

How not to fill the gap: Blended finance and climate justice

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Abstract

Policymakers worldwide currently share the general consensus that filling the climate finance gap will require attracting private investments. In this article, we discuss a family of instruments aimed at achieving this goal, so-called Blended Finance (BF) instruments. BF uses public resources to improve the risk/reward profile of relevant mitigation and adaptation projects in order to render them vastly more attractive to private investors. Political economy and critical macrofinance scholars have generally taken a critical stance towards BF. We contribute to this debate by arguing that BF also threatens to violate central climate justice-relevant fairness considerations. In particular, we claim that because BF inherently requires supported projects to be profitable, it unfairly generates financial flows from citizens in developing countries to private investors in developed countries. This contradicts central fairness requirements of plausible climate justice approaches, which necessitate that net financial flows move in precisely the opposite direction, from developed to developing countries. We discuss various objections to our argument and finally end by defending a policy approach aimed at increasing the fiscal space of developing countries before turning to private finance, which we consider much more likely to preserve climate justice.

Keywords

Blended finance, climate ethics, SDGs, climate finance gap, de-risking

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Introduction

Combating climate change is costly. As the International High Level Expert Group on Climate Finance stated in its 2024 report from 2024, developing countries (excluding China) are required to invest approximately \$2.5 trillion globally per year by 2030 in order to meet central mitigation and adaptation goals (Songwe et al., 2024: 4).¹ These financing needs will only increase with time. Unsurprisingly, these countries are unable to stem this burden on their own without developmental support from rich countries. Even less surprisingly, the track record of rich countries is poor: Various pledges to support the green transition in developing countries have been largely disregarded (Oxfam, 2023a). Many developed countries are still reluctant to stretch their fiscal budgets further to aid vulnerable developing nations to meet their climate financing needs. The almost unanimously accepted solution to this problem, embraced by the Independent High Level Expert Group (Songwe et al., 2024), IMF (2022), World Bank (Sierra-Escalante and Lykke, 2018), Green Climate Fund (2023), Network for Greening the Financial System (2023), and many more, is to attract private capital to fill the climate finance gap in developing countries. However, there is little incentive for private investors to engage with projects in the world's most vulnerable and poorest regions.

In this article, we critically examine a family of policy instruments aimed at attracting private funds to fill the climate finance gap in vulnerable nations, so-called 'blended finance' (BF). BF usually refers to a number of financial policy instruments that use public (and sometimes philanthropic) capital to channel additional private capital towards Sustainable Development Goals (SDGs)-related projects (OECD, 2018a). One of the central ideas behind these instruments, which we focus on in this article, is to employ public resources to de-risk targeted projects in order to attract private investors. At this moment, policymakers worldwide attach high hopes to BF. The IMF, for example, expects that if successful, BF measures could provide around \$10 in private funding for every \$1 in public funding provided (Adrian et al., 2022). Sharing this high hope, the European Union has considerably increased its reliance on BF by establishing a new blending facility (European Fund for Sustainable Development Plus), as have Canada (FinDev Canada), the United States (US International Development Finance Corporation), and many other developed nations over the last 10 years. BF is manifestly at the heart of the so-called 'billions to trillions' agenda (World Bank, 2015).

Unfortunately, the enthusiastic shift towards BF has problematic implications. In this article, we argue that there is good reason to believe that BF seriously threatens climate justice. This article thus contributes to the long-standing debate in political economy on privatized climate finance and enhances this debate by presenting crucial issues in the context of philosophical debates regarding climate justice. Due to its interdisciplinary nature, our article deploys a combination of standard empirical and philosophical methods. The empirical insights gathered in this article are the result of a thematic analysis of both primary sources, including reports by the OECD, Climate Policy Initiative, and Convergence, as well as seminal secondary sources from the political economy literature on BF. Our central argument, which is of decidedly normative focus, relies on standard

reflective equilibrium methods aimed at illustrating a mismatch between climate justice principles and the internal operational logic of BF.

The article is structured as follows: In the first section, we explain how BF aims to attract private finance to climate-relevant projects, introduce archetypical BF instruments and present the main criticisms launched against BF in the political economy literature. In the second section, we move on to our main argument. We argue that all plausible accounts of climate justice either subscribe to a backward- or a forward-looking conception of fairness. Regardless of which of these two options is favoured, the upshot is that wealthy nations and their citizenry ought to bear the overwhelming share of the climate burden, i.e. the cost to address climate change and its consequences. Thus, any plausible account of climate justice requires financial flows to go from wealthy, developed nations to economically vulnerable developing nations which are threatened by climate change. We argue that BF generates a palpable danger of shifting financial flows in the other direction, thus violating main fairness-related desiderata of climate justice. The third section discusses two objections to our main argument, the success of which is doubtful without significant empirical support, which is currently missing. In a final section, we sketch out an alternative approach which centres on increasing the fiscal space of developing countries.

Blended finance and the need for private funding

According to the High-Level Expert Group on Climate Finance (2023: 5), around \$1 trillion of cross-border investment per year will be needed by 2030 to meet the climate mitigation, adaptation, and compensation needs of emerging and developing countries (other than China). This represents a climate finance gap of around four times the current investment in these sectors. Sectors that are underfunded at present are primarily those other than mitigation. In particular, according to a recent and comprehensive literature review by the UN Environment Program (2023), adaptation costs for developing countries are in the range of \$215–387 billion per year by 2030, and increase substantially thereafter, in line with current mitigation policies. By contrast, public climate finance flows for adaptation from developed to developing countries amount to only \$21 billion in 2021. Private finance has also contributed very little to adaptation projects that can meet the needs of developing countries, mainly because these projects are less likely to become cash-flow activities (Gordon, 2023: 20). In fact, only 4% of private finance mobilized for development goals between 2018 and 2020 went to climate adaptation (OECD, 2023b: 4). Given these barriers, many believe that the only way to close the climate finance gap as quickly as possible is to mobilize private capital by using public capital to ‘de-risk’ the relevant investments (Gabor, 2021). BF is a central instrument currently put forward by most policymakers to achieve the required levels of de-risking.

While there is no consensus on a unified definition of BF, the most prominent version is due to the OECD, which defines BF as ‘the strategic use of development finance for the mobilization of additional finance towards sustainable development in developing countries’ (OECD, 2018a). While BF is employed for various purposes, including speeding up crucial developmental projects, providing technical assistance, or aiding in the design

stage of crucial mitigation or adaptation projects (Convergence, 2025), the central purpose of BF that we focus on in this article is to use public resources to protect private investors from losses or to guarantee returns on investments in asset classes tied to SDGs, i.e. to de-risk the relevant projects. De-risking is the process of adjusting the risk/return profile of a recipient project in order to render investment in the project attractive (Gabor, 2021). Various types of risks can undermine investors' willingness to provide capital for relevant projects in developing states. A report by the Climate Policy Initiative finds that the most important risks which constitute barriers to private investment are demand risks in the energy sector, currency risks which threaten to diminish profits, liquidity risks which might undermine future financing of supported projects, and policy risks which might render investments unprofitable in the long run due to adverse regulation (Tonkonogy et al., 2018: 5). BF instruments are thus employed in order to enable projects to offer investment-grade debt or equity that is 'commensurate with similar investments in OECD markets' (UN Environment Program Financial Initiative, 2021: 5).

BF tools can be grouped into four broad categories: design-stage grants, technical assistance funds, guarantees/risk insurance, and concessional capital (Convergence, 2025). In this article, we focus primarily on *concessional capital*, which constitutes the vast majority of BF transactions (Convergence, 2025; Randall, 2022). Concessional capital is an umbrella term for financing made available at below market rates. Transactions in which concessional capital is used schematically involve three parties: The respective capital instrument is provided by (a) blenders, i.e. public institutions such as Multilateral Development Banks and Development Financial Institutions, to de-risk (b) recipient projects in developing countries. The hope is that once de-risked, the recipient project enjoys an improved risk/reward profile, which renders them competitive or at least much more attractive to (c) private investors than they would be otherwise.

We can distinguish five basic forms of concessional capital:

1. Grants: Direct provision of a lump sum of money from blender to recipient with no required repayment (i.e. fully concessional).
2. Debt: Loan provided from the blender to recipient at a lower than market interest rate.
3. Equity: Shares bought by the blender from the recipient. The blender assumes fractional ownership over the recipient project.
4. Guarantees: The blender guarantees repayment for a third party offering a loan to recipient. In case of (partial) default of any pre-specified loss, the blender (instead of recipient) offers repayment to the third party.
5. First loss equity/debt: The blender provides equity or debt but assumes the lowest repayment priority. In case of (partial) default of the recipient project, losses are thus first absorbed by the blender qua creditor or shareholder before other creditors or shareholders (while shareholders generally assume a lower repayment priority than creditors).

Each of these forms of concessional capital de-risks a recipient project either by reducing the financing needs of the recipient project, thus lowering the risk of default due

excessive financing costs, and signalling confidence in the project (grants, debt, equity), or by straightforwardly absorbing large losses before they affect private investors (guarantees, first loss equity/debt). In short: Due to BF, private investors receive better returns at lower risk for investing in recipient projects.

Despite its appeal in theory, critics argue that BF has not delivered on its promises. Four points of criticism are worth highlighting here: lack of transparency, lack of effectiveness, lack of efficiency, and the extraction of wealth from developing and developed nations via financialization and privatization. To begin with, critics point out that accountability of blenders is often an issue, as illustrated by the fact that many BF donor facilities lack complaint mechanisms and that documentation about recipient projects is often incomplete (Pereira, 2017: 37). Worse yet, critics also attest a deeper ‘lack of definitional and methodological harmonization at the global level’ (Attridge and Engen, 2019: 32), meaning that there is neither a commonly agreed upon definition of BF nor a commonly agreed upon method of measuring how much private capital has in fact been attracted due to BF (Bayliss et al., 2020).

A related, yet more general strand of criticism points out that BF fails to be effective. Due to methodological discrepancies, estimates of how many dollars in private capital are leveraged for each public dollar in BF have historically varied between highly optimistic global leverage ratios of \$9.30 in private capital per \$1 in public finance (Adrian et al., 2022: 42) and shockingly low ratios of around \$0.37 in low income and \$0.65 in upper middle income countries (Attridge and Engen, 2019: 15). The general consensus is that BF has failed to attract private investments to projects specifically in the most vulnerable low-income countries, as admitted by the OECD, which in a recent report stated that private investment mobilization over the last decade has been ‘modest and below expectations’ (OECD, 2023b: 12). Recent estimates state that total private investments in low-income countries amounted to merely 12%, whereas private investments in middle-income countries amounted to roughly 45%. This indicates that despite BF support, private investors still shirk away from risky investments in politically and economically unstable countries (OECD, 2023b).

Third, critics argue that BF is not only ineffective, but inefficient, i.e. it is a far more costly alternative to pursuing development projects directly via public funds. This is primarily so for two reasons: First, governments can typically borrow more cheaply than the private sector (Goksu et al., 2017), and second, BF infrastructure is costly to maintain due to high transaction costs in legal, technical, and consultancy fees (Kedward et al., 2023: 1341). A particularly upsetting example is Belize’s \$364 million debt-for-nature swap, a textbook case of BF, which may have accrued as much as \$86 million dollars in financing costs owed to banks and financial professionals in the Global North (White, 2023).

Lastly, critics argue that BF fosters wealth extraction from both developing countries qua recipients of BF funds, as well as developed countries qua blenders. The latter occurs primarily because of an inequitable distribution of risks and rewards between blenders and private investors. Public blending institutions provide more than two thirds of their concessional funding via guarantees and grants, while around 90% of private investors allocate their funds via senior debt and equity (Mazzucato and de Sá, 2025: 12). Senior debt and senior equity are much less risky for investors, since debt requires

repayment, while senior equity guarantees for prioritized repayment in case of bankruptcy. Mazzucato thus concludes that ‘this configuration systematically places downside risk on the public balance sheet while allowing private investors to concentrate in safer, senior positions’ and thus is ‘raising concerns about the fair distribution of risk and return’ (Mazzucato and de Sá, 2025: 13).²

The former occurs via privatization and financialization of crucial infrastructure (Gabor, 2021). More concretely, BF operates via the establishment of private–public partnerships (PPPs): Private investors offer funding for recipient projects, but in return require that the projects remain profitable. Profitability is achieved by providing crucial infrastructure services in mobility, energy, water, sanitation etc. in return for user fees, such as highway tolls or electricity billing. If user fees cannot be collected, profitability is ensured via state guarantees and subsidies, especially in order to mitigate demand risk (Gabor, 2021). In light of previous experiences, the European Court of Auditors (2018) warned that the long-term cost-effectiveness of PPPs is doubtful as direct public investments are usually cheaper because of lower financing costs. Another report submitted to the French Senate (Sueur and Portelli, 2014) went as far as renouncing PPPs outright as ‘budgetary time bombs’. An illustrative case is the Ghanaian Sankofa Gas Project PPP, which committed state-owned Ghana National Petroleum Corporation to purchase 90% of a predetermined quantity of gas produced. In 2019, Ghana’s bill for unused gas owed to private investors amounted to \$250 million, around 0.35% of Ghana’s GDP (Bretton Woods Observer, 2020), which led to the IMF declaring Ghana’s gas sector as a fiscal risk to the country, in line with the more general worry that ‘35% of the outstanding PPP arrangements become part of public debt’ (IMF, 2019: 2). BF often shifts significant financial resources from end consumers in developing nations and their governments to private investors, potentially leaving these countries and their citizens in financial distress as a result. This last point of criticism is of particular importance for our purposes here. In what follows, we argue that BF threatens climate justice primarily because of its tendency to generate financial flows from developing to developed countries in order to secure profitability.

The unfairness of BF

In this section, we argue that the employment of BF tools generally threatens to produce an unfair state of affairs: Any plausible account of climate justice will insist that duties of mitigation, adaptation, and compensation should disproportionately lie with wealthy emitters in developed states. All else equal, this implies that net financial flows dedicated to climate action ought to move from wealthy emitters to residents in developing states exposed to harms due to climate change. BF has an inherent tendency to reverse this desired direction of financial flows. Let us begin by illustrating why plausible climate justice accounts typically converge on the idea that it is fair for the wealthy to disproportionately bear the burden of mitigation, adaptation, and compensation.

Climate justice accounts either subscribe to *backward-looking* or *forward-looking conceptions of fairness*, or combinations of both. Backward-looking conceptions insist that duties of mitigation, adaptation, and compensation should fall on those who have

caused others harm via their contributions to climate change (Neumayer, 2000; Shue, 2017; Tan, 2023). The underlying claim is that it is unfair for other parties to become bearers of such duties, since those parties cannot be held causally responsible for the harm induced by human-made climate change. However, some promoters of backward-looking conceptions of fairness cautiously take the year 1990 to be the cut-off point from which backward-looking duties apply. This is because, prior to the formal establishment of the scientific consensus on climate change with the publication of the first IPCC report in 1990, emitters could be considered excusably ignorant of their contribution to climate change (García-Portela, 2023).

More than half of the greenhouse gas emissions since the industrial revolution have been produced in the last 35 years (Moss and Kath, 2018: 269). Thus, even in the face of supposedly excusable ignorance, we can determine for whom it is fair to bear a large part of the climate burden. From 1990 to 2019, the emissions of the globally wealthiest 1% grew at the same rate as the emissions of the global bottom 50% (26%), while the emissions of the global middle 40% declined by 1.2%. This has led to the current situation in which the top 1% emits more in total than the bottom 50% (around 17% of annual greenhouse gas emissions versus just over 11%). More specifically, in 2019, the average carbon footprint of a member of the top 1% was 101 tCO_{2e} per year, and that of a member of the top 10% was almost 29 tCO_{2e}, against 6 tCO_{2e} for the middle 40% and 1.4 tCO_{2e} for the bottom 50% (Chancel et al., 2022). The clear conclusion is that even if the focus of responsibility is narrowed to post-1990 emissions, climate justice accounts built on backward-looking conceptions of fairness will yield the result that the wealthy ought to disproportionately bear the cost of mitigation, adaption, and compensation.

Forward-looking conceptions of fairness insist that, regardless of causal responsibility, it would be fair to assign the climate burden to those who can bear it without endangering their morally relevant interests, i.e. the wealthy (Kingston, 2021; Moellendorf, 2014; Shue, 2015: 186–189). The richest 10% of the world's population control about 76% of global wealth. This is a relatively small club of people, just over 500 million, of whom the least wealthy have about 125,000 PPP€ (Chancel et al., 2022: 25–28). Within the top 10%, wealth is unevenly distributed, both quantitatively and qualitatively. On the one hand, the top 1% controls vastly more wealth than the remaining 9% (Chancel et al., 2022: 90; Oxfam, 2023a). On the other hand, the top 1% controls the majority of financial assets, while the wealth of the remaining 9% consists mainly of real estate (Kenner, 2019: 27). Given this distribution of wealth, forward-looking conceptions of fairness promote the view that it would be blatantly unfair to choose to pursue the alternative and allocate the climate burden with the global poor, or to even distribute it equally among the wealthiest top 10%. Fairness requires that this cost is distributed in proportion to wealth.

Combinations of these conceptions of fairness which start from forward-looking conceptions can adjust their accounts for historic emissions. Those who have made their wealth with emission-intensive activities could be required to take on a proportionally larger share of the climate burden (Caney, 2010: 215; Roser and Seidel, 2017: 147). Combinations which begin from backward-looking conceptions could argue that the climate burden should not fall on emitters or the wealthy per se, but rather more generally on beneficiaries who have unjustly profited from their own or others' emissions (Page,

2011). As we argue below, even on these alternative conceptions, the wealthiest top 10% and more so top 1% ought to bear a disproportionate share of the climate burden.

From 2020 to 2023, the wealthiest top 1% has appropriated two-thirds of newly created wealth, reinforcing their economic dominance – the top 1% control more wealth than the bottom 90% (Oxfam, 2023b). One of the main reasons for this unprecedented enrichment of the top 1% in recent years are the stratospheric profits of fossil fuel companies and the huge corporate profits from inflation. The world's top five oil and gas companies made a record \$200 billion profit in 2022. Some of this money went into the pockets of shareholders in the form of dividends, and some went into fossil fuel infrastructure and exploration investments in the same year, amounting to \$1 trillion (Milman, 2023). At the same time, corporate profits have contributed to inflation in an unprecedented way in recent years (Bivens, 2022). On the one hand, this allows companies and shareholders to become extraordinarily wealthy; on the other hand, it helps to keep the prices of many basic goods high, thus hindering the satisfaction of the basic needs of a large number of people, even in developed countries (Smith and Rennison, 2023). Hence, on combined conceptions of fairness, the largest part of the climate burden also falls on the global top 10%, and even more on the top 1%. In conclusion, both backward- and forward-looking conceptions of fairness as well as standard combinations of these conceptions argue in favour of imposing the climate burden disproportionately on the wealthy in proportion to their emissions, their wealth, the degree to which their wealth was obtained from emission-intensive investments, or the degree to which they benefitted from investments which contributed to climate change.

Back to BF. As we pointed out in the previous section of this article, BF requires that recipient projects are profitable; they must generate a steady stream of income for their investors in order to attract private capital. The inherent logic of BF is thus focused on what kinds of services are suitable for privatization in the first place. As the Inter-American Development Bank explains in an early note on mobilizing private capital:

When thinking about whether a project is bankable, the first thing Multilateral Development Banks should be asking themselves is ‘will people pay to use it?’ Investors are far more confident in returns when projects have a built-in set of users who are willing to pay (Inter-American Development Bank, 2017: 10).

Ultimately, profitability of recipient projects entails that private investors receive a stream of income collected either from end users of a recipient project in a developing country or from their governments via some form of subsidization. Who accrues this stream of income? Total global assets held by banks, institutional investors, and asset managers are estimated around \$470 trillion, 80% of which are held in developed economies (OECD, 2021: 4). BF explicitly aims at attracting capital from wealthy asset owners who are primarily located in developed nations. As of now, blenders as well as private investors are primarily located in the Global North: All major blenders, i.e. DFIs as well as bilateral institutions, are exclusively based in the Global North, primarily in Europe and the USA (OECD, 2023b), and according to Convergence (2025), out of the ten

most active private investors in BF-funded projects, eight are headquartered in the US or EU, the remaining two are headquartered in Japan.

The underlying problem is forcefully illustrated in a recent report commissioned by the EU Parliament's Committee on Development, which discusses the widely studied case of privatized water system infrastructure in developing countries. Here, the authors examine increasing user fees (tariffs) for water system usage in developing countries to cost recovery levels in order to attract private investors:

Raising tariffs to cost recovery levels in a number of African countries would be prohibitively expensive relative to income levels generally, and even relative to the incomes of the top quintiles in many countries. Essentially, then blending could lead to a situation where pensions [in developed countries] are financed by increased water bills in developing countries where affordability is questionable (Bayliss et al., 2020: 20; parenthesis added).

The crux is that raising user fees (even to cost recovery levels) to ensure profitability inevitably generates a financial stream from users in developing countries (or their governments via subsidies, as in the case of the Sankofa Gas Project) to wealthy investors in developed countries. This is precisely the *opposite direction* in which resources should flow according to any plausible backward- or forward-looking account of climate justice, but under BF, profitability requires that resources flow from the economically vulnerable to the wealthy. However, more generally, we believe that the fundamental issue with BF (the transfer of resources from poor to rich) would not be resolved if the transfer occurred intra-nationally or intra-regionally: If it were the case that it was disproportionately rich and/or polluting beneficiaries from Ghana who received resources from poor Ghanaian residents due to BF, we would attest a similar violation of climate justice enabled by BF. The normative upshot is thus that the employment of BF ultimately entails a deeply unfair state of affairs, on both backward- and forward-looking conceptions of fairness.

An obvious objection is that nothing guarantees that the employment of BF necessarily leads to such violations of fairness. Even if there is a broad number of problematic implementations, we can at least conceive of a situation in which BF takes in financial flows from developing to developed countries, but nonetheless creates net benefits for users (and their governments) in those countries because without BF, the required investments in, for example, energy infrastructure or flood walls would not have taken place.

While we acknowledge that this is a theoretical possibility, it is worth stating explicitly that the burden of proof is on promoters of BF. The crucial point here is that employing BF instruments must ultimately be justified by the fact that the benefits generated via BF would not have been generated in the absence of these instruments. The technical term for this desideratum is 'mpa#lsquo;additionality'. BF provides additionality if it is the case 'that private investment [in a specific project] would not have been made if it were not for the Official Development Assistance (ODA)/public funds (i.e. the blending)' (Bayliss et al., 2020: 19; parenthesis added). If a particular project had received funding even without BF, then the employment of BF lacks justification. Unfortunately, assessment methodologies for additionality remain vague and contested in the literature

(Carter, 2018; Pereira, 2015). In fact, multiple OECD reports have admitted that ‘in practice, mobilization [of additional private finance] is often assumed rather than observed’ (OECD, 2019: 17; parenthesis added), or worse, that ‘little reliable evidence has been produced linking initial blending efforts with proven development results’ (OECD, 2018b: 140). As Bayliss et al. conclude, ‘across the board, additionality tends to be assumed rather than established’ (Bayliss et al., 2020: 32). The claim that BF generates net benefits for users in developing countries cannot be verified in the absence of reliable evidence of developmental and financial additionality. Yet, despite this devastating observation, the OECD itself continues to insist that ‘in order to scale up mobilized private finance, providers should urgently make greater use of mobilization instruments and blended finance solutions more generally’ (OECD, 2023b: 12). In sum, BF generates financial flows from developing to developed countries and there is no reliable evidence that citizens in developing countries ultimately receive a net benefit due to the employment of BF.

Objections

Irrelevance

Quite surprisingly, even staunch promoters argue that BF cannot be a ‘silver bullet that will solve every development challenge’ (Larrea, 2021). Indeed, Convergence (Larrea, 2021), the largest global network for BF, officially stated that public resources dedicated to BF should ideally amount to 5% of total annual ODA. The underlying argument states that we should hence not be worried about BF as introducing a fundamental paradigm shift in foreign aid policy. A potential objection to our argument could thus be that even if BF is unfair, the degree to which it frustrates climate justice is negligible. Instead, we should consider BF merely as one minor, yet particularly efficient way to mobilize urgently needed capital. The vast majority of the heavy lifting to reach mitigation and adaptation goals will still fall to public ODA. Call this the *objection from irrelevance*.

Convergence reports that the average amount of ODA dedicated to BF during the timeframe between 2018 and 2023 years was about \$1.3 billion (Convergence, 2023: 20), equivalent to less than 1% of average net ODA within the same time period (OECD, 2023a). At the moment, the objection from irrelevance thus seems motivated, even though critics point out that the number of BF instruments that have been employed is likely a much larger share of ODA which has not been monitored correctly due to ambiguities and gaps in reporting (Meeks et al., 2020). But there are reasons to believe that BF will play a much larger role in the future. A recent survey by the OECD highlights that the mobilization of private finance for climate action remains a prioritized strategic goal for 64% of multilateral BF providers and 42% of bilateral providers (OECD, 2023b: 32). The ambition to significantly increase BF is also demonstrated by the World Bank Group’s 2025 Targets to Step Up Climate Action, which aimed at employing \$67 billion dedicated to ‘significantly increasing the leverage of private finance’ (World Bank, 2022: 18), presumably by relying on BF or similar instruments.

An important additional issue is that since 2018, OECD member states have on average achieved only around half of their mandated net ODA target of 0.7% of Gross National Income (the exceptions in 2023 were Luxemburg, Sweden, Norway, and Germany; see OECD, 2023a).³ As ODA spent on BF will foreseeably increase significantly in the near future, the relative opportunity costs of each dollar spent on BF rather than on conventional uses of ODA increases proportionately (Attridge and Engen, 2019; Pereira, 2017). This is particularly worrisome in light of the fact that the additionality of BF remains opaque. In short, even if comparatively little ODA is spent on BF at the moment, this percentage should be expected to increase significantly, as will the accompanying opportunity costs of employing BF instruments.

Feasibility

Another important objection comes from feasibility. There are two variations of the objection: First, an objection from fiscal feasibility, and second, an objection from political feasibility. We begin with the former.

One of the central motivations for embracing BF is that with an SDG funding gap (including the climate and adaptation gap) of around \$4 trillion per year ‘it will be nearly impossible to meet these goals by relying on public funding alone’ (World Bank, 2018). As explained earlier, BF tools are presented as a necessary element for achieving SDGs, since scarce fiscal resources are insufficient to achieve the SDGs: Private finance must be crowded in via BF (Gabor, 2021: 14). This line of reasoning entails that even if the employment of BF violates central climate justice considerations, there is no fiscally feasible alternative for developed nations to achieve their development goals, including meeting mitigation and adaptation targets in developing nations. Fascinatingly, this objection is so widely accepted that it is typically not even substantiated with evidence by promoters of BF (see for example Convergence, 2023: 13; OECD, 2023b: 4).

Even though we cannot fully evaluate the validity of the objection’s underlying empirical claim here, it is worth pointing out some reasons to be sceptical about it. First, BF projects are usually coordinated in cooperation with public banks, i.e. banks which are in public ownership (state or municipality) and operated with a public mandate. BF activities are particularly relevant for public banks with a mandate for development. For example, many BF initiatives undertaken in Europe are coordinated via the European Investment Bank and the European Bank for Reconstruction and Development (Thiemann et al., 2025). The crucial point here is whether such public banks, especially in developed countries, are necessarily forced to turn to private investors in order to fund mitigation and adaptation projects. Unfortunately, information regarding the availability of loanable funds available to public banks is difficult to obtain, and thus, some authors consider immediately loanable public bank funds to be severely underestimated. Tapping into these sources of funding could in fact provide sufficient funding to close a substantial part of the SDG and climate finance gap. As Marois states:

If you are led to believe that public banks control at best \$5 trillion in total assets, then raising \$6 trillion annually seems insurmountable. You would obviously need to tap private markets. But,

if you understood that public banks alone have closer to \$38 trillion in assets then the realm of the possible is radically different (Marois, 2019: 158).

Second, even if public finance is indeed scarce, it is at best an open question whether embracing BF is actually relieving the public fiscus in the long run. As established earlier, BF primarily operates via the establishment of PPPs. Some scholars argue that PPPs are not primarily attractive to policymakers because of their purported low costs, but rather because PPP investments do not contribute to the fiscal deficit in the short run and thus permit them to signal fiscal discipline (Engel et al., 2021: 334). Even if PPPs provide initial private financing, they can in the long-run become much more costly to the public purse than direct public financing if left without proper institutional controls and safeguards (Reyes-Tagle and Garbacik, 2016; Trebilcock and Rosenstock, 2015). As Funke et al. put it: If a government ‘cannot afford to finance the project using traditional public finance, it probably cannot afford to undertake it as a PPP. Conversely, if the government can afford to undertake the project as a PPP, it can probably also afford to finance it traditionally’ (2013: 9).

Third, a novel heterodox approach to economics, so-called Modern Monetary Theory, insists that ‘monetarily sovereign governments have a very flexible policy space that is unencumbered by hard financial constraints’ (Tymoigne and Wray, 2013). Its proponents argue that monetarily sovereign states can always meet payment commitments denominated in their own currency simply by issuing more. Their fiscal constraints are thus primarily determined first, by their payment commitments denominated in foreign currency and, second, resource constraints (Kelton, 2020; Mosler and Forstater, 1999). Hence, if Modern Monetary Theory is correct, it undermines the objection from fiscal feasibility insofar as fiscal constraints denominated in a state’s own currency do not constitute a ‘hard constraint’ (more on this below).

Fourth, as we discuss in detail in the next section, developing countries still have feasible alternative policies available to increase their fiscal space in order to scale up public financing of important mitigation and adaptation projects before turning to private finance. In conclusion, even though we are not able to conclusively evaluate the objection from fiscal feasibility, there are points of contention which raise important doubts regarding its validity. Precisely because the objection from fiscal feasibility is often taken for granted, these doubts should be taken seriously.

The objection based on political feasibility states that even if proponents of BF were to concede the justice-based arguments against it, any alternative would be politically unfeasible due to a lack of political consensus and opposition from entrenched economic interests. In this case, our criticism of BF would be relevant in theory, but not in practice.

The political feasibility of a policy proposal can be assessed in terms of both ‘hard’ and ‘soft constraints’ (Carey, 2024: 10–11; Gilabert and Lawford-Smith, 2012). Hard constraints on political action are logical, physical or metaphysical limitations that cannot be lifted or altered. These constraints lend themselves mainly to a binary assessment of feasibility. A political action is either feasible, in which case it does not encounter any hard constraints, or it is not feasible, in which case it encounters at least one hard constraint. Clearly, different political actions may face hard constraints of different

magnitudes. For instance, providing the resident population with twice the national average income would presumably face unchangeable logical constraints. Similarly, providing the resident population with three times the national average income would encounter the same logical constraints. Therefore, both actions are politically unfeasible (Lawford-Smith, 2012: 244–245). However, it would not make much sense to compare the two actions and claim that the second is more unfeasible than the first, as this would be akin to saying that jumping one and a half kilometres high is more unfeasible for a human being than jumping one kilometre only. For our purposes, it is sufficient to conclude that neither of these actions could ever be realized.

Conversely, soft constraints on political action are primarily institutional, economic and cultural limitations that may be more or less significant yet remain malleable. Therefore, a proposal that comes up against one or more of these constraints remains feasible from a binary perspective. However, from a scalar perspective, its feasibility can be assessed as greater or lesser depending on the significance and malleability of the constraints in question. For example, transitioning a country such as the United Kingdom from a capitalist to a socialist production system would be feasible in a binary sense. However, it encounters soft constraints of an economic nature, such as entrenched economic interests pushing for the status quo, institutional constraints in the form of the complexity of common law reforms, and cultural constraints manifested in widespread support for the free market. This suggests that this political proposal should be placed at the lower end of the political feasibility spectrum (Gilabert and Lawford-Smith, 2012: 820; see also Lawford-Smith, 2011). In the case of climate finance, hard constraints would mainly relate to fiscal viability, but as we have indicated above, BF might very well turn out to be much more expensive for the public than at least some of its alternatives. It is therefore doubtful that BF is unavoidable due to a hard constraint related to fiscal viability.

Soft political constraints refer to the institutional and cultural circumstances that may influence whether governments decide to use only public funds to bridge the climate finance gap, and whether they translate this into concrete measures (Gilabert and Lawford-Smith, 2012: 813). Institutional soft constraints refer to governments' ability to take the administrative and bureaucratic steps necessary to mobilize sufficient public funds to bridge the climate finance gap within a reasonable timeframe. Because governments in developed countries typically possess robust, well-functioning and accountable institutions, and because BF-financed projects are often structured via multi-national, complex financial contracts, we posit that institutional soft constraints on alternative policies than BF are likely either lower or not significantly higher than BF.

Institutional soft constraints can also take on the form of economic entrenchment or structural economic power. Private investors are almost unrestricted in their ability to choose between multiple investment destinations. This, in turn, enables them to pursue a 'divide and rule' strategy, in which states are 'in competition with each other to attract investment' which then leads 'to the awarding of ever-more generous subsidies and tax exemptions' (Bulfone et al., 2024: 26). Due to these dynamics, private investors are imbued with the power to determine the achievement of states' mitigation and adaptation targets by simply withholding funding unless the projects in question exhibit their

preferred risk/reward profile (Gabor, 2021). The fact that BF does not challenge this form of economic power, but rather enforces it, renders BF subject to fewer soft constraints than many of its alternatives.

Cultural soft constraints refer to the moral beliefs and intuitions that may cause taxpayers in developed countries to be reluctant to pay for the climate transition in developing countries. We acknowledge that these constraints are significant. Much of the public in developed countries is concerned about the climate crisis and would like to see more action taken (UNDP, 2024). Furthermore, recent studies show that the majority of people in some developed countries would be willing to give up some of their wealth to facilitate climate action in developing countries (Fabre et al., 2025). However, this willingness appears to be limited to relatively minor sacrifices. Large cross-border transfers of public resources from developed to developing countries would probably encounter strong political opposition from at least one sector of public opinion in developed countries, particularly conservatives with a fundamentally statist conception of socio-economic justice.

In sum, although alternative methods of closing the climate finance gap, such as those that make significant use of concessional public finance, are politically feasible, they occupy the lower end of the spectrum of political feasibility for global climate action, while blended finance occupies the upper end. The reason for this, as mentioned, is that blended finance is the climate finance strategy that faces the fewest soft constraints: It does not conflict with entrenched economic interests, but rather caters to them, and at least superficially does not involve a relative sacrifice on the part of taxpayers in developed countries.

However, soft constraints are, as we mentioned, ‘malleable’: They can be mitigated over time, especially cultural constraints (Gilabert and Lawford-Smith, 2012: 814; Lawford-Smith, 2012: 255). This is particularly relevant given that global warming is a growing phenomenon, marked by tipping points that reinforce each other. Based on current policies, many of these tipping points could be triggered in the coming decades, which could undermine some of the fundamental pillars of life in developing countries, including agricultural production, water availability, and outdoor living conditions (Ngcamu, 2023; Ripple et al., 2026). This could have severe global repercussions through global supply chains, migration, and political instability. In such circumstances, it is likely that many of the cultural soft constraints faced by developed countries in providing concessional financing for climate action to developing countries could be relaxed, thus prompting both public and private investors to readjust their financial priorities.

Finally, given the urgency of tackling the climate crisis, some may argue that it is therefore justified to increasingly resort to BF, since any policy intervention is better than no intervention at all. As we sketched out earlier, whether BF turns out to be economically superior to ‘business-as-usual’ (BAU), i.e. simply refraining from policy intervention with climate change *grosso modo*, depends crucially on the effectiveness and the costs of BF. We have indicated that there is reason to be sceptical about both issues: Measuring the effectiveness of BF initiatives continues to be a major challenge and without effectiveness, there is a serious risk that states overpay for the benefits in mitigation and adaptation they receive (compared to BAU). These factors are immediately inter-linked with the climate justice dimension of BF: Because BF is justified insofar as it

achieves desired outcomes, its justification depends crucially on whether it generates desired net benefits in mitigation and adaptation in the first place. If it does not, BF threatens to violate climate justice by imposing net losses on the vulnerable.

Again, we argued that policymakers should be sceptical about BF's ability to achieve the desired outcomes. Therefore, it would be prudent for policymakers to limit the implementation of BF to projects that can reliably demonstrate their effectiveness and cost efficiency, instead of presuming that BF is generally better than nothing. By its proponents' own admission, BF is not meant to be a silver bullet. Policymakers should accordingly enhance the policy toolbox to alternative means to achieve mitigation and adaptation outcomes. In the next section, we sketch out some of these alternative policy tools to BF.

An alternative: Fiscal space for public finance

Thus far, our main argument was that BF violates central climate justice fairness considerations. In this section, we argue that the most evident justice-preserving policy alternative to the de-risking paradigm is to increase the fiscal space of developing countries instead of relying on private investments to secure mitigation and adaptation targets.

Promoters of BF typically point out that mobilizing private finance is an important measure to fill the climate finance gap. However, as Attridge and Engen argue, 'BF may tip the balance, but it will not work if the economic fundamentals are not in place' (2019: 11). A crucial precondition for successful mobilization of private capital in developing countries is previous public investment. Indeed, a significant number of studies confirm that public investment attracts, rather than crowds out, private investment over the long term (Aschauer, 1989; Matvejevs and Tkacevs, 2025). Thus, increasing the public fiscal space of developing nations, rather than de-risking, could prove a central precondition not only for building important mitigation and adaptation infrastructure, but ultimately also for attracting private finance.

There is a large policy menu available for increasing fiscal space, which we are unfortunately unable to present here in an exhaustive manner. Which policies are particularly suitable for a specific context is arguably a matter of case-by-case evaluation, which is beyond the scope of our article. Nonetheless, it is worth highlighting some important options.

First, developed nations must live up to their ODA and international climate finance commitments. In 2022, ODA amounted to roughly \$204 bn, which represents barely around half of the officially stated ODA targets for that year (OECD, 2023a).⁴ Furthermore, around 15% of this amount is deployed domestically to host refugees (Craviotto, 2023). Living up to the ODA targets in one year alone would take us a long way in filling the climate finance gap: On its own, this amount is equivalent to the adaptation gap of roughly \$200 bn in developing countries. In addition, developed countries could simply meet their international climate finance commitments to mobilize \$100 billion per year by 2020, as agreed at COP15 in Copenhagen, even though this amount was generally recognized as only a symbolic figure and fell far short of the real needs of developing countries (Timperley, 2021).

Second, the number of developing countries in debt distress has risen significantly since 2015 (Chabert et al., 2022). The IMF reports that long-term repayments of developing countries have tripled from the historical average to \$60 bn (Holland and Pazarbasioglu, 2024). Much needed large-scale debt restructuring, including partial and full debt cancelation, could open up significant fiscal space (Ortiz et al., 2017: 42). Pursuing debt restructuring on a large scale, for example via an expansion of the Heavily Indebted Poor Countries Initiative, could significantly diminish debt distress and lower the public financing costs of developing countries in order to provide more fiscal space.

Third, improving taxation could provide additional fiscal resources for pursuing adaptation and mitigation goals. A recent IMF report suggests various reforms to increase the tax base in developing countries and estimates these reforms could in total amount to a surplus of 9% of GDP in tax revenue, which could in turn be deployed for development (Benitez et al., 2023). Furthermore, there is still ample potential to constrain tax evasion and illicit outflows from developing countries. According to the Tax Justice Network, losses in tax revenue on average wipe out around half of developing countries health budgets yearly, around \$50 bn (Tax Justice Network, 2023). Limiting tax evasion, however, will require significant international coordination on taxation. A reason to be somewhat hopeful for progress in this area is that a dedicated UN Intergovernmental Negotiating Committee is currently drafting a Framework Convention on International Tax Cooperation, and its results will be presented in 2027 (UN Department of Economic and Social Affairs, 2026).

Last, a much more ambitious approach supported by various critical macrofinance scholars is the ‘big green state’ (BGS), a radical form of industrial policy which would entail a massive rearrangement of fiscal and monetary authorities to enable large-scale public investment targeted towards meeting the SDGs (Gabor, 2021; Ryan-Collins et al., 2022). The point of the BGS, as Blyth and Downey put it, is that ‘the big green state is not interested in either nudging or attracting. Under this regime the state directs, and capital follows, if capital wants to make any profits at all’ (Blyth and Downey, 2025: 533). Contrary to the ‘only carrots’ approach of BF, which bribes private finance into participating in filling in the mitigation and adaptation finance gap, the big green state thus promotes a ‘carrot and stick’ approach aimed at disciplining private capital to stay in line with the state’s industrial policy agenda.

The BGS achieves its decarbonization objective via two policy levers: Coercing or bypassing private capital (at least where the relevant projects are not immediately profitable).

Coercion comes in the form of regulatory ‘sticks’. While the BGS still uses ‘carrots’ in the form of subsidies, tax rebates, research and development spending, land grants, concessional loans, and so forth, these carrots come with performance conditionalities attached, such as profit sharing, ensuring global competitiveness, or ensuring equitable and affordable access to particular goods (Mazzucato and MacFarlane, 2023).⁵ When beneficiaries fail to meet the conditionalities, ‘sticks’ are deployed. These measures can range from losing access to preferential credit to shifting assets directly to beneficiaries who met the conditions.

Bypassing primarily occurs via public procurement funded by high public spending, often in the form of deficit spending: The logic here is that at least monetarily sovereign states can borrow cheaper and therefore cover more of the mitigation and adaptation gap than private capital. Among BGS proponents, there is still an unresolved question regarding how much financing of a green transition should be taken over by the state versus private capital, in which the positions span from no private investment to a half-half approach (Larsen, 2025). Where the state considers the involvement of private institutional investors suitable, it can issue debt instruments such as green or SDG bonds and hence retain control of the direction of industrial policy instead of relinquishing it to price signals of financial markets (Gabor and Braun, 2023: 28).

In conclusion, there is a wide plethora of important and politically feasible options for increasing the fiscal space of developing countries which would enable developing countries to pursue direct public investments without having to turn to private finance in the first place. However, our point here is not that attracting private capital via de-risking should be off the table entirely. Certainly, private capital can do much good to bolster innovation and growth in certain sectors (presumably outside of critical infrastructure) of the economy. However, relying primarily on ‘only carrot’ approaches à la de-risking via BF threatens efficiency, efficacy, and ultimately climate justice concerns. A more justifiable policy approach would insist on improving developing states’ fiscal capacities and maintaining a clear industrial policy vision first, and only then move on to employing de-risking instruments to fine-tune financial flows where they are most needed and most likely to be effective.

Conclusion

In this article, we discussed a rapidly growing paradigm shift in development policy towards de-risking via BF. Our main conclusion was that the employment of BF tools, as it is currently practiced, constitutes a serious threat to climate justice. Our central argument for this conclusion is that BF operates via PPPs, which entail significant financial outflows from developing to developed countries, which in turn stands in stark contrast to central fairness conceptions in any plausible climate justice theory. In a last section, we outlined an alternative policy direction which aims at building up developing states’ fiscal capacities first and only attracting private finance where it can be disciplined and aligns with sustainable industrial policy.

On a final note, this article focused specifically on the issues that BF raises with regard to global climate justice. However, it is worth noting that a number of ethical issues also surround the more general use of market-based instruments, including BF, for climate action (Neuteleers, 2022; Sandel, 2005). These issues are not covered in this article, but further investigation would be worthwhile. We highlight what we believe to be the two main issues below. Firstly, BF can lead private actors to believe that they can contribute to the worsening climate crisis through emissions-generating activities, as long as they reinvest some of the profits in climate projects in developing countries, potentially generating further profit. On the one hand, this normalization effect may lead to ‘green-washing’, whereby polluters present themselves as climate-friendly by using BF as a

marketing tactic. On the other hand, it can crowd out noneconomic motivations for private actors to take climate action that goes beyond what is cost–benefit justified. Secondly, within BF schemes, local populations in developing countries are mainly viewed as potential customers and end users of certain economic activities, rather than as communities that can express their needs through democratic and inclusive processes. This may result in profit-seeking being prioritized over other concerns that local populations may have, such as those relating to natural systems, cultural assets, and traditional ways of life, which they may value intrinsically or relationally.

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No data is available for this article.

Notes

1. The total global investment required is estimated at \$6.3–6.7 trillion per year by 2030 (Songwe et al., 2024: 13).
2. This point in particular has been appreciated beyond debates on renewable energy. Stein and McNeill, for example, make a similar point about the sharing of risks and rewards for BF in the context of vaccine production (Stein and McNeill, 2025: 9).
3. It is worth putting this number into perspective with a back of the envelope calculation: if all OECD member states actually achieved their contribution goals of 0.7% of GNI, ODA for

- 2022 alone would have been around \$400 billion (OECD, 2023a). This would amount to an addition of around \$200 billion, which is roughly equivalent to the entire private finance mobilization of \$203 billion achieved since 2012, according to Convergence (2023).
4. As Eurodad states, the total amount of ODA that developed countries committed to but failed to deliver over roughly four decades now amounts to \$6.5 trillion (Craviotto, 2023: 3).
 5. There is a large variety of tools available to both fiscal and monetary authorities to discipline private capital, ranging from coupling subsidies and tax exemptions to performance conditions on the fiscal side (Gabor and Braun, 2023) to various prudential policies available to central banks, such as green capital requirements, green leverage ratios and direct lending targets for banks (D’orazio and Popayan, 2019) to greening collateral frameworks (Dafermos et al., 2022). Due to space constraints, we are unable to discuss all these policy options at length here.

References

- Adrian T, Bolton P and Kleinnijenhuis M (2022) The Great Carbon Arbitrage. *IMF Working Paper*.
- Aschauer DA (1989) Is public expenditure productive? *Journal of Monetary Economics* 23: 177–200.
- Attridge S and Engen L (2019) *Blended Finance in the Poorest Countries. The Need for a Better Approach*. London: Overseas Development Institute.
- Bayliss K, Bruno Bonizzi B, Dimakou O, et al. (2020) The use of development funds for de-risking private investment: how effective is it in delivering development results? Study requested by the European Parliament Committee on Development. Available at: [https://www.europarl.europa.eu/thinktank/en/document/EXPO_STU\(2020\)603486](https://www.europarl.europa.eu/thinktank/en/document/EXPO_STU(2020)603486) (accessed 22 August 2025).
- Benitez JC, Mansour M, Pecho M, et al. (2023) Building tax capacity in developing countries. IMF Staff Discussion Notes No. 2023/006. Available at: <https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2023/09/15/Building-Tax-Capacity-in-Developing-Countries-535449> (accessed 22 August 2025).
- Bivens J (2022) Corporate profits have contributed disproportionately to inflation. How should policymakers respond? In: Working Economics Blog. Available at: <https://www.epi.org/blog/corporate-profits-have-contributed-disproportionately-to-inflation-how-should-policymakers-respond/> (accessed 22 August 2025).
- Blyth M and Downey L (2025) Macrofinance and the green transformation: nudging, attracting, and coercing capital towards decarbonization. *Review of International Political Economy* 32(3): 529–541.
- Bretton Woods Observer (2020, April 7) Ghana’s Sankofa Gas Project – backed by World Bank – brings fiscal pain. Available at: <https://www.brettonwoodsproject.org/2020/04/ghanas-sankofa-gas-project-backed-by-world-bank-brings-fiscal-pain/> (accessed 22 August 2025).
- Bulfone F, Ergen T and Maggor E (2024) The political economy of conditionality and the new industrial policy. *MPIfG Discussion Paper No. 24/6*.
- Caney S (2010) Climate change and the duties of the advantaged. *Critical Review of International Social and Political Philosophy* 13(1): 203–228.
- Carey B (2024) A multifunctional account of political feasibility. *Canadian Journal of Philosophy* 54(6): 451–465.

- Carter P (2018) The pitfalls of leverage targets. In: Center for Global Development Blog. Available at: www.cgdev.org/blog/pitfalls-leverage-targets (accessed 22 August 2025).
- Chabert G, Cerisola M and Hakura D (2022) Restructuring debt of poorer nations requires more efficient coordination. In: IMF Blog. Available at: <https://www.imf.org/en/Blogs/Articles/2022/04/07/restructuring-debt-of-poorer-nations-requires-more-efficient-coordination> (accessed 22 August 2025).
- Chancel L, Piketty T, Saez E, et al. (2022) *World Inequality Report 2022*. Paris: World Inequality Lab.
- Convergence (2023) State of Blended Finance. Available at: <https://www.convergence.finance/resource/state-of-blended-finance-2023/view> (accessed 22 August 2025).
- Convergence (2025) Homepage. Available at: <https://www.convergence.finance/> (accessed 22 August 2025).
- Cravittot N (2023) Little to celebrate: an assessment of official development assistance in 2022. *Eurodad Briefing Paper*.
- Dafermos Y, Gabor D, Nikolaidi M, et al. (2022) Greening Collateral frameworks. Inspire sustainable Central Banking Toolbox Policy Paper 07. Available at: http://eprints.lse.ac.uk/116640/3/INSPIRE_sustainable_central_banking_toolbox_policy_briefing_paper_7.pdf (accessed 22 August 2025).
- D'Orazio P and Popayan L (2019) Fostering green investments and tackling climate-related financial risks: which role for macroprudential policies? *Ecological Economics* 160: 25–37.
- Engel E, Fischer RD and Galetovic A (2021) When and how to use public-private partnerships in infrastructure: lessons from the international experience. In: Glaeser EL and Poterba JM (eds) *Economic Analysis and Infrastructure Investment*. Chicago: University of Chicago Press, pp.333–364.
- European Court of Auditors (2018) Public private partnerships in the EU: widespread shortcomings and limited benefits. Available at: https://www.eca.europa.eu/Lists/ECADocuments/SR18_09/SR_PPP_EN.pdf (accessed 22 August 2025).
- Fabre A, Douenne T and Mattauch L (2025) Majority support for global redistributive and climate policies. *Nature Human Behavior* 9(8): 1583–1594. Available at: DOI: 10.1038/s41562-025-02175-9 (accessed 22 August 2025).
- Funke K, Irwin T and Rial I (2013) Budgeting and reporting for public-private partnerships. Available at: <https://www.econstor.eu/bitstream/10419/97104/1/74517258X.pdf> (accessed 22 August 2025).
- Gabor D (2021) The Wall Street consensus. *Development and Change* 52(3): 429–459.
- Gabor D and Braun B (2023) Green Macrofinancial Regimes. Available at: <https://ideas.repec.org/p/osf/socarx/4pkv8.html> (accessed 22 August 2025).
- García-Portela L (2023) Backward-looking principles of climate justice: the unjustified move from the polluter pays principle to the beneficiary pays principle. *Res Publica* 29(3): 367–384.
- Gilbert P and Lawford-Smith H (2012) Political feasibility: a conceptual exploration. *Political Studies* 60(4): 809–825.
- Goksu A, Trémolet S, Kolker J, et al. (2017) *Easing the Transition to Commercial Finance for Sustainable Water and Sanitation*. Washington D.C.: World Bank Group.
- Gordon NJ (2023) Climate finance: an overview. *Environment: Science and Policy for Sustainable Development* 65(4): 18–26.

- Green Climate Fund (2023) Making blended finance work for adaptation. Executive Director Speech Green Climate Fund. Available at: <https://www.greenclimate.fund/speech/making-blended-finance-work-adaptation> (accessed 22 August 2025).
- High-Level Expert Group on Climate Finance (2023) A climate finance framework: decisive action to deliver on the Paris Agreement. Available at: <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2023/11/A-Climate-Finance-Framework-IHLEG-Report-2-SUMMARY.pdf> (accessed 22 August 2025).
- Holland A and Pazarbasioglu C (2024) How to ease rising external debt-service pressures in low-income countries. In: IMF Blog. Available at: <https://www.imf.org/en/Blogs/Articles/2024/01/24/how-to-ease-rising-external-debt-service-pressure-in-low-income-countries> (accessed 22 August 2025).
- IMF (2019) *Ghana Joint World Bank-IMF Debt Sustainability Analysis*. Washington, D.C.: World Bank Group.
- IMF (2022) *Mobilizing Private Climate Financing in Emerging Market and Developing Economies*. Washington, D.C.: World Bank Group.
- Inter-American Development Bank (2017) Mobilizing private capital for infrastructure: lessons for governments, private investors, and multilateral development banks. Available at: <https://publications.iadb.org/en/mobilizing-private-capital-infrastructure-lessons-governments-private-investors-and-multilateral> (accessed 22 August 2025).
- Kedward K, Zu Ermgassen S, Ryan-Collins J, et al. (2023) Heavy reliance on finance alone will not deliver conservation goals. *Nature Ecology and Evolution* 7: 1339–1342.
- Kelton S (2020) *The Deficit Myth*. New York: PublicAffairs.
- Kenner D (2019) *Carbon Inequality. The Role of the Richest in Climate Change*. London: Routledge.
- Kingston E (2021) International law as a basis for a feasible ability-to-pay principle (Ch. 4). In: Kenenhan S and Katz C (eds) *Principles of Justice and Real-World Climate Politics*. Lanham, MD: Rowman & Littlefield Publishers, pp.89–114.
- Larrea JM (2021) Five critiques of blended finance – and five responses from convergence. Available at: <https://www.convergence.finance/news-and-events/news/7DQVQeR4TfTDLLqbsyszb8/view> (accessed 22 August 2025).
- Larsen M (2025) The archetype of a ‘big green state’? What China tells us about Green Macrofinancial Regimes. *Review of International Political Economy* 32(6): 2115–2146.
- Lawford-Smith H (2011) Cosmopolitan global justice: Brock vs. the feasibility sceptic. *Global Justice: Theory Practice Rhetoric* (4): 1–12.
- Lawford-Smith H (2012) Understanding political feasibility. *Journal of Political Philosophy* 21(3): 243–259.
- Marois T (2019) Public banking on the future we want. In: Steinfort L and Kishimoto S (eds) *Public Finance For the Future We Want*. Amsterdam: Transnational Institute, 150–164.
- Matvejevs O and Tkacevs O (2025) Invest one - get two extra: Public investment crowds in private investment. *European Journal of Political Economy* 90(Part A): 1–20.
- Mazzucato M and de Sá RV (2025) Mind the mission, not the gap: rethinking blended finance for public purpose. *Institute for Innovation and Public Purpose Working Paper 2025-09*. Available at: https://www.ucl.ac.uk/bartlett/sites/bartlett/files/2025-06/Working_Paper_Blended_Finance.pdf (accessed 22 August 2025).

- Mazzucato M and Macfarlane L (2023) Mission oriented development banks: the case of KfW and BNDES.
- Meeks P, Gouett M and Attridge S (2020) *Mobilising private development finance: implications for overall aid allocations*. Stockholm: Expertgruppen för Biståndsanalys.
- Milman O (2023) Monster profits' for energy giants reveal a self-destructive fossil fuel resurgence. *Guardian*, February 9.
- Moellendorf D (2014) *The Moral Challenge of Dangerous Climate Change: Values, Policy, and Poverty*. Cambridge: Cambridge University Press.
- Mosler W and Forstater M (1999) A general framework for the analysis of currencies and commodities. In: Davidson P and Kregel JA (eds) *Full Employment and Price Stability in a Global Economy*. Northampton: Edward Elgar Publishing, pp.166–177.
- Moss J and Kath R (2018) Historical emissions and the carbon budget. *Journal of Applied Philosophy* 36(2): 268–289.
- Network For Greening the Financial System (2023) Scaling up blended finance for climate mitigation and adaptation in emerging market and developing economies. NGFS Technical Document. Available at: <https://www.ngfs.net/en/scaling-blended-finance-climate-mitigation-and-adaptation-emerging-market-and-developing-economies> (accessed 22 August 2025).
- Neumayer E (2000) In defence of historical accountability for greenhouse gas emissions. *Ecological Economics* 33(2): 185–192.
- Neuteleers S (2022) Survey article: trading nature: when are environmental markets (un)desirable? *Journal of Political Philosophy* 30: 116–139.
- Ngcamu BS (2023) Climate change effects on vulnerable populations in the Global South: a systematic review. *Natural Hazards* 118: 977–991.
- OECD (2018a) OECD DAC blended finance principles for unlocking commercial finance for the sustainable development goals. Available at: <https://web.archive.oecd.org/2022-08-19/469783-OECD-Blended-Finance-Principles.pdf> (accessed 22 August 2025).
- OECD (2018b) *Making Blended Finance Work for the Sustainable Development Goals*. Paris: OECD Publishing.
- OECD (2019) Blended finance evaluation: governance and methodological challenges. *OECD Development Co-operation Working Papers No 51*, 2019.
- OECD (2021) Closing the SDG financing gap in the COVID-19 era. Scoping note for the G20 Development Working Group. Available at: <https://dwgg20.org/app/uploads/2021/10/OECD-UNDP-Scoping-Note-Closing-SDG-Financing-Gap-COVID-19-era.pdf> (accessed 22 August 2025).
- OECD (2023a) Net ODA. Available at: <https://data.oecd.org/oda/net-oda.htm> (accessed 22 August 2025).
- OECD (2023b) *Private Finance Mobilised by Official Development Finance Interventions*. Paris: OECD Publishing.
- Ortiz I, Cummins M and Karunanethy K (2017) Fiscal space for social protection and the SDGs: options to expand social investments in 187 countries. International Labour Office, Geneva.
- Oxfam (2023a) *Climate Finance Shadow Report 2023. Assessing the Delivery of the \$100 bn Commitment*. Oxford: Oxfam GB.
- Oxfam (2023b) *Climate Equality. A Planet for the 99%*. Oxford: Oxfam GB.

- Page E (2011) Climatic justice and the fair distribution of atmospheric burdens. *The Monist* 94(3): 412–432.
- Pereira J (2015) *Leveraging Aid: A Literature Review on the Additionality of Using ODA to Leverage Private Investments*. London: UK Aid Network.
- Pereira J (2017) Blended finance: what it is, how it works and how it is used. *Oxfam Policy Paper*. Available at: <https://www.oxfam.org/en/research/blended-finance-what-it-how-it-works-and-how-it-used> (accessed 22 August 2025).
- Randall T (2022) How can ‘blended finance’ help fund climate action and development goals? Available at: <https://www.lse.ac.uk/granthaminstitute/explainers/how-can-blended-finance-help-fund-climate-action-and-development-goals/> (accessed 22 August 2025).
- Reyes-Tagle G and Garbacik K (2016) Policymakers’ decisions on public-private partnership use. The role of institutions and fiscal constraints. Available at: <https://publications.iadb.org/en/policymakers-decisions-public-private-partnership-use-role-institutions-and-fiscal-constraints> (accessed 22 August 2025).
- Ripple WJ, Wolf C, Rockström J, et al. (2026) The risk of a hothouse Earth trajectory. *One Earth* 9(2): 101565, online first.
- Roser D and Seidel C (2017) *Climate Justice: An Introduction*. London and New York: Routledge.
- Ryan-Collins J, Kedward K and Gabor D (2022) Aligning finance with the green transition: from a risk-based to an allocative Green Credit Policy Regime. Available at: https://www.ucl.ac.uk/bartlett/public-purpose/sites/bartlett_public Purpose/files/kedward_gabor_ryan-collins_aligning_finance_with_the_green_transition_from_a_risk-based_to_allocative_green_credit_policy_regime.pdf (accessed 22 August 2025).
- Sandel M (2005) Should we buy the right to pollute? In: *Public Philosophy: Essays on Morality in Politics*. Harvard: Harvard University Press, 96–96.
- Shue H (2015) Historical responsibility, harm prohibition, and preservation requirement: Core PRACTICAL convergence on climate change. *Moral Philosophy and Politics* 2(1): 7–31.
- Shue H (2017) Responsible for what? Carbon producer CO2 contributions and the energy transition. *Climatic Change* 144: 591–596.
- Sierra-Escalante K and Lykke Lauridsen M (2018) *Blended Finance: A Stepping Stone to Creating Markets*. Washington, D.C.: World Bank Group.
- Smith JT and Rennison J (2023) Companies push prices higher, protecting profits but adding to inflation. *New York Times*, May 30.
- Songwe V, Stern N and Bhattacharya A (2024) Raising ambition and accelerating delivery of climate finance: Third report of the Independent High-Level Expert Group on Climate Finance. Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science, London.
- Stein F and McNeill D (2025) Blended finance to the rescue? Subsidies, vaccine bonds and matching funds in global health. *Global Public Health* 20(1): 1–19.
- Sueur JP and Portelli H (2014) Les Contrats de Partenariats: Des Bombes à Retardement? Rapport d’Information fait au Nom de la Commission des Lois. Available at: https://www.senat.fr/rap/r13-733/r13-733_mono.html (accessed 22 August 2025).
- Tan KC (2023) Climate reparations: why the polluter pays principle is neither unfair nor unreasonable. *WIREs Climate Change* 14(4). DOI: 10.1002/wcc.827.

- Tax Justice Network (2023) The state of tax justice 2023. Available at: <https://taxjustice.net/reports/the-state-of-tax-justice-2023/> (accessed 26 May 2026)..
- Thiemann M, Mocanu D and Piroska D (2025) The rise of the European Enlargement State: blended finance, development banks and the new modalities of EU accession. *Journal of European Public Policy* 32(12): 2936–2972.
- Timperley J (2021) The broken \$100 bn promise of climate finance — and how to fix it. *Nature* 598(7881): 400–402.
- Tonkonogy B, Brown J, Micale V, et al. (2018) Blended finance in clean energy: experiences and opportunities. A report for the business and sustainable development commission and the blended finance taskforce. Available at: <https://climatepolicyinitiative.org/wp-content/uploads/2018/01/Blended-Finance-in-Clean-Energy-Experiences-and-Opportunities.pdf> (accessed 22 August 2025).
- Trebilcock M and Rosenstock M (2015) Infrastructure public-private partnerships in the developing world: lessons from recent experience. *The Journal of Development Studies* 51: 335–354.
- Tymoigne E and Wray LR (2013) Modern money theory 101: a reply to critics. *Levy Economics Institute Working Paper* 778.
- UN Department for Economic and Social Affairs (2026) Intergovernmental negotiations for UN framework convention on international tax cooperation. Available at: <https://financing.desa.un.org/unfcitc>
- UN Development Program (2024) The world's largest survey on climate change is out – here's what the results show. Available at: <https://climatepromise.undp.org/news-and-stories/worlds-largest-survey-climate-change-out-heres-what-results-show> (accessed 22 August 2025).
- UN Environment Program (2023) Underfinanced. Underprepared. Inadequate investment and planning on climate adaptation leaves the world exposed. Available at: <https://www.unep.org/adaptation-gap-report-2023> (accessed 22 August 2025).
- UN Environment Program Finance Initiative (2021) Scaling blended finance. Available at: https://www.unepfi.org/wordpress/wp-content/uploads/2021/12/NZAOA_Scaling-Blended-Finance.pdf (accessed 22 August 2025).
- White N (2023) How Wall Street's new ESG money-maker promises nature conservation in emerging markets. *Bloomberg*, January 15.
- World Bank (2015) *From Billions to Trillions: Transforming Development Finance*. Document prepared jointly by the AfDB, ADB, EBRD, EIB, IADB, IMF and World Bank Group for the 18 April Development Committee Meeting. Washington D.C.: World Bank Group.
- World Bank (2018) Maximizing finance for development. Available at: <https://documents1.worldbank.org/curated/en/16833152282693264/pdf/124888-REVISED-BRI-PUBLIC-Maximizing-Finance.pdf> (accessed 22 August 2025).
- World Bank (2022) Next generation Africa climate business plan. First progress report: forging ahead on development-centered climate action. World Bank Group, Washington D.C.