of imagination

In explicating the 2023 RGS-IBG Annual Conference theme, the conference chair, Prof. Harriet Bulkeley, urged geographers to think about 'what it means to know and inhabit a climate changed academy, and how this in turn shapes how we come to understand climate change and the ways it is changing the worlds with and around us'.[1] In essence, is climate change changing geography as a discipline? Bulkeley asked geographers to 'consider how ideas of time and change, past, future and present are being addressed in the discipline... in dialogue with climate change'. Previously, Bulkeley (2019, p. 8) has lamented that climate change is positioned in the 'middle' of the discipline of geography. This 'middle' ground, as opposed to being 'a central preoccupation across human geography's wide range of subfields' means that climate change is seen as a concern of those 'who (self) identify as "environment and society" scholars' (Bulkeley, 2019, p. 8). In a famously open and bound(ary)-less discipline, climate change becomes a victim of continuing 'disciplinary structures, agendas and practices' with assumptions of easy distinctions between 'the natural' and 'the social', notwithstanding the persistent recent critiques of such binary (Bulkeley, 2019, p. 8). While human geographers of climate change have contributed to growing debates in various environment and climate focused journals, this has reinforced the idea of climate change as an environmental problem, rather than one of power, economy, inequality and identity (Bulkeley, 2019, p. 10). This 'middle ground' position in human geography has unfortunately reinforced the role of climate social sciences as one of 'facilitating the uptake of scientific knowledge in policy and society' in the interdisciplinary concern of climate change (Bulkeley, 2019, p. 10). This has often meant a sidelining of critical perspectives in favour of practical applications (Bulkeley, 2019, p. 11). Therefore, human geographical work has been relegated to one that analyses societal responses (including politics and policy) to climate change rather than direct it. What Bulkeley (2019) hints at is a crisis of human geographers to imagine climate change as a central concern to the discipline and for human geography to be central to climate change. This has begun to change with a range of aspects of climate change being explored by geographers (Parsons, 2024). Perhaps the Royal Geographical Society deciding to have a conference on the theme of Climate Geographies is another evidence of this change. Yet, what and who is included in these Climate Geographies still stands as a valid concern, evident also from the fact that all colleagues participating in this plenary from the Global South asked if they qualified as legitimate voices in a Geography forum.

Similarly, lamenting the absence of climate change from serious (mainstream) fiction writing, Amitav Ghosh (2017, p. 9) has referred to the crisis of climate change as a 'crisis of culture, and thus of imagination'. The title of the RGS-IBG plenary and this themed intervention takes its lead from this statement. Ghosh argues that fiction's focus on 'the probable and the prosaic makes it incapable of dealing with the exceptional and the catastrophic' (Thomas et al., 2016, p. 932). Both these sides are present in climate change, and it has been relegated to the 'genre' of science fiction and fantasy, and thereby onto the margins of the literary world. Climate change, Ghosh (2017, p. 7) contends, is equated with extra-terrestrials and interplanetary travel in literary imaginations; both, things that are plausible but not yet fully real or fully affecting our lives. These are topics of interest for specialist writers and specific readers. Much in the same way that Bulkeley (2019, p. 8) laments climate change being equated with the interests of specialist 'environment and society' scholars and scholarship within Geography and allied social sciences. These parallels between the state of fiction and the state of geography should prompt us to think about the responsibility of human geographers in this crisis of imagination. Riffing off of Ghosh (2017, p. 135), future generations might find human geographers and allied social scientists 'to be equally [to leaders and politicians] culpable—for the imagining of possibilities is not, after all, the job of politicians and bureaucrats'.

There is yet a third crisis of imagination that climate change unfolds. Progressive global negotiations (under the United Nations Framework Convention) on climate change have failed to deliver substantial changes. While climate change is (rightly) portrayed as a common problem, whose causes and effects do not respect the boundaries of nation-states, the

actions within the UN framework are negotiated from entrenched positions of nation-states and other powerful actors. What is evident is a closing down from dominant actors (USA,[2] EU, for example) and those historically responsible for climate change attempting to secure their political, economic and cultural positions rather than opening up to profound changes. Climate justice, as 'a question of responsibility and morality', is sidelined (Sze, 2020, p. 11). Therefore, climate change remains a common cause in rhetoric but not in praxis. In addition, presently both climate change mitigation and adaptation overlap with the simultaneous congealing of populism, nationalism, securitisation and bordering, leading to further closing down. These other crises also relegate climate change, often understood, especially by dominant actors, as a problem of longue durée, to the sidelines, while many around the world suffer its impacts now. The first email I wrote to colleagues in Kenya in February 2023 seeking interest in this plenary was responded to as: 'I write this as Nairobi boils and cattle die'. Discussions on progressively hotter and longer summers in India and Kenya, record temperatures in the United Kingdom and frustration with inaction from dominant actors took up most of our first meeting. These frustrations are evident in Hermanus' intervention (Section 3), which asks if climate change, by training the lenses of its worst impacts on the most vulnerable population in the Global South, has 'by mistake found the wrong home'. Climate change as a problem itself is an outcome of the ending of many worlds through processes of colonialism and capitalism (Davis & Todd, 2017). These processes now endure within climate change responses through many 'experts' that see 'opportunity in crisis' telling those in the Global South how to cope, adapt and transition in a climate changed world (Hermanus, Section 3). As Ghosh (2017, p. 8) argues, a 'broader imaginative and cultural failure … lies at the heart of the climate crisis'. It is difficult to imagine a way out of this.

It might be unfair to say that no reimagination is evident in climate change framings and responses. Indeed, for some time now, climate change social scientists have, with considerable success, pushed to reimagine climate change as 'an ethical, societal, and cultural problem that poses new questions and reconfigures the geographic imaginaries of the world' (Yusoff & Gabrys, 2011, p. 616). This has led to climate change being seen as much as a social phenomenon as it is a scientific one (Yusoff & Gabrys, 2011). In the last decade, the Intergovernmental Panel on Climate Change (IPCC) has also progressively adopted new measures like the Burning Ambers diagram (Mahony, 2015) to communicate the dire nature of climate change and the increasingly shorter timeframes left for collective action. Climate change activists have also adopted radical measures to push both politicians and publics to act, Fridays for Future being an excellent recent example. Yet, it might not be wrong to suggest that all these ways of re-imagining are strongly embedded in dominant Western worldviews. Concurrently, or perhaps due to the fact of being embedded in Western worldviews in a world shaped by Western hegemony, these reimaginations remain incremental rather than radical. The crisis of imagination that Amitav Ghosh gestures at in his writings points more towards a need to radically transform worldviews in ways that climate change threatens to radically transform the world itself.

## 1.3 | Geographical imaginations

In 2011, the chair of the RGS-IBG conference, Prof. Stephen Daniels, while explicating the conference theme 'The Geographical Imagination', argued that imagination sits between 'the factual and fictional, the subjective and objective, the real and representational' (Daniels, 2011, p. 182). Here, 'imagination is a way of encompassing the condition of both the known world and the horizons of possible worlds' (Daniels, 2011, p. 183). Imagination helps us know the present and think of the future. Yet, imagination is a 'critical and distinctly political intellectual endeavour' (Jazeel, 2019, p. 45). The crisis we face presently, Escobar explains, is one of 'the dominant *modelo civilizatorio* or civilisational model' (Escobar et al., 2022, p. 104). This dominant model also 'occupies the imaginative space of other people and places' (Escobar et al., 2022, p. 105). Colonised by this dominant civilisational model, one needs to ask if academic practice and policy-making run like a hamster wheel without providing a radical exit from the crisis of climate change. Escobar explains that caught within institutional policies that 'perpetuate the de-futuring pressures', the 'existing academic practices and epistemologies' lack the political imagination needed for the 'complexity of compounded crises' (Escobar et al., 2022, p. 115) (see Kumar, Section 4, on Western academic practice). Yet, while some imaginaries might seem dominant, it is worth remembering the 'plural, hybrid and incomplete nature of geographical imaginaries' (Radcliffe, 2012, p. 361).

Ghosh (2017, p. 128) proposes that imagining 'other forms of human existence is exactly the challenge that is posed by the climate crisis'. Stuck in thinking through the world *as it is* has curtailed our imaginations; instead, we need to focus on a world *that might be* (Ghosh, 2017). We as (social) scientists and human beings are both accomplices and victims of this crisis of imagination. We follow research agendas that shape policies, agendas and public perceptions. McKittrick (2020, p. 2 through Wynter) argues that 'we invest in our present normative mode of existence in order to

keep the living-system—our environmental and existential world—*as is*. This is a recursive logic; it depicts our presently ecocidal and genocidal world as normal and unalterable. Our work is to notice this logic and breach it' (emphasis in original). In the same vein, Escobar argues that 'constructing the conditions for ... innovative imaginaries becomes one of the most important intellectual-political tasks of our time' (Escobar et al., 2022, p. 115). Indeed, rather than allowing climate change narratives to fracture 'our present from a future without us' (Hermanus, Section 3), we need to follow Singh (Section 2) in examining 'the frames we use to talk about the risks climate change poses, and the narratives we employ when we demand transformational change'. Rather than being blinded by crisis thinking and universal urgency, these frames prompt us to think of responsibility and morality, and force, especially Global North scholars, to centre climate justice, solidarities and a relational understanding (Singh, Section 2). Kumar (Section 4) argues that such solidarity needs the more privileged to shed their (in)securities, making the self-vulnerable to Others, rather than more secure and resilient (as climate change literature often argues).

Taking these impetuses together, and thinking with Bulkeley (2019), these interventions ask if geographers and social scientists of climate change can meaningfully conduct research on something that is *only* climate change. Concurrently, can geographers and social scientists who do not study climate change leave out climate change? For experiences of a changing climate are co-constituted by and co-constitutive of every aspect of our daily lives. For example, Ranganathan and Bratman (2019, p. 7) urge us to recognise that climate justice is 'not just about climate'.

## 1.4 | (Re)Claiming radical (re)imaginations: Time, power and the margins

One point of reimagining raised in this set of interventions is the idea of time. An obsessive focus on a crisis-ridden future presents an ahistorical picture that needs rectifying. This future is convenient for a climate change discourse dominated by the West, which seeks to assign responsibility to a 'depersonalised humanity-gone-too-far' (Hermanus, Section 3). As Singh (Section 2 reminds, 'tracing the root causes of climate change' in unequal consumption and colonisation is critical for preventing an erasure of history while we focus on the future. The CC of Climate Change is also the CC of Consumption and Colonialism. A time of crisis often squeezes out time for justice. Climate justice, as yet, has not been substantially engaged with in UNFCCC agreements. It is mentioned in the Paris Agreement preamble but does not appear in the substantive agreement. Within this simultaneous co-opting and dismissal of justice, Singh (Section 2) reminds the Global North of its responsibility, and Hermanus (Section 3) argues that an absence of justice is 'not from ignorance but by enforcement'. That is, hegemonic actors like the G7 use their power to steer the climate negotiations away from 'distributive and restorative considerations' (Hermanus, Section 2). Kumar (Section 4) reminds the role scholars bound by 'responsibilities' towards nation-states might play in supporting these hegemonies and whether they can open up to 'embrace humility and openness' (Singh, Section 2) towards those on the climate change frontlines. An obsession with a crisis-ridden future is evident in universal urgency and several climate emergency arguments that are hollow and tend to present maintaining the status quo of Western hegemony, techno-optimism and closely guarded ideas of expertise as the solutions to prevent the end of *the world* (Kumar, 2023a, 2023b). Yet, the establishment and maintenance of Western hegemony is how *many worlds* have ended. 'Hope for justice in the transitions from Global South is hinged precisely on' disruptions of these established actors and processes that have caused the crises in front of us (Hermanus, Section 2). We need to put our collective imaginations towards this task.

As this discussion started by defining geographers and social scientists from allied disciplines as the recipients for these reflections, it is important to draw out some disciplinary lessons from the interventions that follow. Daniels (2011, p. 183, referring to Said, 2003) explains the 'notion of "imaginative geography" as an imperial projection' where 'who possesses the powers of the imagination and where it is materially deployed' matters immensely. Relationships of power between geographers in the Global North and South are well known. In fact, ideas of North, South, West and non-West (among many others) are all creations of imaginative geographies. For geographers, it remains a challenge 'to find speaking positions outside the perverse structures and geographical taxonomies that Orientalist discourse has produced and that continues to constitute our taken-as-given spatial present' (Jazeel, 2019, pp. 43–44). These imaginative geographies of seeing and 'creating' the world and their embedded relationships of power are, themselves, a crisis of imagination emanating from a Eurocentric epistemological embedding. For Edward Said, this relationship of imagination and power emerged from the 'ontological inseparability of representational practices and colonial geography' (Jazeel, 2019, p. 45). Reclaiming imaginations by/from/for the subaltern then becomes an important task. Such reclaiming can happen when we move beyond the attempts to maintain the status quo, connect the past to the future and embrace contingency rather than coherence to open up 'what could have been otherwise and it could still be otherwise' (Hermanus, Section 2. All interventions in this set

speak of a need for radical change in how we think about climate change, how we understand climate vulnerability, how we postulate solutions, how we imagine solidarity and what climate change leadership might be. Singh, Kumar and Pelling (Sections 2, 4 & 7) urge a need to carefully consider what climate vulnerability is and how it could be an idea that forms rather than fractures solidarities. To foster such humility, solidarity, collectives and careful, equitable, place-based scholarship, Kumar (Section 4) asks for a pushback by (relatively) privileged scholars in the Global North against the knowledge and funding structures in Western institutions that promote Western hegemony in these spaces. Pelling (Section 7) points out that the institutional bodies like the Royal Geographical Society and the 'academy more widely has a role to play in advocating for the research agenda inspired by a demand for greater justice in climate change research'. The coda reminds us of the need to cultivate 'our own vulnerabilities at the same time as embracing our responsibilities and seeking to generate solidarities in both knowing and acting with and for others in a climate changing world'. That is, building new geographical taxonomies of climate change, vulnerability, justice and solidarity is a second critical task of (re)imagining.

For Kamath (Section 5), rather than the neatly arranged Eurocentric frames of research, (re) imaginations for such new taxonomies need to draw inspiration from the muddiness and messiness 'of being caught between estrangement and reclaiming, hope and hopelessness'. Kumar (Section 4) implores us to 'embrace and reimagine other(s and) futures' and put our hope on the 'wretched of the earth … to act beyond the false hegemonic solutions of "brown" and "green"' climate transitions. The same wretched—fisherfolk, peasants, students, dalits, indigenous and many others—whose worlds were ended by colonialism and capitalism, whose worlds are being ended by colonialism, capitalism and climate change, and who we put our faith in (but not our weight on) to provide critical (re)imagination for climate change.

Escobar argues that 'work being undertaken at the onto-epistemic and social margins and peripheries' of the hegemonic world is central to the project of reimagining the world(s) (Escobar et al., 2022, p. 115). Following Escobar, this themed issue makes space mainly for scholars from/of the Global South. In the conversations that led to assembling the RGS-IBG plenary, various questions of disciplinary embedding kept cropping. Some asked if they could speak to this theme even if they were not climate social scientists. Others wondered who might qualify as a geographer speaking at the Royal Geographical Society Annual Conference. These questions inadvertently spoke to the central themes of this plenary—who speaks for and of climate changed geographies. The intention indeed was to assemble a 'crew' that spoke to and of climate change from a diversity of vantage points to produce a set of conversations that, if not break, at least collectively chip at our crisis imagination and produce some re(imaginations) for this crisis. They tackle (re)imaginations for climate social science, for different stories of the world, and different relationalities in a climate changed world.

### 1.5 | Conclusions: making common cause

As this collection of interventions on 'crisis of imagination' is inspired by the words of Amitav Ghosh, it is worth concluding by thinking with him that 'Western intellectual and academic discourse is so configured that it is easier to talk about abstract economic systems than it is to address racism, imperialism and the structures of organised violence that sustains global hierarchies of power' (Ghosh, 2022, p. 120). Our work as geographers and social scientists is unquestionably structured by and often works to prop up the structures of racism, imperialism, violence and hierarchies of power. Climate change festers as a crisis of imagination within these settings. This crisis makes climate change a common problem, but prevents it from becoming a common cause. If climate change is to become a common cause, we need (re)imaginations that strike at racism, imperialism and hierarchies of power. This is what this set of interventions hopes to begin.

## 2 | BEYOND CRISIS THINKING: TELLING CLIMATE STORIES DIFFERENTLY

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### 2.1 | Introduction

There is no denying that we are living in a climate-changed world. The city I grew up in, Delhi, is a poster child for climate change—in 2023, it saw devastating heatwaves and was flooded in July—climate change and urbanisation

stirring a deadly cocktail for the most vulnerable and most marginalised. Over the past seven years, as an author on the Intergovernmental Panel on Climate Change (IPCC, 2022), I have been steeped in evidence of an overheated planet. The science is unequivocal—anthropogenic climate change has changed and will change life as we know it (IPCC, 2021, 2023). No matter where you are in the world, climate models, individual experiences, and collective consciousness are coalescing to confront the ways we live, eat, travel, think and work. For some people and some parts of the world, these changes are overlaid on histories of exploitation, marginalisation and colonisation, making climate change the latest entrant in a long, long carnival of unequal opportunity (IPCC, 2023).

In this piece, I do not discuss the growing litany of climate change-fuelled disasters but focus on how researchers *across* disciplines must step back from the climate frontline, from the incessant drumbeat of disasters, from the here and now that crisis thinking demands of us, and revisit how we[3] make sense of climate change. I call for revisiting and critically examining the frames we use to talk about the impacts and risks climate change poses, and the narratives we employ when we talk of transformational change.

## 2.2 | Telling different stories of the climate change problem

When talking of climate change, dominant framings of the problem are being driven by high and increasing emissions, which leads us to think of solutions in terms of achieving 'net zero', building '15-minute cities' or widespread afforestation. However, tracing the root causes of climate change, that is, exclusionary development trajectories and fossil fuel-based industrialisation, exposes that rapid emission reductions are necessitated because of highly unequal overconsumption in the minority world (Kanitkar et al., 2022; Rogelj & Schleussner, 2019) and by the richest globally (Chancel, 2022 estimates that in China, the richest 10% would have to reduce emissions by >70% to reach their 2030 national GHG emissions reduction target, while in India the number is over 50%).

Uncovering the root causes of the climate problem pushes us to also confront that this unequal overconsumption is not new and requires our attempts at futuring to not forget history. Nineteenth and twentieth-century colonisation (Evans & Viisainen, 2023) and its rapacious impacts on resources, mindsets and aspirations of the erstwhile colonised had a similar trajectory where a precious few benefited on the backs of the labouring many (Kumar, 2023a, 2023b). Present-day impacts of climate change are following these old fissures of extraction and domination—as Farhana Sultana evocatively reminds us—'colonialism, capitalism, and globalization are imbricated in the production of uneven climate injustices' ... and climate change is 'a form of slow violence to racialised and impoverished communities across the Global South' (Sultana, 2022b, pp. 119, 120).[4] Kumar (2023a, 2023b, p. 203) adds to this, cautioning against the construction of 'a climate emergency devoid of history' and the need for 'constantly juggling between events and epochs'. Critically, acknowledging the twin root causes of overconsumption and colonisation leads to different implications for the solutions we prioritise: the former requires mitigating GHG emissions rapidly and fairly, while the latter would require addressing deep-seated global power imbalances, a much deeper, radical ask. Building on these arguments, I have two provocations.

First, the Global North needs to confront, acknowledge and then embrace this climate injustice when constructing their narratives of the climate problem. Very quickly have global narratives swung from climate change is happening 'out there' to 'we're all in the same boat', arguing for the need to protect 'our people too from wildfires and heatwaves'. Governments do need to think about their citizens but enshrined in the principle of 'common but differentiated responsibilities and respective capacities' that underpin climate negotiations globally, is the idea that some countries need to do more because of ghosts of climate emissions past.[5] As climate change exacerbates extreme events everywhere, and the Global North begins to develop more experiential and everyday understandings of climate change, its researchers need to cultivate a humility and openness to learn from researchers and communities who have decades of this experiential knowledge. Currently, we are collectively failing at this (Blicharska et al., 2017; Nagendra et al., 2018; Simpson et al., 2022). Many well-intentioned initiatives dissolve in the face of either deep climate anxiety or the discomfort in this upturning of knowledge hierarchies. Unless we build solidarities, we have no hope of generating relational understandings of the problem.

Second, when defining the contours of the problem of climate change, there have been countless studies, projects and metrics to understand and identify who is most vulnerable (e.g., Birkmann et al., 2015; Brooks et al., 2005; Eriksen & Kelly, 2007; Füssel & Klein, 2006; Wisner, 2016). There is a vast and often confusing universe of vulnerability indices and assessment tools that tend to suggest and 'pit' vulnerable groups and places 'against' each other in a cruel race to the bottom. These vulnerability metrics, often reductionist in nature, poorly capture temporality, and in their bid to 'find' and 'fix' the most vulnerable, paper over longer histories of vulnerability. Instead, the reality is much more complex. Multiple studies converge to demonstrate that vulnerability is dynamic and changes over time, which is overlooked in

static assessments and indicators (Fawcett et al., 2017; Singh et al., 2019). Reviewing shifts in vulnerability assessments over three decades, Tschakert et al. (2013, p. 340) find 'declining attention to broad structural and relational drivers of vulnerability and inequality, and an inadequate understanding of vulnerability dynamics which hampers forward-looking change processes'. Despite this, global studies continue to draw homogenising conclusions of vulnerability being an inverse of national wealth (e.g., Formetta & Feyen, 2019).

Jesse Ribot lamented more than two decades ago that 'vulnerability does not fall from the sky' (Ribot, 2010, p. 1) and links vulnerability to Sen's lack of freedom, arguing that 'In the Anthropocene, human causes of climate hazard must also now be accounted for in etiologies of disaster … (and) … should not occlude social causes of (and responsibility for) vulnerability – vulnerability is still produced in and by society' (Ribot, 2014, p. 667). Research shows time and again that there are vulnerable people everywhere in the world and in every country no matter what their country's GDP is. As Aromar Revi has said, in the era of climate change, every country is a 'developing' country (Revi, 2020). Hurricane Katrina in the USA and Hurricane Maria in Puerto Rico demonstrated how hazards follow the fissures of race and poverty (Adeola & Picou, 2017; García-López, 2018), and the spate of heatwaves in South Asia, the UK and Australia in 2022 highlighted how extreme heat affects the most vulnerable in a population (Alizadeh et al., 2022; Chen et al., 2023; Singh, 2023). However, the *implications* of this vulnerability on overall risk, and capacities to adapt, are differentiated within and across countries. The problem thus is that existing vulnerability matrices often do not capture the complexity of rooted vulnerability and its implications first on adaptive capacity, and then on adaptation outcomes, painting an often trope-ridden picture of who or where climate vulnerability may lie.

And so, the stories we tell of differential vulnerability and its somewhat overly upbeat cousin, resilience, need to be cognisant of this—the vulnerable are not equally so, and we must make sense of these differences based on gender and caste, on livelihoods and stage in a life course, with humility and care. This requires careful combinations of methodologies when assessing vulnerability (Singh et al., 2019), and a deliberate slowness when we move from identifying the vulnerable to recommendations to alleviate vulnerability, and a deliberate avoidance of equating vulnerability reduction to resilience building.

## 2.3 | Telling different stories of climate solutions

As the climate crisis has become more real for many more people, there is an impatience to act, to implement solutions. Policymakers want a list of actions they can implement NOW. Practitioners want downscaled climate projections to apply IMMEDIATELY. Citizens are looking for the five things to do in their lives RIGHT NOW. This focus on urgent action is needed but, in the rush to act, researchers are whizzing past the labour of questioning the normative assumptions animating the stories we are telling of climate solutions. Currently, our stories are often listicles of options or deeply simplified technological silver bullets (Nightingale et al., 2020) that do not appreciate the magnitude of change needed, the trade-offs that transformational change will most definitely entail, and the crucial role human behaviour will play in meeting any meaningful change (Morrison et al., 2022).

## 2.4 | How can we tell more nuanced stories of climate solutions?

First, we need to move away from artificial binaries of mitigation *or* adaptation to more hybrid, transdisciplinary imaginations of mitigation *and* adaptation. This will mean overturning current siloes in which these research streams operate and training researchers to think across these binaries (e.g., Colelli et al., 2022). In practice, this would mean that those of us who work on renewable energy need to also think about how a 2°C world comes with the reality of less water to wash solar panels and more frequent cyclones tearing through energy infrastructure. For adaptation researchers, it means examining how different mitigation pathways narrow or expand the space to adapt (e.g., O'Neill et al., 2014). Currently, there are a handful of researchers globally who traverse the adaptation–mitigation binary (notably demonstrated in the IPCC Special Report on 1.5°C, Coninck et al., 2018) and unless we acknowledge its importance, we will not be able to start the crucial work of training more people to think synergistically. This is not a trivial task; it requires disciplinary humility, leadership and dedicated funding to fuel transdisciplinary conversations.

Second, our stories of solutions currently tend to stop at defining solutions and the conditions that lead to undesirable outcomes (e.g., Reckien et al., 2023; Singh et al., 2020). Building on this evidence, building research–practice–policy

collectives and experiments to understand the *conditions* under which solutions work well is necessary (e.g., Culwick et al., 2019). This second ask of transdisciplinary networks is not easy and almost impossible in the current context of precarity and outdated incentive structures that academia functions within. It requires pausing to bring together very different research and practice communities, diverse knowledge systems, and different normative views to first *develop* ideas of desirable futures we want to work towards and fight for.

### 2.5 | Using different narratives to tell these stories of the future

The languages and images we are using to recount horrors of extreme events, depict solutions, or foresee futures tell an incomplete story (Ghosh, 2016; O'Neill et al., 2023). As I discuss earlier, ahistorical readings of the problem and poor metrics to assess dynamic and differential vulnerability are leading to unequal narratives of the climate change problem. Further, the ways we frame solutions remain rooted in adaptation–mitigation binaries and within one (or a few disciplines at best) inadequately engaging in transdisciplinary endeavours. The IPCC uses shades of yellow, orange, red and purple in stacked 'burning embers' to denote increasing risk and a variety of increasingly complex graphs to chart mitigation pathways and plausible futures. While these have been pivotal in animating academic research and policy, they are somewhat blunt instruments to inspire public and policy action (e.g., Mahony & Hulme, 2012; Wardekker & Lorenz, 2019).

Octavia Butler (2000, p. 165) famously wrote, telling narratives of the future can be an act of hope: 'the very act of trying to look ahead to *discern possibilities and offer warnings* is itself an act of hope'. Indeed, the stories we tell and envision of the future and possible futures are powerful vehicles of changing our present. They also allow us to create spaces for stories and experiences silenced or underrepresented (e.g., Danielle Purifoy, 2021, on 'Black places' or Mukul Sharma, 2022 on 'Dalit ecologies'). While climate change research and practice are increasingly pluralising engagement with visioning, from 'climate-resilient development pathways' (Werners et al., 2021), experiments on transformative scenario planning (Totin et al., 2018), to foresight and modelling approaches (UNEP, 2024), these 'techniques of futuring' need care to avoid becoming performative and/or excluding certain voices and needs (e.g., see Oomen et al., 2022).

The stories we tell to map the contours of climate change and the solutions we trial and implement, need a plural language, a more humble and careful syntax. They need a historically informed yet forward-looking character, drawing from research and practice, and from memory and experience. Only then can the visions of our climate futures be inhabited and shaped by more characters who look brown and black, who are fishers and factory workers, who have experienced exploitation and recognise its maleficence. We need to find ways to enable dialogues between climate science and storytelling traditions of societies that are relational cultures, that embody socio-ecological systems thinking viscerally and in the everyday. We need to employ fiction and fantasy but also songs and data to weave what climate change means and how solutions to the same problem betray different values.

## 3 | RECLAIMING THE PAST AND FUTURE IN FRAMING THE CLIMATE CRISIS AND PLANNING A (JUST) TRANSITION

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### 3.1 | Introduction

The climate change and related (just) transition discourses that are proliferated within international climate governance structures, processes and decisions have a disjointed relationship to time. These discourses frame the challenge of conceiving and implementing a global response to climate change within an imminent and *immanent* planetary-scale crisis—even a polycrisis (Henig & Knight, 2023)—and impending catastrophe. This is then instrumentalised as the premise for the rhetorical 'urgency' of climate action (UNFCCC, 2023; United Nations, 2018). While it has not facilitated action at a pace or scale commensurate with a global crisis, this framing has achieved the reduction of the aperture for envisioning the changing climate and its consequences now in a way that is simultaneously severed from its antecedents, from its history and from the future (Davidson & da Silva, 2022; Kumar, 2023a, 2023b). This constrained presentism does not foreclose the future in the sense of the present receding into the next moment, day, century or event hereafter. Rather, this urgency limits

our imagination of a future arriving from beyond a horizon of alterity that exceeds our knowledge, prediction and control (Derrida, 1994). It is not '[A] future which is predictable, programmed, scheduled, foreseeable', but as Derrida reminds us, '[A] future, [to come], which refers to someone who comes, whose arrival is totally unexpected' (Jacques Derrida in (Dick & Ziering, 2002)), undetermined or undecidable (Derrida, 1992). With no tolerance for the perceived excess of this unknowable future, we are offered a false choice between accepting the inevitability of a world-ending apocalypse that brings the 'Anthropocene' (Kumar, 2023a, 2023b) to its close or choosing a correlated and tightly orchestrated techno-determinist utopia[6] hinged on the attribution of a messianic agency to technological progress, selling salvation to a world in a state of emergency that emerges from a deadly entanglement of humans, technology and non-human life.

In this contribution, I problematise the 'presentism' of global climate governance. I elaborate, first, on how this disjointed temporal framing enforces presentism by distorting 'now', expanding it to envelop a truncated, narrow, dismembered[7] past and a profoundly conservative imagination of the future. Second, I argue that this presentism is interdependently perpetuated and wielded by a minority of powerful actors to sustain an unsustainable global state. One form its perpetuation takes is the discursive curtailment of climate governance. Its wielding is enacted through technocratic prejudice in favour of a contracted field of legitimate solutions. Third, I argue that climate action advanced in this frame forecloses possibilities for justice because it resists change. Finally, I propose a more careful attention to contingency as necessary but insufficient contrapuntal movement, disturbing the conceptual closure of climate governance. This entails the reclamation and reimagination of breadth, heterogeneity and indeterminacy of the past, present and future, particularly by those people who are most at risk and least visible in climate governance now. These points are addressed in succession below.

## 3.2 | The disjointed time of the climate crisis

International climate change governance, and much of the predominantly Global North scholarship that informs it, peddles a bafflingly ahistorical view of climate change. While a thin veneer of temporal attunement has overlays the politics of goal-setting and rules of cooperation, there has been significant and convincing criticism of the idea that historical considerations are meaningfully addressed through the integration of 'climate justice', 'common but differentiated roles and responsibilities' (CBDR), 'loss and damage' and 'just transition' (see, e.g., Ciplet & Roberts, 2017; Kolmaš, 2023). Appearing across decisions and other documents under the United Nations Framework Convention on Climate Change (UNFCCC), these concepts hint at the existence of a globally affirmed consequential history of inequality 'within and between countries' (see Sustainable Development Goal (SDG) 10). However, this flimsy suggestion is never substantiated. Climate justice is never substantively defined, references to structural inequality in relation to CBDR are glaringly absent from decisions, and both are routinely lost in the negotiating process[8,9] driven by incumbent and sometimes emerging geopolitical powers. The pretence of CBDR appeared to crumble at the 2024 Conference of the Parties (COP29). However, embedded negotiators and observers concerned with equity attest to the continuous relegation of this principle to less central negotiations.

The first blow to this façade at COP29 was delivered by the G7 countries (Global North, former colonial powers, and Japan) in their insistence on expanding responsibility to lead and finance climate action beyond Annexe 1 countries. A 'fair shares approach to carbon accounting' attributed in excess of 90% of responsibility for the 'climate breakdown' to the Global North, one symptom of systematic violence and exploitation entailed in its industrialisation (Hickel, 2020). This expansion of responsibility was primarily aimed at China, which has a dominant role in intersecting green and digital technology manufacturing, as well as the critical minerals value chains that underpin them (Montmasson-Clair et al., 2024). It cannot be disentangled from Western powers' fears regarding China's threat to their collective dominance in a climate-changed world (Breslin & Mattlin, 2025). The size of China's population is not considered in either the assessment of its economy or of its emissions, past and present. Moreover, no consideration was given to China and other industrialising economies producing goods for consumption elsewhere. Indeed, in many cases, resource extraction and production processes undermine development through the exploitation of people and the environment, promoting development in high-consumption centres (Dorninger et al., 2021; Givens et al., 2019; Hickel et al., 2021; Rice, 2007). The USD 300 million in climate finance committed by wealthy, less climate risk-exposed countries prompted the vulnerable and under-resourced Small Island Developing States (SIDS) and Least Developed Countries (LDCs) to walk out in protest over the absurdity of this amount in comparison to the G77 and China's (the Global South's) proposal of USD 1.3 trillion. The second blow to equity was struck in the conflict between G7 countries and the rest of the world over whether there are international dimensions and cross-border impacts of climate action (maintained by the G77 and China) or not (the dissenting position of the global minority), most evident in negotiations under the UNFCCC's United Arab Emirates Just Transitions Work Programme (JTWP) (Southern Transitions, 2025).

These events run counter to the advancement of emissions accounting and the setting of planetary boundaries to better reflect the historical impact of European states and settler colonies, including the United States (Gupta et al., 2024; Hickel, 2020; Hickel et al., 2021). They also contradict progressive policy development by countries such as Germany (Federal Ministry for Economic Cooperation and Development, 2023) and the European Union's adaptation strategy (European Commission, 2021). In other words, they arise not from ignorance but through enforcement, as addressed below. Ciplet and Roberts (2017) argue that there has been a steady orientation of the climate governance regime away from rhetorical consideration of distributive and restorative concerns.

The deliberate ahistoricism of formal international climate governance is one manifestation of a broader development discourse that suffers under an enforced, truncated, narrow and dismembered vision of the past and a profoundly conservative view of the future. Amitav Ghosh (Ghosh, 2022) identifies an increasing appetite for critique that proposes a causal relationship between the excesses of contemporary capitalism and industrialisation and the climate crisis. The result is an increasingly mainstream structural or systemic analysis of the current economic system. However, this analysis is profoundly sanitised and wrenched from its material violent colonial histories and epistemological commitments. This kind of dismembered historical analysis finds expression in several concepts and debates that have been transmitted from scholarship to popular climate action advocacy. Most prominent among these is the 'Anthropocene', a contested and frequently reductionist concept through which the climate crisis is viewed (Kumar, 2023a, 2023b; Yusoff, 2018, 2019). While the epochal thinking implied by the Anthropocene does appear to historicise climate change, its epic scale obscures the 'human-centred time of world history' (Chakrabarty, 2018). Furthermore, the Global North-dominated discourse typically assigns responsibility for terraformed earth systems (Ghosh, 2022) to a depersonalised humanity-gone-too-far (recalling the depersonalisation of 'companies' first set up to colonise the world beyond Europe) even as most people were not seen as all too human (Fanon, 2007) during the first industrial revolution, and many are still excluded from fully inhabiting this category and its rights (Joo, 2020). From the dizzying height of this narrative of humanity-gone-too-far, people are obscured, as are their movements and decisions, their connections and cleavages, and politics, and all the multiplicities and contingencies, unfolding in tangled webs, structured at points by things we come to call major events. This includes those things that global governance structures take decades or centuries to call genocides and ecocides. These details falling outside the frame still orbit and trouble the presumed homogeneity of 'humanity' that is at the same time rigid and vague.

Post-colonial and other critical scholars attuned to difference (Amoureux & Reddy, 2021; Davidson & da Silva, 2022; Ghosh, 2022; Guernsey, 2022; Haraway, 2016; Joo, 2020; Yusoff, 2019) have worked to reconceive this story. A key strategy has been the re-membering of that which is dismembered from the present. The multiple contingent processes and events of the past, the decisions, and the human and non-human actors (plants, bacteria, viruses and currents) and their agency, challenge the coherence and closure of the present as well as its inevitability and immutability. In other words, acknowledging contingency is to recognise that it could have been otherwise, could still be otherwise, and may now be other than what is visible from where we stand. Contingency, and therefore, indeterminacy, pervades all aspects of the global carbon economy within our complex system of systems. Undertaking the work of carefully restitching the past(s) and present(s) allows existing multiple material relationships to become visible and meaningful. Restitching past-present-future(s) has made reconfigured human-non-human relationships imaginable (Haraway, 2018). In the absence of contingency, however, this monolithic Anthropocene, this age of humans, casts an ominous shadow of its own inevitable end without a history. The story of climate change as an apocalypse is prevalent in Western news and popular media, as well as in activism and individual Western psychology, where it is expressed as pervasive eco-anxiety about the end of the world (Coffey et al., 2021). Because the end is nigh, 'radical' activists tell us, 'We don't have time' (We Don't Have Time, 2024). These new 'radicals' have only just woken up to the liminality hitherto reserved for those who are forced to live in places where people are forced to live in poisoned environments.

### 3.3 | The weaving and wielding of a perpetual present

Presentism is both perpetuated and wielded by powerful actors, with the effect of sustaining an intolerable state of international development for the global majority. Powerful leaders from the public and business spheres repeatedly emphasise the urgency of climate action to ward off the imminent apocalypse, while remaining resolutely inactive. There are, quite obviously, serious threats to people and ecosystems present now. However, the most vulnerable to climate change have also been vulnerable to various human and non-human existential threats, which are compounded by climate change. Indeed, the suffering of some due to ecocidal economic activities is even positioned as a necessary evil to enable climate action by providing resources to implement decarbonisation. The 'urgency' (United

Nations, 2018) of the climate crisis is not motivating help for developing countries or vulnerable populations. Over decades and centuries, colonised and racialised peoples, Indigenous people, the 'developing' (as in UNFCCC terminology) world or the Global South have been calling our attention to the world-ending destruction of human and non-human life, articulating rolling genocides and ecocides, some of which continue minimally altered, others having realised their completion (Chipato & Chandler 2023; Ghosh, 2022; Haraway, 2016; Whyte, 2017). The end of the world is nothing new.

The language of crisis seems to pronounce climate change as an event, happening now, not before, and with action, not after. However, it functions instead as a defused and protracted condition of climate politics and governance over time (Roitman, 2014), persisting in the absence of decisive action. The immediacy of the climate crisis, which is indeed causing destruction across both the developed and developing worlds, and the urgency called for in the Paris Agreement and its subsequent technical and political outputs and agreements, have not led to sufficient action to achieve the nearly impossible goal of limiting global warming to under 1.5° (UNEP, 2023a). The global stocktake dialogues at COP28 found that 'global emissions are not in line with modelled global mitigation pathways … and there is a rapidly narrowing window to raise ambition and implement existing commitments to limit warming to 1.5°C …' (UNFCCC, 2023).

Concurrent with global inaction, more information is being generated by International Governmental Organisations, showing that climate change is one of the definitive risk drivers of this age and a 'threat multiplier' (UN Security Council, 2023; World Economic Forum, 2023). Indeed, its interconnection with other problems and risks means that we are living within multiple crises, or a polycrisis (Henig & Knight, 2023). The polycrisis intensifies the urgency of the present, arising from multiple intersecting cataclysms, each of which presents a threshold between a liveable and an unliveable planet, signifying the end of our world (Henig & Knight, 2023; Whiteside, 2004). The concept of polycrisis has been developed to facilitate engagement with the complexity of multiple interconnecting systems in the arena of climate action. It has now become part of popular discourse and economic planning. Its deployment, however, is not correlated to a sensitive, systemic approach to understanding how different problems, risks, and responses are connected. In international climate negotiations, powerful countries have questioned the very existence of such connectivity and emphasised the primacy of a domestic frame for climate action and just transition planning (again, evident in the submissions and outputs of the JTWP). Narration of the disordered enmeshment of crises is delivered to overwhelmed and undirected people.

This frame is wielded to peddle the solution to world-ending, which is world-maintenance,[10] the preservation of rules and structures that determine the transition as 'orderly'. The Global North's commitment to a false dilemma involving world-ending and world maintenance functions effectively as a 'discursive legitimation' (Sareen, 2020), rendering selected social, political and economic systems and structures 'outside' of climate and transition planning. This narrows the view of what matters, who matters and what may legitimately be considered a response or a solution. It also achieves a concentration of benefits predominantly for those who are most powerful or least vulnerable to climate change and the deleterious spillover effects of climate action. Three ways in which the crisis narrative limits the solution space are the deployment of Global North ideas, interest and capacity in the Global South, the scoping out of interconnected and causally important issues, and the favouring of a limited suite of solutions, technological over non-technological solutions (like biodiversity conservation) and of plug-and-play solutions over experimentation.

Limited access to the means of implementation—notably funding, technology and skills—in the Global South is often used as a rationale for utilising Global North funds to resource Global North non-profits and for-profit companies, some of which have G7 state ownership.[11] This is done instead of building up capabilities and resources in the South. Interventions often bypass local institutions and stakeholders (Hermanus & Cirolia, 2024). Scientific outputs and technology patents applicable to the transition are concentrated in the Global North (Tandon, 2021). Additionally, assistance from Global North countries frequently comes with a compulsory requirement for the inclusion or leadership of Global North universities or companies to be involved and receive a share (sometimes a staggering majority share) of funding. The marginalisation of actors, their knowledge and interests is also replicated at other scales (within countries and across international value chains), excluding, for example, racialised, Indigenous, traditional and poor groups from decision-making, knowledge-sharing and action (Givens et al., 2019; Hickel et al., 2021; Rice, 2007). What can and could happen, even what is now the problem, is thus limited by those empowered by systems built for them by them. G7 countries are advancing their own interests, while Global South actors lack the capacity and capabilities to do the same. Relatedly, several Global North institutions allocate resources to tracking risks associated with 'resource nationalism', seemingly assuming that self-interested developing countries should not do anything to interrupt the unencumbered plundering of sovereign Global South states' natural resources (e.g., minerals and land) (Caramento et al., 2023; Hickel et al., 2021).

Regarding the scoping out of issues, because climate action is most often framed by a 'net zero' target, decarbonisation is prioritised in a way that limits interventions to the energy sector (neglecting the rest of the economy) and disconnects and deprioritises adaptation and resilience (UNEP, 2023b). There was an open dispute at COP29 between the G77 and China, as well as their sub-groups, on one side, and the G7 countries on the other, regarding the New Quantified Collective Goal (NCQG), Response Measures, Work Programme on Just Transition Pathways, and the Global Goal on Adaptation. Central to this contestation was the scope of both the crisis and the transition (which systems are vulnerable, and which need to be transformed). G7 countries summarily dismissed calls[12] for structural or systemic interventions to adjust the global political and economic systems that produce and still perpetuate multiple inequalities within and between countries as they reproduce widespread immiseration, and reinforce (self)destructive human–world relationships (Guernsey, 2022; Joo, 2020). Developing countries are encouraged to accelerate their decarbonisation to access development finance that is wholly inadequate, given the complexity of broader sustainable development needs and with an overreliance on debt instruments in the context of already unsustainable debt (Bridgetown Initiative, 2023; G77 and China, 2023). Bolivia, at COP29, described the offer of assistance to developing countries as an 'Intrusive and prescriptive approach to mitigation with almost no finance'. At the same time, global systems, such as tax, trade and debt, which have been the subject of negotiated reform for years, remain resistant to change.

In terms of the kinds of interventions most readily financed and promoted as a response to the climate crisis, green high-tech solutions are promoted in a way that diverts attention from the fundamental reduction and redistribution of global consumption or global politics and governance (Gupta et al., 2024; Rice, 2007; Sareen, 2020; Sareen & Haarstad, 2018). Finance for technology solutions, particularly in the Global South, is also predictably directed towards those that are bankable with high and predictable investment returns. Less attractive investments include network infrastructure, social security and adaptation solutions (Bridgetown Initiative, 2023; Croset, 2024; UNEP, 2023b). The promotion of technologies such as green hydrogen is often undertaken in the Global South, primarily for export, with little consideration for the social and ecological costs of production (including displacement and land use change) as well as local economic value capture (Kalt et al., 2023). Without decisive intervention, emerging green value chains are likely to relegate, as a default, developing countries to be 'suppliers of unprocessed materials with low-value added and strategic minerals to drive development elsewhere' (G77 and China, 2023). Where stakeholders wish to experiment, particularly in the Global South, with new technologies, business models and alternative ownership structures, funding is often unavailable and cannot be raised domestically in countries of the Global South. Funding applications favour endeavours that align with 'best practice' (Bulkeley and Betsill, 2013; Hoppe et al., 2015) within budget cycles, offering predictable outcomes and clear pathways to scale and generate profit (Bulkeley and Betsill, 2013; Hoppe et al., 2015). This in itself forecloses possibilities even within the limited field of technological solutions.

## 3.4 | A transition without justice

Despite the banality of the solutions on offer, the climate discourse that offers an alternative to the apocalypse is a techno-utopian imaginary in which technology is imbued with anthropomorphic or even transcendent qualities, such as being 'democratic' (Becker et al., 2019; Szulecki, 2018). The constructed dichotomy between crisis on the one hand and an orderly technology-driven transition on the other, insofar as it successfully limits the capacity or space for different ideas and actions, allows for some technological and economic change, of course. However, the scope of change tolerated in this strategically circumscribed climate transition is narrowed to resist any more radical transformation in the direction of greater equality (Feola et al., 2021; Gupta et al., 2024; Moore et al., 2023; Olsson et al., 2014). Climate action, as a form of world maintenance, seeks to maintain a world that does not belong to everyone (Mitchell & Chaudhury, 2020). Imagining a just transition within this project of world maintenance can, at best, propose a version of justice as the limitation of certain kinds of disruption and resulting harms.

Juxtaposed with more of the same, however, is the hope for justice in the transition articulated by many Global South states and other actors, hinged precisely on the disruption of an excruciating present and projected future in which poverty, inequality and ecological destruction are sustained. In the context of pervasive suffering and immiseration that underpin the need for global Sustainable Development Goals[13] and climate risks (Davidson & da Silva, 2022), justice is a potential that is maintained by the possibility of change. System maintenance as a goal of climate crisis management and the transition is fundamentally incompatible with the pursuit of justice. Drawing on Derrida (1992) again, one might posit that justice is a possibility sustained by the future against which international climate governance works. That is a future in which social-economic-ecological relations remain ever-open to reimagination and reconfiguration.

A framework that limits legitimate climate action to that which is immanent in global systems as they are now inhibits those calls for justice, acknowledged in the Paris Agreement as having 'importance for some' but in no way meaningfully and certainly not concretely addressed by others (United Nations, 2018).

### 3.5 | Conclusion: reclaiming the future-to-come

All of the points above prompt the question of how to break free of this looping present. Because presentism produces and is reproduced by institutional myopia, it is necessary to begin by seeing more, seeing more of the past, more of the present. A claim must be forcefully asserted, to revision of the breadth, heterogeneity and contingency of the past, present, particularly by those most at risk and least represented in legitimated, incumbent climate discourses (Amoureux & Reddy, 2021; Yusoff, 2019). Across the Global South and all colonised lands and peoples, we also need to attend to the very idea of an apocalypse, of world-ending rupture between us and a future without us. Collectively and individually, in specific places, a revised past-present climate narrative makes visible, among other things, the people who have survived the ends of many worlds, of human and human-earth relationships that sustained us, that were broken, and the brokenness of which we have nonetheless survived (Ghosh, 2022; Joo, 2020; Mitchell & Chaudhury, 2020; Whyte, 2017). We know that such ruptures, although devastating, are never complete, and that apocalyptic thresholds change the conditions for life, but until now, have not obliterated it entirely. There must be an insistence on the right to re-member, to introduce this into how we understand who we are, where we have come from and where we are going, despite and because of the rupture engendered by the crisis, as event, and as a condition of a climate-changed world.

A future-to-come (Derrida, 1994) beckons while obscuring itself behind everything we think we know about it, waiting to surprise us with something different from what has been designed. A more radical global climate politics from the Global South does not need to engage with the climate anxiety endemic in the Global North. A climate politics oriented towards the future-to-come requires the distributed re-membering of multiple contingent experiences and relations between human and non-human subjects. This is climate politics, reenchanted, humbled, reinvigorated. It welcomes more people into the folds of its indeterminacy, to participate in cultivating speculative imagination of the future.

Knowledge-making and practices responding to climate change and climate action have to include more space for new fictions and experimentation in the service of political-economic transformation. It may not seem like there is time for trials and errors. However, when implemented alongside established good practices for things we know how to do, novelty may emerge that could disrupt the epistemological, political and operational flattening imposed on climate crisis management and its imagined 'pharmakon' (Derrida, 1991). These experiments must find ways of deliberately attending to the excess, the mess, the failures, contradictions and irretrievable losses that arise in and across particular places, especially those wilfully ignored peculiarities that can overwhelm, undermine and (hopefully) reconstitute powerful frameworks, metaphors and end-state imaginaries, to reimagine the end of this world and the beginning of another.

## 4 | CLIMATE CHANGE AS A PLANETARY CRISIS OF LOVE

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### 4.1 | Global and planetary politics

This intervention is immature and utopian! Leela Gandhi (2005) explains that radical utopian politics opens up space for new ideas and voices that a regressive, deadlocked politics might judge as immature. Regressive politics focuses on 'the Other' seeking hospitality and love and ignores acknowledging the hospitality, love and friendship offered by these 'Others'. Regressive politics seeks to be othering and dominating rather than inclusive and collaborative (Kumar, 2023a, 2023b). A dominant mode of global politics of climate change is that between nation-states and involves bartering responsibilities for historical greenhouse gas emissions and future harm reductions. This includes individual and collective calculations of climate vulnerability and resilience. These calculations and negotiations often occur from entrenched positions with dominant states and groupings, like the United States and European Union, working to defend their continued hegemony. At the same time, nation-state-based politics raises security

concerns where the state presents climate change, its impacts and those impacted as reasons for closing down rather than opening up. Social justice within and beyond climate change politics and policy has taken a beating. From the Kyoto Protocol to post-Paris discussions, 'the moral tenor of global climate governance has moved away from the principle of common but differentiated responsibility toward a perverse moral concept … "common but shifted responsibility"' (Okereke & Coventry, 2016, p. 847). As a result, such pragmatic climate politics can be seen as deadlocked and regressive. It leads to a fracturing of solidarities, friendships and love among people across states, while also failing to make much concrete and radical changes to address climate change. While climate change is presented as a common 'planetary' problem, a pragmatic but deadlocked politics of nation-states fails to make it a common cause.

Building on these, this intervention first sketches a problem for global climate change politics where claims of wellbeing are made on behalf of an imaginary planetary human, but politics is carried out from particular nation-state embeddings. Next, it discusses how academic work in general and on particular aspects of climate change becomes a vehicle to maintain and extend Western hegemony, rather than global solidarity, which is central to the climate change problem. Finally, it argues for rethinking the idea of climate vulnerability mediated through global solidarity, love and abolitionist justice.

## 4.2 | Global politics for planetary problems

Climate change raises a baffling question of scale: on the one hand, our understanding of climate change itself is based on a planetary history (a geological history), but on the other hand, our understanding of how to tackle climate change is based on a human history, its calculations and risks (Chakrabarty, 2014). A planetary phenomenon like climate change also forces us to think of justice premised on intra-human difference while considering a universal, unified human agency. A normative, regressive politics fails to address this.

In the context of global climate politics, historian and postcolonial scholar Dipesh Chakrabarty (2017) teases out a crucial difference between the global and the planetary. The globe in the global refers to globalisation, that is, 'a web of human connections that humans themselves have knowingly created in … pursuit of power and profit' (Chakrabarty, 2017, p. 167). On the other hand, the planet of planetary recalls the Earth's behaviour as a planet. This planetary system does not conform to the political boundaries of nation-states. This 'borderless' behaviour of the planet's climatic system prompts thinking about a 'borderless' behaviour of human relations embodied by the idea of a planetary solidarity. Thinking through this kind of planetary system and planetary solidarity is the exact opposite of the risk of a planetary governance system emerging through a capitalist planetary sovereign like the Climate Leviathan discussed by Wainwright and Mann (2020). If Climate Leviathan represents a planetary system that doubles down on nation-state boundaries for humans, the planetary system imagined here abolishes those boundaries. As opposed to a politics from above but claiming to be from nowhere—the so-called 'god trick'[14] (Haraway, 1988)—this politics of planetary solidarity needs to be imagined and put into motion from below. For example, Last (2017, p. 148) reports that various artistic expressions (geopoetics) around the closely linked idea of the Anthropocene call for a new '"geopolitics", characterised by notions of responsibility and care for the planet and planetary society', along with 'new forms of identity and participation'. Yet, while climate change raises the issue of a 'planetary climate system as a whole', there is no tangible political system to tackle this 'whole' (Chakrabarty, 2017, p. 167). Humans, Chakrabarty (2017, p. 168) outlines, approach this planetary phenomenon from 'within the politics of the institutions that were created to deal with the "globe" of "globalisation"'.

This distinction between the global and the planetary, and the fact that we lack a politics of 'the planetary', is crucial because in the context of climate change, 'the planetary' is often invoked through a politics derived from, and embedded in, the global. That is, a planetary language is deployed for a politics of in/justice derived from the global of globalisation and capitalism. Many climate change (natural and social) scientists present a planetary analysis for a 'planetary human-subject that simply does not exist or cannot be called into being' (Chakrabarty, 2017, p. 167). Climate scientists invoke a universal urgency premised on a planetary climate emergency, but the politics of this planetary emergency is progressed through the political instruments of globalisation. The instruments invoked in the service of this 'planetary emergency' remain the same as globalisation—bordering, war metaphors, eco-anxiety, resource scarcity, Malthusian analysis and techno-utopianism, among others. These 'weapons forged in the workshop of capitalist globalization …carry with them logics of inequality and domination that have marked the history of globalization' (Chakrabarty, 2017, p. 169). Without a planetary politics of solidarity, justice is sacrificed at the altar of a planetary emergency.

### 4.3 | Western hegemony and security in the name of a planetary human?

I want to raise two points from our research and praxis at Western institutions that reveal a lack of planetary politics of solidarity, even though they are carried out in the name of the planet and a planetary human. I write this from my positionality as a scientist at a Western institution and a citizen of the Global South, but use 'We' or 'Our' to address the community of Western social scientists that I inhabit. First, we carry out research in the name of the planet but in the service of the nation-state and its geopolitics. Planetary crisis, planetary boundaries, planetary emergency; 'the planetary' is a commonly used phrase by climate change scientists. Yet the structures within which we do our research are: (a) designed to extend Western privilege and hegemony and (b) make us more responsible to a range of stakeholders that fund our work. These stakeholders are nation-state funded research councils, private philanthropies and, in many cases, private companies with interests in accumulation and extraction. Research motivated to cater to such stakeholders works to extend Western privilege and secure resources and spaces in order to maintain high consumption notions of a good life in a progressively insecure climate changed world. These are not just antithetical to notions of planetary solidarity but actively work to thwart such solidarity.

The use of research funding to progress climate scepticism is a well-established phenomenon. However, at a stage where major power centres denying climate change are fewer,[15] and a post-political consensus on climate change has emerged (Swyngedouw, 2010), a bigger question is how research is used to serve the entrenched interests of nation-states and to diffuse any planetary politics premised on solidarities among peoples across nation-states. Instruments like the UK's Research Excellence Framework (REF) and impact agendas that push the 'societal relevance' of research are often translated into relevance/benefits for those funding such research—the state and 'UK society'. Such an inward-looking approach contradicts much of the scholarship produced by these institutions, which argues the planetary nature of the climate challenge. The REF builds on an idea that 'world-leading' and 'internationally excellent' research is more desirable than 'local political, community or regional context and debates', thus promoting a 'notion that more international is better than provincial' (Jazeel, 2019, p. 205). Yet, that which is local to 'Europe' is invariably projected as 'global' and 'the province' exists in other places (Chakrabarty, 2008). This is evident in the overwhelming number of articles from Global North scholars in leading Geography journals that pride themselves on being international/global journals (Jazeel, 2019, p. 202). Similarly, the impact agenda motivates work 'resulting in measurable "impact" in relation to global challenges, and with the emphasis on "value for money" for the UK taxpayer' (Noxolo, 2017, p. 343). 'Value for money', a key assessment criterion for UK research council funding, creates an incentive for reducing expenses while UK-based institutions look to increase research incomes. More recently, globally oriented agendas like the Sustainable Development Goals (with their inherent critiques and contradictions (Kumar et al., 2024)) are being co-opted by UK institutions for branding and revenue generation, which perpetuates unjust policies, practices and approaches (Hammett & Mdee, 2025). Knowledge, then, is drawn from around the world, in the name of serving some imaginary planetary community, yet, in reality, serves a narrow group of relatively privileged, nation-state-based stakeholders. In other words, to maintain hegemony, as Oswin (2020, p. 13) explains, '"Others" are set artificially apart, rendered isolated objects of study rather than knowledge co-producers, at best case material rather than scholarly interlocutors'. In this context, 'world-leading' climate change research demands time and energy from those Others affected by climate change, but preferably for research that helps sell them new products, structures and debt packages. Riffing off Oswin (2020), I would say the hegemons are willing to listen to the subalterns but only if they speak of being willing data points, customers and subjects in a new climate change marketplace, rather than being siblings in solidarity in a planetary community.

Second, there is growing mainstream research work on climate change and security (Barnett, 2019; Dalby, 2013; Farbotko, 2018). I say 'mainstream' because organisations like the US army and US intelligence agencies (Ghosh, 2022; Wainwright & Mann, 2020)[16] have researched and prepared for climate change for some time. In the last decade, progressively more research organisations and universities have become involved in conducting climate change-related national security research. This is not related to a justice-oriented planetary security or the security of a planetary human, but rather the security of the nation-state and '*its* humans'. These include securing borders at 'home' but also securing, for Western homes, resources threatened by climate change in homes of the so-called 'Others'. Climate change and migration is a growing discourse, increasingly being treated through the lens of security and threat rather than solidarity (Bettini et al., 2017; Boas et al., 2019). At the same time, energy transitions-related resources like lithium and cobalt are being secured in 'other' places to maintain the good life most citizens in the Global North are used to (Hernandez & Newell, 2022). Wainwright and Mann (2020, p. 32), in their thesis on Climate Leviathan, argue that a planetary security regime might emerge in the future as a means to 'salvage US hegemony'. US hegemony indirectly translates into Western hegemony. Efforts by the UN to institute climate change as a global peace and security issue

and bring it within the Security Council's purview provide evidence for this. Building on the US security establishment discourses, the recognition of climate change as a 'threat multiplier' by the UN Security Council further reinforces this.[17] The complicity of our academic work in continuing colonisation and imperialism by participating in security-centred climate change work should give us a cause for 'introspective postcolonial geographical imagination going forward' (Jazeel, 2019, p. 47).

A key Western liberal claim is that the world is now a hyper-connected and bound-together place. Yet, we stare at a massively divided globalised world, further being fractured by (inaction on) climate change. Climate change mitigation and adaptation overlap with the simultaneous intensification of populism, nationalism, securitisation and bordering. The instruments invoked in the service of this planetary emergency of climate change are the instruments of globalisation. This creates a crisis of imagination where other ways of moving forward become difficult to imagine. As Amitav Ghosh (2022, p. 120) posits, 'the end of the absolute political dominance of the West' is harder to imagine than the end of the world.

## 4.4 | Towards love: More vulnerability in a climate-changed world

In an attempt to think through an emancipatory planetary polities of solidarity, a question I have begun asking in my work is: how might we build a planetary community that operates without states, one that is open to love, friendship, and hospitality, in a climate-changed world? If the Earth's atmosphere is an open, shared space where flows of greenhouse gases, and the warming they cause, do not respect political boundaries, then could the Earth's surface be an open space where flows of humans, monies and spaces do not encounter political boundaries? While flows of carbon are unabated by political boundaries, the impacts of warming caused are differential, and a planetary climate change response needs to be premised on sharing resources and spaces. This is hindered by political boundaries maintained by surveillance and carceral infrastructures. Histories of discrimination, violence and carceral infrastructure embedded within the idea of 'security' and hegemony, which most often target Black, Brown, Indigenous and Dalit bodies, are starkly at odds with the calls for social justice embedded in the questions above and the rhetoric of global climate justice.

Therefore, rather than security, I call for vulnerability in a climate-changed world. This vulnerability depends on a politics of love for the Other, premised on making the self vulnerable to 'others' (Gandhi, 2005, p. 188). Such politics rejects all manners of 'security'. In the normative discourse on climate change, vulnerability is understood as a negative trait, one that should be avoided and countered with the positive forces of security, resilience and adaptation. The Intergovernmental Panel on Climate Change (IPCC) sees vulnerability as the susceptibility to negative effects and a lack of coping and adapting capacities (Barnett, 2019). The starting assumption here is that those vulnerable are in an insecure position and they need to be more secure. Since climate change is a global phenomenon, everyone is vulnerable to some extent (Singh et al., 2022). Yet, a disproportionate and universally homogenous focus on vulnerability as a negative trait distracts from the fact that some are in a position of relative security and power. A planetary politics of climate change premised on love, friendship, hospitality and solidarity can emerge if those in positions of power and security shed some of their (in)securities and make themselves vulnerable, while others become less vulnerable.

Vulnerability is intimately related to love and hospitality. Hindi poet Jai Shankar Prasad's in his poem Atithi (the guest), conflates love and hospitality (Rubin & Prasad, 1978). Prasad's lover-guest comes unannounced, yet he is delighted by their presence (Kumar, 2023a, 2023b). The lover-guest stays inside the host, causing him pain, yet the host accepts, even rejoices, knowing that 'love is capable of wounding the heart' Pachori (1979, p. 258). In other words, knowing full well that it will hurt, she makes herself vulnerable to the possibility of love of/from a guest. This conflation of lover and guest, and the acceptance of vulnerability, gives the host a higher position. Chakrabarty (2018, p. 101), drawing on Derrida, explains that 'to love' rather than 'to be loved' implies a higher ethical position, 'one that does not seek utility and is devoid of ego' (Kumar, 2023a, 2023b). In Gandhi (2005, p. 31) words, this ethical agency emerges from a 'capacity to leave herself open …to the risk of radical insufficiency'. Love here is a central ethical tenet that promotes shedding of (in) securities and making the self-vulnerable. It is in times of crisis, like a looming climate changed world, that 'a profound affirmation of relationality and collectivity' becomes apparent, leading to affirmations of opening rather than closure (Gandhi, 2005, p. 32).

This crucial move from a dominant idea of vulnerability that promotes securitisation and hegemony to vulnerability that embraces openness and solidarity helps take the step from a regressive politics of closure to a utopian politics of openness.[18] How might scholars who work on climate change or scholars who are concerned about climate change engage in this pursuit of vulnerability? Such vulnerability can take three forms.

First, dominant modes of living with the security of an idea of a good life, motivated by particular imaginaries of Western modernity, need challenging. Central to these modes of living are high levels of resource consumption and greenhouse gas emissions that are promoted around the world. A re-imagining of what that good life is about is urgent. A life of limited resources that perhaps is also of less comfort. Engaging with these new imaginations requires those in relatively privileged positions to embrace vulnerability, to changes in life as we know it. This creates a situation of uncertainty, fear and anxiety, already evident in the emergence of the idea of climate anxiety (Sultana, 2022a, 2022b). Are those in more privileged positions willing to make themselves vulnerable to new imaginations of a good life? Much of the violence associated with the securitisation of resources and borders that nation-states carry out on behalf of their citizens is premised on an assurance of maintaining long-promised ideas of a good life. Vulnerability can emerge as a resistance to this violence of security and solidarity towards 'others' targeted by that violence.

Second, for Geography, Brice (2023, p. 2) has called for a 'capacity to embrace a degree of vulnerability, especially, but not exclusively, from those among us in positions of (always-) relative power and stability'. Crucially, as Noxolo (2024) reminds of Black academic careers, there are those on the margins of the Western academy who already stand in relatively vulnerable positions. This is a call to reflect on how, by whom and to what outcomes our discipline is structured. Embracing vulnerability in a climate-changed world requires scholars to push back on mechanisms, matrices and agendas that solely promote Western and nation-state based security and hegemony. Western universities and funding agencies agree to share funding with partners in the Global South. Yet, access to funds is disproportionate, and as mentioned earlier, funding mechanisms are designed to support Western hegemony and further Western security (Butcher et al., 2025). How do we push back against these ideas, even as institutions constantly remind us that the progression of our individual life circumstances depends on embracing these ideas? How would a changed climate of solidarity emerge in this scenario? Climate change gives us an opportunity to re-imagine everything. Might we be able to re-imagine how these relationships are conceived, structured and deployed?

Third, a planetary politics of justice is not a politics of the state and its security apparatus. It is a politics without the state, one that is not a politics of research relevance to what funding calls describe as 'particular societies', of more security, and of concern for 'our' people; it is, following Ruth Wilson Gilmore (2017), a politics of abolition. It is a politics of refusing the 'centuries of white supremacist heteropatriarchal grounding' of our disciplines, institutions and structures of intellectual labour to renew a 'critical geographical imagination' that is premised on shedding our securities, building solidarities and hospitalities (Oswin, 2020, p. 9). It is about refusing to support and engage with narrowly defined security agendas in a climate-changed world. Securitisation, as Gilmore (2023b, pp. 458–59) explains in the context of policing, is about the production of an imaginary enemy, 'who must always be fought, but who can never be conquered'.

## 4.5 | Conclusions: a planetary politics of justice

A planetary politics of justice premised on solidarity might emerge if we ask how 'all kinds of distinctions and categorisations that divide us – innocent/guilty; documented/not; Black, white, Brown; citizen/not-citizen—would have to yield in favour of' rights (Gilmore, 2023b, p. 468). Shedding these differences might help develop an emancipatory politics that replicates the disregard for political boundaries that flows of greenhouse gases, and the warming they cause, embody; a politics suitable for a climate-changed world. Gilmore (2023a, p. 115) posits, 'In any society, those who dominate produce *normative* primary definitions of human worth … those who are dominated produce counterdefinitions which, except in extraordinary moments of crisis, are structurally secondary to primary definitions'. If climate change is indeed a planetary crisis, then it presents a moment for conterdefinitions towards a more emancipatory politics to emerge and break the crisis of imagination. Building on these, it is critical to centre abolitionist climate justice approaches (Ranganathan & Bratman, 2019; Sze, 2021).

Climate change calls for a new form of responsibility premised on shedding our (in)securities and making ourselves vulnerable. For Noxolo et al. (2012, p. 424), this involves 'creating an affective affiliation through a recognition of relationships that are constitutive of who we are, *and at the same time* involve degrees of complicity in suffering and inequality'. Therefore, rather than being forced to urgently unite 'by putting (our) difference(s) aside' (Kumar, 2022), this crisis of climate change and of love, as Chakrabarty (2016, p. 113) reminds, invites us to creatively think as 'a collective…one in which we all participate, whatever our difference[s]'. This is a collective of 'solidarity without a universal We', where 'many we's' join together in 'solidarity against ongoing colonialism and allow cooperation with the incommensurabilities of different worlds, values, and obligations' (Liboiron, 2021, pp. 24–25).

## 5 | CLIMATE STORY-TELLING FOR THE PLURIVERSE

**Lalitha Kamath**

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Over the last few months, I have been preoccupied with The Mystery of the Icebox: my research team's effort to understand why fisher women of Mumbai received relief from the Government in the form of funds for purchasing ice-boxes for storing fish when the Maha and Kyar cyclones struck the west coast of India in 2019. It reads less like a detective novel and more a satirical commentary on the state of climate crisis governance, however, because we have not been able to find anybody in government who seems to know precisely why iceboxes were given or how they serve to offset the damages from the cyclone. The fisher women we speak to are quick to clarify that iceboxes are not what they need but those that received it accepted it as 'better than nothing' from a government that they have hitherto received little from. With the global reframing of cities from being a sustainability problem to a solution, national governments, consultants and global networks (Khosla & Bhardwaj, 2019; Leitner et al., 2018; Weinstein et al., 2019) have coalesced to prepare a slew of 'expert' (climate, heat, biodiversity or disaster) plans and policies to showcase how cities can lead in sustainability solutions. But such policies typically do not support the most vulnerable communities, as the instance of fisher women reveals, their interventions even causing further harms. New climate crisis management/planning efforts are clearly overlaid on a much longer history of environmentally unjust and racialized interventions that critical geographers have exposed (Checker, 2011; Doshi, 2019; Baviskar, 2020). How might we depart from such unjust models to reimagine better in an already climate changed world?

A recent plenary of the RGS-IBG, 2023 provides reality of inspiration. Singh (Section 2) powerfully enjoins us not just to tell different stories of climate change problems and the possible solutions but to tell these stories differently, so as to move beyond unjust crisis thinking and inspire transformative change. An epistemology of plurality through story telling is powerful because it departs from the hegemonic modes of brown and green colonialities, what Kimari distinguishes as older fossil-fuel-driven modes of racial capitalism Vs newer 'green' versions of racial capitalism, towards more just alternatives. In the tradition of Escobar's (2020, p. 9) pluriverse—'a world where many worlds fit' such storytelling highlights multiple ways of knowing and sensing climate change that actively decentres 'expert' knowledge and makes climate policies more attuned to the needs of other, marginalised dwellers (Sandercock, 2010). This calls for social/climate scientists to expand their political and creative capacities to tell climate stories in ways that draw from 'rebellious methodologies' and undo discipline (McKittrick, 2020).

I seek to contribute to this story turn and enlarge our imaginations circumscribed by crisis thinking by telling a story from a community I know well—one situated at the periphery of the hegemonic world that becomes 'central to the project of reimagining the world(s)' (Escobar et al., 2022, p. 115) because it challenges racism, imperialism and unequal hierarchies of power.

Fishers on Mumbai's industrialised east coast are an indigenous community on the frontlines of the anthropogenic climate crisis. Squeezed between a landward moving sea and sea-focused urban development projects, fishers negotiate with the ongoing and long-dying of their lives and livelihoods as they know it. Might telling their struggles against the ending of their world create stories for the pluriverse that upend the crisis of imagination we face by opening up a new way and politics of reimagining?

Fishers in this moment inhabit two entangled processes. The first is estrangement from the sea and sea-based livelihoods—where most fishers, especially the youth, aspire to leave a livelihood and knowledge system that they have built in relation to their fluid terrain over many years. Some fishermen tell the story of estrangement through their experiences of infrastructure projects that capture the coast and seas, and the stomach-sickening harms evoked by catches of rotting garbage. Other women fishers wordlessly show their cut and scarred hands and feet from foraging in the polluted marsh grounds for crabs or resulting from the labour of cleaning plastic waste from the fish caught. These embodied political actions foreground estrangement but also offer up what Rancière (2010) calls 'inadmissible' evidence, a new evidence base that ruptures or creates dissensus in the consensus of contemporary climate crisis thinking. That provides a possible breach in the logic of 'normality' of our presently ecocidal and genocidal world (McKittrick, 2020).

Exploring a 'fisher sense of place' reveals contradictory desires; fisher estrangement is not passively accepted but inscribed by struggle and a simultaneous process of reclaiming homes and futures. Reclaiming is founded on a more expansive sense of home based on a long history of diverse tenurial relations and deep attachment to the environment. Fishers tell stories of their remembered village or home using the language of their commons encompassing land, sea and marsh. Commons have been produced collectively over many years of doing fishing activities and bear the imprint of other social and sacred relations. While not devoid of conflict or exclusion, these are spaces largely

governed by use values and community norms, not nation states or city defined urban planning property codes, where no one person has exclusive rights, and enduring livelihood, social and sacred relations blur the boundaries between workplaces and residence, land and water, human and beyond human. Fisher imaginations of home, not fully erased, and their acts of reclaiming hint at a politics of the planetary, a wider sense of home, affect and solidarity that while embedded within nation states and the edifice of law and property also exceed them, drawing from Kumar (Section 4).

It is imperative we learn from these little-known experiments in political futuring precisely because they arise from the entangled grounds of livelihood, history, politics, environment and climate, the fleshy stuff of our everyday lives. But to do so, we will similarly need to be inspired by the messiness—indeed the muddiness—of being caught between estrangement and reclaiming, hope and hopelessness. While we fear an unknown or strange future, the current world is an oppressive and exclusive one for the majority of us and moving away from it is a future that also offers hope.

## 6 | ON THE 'GREEN' AND 'BROWN' COLONIALISMS OF FALSE CLIMATE CHANGE SOLUTIONS

**Wangui Kimari**

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In a recent meeting with a leading African energy consulting firm, one of its staff conveyed the following in response to a question about the climate decisions being taken at a state level on the continent: 'we can't [green] transition like Greta Thunberg', he said, 'Africa needs "brown" not "green" for our development'. These thoughts were interesting in the wake of the first Africa Climate Summit, held in September 2023, whose outcome document, the Nairobi Declaration, speaks of the reality that 'Africa is not historically responsible for global warming, but bears the brunt of its effects, impacting lives, livelihoods, and economies' Nairobi Declaration 2023.

Here, certainly, this interlocutor was speaking of the need for African countries to chart individual paths to a 'just' and 'green transition' not dictated by blueprints emerging from the West—Greta Thunberg's or otherwise. Yet, even with these wide recognitions, locally and globally, that Africa contributes to <4% of global greenhouse gas emissions, the articulations of this—from the worst drought in 40 years in the Horn of Africa, to the inability of farmers to predict when to plant, to floods that submerge households, schools and futures—are still not considered a 'climate justice emergency' (Kumar, 2023a, 2023b). Instead, more of the same is proffered by those in power, albeit through a variety of paradoxical manoeuvres. On the one hand, as our earlier interlocutor declares, there are calls for us to stay 'brown'—to maintain the fossil-fuel(ed) racial capitalism metabolisms that have got us here in the first place, since this is needed for our 'development' to be 'globally competitive'. However, at the same time, recent events like the Africa Climate Summit have become the staging ground for a discourse on how the continent can be the world's 'pioneer' in the use of renewable energy, while it is simultaneously 'leapfrogging traditional industrial development and fostering green production and supply chains on a global scale'. Though, at first glance, the pursuit of 'brown' and 'climate-positive investments that catalyse a growth trajectory' may appear to be disparate goals, they come together in their endorsement of the inevitability of racial capitalism. The further extractions both launched and portended by 'brown' or the Africa Climate Summit's version of 'green' (carbon credit displacements, lithium mining, 'nature-based solutions,' etc.) are what the African People's Statement on COP 26 termed 'false solutions', since they reproduce a 'colonial, patriarchal and neoliberal model of accumulation driven by a logic of domination, exploitation and destruction of human beings and nature'.

On this continuation of colonialism through 'green', Hamza Hamouchene (2022) writes that 'most of the economies of the peripheries/the Global South are inserted in a subordinate position within a profoundly unjust global division of labour: on one hand as providers of cheap natural resources and a reservoir of cheap labour and as a market for industrialised economies on the other'. This political and economic subordination creates the conditions of possibility for a control that is rearticulated in the 'postcolonial' period through tools such as debt, international law and institutions. When it comes to the so-called 'green transition,' we see the manifestations of this coloniality through what activists from across the region decry as a 'deeply compromised agenda' and 'focus on rich nations interests', all of which maintains the continual exploitation of their territories, for lithium or carbon markets as but a few instances, towards enabling technologies that make Europe/US 'environmentally friendly'. While many commentators assert the novelty of these pursuits, there was no imagination required on the West's part to continue to outsource the costs of a dehumanising consumption to the South. Certainly, as Chandni Singh writes earlier in this collection, no normative assumptions have been questioned by mainstream globally sanctioned climate change solutions, no roots have been upturned.

Therefore, these circumstances evidence that, as in periods of the 'brown', the proposed green does not seek to subvert hierarchical and racialized power relations. In contrast, as Hamouchene argues, 'countries of the Global South are still systematically exploited by a colonial, imperialist economy built around the pillage of their resources and massive transfer of wealth from South to North'. Consequently, the majority of African citizens, who are not represented in the boardroom discussions (from Baku to Glasgow) that now dictate our transition trajectories, have to live with the 'negative externalities' (an amorphous economic term given to account for what, simply, is often disaster in vulnerable lives) generated from the persistence of a 'global petroleumscape' (Hein, 2021) and, now, the African Climate Summit's version (itself, emerging from global imperial entanglements) of 'green'.

Neither of these positions change the geographies or geometries of power, nor stop the 'colonial inhabitations' (Ferdinand, 2021) that, through many crime scenes, territorialise this hegemony. Rather, the outcomes of these formal 'green' proposals often cannot be differentiated from the brown iterations of capitalism; at the heart of it, they make similar exigencies and are promoting both an external and internal expansionism. To understand how this similarity of green and brown is lived in African bodies, we can ask the Ogiek in Kenya who are being evicted from their forest homes so that it can be enrolled in the machinations of carbon credit markets, or listen to the Turkana whose lands were taken illegally to enable the construction of Africa's largest wind farm Group For Indigenous Affairs (IWGIA), (2024); Marshall, 2023. For these groups and others, their evictions speak of the 'out of placeness' of blackness and brownness when up against the predatory metabolisms of global capital. These subjects are always secondary, that is, if they are allowed to live at all, and their homes remain the sites for new frontiers of commodification and extractivist exploration, while their bodies remain its fuel.

Against this climate catastrophe, how can we genuinely chart something anew, lives otherwise, that disarm, at all levels, the proceedings of coloniality? Put differently, what are we going to do for our children, and their children? In a recent session at the 2023 Royal Geographical Society Annual Conference, titled 'Climate Justice Emergencies and the Crisis of Imaginations', Lalitha Kamath spoke of the need to listen to the fisherfolk in India whose lives have changed drastically amidst the fast-paced destabilisation of our climate. Her call is that we listen to how they experience and navigate the possibility of no futures, and the beauty that emerges in their coexistence in the face of the progressive annihilation of their lives. In this same convening, both Ankit Kumar and Lauren Hermanus implored us to look beyond the distractions—for example, the multiple COPs that entrench rather than diminish suffering, and the fallacious hopes of the 'techno-deterministic utopias' proposed by an assemblage of 'green' actors. Instead, what they propose is that we 'reimagine' and with 'love'.

Even with no guarantee, these acts to embrace and reimagine other(s and) futures remain imperative. If not, our proposed green solutions—models from elite Northern imaginaries—will only mimic the 'brown' processes that got us here; here to this place where homes are hotter than before, and their residents face the coinciding multiple perils of 'heatwaves, droughts, wildfires, dried soils, cyclones, storms, locust plagues, flooding [and] sea level rise'. Love, reimagining and vulnerability, as Kumar expresses in this collection, are important counterpoints to both green and brown colonialisms, whether the call for this comes from Greta Thunberg or the 'African people, women and peasants, social movements, and community-based and civil society organisations' that organised the initial African People's Counter COP in 2021. Since regional states and organisations fail to challenge the structures that saw as arrive at this place, the situation where Africa contributes the least but suffers the most from the climate catastrophe, it is up to fisherfolk, peasants, students and other wretched of the earth to deny and act beyond the false hegemonic solutions of 'brown' and 'green'.

## 7 | TOWARDS A JUSTICE-CENTRED CLIMATE CHANGE RESEARCH AGENDA

**Mark Pelling**

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The contributions presented here describe concern for an inflection point in history—climate change is with us either we leverage climate action for progressive policy or drift into accelerated inequality and concentrated risk. The geographical tradition is at home with such questions; it brings a critical lens to working across local contexts and scales of governance, across human and physical realms and across experience, theory and praxis. The preceding sections demonstrate well the capacity for Geography to do this through raising diverse imaginaries, many otherwise hidden by unequal relations in political and discursive power. How far do these insights take us towards enabling practical and policy work in support of more progressive futures?

Each author explores the ways in which climate change, its impacts and responses force an opening in narrative, vision and values—and their contested nature. Singh emphasises plurality and slow thinking; Hermanus rupture, transition and failed change, and Kumar invokes an emotional landscape and the holding of vulnerability for collective action. These viewpoints also all agree that climate change impacts and demand for responses are growing, sometimes merging, and consistently uneven in their social and spatial distribution. This successfully brings to the fore concerns for equity and inclusion. It also takes analysis away from simple bifurcations of the private and public, through personal imaginations made collective through discourse and collective action given personal meaning by individual experience.

Across the contributions, two visions of accelerated development under climate change emerge. First, it is a response to climate change as a space for progressive transformation—climate action enabling a renaissance in local voice, political accountability and participation informed by science. Second, and arguably the more dominant experience, views climate change as climate colonialism—where the 'emergency' or 'crisis' narrative of climate sweeps aside safeguards and pushes away the time and care needed for informed and inclusive participation in decision-making to intensify existing inequalities. These two narratives are less in opposition than two elements of a continuum to be made: can we work through a critique of climate colonialism to guide strategy for progressive transformations? Signposts can already be seen in the micro-publics of citizens juries, in community-based action planning and social businesses.

The elephant in the room for progressive resilience building is the challenge of coupling technical aims with inclusive processes for just outcomes. Geographers have been at the forefront of making the case for this. Work on transformative adaptation is just one example, seeking an integration of climate adaptation solutions into everyday struggles for justice in development—reducing risk through advances in fairly paid work, land rights, accessible and timely health and social care, decent housing and for the long run of youth, education and community services. This lens pulls attention to root drivers in fiscal policy, representation and accountability in public life and getting the balance right between private sector innovation and responsibility—across all scales. Without climate resilience having such broad and deep foundations, geographers—including the authors here—remind us, work risks becoming depoliticised. Climate change risk and loss become externalised from development choices. This is the dominant, persistent tendency—which Hewitt identified in 1983 as the 'risk archipelago', only to be reformulated some 40 years later by Omand (2023) as development through crisis management.

However, there are signs of a shift in positioning, including at scale. One tangible example is the United Cities and Local Government, an international network of around 200,000 urban authorities. Its global strategy seeks to support local governments committed to addressing inequalities through local transformative strategies, to promote a new social contract based on more integrated care systems, services and public policies (UCLG, 2022).

This movement opens at least three strategic opportunities that one can read across the contributions presented here and that geographical research is already helping to shape. These all push back against the narrow international policy-driven construction of climate change that continues to dominate climate change action and science:

First is a rescaling of the justice lens. The UNFCCC and IPCC are sponsored by nation states; the collective understanding of equity these institutions bring is at the scale of nation states. Not incorrectly (but arguably incompletely) this brings focus on inequality in climate justice between countries, and most importantly between the global majority population world of developing countries and the minority population world of industrialised countries. Hidden by this lens are cross-cutting inequalities more closely aligned with socio-economic class than country. Capital interests driving climate change, biodiversity loss, and social exploitation are found in all countries, as are excluded, marginalised and vulnerable people. Shifting our analytic lens from the countries to the people holding power may help tighten action and move past a clumsy state-based depiction of inequality. Detailing these social relationships can point to trans-local forms of resistance and organisation (McFarlane, 2011).

Second is a continuing effort to put people first. Geography is uniquely placed as a discipline working across and between physical and social sciences to move past starting assumptions that climate change analysis and policy must be framed by exposure to climate change associated risk. This frame brings unchallenged prioritisation on the mitigation of hazard, exposure and physical vulnerability as the way to reduce risk. Human vulnerability is deprioritised. The logic for this approach begins to break down when considering the emergent qualities of climate change associated hazard and the importance of multi-hazard risks on well-being and resilience, and the compounding influence of supply chains and networked infrastructure. The more we know about the interaction of climate change impacts with development, the less we know about which climate change associated harms will emerge and where. This is an argument for a human vulnerability centred approach to understanding risk, its creation and reduction. The IPCC Sixth Assessment Report (Birkmann et al., 2022) made a start at resetting our lens through a global mapping of human vulnerability—for the first

time. One finding was the complexity and context specific qualities of human vulnerability that call for a comprehensive international programme of research.

Third is work to re-time climate change. To balance urgent action now with long-term policy and process challenges (and opportunities) that climate change can bring to development decision-making. With its origins in physical and integrated science modelling, climate change has a strong science and policy narrative oriented towards the future. This can be insightful, but also an excuse to delay action. Observed impacts of climate change, mounting examples of mitigation and adaptation actions, and the beginning of research to evaluate the consequences of these actions on wellbeing and sustainability—so-called Climate Resilient Development (Schipper et al., 2022)—do bring climate change and action more tightly into the present.

Tying these agendas together is methodological work that can coproduce imaginations of climate change and development while enabling local voice for contemporary action. One example is interest in normative future visioning (Pelling et al., 2023). Normative visioning places peoples' desires at the centre of analysis, allowing imagination to escape beyond present-day structural constraints; backcasting asks for specific action steps that need to be taken coming from the future into the present. When integrated within policy processes, these visions and action points can be part of deployment and change in the enabling environment for development (Comelli et al., 2024).

How might geography respond to the inflection point we face? One strength geographers bring is an ability to work across scale and abstraction—to connect critical theory and systemic awareness with specific case experiences, including the emotional realm. It is across such points of connection that competing preferences for action to enable mainstreaming and acceleration or bring disruption and resistance become most clear. This is where the emerging politics of climate change lies. Geography's epistemic diversity can help decision makers navigate such difficult and contested terrain. There is a role here for all geographers but also for the Royal Geographical Society as our collective voice helping to harness the convening power as well as the technical capacity of Geography.

## 8 | CODA: RE-IMAGINING CLIMATE GEOGRAPHIES

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The need to act on and for climate change can feel overwhelming. The urgency of the challenge, the risks wrought on the most vulnerable, the seemingly endless procession of political moments for decisions which fade to nothing and the ongoing momentum of the carbon economy have fuelled protest and anxiety in almost equal measure. Increasingly those who feel their own livelihoods, identities and place in society to be most threatened by any attempt to change course are also giving voice to their concerns. In this febrile context, the ways forward appear too narrow. As Hermanus writes in this collection, we are offered either the 'inevitability of a world-ending apocalypse' or a 'techno-determinist utopia hinged on the belief that technology will enable a continuation of the world as it is'. In the polarising world of climate politics, we are confronted with either optimism or despair, which in turn serves to limit what is possible to imagine as a response. Even where it might seem that there are alternative futures, in the shape of shades of 'brown' and 'green' capitalism for African futures as Kimari writes, these are 'linked by their endorsement of the inevitability of racial capitalism', an extractivist, neoliberal model of capital accumulation which serves to sustain the inevitability of technical rather than socio-political fixes to the problems of climate and development.

At just the moment where poly-crises of climate, nature, development and social justice might be expected to open up the needs and possibilities of action the continued logics of binary thinking seemingly lead to an inevitable discourse that we are either with or against action, provoked into urgent responses or merely complacent, and align with techno-capitalism or are against progress. Yet as all contributors to this collection put forward, it is precisely this binary thinking that we need to move from if we are to make space for the real possibilities of progressive transformations in the face of climate change. As Kamath writes, if we are to shift our thinking on climate change, we need to inhabit not a world of multiple crises but a pluriverse in which multiple and often contradictory modes of being are entangled. She invites us into these muddied waters of climate politics that we must enter if we are to find different stories to tell about our futures.

Navigating beyond binary thinking requires, as Kumar, Singh and Pelling all argue in this collection, that we recognise the histories of the current climate emergency and the ongoing social inequalities and injustices that are both its cause and consequence. Accounts of vulnerability tend to focus on an increasing catalogue of indicators and accounting methods, without a fundamental recognition that the root causes of vulnerability lie in poverty and inequality. Yet as this

collection shows, any solutions to the climate crisis must both address these drivers and be grounded on the availability of decent work, health, education and social provision. Otherwise, we will serve to perpetuate the very dynamics climate action ostensibly wants to address with responses confined to 'technical fixes and rounds of emergency response' (Pelling). Changing course requires what Singh suggests is a 'deliberate slowness' and careful bringing together of different ways of knowing and telling stories that open up future worlds for diverse communities.

In seeking to reimagine climate geographies beyond binary thinking and the seeming inevitability of techno-optimistic, carbon colonialism, authors in this collection point to the critical shifts needed in our climate stories. One such shift relates to the sites and scales through which we relate the climate problem and the vital work of climate justice. As Pelling and Kumar point out, notions of climate justice remain stubbornly fixed to an international or planetary imaginary which paints an incomplete picture of the ways in which questions of justice must be addressed. Across other contributions to this collection—from fishers and their everyday lives through to dominant discourses of development, the practices of climate scholarship in the Global North and through how resilience is understood and enacted—it is more than evident that every climate story told is entangled with matters of justice and that these dynamics need to be bought to the forefront of re-imaging climate geographies. A second, and related, shift concerns the importance of bringing the subjects of climate change back into the frame. Whether it is as Hermanus argues in attributing the causes of climate change to a 'depersonalised humanity' gone astray or as Kumari finds in the calls for a 'green' development for Africa and Pelling sees visible in the 'unchallenged prioritization on the mitigation of hazard, exposure and physical vulnerability as the way to reduce risk' that dominates global science-policy processes, so many of our imaginations of climate geographies are devoid of human (and more than human) agency. Reimagining climate geographies requires addressing the displacement of those both responsible for and who stand to gain from climate interventions and those who are most likely to suffer harm, while also recognising the ways in which material conditions and more-than-human agency shape and unfold through climate changed geographies.

A third shift, which contributors to this collection call for, concerns the ways in which geographical imaginaries of climate change relate to time. Hermanus (Section 3) points us to the ways in which framing the climate problem as an urgent crisis creates a 'disjointed framing', creating a narrow window of action that severs the present moment from its historical causes and 'that enforces a flat, reductionist and distorted imagination of both past and present'. At the same time, Pelling (Section 7) argues that the dominance of modelling approaches to tell our climate stories leads to a 'policy narrative oriented towards the future', which offers excuses for delayed action. In this space where the options are either now or the very nearly never, the effect is the removal of choice, deliberation and justice—all of which are regarded as taking either too much time or of being inconsequential in the very long run. Creating the space to meaningfully restitch pasts, presents and futures to 'make visible consequential relationships and events' (Hermanus, Section 3) will require moving beyond imaginaries dominated by narratives of crisis and urgency on the one hand and those which (more or less) deliberately seek to obscure the need for change by casting climate change into the future.

Making such shifts in the stories we tell will also require that we shift the ways and means through which we tell them. Running through this collection is a concern to shift the register of our stories, to open up to more and more different voices, moments and tales and to find alternative ways of expressing these, whether it be through multi-method approaches, artistic work or situating stories with and through everyday lives. As Singh (Section 2) suggests, this will require 'humility and openness to learn from researchers and communities who have decades of this experiential knowledge'. It will also require something perhaps even more challenging—a turn towards the stories we find hard to hear and hard to tell, particularly when it comes to our own role in such imaginaries. As Kumar (Section 4) argues, when it comes to the practice of climate scholarship in the Global North, 'we must ask if the problem is how research is used to serve entrenched interests of nation-states and to diffuse any planetary politics premised on solidarities among peoples across nation-states'. Without such solidarities, Singh (Section 2) concludes, we have 'no hope of generating relational understandings' of climate change needed to enable progressive and transformational ways forward.

Yet, as Kumar (Section 4) powerfully argues, the possibilities for building the forms of solidarity and care needed to support such a progressive agenda remain deeply constrained by our personal and political attachments to security and control. This desire for security and control exists not only in terms of the easily critiqued forms of techno-economic fixes that abound in climate imaginaries but also in our own senses of what security means in our lives, working practices and worlds. Kumar (Section 4) calls for a profound embrace of vulnerability as the means through which we can embrace a climate politics which can foster 'love, friendship, and hospitality in a climate changed world'. At heart, re-imagining climate geographies requires that we engage in cultivating our own vulnerabilities at the same time as embracing our responsibilities and seeking to generate solidarities in both knowing and acting with and for others in a climate-changing world.

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## ENDNOTES

[1] https://rgs-ibg.onlinelibrary.wiley.com/doi/toc/10.1111/(ISSN)9999-0017.climate-changed-geographies.

[2] The very possibility of USA, one the biggest global greenhouse gases emitters, to enter and exit the Paris Agreement with changes in national leadership in the last 10 years raises further questions over this dominant framework for climate change resolution.

[3] The 'we' I invoke here is the collective research community that is working on issues related to climate change, across disciplines and arenas of action. This 'we' encompasses geographers and modellers but also economists and philosophers, those working on climate change vulnerability and adaptation, and mitigation, those making sense of escalating impacts and those calculating costs of plausible futures.

[4] Importantly, 'old fissures of extraction and domination' are not only between countries but also within countries: exclusion and domination play out along axes of race, gender, ethnicity, caste and past marginalisation continues to shape present-day differential vulnerabilities (Gajjar et al., 2019; Ribot, 2023; Taylor, 2013)

[5] Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) is a principle underpinning the United Nations Framework Convention on Climate Change (UNFCCC). The 2015 Paris Agreement expanded CDDR-RC to included 'in the light of national circumstances', allowing voluntary self-differentiation by countries. (Rosencranz & Jamwal, 2020)

[6] This section does not propose a naïve disavowal of technology in the context of climate change or the transition. Instead, it relies on a more interesting and useful techno-ambivalence (Feenberg, 1990).

[7] The connection between the material physical and geographical dismemberment of colonisation and the dismembered, amnesiac history of colonial imagination in the present is perspicuously articulated in Ngugi Wa Thiongo in 'Something Torn and New: An African Renaissance' (Wa Thiong'o, 2009).

[8] See the G77 and China submission integrating the positions of various negotiating groups, including the African Group of Nations (AGN), the Alliance of Small Island States (AOSIS), the Arab Group, Argentina, Brazil and Uruguay (ABU), the Least Developed Countries (LDCs) and the Like-Minded Development Countries (LMDCs).

[9] The final proposal makes no reference to inequality of any kind, nor to the dynamics that have produced the 'the specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change'.

[10] This is at odds with the very idea of a transition, which is a profound temporalised shift with uncertainty and disruption in their progression (Geels et al., 2017; Turnheim & Sovacool, 2020).

[11] For example, Globeleq (United Kingdom), Électricité de France SA (EDF) (France) and Enel (Italy).

[12] See the G77 and China submission integrating the positions of various negotiating groups, including the African Group of Nations (AGN), the Alliance of Small Island States (AOSIS), the Arab Group, Argentina, Brazil and Uruguay (ABU), the Least Developed Countries (LDCs) and the Like-Minded Development Countries (LMDCs) (G77 and China, 2023).

[13] This is noted by the G77 and China submission (G77 and China, 2023).

[14] Thanks to the anonymous reviewers for this reminder.

[15] I wrote a first draft of this piece in 2023, but I am revising this draft on 30 January 2025, 10 days after the US president Donald Trump's withdrawal of his country from the Paris Agreement. In this sense, climate scepticism has a major power centre, and there are risks of this spreading to other places. https://www.whitehouse.gov/presidential-actions/2025/01/putting-america-first-in-international-environmental-agreements/.

[16] See also US congressional hearing on the NATIONAL SECURITY IMPLICATIONS OF GLOBAL CLIMATE CHANGE in 2008 https://www.govinfo.gov/content/pkg/CHRG-110hhrg62523/html/CHRG-110hhrg62523.htm and US National Intelligence Assessment in 2008 https://irp.fas.org/congress/2008_hr/062508fingar.pdf.

[17] UN News on climate change threat multiplies for peace https://www.un.org/peacebuilding/fr/news/climate-change-recognized-%E2%80%98threat-multiplier%E2%80%99-un-security-council-debates-its-impact-peace.

[18] Thanks to the reviewers for this clear articulation.

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