

Gender, climate finance and inclusive low-carbon transitions

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The James E. Rogers Energy Access Project at Duke University advances foundational research and fosters constructive dialogue among the world's policymakers, entrepreneurs and scholars to support evidence-based decision making related to energy poverty. The project seeks to develop new, disruptive tools and models that break down barriers to improved energy access.

The Economics Department at Universidad de los Andes has embarked on the Mission of "Contributing to the sustainable development of Colombia through the training of professionals who are able to understand and analyze the national economic environment from a global perspective, the advancement of economic sciences through research and the application of knowledge in economics". The Vision, proposed and achieved, was becoming one of the five Latin-American schools leading in teaching and research in economics

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Climate change will have significant long-term impacts on people, ecosystems and the global economy. To avoid catastrophic impacts, the world must mobilise finance at scale to deliver rapid and substantial low-carbon transitions across sectors and regions. Improving sustainable finance approaches and enhancing market alignment with this transition is crucial. Evidence shows that climate finance is not reaching those who need it most. Despite the significant climate risks faced by women and girls, only 2.3% of climate finance intends to principally support gender equality. Low-carbon transitions must be designed with proper understanding of contextual gender inequalities.

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Executive summary

Undertaking an inclusive and just low-carbon transition requires vast flows of finance into activities that support mitigation and adaptation. Developed countries have already fallen short of their aims to support climate actions in low- and middle-income countries, providing only US\$83.3 billion in 2020. How much finance flows, the sectors it flows into and the channels it flows through affect the distributional impact of climate finance, including how different genders are impacted. Addressing gender equality alongside a low-carbon, climate-resilient transition requires greater knowledge of those impacts and evidence to support how finance can best address these high-priority global goals.

This paper is part of an initiative to develop an actionable research agenda, led by Environment for Development (EfD), a global network of research centres that seek to solve the world's most pressing environmental and development challenges. This paper builds on the work undertaken in the EfD initiative. It seeks to unpack the current state of evidence on climate finance for low-carbon transitions and gender and identifies key research gaps in each area (which are summarised in Section 7).

The following presents our findings on the current state of evidence and resulting policy recommendations.

Unpacking gender-inclusive, low-carbon transitions and financing approaches

Climate finance is flowing into traditionally maledominated sectors, and there is little evidence of it being channelled towards projects or programmes that proactively address gender equality. Up to 90% of global climate finance aims to address climate mitigation, particularly energy and transport (Naran et al. 2022), which primarily employ men. Sectors such as forestry and agriculture, which more often employ women, principally seek finance for adaptation activities, which have attracted significantly less finance to date. At the same time, only 57% of the official development assistance (ODA) that specifically targets climate action (US\$33.1 billion) has integrated gender equality into its projects to some degree. This is a small portion of the global scope of climate finance (US\$632 billion). And outside of ODA, there is limited evidence of the integration of gender considerations or the gendered impacts of financial flows.

Policy recommendations: Climate finance needs to support gender transformation in both adaptation and mitigation areas, across all sectors, and to the local level, to achieve an inclusive and just low-carbon transition. Far more climate finance needs to flow to projects and programmes that are tagged as principally targeting gender equality.

Primary financing instruments and mechanisms

Many instruments can deliver finance - from loans to grants, equity and guarantees - and these forms are not gender-neutral. Significant evidence exists on the barriers women face in accessing loans, which account for over 70% of public climate finance mobilised between 2016 and 2019, whether at household or business level. So, women-led projects or businesses will likely face challenges in accessing loans for climate activities. And as sovereign debt loads increase, there is evidence that subsequent debt crises and fiscal consolidation hit women hardest as social services are cut. Grants, which often better support adaptation projects, capacity building and other activities with lower private returns on investment, can be an effective tool for supporting gender equality if targeted well. But only 26% of public finance is delivered in this form.

Policy recommendations: Climate financiers need to review the instruments being used to channel finance, acknowledging that these are not gender-neutral, and carefully design loans, grants, equity, guarantees and innovative or blended finance instruments that can support gender equality in low-carbon transitions. Climate finance needs to ensure it is targeting gender equality and the poorest and most marginalised groups well.

Climate finance from multilateral institutions

The infrastructure of international climate finance which includes multilateral climate funds (MCFs) and multilateral development banks (MDBs) - has embraced gender mainstreaming in recent years. There are three lenses through which to consider gender mainstreaming in MCFs and MDBs: corporate requirements, including gender representation in financial decision making; the gender breakdown of investees or recipients; and the gendered impacts of investments. Some organisations have made efforts in terms of decision making - for example, the Green Climate Fund has established a mandate for gender balance for its staff and board. Across these institutions, such gender mandates and policies have aimed to better incorporate gender considerations into their decision making and impact monitoring. But even then, evaluations have found gender to be an add-on rather than an integrated part of programming.

Policy recommendations: Multilateral finance institutions should ensure gender balance in representation on decision-making bodies and related agencies; improve gender disaggregation in data collection and support the development of strong national frameworks to monitor accountability; ensure programmes and projects engage with local-level actors, including women- and gender-related groups; and seek to support stakeholders at all levels develop skills on the methods for engagement and gender mainstreaming.

Domestic climate finance

Domestic financial flows accounted for over 75% of tracked climate investments in 2019/20. National budgets have a large role to play in financing climate action, and gender budgeting activities can help policymakers identify the extent to which expenditures are supporting gender equality. Likewise, fiscal policies, such as setting taxes and adjusting spending priorities, can support climate action and investments for genderresponsive activities. And because fiscal policies have an impact on distributional equity, to avoid negative impacts on the poorest and most marginalised groups, governments must consider gendered impacts in their design. There is some evidence on the distributional impacts of carbon taxes or value added tax (VAT) on clean cooking technologies, for example, but more evidence is needed across-the-board to aid decision makers.

Policy recommendations: National governments should seek to support and strengthen the flows of domestic finance across different groups and levels, including by using tools such as gender- and climate change-responsive budgeting, which can help improve the management of resources in the national budgets going to climate, gender and low-carbon transition areas, and enable the scrutiny of local actors, who can suggest where national funds can best support their needs, to support and amplify the household and locallevel flows. National governments should also carefully consider the impacts of various fiscal policies, and seek to mitigate potential negative impacts, including those resulting from gender dynamics of changes.

Private climate finance

Globally, of US\$632 billion in climate finance, US\$312 billion comes from the private sector, with varying ratios of public-to-private finance across regions — from 95% in the United States and Canada, to around 10% in sub-Saharan Africa. And womenled businesses generally have lower access to private finance to start or to expand operations. Gender lens investing — which has aims that include improving finance to women-led businesses, incorporating gender as a factor in financial decision making, and investing in businesses that aid gender equality — has become a popular approach to address this issue. But there are limited data on the social and environmental impact of impact investing, and few rigorous analyses on the efficacy of gender lens investing approaches.

Policy recommendations: The private sector in developing countries, particularly micro, small and medium enterprises (MSMEs), need to be better supported, as these can provide significant contributions to positive low-carbon transition and gender outcomes. Global impact investors should improve the transparency of their investments in relation to the concessionality of terms offered and social and environmental impacts of investments, in order to create an evidence base of good practice and outcomes across the industry.

Introduction

1.1 Low-carbon transitions

Shifting to a low-carbon economy can unlock new jobs and opportunities, but intentionally considering the distribution of positive and negative impacts from low-carbon transitions is critical for garnering political support and building an equitable future (Box 1). The Katowice Committee of Experts on the Impacts of the Implementation of Response Measures finds that economic diversification and transformation, and the just transition of the workforce and the creation of decent work and quality jobs are two of the main strategies to mitigate the potential socioeconomic impacts of response measures while enhancing access to opportunities emerging from the low-carbon transition. State, national and international institutions are core to supporting and scaling just transitions and broader transformational change. Climate finance institutions in particular are well-positioned to support and learn from transition processes globally, and could, in turn, mobilise this learning to support just transitions through country engagements and project finance (UNFCCC 2023).

Reviewing the research on the likely impact of lowcarbon transitions across various sectors — including energy, transportation, agriculture, forestry and textile manufacturing — shows that men and women are impacted differently. Men hold most jobs in many high-carbon sectors, such as energy (78% of oil and gas jobs) and transport (85% of public transport jobs), which may anticipate job losses in the lowcarbon transition (Godfrey and Bertini 2019; IRENA 2021). Meanwhile, women are crucial parts of forest economies, agriculture and textile manufacturing; but impacts on these sectors rarely acknowledge the gender dimension. To ensure that all genders can benefit from the low-carbon transition, identifying future sectors, skills and capacity needs is vital. Women's central role in the care economy is also central to gender equality, particularly as climate change is expected to increase care work as men migrate to urban areas in search of jobs, extreme weather events cause negative health impacts and subsequent shifts in demographics disrupt social services (MacGregor et al. 2022). Further research must acknowledge the role of care work and evaluate how to manage the balance of such work and interventions in order to improve solutions for all genders.

Climate finance is a crucial means for supporting gender equality within the low-carbon transition, but there are limited data on how much climate finance flows to gender-related programming outside of the Organisation for Economic Co-operation and Development (OECD) reporting. Even within the set of transactions captured, little of the climate finance provided is gender-responsive, despite broad interest in social returns on investment. This is partly because the gender equality impacts of projects have been generally unmeasured, and, therefore, not monetised. Additionally, a heavy focus on loans has increased country-level debt, leading to social spending cuts, which have disproportionately negative impacts on women. Women also remain underrepresented in climate funds and across financial decision-making bodies.

BOX 1. AN INCLUSIVE AND JUST LOW-CARBON TRANSITION

The concept of **low-carbon transition** refers to a shift from an economy which depends heavily on fossil fuels to a sustainable, low-carbon economy. It is a highly knowledge-intensive process encompassing reducing greenhouse gas emissions and adapting to a warming climate.

The **just transition** is a related concept, with roots in trade union movements, that involves ensuring a range of social interventions to secure people's rights and livelihoods when economies are shifting, so that no one is left behind (UNDP 2022a). It includes interventions such as providing fair compensation, offering training and vocational courses, and creating decent work opportunities through diversifying economic activities.

Low-carbon transitions have generally focused on decarbonisation, fossil fuel and renewable policies, and employment. But they are far more wide-ranging and complex than that, particularly with the lens of delivering an inclusive and just transition. A just transition implies broader national and societal dialogues on the future of the economy, asking: What sectors and activities will be needed in the future? How do shifts in sectors impact different parts of society? How do climate impacts affect migration, the workforce and livelihoods? Who decides what type of economic diversification is promoted? And how do we prevent existing inequalities from becoming further entrenched?

In this sense, the low-carbon transition encompasses adaptation and resilience measures, social protection and welfare needs, and livelihood protection and support (UNFCCC 2023; Macron et al. 2023). In this paper, low-carbon transition means looking across the changing economy at the impacts of activities that both reduce greenhouse gas emissions and support adaptation to a warming climate — activities that are relevant to a just and effective transition. Gender is a critical component of this process for three reasons (EfD 2023):

- Climate change has different impacts on women, men and gender-diverse persons. And within these categories, intersectionality shapes experiences further. Gender roles and relations are not fixed; rather, they vary over time and across societies and countries, and planners need to consider this when designing activities. For example, when a drought or flood induces young men to migrate to urban areas in search of jobs, women are more likely to remain in rural areas. This has implications for both men and women, and urban and rural areas.
- 2. Enacting low-carbon transition policies without considering their gender dimensions may reinforce existing inequalities. For example, men hold most of the formal jobs in many carbon-intensive sectors that anticipate job growth and may require specialised education or skills, such as energy and transport. If planners do not consider these dynamics, women risk missing out on opportunities in the new clean-energy economy. Meanwhile, women are crucial in forest economies, agriculture, and textile and service industries, so it is important to consider the impacts of actions on these areas.
- 3. Improving gender equality and implementing a low-carbon transition can often be mutually supportive. For example, there are gendered perspectives in decision making at all levels from a household decision to purchase an improved cooking stove, to the weight that a government official places on environmental values and household welfare when making policy decisions. A just transition will anticipate the training, education and support required to offer all genders equal opportunities to participate in decisions and employment in the low-carbon transition.

1.2 Climate finance

At the 15th Conference of Parties (COP15) of the United Nations Framework Convention on Climate Change (UNFCCC) in 2009, developed country Parties committed to a collective goal of increasing the mobilisation of climate finance to US\$100 billion per year by 2020 to address the needs of developing countries (UNFCCC 2010; Box 2). But at the time of writing this report in 2023, this target has yet to be met. Only US\$83.3 billion in climate finance was mobilised towards the Paris Agreement goal in 2020 (OECD 2022b). The Paris Agreement states that "[t]he provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints, such as the least developed countries and small island developing states, considering the need for public and grant-based resources for adaptation." It also states that "Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of Indigenous Peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity" (UNFCCC 2015).

Climate change has significant and imminent (direct and compounding) impacts on women, girls, genderdiverse persons, and other marginalised groups, who have limited access to livelihood opportunities, finance and other forms of support (OECD 2016a). And yet, there is little evidence that climate finance reaches and adequately supports these groups. Instead, it is falling short in terms of quantity, quality and accessibility.

Few data track flows of climate finance to the local level, and studies (such as Soanes et al. 2021b) suggest this is because little climate finance is getting there. Of all finance mobilised between 2016 and 2019, only 15% has flowed to the 46 Least Developed Countries (LDCs), and 2% to the 38 Small Island Developing States (SIDS)¹ (OECD 2021a). And of the small amounts of finance that do reach the poorest and most vulnerable countries, very little reaches the local level. Research finds that, across all climate finance, less than 10% of climate finance is committed at this level, and it is hard to disaggregate data beyond that (IIED 2019). We explore this more in Section 2.

The blockages in finance also stem from quality and access issues. **Quality** refers to how the finance is delivered: the instrument, the decision-making process and other aspects related to how well the finance flows. For example, 72.9% of the public climate finance mobilised between 2016 and 2019 has been in loan form, disproportionately flowing to low- and middle-income countries and adding to the debt burden of poorer countries (OECD 2021a). We explore some potential impacts from the use of different financial instruments in Section 3.

Finance has been very **inaccessible** to the poorest and most vulnerable countries, communities and individuals for several reasons, including that they often do not have the resources or capacities to go through complicated application processes; and that they are perceived as a higher risk and investors expect lower returns, meaning that the terms of financing offered are usually highly unfavourable for these groups. To date, there has been limited transparency and accountability of investors' and funders' decision making and governance arrangements. It remains crucial to examine and better understand the causes of - and address the issues preventing - the effectiveness of climate finance delivery, to ensure it can flow in greater quantity and with greater quality to the most climate-vulnerable. Although they provide a small proportion of climate finance flows,

multilateral climate funds (MCFs) are some of the most transparent and scrutinised providers of climate finance. We look at some gender considerations around MCFs in Section 4.

Most climate finance has historically been channelled into mitigation projects - for example, the Climate Policy Initiative (CPI) reports that almost 90% of climate finance in 2019/20 went to mitigation activities (Naran et al. 2022). This has gendered implications for the impact of finance, which has flowed predominantly into carbonintense, traditionally male-dominated and commonly top-down-managed sectors such as energy and transport (see Section 2). Large investment gaps remain in key sectors, geographies and climate-vulnerable populations. This includes through supporting distributed renewables, climate-smart agriculture, green value chains and nature-based solutions - areas that offer an opportunity to bring together the objectives of adaptation and mitigation by supporting low-carbon, climate-resilient pathways. And as well as international climate finance, domestic and private finance also play a key role in shaping these priorities. In Sections 5 and 6, we look at some considerations within domestic public financing and both domestic and international private finance.

Article 2.1c of the Paris Agreement requires all flows of finance (and not just climate finance) to be "consistent with a pathway towards low greenhouse gas emissions and climate-resilient development," not just climate finance (UNFCCC 2015). To achieve low-carbon, climate-resilient pathways, all finance in the global system must be aligned towards this objective. Likewise, to achieve gender equality, it is important to consistently and meaningfully integrate gender considerations into all financial flows.

This paper aims to set out the importance of ensuring gender and intersectionality lenses in discussions around a low-carbon, climate-resilient future, and particularly in relation to the way climate finance is delivered as part of that future. Starting with a discussion of the inclusion of gender in financing approaches, we then look at some gender considerations in the use of key financing instruments. We go on to highlight some gender considerations and knowledge gaps within international, national and private sector financing, and close with some recommendations for improving gender integration in financing low-carbon, climate-resilient transitions. The paper takes an overview of the landscape of financing in this area, and does not go into detail on specifics, such as the impacts of different financing instruments in agriculture in a particular location. Instead, we point to deep dives as a useful next step to build our understanding of gender integration in the low-carbon transition.

¹Note that the LDC and SIDS country groupings overlap, meaning the amount of finance flowing to LDCs and SIDS in total is less than the sum of the flows to the two country groupings as presented.

BOX 2. WHAT IS CLIMATE FINANCE?

Broadly speaking, **climate finance** refers to finance that seeks to address climate change. This may be by mitigating its causes, adapting to its impacts, or addressing the losses and damages it causes. Climate finance can refer to flows at local, national or transnational levels, through public, private and alternative sources of financing.

Provision under the UNFCCC

In accordance with the principle of 'common but differentiated responsibility and respective capabilities' set out in the UNFCCC, developed country Parties are to provide financial resources to help developing country Parties implement the objectives of the Convention. In 2009 at COP15 in Copenhagen, developed country Parties committed to channel US\$100 billion a year by 2020 to developing country Parties.

Since 2015, at the request of developed country Parties (represented in the OECD Development Assistance Committee or DAC), the OECD has been measuring progress towards the US\$100 billion goal, as part of the creditor reporting system, which tracks all ODA (OECD 2022c). Progress towards this goal is particularly important because it underpins international support to climate-vulnerable developing countries, bringing in a basis of climate justice by recognising that countries who have done the least to cause climate change are being most affected by its impacts. It is key to achieving the UNFCCC and Paris Agreement goals.

Broader climate finance flows

Outside of this finance provision commitment under the UNFCCC, we can also consider broader flows of finance to activities that address climate change as climate finance. This includes finance mobilised in public budgets or by the private sector.

The CPI provides estimates of finance from government budgets, national, bilateral and multilateral development finance institutions, multilateral funds, state-owned enterprises, state-owned financial institutions, commercial financial institutions, funds, households and individuals, corporations, and other sources. It tracks data for grants, low-cost project debt, project-level market rate debt, project-level equity, debt, balance sheet financing, and equity — for mitigation, adaptation and duel uses — and breaks it down by sector (CPI 2021a).

Tracking and understanding domestic public finance flows is important when considering how countries address climate change at the national level, to understand their approach and prioritisation.

Private finance flows are considered a huge source to be unlocked in scaling up resources to address climate change.

Broader finance flows

Overall, efforts under the Paris Agreement are guided by an aim to make all (and not just climate) finance flows consistent with a low-greenhouse gas emission and climate-resilient development pathway. So, for example, investing in renewable energies while still expanding the use of fossil fuel energies is not consistent with progressing on the goals of mitigation. There is an implicit need for all financing mobilised by all actors to be consistent with UNFCCC and Paris Agreement goals.

1.3 Developing an actionable research agenda

This paper is adapted from a chapter in a report written under the 'Inclusive Low-Carbon Transitions for Sustainable Development in the Global South: Development of an actionable research agenda' project, led by EfD, a global network of research centres solving the world's most pressing environmental and development challenges.² This report builds on the work undertaken in the EfD initiative, pulling out the chapter on climate finance, gender and the low-carbon transition³ to stimulate discussion and awareness in the climate finance landscape.

Under the initiative, a high-level research agenda was informed by a series of specific analyses of knowledge gaps and research needs to (i) create enabling policy environments, (ii) mobilise new climate investments, and (iii) transform key sectors — such as energy,

²See https://www.efdinitiative.org/research/projects/high-level-research-agenda

³See https://www.efdinitiative.org/publications/research-agenda-low-carbon-transition-and-gender-equity-global-south-gender-equality

infrastructure, and forestry — as well as (iv) engage crosscutting themes, such as gender equality, women's economic empowerment, human capital and institutions. Its overall objective was to develop an actionable research agenda by:

- Identifying research needs for an inclusive low-carbon transition based on validated demand in national policies, including nationally determined contributions (NDCs), in support of evidence-based policy implementation
- Reviewing policy instruments to identify the potential for research on these to support an enabling environment for inclusive low-carbon transitions
- Deepening the research needs analysis by considering key sectoral conditions for a low-carbon transition
- Identifying ways to mobilise new climate investment models and better align climate finance with national policies through research
- Conducting a needs assessment for capacity development on inclusive green transitions for sustainable development and proposing strategies tailored for current and future policy actors, and
- Engaging policymakers and stakeholders at national and regional levels to validate the identified knowledge and capacity gaps and finalise research agendas.

1.3.1 Methodology

A range of approaches have been applied in the development of the research, including:

- Reviews of policy documents
- Reviews of literature on policy instruments, sectoral impacts, and gender aspects (including through keyword-based searches, snowballing and grey literature capture
- Targeted reviews of actors' experiences, and
- Quantitative and qualitative methods to analyse the impacts of these policies.

The findings were validated in national and regional workshops with participants from a range of stakeholder groups.

1.3.2 Purpose

The analysis in this report highlights the limited (but improving) knowledge and information on genderresponsive financing in the context of climate change and low-carbon transitions. At both recipient and provider levels, women and other marginalised genders are persistently underrepresented in decision making and policy implementation.

We hope that the stakeholders involved in the different aspects of financing climate change will find this report useful when considering the state of play of genderresponsive finance for low-carbon transitions.

2

Unpacking genderinclusive, low-carbon transitions and financing approaches

The transition towards a low-carbon, climate-resilient economy presents several opportunities for achieving gender equality that are crucial for achieving the Paris Agreement and the United Nations' Sustainable Development Goals. If done well, there is also opportunity to significantly increase women's economic participation in male-dominated sectors, such as infrastructure and energy, and in jobs that are resilient to negative climate impacts. But if low-carbon transitions are not inclusive, there is a risk of exacerbating gender gaps due to disruptive labour impacts of low-carbon economy transitions in energy-driven economies, and if planning and decision making does not factor a gender lens into green job creation and upskilling, it risks leaving women behind (BII n.d.; ENERGIA 2019).

The flow of finance is key to whether an inclusive, lowcarbon transition is well supported. In infographic 1 of OECD 2022d, the OECD present graphs illustrating tracked climate finance flows, which provide useful context on the volume, thematic areas, sectors and instruments used in flows under the UNFCCC.

2.1 Mitigation vs adaptation

Inclusive low-carbon transitions require progress on both adaptation and mitigation. In 2020, 58% of the US\$83.3 billion of the OECD-tracked climate finance flowed to mitigation projects, with 46% going to the energy and transport sectors (OECD 2022a). Looking at global climate finance flows, closer to 90% was invested in mitigation projects (Naran et al. 2022). This split between mitigation and adaptation finance and to the activities in these areas is not gender-neutral. Of the bilateral climate ODA, the OECD reports that in 2018–19 over 60% of adaptation programmes 'integrated' gender objectives - according to OECD policy markers (see Section 2.2 and GIZ 2014) compared to only 46% of mitigation programmes (OECD 2022b), suggesting that gender is more considered in the space of adaptation. Although this is partly because more women work in sectors tied to adaptation activities, such as agriculture, it is also the result of the prominent narratives that decision makers hold around women's participation outside of those sectors.

One issue causing the lack of gender considerations in the majority of projects is the lack of women's voices within financial decision-making bodies. For example, the UNFCCC's Enhanced Lima Work Programme on Gender and its Gender Action Plan outlines actions on gender and climate change agreed by Parties to the Paris Agreement (UNFCCC 2019). The Gender Action Plan emphasises that a just transition to sustainable development can only be achieved if women are actively involved in developing and implementing all aspects of climate change mitigation and adaptation. And, although large investments of climate finance are supporting mitigation projects where women are generally not specifically engaged, applying a gender lens to climate finance is increasingly recognised by financiers as key to effective climate outcomes. However, it still remains challenging for women and women's organisations to participate in climate finance processes or access funds (UKAID 2021).

Women's voices and agencies are marginalised in several ways. This begins in representation — women as decision makers in organisations, in leadership positions, and so on — which then affects outcomes (of investments, projects, plans and opportunities) and access (to resources, networks, and so on). Marginalisation affects a range of issues, from poverty and the domestic work burden for women to their behaviour in seeking advice, physical and psychological stress and autonomy, access to natural resources, asset holdings, collective action, power and social and political relations, nutritional outcomes, and their ability to achieve economic independence, enhance human capital and maintain health and wellbeing (Takeshima et al. 2022).

Until the last decade, gender had been only marginally considered in climate mitigation financing and policy (Zusman et al. 2016; UK DIFD 2015). Most mitigation financing has been channelled to energy infrastructure, efficiency or renewable energy projects that do not tend to consider gender as a relevant component, with few conceptualising women as potential employees in the sector. Although it has become increasingly important to consider the gender lens in all operations, this is a relatively nascent approach and there is a long way to go to build a track record and be able to assess efficacy (Box 3). Many mitigation areas — such as water filtration, mass transportation and agroforestry projects — have the potential to support gender equality, particularly as these activities tend to provide greatest benefits to

women, improving access to clean water (helping to free up their time), mobility options (which is crucial for independent movement, leading to greater employment options for low-income women), food security, and creating alternative means of income (for example, through agroforestry) while also delivering mitigation benefits (UNDP and GGCA 2016).

But rather than consider these ancillary gendered benefits, many mitigation projects tend to be large, utility-scale deployments implemented in a top-down manner without engaging local people, communities and actors, which can leave women out (Colenbrander et al. 2018). Small-scale, low-carbon technologies or practices, on the other hand, are well placed to take more inclusive approaches. For example, most women's groups operate at grassroots level, precluding them from participating in large, capital-intensive mitigation projects; but they work well with small-scale, contextualised actions and interventions (Gupta and Leung 2010; Jayasinghe et al. 2020).

BOX 3. GENDER INTEGRATION IN LARGE-SCALE UTILITY DEPLOYMENTS

Until recently, there was little to no consideration of gender concerns in large-scale energy developments. But new initiatives are emerging that support the integration of gender equality in such schemes. For example, the USAID-funded 'Engendering Utilities' programme aims to strengthen gender equality outcomes in electricity and water utilities in developing countries to increase economic opportunities for women. Through a best practice framework, leadership programme and management coaching, the initiative has supported several utilities to increase their recruitment and retention of, and quality of work for, women (USAID n.d.).

Research on gender and climate action has tended to focus on how women have been involved in climate adaptation activities in agriculture and development rather than their contributions to mitigation activities (EfD 2023; GGCA 2016). More research is needed to understand how large-scale mitigation projects can better build in gender and intersectionality lenses and to identify examples of this in practice. Further study is also needed to understand the impacts of the lopsided financial flows into mitigation projects vs adaptation projects on all genders (Zusman et al. 2016).

2.2 Tracking climate finance flows to gendered objectives

Tracking climate finance flowing into activities that support gender equality is vital to improve the quality and quantity of that finance. As it stands, we have little idea of the true scope of where and how climate finance flows into gender-related activities. The OECD (2022b) recognises that the devastating impacts from climate change are not gender-neutral, as they acutely affect women and girls, and that ODA should be better leveraged to combat these effects by supporting gender-responsive climate action.

To track gender-responsive action, the OECD uses policy markers which break down ODA activities into three categories (OECD 2016b):

- **Principal (principally targeting gender)**: Gender equality is the main objective of the project/ programme and is fundamental in its design and expected results. The project/programme would not have been undertaken without this objective.
- Significant (significantly targeting gender): Gender equality is an important and deliberate objective, but not the principal reason for undertaking the project/programme.
- Not targeted (not targeting gender): The project/programme has been screened against the policy marker but has not been found to target gender equality.

A similar scoring system exists for climate and environmental activities, known as the Rio markers. Gender markers and Rio markers are two of a number of policy markers within the OECD system (GIZ 2014).

The OECD (2016b) states that a 'principal' score is not by definition better than a 'significant' score and recommends that donors adopt a twin-track approach to gender equality across their development portfolio that involves combining dedicated/targeted (principal) interventions with gender mainstreaming (significant).

At COP23, Parties to the UNFCCC adopted the Gender Action Plan, which uses two different terms to categorise gender in climate action. **Gender-related climate action** refers to climate action that has a relation to gender, meaning that at least some portion of the intended outcomes will support gender equality in some way. These actions show some sensitivity to gender differences but do not necessarily address the systemic and larger issues at hand. **Gender-** **responsive climate action** goes beyond sensitivity to gender differences, actively promoting equality and often involving actions for empowering women in their households, communities, societies and broader political and planning processes.

A further category has emerged since the development of the UNFCCC's Gender Action Plan: **gender transformative**. This term aims to capture the need for transformational change in gender issues, going beyond just being responsive to gender challenges, and seeking to create step changes in how gender is seen and addressed.

The categorisation of gender as a significant or principal objective of an action does not necessarily map onto the categories of gender-related or gender-responsive (or gender-transformative) action. The definition of gender-related, gender-responsive or gender-transformative climate action describes how the activity is designed and delivered, whereas the OECD's monitoring of gender action in development finance flows relate to the proportion of an intervention that is related to gender. These different definitions, and the narrow scope of finance they are applied to, limits analysis of gender-and climate-related financial flows.

Nevertheless, the OECD analysis finds that, of the total volume of bilateral public climate finance over 2018/19, only 57% (US\$18.9 billion) integrated some form of gender equality objective (significant) (Figure 1). For the same period, only US\$778 million (2.4%) of all climate-related ODA had gender equality as its principal objective (OECD 2022b). The flows with gender as a principle objective are therefore very small, indicating that few projects are meaningfully addressing gender. Being marked principal in gender does not preclude projects from having other principal policy markers. For example, one programme supported by France has both climate change mitigation and gender equality as its principal objectives. Recognising the role of women in Morocco's energy transition, the programme strengthens their place in the renewable energy sector by creating two women's energy cooperatives and supporting organised women's cooperatives to use sustainable production and management methods, as well as through their involvement in advocacy and local policymaking (OECD 2022b).

Given the prevalence of gender issues in global discussion, we could expect a greater balance between principal and significant activities; and so, having gender-dedicated interventions would be good practice. Further research is needed to understand what these 2.4% of flows have funded, and on the reasons for underinvestment.



Figure 1. Trends in ODA for gender equality and climate change

The OECD (2022b) analysis provides just a small snapshot of the finance gaps for gender-related climate finance. Further work is needed to determine how much finance is gender related, gender responsive and gender transformative, and to move beyond exploring gender in climate-related ODA (only US\$33.1 billion) to look at gender's role in the global scale of climate finance (US\$632 billion). More research is needed to determine which other gendered indicators all climate finance governance structures, programmes and procedures should collect to ensure that climate finance supports gender equality.

Tracking the amount of finance going to different sectors and activities, and how much of that supports gender equality objectives, is very important for understanding what is and is not being funded. This, in turn, helps us understand the gaps and learn from what is working well, and provides transparency and accountability when funds are not flowing despite the need.

2.3 Tracking finance to the local level

Evidence suggests that locally led climate projects can better incorporate women, girls and marginalised communities into the design and implementation of climate response actions (UN Women 2022; UNHCR 2019). The meaningful, informed and effective participation of women and girls with diverse backgrounds in relevant decision making lies at the heart of a rights-based, gender-responsive approach to climate action (UNHCR 2019). Communities' needs and risks vary, and experiences differ depending on gender, age, ethnicity, religion, disability, wealth, socioeconomic status and other intersectional aspects (ASSAR n.d.). Incorporating local diversity and lived experience into policy design is crucial for adapting to highly uncertain climate and nature risks (Eriksen et al. 2021; UNHCR 2019; Box 4).

In an ideal world, all interventions that support people and communities to adapt to the impacts of climate change should be designed with the people and communities that are intended to be supported. A 2021 IIED review (Soanes et al. 2021b) found, however, that only 46% of climate finance committed from international sources for climate adaptation to LDCs aimed to give agency to local actors; and even where the intention was there, there was little evidence of local actors fully leading adaptation interventions. The review found that social groups facing structural exclusion including women, youth, persons with disabilities and Indigenous Peoples - were even more sidelined from playing leading roles in influencing funding decisions: less than 3% of the financing was intended to primarily tackle gender inequalities, only 2% targeted Indigenous Peoples, and less than 19% prioritised non-state enterprises and nongovernmental organisations (Soanes et al. 2021b). Further research is required to better understand the gender impacts of finance for youth-led programming and programmes targeting populations with disabilities and other marginalised groups, as well as the barriers preventing this finance from flowing.

BOX 4. IMPROVING SOCIAL INCLUSION AND LOCALLY LED PROCESSES IN LOW-CARBON TRANSITIONS

Some lessons for improving social inclusion and locally led processes include:

- Recognising the grounds of social exclusion and supporting research, advocacy and community mobilisation to highlight the role of marginalised groups and to build their capacity to influence policies and other decisions that affect them.
- Recognising that time and resources are required to engage at community level and strengthen the voices of marginalised groups in just transition dialogues.
- Recognising that the language and framing of processes can determine who participates in and shapes the transition. For example, if the narrative is framed as a technological transition from coal to renewables, then participation is commonly skewed towards engineers and scientists. But if just transitions are framed as a political process with implications across the whole of society, then it can help engage broad inclusion across business, the government, labour and civil society.
- Creating space for dialogues on just transitions that bring together civil society, labour, business and government representatives at local, provincial and national levels. A whole-of-society and whole-ofgovernment approach is key to ensuring meaningful and fair participation.
- Governance is also key, to ensure effective coordination and clarity when implementing a just transition. This includes engaging relevant groups to strengthen governance processes, for example, bringing in cross-sectoral and non-state actor representatives to examine impacts of climate change on jobs and contribute to unlocking an inclusive green economy.
- Strengthening recognition and participation through establishing formal institutions within sectors of society to influence and enact policies and decisions on development pathways. It is important to give careful attention to building the capacity and influence of marginalised and emerging social and economic groups in the pursuit of low-carbon and climate-resilient futures.

Source: CIF (2020c)

Primary instruments and mechanisms

Financial instruments are not gender-neutral. That is, their use and the conditions of their delivery affect the types of activity they support, as well as their intersectional and gendered impacts. Across all instruments, long-term funding that is patient, predictable and accessible is particularly important for supporting women, girls and other marginalised groups (Soanes et al. 2021a). Long-term funding helps build these actors' capacities to continue activities beyond the intervention period. Projects with insufficient time to establish long-term financing mechanisms can result in decision-making structures that are fragile and unsustainable, which can also lead to negative outcomes for climate-vulnerable and marginalised groups (Holland et al. 2022). Long-term funding enables women and other marginalised groups to make longterm plans, making it possible to build capabilities, capacities and more inclusive and formalised decisionmaking structures.

BOX 5. CLIMATE FINANCE PROVIDED AND MOBILISED, BY INSTRUMENT

Figure 2 illustrates the instruments used to channel the public climate finance provided from 2016 to 2020. While the volume has increased for each instrument over the period, their respective shares of total public climate finance provided have remained stable. Figure 2 does not include public guarantees, which are instead captured in Figure 3 as part of the private finance mobilised.



Figure 2. Instrument split of public climate finance in 2016-20 (US\$, billions)

Figure 3 presents the instruments used to channel the private finance mobilised by public finance (as per the 'mobilised private (attributed)' category). Public finance providers mobilise private finance through the mechanisms illustrated in Figure 2. Except for guarantees, the mechanisms are underpinned by the public finance instruments (equity, grants and loans). For example, shares in collective investment vehicles consist of equity investments; direct investment in companies and special purpose vehicles (SPVs) can take the form of equity or loans; and simple cofinancing involves grants or loans.

Direct investment in companies or SPVs mobilised nearly half (44%) of private climate finance over 2016–20. This was followed by guarantees (19%), syndicated loans (14%), credit lines (9%), simple cofinancing arrangements (8%) and shares in collective investment vehicles (6%). Significant variations yearon-year could relate to the volatile nature of private finance flow and availability of project pipelines. The largest share of private finance mobilised was attributable to MDBs (57%), followed by bilateral providers (36%) and MCFs (7%). Around 86% of the mobilised finance over the 2016–20 period was for mitigation, with the energy sector accounting for more than half.

Over this period, private climate finance for sectors that often involve infrastructure projects — such as energy, transport, industry, mining, construction and communications — was mainly mobilised through mechanisms typically used in the context of project finance (that is, guarantees, syndicated loans and direct investment in companies or SPVs). These three mechanisms accounted for more than 80% of private climate finance mobilised in these sectors. In contrast, in banking and financial services, credit lines, which are frequently employed in the context of local micro, small and medium enterprise (MSME) development, played a significant role (OECD 2022d).





Source: Based on OECD DAC statistics and complementary reporting to the OECD (graph reproduced from OECD 2022d) Note: CIVs = collective investment vehicles. Definitions of all instruments included in the figure are provided in Table A.A.2. of OECD (2022d).

In this section, we consider some key issues across the primary instruments and mechanisms used to deliver climate finance towards the US\$100 billion goal (Box 5), from the perspective of availability for and delivery to governments, local people and communities as individuals, and to national MSMEs.

3.1 Loans

Seventy-one percent of the total public finance (59% of bilateral finance and 84% of multilateral finance) provided towards the US\$100 billion goal in 2020 was channelled in the form of loans (OECD 2022a). Among multilateral providers, 91% of climate finance from MDBs and around 44% from MCFs was in the form of loans. These totals include loans on concessional and non-concessional terms, and it is not clear what portion were provided on concessional terms, nor is there information on the level of concessionality. A significant amount of the private finance mobilised was delivered as loans through direct investment, syndicated loans and credit lines.

The OECD (2022d) report on flows takes a 'provider' perspective, giving little information on recipients, who could be governments, private delivery institutions, national or international nongovernmental organisations, and private sector companies or businesses. It is not clear how the US\$100 billion is split between these recipients.

3.1.1 Thematic and sectoral implications of loans

Loans as instruments are not conducive for supporting climate activities that do not harness financial returns, and as such are unsuitable for many social interventions and climate adaptation activities. Public loans often fund financially sustainable mature or close-to-mature technologies and large infrastructure projects with a future revenue stream, which are more often found in the context of mitigation activities - for example, the construction and operation of an urban metro rail transit system; the expansion of the recipient country's geothermal generating capacity; and climate-resilient road maintenance works (OECD 2022d). Most climate finance flows towards sectors such as large-scale energy infrastructure; far less flows to sectors such as smallholder agriculture (CPI 2022). The few adaptation activities that are financed by loans also mainly relate to infrastructure projects, such as the construction of water treatment plants or sewerage systems (OECD 2022d).

If a low-carbon transition focuses on shifting from a dependence on fossil fuels to a sustainable lowcarbon economy, these shifts must also consider social interventions to respect rights and support livelihoods

and avoid reinforcing inequalities (Box 1). With many women working in smallholder agriculture, forestry and other sectors that are both crucial for livelihoods and social welfare, and often related to climate adaptation, underinvestment in these sectors has gendered implications. These smallholders often act as stewards of nature, biodiversity and carbon stores, making these important and undervalued mitigation areas (IFAD and UNEP 2013). As such, it is vital that these areas, and the women who work there, are involved in the planning and resourcing of low-carbon transitions; but they are often left out. Climate finance providers must either provide loans in a way that supports these groups, or diversify the instruments they use to channel their funds to ensure they provide more inclusive support for low-carbon transitions.

Since projects focus on financial returns to repay loans, finance delivered through loans may limit support for capacity and capability building, livelihoods assistance and other welfare activities. These can be crucial for the continuing functioning of society through implicit care work, reducing the burdens of unpaid work and, given that women typically have a much larger share of unpaid care work, improving women's incomes and access to employment opportunities. An International Labour Organization report finds that across the world, without exception, women carry out 75% of total unpaid care work hours (Charmes 2019). Climate finance must therefore support these non-revenuegenerating activities to ensure a transition where women can be included, their informal work is acknowledged and reduced, they can engage in reskilling or other opportunities, and other related issues are considered.

3.1.2 Gendered impacts of loans to individuals and small businesses

At the individual level, women have less access to loans than men, and the cost of credit can be more expensive for them (Montoya et al. 2020; Ongena and Popov 2015; Parrado 2020; Seema et al. 2021). But women play pivotal roles in responding to climate impacts, safeguarding their homes and families, and rebuilding after disasters (Eskander and Steele 2019). Research shows that informal savings groups, village or community-level women's groups, and federations and networks that manage savings and credit have significant beneficial outcomes for women (Patel and Mitlin 2011). These groups generally develop organically, with women coming together for collective outcomes. So, while the groups have a financial function in providing loans and credit, these are often very different from loans provided by external entities. Having greater access to loans allows women to invest in their resources and capabilities, and build their resilience and livelihood opportunities.

The global gender pay gap also constrains women's access to finance. Globally on average, women make 77 cents for every dollar earned by men (UN Women n.d.). Women are more likely to work in lower-paying or informal sectors in both rural and urban areas, and informal work is often the norm in developing countries - for example in South Asia, sub-Saharan Africa and East and Southeast Asia (excluding China), more than 75% of all jobs are informal, and for women in nonagricultural jobs, over 80% are in informal employment in South Asia, 74% in sub-Saharan Africa and 54% in Latin American and the Caribbean (UN Women 2015). Women are also less likely to have access to bank accounts and credit services - on average, only 37% of women across developing countries have a bank account (Demirgüç and Klapper 2021).

Studies also find that female-owned firms are more frequently discouraged from applying for bank credit and more likely to rely on informal finance (Ongena and Popov 2015). On the supply side, unconscious bias can play a role, alongside women's diminished access to collateral and wealth. On the demand side, the study finds that female owners are less likely to apply for a loan because they believe their credit application will be denied. This belief is stronger in societies where cultural attitudes favour men even if credit markets do not reflect that discrimination (Ongena and Popov 2015). Globally, 20.7% of women (compared to 24.4% of men) have borrowed money from a financial institution or used a credit card over the age of 15: this gender gap varies widely by country, with the biggest gaps in Central America, North Africa, Eastern Europe and South and Central Asia (World Bank 2022). A person's ability to access credit is also influenced by other categories, such as ethnicity (Gonzales Martínez et al. 2020).

Inclusive low-carbon transitions therefore need to take into account challenges that women face with the financing requirements as well as women's unpaid care work. Most women work in the informal sector, and while their contributions subsidise the current economic systems, it is neither recognised nor valued in the financing systems and more generally.

3.1.3 Gendered impacts of loans to national governments

Providing climate finance in the form of loans also adds to countries' growing debt burden. At national level, this has negative implications for supporting both lowcarbon transitions and gender equality, as debt servicing takes up fiscal space, reducing the budget for other activities. Such squeezes on the budget often mean that perceived non-essential areas — such as low-carbon transitions and support for gender equality — drop out of priority financing agendas. Climate financiers need to start thinking about how to provide support through blended finance or innovative financial instruments that can provide solutions for funding without shifting the burden of payments in an unsustainable way.

Debt burdens across developing countries have been rising since the 1990s, increasing rapidly after the great recession (2007–09) and rising to record highs with the impacts of the COVID-19 pandemic and the war on Ukraine (World Bank 2021b). As a result of pressures on budgets, fiscal consolidation that is achieved through cutting social spending and increasing regressive taxes can generate unequal and undesired outcomes.

Past international debt relief packages linked to International Monetary Fund (IMF) agreements with associated conditionalities have impacted women more adversely than men and disproportionately disempowered women. Ghosh (2021) finds that this is because debt management policies effectively rely on the gendered division of labour and women's unpaid and underpaid work to cushion the impacts of fiscal austerity. Analysing IMF agreements associated with some form of debt relief between March and September 2020, Oxfam (2020) find that 76 of 91 loans involved cutting public expenditure in ways that could result in reducing public healthcare and pension schemes, wage freezes and cuts for public sector workers such as doctors, nurses and teachers, and reductions in benefits, such as sick pay. Ghosh observes that debt relief packages should avoid including purely symbolic or relatively minor gender-responsive measures that do little to improve the condition of women within a wider package that makes them worse off. Incorporating gender concerns is frequently seen in terms of including some specific schemes or expenditure focused on women and children, an approach that Ghosh notes is at best inadequate and at worst, counterproductive, especially if it distracts attention from conditionalities that impact women adversely, such as social and educational expenditure cuts that increase women's unpaid (and often largely informal) work burden.

More research is needed on the gendered impacts of loans and high debt burdens on national government budgets. This will provide alternatives for strengthening how gender-responsive approaches can be built into country borrowing, resource allocation and economic recovery policies.

3.2 Grants

Grants can be a highly effective instrument for supporting gender equality. Yet only 26% (US\$17.9 billion) of public climate finance flows towards the US\$100 billion climate finance goal was delivered in grant form in 2020 (OECD 2022a).

On average between 2016–20, about 37% of climate finance from bilateral public entities and 56% from MCFs was provided in grant form. The OECD (2022d) notes that, since MCF and bilateral aid agency mandates and operating models typically rely on paid-in contributions and budget allocations, they can commit more funds as grants than MDBs and bilateral development finance institutions.

Since they do not require financial returns, grants allow recipients to prioritise actions with social benefits, such as activities explicitly designed to support gender equality. This can include adaptation activities, capacity and capability support, livelihood support, feasibility studies, technical assistance and demonstration projects, and other activities with low or no direct financial returns but high social returns (Mierovich et al. 2013). The OECD (2022d) finds that technical assistance and capacity building tends to occur more frequently in adaptation than mitigation activities, but that capacity constraints around skills, institutions, management and implementation can increase the cost of investment. Infrastructure projects in particular can suffer from a lack of transparent and bankable project pipelines that could attract loans and equity investments. As such, grants to support capacity and capability building, demonstration projects, and so on would also greatly benefit mitigation objectives.

The three main sectors supported by grants over 2016–20, representing 46% of all grants, were agriculture, forestry and fishing; energy; and general environmental protection. Examples of activities supported by climate finance grants in the energy and transport sectors have included the solar power electrification of public institutions, such as schools and hospitals, in an LDC; technical assistance to 15 megacities in Asia and South America to develop sustainable transport plans consistent with the Paris Agreement; and the creation of environmentally and economically sustainable electric mini-grid systems for small remote rural communities (OECD 2022d).

How grants are delivered has an impact on gender equality objectives. For example, UN Women and the United Nations Population Fund (UNFPA) find that, while

disasters and conflict increase the number of femaleheaded households, many women report being unable to receive assistance or recovery grants because their government only recognises male-headed households (UN Women and UNFPA 2020). Recent evidence also finds that female research grant applications receive lower rates of acceptance, despite there being no correlation with post-grant performance, with biases stemming from differences in words used in titles and descriptions (Goldstein 2019; Kolev et al. 2019). Kolev et al. find that female proposal authors tend to use more 'narrow' words (which appear significantly more often in some topics than others) while male proposals use more 'broad' words (which appear at similar rates in all topic areas). When controlling for this measure, they find that the gender bias becomes insignificant, showing that differing communication styles are a key factor. Many climate funds provide technical assistance grants to implementing agencies to strengthen their gender integration to reduce such effects.4

Despite its potential for supporting gender objectives, there is a limited supply of grant funding. While bilateral aid agencies, such as those of Paris Club countries, provide most of their climate finance as grant funding, economic shocks and resulting slowdowns over recent years limit the potential to significantly increase the volume of grant financing. Economic downturns can also reduce their support for innovative tools for increasing grant provisions, such as debt-for-climate swaps. Because the need for grant financing outstrips supply, blended finance and other tools may provide a means for leveraging grant financing to mobilise greater private finance. But there is little literature on how blended finance can bring the private sector on board without losing key elements of public benefits provided through grant financing.

More research is needed to review the impact of technical assistance grants on strengthening the gender equality integration by implementing agencies and whether they have supported gender equality in delivering financing, highlighting areas for improvement. Further research could also look at the range of available grant funding for climate finance and gender equality. Important questions for understanding how to improve grant funding provision include: How much of the US\$17.9 billion of public climate finance grants provided in 2020 went to support gender equality? For what purposes? Was there flexibility for recipients to define what they needed to support gender equality? Or was funding only available for a few pre-defined areas?

⁴ See, for example, the Adaptation Fund's call for grants to support National Implementing Entities' capacity to assess, mainstream and manage gender-related issues in projects and programmes in line with the fund's gender policy (https://tinyurl.com/yjdtpp4e).

3.3 Equity finance

Equity finance is the provision of public or private finance in the form of equity stake or shareholder investment to support an enterprise or one of a series of discrete projects. Public equity investments have been very limited, representing only 2% of public climate finance (US\$1.6 billion) in 2020, from both bilateral and multilateral providers. They have largely come from bilateral development finance institutions and MDBs, as equity investments provide exit and return prospects (OECD 2022d).

Public climate finance equity investments have almost exclusively focused on mitigation activities in the energy and transport sectors; examples have included direct investment in the construction of an additional metro line, and participation in a fund investing in power generation assets (using renewable energy and natural gas) in Sub-Saharan Africa, Southeast Asia and Latin America (OECD 2022d). Such public equity investment typically helps improve the financial viability of large projects to private investors, which may otherwise consider investments in developing countries too risky. The OECD concludes that, for these reasons, equity investments are mainly used by development finance institutions with a mandate to promote investment in the private sector, and to mobilise private finance (OECD 2022d). Looking at the global scale of climate investments, equity actually accounts for 32% of financial flows, but the overwhelming majority of that equity investment comes from corporations and commercial financial institutions (Naran et al. 2022).

Of the private finance mobilised by public finance towards the US\$100 billion goal, the finance channelled as shares in funds and collective investment vehicles represent equity investments as well as some of the direct investments in companies and project finance SPVs (OECD 2022d).

Although less commonly used than other investment instruments, equity investments can be valuable for early-stage enterprises to provide growth capital to help enterprises harness climate investment opportunities. The World Bank notes that equity finance is particularly valuable in less developed financial markets (World Bank 2020).

Given that women own 23% of MSMEs and that these account for 32% of the MSME finance gap in developing countries (SME Finance Forum n.d.), equity investment could be a useful instrument to support the scale-up of women-owned businesses (IFC 2017). Since flows from the public sector of equity are very small, there is little evaluation or literature on its use and learnings and lessons for supporting gender outcomes. In 2019/20, 60% of global climate equity investments went to energy projects, 31% to low-carbon transport, and 9% to buildings and infrastructure — all maledominated sectors (CPI 2021b). Further research would be useful to understand where the US\$1.6 billion in public climate finance was invested and who received these funds. It would also be useful to examine current barriers to enabling larger volumes of equity finance to flow to developing countries, and whether guarantees or insurance instruments could help de-risk equity investments.

3.4 Guarantees

Guarantees are commitments in which a guarantor undertakes to fulfil a borrower's obligations to a lender in the event of non-performance or default of their obligations, in exchange for a fee (Mierovich et al. 2013). Guarantees — a de-risking instrument that can help crowd in private investment — can cover the entire initiative or just a portion of it. Without guarantees, investing in an initiative or organisation might not be palatable to investors, resulting in the recipient's inability to attract capital on feasible terms. In 2020, 19% of private climate finance mobilised by public climate finance was the result of a guarantee (OECD 2022a). They accounted for 20% of private finance mobilised by both MDBs and bilateral providers, but were seldom used by MCFs.

Guarantees were often provided on private finance in sectors that involved infrastructure projects, such as energy, transport, industry, mining and construction and communications. Once again, these are sectors that are traditionally male-dominated. Sectors where women are more likely to work, such as agriculture, benefited less from this instrument.

Given their risk mitigation role, guarantees can be particularly important in contexts where actors have little to no track record and where access to finance is low.

The OECD finds that over 2016–20, guarantees were used predominately in medium- to high-risk countries, with 30% of private finance mobilised in countries with a medium risk profile, and 39% in high-risk profile countries. This suggests that the lower the economic and political uncertainties and the more favourable the business climate, the lesser the need for guarantees to mobilise private finance for climate projects (OECD 2022d).

Guarantees can reduce risks arising from resource constraints, regulatory environments, off-taker credit, performance uncertainty, perceived technology risks, and other issues. For example, a performance uncertainty or perceived technology risk guarantee could reduce the risk of a renewable resource generating less power than expected, construction cost overruns, or broader technology underperformance; a credit guarantee could cover the risk of a contracted power off-taker or fuel purchaser going out of business; and a regulatory guarantee could insure against the loss of supportive tax credits or feed-in-tariffs provided by a host country government or utility (Mierovich et al. 2013).

Public guarantees could be a tool for including the most climate-vulnerable and marginalised communities, such as women-run small enterprises, but there is no evidence of them being key recipients to date. Further information is needed on where guarantees have been provided, the terms of those agreements and so on, to better understand how funders are and could be using guarantees. Further research could then outline a design for pilots using guarantees to support womenled enterprises and other climate and gender-responsive areas to improve the accessibility and awareness of this instrument.

While guarantees can promote the development of initiatives in high-risk (or perceived high-risk) areas that might be crucial for climate and gender objectives, they increase contingent liabilities, may impact fiscal deficits, and require highly specialised information about new market and technical capacity that may not be in place.

Such issues would need to be carefully considered in scaling up the use of guarantees – of which there is much potential. One study finds that a multilateral sovereign guarantee mechanism could leverage the effect of public funds for low-carbon investments to two-to-four times the scale of the US\$100 billion Paris Agreement goal (Hourcade et al. 2021). However, such mechanisms do not discuss social or distributional impacts. Further research is needed on the use of largescale as well as small-scale guarantees, to understand how local communities would be involved in decision making from the start, and whether they would be able to access the benefits to ensure such financing does not further entrench unjust systems.

3.5 Blended finance

Blended finance is an approach that tries to increase the viability of investments that would otherwise be too risky for commercial investment by using a mix of public and private financing. It achieves this by leveraging concessional (public and philanthropic) financing to draw in market-rate private capital. For example, guarantees (Section 3.4) are a form of blended finance, using public funds to play a de-risking role to crowd in private funds.

Blended finance aims to support social and environmental components and outcomes that would not have otherwise occurred — for example, by providing training and building institutional capacities in a project preparation phase before implementation that can run commercially — but few investors assess social and environmental additionality with any rigour (Bhattacharya and Khan 2019; OECD 2021a; Pereira 2017). Without these data, it is impossible to assess impacts on social outcomes, including on gender objectives.

There is much potential for climate finance providers to improve the adaptation of the terms and use of their financial instruments to the context through this approach, to provide innovative finance. While innovative finance instruments are more complex technically and developing them is more time-consuming, such scrutiny and flexibility in the terms and application of the financial instrument is key to stronger outcomes. The OECD finds that there is significant potential to develop innovative financial mechanisms, and to better tailor the blending of public and private resources and instruments in different country, sector and risk contexts (OECD 2022d).

SPVs are legal entities that are created for a specific purpose. In the context of project finance, they are often created to structure resources from a group of investments, typically including MDBs, bilateral development finance institutions and private investors, finding optimal risk distribution across the investor pool (OECD 2022d).

4 Multilateral climate finance institutions

4.1 Multilateral climate funds

MCFs are funds that have been set up to coordinate, aggregate and manage the programming of climate finance through international agreements or for specific mandates. Although they can contain flows from a range of entities, they usually pool bilateral financing. MCFs have been set up both within and outside the UNFCCC system.

Under the UNFCCC, the Kyoto Protocol and Paris Agreement both set out mechanisms to deliver financial assistance from richer countries — who have historically emitted more greenhouse gases — to poorer countries, who have emitted fewer gases, yet are more vulnerable to the effects of climate change.

The Global Environment Facility has served as a financial mechanism since the UNFCCC entered into force in 1994, managing the Special Climate Change Fund and the Least Developed Countries Fund. The Green Climate Fund (GCF) was established in 2010. Together, they serve as the financial mechanism to the Kyoto Protocol and Paris Agreement. The Adaptation Fund was established under the Kyoto Protocol in 2001. All these financial mechanisms are accountable to the UNFCCC's COP, which decides on their priorities and eligibility criteria for funding. In 2008, the World Bank Group set up the Climate Investment Funds (CIFs) at the request of the G8 and G20 countries. The CIFs were established as a partnership among five MDBs: the African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank and World Bank. Although intended as an interim measure while the GCF was established, the CIFs have continued to function, given the challenges of accessing the GCF (CIF 2019a; CIF 2019b). The CIFs — comprising the Clean Tech Fund and the Strategic Climate Fund (which includes the Forest Investment Program, the Pilot Program for Climate Resilience, and the Scaling up Renewable Energy in Low-Income Countries Program) — all work through the MDBs as implementing agencies.

Although these climate funds were established under different circumstances and different bodies, they have similar criteria for investment. These broadly include meeting requirements, among several others, for: transformation or paradigm shifts, additionality and beneficial social and gender impacts.

In MCFs, centring gender equality includes developing and implementing a robust set of social, gender and environmental safeguards and guidelines, and capacitybuilding support for their implementation. Many MCFs have been pushing for gender-transformative approaches, but there is still a long way to go (Schalatek 2022). There are three lenses through which we consider gender mainstreaming in MCFs:

- Corporate requirements, such as hiring policy and gender representation in the funds themselves, their decision-making bodies, implementing agencies and other related bodies, agencies and partners
- Gender breakdown of investees and their level of engagement in designing and leading interventions, and
- Gendered impacts of investments.

This section does not provide a comprehensive look through all MCF policies, activities and operations; rather, it seeks to briefly touch on the status or key issues of some of the biggest MCFs.

4.1.1 Corporate requirements

Climate funds have made recent efforts to increase gender diversity in their governance. A 2015 review found that women's representation in the governing bodies of the major climate funds was, on average, just 22% (UNDP and GGCA 2016). Since then, the GCF has put in place a mandate for gender balance for its staff and board (GCF 2017).

The CIFs' most recent gender policy also includes expanding the number of gender specialist staff and improving gender considerations in investment plan preparations, review and submission procedures (Schalatek 2020). The CIF's Gender Action Plan Phase 3 (FY21–24) also sets out plans for increasing country-level gender technical support for developing investment plans and project design, and monitoring and reporting gendered outcomes (CIF 2020a).

4.1.2 Gender breakdown of investees

The MCFs have also been improving their inclusion of gender considerations into procedures for investees in recent years (Schalatek 2020). The GCF's 2019 Gender Policy and Action Plan specifies that its allocation for adaptation and mitigation projects and programmes should address gender equality and women's empowerment and provide gendersensitive solutions; stating that the GCF will support women's climate change adaptation and mitigation initiatives. GCF procedures for evaluating gendered impacts also stipulate that: all feasibility studies and environment and social impact assessments must include gender issues; a gender expert must be a study team member; and projects must collect sexdisaggregated data before implementation. However, the fund's ninth report to the COP in 2020 largely provided a description of the procedures involved in implementing the gender policy in project preparation, and gave no qualitative or quantitative gender equality outcomes, or gender-differentiated beneficiary numbers (Schalatek 2020). An independent study on the GCF's integration of gender by GCF civil society observers highlights the need for the GCF to ensure that all approved initiatives treat gender as a core determinant for successful implementation outcomes, and that they avoid 'sidelining' gender considerations into separate unconnected exercises and treating gender considerations as 'add-ons' (Schalatek et al. 2021)

The Adaptation Fund, Global Environment Facility and CIFs all have gender policies that mandate mainstreaming gender considerations into projects and programming, and in some cases, these have translated to gender-related projects and programming. But the policies still need strengthening, as evidenced by an Adaptation Fund review, which showed that less than half of all surveyed implementing entities, board members, designated authorities and nongovernmental organisations thought that its policies and programmes sufficiently consider gender (Adaptation Fund 2019). A Global Environment Facility evaluation (GEF 2017) found that among 157 completed projects, only 55 adequately mainstreamed gender in design and implementation. A CIF (2020b) assessment of funded programmes found that only a limited number of in-country women- and gender-related groups were engaged in adaptation programmes, and that strong national leadership and frameworks to monitor accountability for making progress toward gender equality was lacking. Stakeholders at all levels lacked knowledge on the methods for engagement and gender mainstreaming approaches, and there was inadequate financial allocation and specific budgeting for engagement, including for non-state actors.

4.1.3 Gender impacts of investments

Since most of these gender policies are relatively recent and there has historically been little genderdisaggregated evaluation and monitoring of climate finance projects, it is difficult to evaluate their long-term efficacy. But some evaluations have taken place. For example, the GCF (2021) evaluation finds that 60% of projects in the GCF portfolio do not take intersectional approaches, assuming that women and men constitute homogenous groups and failing to acknowledge how ethnicity, class or sexuality may affect different marginalised gender groups' ability to access project and programme benefits. It also finds that those projects that tried to target women did not consider the extent to which their poverty or lack of property as collateral might exclude them from participating in proposed credit schemes, or conversely, how taking up credits could aggravate their economic situation.

Strong monitoring, evaluation and learning (MEL) is a key element in improving gender integration and outcomes (Schalatek 2011). MEL frameworks are most effective when they combine top-down and bottom-up processes and frameworks to align project indicators with community-level reporting (Smith 2020). Independent monitoring and verification of outcomes by civil society is also an important aspect of accountability. Civil society groups can help improve gender outcomes by monitoring the activities and impacts of climate interventions and feeding that back into the public space. This can help improve the visibility, transparency and accountability of interventions (Global Initiative on Fiscal Transparency 2021).

There are typically only a few gender-related indicators in MEL systems. So, how can MEL frameworks be improved and better monitored? Further research is needed to understand the good practice in incorporating gender criteria performance objectives, results measurement frameworks and funding options evaluations. There is also a need to better understand how MDFs can help increase access to climate finance to support gender-responsive approaches and mechanisms — for example, by supporting local women's groups through enhanced direct access (EDA) type facilities – these are structures where finance is provided to a nationally owned implementing agency (government agency or national organisation) which can then on-lend the financing to subnational actors based on an agreed set of criteria between the MCF and implementing agency.

Given the large role that MDBs play as intermediaries in channelling financing and resources and supporting implementation, it is important that they have robust gender policies, guidelines and indicators. While this report did not review MDBs in this context, it proposes that a comprehensive review capturing the state of gender integration across MDBs would be useful.

Domestic climate finance

While scrutiny of international climate finance is essential — particularly in the context of mobilising towards the US\$100 billion goal and international climate change cooperation — in many countries, most climate finance comes from national governments, businesses, communities, households and individuals. In 2019/20, over 75% of climate investments tracked by CPI (2021b) flowed domestically. In this section, we consider two of the many issues related to domestic climate finance, gender and low-carbon transitions: gender- and climate change-responsive budgeting, and fiscal policy.

5.1 Gender- and climate change-responsive budgeting

Public financial management is an important part of an integrated government response to gender inequality, climate change and low-carbon transitions. Government plans and strategies require investments, implemented through public budgets, and incentives and regulatory frameworks developed for private investments.

Gender-responsive budgeting is a public financial management tool that governments have used for more than 25 years to promote gender equality. The "technical task of investigating to what extent

the government budget provided the resources to implement gender-responsive policies and programs" (Budlender 2014), it can be used to raise awareness, for management, accountability and impact evaluation, and to inform improvements in planning and implementation. By 2014, more than 90 countries had experimented with some form of gender budgeting over the preceding decade (OECD 2014).

As governments in climate-vulnerable countries have sought to improve their public finance systems and practices to respond to climate change, there have been early efforts to learn from gender-responsive budgeting experiences in implementing **climate-responsive budgeting**. This can take various forms, including climate tagging of budget lines, using environmental cost-benefit analysis for decision making, and carbon pricing. By 2022, 26 countries had introduced or piloted climate budget tagging at central level (UNDP 2022b).

Given the crosscutting nature of gender equality and climate change, it is possible to take a **gender- and climate change-responsive budgeting approach**, which combines the two. An evaluation of genderresponsive and climate change-responsive budgeting in Bangladesh and Mexico (Patel et al. 2021) finds that while developing gender and climate policies does not necessarily translate to shifting budget allocation due to political and other factors, gender- and climate changeresponsive budgeting does help increase transparency on national flows and build national capacity to discuss flows and accountability. As such, it has the potential to improve the transparency of budget and climate reporting at the national level (Patel et al. 2021).

Gender- and climate change-responsive budgeting can help strengthen and support further access to finance for gender and climate change. In Indonesia, government and nongovernmental organisations are collaborating at local level through gender-related capacity building and awareness creation, providing a good example of mainstreaming gender in domestic climate finance policies. But several of the country's financial mechanisms lack monitoring and evaluation processes, which would allow for understanding programme impacts (Atmadja et al. 2020). CIFOR (2020) reviewed subnational adaptation and mitigation actions, including budget items tagged in the Indonesian Climate Budget Tagging system, and across several different mechanisms in Indonesia: the Village Fund, Dana Desa; the Public Service Agency for Forest Development Financing Center, BLUP3H; the Indonesia Climate Change Trust Fund; the Special Allocation Fund, DAK; and the Environmental Fund Management Agency, BPD-LH. Assessing whether climate finance flows and climate actions contribute to long-term gender-transformative change and pro-poor co-benefits at local level, the study finds that in practice, implementation of pro-poor and gender-responsive climate finance is lagging. Where the root causes of vulnerability are not considered in the development of actions, the potential solutions developed could exacerbate inequalities without addressing the challenges of climate change (CIFOR 2020).

Gender- and climate change-responsive budgeting and related tools are important, among other reasons, for tracking and identifying financing going to these areas. It supports scrutiny from local and national actors, and facilitates transparency, discussion and accountability on flows. But it is also important to understand how those flows sit within the full budget. Patel et al. (2022) find, for example, that while some post-COVID-19 recovery spending across countries supported climate and environment outcomes, it is probable that some spending in those budgets will have negative climate impacts. Gender- and climate change-responsive budgeting tools are therefore also important for understanding where flows are harmful to gender and climate outcomes.

5.2 Fiscal policy

Fiscal policies, such as setting taxes and adjusting spending priorities, can support climate action and low-carbon transitions by incentivising or providing investment directly for gender-responsive, lowcarbon transition and climate activities. And because they impact distributional equity, avoiding negative impacts on the poorest and most marginalised groups requires governments to consider gendered impacts in their design.

World Bank (2020) has the following examples of fiscal policy adjustments:

- Removing or reducing fossil-fuel subsidies: This approach can have mixed positive and negative impacts on gender equality. Removing subsidies reduces the incentives to invest further in fossil fuels, as the funding essentially helps artificially lower the cost of using them. This can help make energy efficiency or renewable energy investments more competitive and therefore more economically viable. But implementing such policies can result in economic decline for the targeted areas, impacting the people who live or work there (World Bank 2019), and can have specific gendered impacts. While the jobs affected may be typically dominated by men, the loss of those jobs can have important impacts on women by relation, as increased financial household stress can for example, increase domestic violence (Sanders-McDonagh et al. 2016; Greve and Lay 2023). To enact just energy transitions, decision makers would therefore need to incorporate support for workers and social groups that are likely to be negatively affected.
- Carbon taxes: Using price signals to discourage emissions-intensive activity while promoting innovation and investment in cleaner, more efficient technologies (World Bank 2019), carbon taxes can be applied within specific sectors or across the whole economy, and placed at various points in the supply chain, from the point of fossil fuel extraction to the point of use in industry or energy production. By leading to reductions in emissions-intensive activities, a carbon tax can, like removing or reducing fossil fuel subsidies, affect workers in a specific area, with gendered impacts at household level. The poorest and most marginalised groups are also more likely to be directly working with - or dependent on - carbon-intensive sectors, since fossil fuels are commonly the cheapest fuel sources and so most accessible for households and small enterprises or companies with low-paid staff (GSI and IISD 2013).

The gendered impacts of low-carbon transition policies have not been adequately studied. There is evidence from the World Bank on how the impacts of carbon pricing policy may be distributed differently across genders (World Bank 2021a) and, although there is a growing body of work and policy best practices looking at the social implications of putting a price on carbon, the gender dimension has been largely unaddressed.

More research is therefore required to identify how carbon taxes could be implemented in a way that ensures they do not exacerbate gender inequalities.

Subsidies and tax incentives for climate action: Governments can use tax reductions, subsidies or loan guarantees to help overcome barriers to investment in climate mitigation and adaptation. Using a combination of fees on high-emission activities and subsidies to support mitigation and adaptation action, they can consider using specific subsidies for women-led enterprises that have positive adaptation or mitigation objectives and other approaches to support gender-responsive, low-carbon transitions. Further research to unpack how this could look in different contexts could support the uptake of such adjustments. Government procurement and investment processes: These involve governments incorporating a shadow price of carbon into their decision-making

and investment appraisal processes or using their procurement power to encourage the market penetration of low-carbon, climate-resilient products. As this can have similar distributional equity and gender impacts as carbon taxes, governments should use a gender-responsive lens to consider and mitigate negative impacts on men and women.

 Integrating climate considerations into planning: This includes fiscal frameworks and strategic investment decisions, using disaster and climate risk management financing tools, and expanding fiscal buffers to increase the ability to cope with climate impacts.

Across all these fiscal policies, greater research is needed to identify the distributional impacts and options for improving the equal distribution of those impacts through policy design.

6 Private finance

Globally, US\$312 billion out of a total of US\$632 billion in climate finance comes from the private sector (CPI 2021b). But the ratio of public-to-private finance varies drastically by region — for example, in the United States and Canada, private finance represents 95% of climate finance, compared to 10% in sub-Saharan Africa (CPI 2021b). As private investments in climate change activities increase in developing countries, there will be gendered implications for the impacts of finance.

6.1 Micro, small and medium enterprises

Climate finance predominantly targets large-scale projects and companies, with relatively little finance addressing MSMEs (Phillips et al. 2022). Given that women-led businesses constitute 23% of MSMEs and 32% of the MSME finance gap in developing countries (SME Finance Forum n.d.; IFC 2017), a lack of financing for MSMEs represents a gap in supporting women's enterprises and their expansion. It is also worth noting that women are particularly represented in the informal sector, which has even fewer resources and support (Bonnet et al. 2019). Women and men do not have equal access to resources - including property rights, technology, skills development opportunities, banking and access to credit - and these are key barriers to maintaining and developing MSMEs (IFC 2017; Schiff et al. 2013).

Further research and action is needed on how to overcome barriers to women's access to finance for

MSMEs. Women in MSMEs and the informal sector are often part of women's saving groups, which can act as a crucial intermediary for access to credit and funds (Brody et al. 2015; de Hoop and Desai 2021). But even as researchers explore how women's groups function with health programmes and enterprises, more work is needed on the efficacy of working with women's groups on low-carbon technologies (Desai et al. 2019). Partners of women's groups tend to be philanthropies or development organisations, so further research is also necessary to explore the best models for private sector investment to flow through women's groups.

6.2 Impact investing and gender lens investing

Impact investing aims to create additional positive social or environmental outcomes that would not otherwise be financed. Although the expectation has been that impact investors are willing to take lower financial returns in exchange for greater social returns, the Global Impact Investing Network (GIIN) finds that 67% of its members, who self-identify as impact investors, expect market rate returns, when adjusting for risk (GIIN 2020). As of October 2022, the total assets under impact investing industry management was estimated at US\$1.164 trillion (GIIN 2022).

There are very limited data on the social and environmental impact of impact investments, including impacts on gender equality. Although some impact investors use tools like the IRIS metrics⁵ or Sustainable

⁵ https://iris.thegiin.org/metrics/

Development Goals as frameworks for measuring impact, social and environmental impact evaluations are primarily limited to grey literature case studies, rather than peer-reviewed analyses. To the best of our knowledge, there are no studies comparing the gendered impacts of various investments, although such analysis could help investors understand where additional finance could prompt the greatest outcomes.

A subset of impact investing, gender lens investing is a strategy or approach to investing that considers gender-based factors across the investment process with the objective of advancing gender equality and better informing investment decisions. It covers two broad categories: improving gender sensitivity in the investment process or focusing on investee enterprises that incorporate gender in their vision or mission, organisation structure, or use of data and metrics (GIIN 2019). Some of the reasons for investing in both gender and climate change initiatives include risk mitigation, improving long-term value, finding new avenues for investment, amplifying societal impact, fulfilling fiduciary duty and meeting investors' expectations (Biegel and Lambin 2021). But few analyses have rigorously evaluated the efficacy of gender lens investing activities by impact investors to evaluate the best practice approaches (Gender Smart Investing 2022).

Some evidence makes the case that gender lens investing can be beneficial, with institutions reporting that they are funding poverty reduction activities and could potentially be adding US\$12 trillion in annual flows to the global economy (Acumen and ICRW 2017; Woetzel et al. 2015). Private investors are increasingly adopting gender policies and protocols and highlighting women in their investee companies (Calvert Impact n.d.; G-SEARCh, n.d.; Root Capital 2021). There is also evidence that supporting investees with technical assistance programming geared towards improving women's employment within companies or better meeting the needs of women clients can improve business outcomes (G-SEARCh 2022).

But although investing in women-led businesses is a key objective of gender lens investing, there is little evidence focused on how private investors target women-led businesses. Aside from a handful of best practice examples — such as maintaining quotas for women-led investees in early decision rounds or creating separate funds for women-led businesses (Phillips et al. 2022) — there has been little rigorous analysis to identify the most effective approaches to increasing investments in women-led companies. Further research is therefore needed on the effectiveness of adjusting decision processes, re-evaluating collateral requirements or shifting financial and social expectations or targets.

7 Conclusions and recommendations

The objective of this paper has been to review some of the key considerations in the provision of climate finance towards gender equality in low-carbon transitions. We have sought to examine some areas of climate finance provision to highlight significant gaps in supporting gender equality and inclusive transitions, and to point to useful areas for further funding and research. In particular, we have sought to highlight that further research is needed to bring more clarity to the situation, learn from approaches and experiences, and identify ways forward.

The intentions of developing an actionable research agenda for 'Inclusive Low-Carbon Transitions for Sustainable Development in the Global South' have been to stimulate further research which:

- Is conducted by or with local researchers or actors, or empowers local researchers and actors to lead and co-create the research based on country and regional context and circumstances
- Seeks to build partnerships and collaboration across various stakeholder groups including funders, governments, research institutions and civil society among others
- Has funding provided for identified research gaps to support inclusive and gender-responsive low-carbon transitions in the global South, and
- Continues in the identified (and other) areas to highlight the imbalances, marginalisation and disproportionate impacts, and potential solutions and ways forward.

This paper identifies several gaps in research, categorised and listed here.

Unpacking gender-inclusive low-carbon transitions and financing approaches

- Understanding how large-scale mitigation projects can better build in gender and intersectionality lenses and identifying examples and experiences of this in practice
- Understanding the impacts of the uneven financial flows into mitigation projects vs adaptation projects on all genders
- Determining how much finance is gender transformative, gender responsive and gender related, exploring how to increase the amount of gendertransformative finance and moving beyond exploring gender in climate-related ODA (only US\$33.1 billion) to look at gender's role in the global scale of climate finance (US\$632 billion)
- Determining which other gendered indicators should be collected within all climate finance governance structures, programmes and procedures to ensure that climate finance is supporting gender equality
- Determining how much climate finance reaches the local level and supports locally led action, and how to increase that finance, and

 Understanding the gender barriers and impacts of finance across vulnerable and marginalised groups, and with the lenses of gender equality and intersectionality, including looking at youth-led programming, programmes targeting populations with disabilities and programmes targeting other marginalised groups.

Primary instruments and mechanisms

- Determining the public and private flows of climate finance across different instruments that support or do not support gender equality and the impact of such flows
- Understanding the conditions on which financing is provided: Is there flexibility for recipients to define what they need to support gender equality in their contexts? Is the funding only made accessible for a few pre-defined areas? and so on
- Exploring the gendered impacts of loans, grants, equity and guarantee instruments, including how they can work together (blending finance or creating innovative financing structures) to improve the gendered outcomes of financing
- Understanding the gendered impacts of high debt burdens, how to mitigate these and how to build gender-transformative approaches into country economic recovery policies
- Exploring how well grants and other financing instruments are supporting the targeting of the poorest and most marginalised groups
- Understanding where the public climate finance flowing as equity has been invested, and how to expand equity finance to support small-scale businesses in an inclusive way
- Understanding how the use of guarantees or insurance instruments could help usefully de-risk and support gender equality and inclusion objectives, and
- Exploring how to involve local people and communities in decision making from the start on equal terms.

Multilateral climate finance institutions

- Reviewing the adequacy of MCF and MDB corporate requirements and representation in decision making using gender and inclusivity lenses
- Understanding how effectively MCFs and MDBs have incorporated gender criteria in application screenings, performance objectives, results measurement frameworks, the evaluation of funding options in recent years, and how they can expand the gender inclusion of their investments
- Evaluating the efficacy of MCF and MDB investments for gender and inclusion, including by developing stronger indicators in MEL frameworks and monitoring arrangements, and
- Exploring how MDBs can improve access to climate finance to support gender-responsive approaches and mechanisms — for example, by using enhanced direct access type mechanisms to be able to reach the grassroots (such as local women's groups).

Domestic climate finance

- Strengthening understanding of the proportion of domestic flows to climate investments that support gender equality and the activities this covers
- Exploring how gender-responsive climate budgeting can be strengthened across countries, and
- Identifying the distributional impacts of various fiscal policies and developing options for improving the equal distribution of those impacts through improved policy design.

Broader finance flows

- Understanding how to overcome barriers to women's access to finance for MSMEs in various contexts
- Determining the best models for getting private sector financing to women's groups and cooperatives, and
- Identifying the most effective approaches for increasing investments in women-led companies, including through adjusting decision processes, reevaluating collateral requirements or shifting financial and social expectations or targets.

Acronyms

CIFs	Climate Investment Funds
COP	Conference of the Parties to the UNFCCC
CPI	Climate Policy Initiative
DAC	Development Assistance Committee
EfD	Environment for Development
GCF	Green Climate Fund
GIIN	Global Impact Investing Network
IMF	International Monetary Fund
LDC	Least Developed Countries
MCFs	multilateral climate funds
MDBs	multilateral development banks
MEL	monitoring, evaluation and learning
MSME	micro, small and medium enterprise
NDCs	nationally determined contributions
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
SIDS	Small Island Developing States
SPVs	special purpose vehicles
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund

Related reading

EfD. High-level research agenda for a low-carbon transition in the global South. www.efdinitiative.org/ research/projects/high-level-research-agenda

EfD (2023) Brief actionable research agenda on: gender. Environment for Development. www.efdinitiative. org/sites/default/files/publications/EfD_twopager_A4_ GENDER.pdf

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