11 Global warming is worsened by the north-south divide

Jomo Kwame Sundaram[88]

11.1 Introduction

The wealthier large nations of the Global North have shaped the main policy responses to climate change. Without a substantial, urgent effort to curb global warming, these policies will not curb the processes soon enough to prevent irreversible catastrophe as average temperatures exceed the 1.5 degrees Celsius threshold above the pre-industrial mean. The worst consequences will be borne by the world's poorest countries, which have contributed little to greenhouse gas (GHG) emissions. Worse still, most developing countries lack the means to fund enough adaptation to climate change. Hence, those far less responsible bear the brunt of climate change and have the least means to cope with, let alone prevent, global warming.

This chapter analyses the injustices inherent in climate change and ostensible efforts to address them[89]. It explores the chasm between what is needed and actual actions taken. Finally, it explores how this can be addressed to mitigate and adapt to climate change more effectively.

88 The author is grateful to Luca Léry Moffat and Anna Fiore for their contributions to the work on this chapter.

89 Burden sharing in solutions to global warming is discussed in Jomo (2025).

11.2 Net-zero by 2050

The 1992 United Nations Framework Convention on Climate Change (UNFCCC) committed to "*the stabilization* [sic] *of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic* [human-caused] *interference with the climate system*"[90]. Consequently, climate negotiations initially focused on stepping up mitigation efforts. Achieving 'net zero' initially only required cutting net GHG emissions and accumulation before the century's end in 2100, the original target year.

This was brought forward by the 2015 Paris Agreement which committed to *"undertake rapid* [emissions] *reductions … to achieve a balance between anthropogenic emissions by sources and removal by sinks of greenhouse gases in the second half of this century"* (UNFCCC, 2015a). The Intergovernmental Panel on Climate Change (IPCC) Special Report on keeping warming under 1.5°C (Rogelj *et al*, 2018) was used to advocate for this 'net-zero by 2050' target. Pledges to achieve this still-distant target have grown but inaction, underfinancing and broken promises have delayed urgently needed climate action in the near term.

Since the 2021 UNFCCC Conference of Parties (COP) in Glasgow, many governments have promised to achieve net-zero emissions by 2050, which is framed as achieving climate stabilisation. After reneging on various other Glasgow commitments, such as ending the burning of coal to generate energy, G7 Western leaders reiterated in April 2024[91] the net-zero by 2050 promise. After President Donald Trump's second inauguration, the United States then withdrew from the Paris Agreement for the second time.

90 The 1992 convention is available at https://unfccc.int/resource/docs/convkp/conveng.pdf.

91 See G7 Italia announcement of 24 April 2024 of Ministers' Meeting on Climate, Energy and Environment, https://www.g7italy.it/en/g7-ministers-meeting-on-climate-energy-and-environment/.

Net-zero by 2050[92] offers an attractively simple target for climate stabilisation. If fully met, net zero should stabilise the climate from 2050, but will certainly not check planetary warming in time. While the 2050 target year is significantly better than the earlier target year of 2100, it will not cut GHG emissions in time to avoid breaching the 1.5°C threshold in less than a decade. Worse, the agreement allows notable exemptions, such as for military purposes and air and marine transportation. In contrast to the excuses for inadequate concessional climate finance for developing countries, the US alone accounts for a trillion dollars, or two-fifths of total world military spending, of around $2.5 trillion yearly. Meanwhile, invoking the 'common but differentiated responsibilities' principle, some developing countries have bargained for more time. India, for example, has announced a 2070 deadline[93].

Government leaders have been more willing to make pledges far off into the future. After all, 2050 is almost three decades after the Glasgow COP in 2021. Net zero first appeared in the UNFCCC's 2014 Emissions Gap Report (UNEP, 2014) and at the UNFCCC COP (UNFCCC, 2015b). Removing GHGs will trap and absorb less heat in Earth's atmosphere. Hope in carbon sequestration continues despite no actual progress. There seems to be little recognition that most consequences of climate change, especially global warming, are largely irreversible. Yet, many carbon sequestration proponents still insist that 'carbon dioxide removal' and 'harmful emissions' technologies will be enough. Despite modest progress, there has been little feasible progress at scale in

92 Karl Ritter, 'A climate idea comes of age: Zero emissions', *AP News*, 11 December 2014, https://apnews.com/general-news-abcef70cf9c24f0f8e10ccd6a4370557.

93 See statement delivered by India at the UN Security Council on behalf of Bolivia, China, Gabon, India, Iran, Iraq, Mali, Nicaragua, Panama and Syria of 7 June 2022, 'Cross-Regional Joint Statement on Global Net Zero', https://pminewyork.gov.in/others?id=NDYzNA.

terms of carbon capture and storage[94]. There has been little significant growth in top-soil carbon sequestration, or large-scale tree planting and reforestation, with more controversial 'geoengineering' schemes much touted more recently. However, the IPCC Special Report (2022) warned that while some options might be technologically feasible, many have not proved viable at scale.

The International Energy Agency's revised Net Zero Roadmap for the 2023 Dubai COP led the UNFCCC to endorse "*transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science*" (IEA, 2023; UNFCCC, 2024). However, regardless of advocates' intentions, mitigation measures have been exaggerated and abused for greenwashing. The 2023 Emissions Gap Report noted that the gap between promise and practice has worsened (UNEP, 2023a).

The IPCC argued in 2014 that keeping global warming under 2°C would require *"near zero emissions of carbon dioxide and other long-lived greenhouse gases by the end of the century"* (IPCC 2014b). The European Union (EU) adopted a 2°C[95] threshold (Cointe *et al*, 2011) in 1996, insisting it should be for all.

However, some of the most vulnerable developing countries, mainly in the tropics, successfully insisted on 1.5°C. Following their sustained efforts, a later IPCC Special Report urged keeping average global temperatures under 1.5°C above pre-industrial levels.

94 Volker Sick, 'Not All Carbon-Capture Projects Pay off for the Climate – We Mapped the Pros and Cons of Each and Found Clear Winners and Losers', *The Conversation,* 12 January 2024, https://theconversation.com/not-all-carbon-capture-projects-pay-off-for-the-climate-we-mapped-the-pros-and-cons-of-each-and-found-clear-winners-and-losers-218425.

95 Carbon Brief Staff, 'Two Degrees: The History of Climate Change's Speed Limit', *Carbon Brief*, 8 December 2014, https://www.carbonbrief.org/two-degrees-the-history-of-climate-changes-speed-limit/.

Vulnerable poor nations rallied around "*1.5°C to stay alive*"[96] with many calling for a fossil fuel non-proliferation treaty to phase them out. Carbon budget projections have improved with better GHG emissions and atmospheric persistence monitoring techniques[97].

Governments pledged to meet the 2015 Paris Agreement goal of keeping global warming under 1.5°C. But former UN Climate Action and Finance Special Envoy Mark Carney expects the threshold to be breached in under a decade, over a decade and a half before 2050[98]. Over recent decades, the climate policy targets discourse has gone from emissions reduction to limiting temperature warming above pre-industrial levels.

11.3 Global North leadership

Primary responsibility lies with the Global North mainly due to its much greater contribution to GHG emissions, historically and *per capita*. Such emissions are also why the well-off in rich nations generally enjoy much higher living standards. The US has emitted a quarter of all carbon dioxide emissions since the 1750s, while Europe accounts for 31 percent. By contrast, Africa, South America and India contributed about 3 percent each, while China contributed 14.7 percent[99].

Taking 350 parts per million of carbon dioxide in the atmosphere as

96 Amy Martin, 'Meeting the 1.5°C Climate Goal Will Save Millions of People, and It's Still Feasible', *Scientific American*, 20 November 2023, https://www.scientificamerican.com/article/meeting-the-1-5-c-climate-goal-will-save-millions-of-people-and-its-still-feasible/.

97 Zeke Hausfather 'Why the IPCC 1.5C Report Expanded the Carbon Budget', *Carbon Brief*, 8 October 2018, https://www.carbonbrief.org/analysis-why-the-ipcc-1-5c-report-expanded-the-carbon-budget.

98 See 'Mark Carney: Investing in net-zero climate solutions creates value and rewards', United Nations interview, 2021, https://www.un.org/en/climatechange/mark-carney-investing-net-zero-climate-solutions-creates-value-and-rewards.

99 See Hannah Ritchie and Mark Roser, 'CO_2 emissions', *Our World in Data,* June 2020, https://ourworldindata.org/co2-emissions.

the upper limit to stabilise the climate and prevent disastrous climate change and apportioning this carbon budget as quotas to countries, rich nations used up their quotas around 1969, then overshot their 1.5°C quota in 1986, and their 2°C quota in 1995 (Fanning and Hickel, 2023). Even if the Global North achieves net zero, their cumulative emissions alone would still be thrice their 1.5°C 'fair share.'

The Global South is already suffering from climate change, which the Global North mainly causes. Many parts of the developing world are teetering on the brink of climate catastrophe, anxiously awaiting when devastating heatwaves, cyclones, floods or storms will strike. Meanwhile, many countries of the Global South are left too fiscally constrained to fund climate adaptation or repair losses and damages, let alone contribute, through decarbonisation, to mitigating further warming. Encouraged by the World Bank and others to borrow more on commercial terms with slogans such as 'from billions to trillions,' many developing countries have faced severe debt crises, especially when Western central banks raised interest rates from 2022.

Many now spend as much on debt-service obligations as on education, health, social protection and climate adaptation combined (Development Finance International, 2023). In a rapidly worsening vicious cycle, large natural disasters require significantly more public spending and debt, while developing countries' interest payments outweigh climate investments (UNCTAD, 2024). This debt-climate nexus has already had a catastrophic effect on low-income countries (Mallucci, 2020; IMF, 2019b).

The North Atlantic Treaty Organization (NATO) responded to the Ukraine invasion, *inter alia*, by blocking Russian exports of oil and gas to Europe, raising the US share of European fossil-fuel imports. Faced with higher oil and gas prices, Europe has provided various energy price subsidies, which have lowered the effective carbon price, undermining carbon markets as a tool to mitigate planetary heating.

At the 26th UNFCCC Conference of Parties in Glasgow at the end of 2021, the UK host secured a commitment to abandon coal burning for

energy. But the vow was soon abandoned, with coal mining in Europe revived to replace some of the Russian oil and gas imports.

11.4 Climate finance

Grossly unequal historical and current contributions to GHG emissions and the modest means of most of the Global South imply the Global North must take greater responsibility for climate change. The North must urgently contribute far more resources to enable developing countries to address the issue more effectively. This must involve urgently reducing carbon (dioxide) emissions to limit global warming to no more than 1.5°C above the pre-industrial level two centuries ago, as agreed to by the 195 parties to the 2015 Paris Agreement.

Despite commitments to climate finance, carbon markets, 'environment, social and governance' policies, the US Inflation Reduction Act and other legislation, emissions continue to rise. This is putting the world on track for a catastrophic 2.7°C warming over the pre-industrial average temperature level by the century's end (UNEP, 2023a). There are several reasons for this, some discussed later. The bottom line is that commitments from the Global North are wanting. However, many agreed policy targets distract from the urgency of reducing emissions to limit warming to no more than 1.5°C on average.

Providing far more climate finance on more generous terms has to be the main focus of the Global North's policies. Much more financing, on far more generous concessional rather than commercial terms, is also urgently needed for adaptation in the Global South. The finance required to address global warming is beyond the capacity of many developing countries (Chowdhury and Jomo, 2022). Countries of the Global North must recognise that the catastrophic consequences of the accumulation of their GHG emissions are already manifest worldwide with far worse effects in the Global South, where 3.6 billion people in low and lower-middle-income countries "*disproportionally bear the human costs of disasters due to extreme weather events and hazards*" (IPCC, 2022).

Mitigation remains important. Much more must be done to enable and accelerate the transition from fossil fuel combustion to renewable energy. Poorer countries should be enabled to leapfrog the fossil fuel stage that developed economies all went through. Such renewable energy investments to provide poor populations with affordable electricity may not be profitable enough to attract private investment. Developing countries cannot mobilise finance domestically, so international cooperation and commitment are necessary.

The Global North should deliver and significantly improve on what it promised in 2009, including the commitment to scale up support after 2020. Increasing total green investments by two percent of world income annually – to around $1.7 trillion, or a third of what governments currently spend on fossil fuel subsidies – could create over 170 million jobs, ensure cleaner industrialisation in the South and reduce GHG emissions by 2030[100]. While private finance tends to be more short-term in orientation, advanced countries should provide much more concessional climate finance (Bolton *et al,* 2024).

With the Global North's reluctance to provide much more generous climate finance, far more IMF Special Drawing Rights[101] (SDRs) must be issued to provide considerable urgent funding. SDRs are a grossly underutilised source of sorely needed climate and development finance. SDRs are international reserve assets that can be converted into currency by those holding them. The IMF allocated $400 billion in SDRs to rich countries in 2021 to help fund pandemic recovery, much of which was not used. In stark contrast, low-income and middle-income countries only received $250 billion since they are much smaller shareholders with considerably smaller quotas. At least 80 developing

100 See UNCTAD press release of 25 September 2019, 'UN calls for bold action to finance a global green new deal and meet the SDGs', https://unctad.org/press-material/un-calls-bold-action-finance-global-green-new-deal-and-meet-sdgs.

101 See IMF, 'Special Drawing Rights', https://www.imf.org/en/About/Factsheets/Sheets/2023/special-drawing-rights-sdr.

countries have used these allocations for various purposes[102]. Rich countries should direct their unutilised SDR allocations to climate funds or regional development banks for the Global South. These same countries can still do so now. Yet, there is no significant effort to enable this. This would provide massive amounts of much-needed funding at much lower interest rates than multilateral development banks currently offer to low-income countries (Ghosh, 2023)[103].

The Global North has failed to meet its modest and inadequate climate finance promises. At the 2009 UNFCCC COP in Copenhagen, rich countries pledged to provide $100 billion yearly in climate finance to developing nations until 2020. This was formalised in the 2009 Copenhagen Accord and reaffirmed by the Paris Agreement of 2015. The Green Climate Fund was formally established in December 2011 as the main channel through which climate finance is to be raised, disbursed and monitored. This framework was expected to deliver grants that mainly support developing countries. While modest compared to the finance needed to adequately address climate change – adaptation costs alone were estimated to average $215 billion annually until 2030 (UNEP, 2023b) – it was considered a promising start.

Unfortunately, rich countries have not kept their modest pledges. The promises were modest supposedly because they were made during the Great Recession in the aftermath of the 2008 global financial crisis and were to be significantly increased after 2020. There is a wide variety of estimates, all agreeing that total climate finance has fallen well short of needs. The OECD (2024) claimed the total amount

102 Andrés Arauz and Kevin Cashman, 'Eighty Countries Have Already Used Their Special Drawing Rights, but More of these Resources Are Needed', Center for Economic and Policy Research, 26 January 2022, https://cepr.net/publications/eighty-countries-have-already-used-their-special-drawing-rights-but-more-of-these-resources-are-needed/.

103 Jayati Ghosh, 'SDRs Are the Great Untapped Source of Climate Finance', *Project Syndicate*, 12 December 2023, https://www.project-syndicate.org/commentary/bolstering-climate-finance-through-special-drawing-rights-by-jayati-ghosh-2023-12.

of climate financing[104] by OECD members from 2013 to 2022 was $73.8 billion. In 2022, for the first time, this exceeded the $100 billion yearly originally promised in 2009.

However, even these OECD estimates are much disputed. Oxfam has argued the actual value of climate finance provided by rich nations to be as little as $28 billion and no more than $35 billion in 2022 – much less than claimed by the OECD report[105]. Oxfam attributed its much lower estimates to two factors. First, climate finance is dominated by loans, reported at face value rather than in terms of the estimated actual benefit to nations. Second, the climate impact of projects is often exaggerated. For example, some donors count development aid or official development assistance as climate finance, even when not primarily funding climate action, whether mitigation or adaptation.

Developing countries expected the $100 billion annual funding for climate finance, as agreed to at the 2009 UNFCCC COP, would mainly be in the form of public grants disbursed by the Green Climate Fund. Hence, providing climate finance as loans, especially commercial debt, is problematic. Much higher interest rates since 2022 have worsened recent sovereign debt crises and related contractionary fiscal austerity policies. Loans on less concessional terms continued to grow as a share of total public climate finance from 2016 to 2022 – 35 percent in lower-income countries and 85 percent in lower and middle-income countries (OECD, 2024). This has pushed poor countries deeper into debt, which has been exacerbated by more commercial lending. Private finance's actual role and impact are much disputed (Roberts *et al*, 2021), but it is unlikely to help countries most in need, let alone meet their policy priorities.

104 Provided and mobilised.

105 See Oxfam press release of 9 July 2024, 'Rich countries overstating "true value" of climate finance by up to $88 billion, says Oxfam', https://www.oxfam.org.uk/media/press-releases/rich-countries-overstating-true-value-of-climate-finance-by-up-to-88-billion-says-oxfam/.

Necessary adaptation – such as improving drainage, water catchment and infrastructure – is costly but necessary. Adaptation investments are rarely profitable and far less attractive to private investors, who favour mitigation investments more likely to generate higher returns. Unsurprisingly, only a yearly average of $1.5 billion of private finance was mobilised for adaptation from 2016 to 2021, primarily due to a single large project in Mozambique (OECD, 2023a). Furthermore, most private climate finance goes to middle-income countries where the profit potential is higher – less developed countries and fragile states received only 33 percent of private finance for adaptation, and small island developing states received 0.6 percent – equivalent to 0.1 cent per capita (OECD, 2023b).

Weak commitment to pledges made, even in multilaterally agreed arrangements, and inadequate climate finance, mainly in the form of private lending, have most hurt developing countries in need, especially the most vulnerable. Developing countries are supposed to be involved in decisions over disbursement, but they actually manage little among the many channels through which climate finance flows. Such conduct continues to deprive the Global South of agency in coping with, and otherwise rising to, the challenge of global warming.

11.5 Carbon and offset markets[106]

A basic underlying assumption in keeping the average temperature rise below 1.5°C above the pre-industrial level is that countries must meet net zero, ie not add to net worldwide GHG emissions. More than 130 countries have committed to achieving net zero by 2050. However, the still-distant net-zero by 2050 target has allowed the rich world to continue kicking the can down the road. Thus, they have avoided acting decisively and urgently to cut emissions sufficiently to avert exceeding the 1.5°C threshold, now expected in less than a decade. Achieving net-zero emissions typically relies on 'offsets' allowing

106 Market-based solutions to global warming are discussed in Jomo (2024).

countries and companies to avoid actually reducing GHG emissions.

Offset market advocates claim to reduce emissions or remove GHGs from the atmosphere through actions encouraged by incomes from selling 'carbon offsets'. In many cases, this means paying someone poor to cut emissions or forcing them to pay someone else to do so. Buying offsets allows big emitters to keep polluting, albeit at some cost. GHG emitting activities by wealthier individuals, companies, and nations can thus continue after "*transferring the burden of action and sacrifice to others*"[107] – typically to those in poorer nations – via the market.

At the most fundamental level, offset markets do not stop climate change since they do not actually reduce GHG emissions. They also fail to provide funds the Global South needs and distract from other more effective mechanisms such as 'polluter pays' fees[108]. After all, the logic of offsetting necessarily implies buyers get to keep emitting GHGs[109].

Thus, carbon offset markets have long overpromised but underdelivered. The Clean Development Mechanism, established under the Kyoto Protocol in 1997, allowed rich nations to invest in emission reduction projects in developing countries to meet their emissions targets. Cames *et al* (2016) found that 85 percent of Clean Development Mechanism offset projects would likely have happened without the offset programme. Only two percent of projects led to additional emissions reductions, exposing just how poorly offsetting substitutes

107 Robert Del Naja, 'We've toured the world for years. To help save the planet we'll have to change', *The Guardian,* 29 November 2019, https://www.theguardian.com/commentisfree/2019/nov/28/tour-world-massive-attack-band-climate.

108 See statement by 80 NGOs, 'Why carbon offsetting undermines climate targets – Joint NGO Statement', *Carbon Market Watch*, 2 July 2024, https://carbonmarketwatch.org/publications/why-carbon-offsetting-undermines-climate-targets-joint-ngo-statement/.

109 Doreen Stabinsky, Wim Carton, Kate Dooley, Jens Friis Lund and Kathy McAfee, 'Letter: Don't rely on carbon offsets as a climate change solution', *Financial Times,* 10 December 2020, https://www.ft.com/content/300213d3-7968-4219-a131-e433e6012b60.

for cutting fossil fuel use. Other established programmes – such as the United Nations' REDD programme[110] – have been bogged down in international negotiations and have failed to significantly reduce emissions. With the Paris Framework plugging some such loopholes, voluntary carbon offset markets continue to be touted as a solution[111]. Trading such non-verifiable offsets allows continued emissions with business almost as usual[112].

Despite modest climate benefits, the voluntary carbon offset market is expected to grow fifty-fold from 2020 to 2030[113]. This is likely to have particularly severe consequences in predominantly agricultural societies in the Global South since offset markets are intensifying competition for land. Land transfers for biofuels, green energy and conservation schemes have surged over the past decade, accounting for at least a fifth of land deals (IPES-Food, 2024). Governments worldwide increasingly include carbon removals involving land in national net-zero pledges, which adds up to almost 1.2 billion hectares of land – equivalent to current global cropland (Dooley *et al*, 2022). This is likely to have devastating impacts on biodiversity – 87 percent of large-scale land acquisitions are in areas of medium-to-high biodiversity (Lay *et al*, 2021).

More than half the land area pledged for carbon removal involves reforestation, which will likely put pressure on ecosystems, food security and indigenous peoples' rights (Dooley *et al*, 2022). The new land rush will continue to displace small-scale farmers, indigenous

110 See https://www.un-redd.org/.

111 Anders Porsborg-Smith, Jesper Nielsen, Bayo Owolabi and Carl Clayton, 'The Voluntary Carbon Market Is Thriving,' *BCG Global,* 19 January 2023, https://www.bcg.com/publications/2023/why-the-voluntary-carbon-market-is-thriving.

112 Sabine Frank, 'Does carbon offsetting do more harm than good?,' *Carbon Market Watch*, 6 July 2023, https://carbonmarketwatch.org/2023/07/06/does-carbon-offsetting-do-more-harm-than-good/.

113 Morgan Stanley, 'Where the Carbon Offset Market is Poised to Surge,' 11 April 2023, https://www.morganstanley.com/ideas/carbon-offset-market-growth.

peoples, pastoralists and rural communities, eroding their access to land despite their general record of responsible stewardship. This will worsen the already dismal state of land ownership – globally, one percent of the world's largest farms control 70 percent of the land (Lowder *et al,* 2021). Hence, land inequality, driven by supposedly 'green' measures, will not only do little for climate but will worsen rural poverty, food insecurity and violence.

11.6 Conclusion

The Global North bears disproportionate responsibility for climate change due to historical and ongoing GHG emissions, while the Global South, mainly in the tropics, suffers most from its consequences. Promises and policies, such as the 2050 Net-Zero target, are clearly inadequate in addressing the urgent need for GHG emissions reductions, often delaying needed action, even if only inadvertently. Additionally, mechanisms such as carbon and offsets markets, as well as climate financing, have fallen far short, leaving the most vulnerable nations struggling to adapt. A more equitable multilateral approach is needed, where the North contributes much more to mitigation and adaptation efforts, acknowledging its role in causing the current climate crisis and providing most of the financial resources required for a sustainable and just transition.

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