

## **Climate Finance & The UNFCCC: How effective is the UNFCCC at governing the international response to climate crisis?**

### **I: Introduction**

Effectively responding to the climate crisis requires an urgent and global transformation of society and economy. Vast sums of climate finance need to be mobilised to fund this transition. Although climate risks are global, industrialised nations have emitted the most historically, and developing nations are most at risk. Reflecting their need for economic development, this makes mobilising climate finance to developing countries particularly urgent. The primary institution governing the international response to the climate crisis, and with it, mobilising climate finance to developing countries, is the United Nations Framework Convention on Climate Change (UNFCCC).

In this context, this essay will assess the effectiveness of the UNFCCC at governing the international response to climate crisis by focusing specifically on the issue of channelling climate finance into developing countries, with a particular emphasis on low-carbon energy. The UNFCCC's effectiveness in raising climate finance – weighed against the needs of developing nations – will be considered first, seated in the context of global climate finance generally. Second, this issue of effectiveness will be widened to explore the broader mechanisms through which the UNFCCC can exert influence.

To this end, this essay will be split into the following sections. After the introduction, part II will explore the current context of the climate crisis for developing nations and the need for sustainable development. Part III will explore the UNFCCC and its role in responding to the climate crisis. Part IV will examine the climate finance gap and the effectiveness of the UNFCCC in raising climate finance. Finally, the conclusion will summarise findings.

### **II: Climate Crisis, Sustainable Development**

Human activity is causing profound and dangerous climate change (Mann & Wainwright, 2019), which long term threatens human civilisation itself (Gilman et al., 2011; Lynch, 2008). Although this process is deeply complex, working across planetary boundaries (Steffen et al., 2015; Rockström et al., 2009) and sectors, including land use, energy, agriculture, industry, and transport (Ritchie et al., 2020), the single biggest source of greenhouse gas emissions (GHG) is the burning of fossil fuels for energy, accounting for 73.2% of emissions in 2018 (Ritchie et al., 2020). Energy is essential to the growth of human civilisation (Klare, 2018; World Energy Council, 2020), and since the Industrial Revolution, fossil fuels have been a key driver of the development that has followed (Ritchie & Roser, 2020).

Already, the climate crisis is causing widespread and dangerous disruption to nature, impacting billions of people around the world, threatening human wellbeing and the planet (IPCC, 2022b). Although risks are global, the negative impacts are being disproportionately felt by the Global South (Sarkodie & Strezov, 2019). This is because vulnerability to climate change is highest where there is poverty, governance issues, limited public services and resources, violent conflict, and where livelihoods are more climate sensitive (e.g. smallholding farms, fishing communities) (IPCC, 2022a), all manifesting in reduced adaptive and mitigative capacity (Sarkodie & Strezov, 2019).

In essence, the Global South is more vulnerable to climate change because of its lack of economic development. Recognising this, the ‘sustainable development’ framework seeks to integrate the goals of economic development and climate change policy in developing countries to address both simultaneously (Halsnæs et al., 2008). This principle is well recognised now internationally: at the UN in the form of the Sustainable Development Goals (UN, 2022d), and in the work of the IPCC, which highlights how sustainable development is essential to reduce systemic vulnerability (Roy et al., 2018). Practically speaking, in terms of energy this means that building reliable, low-carbon energy infrastructure is critical to achieving sustainable development in developing countries (IEA, 2021a), enabling emissions reductions to go alongside improved energy access and equity (IEA, 2021b). Although the necessity of sustainable development is recognised, the challenge lies in creating effective facilitating processes.

### III: UNFCCC, Climate Finance Goals

At the international level, the key institution governing the international response to the climate crisis is the UNFCCC. Adopted in 1992, the UNFCCC is the “*foundational climate agreement that has provided the platform for most subsequent international climate agreements*” (Kuh, 2018: 505). From a legal perspective, the UNFCCC takes the form of a framework convention, creating an architecture for parties to commit to joint action to meet a recognised goal (Kuyper et al., 2018), that can be supplemented by protocols and amendments that expand its function (Hunter et al., 2011), so enabling negotiations to evolve over time (Kuyper et al., 2018).

Over the years the UNFCCC has taken different forms. Under the Kyoto Protocol (1997), the UNFCCC attempted to impose legally binding targets and emissions cuts, specifically for developed countries at 5% below 1990 levels (Kuh, 2018). However, Kyoto has been widely recognised as a failure. Most countries did not meet their emissions reduction targets (Napoli, 2012), fewer were willing to sign up to the second commitment period (Kuyper et al., 2018), many states failed to ratify (e.g. USA) (Vezirgiannidou, 2008), some negotiated, left, and later re-joined (e.g. Australia), some significant emitters were not required to make any cuts at all (e.g. China, India), and some argue that its design has derailed global efforts at reducing GHG emissions (Rosen, 2015).

Today, the shape of the UNFCCC is provided by the Paris Agreement (2015) (UN, 2022e), for some a landmark step toward global climate action (Stephenson et al., 2019). After two decades of failing to create legally binding cuts – recognising the limits of coercing nation states without the formal power to do so – now the UNFCCC focuses on creating an international system of accountability to facilitate international cooperation (Falkner, 2016). In so doing, under Paris the UNFCCC has taken a different form and role, shifting from implementor to coordinator (Kuyper et al., 2018). The old top-down administration has morphed into a hybrid of processes, simultaneously bottom-up and top-down, with a greater participation of states and non-state actors alike, while more issues are covered and the focus has broadened, from mitigation alone, to mitigation, adaptation and finance (Kuyper et al., 2018).

Now, the UNFCCC’s key lever of influence is that signatory states must disclose their NDCs (Stephenson et al., 2019), adhere to transparency and accounting processes, participate in global stocktakes that monitor progress, verify efforts against NDCs and ratchet their ambitions upwards (UN, 2022c; Kuyper et al., 2018), opening themselves up to international

comparison and review (Falkner, 2016). Where parties do not meet their targets, the UNFCCC can name and shame them to apply pressure (Falkner, 2016), alongside offers of support (technology, finance) and efforts to coordinate action between states and non-state actors (Kuyper et al., 2018).

In terms of channelling climate finance to developing countries, the Paris Agreement stipulates that developed countries should provide financial assistance to support developing countries to implement the convention (UN, 2022b; UN, 2022a). This reflects a recognition of the principle of ‘common but differentiated responsibilities’; namely, that although industrialised nations have created the majority of historical GHG and have the highest per-capita emissions (Steckel et al., 2017), emissions reductions are required by developing and emerging economies – particularly rapidly developing nations like China, India, Brazil and others – to reach climate stabilisation goals (Steckel et al., 2017; Kuyper et al., 2018).

To this end, at Copenhagen (2009) developed countries committed to mobilising \$100bn per year by 2020 to address the mitigation and adaptation needs of developing countries (UNFCCC, 2009). Flowing through the UNFCCC Green Climate Fund, this capital would come from various sources, including public and private, bilateral and multilateral, and prior to 2025, a new collective goal would be set with \$100bn per year as the baseline (UN, 2022a). In 2015, this climate finance goal was re-articulated (UNFCCC, 2015), reinforcing the role of developed countries in channelling climate finance to developing countries (UN, 2022b). The next section will explore whether this target is appropriate and the extent to which it has been achieved.

#### **IV: Climate Finance, UNFCCC Effectiveness**

*i. The climate finance (energy) gap:* Effectively responding to the climate crisis requires an immense transformation of society and economy. In terms of energy, this entails a revolution in the way energy is produced and consumed (IEA, 2021b). The costs of this are both uncertain and vast (McCollum et al., 2013), requiring significant increases in investment flows and shifts in capital allocation, moving away from fossil fuels towards low-carbon energy (IEA, 2021b). Pivotal to doing so is the mobilisation of climate finance; those financial flows that support countries to pay for mitigation and adaptation efforts in response to climate change (Hill & Babin, 2021b).

Globally, levels of climate finance have increased substantially in recent years. Between 2011/12 to 2019/20 annual rates of climate finance climbed from \$364bn to \$632bn (Buchner et al., 2021), representing 0.7% of world GDP, much of it going into renewable energy (Timperley, 2021). However, flows of climate finance remain far below the sums needed to keep the planet below 1.5°C warming, estimated at some \$1.6-\$3.8trn each year (Timperley, 2021), or an increase of over 590% to meet 2030 climate targets (Buchner et al., 2021). In terms of energy, while fossil fuels continue to receive huge subsidies, \$554bn each year between 2017-19 (Timperley, 2021), global energy investments – in 2021, some \$2trn per year or 2.5% of global GDP – need to increase to \$5trn per year or 4.5% of global GDP by 2030 and to \$4.5trn annually by 2050, for any hope of achieving net-zero (IEA, 2021b).

In terms of climate finance to developing nations, the gaps are even more stark. To effectively mitigate and adapt to climate change, developing countries need hundreds of billions (\$) each year at minimum (Timperley, 2021), and by the end of the decade, emerging and developing nation spending on clean energy needs to increase seven-fold, to above \$1trn

per year, to reach net-zero by 2050 (IEA, 2021a). In this context, the \$100bn UNFCCC pledge is revealed only as symbolic, rather than an adequate solution (Timperley, 2021). Yet even this sum has proved hard to achieve. Projections show that efforts to reach the goal of \$100bn have been delayed, now likely to be reached in 2023 after years of lackadaisical growth, but potentially to be surpassed in the years after (OECD, 2015; OECD, 2020; IRENA, 2022).

Achieving such goals are better than not, even if they are inadequate, but the slow pace to achieve them should be cause for concern. The climate finance gap is especially pressing for developing and emerging economies, because they urgently need to develop, they often lack the financial resources to mitigate or adapt to climate change (Hill & Babin, 2021b), and while they have not emitted the most historically, such countries will go on to emit large quantities of GHGs in the future (IEA, 2021b). Shifting such countries to sustainable low-carbon growth pathways requires large investments in renewable energy and energy efficiency (Steckel et al., 2017; Winkler & Dubash, 2016). Yet without the support of climate finance, rising energy needs in such countries are likely to continue being met by high carbon energy sources like coal, which risk locking in carbon-intensive energy infrastructure and path dependence (Kalkuhl et al., 2012; Erickson et al., 2015), threatening efforts to meet climate goals (Bertram et al., 2015). Climate finance offers an important opportunity for developing nations, but present rates are too low and even those sums that have been committed should be viewed with caution, as the next section explores.

**ii. Issues in climate finance:** For existing climate finance commitments, there are several interlocking issues that need to be considered. First, there are concerns about accessibility. For example, developing countries are much less likely to attract climate finance than developed countries (Ameli et al., 2021), such that in 2019, 69% of climate finance investments went to middle-income countries and only 8% to low-income countries (OECD, 2020), meaning those most in need missed out (Heubaum et al., 2021). Even institutions like the UNFCCC Green Climate Fund, set up to support developing nations, disproportionately disadvantages such countries because of resource-intensive accreditation processes to receive funding (Heubaum et al., 2021). Such issues occur because mobilising capital for low-carbon projects, which are more capital intensive than fossil fuels, is dependent on local environments – for example, macroeconomic conditions, business confidence, policy and regulatory frameworks, maturity of capital markets – which define how attractive an investment is (Ameli et al., 2021). Because such conditions are typically less conducive in developing countries, this risks creating a climate finance trap, where investments are chronically insufficient, creating an unvirtuous cycle; higher risks lead to less investment, but less investment leads to higher (climate) risks (Ameli et al., 2021).

Second, existing climate finance flows can have mixed or problematic impacts, including in terms of effectiveness and allocation. While some projects have been shown to be effective, reducing GHG emissions and promoting renewable energy (Li et al., 2022), others can interfere with development goals, disempower recipient countries, or prove ineffective in delivery (Steckel et al., 2017). On the one hand, this can mean that much of the capital that goes to developing countries is hard to track and may not be reaching its target – between 2014-18, the UN could account for less than 20% of the climate finance it had provided (Timperley, 2021). On the other, it manifests in an imbalance in the types of projects that are allocated finance. Presently, adaptation needs are the most urgent for low-income countries (Hill & Babin, 2021b; Timperley, 2021), already estimated at some \$70bn per year, potentially increasing to \$500bn per year by 2050 (Heubaum et al., 2021). Yet, because

mitigation projects provide more visible outcomes than adaptation (Timperley, 2021), in 2018, 70% of climate finance went to mitigation projects and only 21% to adaptation (OECD, 2020).

Third, there are significant challenges in mobilising capital for climate finance. The contributions of countries are uneven – some are contributing more than their fair share (e.g. Japan, France) and others are falling far short (e.g. USA, Australia, Canada) (Bos & Thwaites, 2021). At the same time, there is an imbalance between public and private contributions. Given the high volumes required, it is expected that the private sector should be the primary source of climate finance (Steckel et al., 2017; Heubaum et al., 2021). However, public institutions continue to provide the majority – in 2019/20, public sources provided 51%, while 49% came from private (Buchner et al., 2021). In terms of finance to developing countries, these patterns are even more pronounced. From 2018-19, nearly three-quarters of climate finance to developing countries came from public sources (OECD, 2020; Timperley, 2021). While this indicates the failure of private finance to contribute and to be effectively channelled, this also highlights how the role public financial institutions can and should be playing is underappreciated. Public financial institutions have the capacity to lead the green transition, having some \$49trn in assets at their disposal globally (Marois, 2021), which at the least will be needed to build infrastructure and accelerate technological innovation (IEA, 2021b).

Fourth, the way climate finance is structured can be problematic. In 2018, 74% of financing to developing countries took the form of loans rather than grants (OECD, 2020). Because these loans typically have high interest rates, increasing their risk, vulnerable countries either have to accept increased debts (Nature, 2021) or be excluded from green finance (Hill & Babin, 2021b). As a result, organisations like Oxfam argue that OECD climate finance estimates are significantly inflated – when in 2017-18 climate finance levels were reported as being \$79.8bn, Oxfam argued they should have been reported as \$19-22.5bn, because after grants, only the advantages from loans at below-market rates should be incorporated, not the loans' full value (Carty et al., 2020; OECD, 2020).

Fifth, there are issues with the quality of data and accounting processes, for both private and public contributions. Verifying data quality is challenging (Heubaum et al., 2021), and this can be problematic both for private finance (Steckel et al., 2017; Kuyper et al., 2018) and in the public sector, where many public commitments often involve re-labelling existing investments rather than creating additional commitments (Michaelowa & Michaelowa, 2011). This is the product of a number of interlocking issues, including that: there is no single operational definition of climate finance; climate finance accounting processes need to be standardized to facilitate tracking, comparison, and accountability; and robust and comparable impact data is required where it is presently lacking (Heubaum et al., 2021). In absence of clear accounting rules and processes to verify data quality in climate finance, mistrust between stakeholders and participants has been the outcome (Nature, 2021).

**iii. Alternative approaches to effectiveness:** Although efforts to mobilise climate finance are falling short of stated targets and actual needs, the issue of the UNFCCC's effectiveness in mobilising climate finance can be explored more broadly. While the UNFCCC's limitations are sizeable – ranging from its reliance on voluntary commitments, and its complicity in creating unequal access to resources, technology, knowledge, power and finance, to its lack of inclusivity to the most vulnerable countries – the UNFCCC represents an attempt to address the climate crisis where otherwise there may have been none (Sovacool & Linnér,



2016). Although legally binding restrictions on emissions would have been preferable, the experience of the Kyoto Protocol, reflecting a broader reality that nation states are the preeminent entity in international politics, rendered voluntary mechanisms the only option available (Taebi & Safari, 2017). This has tied the UNFCCC into relying on soft power to govern the response to climate change, either seeking to persuade countries subject to international comparison and review to comply with their NDCs through shaming or peer pressure, or acting as a coordinator, mobilising, steering, and facilitating cooperation, offering support where it can based on limited resources and power (Kuyper et al., 2018; Falkner, 2016). While less than desirable, such mechanisms can be effective. Naming and shaming both states and multinational corporations – for instance, publicly acknowledging more significant cuts, or condemning and publicly exposing noncompliance – has been shown to incentivize voluntary commitments (Taebi & Safari, 2017; Friman, 2015). At the same time, the UNFCCC occupies a key role in keeping climate on the agenda, promoting policy, capacity building, disseminating knowledge (Sovacool & Linnér, 2016), and facilitating international cooperation, which will be pivotal to mobilising climate finance going forwards (IEA, 2021b).

Whatever its limitations, the reality is that the UNFCCC – despite the immense complexity of its task – has mobilised some amount of climate finance, the climate crisis is on the political agenda, and countries have made some changes to address the climate crisis (Sovacool & Linnér, 2016). The \$100bn climate finance goal is not enough and has been delayed, but it is something and is likely to increase in the coming years (IRENA, 2022). More broadly, the coordinating functions of UNFCCC offer ongoing opportunities for progress. For example, although COP26 was no great success (Hill & Babin, 2021a), notably “*over 450 financial institutions overseeing \$130 trillion in assets promised to align their portfolios with the goal of achieving net-zero emissions by 2050*” (Hill & Babin, 2021a), accounting for some 40% of the world’s financial assets, almost double the commitments following COP26, increasing from \$70trn to \$130trn (Metcalf & Morales, 2021).

Led by UN Special Envoy Mark Carney, these commitments were part of the Glasgow Financial Alliance for Net-Zero, a network of financial services firms committed to align business, lending and investment strategies with the net-zero goals of the Paris Agreement (Baker, 2021). Those institutions signing up to the GFANZ have to make a number of commitments, including making disclosures through the Task Force on Climate-related Financial Disclosure (TCFD), stress testing their businesses, developing science-based transition plans, aligning portfolios with net-zero, and winding-down stranded assets (Baker, 2021; GFANZ, 2021). Beyond the intention to develop common industry standards, the GFANZ is seeking to develop new ways to channel private finance to emerging and developing economies, for instance, working through country platforms where stakeholders and financiers can coordinate activities (GFANZ, 2021).

Like all climate commitments, those from the GFANZ should be viewed with caution. Concerns have been raised about the network, as it contains many of the world’s leading investors in fossil fuel projects (Heubaum et al., 2021), and like the UNFCCC, it has no legally binding capacity to enforce action (Metcalf & Morales, 2021). The large increases in committed capital are positive and the membership has expanded significantly, but the short-term targets members are required to submit within a year of joining have not yet been released (Solomon et al., 2021). Such commitments are positive and are an expression of the cooperative functions of the UNFCCC, but because there are no legal requirements for

signatories, the GFANZ depends on the same mechanisms – cooperation, international review, peer pressure, and naming-and-shaming – to facilitate change.

To a greater extent, whether these tools at the disposal of the UNFCCC and the GFANZ are effective will be revealed in the next few years. Given the geopolitical reality the UNFCCC operates in, the tools at its disposal, and that it is essentially run on goodwill, perhaps it is remarkable that it has achieved anything at all (Sovacool & Linnér, 2016). While less than the ideal of legally binding emissions targets, the fact that countries and financial institutions become signatories to such institutions at the very least opens them up to some level of international scrutiny, and with it, the ability for governments, civil society organisations, journalists, and academics to apply pressure to encourage action on climate change. This may not provide the certain answers a threat like the climate crisis truly needs or humanity desires, but it does provide a forum and mechanism to continue applying pressure to a socio-economic system that so desperately needs to change.

## **V: Conclusion**

In the face of the civilisational threat of climate change, martialling climate finance will be pivotal. Only by mobilising climate finance at scale can the hope of transforming society and economy to create a low-carbon, sustainable future for humanity and the planet be achieved. This is particularly important for developing nations. For such countries, otherwise the most vulnerable to climate change by virtue of their lack of economic development, climate finance will be integral to their sustainable development in the years to come.

The UNFCCC, its current form provided by the Paris Agreement, is the primary institution tasked with governing the international response to the climate crisis, and with it, raising climate finance for developing nations. As an institution, the UNFCCC has significant limitations – relying on soft-power mechanisms like coordination, peer pressure, accountability, and transparency; operating in an unforgiving environment where it has no legal powers over nation states. Reflecting this, progress on mobilising climate finance has been slow and remains far below the levels required to achieve its climate goals. From this perspective, it is reasonable to argue that – in terms of mobilising climate finance to developing nations – the UNFCCC has proved ineffective at governing the international response to climate change.

Yet taking a broader approach, one better seated in the context of climate crisis and the geopolitical political reality of the twenty-first century, it is possible to view the effectiveness of the UNFCCC in a more forgiving light. The UNFCCC's reliance on soft-power mechanisms was the only option available after the failure of Kyoto. Although less desirable than legally binding powers and having only incremental impacts so far, these soft-power tools are having some influence; keeping climate change on the agenda, coordinating efforts between states and non-state actors, slowly increasing climate finance commitments and actions, creating a framework for international scrutiny and accountability, and offering a space for international cooperation, as the case of the GFANZ reveals.

In absence of the UNFCCC, these functions, and the pressure they apply to states and non-state actors to act on climate change, would likely be absent. In a world where few other options have been left, whatever its imperfections, the UNFCCC will in all likelihood remain crucial to the international response to climate change in the years to come; providing a glimmer of hope in the steepest of climbs, still with a great deal of work yet to be done.

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