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Making Migration Work for Climate Adaptation

Classifying Remittances as Climate Finance

SAM HUCKSTEP · JONATHAN BEYNON

Abstract

This paper argues that climate-vulnerable populations should be given preferential access to labour migration programmes by countries of destination; and that this could be incentivised by classifying some remittances, in narrow circumstances, as mobilised private climate finance. Labour migration can provide climate-vulnerable households with access to large new financial flows with potentially transformative effects for household adaptation. No other development intervention matches the impacts of international labour migration. Despite this, few countries of destination have attempted to target labour migration opportunities to climate-vulnerable communities able to derive the greatest benefit.

To overcome the relative inconvenience of doing so for countries of destination, we propose a new tangible incentive. Migration programmes meeting narrow criteria (verifiably and transparently selecting for climate vulnerability) could be ODA-eligible and meet OECD standards for mobilising private climate finance. After deductions of migrants' participation and opportunity costs, remittances generated could be considered mobilised private climate finance for adaptation. Current flows of mobilised private finance for adaptation are intolerably low, and high-income countries have declared their desire to mobilise more as a matter of priority. Targeted migration programmes can offer an efficient way of doing so: the leverage ratio of project costs to remittances is likely favourable compared to other examples of mobilised private finance.

Targeted migration programmes could mobilise significant finance (potentially hundreds of millions of dollars), contributing to meeting underfunded and growing climate adaptation needs at the most local level. The quality of this financing is higher than many alternative options: funding flows directly to climate-vulnerable households, in amounts unmatched by alternative interventions. Several positive secondary effects are also identified.

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Executive summary

International labour migration can be transformative for the adaptive capacity of climate-vulnerable households. Migration's potential to increase household income exceeds that of any alternative development or adaptation intervention.

Countries of destination should seek to maximise positive externalities in countries of origin when making migration policy. Migration programmes should be targeted to places where remittances would have the highest marginal benefit. This impact could be still greater if climate-vulnerable populations within climate-vulnerable countries were selected for mobility.

Despite the benefits of targeted remittances, very few migration programmes have deliberately incorporated development goals. There is evidently an incentive bottleneck: countries of destination are reluctant to take on the extra administrative and financial cost of development-oriented migration policymaking.

We propose a new incentive: new remittances directed towards climate-vulnerable households as a result of public interventions could be considered mobilised private climate finance. Countries of destination have not succeeded in mobilising private adaptation finance and have a stated desire to do so. The possibility of mobilising private adaptation finance through migration programmes could incentivise countries of destination to prioritise climate-vulnerable populations.

'Climate-conscious migration programmes' would deliberately and verifiably select participants from climate-vulnerable countries and climate-vulnerable populations within these countries. 'Climate-vulnerable countries' are non-Annex I countries in the 1992 UN Framework Convention on Climate Change.

Migrants must be selected according to vulnerability-related criteria. These criteria must go beyond mere exposure to climate hazards and include considerations of adaptive capacity and sensitivity. They must be transparently set out in project documents and evaluated in order to meet the OECD-DAC Rio marker guidelines on the use and mobilisation of climate finance. Remittances must be carefully measured to calculate mobilisation of private climate finance.

Existing remittance flows would not be eligible for classification. Only remittances sent by migrants participating in programmes with climate vulnerability selection criteria would be classifiable as mobilised private climate finance.

Remittances to vulnerable populations would be considered analogous to cash transfers or cash-for-work programmes. These have already been shown to benefit adaptation in many contexts. Several cash transfer programmes have already been categorised as climate finance.

Remittances net of mandatory deductions could be considered climate finance. Migrants' participation costs—money spent on migrating—should be deducted from mobilised totals. Depending on interpretation of UNFCCC guidance, opportunity costs—the money migrants would have earned in the non-migration counterfactual—may also be deducted from mobilised flows.

After deductions, up to 100 percent of mobilised remittances could be considered mobilised climate finance. Under the OECD-DAC Rio marker guidelines, a climate-conscious migration programme could be assigned a 'significant' or 'principal' climate marker, depending on its management and prioritisation. If 'principal', all remittances mobilised can be classified as climate finance; if 'significant', a discretionary amount can be classified. 'Significant' is more likely but complementary measures could potentially justify a 'principal' rating.

Climate finance mobilisation via remittances can have a favourable leverage ratio compared to alternative sources. Estimates suggest that current leverage ratios—dollars of private adaptation finance mobilised for each dollar of public money spent—are around 1:0.12. An evaluation of the pilot Pacific-Australia Seasonal Worker Programme suggests that, had it been managed in a Rio marker-aligned way, its ratio of programme costs to mobilised remittances would have been 1:1.83. Modelling of a hypothetical climate-conscious UK Seasonal Worker Programme suggests that a leverage ratio of between 1:1.4 and 1:10.2 could be obtained. With efficient programme management, leverage ratios may be higher.

Flows of mobilised private climate finance via remittances could be considerable. A worked example suggests that the UK's Seasonal Worker Programme could, if fully scaled and successfully managed, generate up to US$535 million per year in mobilised private climate finance (equalling 15 percent of all mobilised private adaptation finance in 2022.)

This initiative is unlikely to displace conventional climate finance flows. Mobilised private climate finance and bilateral public climate finance are not viewed as substitutable by donors. In addition, while flows mobilised could be considerable, they will contribute only a fraction of the additional finance needed to meet the large gaps between adaptation financing needs and supply, especially after the negotiations over the New Collective Quantified Goal on climate finance.

It is critically important to improve and ensure the credibility and integrity of all climate finance reporting. Some approaches to scoring and reporting climate finance have been criticised for greenwashing. It will therefore be particularly important that this proposal is properly targeted at the most climate vulnerable.

Climate finance mobilised is expected to be of high quality. Unlike much current climate finance, it would successfully reach the most local levels, and be made through grants, rather than non-concessional loans.

The costs of climate-conscious migration programmes are likely to need to be met by countries of destination. The private sector in these countries could and should also contribute.

'Flanking' development interventions would maximise programme impact and increase the likelihood of a 'principal' Rio marker score. These include interventions to increase 'climate literacy'; to support households in investing new remittance flows in adaptation-optimal ways; and to expand access to credit for migrant households.

Several positive secondary incentives are further identified. The drive to maximise climate finance mobilisation should incentivise countries of destination to pursue further desirable goals. These include selecting migrants with low opportunity costs, especially the unemployed or very low-wage; reducing participation costs, remittance transaction costs, and taxes on migrant earnings or remittances; and ensuring migrants can work adequate hours at decent wages without exploitation.

New institutions in countries of destination would help make development considerations and migration policy coherent. We suggest the creation of a 'Migration Research Agency' to evaluate the external effects of new migration partnerships; and a 'Migration Commissioner' to coordinate migration policy across government, advising on, negotiating, and agreeing migration partnerships.

This proposal is not intended to have relevance to questions of protection. Migrants participating in the proposed programme would do so on a temporary basis to gain greater household adaptive capacity: there is no expectation that these programmes would directly provide long-term residence outside the country of origin.

Acronyms

CRS	(OECD) Creditor Reporting System
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ICF	(UK) International Climate Finance
ILO	International Labour Organisation
IOM	International Organisation for Migration
IPCC	Intergovernmental Panel on Climate Change
MDB	Multilateral Development Bank
NCQG	New Collective Quantified Goal
NDC	Nationally Determined Contribution
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
OECD-DAC	OECD Development Assistance Committee
PALM	Pacific Australia Labour Mobility programme
RSE	(New Zealand's) Recognised Seasonal Employer programme
SDG	Sustainable Development Goal
SPV	Special Purpose Vehicle
SWP	(Australia's) Seasonal Worker Programme
SWSAS	(New Zealand's) Seasonal Worker Superannuation Administration Service
SWVS	(UK) Seasonal Worker Visa scheme
TCLM	(Colombia – Spain) Temporary and Circular Labour Migration programme
UNCCD	United Nations Convention to Combat Desertification
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WFP	World Food Programme

Definitions

Adaptation is "the process of adjustment to actual or expected climate and its effects", seeking "to moderate or avoid harm or exploit beneficial opportunities." (IPCC, 2014: 118).

Adaptive capacity is the "the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequence" (IPCC, 2014: 118).

Cash transfers are defined as "the provision of assistance in the form of cash to the poor or those who face a probable risk, in the absence of the transfer, of falling into poverty", and may be given "in the form of social assistance, insurance, near-cash tax benefits, and private transfers" (Tabor, 2002: 4).

Circular migration is "a form of migration in which people repeatedly move back and forth between two or more countries" (IOM, 2019: 29).

Climate finance is defined as "new and additional financial resources to meet the agreed full costs incurred by developing country parties", provided by a 1992 list of 'developing countries' (UNFCCC, 1992).

Exposure refers to "the presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected" (IPCC, 2014: 549).

Hazards are "the potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources" (IPCC, 2014: 551)

Mobilised private finance is defined as "additional financial resources" obtained "for development purposes" by "specific leveraging mechanisms … from the private sector" (OECD, 2023d: 19). Mobilised private *climate* finance must be mobilised by public finance for projects that meet Rio marker criteria.

Remittances are "personal monetary transfers, cross border or within the same country, made by migrants to individuals or communities with whom the migrant has links." They may be formal transfers sent through banking networks, or informal, distributed in-kind or as cash (IOM, 2019: 180)

Temporary migration refers to migration "with the intention to return to the country [or area] of origin or habitual residence after a limited period of time or to undertake an onward movement" (IOM, 2019: 213).

Vulnerability refers to "the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt" (IPCC, 2014: 560).

1. Introduction

We know two facts. Firstly, there is a severe lack of climate finance to support adaptation in climate-vulnerable countries, and especially a lack of adaptation finance flowing to the local level. Secondly, labour migration has the potential to bring new funding flows directly to households in those countries at a scale unmatched by any other development intervention. This paper responds to both.

Estimates by the UN Environment Programme (UNEP) suggest that low- and middle-income countries' (LMICs) adaptation finance needs are currently 10 to 18 times greater than current international public finance flows (UNEP, 2023). In 2009, high-income countries committed to mobilise US$100 billion in climate finance annually by 2020 (UNFCCC, 2022c). After two years of undershoots, this target was finally achieved in 2022 (OECD, 2024).[1] Finance for adaptation has historically been, at most, a third of the total (OECD, 2023a). This is highly inadequate. With the negotiation of the New Collective Quantified Goal for climate finance provision, targets will need to be significantly elevated.[2] It is likely that high-income countries will continue to struggle to mobilise the funding needed. This will be especially difficult for adaptation, for which it is harder to attract private finance (OECD, 2023b). New options for sourcing funding for adaptation must be explored.

UNEP, in its flagship *Adaptation Gap* report, proposes that remittances are among the most promising options for sourcing new adaptation funding (UNEP, 2023). In 2023, remittance flows to LMICs totalled US$656 billion (Ratha et al., 2024). These are predominantly private intra-household flows and are not necessarily used for deliberate long-term adaptation. They can be transformative, however, for climate-vulnerable households, including by reducing vulnerability to climate shocks. A low-skill worker moving from a low-income country to a high-income country, even briefly, can earn and send home multiples of their previous incomes (Clemens et al., 2008). These income increases can allow adaptation where it was previously impossible. Remittances are, in essence, enormous cash transfers—themselves increasingly recognised to be a valuable tool for adaptation and increasingly funded by climate finance—crowdsourced from employers. Where migrants are sent from climate-vulnerable households, remittances can be used for crucial smoothing of consumption, for proactive longer-term adaptation, and / or for post-shock reconstruction.

Migration offers an immense opportunity. The benefits of international migration to low-income households are "immediate and huge", "at least an order of magnitude larger than the income gains from any other development program that has been rigorously evaluated" (McKenzie, 2017: 25). Despite this, very few efforts have been made to proactively make these opportunities available to

1 The US$100 billion target was, in addition, achieved in part by relabelling pre-existing finance (Kenny, 2024).

2 At the 2009 Copenhagen COP, high-income countries pledged to contribute US$100 billion per year in financing to low- and middle-income countries to support mitigation of climate change and adaptation to climate shocks. The New Collective Quantified Goal is the successor to the 2009 goal. Unquantified at the time of writing, it will set US$100 billion as the floor in the amount to be mobilised; recipient countries have suggested that transfers should exceed US$1 trillion annually.

the communities that would most benefit. There is, clearly, an incentive bottleneck: countries of destination are reluctant to shoulder the extra administrative burden and cost of going beyond the most conveniently accessible labour pools to maximise positive externalities in countries of origin.

This paper proposes an approach that would have significant benefits for migrants and migrant-sending communities, and would also provide a tangible 'reward' for countries of destination beyond the obtainment of necessary labour.

We propose that where labour migration pathways (i) are explicitly and carefully targeted towards climate-vulnerable populations, such that (ii) the resources generated as a result of migration (remittances) increase the adaptive capacity of vulnerable communities of origin, the programme (iii) can meet eligibility requirements for the use of climate finance, and (iv) the remittances generated can be classified as mobilised private climate finance. Countries of destination, which have a stated desire to increase the current anaemic flows of mobilised private climate finance, would therefore have a new incentive to maximise the volume of remittances deliberately diverted towards climate-vulnerable populations.[3]

Several conceptual bars must be cleared. Firstly, the migration programmes implemented must be eligible for the use of climate finance under United Nations Framework Convention on Climate Change (UNFCCC) guidelines. In practice, this means that they must, in the absence of universally accepted reporting processes, meet Rio marker guidance.[4] Secondly, the programme must be eligible to mobilise private climate finance. Thirdly, if climate finance can be mobilised, this must be achieved in meaningful volumes, sufficient to significantly increase the adaptive capacity of recipients. Fourthly, finance must be mobilised at rates preferable to alternative means of leveraging private finance. This will be easier where countries of destination already operate a migration programme that could be retooled for adaptation support, in which case the amount of climate finance mobilised would only need to exceed the marginal cost of reorienting the programme's selection process.

In this paper, we lay out how these bars can be cleared. Migration programmes can be eligible for use of climate finance under UNFCCC/OECD guidance, and can mobilise significant financial flows, potentially transforming local adaptation potential, at leverage rates likely to be acceptable for country of destination governments. In an assessment of the pilot of Australia's Seasonal Worker Programme, it is estimated that, had the programme been managed as proposed in this paper, it would have obtained a mobilisation ratio of 1:1.83. Modelling based on the UK's Seasonal Worker Scheme suggests that, were it successfully managed in a climate-conscious manner, it could feasibly obtain a leverage ratio of around 1:3. These ratios are significantly better than development finance

3 Note that only remittances sent by migrants participating in deliberately targeted programmes would be classifiable as climate finance: remittances sent by existing migrants, or by migrants recruited through unselective programmes, would not be eligible.

4 This guidance is explained in detail in section 4.1.

institutions' leverage ratios, estimated to average 1:0.35 in 2021 (All Banks, 2023); and much better than current leverage ratios for adaptation finance, which averaged 1:0.12 in 2022 (OECD, 2024).

In order to operationalise the ideas contained in this paper, a country of destination must be able to meet certain conditions. Firstly, they must operate a low-skill migration programme with low or no prerequisites, or have interest in creating one.[5] Given that the most climate-vulnerable populations are typically low-skilled due to intersectional deficits of opportunity, low-skilled migration programmes. such as those in agriculture, are most likely to offer relevant mobility opportunities.[6] Secondly, countries of destination would need to be able to select participants for this programme from climate-vulnerable communities in order to maximise impact and meet adaptation finance criteria. Thirdly, migrants would need to have reliable access to decent work, enabling them to send a relatively high proportion of wages as remittances with minimised sending costs. Fourthly, countries of destination would need to keep migrant participation costs to a minimum. For most countries of destination, these requirements are feasible.

Beyond its immediate benefits for migrant-sending households, the proposed approach is anticipated to have a number of positive secondary effects for country of destination policy. The remittance-sending opportunities available to low-skill temporary migrants are frequently reduced by adverse factors, including high participation costs; exploitation and abuse; and high remittance sending fees. Countries of destination, incentivised to maximise remittance totals in order to increase the amount of private climate finance mobilised, would have a spillover incentive to reduce participation costs; tightly regulate employers to reduce exploitation and increase wages; reduce taxation of participating migrants; and to reduce remittance sending costs, which often remain high.

Given the growing urgency of adaptation to climate change, and the immense scale on which it must take place, possible new sources of adaptation finance should not be ignored. This paper finds that labour migration programmes deliberately channelling remittances to households vulnerable to climate shocks could potentially provide hundreds of millions of dollars efficiently and directly to the most local levels. These programmes could be transformative for vulnerable households and for their wider communities. They should be explored and implemented.

The remainder of this chapter provides a more comprehensive summary of the paper's analysis (1.1) and process for implementing policy proposals (1.2).

5 It is assumed that lack of access to education and skill development is a component of high climate vulnerability (see e.g., Striessnig et al., 2013; Muttarak and Lutz, 2014), and that accordingly, low-skill migration is most likely to be accessible for this group.

6 Low-skill agricultural migration is frequently managed through temporary (seasonal) visas: this paper accordingly focuses on temporary and circular migration programmes.

1.1 Detailed section summaries

1.1.1 The benefits of remittances for climate adaptation

Section 2 summarises the potentially large benefits of access to migration for adaptation to climate change. Benefits are accrued primarily through access to better earning opportunities, allowing households to receive remittances that smooth income shocks and ease consumption limitations.

Remittances from temporary migration programmes are found to be analogous to large cash transfers, often raising household income by several multiples, and to be extremely valuable in supporting vulnerable households and increasing adaptive capacity, with potential positive spillover effects. Not all vulnerable households will choose to use remittances for 'direct' or 'proactive' adaptation. For extremely vulnerable households, however, almost any use of new resources will increase resilience.

Programmes targeting migration opportunities towards climate-vulnerable populations offer several advantages over conventional adaptation support. Remittances go directly to shock-affected households, unlike much climate finance; on a per-household basis, they greatly exceed conventional finance flows; and they are concessional, without needing to be repaid.

1.1.2 The need to facilitate greater access to remittances for the most climate-vulnerable

Section 3 argues that, given historical incoherence between development objectives and migration policy, countries of destination are likely to need an additional incentive if they are to direct access to labour migration pathways towards highly vulnerable populations. These populations would obtain greater marginal benefit, and currently have little access to migration opportunities. An incentive is proposed to be provided by making a narrow class of remittances classifiable as mobilised climate finance.

High-income countries have a stated desire to improve mobilisation of private climate finance. Increasing access to adaptation finance is vitally important. New alternative sources of mobilised private climate finance will be increasingly necessary for adaptation. This is especially the case given that (i) adaptation needs will grow as climate impacts increase in frequency and severity; (ii) mobilisation obligations placed upon Annex II countries will grow with the shift from 2025 to the New Collective Quantified Goal; and (iii) the mobilisation of private finance for adaptation purposes has historically been extremely underwhelming, and will need to be bolstered through the use of new innovative financing sources.

We argue that where a migration programme was:

i. Carefully and verifiably targeted towards highly climate-vulnerable households with pressing adaptation needs, *and*
ii. Migrants were selected only if they meet this definition, *such that*
iii. Remittances were deliberately channelled to the demographics with the greatest adaptation need, *then*
iv. The cost of the programme itself would be scorable as climate finance under Rio marker guidelines, *and*
v. Could, with an innovative accounting system, mobilise remittance flows that would be classifiable, after deductions, as mobilised private finance, *with*
vi. Leverage ratios superior to most alternative methods of sourcing mobilised private adaptation finance.

1.1.3 Ensuring programme eligibility under UNFCCC guidelines

Section 4 examines three subjects: (i) whether climate-conscious migration programmes can use climate finance by considering eligibility against the UNFCCC Rio markers; (ii) whether, and when, programmes can mobilise private climate finance; and (iii) how participants could be targeted from climate-vulnerable communities.

There is no universal reporting standard for assessing project eligibility for climate finance classification; we use the OECD-DAC/UNFCCC Rio marker guidelines commonly used for this purpose as benchmarks. Following Rio marker guidelines, projects must (i) set out vulnerabilities experienced by target populations; (ii) state how the project will assist; and (iii) demonstrate a link between project activities and outcomes. A migration programme targeting climate-vulnerable populations can meet these requirements. Under the Rio marker guidelines, a project can obtain a 'principal' score if adaptation is its main aim, or a 'significant' score if supporting adaptation is not its prime objective. A 'principal' project is typically wholly counted as climate finance; a 'significant' project's funding level is discretionary. A climate-conscious migration programme could be either 'principal' or 'significant' depending on management and discretion.

In the methodological guidance provided for the OECD-DAC's Creditor Reporting System, it is assumed that private mobilised finance will be in the form of a loan. Mobilised remittances are intra-household grants, rather than loans; no methodology for assessing private mobilised finance currently provides for the mobilisation of grants. Of the mobilisation instruments referenced in OECD guidance, Special Purpose Vehicles—legal entities created for specific or temporary purposes—appear the most likely to meet the needs of the proposed programme.

To achieve the desired impact and fulfil Rio marker guidelines, migrant participants must be deliberately and verifiably targeted according to their vulnerability to climate shocks. Criteria used

in the selection process must consider both exposure to climate hazards (location), and adaptive capacity (socio-economic factors). Migrants who are not selected through these criteria (including existing migrants, and migrants recruited through unselective pathways) would not be of relevance in calculations of mobilised private climate finance. Selection of migrants from vulnerable households should take place at the local level, and could be undertaken through partnerships with a range of actors, such as the International Organisation for Migration (IOM), community actors, or the country of origin government. To meet UNFCCC requirements, migrants must be selected from a list of 155 'developing' countries drawn up in 1992. To maximise impact and meet Rio marker guidelines, countries of destination should look beyond this list to prioritise vulnerability.

1.1.4 Calculating flows of mobilised private climate finance via remittances

Section 5 sets out a methodology for calculating the size of possible mobilised remittance flows under the proposal, and calculates the amount of climate finance that could be mobilised for vulnerable populations by climate-conscious migration programmes. For the proposed programmes to be successful, (i) significant amounts of new finance must be mobilised at (ii) a competitive level of efficiency. Two example programmes are used for modelling amounts, both treated as if managed in a Rio marker-adherent manner: Australia's Seasonal Worker Programme, selected because of relatively good accessible data on programme costs; and the UK's Seasonal Worker Visa scheme.

From remittances mobilised, migrants' participation costs (such as for visas, airfare, or equipment) should be deducted.[7] It is argued that for programmes managed in adherence to Rio marker guidelines, the entire net gain from participation (i.e., after the deduction of participation costs) should be considered privately mobilised adaptation finance, reflecting the conceptual and operational difficulty of dividing 'adaptation' spending from other spending activities by highly vulnerable households.

The measurement of remittances mobilised is unlikely to be feasible at the aggregate level, given data shortfalls. Instead, surveys or, preferably, direct measurement in partnership with a remittance service provider whose use is required, would be more likely to capture mobilised flows with precision.

In the retrospective analysis of Australia's hypothetically Rio marker-aligned Seasonal Worker Programme, a pilot programme eligible for mobilising climate finance via remittances is estimated to obtain a 1:1.83 leverage ratio of public funding to mobilised private climate finance. Leverage ratios are likely to improve as programme efficiency increases and a programme scales up.

7 Migrants' opportunity costs (the contribution they would have made to their household had they not migrated) could also be deducted, but this is not necessarily required under Rio marker guidelines. If opportunity costs were deducted, it would ensure that remittances mobilised are truly additional versus pre-participation baselines. It would also ensure that the success of the migrant selection process, crucial to the impact of the proposed programme, is 'hardwired' into the success of the climate finance mobilisation due to the incentive to minimise opportunity costs.

Given the emphasis placed upon the possible incentivising role of private climate finance mobilisation, the method by which mobilised finance is counted is crucial. Policymakers must be able to assess, before embarking on a new programme, whether enough finance would be mobilised for the incentive to be adequate. We suggest that the formula that should be used to calculate private climate finance mobilised by the proposed approach is:

$$\textit{Climate finance mobilised via remittances} = \alpha(\beta(\gamma - (\gamma\delta)[-\varepsilon] - \eta))$$

α – total number of migrants
β – climate finance coefficient
γ – average amount remitted per migrant: the product of *average percentage of earnings remitted* and *average earnings* (for which inputs are *hours worked*; *earnings per hour*; and *tax rates*)
δ – cost of sending remittances, as a percentage
ε – opportunity cost[8]
η – participation cost

These programmes would be most successful in mobilising private climate finance when:

- Migrants can be expected to have reliable access to work;
- A reasonably high percentage of remittances is expected to be sent;
- The programme will merit a high 'significant' coefficient or a 'principal' tag under Rio marker guidelines;
- Opportunity costs are kept low by adequate targeting of climate-vulnerable populations;
- Participation costs can be kept to a minimum, or at least below a critical threshold relative to remittance sizes; and
- The cost of sending remittances is not prohibitively large.

Estimates of mobilisation totals by the UK Seasonal Worker Visa scheme suggests that leverage ratios could range from approximately 1:1.4 to 1:10.2. This assumes that the cost of a pilot scheme was approximately US$1,270 per migrant, following costs for Australia's programme. If per-migrant costs from more efficient programmes could be replicated, leverage ratios may be considerably higher. We estimate that a 1,000-participant pilot programme could mobilise between £1.5 million (US$2 million) and £8.2 million (US$10.7 million), and that a programme fully scaled to 50,000 participants could mobilise between £72.8 million (US$95.3 million) and £409 million (US$535.4 million).

1.1.5 Risks of dislocating current commitments and climate injustice

Section 6 assesses risks that new mobilised flows could displace climate finance commitments by Annex II countries, and breach ethical standards in addressing climate damages. Displacement is

8 Note that the opportunity cost is not mandatorily deducted.

considered unlikely to be a serious concern. Firstly, mobilised private climate finance is not generally counted within headline bilateral climate finance commitments: new mobilised flows would therefore not be fungible with bilateral contributions. Secondly, the bar set for managing a migration programme eligible to mobilise remittances is high, and remittances mobilised will be higher-quality climate finance than most alternative adaptation options. If current reporting standards did change, and some countries used large migration programmes to replace some current commitments, it is possible that this would even represent an improvement.

Even this is considered unlikely to happen. The US$100 billion commitment was only met with a delay, and the post-2025 New Collective Quantified Goal is likely to be significantly higher. Donors are expected to continue to struggle to mobilise sufficient finance, especially for adaptation. Flows mobilised through climate-conscious migration programmes could be significant where programmes are successful, but they are very unlikely to exceed the size of the expected finance gap to the extent that they can displace existing commitments.

Ethical standards are assessed to be upheld. Firstly, the proposed climate-conscious migration programme does not allow reductions in the obligations of those responsible for the harms of climate change. Secondly, in a context of constrained adaptation resources, the alternative to migration programmes is assessed to be the imposition of greater adaptation obligations on the most vulnerable, not increased international transfers. Thirdly, we assess that the structure of the proposed incentive is such that countries of destination should uphold migrants' rights when participating, limiting the risk of exploitation.

1.1.6 Climate finance maximisation incentives have positive spillover effects

Section 7 examines the positive secondary effects of the proposed finance mobilisation mechanism. It suggests that a desire to maximise the amount of private climate finance mobilised will incentivise countries of destination to take more than usual care in creating an enabling environment for remittance-sending. In particular, countries of destination are likely to seek to minimise migrants' participation costs; reduce migrant exploitation; and reduce the cost of sending remittances—all of which would otherwise reduce the amount of climate finance mobilised.

1.1.7 Operationalising and institutionalising climate-conscious migration programming

Section 8 considers several core and adjacent policy areas if migration programmes are to effectively channel remittances to highly climate-vulnerable populations: institutional reforms needed to increase coherency in migration policymaking; funding sources for the programmes discussed; 'flanking' interventions to maximise development outcomes; and risk mitigation against the possibility of migrants overstaying visas.

It argues that two 'strong' reforms would be beneficial to integrating development considerations into migration policy. Firstly, countries of destination should create 'Migration Research Agencies' with a mandate and capacity to evaluate ex-ante both domestic labour market needs and the impacts of potential migration policies upon countries of origin. This is intended to increase the benefits of migration policies to international development and climate adaptation priorities, and draws upon the example of similar institutions in international trade policy. Secondly, countries of destination should consider creating the role of the 'Migration Commissioner', empowered to (i) coordinate migration policy across government; and (ii) advise on, negotiate, and agree migration partnerships with countries of origin. This is intended to create greater coherency within a policy area that is often fragmented across poorly connected departments and agencies.

With regard to the funding of the proposed programmes, it is expected that countries of destination are most likely to provide core programme costs. Private financing for some components should be sought and obliged, but key costs, especially those related to targeting components, will need to be funded by public actors. Importantly, public financing is necessary if programmes are to be eligible to mobilise private climate finance. At least some costs are likely to be eligible for use of official development assistance (ODA).

To maximise the impact of the proposed programmes, and to increase eligibility for a 'principal' Rio marker tag, several 'flanking' interventions are advisable. Firstly, providing support to migrants and migrant-sending households regarding how to use remittances in ways that best increase adaptive capacity could maximise the resilience-building impact of the new funding flows. Secondly, parallel development sub-projects, such as assistance provided to migrant-sending households in accessing credit or hiring labour, could provide spillover benefits or longer-term transformation. Thirdly, pilot programmes should be rigorously evaluated, growing the knowledge base in the remittances-adaptation nexus and ensuring that programmes have the maximum impact.

Finally, the section briefly reviews the possibility that migrants from climate-vulnerable backgrounds may be more likely to overstay visas. This risk was previously given as a reason for halting the high-impact H-2A visa programme assisting post-earthquake reconstruction in Haiti, and could limit willingness to consider the paper's proposals. It is possible, but not conclusively evidenced, that migrants from these backgrounds could be more likely to overstay visas. To the extent that this risk is real, however, it is not unmitigable, and examples are given of programmes that have succeeded in reducing overstays.

1.2 Operationalisation: creating climate-conscious migration pathways

This section brings together the policy proposals contained in the paper. It sets out how a country of destination could organise a temporary migration programme that channels remittances towards climate-vulnerable communities and is eligible to mobilise private climate finance for adaptation.

Initial stages

i. Identify an existing or possible low-skill migration programme with low or no prerequisites, e.g., in agriculture, in which migrants from climate-vulnerable populations could feasibly participate.[9]

ii. Assess the programme's likely leverage ratio for the mobilisation of private climate finance, to determine whether it represents value for money. This requires assessing:
    a. Earnings by programme participants
    b. Plausible remittance proportions
    c. Remittance-sending costs
    d. Migrants' participation costs and, if relevant, opportunity costs
    e. Programme costs per migrant
    f. The programme's expected ability to justify a 'principal' or high 'significant' marker under Rio marker guidelines.

iii. Assess possible climate-vulnerable countries of origin from which migrants could be recruited from climate-vulnerable households. These must be non-Annex I countries under the 1992 UNFCCC. When undertaking this assessment, factors to consider include the country's vulnerability to climate shocks; wealth levels among the lowest quintiles; the accessibility of highly climate-vulnerable population groups; and travel options to the country of destination.
    a. *This step could be facilitated by the creation of a domestic Migration Research Agency charged with assessing the supply-side benefits of possible migration policies in order to maximise impact.*

iv. Agree a migration partnership with the country of origin, facilitating the implementation of the programme.
    a. *This step, and the entire process, could be facilitated by the creation of an Office of the Migration Commissioner in the country of destination, mandated to advise on and coordinate migration policy across government in a way that is coherent with diverse policy priorities.*

Managing the migration programme

i. Carefully consider programme accounting approaches under the OECD's Creditor Reporting System. It is possible that the programme will need to be formally managed through a Special Purpose Vehicle.

ii. Programme funding is likely to be predominantly provided by the country of destination government. Given the proposed programme's focus on development/adaptation outcomes,

9 Highly climate-vulnerable populations are assumed to be low-skill. Given the predominance of temporary visas in the management of low-skill migration, this paper assumes that the migration programme will be temporary or circular, e.g., seasonal. If the programme is permanent, the continued vulnerability of the migrant-sending household should be assessed at regular intervals to ensure that financial flows are still verifiably supporting a low-adaptive-capacity household, and can still be justifiably assessed to be mobilised private climate finance. This also applies when migrants participate multiple times.

some costs are likely to be eligible for use of ODA. Private sector funding could be leveraged/obliged and should be sought, especially to reduce costs to migrants.

iii Manage selection of migrants in the country of origin according to transparent criteria prioritising climate vulnerability factors. These factors should include location and exposure to climate shocks and adaptive capacity. Factors reflecting adaptive capacity could include education level, number of dependents, indebtedness, calorie intake, and household wealth. These factors could be agreed through discussions with migrant-sending communities.
   a. *Recruitment could be undertaken through partnerships with international recruitment agencies; international development actors, such as the IOM or Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); the partner (country of origin) government; and community partners. These partnerships should be carefully audited to ensure selection criteria are followed.*

iv. Assign a climate finance coefficient on the basis of the programme's objectives and efficacy in targeting highly climate-vulnerable populations, according to UNFCCC/OECD Rio marker guidelines.
   a. *If the programme has support for adaptation as a principal motivating aim, a 'principal' score can be given, and the project's finances can be classified as up to 100 percent climate finance.*
   b. *If the programme's support for adaptation is explicitly stated, but is not a fundamental driver or motivator, a 'significant' score should be given. Most donors apply a standard percentage (typically 30–50 percent) of what proportion of such project costs are counted and reported as climate finance. For those that apply project-specific coefficients, the stronger the focus on climate vulnerable communities, the higher the proportion that could be scored as climate finance.*

v. Provide informational support to migrants before participation. This could include information on the country of destination; guidance regarding expected earnings, savings, and remittance practices; and information on rights when in the country of destination.

vi. Provide participation support to migrant participants where needed. Visa costs, airfare, and other necessary costs should be reduced and supported where possible.
   a. *These costs could be paid by the country of destination or by employers, and fully or partially refunded from migrants' pay. Where this is the case, these sums should not be deducted from final remittance totals, in order to avoid double-counting.*

vii. Coordinate closely with, and closely regulate, domestic employers throughout the design and implementation of the migration programme. Ensure that migrant workers are efficiently paired with employers facing worker shortages; receive assured access to work; do not suffer abuses of rights; are exposed to minimal costs; receive adequate training where necessary; and have access to repeat participation with the same employer where mutually desired.

viii. Reduce additional costs to migrants where possible, in order to maximise adaptation finance mobilised. In particular, reduce taxes placed on migrants and remittance sending fees.

ix. Coordinate with local authorities or communities in the country of origin where relevant and possible, to reduce the impact of the temporary loss of the migrant and their labour to the sending household.

Managing and measuring mobilised climate finance

i. Assess migrant participants' financial contribution to their households during the selection process, in order to allow the opportunity cost of participating to be factored into the calculation of mobilised private climate finance.

ii. Measure remittances sent by migrant participants. This may be achieved through surveys administered to migrants or migrant-sending households, or through direct measurement in partnership with a low-cost remittance service provider whose use is required.

ii. Assess climate finance mobilised in the following way:
    a. Assess the financing contribution. Typically, the country of destination government will be the only public funder. If another public funder also supports the programme, mobilised finance should be attributed on a pro-rata basis.
    b. Deduct participation costs and opportunity costs from remittance totals. Ensure also that remittance totals are measured after remittance sending costs are removed.
    c. Consider all remittances, following deductions, to support adaptation when directed to highly climate-vulnerable households.
    d. Multiply remittances mobilised by the programme's climate finance coefficient, determined following the Rio marker guidelines.

Undertaking 'flanking' development interventions

i. Consider several adjacent interventions, intended to maximise the programme's effectiveness and justify a higher climate finance coefficient under Rio marker guidelines. These include:
    a. Assisting migrant-sending households in optimising remittance uses for adaptation, including through 'climate literacy' support and facilitation of investments into local public goods.
    b. Providing training to migrants and returnees in climate-aware practices, such as livelihood diversification; adaptive dwelling reconstruction; and business and entrepreneurship training.
    c. Supporting initiatives connecting migrant-sending households with local labour in need of employment, avoiding reductions in food production where relevant and supporting spillover benefits.
    d. Supporting migrant-sending households in accessing credit.

ii. Rigorously evaluate climate-conscious migration programmes, in order to both increase the knowledge base in this area and ensure that programme outcomes are optimised.

2. Remittances have major benefits for climate adaptation

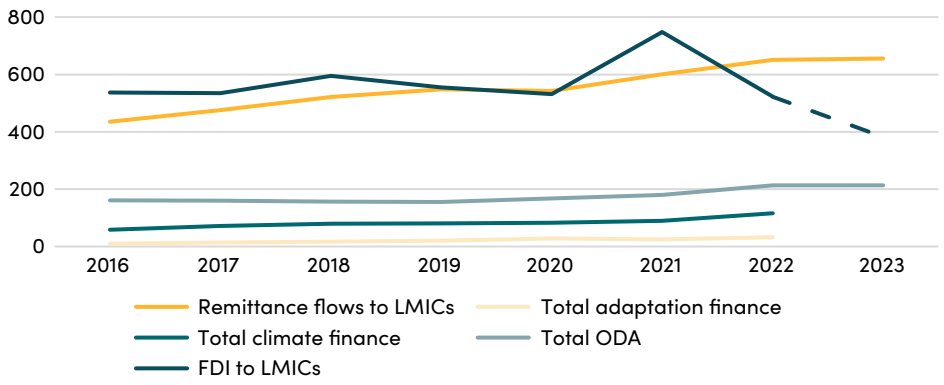
Migration can play a major role in facilitating adaptation to climate change. This occurs primarily through access to better earning opportunities, allowing households to receive remittances that smooth income shocks and ease consumption limitations. This section briefly reviews remittances' broad uses, and their uses for adaptation to climate shocks. It finally compares remittances' benefits to those of alternative development interventions.

2.1 The characteristics of remittances

Migration enables workers to access higher wages. As Clemens et al. (2008) argue, a 'place premium' moderates the size of wages available; a low-skill worker in the U.S. can earn 2.6, 3.5, or 7.8 times what she would have earned undertaking the same work in Peru, the Philippines, or Haiti respectively. Several boxes throughout the paper give examples of the (often enormous) earning differentials available as a result of migration. Remittances—the money sent by migrants back to their community of origin—are, in addition, useful because their supply is typically uncorrelated with conditions in the community of origin. They can be sent counter-cyclically (e.g., Couharde and Generoso, 2014; Pelham et al., 2011), supporting households during or after crises such as climate shocks.

Remittances are in effect large cash transfers, made directly to households, allowing them full choice in how they act. The total amount of remittances sent is extremely large. In 2023, remittance flows to LMICs totalled US$656 billion (Ratha et al., 2024): larger, according to World Bank estimates, than ODA and foreign direct investment (FDI) combined (see Figure 1). Only US$32.4 billion, by contrast, was provided for climate adaptation in 2022 (OECD, 2024).

FIGURE 1. Remittances vs. other financial flows to LMICs, US$ millions, 2016–2023



Sources: World Bank, 2024; OECD, 2024; Ratha et al., 2024. Note that the FDI figure for 2023 is projected by Ratha et al., 2024, and that climate finance figures are only available up to 2022.

Remittances allow households to respond to their most immediate needs and to invest in new opportunities. Examples of key uses of remittance flows include the choices to:

- Maintain consumption where it would otherwise not be possible;
- Pay off debt, reducing the risk of vulnerability spirals;
- Reconstruct properties after disasters, or proactively strengthen dwellings ahead of impacts;
- Diversify income streams, reducing reliance on shock-exposed sectors such as agriculture;
- Purchase inputs, such as fertiliser, energy, or labour;
- Support education, increasing subsequent adaptive capacity;
- Pay healthcare costs; and
- Relocate in the face of sudden-onset disasters.

For households vulnerable to climate shocks, remittances can be a lifeline, especially in increasing resilience by supporting continued household consumption (Huckstep and Clemens, 2023). They will not, however, always or immediately be used for proactive longer-term adaptation of the sort targeted by conventional adaptation projects. Remittances are intra- or inter-household transfers, and their uses depend on the needs and choices of the receiving household (Iskander, 2005). Very poor and vulnerable households are likely to use remittances first to support baseline resilience (Bharadwaj et al., 2022; Lipton, 1980). In communities in Cambodia trapped by cycles of debt and climate-related shocks, for example, around 40 percent of remittances may be used to pay debts (Jacobson et al., 2019). In Ghana, over 50 percent of remittances are found to be spent on daily consumption needs, with some households in climate-affected areas relying on remittances for up to 90 percent of their expenditure (Musah-Surugu et al., 2018). These uses reduce vulnerability, but will do so more indirectly than, for example, a project that builds a sea wall protecting the same households.

Remittances are transfers directly to households made possible by spatial inequalities of earning opportunities. They can be sent counter-cyclically, responding to shocks, and remittance totals are much larger than other flows to LMICs.

2.2 Using remittances for climate adaptation

Climate-vulnerable households can benefit immensely from greater access to remittances, and facilitating this access would be valuable for adaptation. In Box 1, we summarise a number of studies on remittances' role in adaptation. In varying contexts, remittances are used as insurance against shocks to allow continued consumption; to reconstruct accommodation after floods; to diversify livelihoods; to increase (clean) energy use; and to support local public goods.

As noted, however, not all households will use remittances for what is considered 'direct', or 'proactive', adaptation (see section 5.1). Decisions not to use remittances for proactive long-term climate adaptation may be due to multiple priorities competing for inadequate funds: climate-vulnerable

households are vulnerable in large part because they suffer confounding challenges, and the remittances received are often too small to be used for both pressing needs and deliberate resilience-building (Maduekwe and Adesina, 2022; Wrathall, 2012; Tacoli, 2011; Atuoye et al., 2017).[10] This is especially likely to be the case when the remittances in question are sent by internal, rural-urban migrants, who will often work in lower-salary labour markets than international migrants (see e.g., Musah-Surugu and Anuga, 2023). Remittance flows from Global North countries can be significantly larger, with correspondingly larger effects for adaptive capacity (Mohapatra et al., 2009).

Households may also choose not to prioritise proactive adaptation activities due to a lack of 'climate literacy', limiting their understanding of their vulnerability and of possible adaptive activities (Simpson et al., 2021). While recognising that for the very vulnerable most uses of remittances are likely to increase adaptive capacity, it is also possible that targeted awareness-raising of risk factors, and dissemination of resilience-building techniques, could see increased proportions of remittances used for proactive adaptation (see section 8.3).

Remittances can be extremely valuable in supporting vulnerable households and increasing adaptive capacity, with potential spillover effects. Not all households, however, will choose to use remittances for proactive long-term adaptation purposes.

BOX 1. Remittances' role in adaptation

In this box, we summarise a number of studies on remittances' value to households experiencing climate shocks. Remittances have significant benefits for households in responding to adaptation needs. They can also have positive spillover effects. In some cases, remittances are found to be pooled at the community or project level, supporting local public goods (e.g., Scheffran et al., 2012). At the meso- to macro- level, remittances can also be highly beneficial. The Mayor of Accra, for example, has described the US$300 million transferred to city residents by UK-based diaspora populations each year as "a lifeline when recovering from extreme weather events" (Khan and Sackey, 2023).

- In the Philippines, remittances are found to serve as insurance against rainfall shocks, meeting up to 60 percent of declines in household income (Yang and Choi, 2007).
- In numerous countries, such as Ghana (Adjei-Mantey et al., 2023); Malawi (Zingwe et al., 2023); Mexico (Mora-Rivera and van Gameren, 2021); Sri Lanka (Jayaweera and Verma, 2024); and Venezuela (Stampini et al., 2021), remittances are crucial to maintaining food security during shocks.
- In surveys in Bolivia, Senegal, and Tanzania, households not receiving remittances are those that are most insecure; and in the most vulnerable areas, remittances are identified as an essential element of food security (Tacoli, 2011).

10 It should be noted that the ability to smooth consumption during shocks is a key component of successful adaptation (see e.g., Hallegatte et al., 2014; Kala et al., 2023). Where remittances are used primarily for maintenance of consumption, they support direct immediate adaptation while not creating the conditions for long-lasting resilience.

- In coastal Ghana, diaspora communities have coordinated to use remittances to construct new accommodation after flooding (Hillmann et al., 2020).
- In Tajikistan, remittances to climate-vulnerable communities are used for consumption; repair of dwellings damaged by shocks; support for local public infrastructure; and investment in agricultural inputs or off-farm diversification (Babagaliyeva et al., 2017).
- In Mexico, access to remittances allows households to buy air conditioning to adapt to rising temperatures (Randazzo et al., 2023).
- In Burkina Faso and Ghana, households receiving remittances are more likely to have concrete houses and access to communications devices, increasing adaptive capacity against flash floods (Mohapatra et al., 2009).
- In northern Ghana, small remittance flows averaging US$369 per household annually are found to be vital in financing adaptation activities (Musah-Surugu and Anuga, 2023), allowing smallholder farmers to invest in higher-yield and diversified crops, off-farm activities, irrigation, fertiliser, and crop storage capacity.
- In Tonga, 73 percent of remittance-receiving households whose dwellings were damaged or destroyed by climate shocks use money received to reconstruct their houses (BASE, 2022).
- After floods in Mozambique in 2013, remittance-sending to affected villages through mobile money networks increased significantly, allowing households to rebuild in the aftermath. Following the subsidence of the crisis, remittance flows then returned to lower levels (Batista and Vicente, 2021). Similar findings have also emerged from Kenya (Suri et al., 2023).
- Poorer households may use up to 25 percent of remittances in purchasing energy access (Mills, 2023). In Bangladesh, remittance flows have supported renewable energy installation, especially in off-grid solar (Das et al., 2020). In Togo, energy access made possible by remittances is found to significantly increase household resilience to climate shocks (Sodokin and Nyatefe, 2021). In the Philippines, remittances facilitate access to alternative energy sources, reducing deforestation for fuelwood (Zhunusova et al., 2022).
- In Mauritania, remittances have been pooled and used to construct solar-powered wells, creating employment and freeing women's time for productive activities (Scheffran et al., 2012).

2.3 The benefits of remittances versus alternative interventions

Remittances can be preferable when compared to a range of alternative forms of finance and development intervention. For the poorest and most vulnerable, facilitated access to greater remittance-sending opportunities could be transformative.

2.3.1 Remittances' benefits are directly comparable to those of cash transfers

Remittances are, in essence, cash transfers. They provide migrant-sending households with extra money, and beyond the pre-requisite of having undertaken migration, there are no strings attached to the influx. Cash transfers are often considered the 'gold standard' of development against which alternative interventions can be measured (Handa et al., 2014; Evans, 2016). Cash transfers have a range of positive spillover and multiplier effects at the household level and can boost the wider local economy thanks to the opportunities they open for both consumption and different forms of investment (Gassmann et al., 2023).

In contexts experiencing environmental shocks, both cash transfers and remittances can have outsize benefits by reducing losses, allowing proactive preparations or rapid recovery. Adaptation projects, managed through top-down interventions, frequently struggle to improve beneficiaries' resilience, and there have been numerous instances of 'maladaptation': adaptation interventions that have a net negative effect on resilience (see e.g., Schipper, 2020; Paprocki, 2018, 2019). Cash transfers may be lower-risk: if vulnerable populations are adequately targeted, they can delegate responsibility for adaptation decisions to those who should know best how to use the money. As Godfrey Wood (2011: 83) argues, cash transfers offer an "[unusually] clear 'no regrets' use of adaptation finance."

An increasing number of studies finds that cash transfers are highly beneficial in supporting adaptation to climate shocks in different settings, with the possibility of significant positive spillover effects (e.g., Fitriniatia and Matsuyuki, 2023; Bowen et al., 2020; Lawlor et al., 2015). In Niger, for example, cash transfers increase household consumption by 10 percent, and are especially useful for drought-affected households where the income smoothing effect can have the greatest marginal impact (Premand and Stoeffler, 2022). Remittances can be better still, in reach, effect, and size. In comparison with humanitarian cash programmes, remittances can have greater coverage, including among the poorest demographics, and may respond more rapidly to shocks and in larger sums (Hagen-Zanker and Himmelstine, 2014).

Remittances are analogous to cash transfers: recipient households have freedom to spend them as they choose. Their size, flexibility, and rapid response to shocks can be highly beneficial for vulnerable households.

2.3.2 Benefits significantly exceed those of conventional poverty reduction interventions

The impacts of remittances are significantly larger than those available through conventional poverty-reduction policies. At the high end, conventional interventions are estimated to increase incomes by 20–30 percent (Hagen-Zanker et al., 2017). Even a very short spell of low-skill work by an international migrant, by contrast, can potentially raise *household* income by over 100 percent (Clemens and Postel, 2017; see Box 2). Some workers participating in labour migration schemes in the Pacific are found to increase their earnings by nine to ten times (Edwards et al., 2023). One review

of studies examining the impact of migration finds that "the gain in income from moving is [...] immediate and huge", "at least an order of magnitude larger than the income gains from any other development program that has been rigorously evaluated" (McKenzie, 2017: 25).

Remittances can increase household earnings by several multiples. No other development intervention offers such outsized impacts.

BOX 2. Post-earthquake migration from Haiti to the U.S.

Following the 2010 earthquake in Haiti, the U.S. allowed Haitian workers to migrate under the H-2 visa in order to work on U.S. farms suffering labour shortages. Between 2015 and 2016, 68 Haitian workers travelled to the U.S. (Hagen-Zanker et al., 2017). Access to this programme had strikingly large effects. Migrant workers' incomes went from a monthly average of US$147 in Haiti to US$2,278 in the U.S., an increase of 1,400 percent, and workers remitted 80 to 85 percent of earnings (Clemens and Postel, 2017). Merely working two to three months in the U.S. was sufficient to double annual household incomes. Migrant households used remittances to invest in durable goods and diversified livelihoods. The financial effects of the programme far outstripped aid alternatives, in part due to the fact that the money remitted was delivered entirely to vulnerable families, without expensive overheads.

This programme was also enormously beneficial to broader economies. Each month of overseas work introduced US$1,700 to the Haitian economy; added at least US$3,000 to Haiti's GDP; and added approximately US$4,000 to U.S. GDP. An evaluation estimated that if the programme was scaled to 10,000 seasonal Haitian migrant workers, approximately US$100 million would be added annually to Haiti's economy (Clemens and Postel, 2017).

Access to low-skill migrant work in the US allowed earthquake-affected Haitian households to double incomes within 13 weeks, with transformative effects for reconstruction.

2.3.3 Remittances go beyond concessionality

Remittances are de facto grants. Despite frequent calls from the most vulnerable countries for climate finance to be provided through grants, allowing them to avoid greater indebtedness (Khan et al., 2020), around 70 percent of official climate finance is currently provided as loans (Cichocka and Mitchell, 2022; OECD, 2022c). Many of these climate loans are provided at concessional rates. This is encouraged (but importantly, unlike in the case of ODA, not required) by the OECD-DAC. Strikingly high proportions of loans for climate finance have been provided at non-concessional rates: from 2016 to 2022, at least 18 percent of climate finance loans made bilaterally; 59 percent made by climate funds; and 73 percent made by multilateral development banks were non-concessional (OECD, 2024). The de facto grants accessible through facilitated remittance programmes are preferable: they allow money to reach the most vulnerable without imposing (potentially significant) future costs.

Over 70 percent of climate finance are delivered through loans, often at non-concessional rates. Remittances, by contrast, are intra-household grants.

2.3.4 Remittances are direct

Remittances are transferred directly to the local level. This positively distinguishes them from conventional climate finance and development flows: it has been persistently difficult to bring climate finance to the local level, where it can make the most difference (Soanes et al., 2017). Small-scale farmers near the equator, in particular, are among the populations most vulnerable to climate shocks (Addom, 2024). Globally, small-scale farmers are estimated to collectively spend US$368 billion a year on adaptation needs (Hou-Jones and Sorsby, 2023). Notably, however, climate finance to this group fell by 44 percent in 2019–20, to a mere 0.8 percent of total climate finance (Chiriac et al., 2023). While some climate finance has been used to fund direct cash transfers or cash-for-work programmes (see Box 5), direct transfer initiatives remain very few in number.[11] This has led to calls for more climate-related funding to be routed directly to vulnerable households through national social protection systems (see e.g., Sengupta and Sivanu, 2023; Huber and Murray, 2023; Aleksandrova, 2021; Sitko et al., 2023).

Conventional climate and development flows often do not penetrate to local levels. Remittances can go directly to vulnerable households, where they will have the greatest impact.

2.3.5 Remittances targeted towards vulnerable actors permit anticipatory action

Remittances directed towards climate-vulnerable areas can allow households to take proactive action against shocks. It is axiomatic in disaster risk reduction activities that "acting prior to the onset of predictable shocks is significantly faster, more dignified and more (cost) effective than traditional humanitarian response" (Gettliffe, 2022: 4). In Bangladesh, for example, households that receive a World Food Programme (WFP) cash transfer before floods maintain far better consumption levels (the risk of going a day without eating decreases by 36 percent); endure lower asset loss; are less likely to engage in costly borrowing; and report higher earning potential afterwards, than those who do not (Pople et al., 2021). In Senegal, 73 percent of households receiving remittances have a risk management strategy, versus 22 percent of those not receiving remittances; and 65 percent can save against future agricultural losses, versus only 33 percent of those without remittances (IFAD, 2020; Figure 2).[12] The United Nations Convention to Combat Desertification (UNCCD, 2023) estimates that for every dollar spent on anticipatory action, at least two and up to ten dollars of post-shock humanitarian spending are saved; another estimate (FAO and WFP, 2023) suggests a return of seven to one.

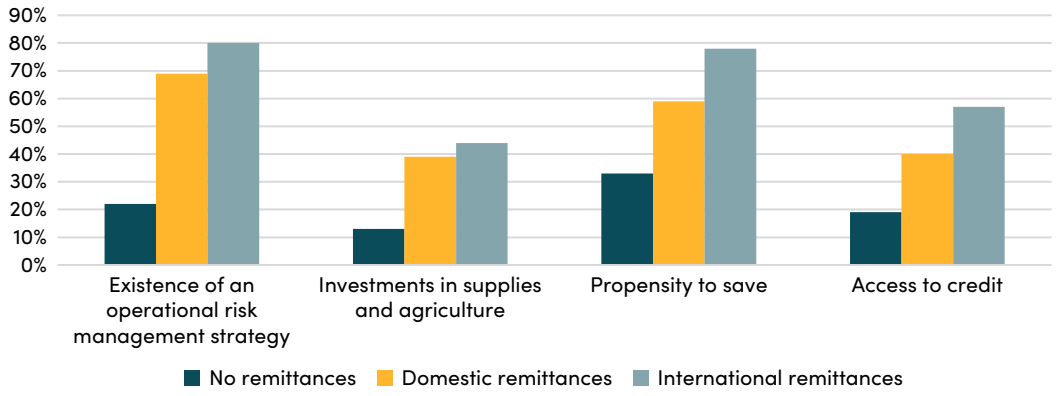
11 This is unsurprising: of all ODA, less than 5 percent is estimated to go to cash programming (Wright, 2023).

12 The causality may not be straightforward: households that can afford to send a migrant may also be more likely to be able to afford to invest or save, even if remittances undoubtedly make a difference at the margin.

Where access to migration opportunities can be delivered to households identified to be vulnerable to future shocks, remittances can allow proactive adaptation. Early access to funds can reduce the size of losses and the extent to which rebuilding is necessary, smoothing expenditure and allowing a more efficient use of scarce resources.

Remittances delivered to vulnerable households can allow anticipatory resilience-building ahead of shocks, reducing losses.

FIGURE 2. Risk management behaviour by receipt of remittances and their type in rural Senegal[13]



Source: IFAD (2020).

3. Facilitating greater access to remittances for the most climate-vulnerable

Despite the immense benefits of migration for climate-vulnerable populations, very few coherent efforts have yet been made to maximise its impacts. We propose that this can be done by targeting access to international labour migration towards communities that are highly vulnerable to climate shocks, allowing remittances to have the greatest marginal impact in increasing resilience both prior to shocks and during post-shock recovery periods. We propose a new incentive for climate-coherent migration policy.

Very few governments have attempted to prioritise external benefits delivered through migration programming. Coherence between migration policy and development goals is not the norm, despite the large externalities of country of destination migration policy (see Box 3). Migration policy is currently frequently siloed from other policy areas and is driven by crude stimuli from competing actors (Alexsson et al., 2021; see section 8.1). Migration policy's development benefits are typically "an inadvertent product of other, mostly domestic, policy goals" (Newland, 2017: 2): development is seldom a primary concern. For this to change, governments in countries of destination require new incentives to make migration policy coherent with considerations of climate vulnerability.

13 The average amount for domestic remittances is FCFA 25,000 (US$55), versus FCFA 150,000 (US$330) for international remittances (IFAD, 2020).

BOX 3. Migration policy externalities and responses to climate shocks

Country of destination migration policies can have significant unremarked consequences for responses to climate shocks in countries of origin. In varying contexts, weather shocks are found to contribute to unemployment (Xie, 2024; Eickmeier et al., 2024; Caruso et al., 2024). In these circumstances, migration to access uncorrelated earning opportunities, if available, is a logical response. Country of destination policies that facilitate this—or make this harder—will inevitably affect households' adaptation options in countries of origin.

In the Philippines, remittances have long been recognised to be important in response to weather shocks (e.g., Yang and Choi, 2007). During the period 2007 to 2016, typhoons increased out-migration from the Philippines by 3.7 percent in the following one to two years, and 4.1 percent in the following two to three years. Following typhoons, the share of migrants (including more educated migrants) working in the lowest-paying occupations, such as in construction or domestic help, rose as households' financial needs forced migrants to accept lower wages (Murathanoğlu, 2023). Typhoons increased remittance flows to affected regions at a scale unmatched by other support. During 2007–2016, remittance flows totalled approximately US$11 billion, 180 percent of the Philippines' total estimated typhoon damages. Of these remittances, 15–18 percent are estimated to be sent *by migrants whose migration was a response to the typhoon itself*. Significantly more remittances were sent by migrants working in countries where conditions for migrants were better, including easier access to immigration and greater access to higher-paying jobs due to high labour demand (Murathanoğlu, 2023). This suggests that where access can be preferentially increased, major positive externalities could accrue to communities responding to climate shocks.

A converse example from the Indonesia – Saudi Arabia migration corridor confirms this. In 2011 a moratorium against female migration to Saudi Arabia was imposed by Indonesia's government following assaults on domestic workers. This ban prevented emigration for millions of Indonesian women. In the aftermath of this ban, villages with high ex-ante propensity for sending migrants to Saudi Arabia saw poverty increase by 13 percent after weather shocks relative to other villages. This was especially the case for villages dependent on flood-exposed rainfed rice production, a sector into which many would-be migrants moved. The aim of the Indonesian government to protect its migrant workers thus came at a significant cost to migrant-sending villages (Cinque and Reiners, 2022).

Migration policy choices have significant unheeded externalities for climate adaptation. If countries consider supply-side factors when making access to domestic jobs available to international workers, there can be major positive effects for communities responding to climate shocks.

The country of destination needs to be motivated to accept the inconvenience and costs of orienting their labour migration programmes towards climate-vulnerable countries. It is often easier to be

agnostic as to migrants' countries of origin, or to orient migration pathways towards countries with which there is an established relationship. The marginal benefits to migrants and their communities are therefore considerably lower (see Box 4), but there is a lower administrative burden for officials in the country of destination. Bringing climate-conscious migration programmes beyond theory, or even beyond small-scale pilots, requires providing the country of destination with an incentive.

We propose a new solution: that this bottleneck could be loosened by classifying *some* remittances, in narrow and defined circumstances, as an alternative source of mobilised private climate finance.

The concept of mobilised private climate finance is a pillar of climate finance provision: in the 2009 Copenhagen Accord of the United Nations Framework Convention on Climate Change (UNFCCC) and in the subsequent Cancun Agreements, the pledged US$100 billion was expected to come from "a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance" (UNFCCC, 2009: §8). Mobilisation, however, has been harder to achieve than envisaged. The US$100 billion climate finance target for 2020 was not achieved until 2022, several years behind schedule (El Dahan et al., 2023). This repeated failure was largely due to shortfalls in anticipated volumes of mobilised private finance.[14] High-income countries will need to find new ways to 'crowd in' increased amounts of 'alternative' climate finance, especially in coming years as the global costs of adaptation increase (UNEP, 2023).

Numerous senior figures—including John Kerry; Emmanuel Macron; Ajay Banga; Ursula von der Leyen; Samantha Power; and the UK's Energy Secretary—have emphasised the importance of mobilising increased private climate finance (USAID, 2023; Basso, 2022; Banga, 2023; DESNZ and Grant Shapps, 2023). Historically, however, they have struggled to 'walk the talk' (Zattler, 2023). Insofar as these actors are genuinely committed, they have a strong incentive to explore new mobilisation opportunities and therefore to take seriously the proposals of this paper.

The concept of mobilised private finance has never been operationally applied to remittances.[15] We propose that it could be, under narrow and defined circumstances. If access to a migration programme was:

i. Carefully and verifiably targeted towards highly climate-vulnerable households with pressing adaptation needs, *and*
ii. Migrants were selected only if they meet this definition, *such that*

14 In 2020 only US$13.1 billion in private climate finance was mobilised (OECD, 2022a), versus previous expectations of at least US$24.2 billion and possibly more than US$100 billion (OECD, 2016a).

15 Interest in the role of remittances as an alternative source of adaptation finance has been growing. A European Commission report (Lubambu, 2014) proposed over a decade ago that remittances could be leveraged for climate financing. Bendandi and Pouw (2016) present a high-level argument that some remittances may meet the formal definition of climate finance (see Appendix), and Musah-Surugu et al. (2018) apply this framework to remittance flows to Ghana. The UNEP (2023), in its flagship *Adaptation Gap* report, proposes that remittances may be a necessary new source of financing to bridge the growing shortfall in climate finance for adaptation, and calls for further research in this space.

iii. Remittances were deliberately channelled to the demographics with the greatest adaptation need, *then*
iv. The programme itself would be scorable as climate finance under Rio marker guidelines (see section 4.1), *and*
v. Could mobilise remittance flows that would be classifiable, after deductions (see section 5.3), as mobilised private finance, *with*
vi. Leverage ratios superior to most alternative methods of sourcing mobilised private adaptation finance.

The proposed mechanism would in essence 'crowd in' financing from the domestic private sector of the country of destination, channelled via the migrant to carefully targeted climate-vulnerable communities. This could be considered analogous to a scaled-up conditional cash transfer programme funded by companies in the country of destination, or to a cross-border cash-for-work programme—both models which, in their conventional forms, have already been funded by climate finance for adaptation (see Box 5).

Migration programmes targeted towards climate-vulnerable households could allow extra finance for adaptation to be 'crowded in', complementing existing climate finance. High-income countries have a stated desire to increase mobilised private climate finance.

BOX 4. The importance of targeting opportunity: maximising migration's marginal benefit

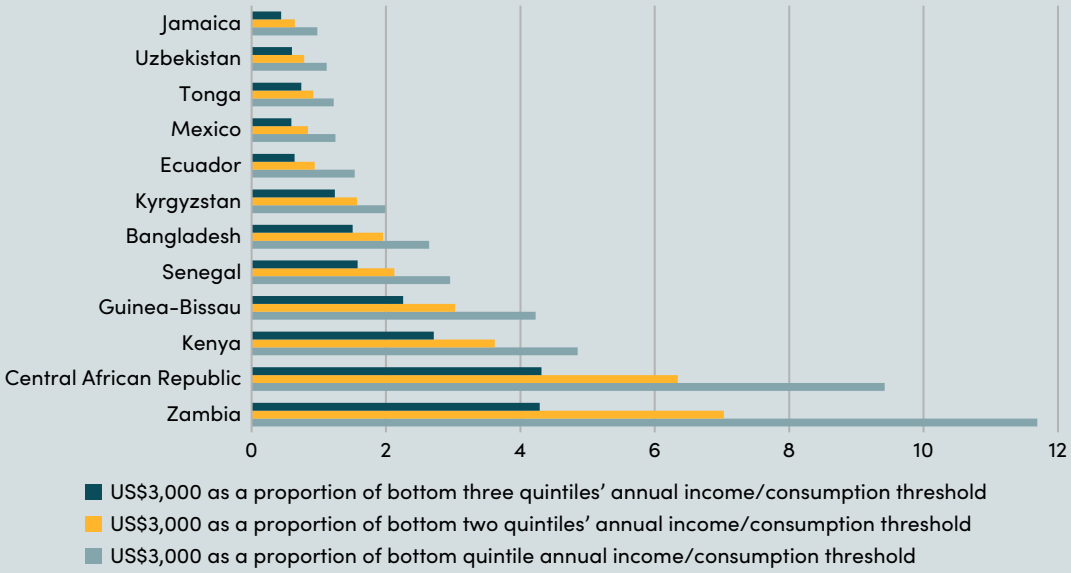
The benefits of migration are typically captured by those who are already relatively affluent. Migration is expensive, and the poorest are less likely to be able to afford it.[16] This reduces the impact of migration: money does not flow to those who need it most.[17] This is sub-optimal. The principle of maximising marginal benefit is historically central in aid allocation discussions. All else equal, Kenny (2021: 6) suggests, "a dollar of aid is better spent on a project in a country where the average income is $2 than in a country where the average daily income is $4 unless the return to the project in the richer country is twice that of the return in the poorer country."

16 In low-income countries, those preparing to migrate have incomes approximately 30 percent higher than their peers (Clemens and Mendola, 2020): as wealth rises, migration becomes more possible (Clemens, 2014). Even in middle-income countries, however, "only the richer individuals have the means to afford [a] migration journey", and are thus most likely to be able to move (Migali, 2018: 48; Bossavie et al., 2021).

17 In the Philippines, for example, remittances sent in response to a typhoon flow predominantly to richer provinces with higher emigration, rather than poorer provinces which may be more affected by the shock (Licuanan et al., 2015).

In the same way, a dollar of remittances will have a greater impact in a poorer community than in a wealthier one.[18] In Figure 3, we show the size of a possible six-month seasonal agricultural worker's remittances—an arbitrary and conservative US$3,000—versus income thresholds for the bottom three quintiles in a range of countries. Remittances to Jamaica and Mexico (large beneficiaries of the US' H-2A agricultural visa: see Martin, 2022) or Uzbekistan and Kyrgyzstan (large beneficiaries of the UK's seasonal worker visa: see McKinney et al., 2023) will be less impactful than remittances to, for example, Bangladesh or Zambia. Similarly, targeting migration opportunities to lower income quintiles, rather than the higher quintiles typically more able to benefit, will also significantly increase their impact.

FIGURE 3. Indicative remittance sum as a proportion of threshold income or consumption across quintiles, 2022



Sources: Data from World Bank Poverty and Inequality Platform, 2024. Note that for several countries, the most recent data is from 2021 rather than 2022.

Targeting migration opportunities to low income quintiles in low- and middle-income countries allows a much greater marginal effect of remittances.

18 In Haiti, remittances are relatively more important the poorer the household (Cardozo et al., 2019). In Sri Lanka, remittances assist the poorest households most in moving up the income ladder (Prabal and Ratha, 2012). Fundamentally, in all contexts, "remittances are more likely to have a poverty-reducing effect when they are received by poorer households" (Hagen-Zanker, 2015: 5). Combes and Ebeke (2011) find that the stabilising impact of remittances on consumption diminishes above a certain level of financial development. There are also diminishing returns at the macro level. Giuliano and Ruiz-Arranz (2009) find that the impact of remittances upon growth is greatest in less financially developed countries.

3.1 There is a large adaptation funding gap to be filled

The 2009 commitment made by high-income countries to provide US$100 billion per year in climate finance has now been achieved (OECD, 2024). It is itself inadequate, however, and despite the difficulties of achieving it (UNFCCC, 2022c), the next pledges must be significantly larger (Civillini, 2023b; Beynon, 2023).[19] The New Collective Quantified Goal (NCQG), the successor to the US$100 billion target, is currently under negotiation and will be actionable from 2025; recipient countries have called for contributions of over US$1 trillion a year (Civillini, 2024). In a draft proposal for discussions on the NCQG, the EU has stressed that the majority of the larger new target will not come from national budgets, arguing that "private investments will have to undertake the largest share of the required investment in low emissions, resource-efficient and climate-resilient development" (Weise, 2024).

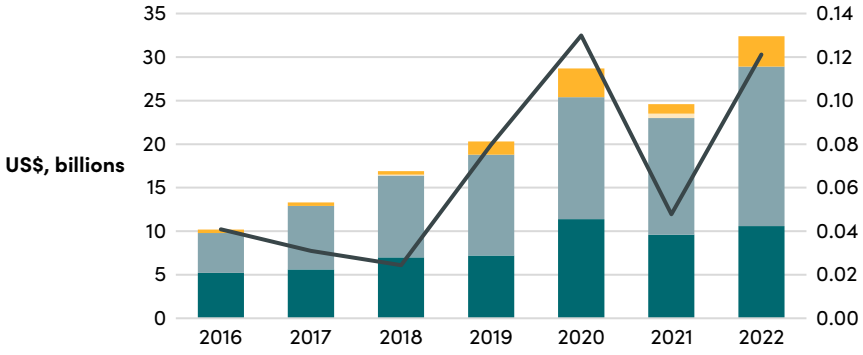
Most of the climate finance provided, furthermore, has supported mitigation rather than adaptation. The Paris Agreement suggests that there should be a balance between mitigation and adaptation (UNFCCC, 2015), but only US$32.4 billion in adaptation funding was provided in 2022 (OECD, 2024). Furthermore, not all pledged adaptation finance is disbursed: from 2017–2021, only 66 percent of pledged adaptation finance was disbursed to recipient countries, compared with 98 percent for all bilateral development finance (Bhattacharya et al., 2023).[20] It is especially hard to mobilise private finance for adaptation: adaptation projects generally "do not offer sufficient financial returns to attract private investors and traditionally remain to be financed by the official sector" (OECD, 2023b: 39; see Figure 4).

Of the private finance that has been mobilised for adaptation, most has been mobilised through large industrial projects intended to support mitigation but with a small share of finance tagged as adaptation (for example, a utility solar project tagged as mitigation but with some project adjustments to increase its durability against climate shocks, tagged as adaptation). From 2016–2021, only 37 percent of private adaptation finance had a 'principal' Rio marker (see section 4.1.1) (OECD, 2023c).

19 The UNFCCC (2021) finds that the finance needs outlined in low- and middle-income countries' Nationally Determined Contributions (NDCs) total around US$600 billion per year up to 2030. Songwe et al. (2022) warn that these estimates may undercount the sums needed.

20 From 2017–2021, approximately US$12 billion of pledged climate finance was not disbursed (Beecher and Ritchie, 2022).

FIGURE 4. Adaptation finance provided and mobilised, 2016–2022, per component



	2016	2017	2018	2019	2020	2021	2022
Mobilised private (attributed)	0.4	0.4	0.4	1.5	3.3	1.1	3.5
Export credits	0	0	0.1	0	0	0.5	0
Multilateral public (attributed)	4.6	7.3	9.4	11.6	14	13.4	18.3
Bilateral public	5.2	5.6	7	7.2	11.4	9.6	10.6
Total adaptation finance	10.1	13.3	17	20.3	28.6	24.6	32.4
Private dollars mobilised per public dollar spent (right axis)	0.04	0.03	0.02	0.08	0.13	0.05	0.12

Source: OECD, 2024.

Estimates by the UN Environment Programme (UNEP) suggest that low- and middle-income countries' adaptation finance needs are currently 10 to 18 times greater than current international public finance flows, expected to total US$160–340 billion by 2030, and US$315–565 billion by 2050 (UNEP, 2023; 2022). UNEP (2023) recognises that achieving this will require new funding sources, and proposes that remittances are one of the most promising possible options.

There is currently a large adaptation finance gap. The gap between needs and finance provided will grow as impacts increase. New ways of mobilising finance must be explored.

4. Using and mobilising climate finance

This section considers whether climate-conscious migration programmes, and the remittances generated by them, may be classified as climate finance by considering eligibility against the UNFCCC Rio markers; their treatment as mobilised private flows; and the targeting of recipients from climate vulnerable communities.

4.1 Using climate finance: eligibility for classification under Rio markers

In order to be eligible to mobilise private climate finance, a programme must be eligible to use public climate finance. There is currently no universal reporting standard for evaluating whether an individual project's funding is eligible for classification as climate finance (OECD, 2016b;

Roberts et al., 2021). In the absence of a common reporting standard, we use the OECD-DAC's guidance on Rio markers to assess the eligibility of climate-conscious migration programmes. Rio markers were originally intended to identify climate-oriented projects to assess the extent to which climate was being mainstreamed in development activities; they were not designed to quantify finance flows, but instead to provide descriptive data (OECD, 2016b). They are nonetheless used by governments to self-categorise projects for climate finance quantification purposes.[21]

The OECD-DAC's guidance on Rio marker classification specifies that for eligibility for the 'climate change adaptation' marker, an activity must (OECD, 2016b: 4):

> *intend to reduce the vulnerability of human or natural systems to the current and expected impacts of climate change, including climate variability, by maintaining or increasing resilience, through increased ability to adapt to, or absorb, climate change stresses, shocks and variability and/or by helping reduce exposure to them.*

Any migration programme would therefore only be eligible if it was deliberately targeted to assist climate-vulnerable populations.[22] Subsequent sections of this paper discuss how this could be achieved (see 4.3).

In operational practice, an activity's funding can be tagged as climate finance for adaptation if (i) the climate change adaptation objective is explicitly indicated in the activity documentation, and (ii) the activity contains specific measures targeting the definition above. Migration programmes would thus be required to specify in their documentation that they are targeting climate-vulnerable populations and demonstrate how this is intended to be achieved. In practice, this would mean screening migrants according to clear climate vulnerability criteria.

The OECD-DAC guidance suggests three steps as best practice for reporting on projects eligible for the use of climate finance (OECD, 2016b: 4):

1. Set out the context of risks, vulnerabilities and impacts related to climate shocks, using a robust evidence base. This evidence base could draw from existing analyses, or from assessments conducted for the project.
2. State in the project documentation the intent to address the risks, vulnerabilities and impacts identified.

21 All but three governments report using Rio markers as a starting point when reporting climate finance sums to the UN Conventions. The countries that do not are the United States; Bulgaria; and Hungary (OECD, 2022e). The quality of Rio marker assessments relies on governments' own choices, with limited in-depth scrutiny of reporting by the OECD. It also offers limited granularity. This had led to suggestions that the Rio marker system "lacks credibility" (Weikmans et al., 2017: 459); it nonetheless remains predominant.

22 This also means that remittances sent by existing migrants, or by migrants moving outside of targeted migration schemes, could not be considered mobilised private climate finance.

3. Demonstrate a clear and direct link between the specific project activities and the identified risks, vulnerabilities and impacts, explaining how the project will explicitly address risks and vulnerabilities to current and future climate conditions.

These steps could all feasibly be met by a project intentionally targeting access to migration programmes towards climate-vulnerable households.

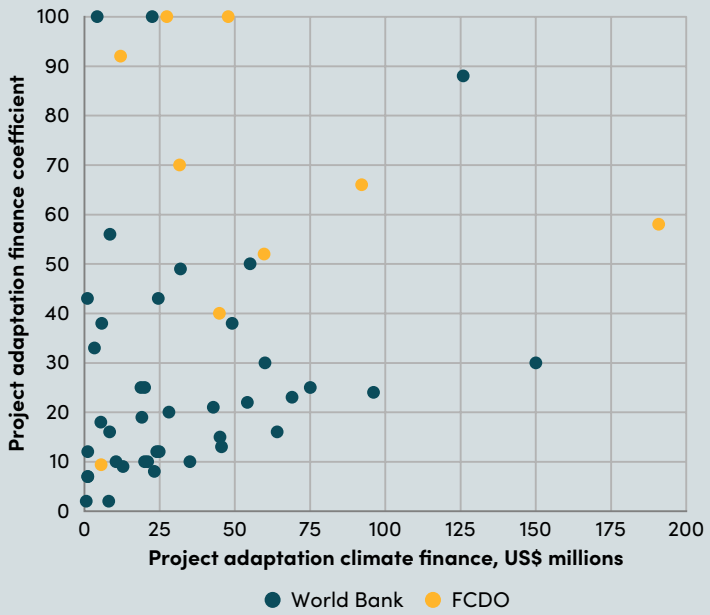
There is no universal reporting standard for assessing project eligibility for climate finance classification. Under the Rio marker guidelines commonly used for this purpose, projects must (a) set out vulnerabilities experienced by target populations; (b) state how the project will assist; and (c) demonstrate a link between project activities and outcomes. A programme targeting climate-vulnerable populations for access to migration could meet these requirements.

BOX 5. Adaptation finance for cash and cash-for-work programmes: precedents set by the World Bank and the UK

Several climate finance providers have already used cash transfers or cash-for-work programmes to support climate adaptation. These programmes have sought to reduce disaster risk or support adaptation to climate change by reducing household vulnerability to shocks through improved household consumption. If remittance facilitation programmes were targeted towards climate-vulnerable populations in the same manner as adaptation cash transfer programmes (see 4.3), any remittances could similarly be used for adaptation.

The brief summaries below describe a precedent and offer a lesson. As can be seen in Figure 5 most of the cash transfer programmes did not deliberately target climate-vulnerable populations; many justified the use of climate finance through spillover effects. Even among those with high climate finance coefficients, not all targeted climate-vulnerable populations successfully. This creates a risk of 'greenwashing', in which programmes (perhaps perfectly adequate, but not targeted towards adaptation) use climate finance with inadequate justification. Nonetheless, a precedent is set of using climate finance to facilitate and fund cash transfer disbursements.

FIGURE 5. Adaptation finance used for World Bank and FCDO cash transfer projects



Source: Author analysis of World Bank and FCDO project documents, identified from Gabbatiss (2023a) and Ritchie (2023).

Climate finance has already been used to support at least forty programmes involving cash transfers by the World Bank across numerous contexts (Ritchie, 2023). Many are not primarily focused on targeting climate-vulnerable populations, and thus have 'significant' markers with climate finance coefficients varying from 2 to 88 percent. Two projects, however, have been tagged as 'principal', with all project funding designated as climate finance:

- **The US$4.2 million Social Safety Net Enhancement Project in Iraq,** running from 2022–2025, uses adaptation climate finance to support the development of an improved national cash transfer programme. The intervention is intended to support the programme in scaling up from 1.4 to 1.6 million households, with improved targeting against poverty indicators through a national registry system. Targeting of beneficiary households is expected to ultimately include climate vulnerability criteria, and the World Bank recognises that "while climate change affects all people[,] poor and vulnerable population[s] face disproportionately higher risks because of their limited ability to cope with shocks" (World Bank, 2022: 20).
- **The US$22.5 million Adaptive Social Safety Nets Project in Niger,** which ran from 2011–2019, aimed to target 140,000 households (1.05 million people). Noting that Nigerien state capacity for building resilience among vulnerable populations is limited, the project document argues that cash transfers are "a critical contribution to disaster risk management and climate risk resilience, both ex ante to prevent and mitigate the impact of disasters for current beneficiaries and ex post, to be scaled up to help poor and vulnerable populations to cope with the impacts" (World Bank, 2016b: 5). The project

- defines vulnerability as "vulnerability to food insecurity due to exposure to risks and shocks", especially climate shocks (Ibid.: 9).

The UK's Foreign, Commonwealth, and Development Office (FCDO) has implemented nine cash or cash-for-work programmes using climate finance since 2011. Most are tagged 'significant', with climate finance coefficients ranging from 30 to over 80 percent. We highlight below three projects with high coefficients.

- **The £48 million (US$61 million) 'Building Resilience Through Asset Creation and Enhancement' project in South Sudan,** running from 2015–2018, used a 'cash for assets' approach in which vulnerable households received cash or food transfers in exchange for work on the maintenance of 'assets' such as dykes or farmland. The programme was tagged as 'principal'. The programme targeted households vulnerable to food security and climate shocks in focus counties, conditional on their being able to participate in labour-based activities. Criteria for participation were agreed with targeted communities. The programme also provided training in climate-adaptive practices, such as climate-smart agriculture (FCDO, 2023b).
- **The £31.6 million (US$40 million) 'Strengthening Ethiopia's Adaptive Safety Net' project,** running from 2020–2022, provided cash and food transfers to 8 million people on a largely cash-for-work basis. It was given a 'significant' tag with a 70 percent coefficient. Households with able-bodied adults were asked to contribute to community-planned public works, not all of which were climate-relevant. Labour-constrained households received unconditional transfers. Households were targeted on the basis of poverty, albeit with only partial success: 60 percent of recipients were in the bottom two income quartiles. The programme did not explicitly target beneficiaries on the basis of climate vulnerability, but the FCDO nonetheless finds that it was cost-effective in assisting adaptation to climate shocks (FCDO, 2022b).
- **The £27.4 million (US$35 million) humanitarian response programme in Pakistan** following the 2022 floods is tagged as 'principal' (FCDO, 2022a: 7). This provided cash transfers to over 23,000 flood-affected households, allowing greater purchasing power and the avoidance of negative coping strategies. Cash transfers were found to be highly effective for adaptation, and "faster, safer and more cost-effective than relief in-kind", while also supporting local economies (FCDO, 2022a: 18).

The precedent for using climate finance to support cash and cash-for-work programmes has been set for some time, although relatively few programmes have thus far been implemented. The examples set in climate finance usage by the UK and the World Bank suggest that the programme costs involved in a targeted remittance mobilisation project analogous to a cash transfer or cash-for-work programme could be eligible for funding using climate finance, although care should be taken to avoid 'greenwashing' programmes that do not adequately target vulnerable populations.

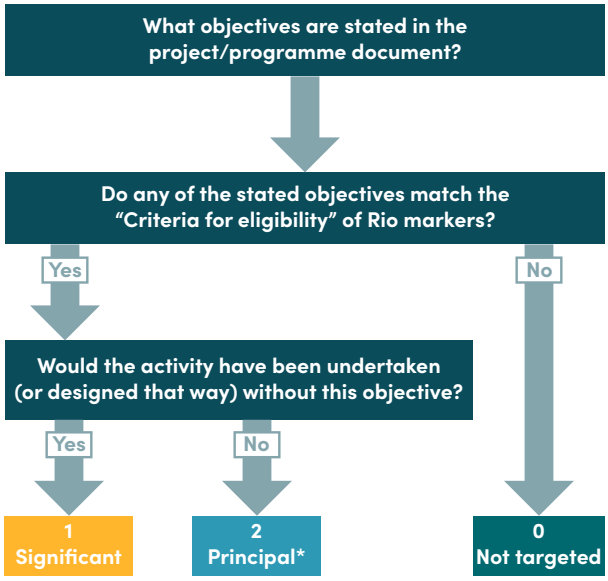
4.1.1 'Principal' and 'significant' Rio markers

Depending on the objectives and activities of a given intervention, a climate finance-eligible project may obtain either a 'principal' or a 'significant' score. The score assigned is important in affecting the amount of climate finance that an activity can potentially mobilise. A 'principal' score is allocated to a project in which adaptation is a principal motivating aim, allowing a project's finance flows to be classified as up to 100 percent climate finance. A project is marked as 'significant' when its climate-related objective is *explicitly stated*, but not *the fundamental driver or motivator for it*. In other words, the activity "has other prime objectives but it has been formulated or adjusted to help meet the relevant climate concerns" (OECD, 2016b: 5).

When a project is assigned the 'principal' tag, most DAC members will classify 100 percent of its financing as climate finance.[23] When a project is assigned the 'significant' tag, a smaller share (typically a fixed proportion of 30–50 percent) of the project's financing will be classified as climate finance, although a few donors assess and apply project-specific coefficients (OECD, 2022e). Belgium, for example, has classified between 2 and 80 percent of a 'significant'-tagged project's funding as climate finance.

The OECD-DAC's criteria for assessing whether a project should be 'principal' or 'significant' "are not intended to limit but rather to guide marking", and "the methodology is based on the purpose of the activity and not the type of activity" (OECD, 2016b: 11). Figure 6 provides a brief decision tree guiding classification.

FIGURE 6. Decision tree for scoring an activity against a Rio marker



Note: *Assigning a double principal score (e.g., to both mitigation and adaptation) to the same activity should be considered only upon explicit justification.

Source: OECD (2016b: 6).

23 Switzerland is unique in using a uniform coefficient of 85 percent for 'principal'-tagged projects (OECD, 2022e).

The OECD-DAC guidance notes that integrating climate considerations into project design "can in some cases transform the activity to the point that climate change mitigation and/or adaptation become the principal objective" (OECD, 2016b: 6). The OECD-DAC gives the example of a power project which is "redesigned so that [instead of using traditional energy sources] it instead relies on renewable energy and energy savings". In this case the base goal of the project is to provide a source of power, but "the entire activity can be considered as having climate change mitigation as its principal objective" because it has been reoriented to prioritise the selection of clean energy over a higher-emissions alternative.

Given this example, it would appear to be a matter of discretion for the country of destination whether a migration project that targets climate-vulnerable communities should be marked as 'principal' or 'significant'.

1. **The case for a 'principal' tag:** A migration programme which originates in the need to source workers but was redesigned so that it deliberately, transparently, and exclusively targeted members of communities assessed as vulnerable to climate shocks (see section 4.3), with the aim of increasing their resilience by providing new access to earning opportunities, could be considered to have adaptation as its principal objective. In this case, a project's funding would typically be registered as 100 percent climate finance, and 100 percent of mobilised remittances could be considered climate finance. This argument follows the example of the OECD-DAC's case for the power project above.
2. **The case for a 'significant' tag:** Conversely, a migration programme is still fundamentally intended to meet labour demand in the country of destination. It may have an explicitly stated climate-related objective, and it may have been reformulated to address climate impacts, but its 'prime objectives' would remain the need to find workers for employment in the country of destination. In this case, a discretionary portion of the project's funding would be registered as climate finance, with an equal proportion of mobilised remittances—see for example the United Kingdom's ICF (International Climate Finance) methodology in Box 5—counted as climate finance. If a programme generating remittances eligible for classification as climate finance included support for flanking policies and projects intended to increase its adaptation impact (see 8.3), this could make a 'principal' tag more likely.

Under the Rio marker guidelines, a project can obtain a 'principal' score if adaptation is its main aim, or a 'significant' score if supporting adaptation is not its prime objective. A 'principal' project is typically wholly categorised as climate finance; a 'significant' project's funding level is more discretionary. A climate-conscious migration project could be either 'principal' or 'significant' depending on management and discretion, though 'significant' will be more likely.

4.2 Mobilising private climate finance flows

Mobilised private climate finance flows are assessed differently to bilateral contributions, and the two categories of finance are not substitutable in reporting. Within the OECD-DAC reporting system, the mobilisation of private finance by official development finance interventions refers to "the stimulation by specific leveraging mechanisms of additional financial resources from the private sector for development purposes" (OECD, 2023d: 19). This requires *a demonstrable causal link* between the specific leveraging mechanism used by a public financial actor, and the private finance made available for a specific project or programme.

Private finance is most typically mobilised through the provision of *blended finance*, in which a public entity—but increasingly, a broader range of actors (OECD, 2020a)—deploys finance to reduce the risk profile of a development intervention, increasing the return on investment for private actors (OECD, 2023d). As noted in the following section, mobilised remittances do not follow this conventional model, and an innovative accounting approach may have to be taken.

The OECD-DAC's reporting guidance is followed, in different forms, in donors' own guidance. The European Union (EU), for example, considers (Latvia and the European Commission, 2015: 6) mobilised private climate finance to be any flows that are:

1. "Mobilised by public finance, or by a public intervention, including in the sphere of policy and regulatory reform", and
2. "Climate relevant in accordance with criteria used by relevant international organisations", i.e., the Rio markers.

The United Kingdom (UK) specifies (Government of the United Kingdom, 2018) that mobilised climate finance must be:

1. *Additional*, i.e., would not otherwise have been allocated to a climate objective or activity; and
2. The product of *an identifiable causal link* between donor funding or actions and the mobilised finance.

Remittances can thus, under the principles of UNFCCC guidance and under current practice, be eligible to be considered mobilised private climate finance if they are:

1. Directed to highly climate vulnerable communities in need of adaptation support, *by*
2. Deliberately targeted migration programmes which would not have benefited these populations *without*
3. Public interventions explicitly intending to make support for adaptation a key component, *such that*
4. The programme fulfils Rio marker guidance.

The financial flows resulting from targeted migration programmes could fulfil all of these requirements. The flow of remittances would be directed deliberately to support those explicitly identified as in need of adaptation support. The causality would be straightforward: remittances would be a new financial flow to selected communities as a result of a public intervention.

Private sector contributions to financing such migration programmes could potentially also qualify as privately mobilised climate finance. Whether these contributions could be counted would depend on the chain of causality—whether public financing choices impacted private funding decisions—and accounting practices used.[24]

Under current recognised guidance, remittances mobilised by a climate-conscious migration programme would be eligible to be considered mobilised private climate finance. They can clearly be attributed to public interventions, and provide clearly additional resources to vulnerable populations.

BOX 6. An example methodology for measuring mobilisation: the UK's approach applied to migration programmes

The UK follows a set methodology for determining the volume of private finance mobilised as a result of ICF (International Climate Finance) (Government of the United Kingdom, 2018). In the absence of a universal approach for assessing mobilised climate finance (see OECD, 2022e), the UK's approach is given as an example of how this could be undertaken.

1. **Identify the funding government's financing contribution.** If the government is only funding part of a programme, mobilised finance attributable to the Annex II country should be calculated as a pro-rata share based on the face value of all co-financing. If the UK funded 40 percent of a project and Norway 60 percent, for example, the UK could claim attribution for 40 percent of any private climate finance mobilised by the project.[25] This prevents double-counting of mobilised flows.

24 The Rio marker assessment process offers limited granularity (Weikmans et al., 2017). For most governments, markers are assigned, and coefficients are reported, on a whole-of-project basis (OECD, 2022e). A project tagged as 'significant' at the whole-of-project level, but with a component that mobilises a large amount of private finance for unambiguous adaptation purposes, would only be considered to have mobilised finance at a rate corresponding to the wider project's coefficient. Breaking a migration programme up into discrete projects, for the purpose of accounting, could thus increase the finance mobilised. In this proposal, the use of a targeting mechanism to select highly vulnerable communities for access to migration is the element key in supporting climate adaptation. This is the component allowing the mobilisation of private climate finance. If a country of destination assessed this element as an individual project, it would be likely to obtain a 'principal' Rio marker tag, and to account 100 percent of its mobilised finance as climate finance. This approach would also mean that other components of a migration programme could be more accurately assigned Rio marker tags, possibly reducing the total project funding eligible for classification as climate finance while increasing the total mobilised. This practice may be too resource-intensive to be feasible (see Ritchie, 2024).

25 This stage is required under OECD-DAC draft guidance published in 2020 (OECD, 2020b).

2. **Identify all public and private finance upfront contributions, distinguishing between them.** This includes all upfront project co-financing within appropriate timeframes. If some financing supports project elements with non-climate-related components, deduct these elements where possible.
3. **Identify the 'business as usual' baseline of private co-finance that would have been provided in the absence of ICF spending.** Migration programme participants should be selected according to their vulnerability. This could imply that the 'business as usual' baseline should be the amount of money contributed to the climate-vulnerable household by programme participants in the absence of access to the migration programme (see 5.3.2).
4. **Determine the quantity of mobilised private finance.** This represents the difference between the finance mobilised in step 2 and the 'business as usual' baseline in step 3, to provide an estimate of mobilised private finance. The UK's document notes that this step requires a judgement of the additionality of the finance and the causal role of the climate finance in mobilising private finance streams, stating that "private finance should only be counted as 'mobilised' if it is truly additional or diverted to the specific climate change-related project or programme because of ICF spending/action." In the case of migration programmes targeting vulnerability, this should not represent a problem.
5. **Attribute finance among all actors who contributed to mobilising the additional finance.** Where the government is the only actor supporting a programme, all mobilised finance can be attributed to that government. Where the government is one of multiple actors whose support causes new finance flows, the mobilised private finance should be attributed on a pro rata basis.
6. **Assess mobilised private finance and the government's 'leverage ratio'.** Finance mobilised should be disaggregated, and the amount mobilised should be calculated versus the amount contributed by the government. Importantly, only the private finance mobilised *by climate finance* should be considered as climate finance. If a project is allocated a 'principal' Rio marker tag, and is thus 100 percent financed by climate finance, 100 percent of mobilised finance—in this proposal's case, remittances—are considered as private mobilised climate finance. If it is only allocated a 'significant' tag, and therefore (for example) 30 percent of the project's financing is considered climate finance, 30 percent of remittances mobilised would be eligible as mobilised private climate finance. The 'significant' versus 'principal' decision is therefore highly important.

4.2.1 The possible need for programme management via special purpose vehicles

Mobilised private climate finance is reported through the OECD's Creditor Reporting System (CRS). For a migration programme to mobilise climate finance in a way that is legible to the OECD and able to contribute to climate finance mobilisation targets, it must be adapted to CRS reporting

requirements. This section briefly sketches a suggestion for how this may be done, but the details are beyond the scope of this paper and require further research.

The OECD guidance for the CRS provides methodologies for the measurement of private finance mobilised through seven broad sets of instruments (OECD, 2023b).[26] None of these were designed to be used for programmes analogous to the one in this paper; all assume that any mobilised private finance will be provided through loans (rather than the de facto grants that mobilised remittances represent (OECD, 2020b)) that must generate returns on investment (OECD, 2020a). This would not be the case for remittance mobilisation projects. Reporting climate finance mobilised through remittances therefore requires some degree of innovation. Of the seven broad sets of instruments with methodologies proposed by the OECD's guidance, *special purpose vehicles* (SPVs: see Box 7) appear the option most likely to work for managing migration programmes in a way that is CRS-compatible.

BOX 7. What are special purpose vehicles?

Special purpose vehicles (SPVs) are legal entities created to meet narrow or temporary needs. Their purposes are pre-defined and limited, and they have a legal personality (Sainati et al., 2017; Bartz-Zuccala et al., 2022). They are incorporated either as project organisations, or to allow specific financial transactions such as leasing or securitisation. The primary reason for the use of SPVs is to allow a broader sharing of risk between public and private institutions when in partnership, and to insulate funders from negative ramifications should the project be liquidated.

SPVs can have multiple and full functions as a corporate actor in their own right, with a staff managing major operations. Alternatively, they can also act as a "legal box", with no or few staff and without performing real activities themselves, and serve primarily to hold and route money (Sainati et al., 2020: 248). SPVs are already widely used in development programme management and financing, primarily within infrastructure megaprojects (Scott, 2017; OECD, 2023b). From 2016–2020, direct investment in companies or SPVs contributed the largest portion of mobilised private finance, with 43 percent of the total (OECD, 2022a). In the development context, they are defined as "'not–for–profit' legal entities, into which [development partners] can place often large amounts of money to implement programmes and projects" (Scott, 2017: 2).

Special Purpose Vehicles are legal entities used for narrow or specific purposes. They may be full corporate actors, or serve as mere 'legal boxes'.

The standard approach for accounting for mobilised private finance invested into SPV structures would not be relevant. Under OECD guidance for private finance mobilisation, SPVs are typically

26 These categories are: (1) collective investment vehicles; (2) syndicated loans; (3) credit lines; (4) guarantees; (5) direct investment in companies; (6) loans or grants; and (7) project finance, including through special purpose companies or vehicles. The OECD is also working to increase its ability to capture private finance mobilised through technical assistance (OECD, 2023d).

financed through public loans, commitments, or guarantees, followed by private sector loans in the expectation of returns (OECD, 2020b). Given the lack of direct returns in this project structure, the standard approach of blended finance anticipated in the use of an SPV may need adjustment.

It is possible that in the absence of more suitable options under the OECD-DAC's CRS, remittances could be routed through the SPV. Under this approach, the SPV could be managed in partnership with a remittance service provider.[27] Public funds placed as grants in the SPV to manage the migration programme would be considered investment in the infrastructure of an adaptive cash transfer programme; remittances routed through the SPV would be considered mobilised private investment in the same programme, and immediately disbursed to migrant-sending households to meet the programme's goals. The funding window to be assessed would thus need to last the length of the project. Further research would be needed to verify whether this approach is legitimate under the CRS.

A more straightforward approach could be to reconsider the OECD-DAC guidance. Provision could be made for counting mobilised *grant* financing, or even to explicitly add mobilised remittances as a possible leveraging mechanism in their own right. It is unclear how easy this could be. Some countries do already afford themselves some leeway in following the OECD-DAC guidance.[28] For those that follow the OECD-DAC's guidance exactly, SPVs appear the most likely option.

As noted above, however, some actors, such as the European Commission (Latvia and the European Commission, 2015), are willing to consider private finance mobilised through policy changes. Where this level of flexibility is possible, SPVs or changes to the OECD-DAC guidance may not be necessary.

OECD-DAC guidance assumes that private mobilised finance will be in the form of a loan; no methodology for assessing mobilised finance provides for the mobilisation of grants. Mobilised remittances are intra-household cash grants, rather than loans. Of the mobilisation instruments referenced in OECD guidance, Special Purpose Vehicles appear the most likely to meet the needs of the proposed programme.

4.3 Targeting and selecting migrants from climate-vulnerable communities

Deliberate and verifiable targeting of participants according to their vulnerability to climate shocks is crucial both to a programme's benefits for adaptation and to its eligibility for generating mobilised

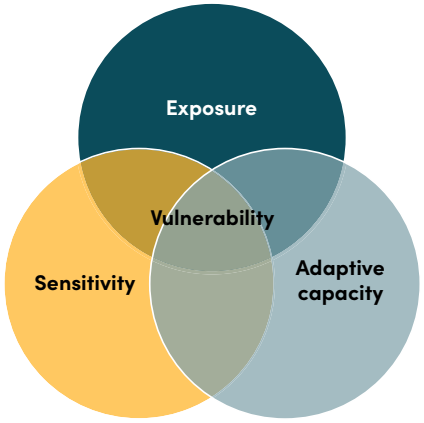
27 If so, this would also be convenient for measurement of mobilised remittances: see section 5.2.

28 For example, the UK notes that the OECD-DAC's guidance suggests that only instruments explicitly aiming to leverage additional finance, such as by contractually requiring supported organisations to provide co-financing, should count as mobilised (Government of the United Kingdom, 2018). The UK notes that this may overlook financing mobilised absent these contractual obligations, or may unhelpfully incentivise over-investment in programmes with contractual co-financing obligations. The UK thus proposes to go beyond the OECD's guidance to better capture unrecognised options for finance mobilisation. Other countries could also do this, making mobilisation through standard project financing approaches acceptable.

private climate finance. This requires careful screening of migrant participants in the country of origin, selecting migrants according to their vulnerability.

Vulnerability to shocks is determined by more than exposure to hazards (Figure 7). For this reason, targeting and selection processes must consider both *the location of possible migrants* and *their capacity to adapt to hazards*.

FIGURE 7. Components of vulnerability to climate change



Source: Adapted from IPCC, 2007.

This requires that, when managing the participant selection process, programme managers consider:

- **Exposure to hazards:** The location of possible migrant-sending households; the likelihood of these locations experiencing the onset of a hazard; and whether possible migrant-sending households may benefit from remittances following the onset of a recent hazard.
- **Sensitivity:** Whether households are especially sensitive to shocks, e.g., due to indebtedness; high dependence on agriculture; and habitation of a fragile dwelling.
- **Adaptive capacity:** Whether households have low current capacity to adapt to reduce the impact of shocks. Factors affecting adaptive capacity include household wealth; land tenure status; education levels; and capacity to diversify.

The process for selecting participants must be *effective*, and also *efficient*. It must be able to accurately select vulnerable participants to meet Rio marker criteria and support those in need, and able to do this at a programme cost that allows an attractive leverage ratio.

This is likely to require a multi-stage selection process, identifying possible participants by location and then through household-level screening in collaboration with partners.

The process for selecting climate-vulnerable participants must go beyond location to also consider broader adaptive capacity.

4.3.1 Selecting locations for targeting

Effectively targeting climate-vulnerable populations requires first identifying those particularly exposed to climate hazards. It is likely that this can most efficiently be done using remote sensing methodologies or existing studies.

Exposure mapping is often undertaken by identifying hazard 'hotspots'. This requires adequate data, including regarding socioeconomic elements such as population locations (typically gathered by government actors); weather; the effects of climate shocks on agriculture; and local government support for climate-affected populations (de Sherbinin et al., 2015). Remote sensing approaches have been used in numerous contexts to identify populations most in need of being targeted for adaptation support (see e.g., Mpandeli et al., 2019; Mainali and Pricope, 2018; de Sherbinin et al., 2019). The large cash transfer NGO GiveDirectly, for example, has used mobile phone and satellite data to assess poverty remotely in Togo, allowing relatively effective targeting at an efficient implementation cost (Steele et al., 2017; Blumenstock et al., 2021). Remote sensing approaches can provide an initial screening to identify exposure and, with the availability of the necessary data, vulnerability at higher geographical scales, before more granular assessments to identify possible participants with greater precision.

To increase the efficiency of targeting, remote sensing methods could be used to identify initial areas from which to select participants.

4.3.2 Selecting participant households

Selection on the basis of remote sensing of merely hazard-exposed areas is inadequate. Programme managers will need to further establish set criteria for the selection of participants at a more granular level. This requires socio-economic data on household status, such as their unemployment rate; income; education level; dependency on agriculture; indebtedness; access to adequate support from existing safety nets; and land tenure status.

To ensure that targeting is accurate, it should take place at the most local level possible (Mobarak and Reimão, 2020): this is likely to be at the household level. Methods of targeting at the household level can be learned from targeting approaches used by similar initiatives, such as those used when targeting cash transfer programmes.

Different approaches to identifying vulnerability exist, including different assessment indices (Doan et al., 2023a). Approaches to assessing household vulnerability should follow universal principles, allowing some degree of comparison across sites, to determine whether possible participants are vulnerable compared to households in other locations (Schipper and Langston, 2015). Because vulnerability is to a large extent socially constructed, however, they should also be attuned to specific contexts. For this reason, the indices used for selection may need to vary across locations.

Approaches for assessing household vulnerability and eligibility for participation in a climate-conscious migration programme could learn from:

- SHARP+: The Self-evaluation and Holistic Assessment of Climate Resilience of Farmers and Pastoralists approach is used by the FAO across Africa and Central Asia. It uses tablets to gather information on household resilience directly from pastoralists and farmers, assessing resilience against a standard framework of thirteen indicators to allow cross-site comparison (Hernández Lagana et al., 2022).
- Subjective resilience approach: This approach uses self-reporting of perceived resilience. This is intended to better use respondent households' own knowledge of their access to livelihoods, community support networks, and resources when assessing how well a household could respond to a possible hazard (Jones and Tanner, 2015).
- 'Vulnerability as expected poverty': An approach that assesses a household's vulnerability to anticipated hazards according to whether the hazard, or set of hazards, would move household consumption below a determined minimum level, such as the consumption poverty line, or prevent the household from moving above the line if it is already below it (Deressa et al., 2009; Doan et al., 2023a.

In many cases, targeting can be facilitated through the use of existing data gathered either by the country of destination's donor agency; local government actors in the country of origin; or NGOs (Barrett et al., 2021). These records may need to be verified through supplementary data-gathering.[29] Where this is the case, the programme is likely to need to hire enumerators. Programme managers should seek to work with partners—such as community groups able to identify the households that would most benefit—where possible.

The indicators for vulnerability to climate shocks will overlap considerably with poverty-based criteria, but are not identical. Numerous research projects indicate the types of data that should be gathered to assess whether a household's vulnerability. Huynh and Stringer (2018), in a study in Vietnam, collate the following indicators from the literature:

- Number of community-based organisations of which the household is a member;
- Highest education attainment of household head(s);
- Health status of household;
- Form of land tenure;
- Household income;
- Access to credit;
- Access to communication;

29 In a review of cash transfer targeting approaches used by the UK, the International Commission for Aid Impact noted (ICAI, 2017) that in several projects partner government records did not sufficiently correlate with poverty or, worse, did not include the poorest populations, and thus excluded them as beneficiaries.

- Access to transport;
- Quality of the household's accommodation;
- Household livelihood activities.

Similar criteria are used by other studies, with context-specific alterations (see e.g., Ngoma et al., 2023; Opiyo et al., 2014; Banerjee et al., 2018).[30] It will also be important to incorporate a gender dimension in the targeting and selection process, recognising that female-headed households are more likely to be vulnerable to climate shocks in many contexts due to intersectional disadvantages (e.g., Opiyo et al., 2014; Flatø et al., 2017; Aiswarya et al., 2023). An example set of criteria is provided by the index applied by the 'Migration, Environment and Climate Change: Evidence for Policy' (MECLEP) project in Haiti (Table 1). A similar set of criteria could be converted into a weighted index to compare household vulnerability.

TABLE 1. Dimensions and indicators of the vulnerability index applied in Haiti by the MECLEP project

Dimensions	Indicators
Economic	1) Less than two sources of income
	2) Dependency ratio is below the sample mean
	3) Household head is unemployed or inactive
	4) Household owns neither house nor land
	5) Household owns less than two assets
Education	1) Household head is illiterate
	2) At least one child in school age is attending school
Health and nutrition	1) Household has no access to health care
	2) Household has a permanently sick or injured member
	3) Household has no access to drinking water at least once a week
	4) Household does not have enough food for three meals a day
Housing and environment	1) Household has taken no measures against future hazards
	2) Household has no access to electricity
	3) Dwelling's walls and roof are not made from resilient materials
	4) Household exposed to environmental hazards in past 10 years
Social capital	1) Household is not a member of an organization
	2) Household has no access to a mobile phone
	3) Household cannot count on somebody for help
	4) Household has no access to formal credit
Social inclusion	1) Household has had security issues in the last year
	2) Household has experienced discrimination
	3) Household has no access to informal credit

Source: Melde et al., 2017: 49.

30 Skjeflo (2013) further notes that in all contexts, households' access to markets and exposure to *market* shocks should also be considered.

Migrant-sending households should be selected on the basis of multiple indicators of vulnerability to climate shocks. Numerous frameworks for assessing climate vulnerability exist and can be adapted.

4.3.3 Partnerships for targeting

Data-gathering and targeting requires the presence of trusted actors in the country of origin. Programme managers could manage selection through relationships with recruiting agents; community institutions; embassies; implementing actors such as the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Germany's international development agency, or the International Organisation for Migration (IOM); or country of origin governments at different levels. It is likely that multiple actors will need to be involved in the selection process. A proactive approach to recruitment will be needed, including deliberate contact with rural (agricultural) communities more likely to be vulnerable to shocks.[31] This could be facilitated through initial screening of possible households using existing administrative data, or by integrating the targeting and recruitment process into household outreach conducted by other programmes taking place in selected locations.

Some examples are already available. The Temporary and Circular Labour Migration (TCLM) programme between Colombia and Spain worked with recruiters and the IOM in Colombia to select households vulnerable to environmental shocks, including in rural mountainous areas (see Box 8). New Zealand's Recognised Seasonal Employer (RSE) scheme (see Box 11) works with recruiters, government actors, and community networks on Pacific Islands to select migrants from vulnerable households (World Bank, 2018; Bedford et al., 2020). The targeted migration programme between the Indian state of Mizoram and Gulf Cooperation Council countries worked with local government and recruitment actors to identify unemployed workers from disadvantaged groups (Gaikwad et al., 2024; see Box 12).

RSE participants are currently deliberately selected from poorer, rural areas (Bedford et al., 2021). They are recruited either through 'work-ready pools', in which prospective workers register their interest and are screened domestically before being placed on an easily accessible recruitment list, or through direct recruitment, often mediated through government bodies or community networks (Mudaliar and Voigt-Graf, 2022). The approach, and the actors involved, vary across countries. In Fiji,

31 Highly vulnerable rural agricultural households are most likely to obtain the greatest benefit from access to opportunities. In some cases, it is possible that rural-urban migrants from these households could be efficiently recruited in cities. This approach was previously used by Australia's Seasonal Worker Programme (now PALM), for which location was an important factor in the selection process, motivating workers to migrate to urban areas to increase their chances of selection (World Bank, 2018). However, there is a risk that a recruitment approach limited to urban areas neglects the most vulnerable households, who may be unaware of migration opportunities or not have the resources to travel to recruitment zones. Pacific seasonal migration programmes have, for this reason, moved to decentralise the selection process to ensure better coverage (Curtain and Howes, 2020).

recruitment is managed by the Ministry of Employment, Productivity, and Industrial Relations in collaboration with local actors. The selection process is intended to ensure that workers:

- Are unemployed;
- Live in a rural area;
- Hold a valid passport;
- Are physically fit and healthy;
- Have a clear police and immigration record;
- Have basic English literacy;
- Have farming experience;
- Are considered hardworking and a team player; and
- Are honest and reliable: selection is undertaken by the head of the village or district.

Often, it is also required that workers come from a low-income family (Gibson and McKenzie, 2010). Some of the factors already used by recruiters in this programme—such as rurality, unemployment, and low household income—interact with other climate vulnerability factors. Further criteria with a more direct relationship to climate vulnerability—including exposure to a range of sudden- and slow-onset climate shocks—could be added to the existing list of factors considered in recruitment. The multi-stakeholder recruitment approach used in the country of origin, collaborating with community leaders, local government actors, and recruiters, would also be likely to be useful in other contexts.

To maintain the integrity of the recruiting approach, any partnerships should be regularly audited and selection criteria verified. It is notable that in three of the best examples of migration programmes intended to support climate vulnerability, targeting processes have in some cases been found to risk replacement by relationships and connection-based selection.[32] Partnerships with community leaders and local government are likely to be important to both targeting and ensuring that the programme is run efficiently, but it is important that targeting errors are kept to a minimum and that selection criteria are respected.

The outcome of the targeting process may vary depending on the approach to programme implementation. Eligible households seeking to send a migrant in a climate-conscious migration programme could be entered into a pool followed by a subsequent lottery process. This would subsequently require an efficient way of communicating the outcome of the lottery process to selected migrants, but may be suitable where it is not known exactly how many workers are needed in the country of destination. Where this is known, workers could be recruited directly into the migration process without an intermediary selection. It is important to note that targeted households

32 These programmes are the TCLM (see Box 8); an internal migration programme in Bangladesh intended to support rural households during the 'famine season'; and New Zealand's RSE (see Zapata-Barrero et al., 2012; Lagakos et al., 2018; Bedford et al., 2020).

may need some form of financial assistance to support participation costs, potentially including rural-urban movement before travel.

The selection process could be undertaken in partnership with a range of actors, such as the IOM, community actors, or the partner government. Care must be taken to audit selection processes and prevent other factors from predominating.

BOX 8. Colombia-Spain labour migration targeted towards climate-vulnerable communities

The Temporary and Circular Labour Migration (TCLM) programme between Colombia and Spain operated from 2001–2012. It was initially run by the Catalonian *Unió de Pagesos*, an agricultural association, and co-managed with the IOM from 2007. It was originally conceived as a way of diversifying the livelihoods of families affected by the Galeras volcano eruption of 1993, but was then expanded to consider other hazards (de Moor, 2014). Around 1,500 migrants travelled per year to Spain, working for a period of 6–9 months in the agricultural sector on a basis renewable for two years. The programme was managed through public-private partnerships to offer not only a migration pathway, but also training and development-focused activities in the community of origin and in Spain. The programme ran successfully until demand for labour reduced following the 2008–2009 recession (CGD, 2021). In addition to its focus on environmental hazards, it was also notable for including in its bilateral agreement the requirement that development would be prioritised (de Moor, 2014).

The programme worked with local partners in Colombia to directly select migrants from vulnerable groups, including members of indigenous groups and communities located in areas affected by recurring environmental shocks (de Moor, 2011).[33] This was done by first identifying hazard-exposed areas, and then vulnerable population using selection criteria that varied across communities. The process was mediated by the IOM, which identified key characteristics of targeted populations, and by local partners and communities which then identified potential migrant workers meeting these criteria (Mejía et al., 2009). In some cases, local private, non-profit and government partners co-financed this selection process (Mejía et al., 2009; Fundación Carboandes, 2009). Community involvement in selection was prioritised throughout (de Moor, 2014). At the level of individual migrant workers, selection criteria were provided by the *Unió de Pagesos* to ensure workers met employers' needs (Vergé Oms, 2009).[34]

33 In some cases targeting may not have been successful. Some migrants reported that selection criteria were in practice dominated by arbitrary factors, including existing links between migrants and recruiters (Zapata-Barrero et al., 2012). Likewise, the selection of geographic areas for recruitment also did not always prioritise environmental or development factors over existing relationships. In its 2009 programme review, the IOM recommended that geographical screening should be prioritised (Mejía et al., 2009).

34 These criteria considered possible participants' family situations; educational levels; experience in agriculture; capacity for teamwork; and their motivation for participation (Vergé Oms, 2009).

The programme allowed community members to earn money in Spain before returning to assist with post-disaster reconstruction or invest in productive enterprises, thus reducing the long-term impact of shocks or increasing resilience before shocks occurred (Schwerdtle et al., 2018). Participation in the programme was described by migrant workers as "life-changing"; 90 percent of migrants surveyed described the programme as "the economic opportunity of a lifetime" (Mejía et al., 2009: 111). During the period of the programme the average daily wage for a farmer in Colombia was around EUR 3 versus EUR 32–40 per day in Spain. Migrant workers in Spain sent home between EUR 100–200 per month in addition to saving an average of around EUR 2,000 (Mejía et al., 2011). These remittances represented an increase in earnings of approximately 700 percent. Participants paid off debts, purchased houses and land, educated their children, and created businesses.

The Temporary and Circular Labour Migration programme between Colombia and Spain offers a rare example of a migration programme that deliberately targeted vulnerable populations for participation. Remittances were approximately 700 percent larger than counterfactual earnings, allowing increased household resilience.

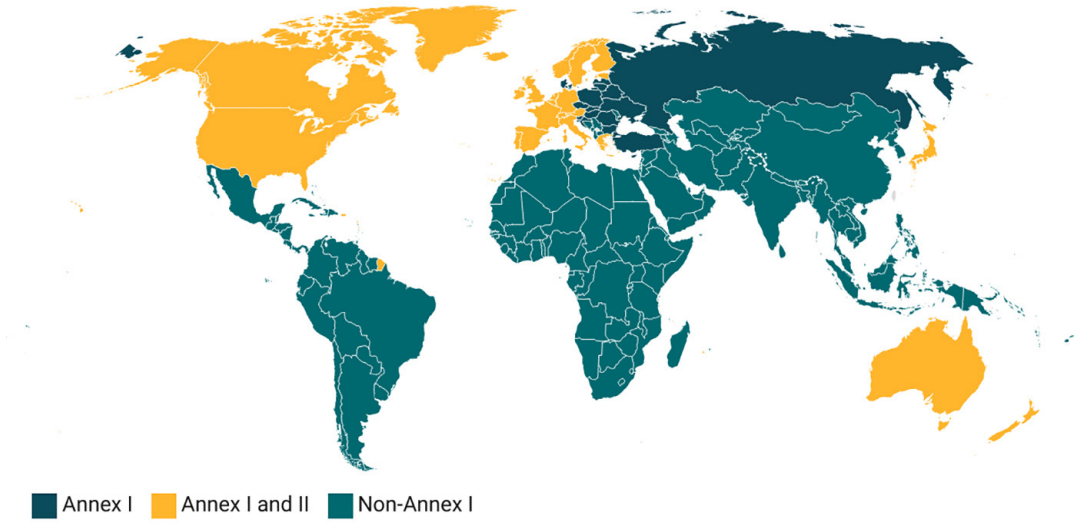
4.4 Country of origin eligibility under the UNFCCC

Only migrants selected according to criteria assessing vulnerability to climate shocks would be eligible for programmes generating mobilised private climate finance through remittances. This is required in order to satisfy Rio marker requirements (see section 4.1). These migrants must, however, be selected from countries eligible to receive climate finance.

Under the 1992 United Nations Framework Convention on Climate Change (UNFCCC, 1992; Figure 8), countries are divided into three groups:

- Annex I, consisting broadly of 'developed' countries (the 1992 membership of the OECD plus countries considered still to be economies 'in transition', e.g., ex-USSR states), accepted a non-binding goal to reduce their emissions levels.
- Annex II, consisting of Annex I but *without* countries considered still to be 'in transition'. Annex II countries are obliged to provide finance and technology to developing countries for mitigation and adaptation.
- 'Non-Annex I' countries—broadly 'developing' countries—had no obligations imposed on them, and are eligible to receive support from Annex II countries.

FIGURE 8. Countries by UNFCCC annex status



Source: UNFCCC, 1992. Created using Datawrapper. National borders are set by Datawrapper.

While there are 155 'non-Annex I' countries potentially eligible to receive climate finance, care must be taken to adhere to the Rio marker guidelines to ensure that Annex membership alone does not determine whether remittances are classified as climate finance. This is important given that some ODA is already being automatically classified as climate finance based purely on the country in which it is spent (Gabbatiss, 2024). Remittances flowing, for example, to Singapore or Saudi Arabia—both non-Annex I countries—should generally not be reasonably classifiable as climate finance: international funds should prioritise those most in need, and these countries' governments have adequate domestic resources to support adaptation.

Given that large amounts of funding are contingent on classifications of vulnerability and eligibility, these discussions are highly political (Klein, 2009). Several important initiatives already attempt to go beyond the high-level and outdated classifications of the UNFCCC, but have notably struggled in doing so. The Adaptation Fund, which finances adaptation projects in low- and middle-income countries, is mandated to support 'particularly vulnerable' developing Parties to the 2001 Kyoto Protocol. Assessment of 'particular vulnerability' has been "a contentious and political issue", meaning that in practice 152 developing Parties are eligible and finance is distributed on a first-come, first-served basis (TANGO International and ODI, 2015a: 26; 2015b).

'Particularly vulnerable' countries are also those initially eligible for loss and damage funding. At COP27 a definition of this category was not agreed (UNFCCC, 2022b: 2); discussions continued through a 24-member transitional committee during 2023 (Lo, 2022), but despite the establishment of a new loss and damage fund at COP28, no definition of 'particularly vulnerable' was detailed in the text (Civillini, 2023a). As of early 2024, little progress appeared to have been made (Vaidyanathan, 2024). It is understood that some proposals in the discussions over the New Collective Quantified

Goal suggest that the 1992 list should be adjusted, to target 'most' vulnerable countries, including small island states or members of the Least Developed Countries bloc (Weise, 2024). When or if an agreement is found, countries seeking to select migrants for vulnerability could use or adapt this list for initial high-level targeting.

Migrants participating in the proposed programme must be selected from a 1992 list of 155 countries, following UNFCCC criteria for the reception of climate finance. To maximise the impact of programming, countries of destination should go beyond this list to target the most vulnerable. The science of vulnerability assessments is, however, contested and politically charged.

5. Calculating mobilised flows

For the proposed programmes to be successful, (i) large amounts of new and additional finance must be mobilised at (ii) a level of efficiency attractive to countries of destination. This section sets out in detail how flows of private mobilised climate finance could be assessed for an eligible temporary migration programme. It projects the amount of climate finance that an individual programme could potentially generate, and the leverage ratios between programme costs and climate finance mobilised. Mobilisation rates through targeted programmes are estimated to be highly efficient.

For some years, international development actors have sought to leverage vast amounts of private finance using public money (Gabbatiss, 2022).[35] This 'billions to trillions' effort has thus far failed, and leverage ratios have on average been underwhelming (Kenny, 2022). The World Bank had hoped to achieve a leverage ratio of 1:9 (Kenny, 2019). Across development finance institutions (DFIs), leverage ratios in 2021 were estimated to average 1:0.35 (All Banks, 2023). Previous estimates for the period 2013–2014 (Attridge and Engen, 2019) suggested that across both DFIs and multilateral development banks (MDBs), the leverage ratio for development finance is 1:0.37 in low-income countries, 1:1.06 in lower-middle-income countries, and 1:0.65 in upper-middle-income countries, with a system-wide average of 1:0.75.[36]

Assuming that countries of destination prioritise the efficient mobilisation of private climate finance, a successful climate-conscious migration programme must at least exceed the 1:0.37 ratio in low-income countries; preferably, it would exceed a leverage ratio of 1:1. Where countries are already organising and funding migration programmes, however, it is likely that the amount mobilised would only need to exceed the additional costs necessary for the programme to be targeted towards

35 There is no universally agreed definition of 'leverage' in the context of climate finance. Broadly, however, it refers to the process of mobilising new private sector capital through the deliberate use of public sector finance, without which the private sector finance would not have been used for climate-relevant purposes. A 'leverage ratio' refers to the ratio of private sector finance mobilised to public sector finance deployed (de Nevers, 2017).

36 This varies across institutions and instruments, from the worst ratio of 1:0.14 to the best of 1:1.5, according to whether attributed finance includes money mobilised indirectly as well as directly (Attridge and Engen, 2019).

climate-vulnerable populations. For this reason, a leverage ratio considerably below 1:1 could still be an adequate incentive for some countries of destination.

Several points must be considered when determining whether climate-conscious labour migration programmes can succeed in meeting this goal.

Firstly, it must be decided what share of net remittances *should* be considered eligible for classification as climate finance. Not all remittances are spent directly on activities typically considered 'adaptation'. We argue that *if* migrants are adequately selected from climate-vulnerable communities, the entirety of remittance sums (net of deductions) should be considered eligible for classification. This recognises (i) that any resources transferred to highly vulnerable populations will increase their resilience and adaptive capacity, and (ii) that distinguishing between 'adaptation' and 'non-adaptation' activities undertaken by highly climate-vulnerable populations is challenging.

Secondly, the total amount of remittances mobilised must be measured. To ensure that estimates of mobilised finance are accurate, we suggest that remittances could be measured in partnership with a low-cost remittance service provider which participants are required to use.

Thirdly, migrants' participation costs and—possibly—opportunity costs must be deducted from remittance totals. Participation costs include visa costs and airfare. Opportunity costs may need to be estimated and deducted, but this is not clear from UNFCCC/OECD guidance. Cost deductions reduce leverage ratios, but also incentivise countries of destination to minimise participation costs and target vulnerable groups with low opportunity costs.

Fourthly, the costs of the migration programme must be assessed against remittances mobilised, establishing a leverage ratio. Few migration programmes publish their costs, making this challenging. In the absence of comprehensive information, the Australia Seasonal Worker Programme, for which partial data is available, is used to estimate possible leverage ratios (section 5.4.1). Calculations are made as if the programme had adhered to the standards set out in the previous sections.

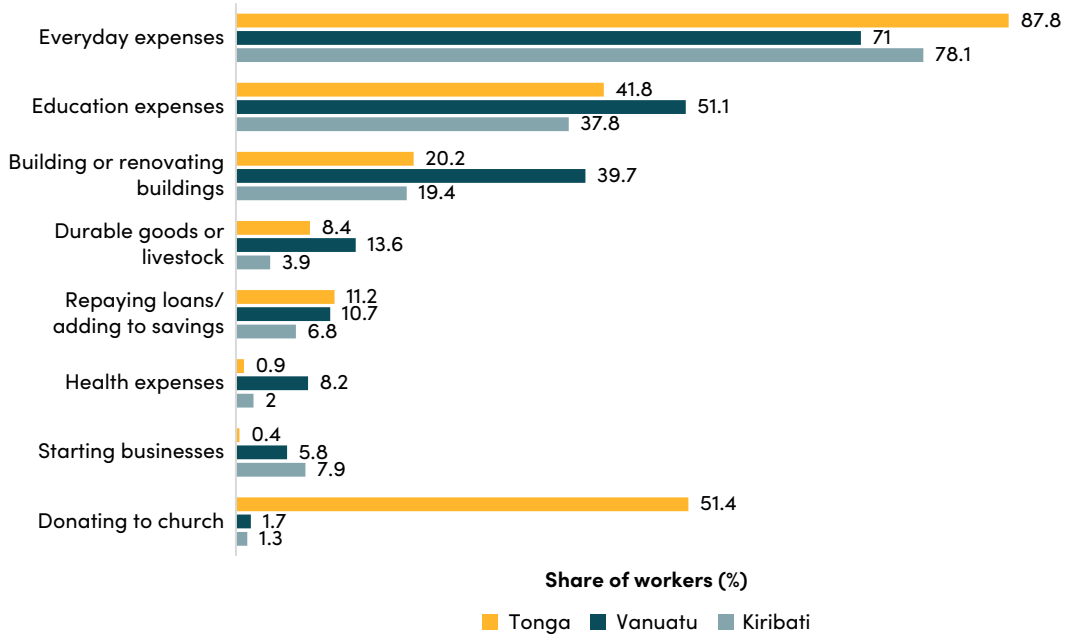
Estimates are made for the amounts of climate finance that could be mobilised. These estimates suggest that where a programme is effectively managed, large finance flows can be directed towards climate-vulnerable populations, and very competitive leverage ratios can be obtained.

5.1 The share of net remittances considered climate finance

Remittances are typically initially used for urgent needs, such as the purchase of food; health-related costs; or the paying off of debts (Lipton, 1980). For climate hazard-exposed communities, these immediate needs can often be related to experiences of climate shocks, such as debts taken on due to the need to buy food during a period of intense drought (Huckstep and Clemens, 2023; Bharadwaj et al., 2022; Doan et al., 2023d). Remittance use choices can vary considerably across contexts.

Figure 9 shows the frequency of remittance uses for different purposes by participants in Pacific seasonal labour migration programmes; note that it does not show the total amount of money spent on each category, and that participants were not selected according to climate vulnerability.

FIGURE 9. Remittance uses, by nationality, of Pacific seasonal migrant workers



Source: Doan et al., 2023d.

Remittances to climate-vulnerable households can thus often be understood to be used as part of an *immediate* adaptation strategy, allowing consumption where it may otherwise be highly challenging. Beyond this, they also support what could be called 'longer-term adaptive activities', such as strategic investments following saving or contributions to local public goods (Huckstep and Clemens, 2023; Musah-Surugu et al., 2018). In practice, 'adaptation' activities will almost always overlap significantly with poverty-reduction initiatives, such as investments in livelihood diversification which raise income and increase resilience (McGray et al., 2007; Singh and Bose, 2021). Given that poverty is a key component of vulnerability (Shahabuddin and Ali, 2006; Hallegatte et al., 2020), these uses can offer very good outcomes for reducing exposure to shocks (e.g., Yang and Choi, 2007). Evidently, however, not all remittances will be spent on activities recognisable as 'adaptation'. Some, for example, are spent on cultural purposes such as weddings (e.g., Babagaliyeva et al., 2017).

Differentiating between 'matter-of-course expenditure', 'development', and 'adaptation' will be very difficult in many remittance-receiving contexts. There are two primary options regarding the share of net remittances considered climate finance: partial or full recognition.

5.1.1 Partial recognition

The first option is to determine parameters for 'adaptation' activities; calculate the percentage of remittances are used for these activities; and then count only that percentage as climate finance. Musah-Surugu and Anuga (2023), for example, in a study of remittance uses by migrant-sending smallholder households in rural northern Ghana, suggest that of the average of US$369 received annually per household, approximately US$100–300 is typically used for activities classifiable as 'adaptation'. To make these calculations, they define adaptation as "the responsive mechanism adopted (directly and indirectly) by farmers to offset the effects of climate change and reduce vulnerability" (Musah-Surugu and Anuga, 2023: 348).

This approach faces two main drawbacks against its use in the proposed programme. Firstly, at the conceptual level, 'adaptation' and 'other' activities have significant overlap, and parameters for distinguishing between them are likely to be arbitrary, subjective, and contestable (McGray et al., 2007; Singh and Bose, 2021).[37] Even where remittances only support smoothing of consumption during shocks, for example, this can still represent a necessary adaptation (Kala et al., 2023).

Secondly, there is an operational challenge. There is frequently little context-specific knowledge of how migrant households use their remittances, and it is not likely to be feasible for a programme to monitor at the household level how remittances are used. Information from one area may also not translate to other areas, meaning that where research is conducted at the granular level, it may not generalise.

Programme organisers could estimate the percentage of remittances used for climate adaptation, and consider only this proportion eligible for classification as mobilised climate finance. This approach faces conceptual and operational challenges: it can be hard to distinguish between non-adaptive and adaptive activities when undertaken by very vulnerable populations, and hard also to measure the funds used for these activities across households.

5.1.2 Full recognition

The second option is to consider *all* remittances, net of costs, sent to highly climate-vulnerable households to be used for adaptation via direct or indirect spending choices.

The validity of this approach relies on the ability of the programme to adequately screen migrants such that money flows *only* towards households reliably assessed to be climate-vulnerable. This is likely to be conceptually and administratively easier than attempting to assess the actual percentage of remittances spent on 'adaptation' or to extrapolate a limited number of assessments to an entire

37 As noted, poverty is a key component of vulnerability (Shahabuddin and Ali, 2006; Hallegatte et al., 2020). Interventions that reduce poverty—including the purchase of nutrition during droughts—are also highly likely to increase resilience.

migration programme. Given that climate finance has previously been used to fund cash transfer or cash-for-work projects (see Box 5), and that migration programmes have previously selected participants on the basis of vulnerability to shocks (see Box 8), it is reasonable to expect programmes to be able to adequately screen participants to select highly climate-vulnerable populations. If this can be achieved, all remittances deliberately diverted towards these highly vulnerable households can reasonably be assessed to support adaptation.

Full recognition of mobilised remittances as climate finance is preferable. This recognises that (i) for highly vulnerable populations, any resources will increase resilience; and (ii) that analogous cash transfer and cash-for-work programmes set a precedent.

5.2 Measuring remittances

To assess the amount of private climate finance mobilised, it is necessary to be able to measure remittances sent by participants in climate-conscious labour migration programmes.[38] This could be achieved, with varying levels of likely success, by measurement at the aggregate level; measurement through surveys; and direct measurement in collaboration with a remittance service provider.

5.2.1 Measurement at the aggregate level

The quality of international remittance flow data is generally low (KNOMAD, 2022), despite the fact that SDG Goal 17.3.2—'Mobilise additional financial resources for developing countries from multiple sources'—requires adequate data to assess progress. The primary source of data for national remittances comes from Balance of Payment statistics, compiled by the International Monetary Fund (IMF) using estimates from national central banks. This collates compensation of employees, personal transfers, and capital transfers between households.

Few countries report data on capital transfers, and there is significant heterogeneity in remittance data collection in the other categories. The quality of remittance data thus varies: some central banks neglect to capture remittance data from key sources, such as money transfer service providers or post offices. IMF guidelines on remittance classification are also not always followed (Andersson and Siegel, 2019). Some areas, furthermore, see up to 90 percent of remittances received sent through informal channels (Olivié and Santillán O'Shea, 2022). It is thus highly unlikely that the impact of new migration programmes upon remittances could be adequately measured using bilateral data gathered using the conventional methods.

38 A more simplistic approach, such as a formula for estimating per-migrant mobilised private climate finance, could also be used. This would weaken, if not remove, incentives to reduce costs to maximise remittances. However, it is possible that this could overcount remittances mobilised; a formula-based approach would need to be carefully audited by transparency actors.

Measurement of remittances at the aggregate, bilateral level is insufficiently reliable or granular to provide the clear data necessary for calculating mobilised climate finance amounts.

5.2.2 Measurement by surveys

Given the importance of accurate measurement of remittances generated by climate finance-eligible programmes, it is likely that implementation will require direct measurement. Several methods have been tested by previous projects. One option is to undertake surveys of migrant-sending households in the country of origin. These are advantageous in that they can record both formal and informal remittances. Households can however misreport amounts of remittances received (Clemens and McKenzie, 2018).

An alternative to household surveys is to ask individual migrants to self-report their remittance amounts. This is the method used by many programme assessments, such as the 2014–2015 project assessing remittances sent by migrant participants in New Zealand's RSE scheme (Ministry of Business, Innovation and Employment, 2015). Depending on the assessment's context, however, it is possible that self-reported remittance amounts may be unreliable. As Brown et al. (2014) note, to remit is to perform the socially desired task, and it is possible that migrants may over-report their remittances sent. A study of reporting of remittances from the United Arab Emirates to the Philippines, conversely, finds that remittances may be *under-reported*: migrants under-report remittances sent by six percent, and recipients by 23 percent. A custom smartphone app designed to make reporting easier has limited effect (De Arcangelis et al., 2023), suggesting that where possible, measurement should be undertaken still more directly.

Measurement of remittances through surveys is preferable to measurement at the aggregate level, but can also be unreliable.

5.2.3 Direct measurement through remittance service providers

It is likely that cooperation with remittance service providers will be the most reliable and simple means of measuring remittances generated by climate-conscious migration programmes. Several efforts have already been made to do use data from remittance service providers for measurement (Kalantaryan et al., 2022). One 2013 study (Bounie et al.), for example, used data from a mobile banking service operated by Société Générale from 2004 to 2009, capturing 19,323 transaction-level transfers by 3,294 migrants. Another study used three years of administrative data provided by the mobile money operator M-PESA to analyse the effects of remittances in Mozambique (Batista and Vicente, 2021).

Given that countries of destination are incentivised to maximise remittance amounts sent in order to increase quantities of climate finance, they could also partner with remittance service providers

to lower transaction fees and maximise the reliability of the data gathered. If transaction fees were lowered; migrants were given adequate information in order to be able to trust the service provided; and financial inclusion was raised (see Olivié and Santillán O'Shea, 2022), adequate data on remittances transmitted could be gathered while also improving outcomes for migrants and sending communities. An example to be learned from has been essayed in New Zealand's RSE programme (see Box 9).

Where possible, direct recording of remittance amounts is likely to be the most effective method of remittance measurement. This requires collaboration with mandated high-value remittance service providers.

BOX 9. Working with remittance service providers: success in the Pacific

In 2020, New Zealand's Ministry of Foreign Affairs and Trade partnered with Appello Services, a remittance service provider, to create an online system enabling ni-Vanuatu workers to place voluntary payments directly into ni-Vanuatu bank accounts (Bedford, 2021b). This system, the Seasonal Worker Superannuation Administration Service (SWSAS), has been stunningly effective. Transfer fees are set at inter-bank rates (Collins, 2023), and the service has also been successful in reducing currency exchange fees. As a result, the cost of remittance-sending is reduced to just 2.9 percent (Bedford, 2021b), an enormous improvement.

The SWSAS operates on a voluntary basis, in which migrant workers must sign up to have an agreed amount deducted from their pay-checks each week to be transferred into an account in their country of origin. This is necessary for the SWSAS to comply with anti-money laundering obligations (Bedford, 2021b), which are often a challenging element in cost-reduction efforts (Olivié and Santillán O'Shea, 2022). This means that both employers and employees must agree to its use. It has proven a simple, secure, transparent, and low-cost service.

The SWSAS is now being scaled to cover workers from Vanuatu, Samoa and Tonga, the three largest countries of origin in the RSE scheme (Bedford, 2021a). A similar model has been proposed for use in Australia.[39]

In New Zealand, a pilot public-private partnership has successfully reduced the cost of sending remittances to 2.9 percent.

39 Collins (2023: 15) proposes that the Reserve Bank of Australia could follow the example of the SWSAS in transferring regular remittances from PALM workers to nominated bank accounts in the Pacific until the market is ready. Implementation prices could be reduced through a public-private partnership following a competitive reverse auction, with transfer costs possibly further reduced through limited subsidies if necessary.

5.3 Accounting for mandatory deductions

Remittances considered mobilised climate finance should be additional to the household's pre-participation baseline; they should be net of money foregone due to the programme. This means that the money spent by migrants on *participation*, and possibly also the financial contribution of the migrant had they not migrated—the *opportunity cost*—should be deducted from the total eligible for classification as mobilised private climate finance.

5.3.1 Participation costs

Participation costs represent money that, due to engagement with the programme, is no longer available for adaptation. Any such costs should be deducted from the total of remittances eligible for classification as climate finance.

Migrants' participation costs are often large, despite widespread recognition that these costs should be minimised (Hooper, 2022). In 2017 the average participant in the Australia Seasonal Worker Programme spent AU$1,474 (US$1,180) in participation costs—eight percent of net earnings—despite the fact that employers subsidised some airfares and visa costs (World Bank, 2018). Participants in an India-United Arab Emirates (UAE) temporary migration programme are similarly found to spend around 10 percent of net income on initial participation costs (Naidu et al., 2023); varying, but often large, expenses are also reported elsewhere.[40]

Participation costs include those incurred by internal travel before migration; visa charges; medical checks; and airfare. In some cases (see Box 10) these amounts are loaned to migrant participants by employers and then repaid directly from wages. When this is done, care must be taken not to double-count participation costs: they will already have been captured by the reduced earnings available to migrants for sending as remittances. This requires that these costs are measured by the government of the country of destination. Surveys of participating migrants, conducted in the country of destination or shortly after return to the country of origin, may be the most feasible way of measuring participation costs (World Bank and ILO, 2019).

Migrant participation costs are often large. They must be deducted from remittance totals when calculating climate finance.

40 For example, participants in New Zealand's RSE scheme pay a median of AU$1,471 (US$950) (ILO, 2022). Seasonal agricultural migrants to Scotland pay £244 in visa costs (US$310), in addition to airfare (Dickson et al., 2023). In Spain, Ecuadorian temporary migrants have previously paid an average of over US$1,000 in costs; and in Korea, around US$1,500, the equivalent of over a month's wages (Abella and Martin, 2014). In the UK, seasonal agricultural workers are estimated to spend an average of 7 percent of earnings on participation costs (Defra and Home Office, 2024).

BOX 10. Ensuring affordable participation costs

Migration costs often prevent emigration for poorer populations (Bossavie et al., 2021). Because migration costs are high, migrants frequently pay for travel by taking on large debts. For example, more than 60 percent of temporary migrants from Bangladesh take on loans to migrate, and more than one-third entirely finance their migration through loans. The government offers US$2,500 loans for first-time migrants, and the NGO BRAC offers larger loans with interest rates of around 25 percent; many migrants use private lenders with still larger fees (Bossavie, 2023).[41] High participation costs and expensive debts reduce the net benefit of migration; they may also increase the risk of exploitation and debt bondage (Bylander, 2019; MAC, 2024).

Governments organising migration programmes should seek ways of smoothing or reducing participation costs. Without this, it is likely that the climate-vulnerable participants proposed to be targeted would not be able to afford to migrate without risking exploitative debt. Where this is the case, either the most vulnerable could not participate—losing the programme its eligibility under the Rio marker criteria—or its adaptation impact would be reduced.

Several options are available. Governments could require that employers fund travel or other costs. In New Zealand's RSE scheme, for example, employers provide 50 percent of airfare costs (Bedford et al., 2020); a similar approach has been taken by Australia (World Bank, 2018). If costs are too high, however, employers may baulk (Curtain and Howes, 2020); cost-sharing agreements may also be challenging to negotiate (MAC, 2024). Governments could alternatively require that employers pay workers some wages up-front to cover initial costs, which are then gradually repaid from employees' pay-checks. This approach has already been used in some contexts, e.g., for I-Kiribati workers participating in New Zealand's RSE (Bedford et al., 2020); for Pacific Islanders participating in Australia's Seasonal Worker Programme (Curtain and Howes, 2020); and for Ecuadorian workers travelling to Spain (Abella and Martin, 2014). It has also been proposed for use in the UK (MAC, 2024). This approach can, however, tie employees to employers through debt, increasing the risk of exploitation (Bylander, 2019): careful regulation would be important. Where small businesses, such as family farms, participate in the scheme, there is also a risk that they may be wary of the risk of upfront costs. Finally, governments—of the country of origin, or of destination—could loan participants the money themselves at low- or no-interest rates, to be repaid from earnings.

Where there is willingness and the expectation of long-term migration partnerships, costs can be further reduced. Korea, for example, reduced participation costs by almost 75 percent when replacing the Industrial Trainee System with its current Employment Permit System (Cho et al.,2018).

41 BRAC's migration loans are much higher than the official maximum recruitment fee—US$1,230—set by Bangladesh's government for migration to the Gulf (Bylander, 2023). They are repaid over one to three years, with interest rates of between 18 and 27 percent; the loan is intended to support migrant-sending families as well as migration (Hossain, 2013). As of 2015 nearly 130,000 loans had been disbursed, with an average size of US$2,150 and a recovery rate of over 99 percent (Suraiya and Whisson, 2015). By 2023, over 500,000 migration loans had been made (Bylander, 2023).

In the case of Bangladesh, a government-to-government programme with Malaysia allowed migration costs to be brought down to US$500 (versus the US$4,500 typical with private intermediation) for 30,000 temporary agricultural workers (Bossavie, 2023).

For climate-vulnerable populations to participate in, and fully benefit from, migration programmes, costs must be kept low. This can be achieved through cost-sharing by employers; low-interest loans; or more systematic cooperation between partner countries.

5.3.2 Opportunity costs

As noted in Section 4.2, the OECD defines mobilised (climate) finance as "the stimulation by specific leveraging mechanisms of *additional* [emphasis added] financial resources from the private sector for development purposes" (OECD, 2023d: 19).

It is unclear, in the context of the proposed programme, how this should be applied.

1. **A 'hard' interpretation of 'additional' mobilised private climate finance:** In the absence of the programme no remittances would have been sent to participating households. Any remittances mobilised should therefore be considered automatically additional.
2. **A 'soft' interpretation:** Mobilised remittances are unlike typical mobilised private finance: rather than going to a discrete project, they go to a household which absent public funding would nonetheless have had an income. Remittances should therefore only be considered additional *insofar as they exceed the household's income in the absence of migration*.

If option (1) is followed, the remittance total will undergo fewer deductions, and a greater amount of finance will therefore be considered mobilised. If option (2) is followed, the amount of money that would have been earned by migrants in their country of origin, in the absence of the targeted migration programme, would also be deducted from the remittances considered mobilised.[42] This would result in a lower total mobilised, but would incentivise countries of destination to more carefully target more vulnerable communities, for whom opportunity costs would be lower.

Opportunity costs can be high, but may also be reduced through careful selection, 'flanking' interventions, or secondary effects. Gibson and McKenzie (2011), in an early evaluation of New Zealand's RSE scheme (see Box 11), find that opportunity costs on average totalled around 30 percent of the value of remittances.[43] In other cases, opportunity costs are likely to be much lower. In Malawi, for example, the median farming household earns only US$20 per capita annually from farming activities,

42 This would need to include both market and non-market activities: for example, it should also consider migrants' labour counterfactual contribution to household subsistence agriculture (Gibson et al., 2014).

43 This figure was calculated during an evaluation using surveys of participating and non-participating households. It includes both earnings through employment and the value of the migrant's labour contribution to the household (Gibson and McKenzie, 2010).

which provide on average 30 percent of total household income (World Bank, 2023).[44] Targeting very low-income or unemployed populations may reduce the opportunity costs incurred. Estimates of counterfactual earnings could be obtained during the migrant selection process; through a formal evaluation; using existing analysis, where available; or through surveys of migrants.

In many contexts, opportunity costs due to migration may be reduced by secondary effects or deliberate preparations. In Samoa, participants in New Zealand's RSE scheme have been encouraged by community leaders to plant extra crops before leaving, providing their family with an easily accessible food source and reducing the impact of their absence (Gibson et al., 2014). In many contexts, in addition, male out-migration may be replaced by increased labour participation by women (e.g., Leder et al., 2024; Southard and Randell, 2022; Bacud et al., 2019).[45] The implications of this trend for labour demand, gender equity, and productivity is contested and varies by context: while it can be beneficial across multiple dimensions (Kawarazuka et al., 2022), it may not always be desirable (e.g., de Brauw et al., 2021). In some contexts, similarly, unemployed labourers may be hired using remittances to replace the lost labour time of migrant workers (e.g., Porst and Sakdapolrak, 2020; Tacoli, 2011).[46] Broadly, emigration is found to lead to wage raises for non-emigrants with similar skills, especially among low-skilled occupations (Elsner, 2022). In addition, where migrants selected may otherwise have undertaken (lower-value) internal migration and thus would in the counterfactual have been absent, opportunity costs can be taken to be zero.

Depending on a country's interpretation of the concept of 'new and additional' finance, the opportunity cost to the migrant—their contribution to household finances had they not migrated—may need to be deducted from the remittance total.

BOX 11. Seasonal labour migration within the Pacific Region

Labour migration is a crucial component of the Pacific region's economy. In an assessment, the World Bank suggested that labour migration is "a necessity to maintain reasonable living standards" (Doan et al., 2023b: 1). The 2024 Pacific Regional Framework on Climate Mobility recognises that "enabling some of our people to move may allow others to stay at home—for

44 Nearly 40 percent of farming households' income comes from *ganyu* labour, seasonal work undertaken during the dry season, when there is a labour surplus. A mismatch between peak labour demand, which occurs during the harvest season, and surplus supply, during the dry season, keeps *ganyu* wages low (World Bank, 2023). A migration programme that provided seasonal work during the Malawian dry season could thus be highly beneficial with low opportunity costs.

45 The extent to which female agricultural labour participation will change as a result of male out-migration is, however, heavily affected by local gender norms and other conditions (e.g., Langill et al., 2023; de Brauw, 2021), and by remittance use choices (e.g., Agadjanian et al., 2021).

46 In some contexts, remittances are not used for this purpose, instead allowing a reduction in work undertaken (e.g., Agadjanian et al., 2021; Madhok et al., 2022). Where implementers undertake 'flanking' development interventions providing advice on optimal remittance use choices for adaptation (see section 8.3), this could be an area of interest, e.g., encouraging the hiring of unemployed labourers to replace lost food production.

instance, rights-based labour opportunities in other places—may help Pacific migrant workers to support their families and communities back home" (Pacific Island Forum, 2024: 12). Several programmes are operational, responding to both labour demand in New Zealand and Australia and lobbying by Pacific Island Countries (Doan et al., 2023d). They are highly regarded by participants: in 2022, migrants rated all major schemes at least an 8 out of 10, and frequently recommend participation to family and friends (Doan et al., 2023d).

The Pacific Australia Labour Mobility (PALM) scheme allows up to 35,000 Pacific Island workers to work seasonally in Australia (Crowe, 2023). Evaluations of the programme's predecessor found that the average Pacific seasonal worker transferred a total of AU$8,850 (US$7,200) annually, four times what they would typically have earned in their country of origin (World Bank, 2018). In Tonga, the programme has become more important than aid and trade combined (Howes and Orton, 2020).

New Zealand's Recognised Seasonal Employer scheme allows circular migration from nine Pacific Island countries, filling labour shortages in the horticulture and viticulture sectors. In 2022/23, there was a cap of 19,000 workers; in 2023 the ruling National Party suggested that this could be doubled by 2028 (Bedford, 2023). A 2007–2008 survey found that participating households earned 35 percent more than non-participating households (Gromilova, 2016). A survey of 640 participants in 2014–2015 found that workers from Samoa and Tonga remitted 42 percent of their take-home pay, sending home a combined total of AU$3.21 million (US$2.6 million) (in addition to in-kind remittances, e.g., farm tools purchased in New Zealand) (Government of New Zealand, 2016).

The effects of seasonal migration for climate adaptation vary across areas, depending on how remittances are used (Burson et al., 2024). In some areas, they play a large role in helping households to adapt agricultural practices and dwellings against climate shocks (Burson et al., 2024; Dun et al., 2020). This is an intended result of the programmes; Australian political leaders have explicitly linked seasonal labour migration to climate change adaptation (Kitara and Farbotko, 2023). Remittances sent by participants in circular migration programmes are found to allow households to diversify their incomes against climate shocks; support relocation away from flood risks; reinforce and rebuild dwellings; increase household and community resilience to shocks; and to provide a 'safety net' against climate-related earnings reductions (Burson et al., 2024; Vaioleti et al., 2023; Nunns et al., 2020; Smith, 2016; Voigt-Graf, 2022; BASE, 2023). For these programmes to have optimal adaptation outcomes, more needs to be done. Current knowledge transfer benefits could be built upon to increase migrants' adaptive capacities (Dun et al., 2023; Kitara and Farbotko, 2023), and tighter regulation against exploitation risks should be adopted (Bedford, 2023).

Seasonal labour migration in the Pacific region is established, important, and valued by countries and participants, and contributes to climate adaptation.

5.4 Calculating flows and leverage ratios

A country of destination considering the use of a climate-conscious migration programme is expected to need to be satisfied that the amount of mobilised private climate finance raised will sufficiently exceed the cost of creating the programme. To do so, it must be able to estimate the amount of remittances sent and the possible cost of running the programme.

The steps for making this estimate are set out below:

1. Calculate the costs of running the migration programme, spreading upfront costs in both partner countries and the annual costs of the programme across the programme's anticipated lifespan.
2. Estimate the number of migrants to take part; their earnings through participation; the proportion of earnings expected to be remitted; and the cost of sending remittances.
3. Estimate the size of participation costs and, if applicable, opportunity costs, for deduction from remittance totals.
4. Assess whether the programme would obtain a 'principal' Rio marker tag, and calculate mobilised remittances if the coefficient is reduced.
5. Calculate the leverage ratio of programme funding to mobilised private climate finance to assess whether a climate-conscious migration programme offers value for money.

The amount of climate finance mobilised through a programme's remittances can be calculated using the following formula:

$$\textit{Climate finance mobilised via remittances} = \alpha(\beta(\gamma - (\gamma\delta)[-\varepsilon] - \eta))$$

α – total number of migrants
β – climate finance coefficient
γ – average amount remitted per migrant: the product of *average percentage of earnings remitted* and *average earnings* (for which inputs are *hours worked*; *earnings per hour*; and *tax rates*)
δ – cost of sending remittances, as a percentage
ε – opportunity cost [if applicable under interpretation of UNFCCC guidance]
η – participation cost

5.4.1 An example leverage ratio using Australia's Seasonal Worker Programme

Data regarding the costs of running labour migration programmes is often inaccessible. For this reason, it can be hard to estimate leverage ratios. Some information on costs for Australia's Seasonal Worker Programme (SWP), which operated from 2008 to 2021, is available. For this reason, we use it as an indicative example to estimate what its leverage ratio would have been *if it had attempted to mobilise private climate finance by targeting climate-vulnerable populations*. Background information

on this programme and more details of its operations are available in the Annex at the end of this paper.

During 2012–2014, total Australian aid programme expenditure on the SWP came to around AU$6.7 million over two years (US$5.7 million). During the same period, 3,487 workers participated in the programme (Australian Government, 2014). This sets a programme cost of around AU$1,500 (US$1,274) per migrant when upfront costs are distributed across the programme's lifetime.

Migrants' participation costs were almost entirely covered by employers and then repaid (Doyle and Howes, 2015; Curtain and Howes, 2020). This reduces the size of deductions, and total participation costs are estimated to have come to approximately AU$307,000 (US$266,000) over the two-year period for all 3,487 participants. Opportunity costs were estimated (in an evaluation of the SWP's pilot predecessor) to be approximately on average AU$2,000 (US$1,755) per migrant (Gibson and McKenzie, 2011; Australian Government, 2014), totalling approximately AU$7 million (US$6.1 million).

The average migrant was estimated to remit AU$5,000 (US$4,465) (Gibson and McKenzie, 2011).[47] Approximately AU$17.4 million (US$15.6 million) was thus remitted. After deducting participation and opportunity costs, net remittances total AU$9.7 million (US$8.5 million). Against the AU$6.7 million (US$5.7 million) spent, this gives a leverage ratio of 1:1.83 with a 'principal' Rio marker, and 1:0.92 with a 'significant' Rio marker and a coefficient of 50 percent. It is likely that this ratio improved as the programme developed, e.g., in significantly reducing remittance sending costs and increasing migrants' earning and remittance potential in Australia.

An estimate of a leverage ratio using data from Australia's Seasonal Worker Programme suggests that, had the programme targeted climate-vulnerable populations, a ratio of up to 1:1.83 may have been obtained.

BOX 12. Supporting targeted emigration from India to the GCC: a highly efficient development intervention

An example programme between India and Gulf Cooperation Council countries demonstrates the potential and possible high efficiency of a targeted labour migration programme. In a large randomised controlled trial, Gaikwad et al. (2024) recruit and facilitate the emigration of 389 workers without experience of migration from a vulnerable group in the North-East Indian state of Mizoram. Mizoram is a geographically isolated border region with low private sector employment and politicised state employment. The intervention specifically targeted members of the Mizo community, an ethnic group classified as a Scheduled Tribe and assessed to have low welfare and to face discrimination in domestic labour markets.

47 This estimate again follows Australian Government (2014) in drawing on Gibson and McKenzie (2011)'s estimates for the SWP's predecessor pilot.

Working with local government and non-governmental agencies, in addition to training and recruitment firms, the programme disseminated information to Mizo individuals interested in overseas employment through a variety of channels; provided five weeks of training; and placed workers with vetted employers in Gulf Cooperation Council countries with a one-year contract. More than 85 percent of programme participants were unemployed at the start of the programme, and local government actors had strong commitment to supporting greater access to international employment.

The programme increased the rate of emigration of the treatment group by over 750 percent versus the control group.[48] Wages among migrants increased by over 300 percent: the annual wages of migrant participants increased by nearly US$4,500 versus those who remained in Mizoram. Migrant participants remitted approximately half their wages, with significant effects for household income, life planning, and possession of durable goods.

Notably, programme costs came to only US$200 per person, despite the fact that not all treatment group members migrated. The programme's evaluation concludes that "as an economic development program, the intervention was extremely cost effective" (Gaikwad et al., 2024: 54).

Targeted support for emigration among a vulnerable group in India increased migrants' wages by over 300 percent and significantly increased household income. Programme costs totalled only US$200 per participant, making it a highly cost-effective development intervention.

5.4.2 Estimating possible flows in the UK's Seasonal Worker Visa Scheme

To estimate the mobilisation potential of a new climate-conscious labour migration programme, we use the example of the UK's Seasonal Worker Visa scheme (SWVS). We assume that programme costs would be roughly equivalent to those of Australia's SWP (reducing with scale), and assign different outcomes to key variables to provide scenario estimates. More detail is again provided in the Annex.

The UK's SWVS granted an initial 45,000 visas in 2023, with a further 10,000 to be considered (Dugan, 2023a). Workers are guaranteed 32 paid hours a week (Dugan, 2023a); workers in Scotland averaged 43 hours (Dickson et al., 2023). Workers must be paid a minimum wage of £10.10 (US$13) per hour (Scottish Government, 2022). Visas last six months (McKinney et al., 2023). A migrant working an average of 43 hours per week would earn £10,423 (US$13,400). The proportion of remittances sent by participants is set to range from 42 percent to 77 percent, following amounts sent in other evaluated programmes (Nunns et al, 2020; Wells et al., 2014).

48 23 percent of the treatment group ultimately emigrated.

Opportunity costs are estimated to range from £300 (US$400), assuming that households at the World Bank's poverty line are targeted, to the £1,000 (US$1,300) cost estimated by Gibson and McKenzie (2011). Participation cost inputs range from £300 (US$385), assuming that some costs are covered by employers or the state and then recouped from pay-checks, to £1,000 (US$1,300), just under twice the current median (Defra and Home Office, 2024). These estimates may be inflated if participation costs can be reduced, or if costs are fully paid by employers and then deducted from pay-checks (see Box 10); they may be too low if inadequate regulation allows high broker fees. Remittance-sending costs range from 2 percent, the lowest charge in the Australia-Tonga corridor (Maeda et al., 2023), to 8 percent, the average cost of remitting to Sub-Saharan Africa (Ratha et al., 2023).

The Rio marker coefficient ranges from 30 percent, for a project with a low 'significant' tag, to 100 percent for a 'principal' tag. Table 2 sets out mobilisation totals and leverage ratios across eight indicative scenarios. Six scenarios assume that opportunity costs will be deducted, and two assume that opportunity costs are disregarded. Programme costs for a pilot programme of 1,000 participants are set at the per-migrant price of the SWP; costs for a fully scaled programme of 50,000 are assumed to reduce, to £800 (US$1,030). Leverage ratios are generally high, ranging from 1:1.4 to 1:10.2. In one scenario, however, the programme raises a non-viable amount of finance.

Per-migrant programme costs may be lower than the estimates following Australia's programme costs. Box 12 details a targeted migration programme from India to Gulf Cooperation Council countries that successfully assisted international emigration from vulnerable households without experience in sending migrants, at a cost of only US$200 per participant. If this was replicable in the UK context, leverage ratios would range from 1:7.4 to 1:66.3. If per participant programme costs are set at US$750, midway between costs in the India – GCC programme and those of Australia's SWP, leverage ratios would range from 1:2.4 to 1:17.7.

For the sake of comparison, we also include an estimate of each scenario's mobilised climate finance per migrant versus the average per capita income in Kenya's fourth income quartile. This ranges from 77 percent in the case of a highly unsuccessful programme, to 1,266 percent in the case of a highly successful one. It should be noted that even when Rio marker coefficient choices mean that less climate finance is mobilised, net remittance amounts may still be large relative to opportunities in the country of origin.

Projections of mobilisation by a climate-conscious version of the UK's Seasonal Worker Visa scheme indicate that a leverage ratio of between 1:1.4 and 1:10.2 could conceivably be achieved, potentially rising significantly higher depending on scale and programme efficiency.

TABLE 2. Mobilisation scenarios for the UK's Seasonal Worker Visa scheme

Scenario	Factors Universal to Migration Programmes					Factors Specific to Climate Finance Mobilisation				Programme Success				Per-Migrant Climate Finance as % of 4th-Quintile Income in Kenya
	Number of Hours Worked per Week by Average Migrant	Average Earnings, £	Percentage of Earnings Remitted	Cost of Sending Remittances	Average Amount Remitted per Migrant, £	Average Opportunity Cost, £	Average Participation Costs per Migrant, £	Rio Marker Coefficient	Average Mobilised Climate Finance per Migrant, £	Total Eligible as Climate Finance after Deductions, Pilot, £m	Leverage Ratio, Pilot Programme	Total Eligible as Climate Finance after Deductions, Scaled Programme, £m	Leverage Ratio, Scaled Programme	
1	48	11,635	77%	2%	**8,780**	300	300	100%	**8,180**	8.2	1:8.1	409.0	1:10.2	1266
2	48	11,635	77%	2%	**8,780**	300	300	50%	**4,090**	4.1	1:4	204.5	1:5.1	633
3	43	10,423	60%	4%	**6,004**	600	550	100%	**4,854**	4.9	1:4.8	242.7	1:6	751
4	43	10,423	60%	4%	**6,004**	600	550	30%	**1,456**	1.5	1:1.4	72.8	1:1.8	225
5	43	10,423	42%	6%	**4,115**	600	750	100%	**2,765**	2.8	1:2.7	138.3	1:3.4	428
6	32	7,757	42%	8%	**2,997**	1,000	1,000	50%	**499**	0.5	1:0.4	24.9	1:0.6	77
7	43	10,423	60%	6%	**5,879**	0	550	30%	**1,599**	1.6	1:1.5	79.9	1:1.9	247
8	48	11,635	42%	8%	**4,496**	0	750	100%	**3,746**	3.7	1:3.7	187.3	1:4.6	580

Scenarios

1. A highly successful programme with a 'principal' Rio marker.
2. A highly successful programme with a 'significant' Rio marker at a 50 percent coefficient.
3. A successful programme with a 'principal' Rio marker.
4. A successful programme with a 'significant' Rio marker at a 30 percent coefficient.
5. A relatively unsuccessful programme with a 'principal' Rio marker.
6. A highly unsuccessful programme with a 'significant' Rio marker at a 30 percent coefficient.
7. A successful programme with a 'significant' Rio marker at a 30 percent coefficient and without the deduction of opportunity costs.
8. A relatively successfull programme with a 'principal' Rio marker and without the deduction of opportunity costs.

6. Risks of dislocating current climate finance commitments and climate injustice

It is crucial that the proposed programme (i) does not displace existing climate finance commitments, and (ii) adheres to ethical standards in addressing climate damages. This section assesses these risks, concluding that they are surmountable.

Finance mobilised by the proposed climate-conscious migration programmes is unlikely to displace existing climate finance commitments. Principally, this is because mobilised private climate finance is not credited to individual countries or generally claimed within bilateral announcements or commitments: it is not substitutable for bilateral finance, and therefore could not displace it. Even beyond this, however, there are two reasons why any significant displacement of existing commitments is unlikely.

Nor should it be seen as a means of making beneficiaries (migrants and their climate vulnerable communities) pay for adaptation. This is important, given the major shortage of climate finance currently available and ongoing negotiations of the NCQG. Instead, the proposal should be seen as a supplement within a wider, and much larger, portfolio of international adaptation support, which in all likelihood must continue to be dominated by bilateral public climate finance.

6.1 Eligible programmes must clear a high bar

Only programmes able to demonstrate that they meet Rio marker guidelines for climate finance eligibility could generate remittances eligible for classification as climate finance. Existing remittance streams, generated through indiscriminate migration programmes and counted unreliably, could therefore not be considered mobilised private climate finance. This is a crucial requirement, and adherence must be carefully monitored to prevent countries from claiming more climate finance than they have in fact mobilised. This is part of a broader requirement to improve the credibility and integrity of climate finance reporting.

The effectiveness of existing climate finance can be challenged (Cichocka and Mitchell, 2022). Many projects are spuriously tagged as climate finance despite having goals unrelated to climate change as climate finance (Reuters, 2023; Núñez-Mujica et al., 2023). Targeted migration programmes, by contrast, could—*if* managed in adherence to Rio marker guidelines and following the steps outlined in this paper—bring large cash transfers to highly vulnerable populations. Indeed, given that the opportunity cost to participating migrants may need to be deducted from mobilised totals, *the less carefully targeted the programme is, the less money may be mobilised*. Compared to many projects classified as using climate finance, the quality of the climate finance provided would be high.

While it remains unlikely that the sums mobilised by targeted migration programmes will displace any existing climate finance, this difference in quality is such that, *even if* new climate finance streams did allow some countries to marginally scale down some existing climate finance

commitments, the impact may not be significant. Rather than focusing on the risk of migration programmes raising *too much* climate finance, attention should therefore instead be paid to improving the quality of other climate finance commitments and improving or ensuring the integrity of climate finance reporting.

Only programmes meeting stringent requirements are eligible to mobilise private climate finance. This ensures that any finance mobilised will be truly additional, and that it will have high effectiveness—likely exceeding the effectiveness of many alternative uses of climate finance. Integrity of reporting is, however, of critical importance.

6.2 Current climate finance commitments are insufficient to be displaced

As discussed in section 3, climate finance targets have been met late (with privately mobilised climate finance falling especially short of expectations, and the sacrifice of additionality), and yet are expected to increase with the agreement at COP 29 of the New Collective Quantified Goal. While flows mobilised by this proposal have the potential to be large, they are not expected to come close to fully filling the anticipated finance gap.

As illustrated in section 5.4, even if the climate-conscious component of a major migration programme was fully scaled, the programme was given a 'principal' tag under the Rio marker guidelines, and migrants both earned and remitted relatively large amounts, the absolute sums generated are unlikely to be worryingly large.

In Table 2, we estimate the amount of climate finance that could be generated if the UK's Seasonal Worker Visa scheme was managed such that remittances generated were eligible for classification as climate finance. Under the best scenario modelled, the total private climate finance mobilised would come to around US$534 million per year for a fully scaled programme. This compares with a total figure of c.£1.7bn (US$2.2 billion) private finance mobilised by UK International Climate Finance in 2022–2023 (UK Government, 2023).[49] This scenario is highly unlikely. A pilot programme of 1,000 participants with a 50 percent Rio marker coefficient might generate around US$5.4 million per year. If we imagine that an identical proportion of the European Union's approximately 1 million annual seasonal migrant workers (Augère-Granier, 2021) participated in eligible programmes, with the same amount mobilised per migrant, US$107 million would be generated annually. If one in five of the EU's seasonal agricultural workforce were recruited through eligible programmes with an identical amount mobilised per migrant, US$1.1 billion would be mobilised. With a 'principal' Rio marker, this would be US$2.2 billion. This is a large amount, but represents less than 7 percent of all adaptation finance in 2022 (OECD, 2024). (It would, however, be a 63 percent increase to mobilised private adaptation finance.)

49 Derived from the latest UK ICF Annual Results publication which reports (UK Government, 2023: 21) that total private finance mobilised up to 2023 increased by 25 percent to £6.9 billion (US$8.9 billion) in the preceding year.

The amounts of climate finance mobilised by the proposed migration programmes are thus anticipated to be potentially sufficiently large, and with sufficiently attractive leverage ratios, to motivate the use of 'climate-conscious' approaches, but not large at the absolute level compared to the climate finance totals needed. This proposal is intended to incentivize climate-conscious international labour migration, bending access to remittance streams towards vulnerable populations. It is not expected to generate such large new flows that the expected funding gap is over-filled to the point of pushing out existing flows.

Annex II countries have struggled to mobilise adequate climate finance. With mobilisation targets rising from 2025, this challenge will grow. This proposal should contribute to such targets without displacing existing climate finance, and should do so in a highly effective way.

6.3 Ethical considerations and climate justice

Climate change is a phenomenon caused by human actors, and the actors responsible for its harms should also be responsible for providing the support needed for adaptation to these harms: this is an ethical imperative. In this subsection, we review whether the proposed programme would breach this ethical imperative, concluding that it does not. The academic literature identifies two key concerns in the use of migration policy for development by states: firstly, the issue of substitution of responsibility from states responsible for harms onto migrants themselves; and secondly, the limitation of migrants' rights for the convenience of countries of destination. Draper (2022: 1021) concludes that if these ethical requirements are fulfilled, "states may use labo[u]r migration policy as a tool for climate adaptation and may even have a duty to do so". We concur: in a resource-constrained political landscape, the proposal is ethically acceptable and perhaps even a matter of duty.

The first challenge concerns the possibility of a trade-off between the use of migration as a tool for adaptation and the support that, it is feared, would *otherwise* be given by those responsible for injustices. Sceptics of the use of migration policy to supplement development efforts have suggested that vulnerable individuals have a morally relevant *right to stay*, and that where development (or adaptation) approaches do not prioritise this right, it is ethically troubling. Oberman (2015:248), for example, argues that "immigration should not be used to address poverty when there are alternatives available." Bettini et al. (2017) argue that in the shift from the problematic concept of 'climate refugees' towards labour migration 'as adaptation', there is a risk that responsibility for righting the wrong of climate change is imposed on the most vulnerable, reducing responsibilities placed on high polluters. They argue (355) that "giving labour markets the responsibility to redistribute resources and regulate adaptation risks undermining the very possibility to identify and act upon the constellations of inequalities related to climate change." Draper (2022: 1021) suggests that states seeking to use migration policy to support adaptation must adhere to a principle of 'voluntariness': countries of destination must ensure that migration is *voluntary* by providing alternative options for in situ adaptation.

Recognising, however, that resources are constrained, the relevance of this argument is limited by whether the proposed programmes *would* lead to reduced efforts to support in situ adaptation. In the context of extremely limited adaptation resources, the alternative to 'no migration' is *not* 'increased adaptation transfers', but 'increased adaptation demands *on the poorest*'. This proposal represents a deliberate intervention in the international labour market by Annex II countries of destination in order to redistribute funds to those most affected by climate change. As noted, public bilateral adaptation finance is currently hundreds of billions of dollars short of meeting needs. In the absence of adequate international finance, low-income countries, and the poorest within them, must pay for adaptation from extremely limited budgets (Lankes et al., 2022; Drakenburg et al., 2020; World Bank, 2010). It would be preferable for bilateral public adaptation finance to be increased to the full extent of adaptation needs, and for a significant proportion of this finance to be delivered directly to vulnerable households through cash grants (see Dissanayake, 2024). In the absence of this increase, second-best options *as a supplement to a broader portfolio of support* remain better than no assistance, especially when even the second-best options can significantly improve the lives of the most vulnerable. In addition, as noted in the previous subsections, there should not be a meaningful trade-off between mobilisation of finance through migration and bilateral finance provided by polluters: the two categories are not fungible.

Also relevant to the challenge of trade-offs and displacement of responsibility is the nature of mobilised private climate finance itself. The concept of mobilised private climate finance, as noted, has been a pillar of the climate finance system since Copenhagen (UNFCCC, 2009). Prominent representatives of vulnerable countries, including Mohamed Nasheed and Mia Mottley, have called for increases to mobilisation efforts (see e.g., Nasheed, 2023; Farand, 2022; Bhattacharya et al., 2022). Typically, mobilised private climate finance is delivered through loans at non-concessional rates by actors prioritising market returns (OECD, 2021).[50] These loans must be repaid either by climate-vulnerable beneficiaries of adaptation projects through direct service charges, or by their governments. In this context the mobilised remittances proposed are both ethically and operationally better, as noted in section 2.3.3, than the alternative: they are larger in sum and do not need to be repaid.

The second challenge concerns the question of *rights*. Kitara and Farbotko (2023) argue that in migration between Oceanian countries and Australia, 'climate justice' requires that the rights of migrants are respected, and that it is not assumed that migration is successful or successfully adaptive: instead, active measures must be taken to reduce the risk of exploitation and to increase the likelihood of positive outcomes for migrants. Draper (2022) argues that countries of destination should not restrict the rights of migrants to increase their own convenience, and that conditions for migration should instead be fair, with countries of destination bearing most costs of migration, and those most vulnerable to the impacts of climate change "bearing minimal burdens" for participation.

50 Climate-vulnerable countries have called for greater availability of financing through grants or concessional loans set at long-term GDP growth trajectories (V20, 2024).

We assess that these requirements are more likely to be met under our proposal than through conventional migration approaches: the proposal incentivises countries of destination to reduce migrants' costs and risks of exploitation in order to increase mobilised finance (see section 7).

More operationally, Szaboova et al. (2023) argue that where the outcomes of migration do not provide improvements in three dimensions, it cannot be considered adaptive. A migration programme that does not enhance the following three dimensions should therefore be reconsidered on both operational and ethical grounds:

- *Equity*: whether migration predominantly benefits those who are already less vulnerable; improved access to early warning systems; reduced morbidity associated with climate hazards; etc.
- *Well-being*: whether migration leads to increased household income; improved household access to healthcare and social care; improved quality of housing; improved nutrition; diversification of livelihoods; etc.
- *Sustainability*: whether migration increases access to knowledge and training; improves livelihood durability; improves access to social protection; etc.

We assess that the migration programme proposed in this paper can provide improvements across all three dimensions. The programme proposed could have excellent results for the well-being of migrant-sending households. We assess that key equity considerations can be met: if migration is well targeted, it can benefit those who are not already well-placed to benefit from opportunities to reduce vulnerability and contribute to reducing inequality. We also assess that the proposed migration programmes can benefit sustainability outcomes, through livelihood diversification, reduced indebtedness, and other effects that increase a household's resilience to shocks.

Questions of justice and ethics in programme design are of crucial importance. We assess that the proposed programme meets ethical requirements, in large part because it supplements, without substituting for, the resources provided by those responsible for climate change and adaptation costs.

7. Climate finance maximisation incentives have positive spillover effects

The more money migrants remit, the more climate finance countries of destination have successfully mobilised. They therefore have a stronger incentive to regulate employers tightly to prevent exploitation; guarantee migrants' access to adequate work; reduce the costs of migration; and reduce the costs of sending remittances.

7.1 Reduce participation costs

Even though the ILO suggests in their guidelines on recruitment practices that workers should not, except in exceptional circumstances agreed following consultations with representative stakeholders, be charged recruitment or related fees—including the costs of insurance, equipment, travel, visas, and training (ILO, 2019: §12)—, migrant workers often pay recruitment costs (Hooper, 2022). These costs can vary by country, by time, by sector, and by recruitment corridor, but can be considerable (see Box 10).

More can be done to reduce these costs, especially for the most vulnerable: countries of destination, for example, could waive visa fees for participants in climate-conscious migration programmes. They could also seek to eliminate exploitative recruitment fees. The Global Compact for Safe, Orderly, and Regular Migration calls upon signatories to "prohibit recruiters and employers from charging or shifting recruitment fees or related costs to migrant workers in order to prevent debt bondage, exploitation, and forced labor" (United Nations, 2018: 12–13). Despite this, few countries make real efforts in this area (Hooper, 2022). Given that migrants' participation costs must be deducted from climate-finance eligible remittances, the introduction of climate finance mobilisation newly incentivises states to investigate ways of reducing these costs.

Reducing migrants' participation costs (e.g., recruitment fees) reduces deductions from remittances, allowing a greater total of mobilised climate finance.

7.2 Reduce exploitation

Migrants are often at risk of employer exploitation. These risks may be higher for migrants participating in temporary labour migration schemes, who may be tied to individual employers (Bauböck and Ruhs, 2022). Exploitation can take the form of withheld wages, dangerous working conditions, or broader deprivation of rights, and is more likely to occur when migrant workers are unaware of their rights or work in sectors excluded from labour laws and resulting wage protections (ILO, 2023).

Migrants participating in state-regulated temporary migration programmes would be unlikely to work in the informal sector but are nonetheless frequently at risk of exploitation. Exploitation may take the form of withheld earnings; the introduction of unanticipated expenses, such as arbitrarily high accommodation costs; or underemployment (e.g., FLEX, 2019; Baey and Yeoh, 2015; Dugan, 2022; European Parliament, 2020; Thiemann et al., 2024). It is inevitable that migrant exploitation will negatively affect remittance amounts. If remittances sent as part of climate-conscious programmes benefit the country of destination, there is a greater incentive than normal for the country to ensure that migrants are treated well, and have as great an opportunity as possible to earn and remit large amounts. Reducing exploitation is morally necessary, but countries may be further incentivised if this helps raise amounts of mobilised climate finance.

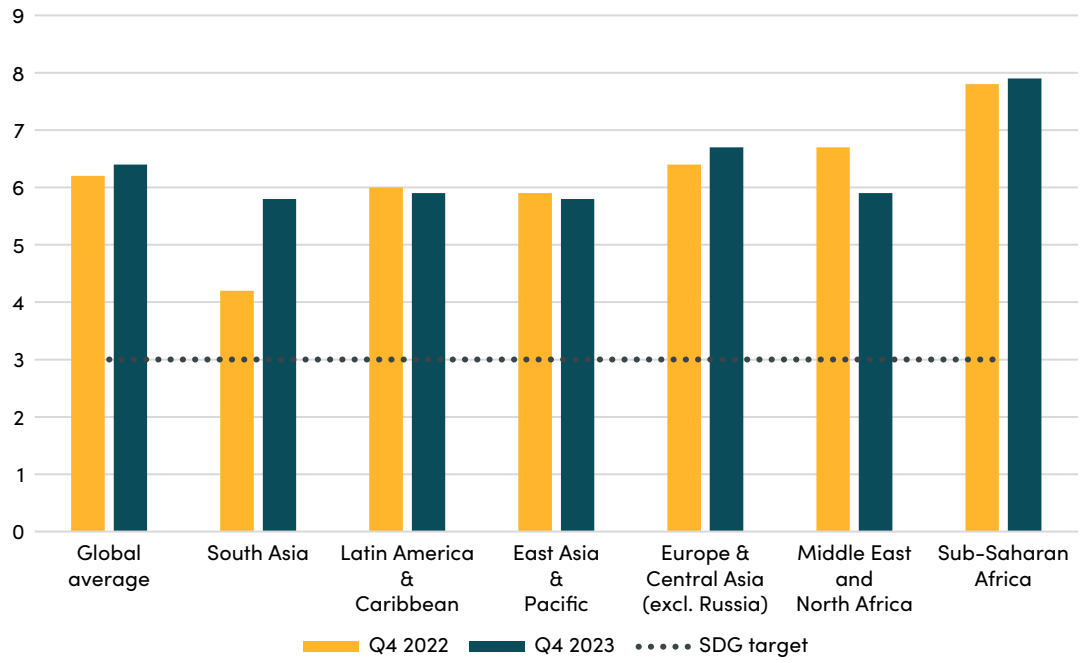
Exploitation of migrants reduces the earnings available for remittances, lowering the amount eligible for classification as climate finance. Reducing migrant exploitation is thus—in addition to being morally obligatory—materially beneficial to countries of destination.

7.3 Reduce remittance sending costs

Many countries have signed agreements to reduce remittance transaction costs: the Sustainable Development Goals (SDGs) include the target of reducing remittance costs to less than 3 percent by 2030, and of eliminating remittance corridors with costs higher than 5 percent (United Nations, 2022: 10.C).

These aims have thus far been unmet. In the last quarter of 2023, the global average cost of sending US$200 was over 6 percent, twice as high as the SDG target; the average cost of sending to Sub-Saharan Africa was 7.9 percent (Ratha et al., 2024; see Figure 10). The average Samoan participant in the Recognised Seasonal Employer scheme was found to have paid US$330 to remit US$4,210 during the 2014–2015 season, and the average Tongan US$440 for US$5,185. The *remittance-sending fees alone* were at least 1.5 times the minimum monthly wage of a worker in the home country capital (Government of New Zealand, 2016).

FIGURE 10. Average cost of sending US$200 to selected regions by % of total, 2022–2023



Source: Ratha et al., 2024.

Remittance sending costs reduce the amount classifiable as mobilised climate finance. Greater financial and digital inclusion of both migrants and remittance-receiving households, and greater

access to information about reliable remittance service providers, could assist programme participants and reduce the loss of possible mobilised climate finance to transaction fees (Olivié and Santillán O'Shea, 2022). Certainly, in some contexts, migrants keep remittance sending costs 'artificially' high by choosing more expensive remittance service providers (Maeda et al., 2024a; 2024b). Beyond dissemination of information, country of destination governments could also seek to enter into direct partnership with higher-value remittance service providers (see Box 9 for an example). This could be of benefit to both direct measurement of remittances sent (see 5.2) and management of a Special Purpose Vehicle, if used (see 4.2.1).

Remittance sending costs can significantly erode sums remitted. Reducing sending costs would increase the amounts available for adaptation investments, and increase the amounts eligible for classification as mobilised climate finance.

7.4 Reduce taxes on earnings and remittances

Countries of destination could consider reducing the tax burden placed on short-term migrant workers. Those selected due to their climate vulnerability, and working and being paid as part of a programme designed to benefit disadvantaged groups, could be made eligible for a tax-exempt personal allowance. This would not be a wholly new policy. New Zealand reduced the tax rate for RSE scheme workers from 15 percent to 10.5 percent in 2011, following the government's recognition that Pacific Islanders' earnings in New Zealand were relatively low, and requests from Pacific Island countries (Gibson and McKenzie, 2011); the change increased the amount retained by migrant workers by around NZ$3.8 million (US$4.8 million in 2011) (Te Tari Taake, 2010). Australia, similarly, reduced the tax rate for Pacific seasonal workers from 29 percent to 15 percent in 2011 (Doyle and Howes, 2015). In the UK, seasonal agricultural workers are eligible for a personal tax allowance of £12,570 (US$16,000) but are still charged tax at the point of pay-check that they often then struggle to reclaim (Defra and Home Office, 2024; McAndrew et al., 2023): creating a tax code allowing seasonal workers to be tax-exempt at source could prevent this from happening.

Countries of destination could also consider reducing taxes on remittances, where relevant. Belgium has explored several options for making remittances sent tax-deductible, offering possible lessons for other countries. Remittances sent for alimony; to registered development aid institutions; and for the purchase of stocks in development funds for microfinance in low- and middle-income countries, have all been made tax-deductible (de Bruyn, 2017). None of these exemptions are themselves relevant to climate finance-eligible remittances, but they serve as an illustration of approaches governments could take to increase the remittances sent by migrants in eligible programmes.

Where taxes imposed on migrants can be reduced, the earnings available for remittances, and for classification as mobilised private climate finance, will be increased.

8. Operationalising and institutionalising climate-conscious migration

This section explores institutional reforms, funding options, and complementary approaches to implement and enhance climate-conscious migration programmes.

8.1 New institutions are needed to mainstream coherence

For migration programmes to incorporate climate vulnerability criteria, greater cooperation across government is likely to be necessary. This presents an institutional and operational challenge. Coherence between migration policy and development goals is not the norm. Migration policy is currently frequently siloed from other policy areas and is driven by crude stimuli from competing actors (Alexsson et al., 2021). Migration policy is often not considered in conjunction with development, foreign policy, trade, and other areas: its development benefits are "an inadvertent product of other, mostly domestic, policy goals" (Newland, 2017: 2).

Some countries of destination may benefit from new institutional approaches if they are to coherently target migration pathways towards climate-vulnerable communities. Targeting migration access requires an attitudinal and knowledge-based shift. Beyond that, it requires a process change: policymakers must become aware of the possible impact of migration for climate adaptation and must be given the tools to enact this realisation. We propose two 'strong' responses to these needs.

To maximise the development and adaptation impacts of migration, new institutional arrangements are needed. In particular, policymakers require greater information of the external impacts of migration, and greater decision-making coherency in migration policy.

8.1.1 Ex-ante information on external migration policy impacts

The first institutional shift needed concerns policymakers' access to information. Policymakers in countries of destination in need of labour must be able to assess (i) what domestic needs there are; and (ii) *which countries would most benefit* from providing migrant workers to meet these needs (see Box 4).

Many countries already have research bodies focused on estimating domestic labour needs and the impacts migration has upon the labour market and other areas of domestic policy. The UK, for example, has its Migration Advisory Committee, and Germany has its Expert Council on Integration and Migration. Current government-affiliated research into migration policy typically stops at a country's borders, however: systematic, policy-oriented research into the impacts of migration in the country of origin is not yet undertaken. This squanders an enormous opportunity.

We therefore argue that countries should establish an independent and nonpartisan 'Migration Research Agency'. This new body would assess options to for improving coherency between labour migration and development, including through identifying feasible migration partnerships targeting climate-vulnerable populations. It could either conduct research itself, or manage the commissioning of ex-ante research into possible partnerships and ex-post evaluations of partnerships. Similar research bodies bringing development considerations into trade policy are already frequently used by governments (Huckstep and Clemens, 2023).

The agency would need to evaluate a range of structural characteristics of potential partner countries in order to identify those that would obtain the most development benefit from participation in a migration partnership. Specific to adaptation, the agency would also need to be able to consider partner countries' climate vulnerability and need for migration-fuelled adaptation funding in response to ex-ante shock risk or ex-post reconstruction needs. The agency would consider the *domestic characteristics* of its own country, such as unemployment patterns, skill needs, and training capacity. It would also consider *partner country characteristics*, such as ODA, FDI, and remittance flows; agricultural dependence; GDP per capita; and estimated exposure to climate-related shocks, drawing on the expertise and information in development Ministries wherever appropriate.

In the management of climate-conscious migration programmes, the research agency could identify possible partner countries; assess populations within these countries likely to most benefit from access to migration opportunities; and conduct or commission evaluations of programmes.

A Migration Research Agency would provide policymakers with ex-ante information regarding the external development impacts of possible migration programmes, allowing benefits to be maximised.

8.1.2 Concentrating decision-making to reduce fragmentation

The second institutional shift needed concerns policymakers' ability to act coherently to meet migration goals. Historically, migration policy is typically fragmented. Many countries have policy approaches consisting largely of 'bolt-ons' (Dempster et al., 2022). Establishing climate-conscious, targeted, migration pathways will require considerably better cooperation between existing configurations of currently empowered bodies, as Switzerland has attempted through its semi-successful 'whole-of-government' approach (FDFA, 2011).[51] It is more likely to be successful, however,

51 Since 2011, Switzerland has sought to undertake a comprehensive approach to migration, balancing economic, social, and cultural opportunities alongside its challenges. This has entailed close interdepartmental cooperation managed through a tri-level system to maintain coherency, and an intention to manage close partnerships with countries of origin and transit to satisfy all stakeholders. In practice, however, some Swiss agencies have more influence than others, and policy discussions have in recent years focused on migrant returns, externalisation, and development to address 'root causes'.

if a single actor is empowered to oversee strategy and to seek out, negotiate, and advise on migration agreements.

Migration policy can learn from trade policy. In the U.S., trade policy is overseen by the Office of the United States Trade Representative, responsible for developing and coordinating U.S. international trade, commodity, and investment policy, and for overseeing negotiations (OUSTR, 2023). The Representative is a cabinet member, and advises the President directly in addition to acting as negotiator, convenor, and spokesperson.

Countries of destination could likewise create an 'Office of the Migration Representative'. This office would be empowered to consider migration policy more holistically, integrating labour market needs, foreign policy factors, skill exchanges, and development. This is an approach already adopted by Germany. Any Office would need a legal mandate to negotiate migration agreements on the basis of both domestic labour market needs and external development impacts; and adequate resources to fulfil this mandate, including financial and human capital resources.

The responsibilities of the Office would be to:

- Consult actively with the private sector regarding labour market needs;
- Consult with the proposed Migration Research Agency regarding potential partner countries, considering both their capacity to provide workers meeting gaps, and the relative impact of the migration partnership upon their development;
- Approach potential partner countries to propose and negotiate labour migration agreements; and
- Advise the executive and legislature on migration-related policy issues.

In Germany, the office sits within the Ministry of the Interior. Depending on the locus of decision-making, the office could sit in a range of ministries. Its role is intended to streamline coordination and coherency across government, required for the management of a climate-conscious migration programme. For most countries, such as a programme would require close collaboration between, at the least, agencies such as the Ministry of Home Affairs, the Foreign Ministry, and the Development Ministry. Uniting management of migration in a single cross-government office would ease this coordination, allowing greater coherency of the multiple aspects at home and abroad that must be governed.

The office of the 'Representative for Migration Policy', responsible for migration partnerships, would allow a more coherent approach to migration policy, including consideration of development and adaptation impacts.

8.2 Funding upfront costs

This section reviews possible funding sources for the proposed programme, concluding that funding is most likely to be provided, at least initially, by the government in the country of destination.

A number of costs are inevitable in any migration programme, including selection, screening, and visa support; other costs are optional, such as training. These can be met by governments in the country of destination; private sector actors; or international actors. Governments in the country of destination are assessed to be most likely to be the primary or sole funders, and programme costs are likely to be eligible for registration as ODA. For remittances to qualify as mobilised private finance, programme costs must be at least partially funded by public (either bilateral or multilateral) finance; private finance from companies co-investing in the migration pathway could also be eligible for classification as mobilised private climate finance.

8.2.1 Funding by destination countries and ODA eligibility

Under the Rio marker guidelines, some quantity of public funding must be used for mobilised finance to be attributable to the country of destination government. Costs associated with management of a climate-conscious migration programme will be eligible for consideration as climate finance, the proportion varying according to the project's classification under Rio marker guidance.

These core climate-relevant costs, especially those of targeting climate-vulnerable populations, will need to be taken on by the government of the country of destination. Governments in countries of destination furthermore have existing interests in resolving skill and absolute labour deficits; are more likely to take risks that employers will be reluctant to undergo; and have adequate funds (Dempster et al., 2022).

When labour migration programmes are carefully and transparently climate-conscious, a greater proportion of their costs are likely to be eligible to be counted as ODA. ODA is defined by the OECD-DAC as "government aid that promotes and specifically targets the economic development and welfare of developing countries" (OECD, 2020c). A new set of criteria for assessing whether migration-related activity can be reported as ODA was published at the end of 2022. This clarified that a migration programme's funding can count as ODA if its "main objective" is "the promotion of the economic development and welfare of developing countries" (OECD, 2022d). The following guiding principles determine whether migration programme costs can be counted as ODA (OECD, 2022b). The principles state that for eligibility:

- Development must be a primary purpose;
- No ODA can be diverted towards donors' immediate interests on migration;
- Mutual benefits can be achieved, but developing countries' interests must remain at the centre of ODA eligibility;

- ODA is aligned with development, humanitarian, and human rights objectives and principles;
- ODA integrity is preserved through a focus on 'developing' countries' main benefit; and
- Activities that intercept and return migrants with the main objective to restrict migration to provider countries are excluded from ODA.

Labour migration programmes prioritising climate-vulnerable populations would, if well-managed and well-targeted, enhance the economic development, the welfare, and the resilience, of climate-vulnerable communities. If they are undertaken with this aim as a primary purpose, a greater proportion of programme funds could be eligible to be counted as ODA. As when considering eligibility under the Rio marker guidance, this requires that programmes deliberately and verifiably target communities assessed as being of high vulnerability, in order to maximise the benefit accrued.

It is likely that destination country governments would need to take on upfront costs. For the programme proposed, these costs are likely to be ODA-eligible.

8.2.2 Funding by private sector actors

While the climate-relevant costs of migration programmes are likely to remain primarily the responsibility of the government in country of destination during the pilot phase, private sector actors in those countries benefiting from increased access to labour can also contribute to programme costs. This already happens in other contexts, such as Australia and New Zealand, where businesses contribute a considerable amount to migrants' costs in the RSE scheme and SWP, including part of migrants' airfare and several costs during their stay (Curtain and Howes, 2020); and in Spain (Abella and Martin, 2014).

Private sector funding should be obtained or obliged where possible, especially where this can reduce costs for migrants. The private sector is more likely to be willing to fund programmes if they can obtain needed skills and workers more cheaply and easily through state-organised migration programmes than through other routes. Funding is also more likely to be made available once the viability of the programme has already been demonstrated and trust has accumulated, meaning that the state will need to fund the pilot but subsequent programming may be (part-) funded by the private sector (Dempster et al., 2022). Private sector funding could come from (MPF, 2020):

- Private companies facing shortages of competent workers, including small or medium enterprises with little capacity for international recruitment;
- Employers' federations;
- Chambers of commerce; and
- Private recruitment agencies.

Where private sector actors part-fund climate-conscious migration programmes, this may have implications for assessing the proportion of mobilised private finance attributable to the country of destination: the contribution of private sector actors to the project's costs could also be eligible for classification as mobilised private climate finance. Alternatively, depending on the sequencing of the investments and the accounting practices used—especially whether mobilised private climate finance is attributed pro rata on the basis of *public* financing contributed, or *all* financing—the introduction of private sector programme funding could also reduce the amount of mobilised private climate finance attributable to the public actor. It is likely to be important for attributing mobilised private finance that the country of destination government funds the targeting component of the project, the key element in mobilisation.

Country of destination governments can seek to place some costs on employers, but are likely to need to fund the pilot stage. Moving from government to private funding can be challenging.

8.2.3 Financing by Multilateral Development Banks

Multilateral Development Banks (MDBs) have already shown some willingness to explore funding in the migration space. In 2016, a briefing paper for the World Bank Board argued (World Bank, 2016a) that the World Bank could contribute to the global migration agenda by financing migration programmes; providing knowledge to policymakers; and contributing to efforts to maximise the benefits of migration in countries of origin and destination. This briefing provides a number of concrete options for greater engagement, including support for bilateral labour migration schemes (noting that the Bank has previously supported the establishment of New Zealand's RSE scheme). A subsequent briefing to the Board (World Bank, 2019) further advanced the argument. The Inter-American Development Bank has also praised the potential of labour migration as a form of adaptation following climate shocks (Dias Alvarenga et al., 2024). With MDB reform currently under discussion and climate a growing focus in MDBs' work, it is possible that their scope for financing labour migration programmes could increase.

MDB interest in supporting bilateral migration programmes may increase, especially where they support adaptation goals. At present, however, MDBs do not significantly engage in this policy area.

8.3 Maximising programme impact and increasing the likelihood of a 'Principal' marker

Several possible interventions, incorporated into or accompanying targeted migration programmes, could make large contributions to the programmes' impact on adaptation and development. These would not be essential in order for a programme to have a positive impact, nor for a programme to be considered eligible under Rio marker guidelines. They would be likely, however, to increase the probability that a programme merited a 'principal' marker.

8.3.1 Assisting migrant households in using new capital

The climate adaptation impact of remittances can be maximised if migrants are aware of the best uses for new capital. In many cases the bulk of remittances will be used for immediate necessities, such as paying off debt or medical fees, or repairing houses after climate shocks. These are uses with real benefits for vulnerability reduction. In many contexts, however, it is likely that the impact of remittances could be heightened, especially where remittance recipients make choices that result in maladaptation. For example:

- In India, remittances are found to often be used to drill borewells to irrigate cash-crops, a strategy that is ecologically and financially unsustainable (Singh and Basu, 2020).
- In Guatemala, inadequate access and to climate information and low knowledge of risk-reducing approaches is found to hinder proactive investment (Díaz López and Reid, 2022).

Suboptimal uses of remittances can be improved. Financial literacy and disaster risk reduction training in Pakistan is found to have significant impacts on households' investments in climate resilience (Ali et al., 2023). Participants in New Zealand's RSE scheme (see Box 11) also initially used remittances for consumption, before targeted encouragement from a range of community actors saw migrants prioritise saving remittances for investment and climate resilience objectives (Bedford et al., 2020).

These approaches could be learned from and used more widely. Countries of destination could support 'climate literacy' training in the country of origin (Simpson et al., 2021; Amakrane et al., 2023), working with community groups to increase access to information—especially for marginalised groups, such as women—, support the sharing of good practices, and reduce the risk of maladaptive remittance use choices (Schipper, 2020; Kitara and Farbotko, 2023). This could increase the likelihood of remittances having a positive, sustained, impact on household and community resilience.[52] In focus groups with community and government representatives in Tonga and Samoa, further calls for efforts to increase community climate literacy in order to "support decision making and action" among climate vulnerable communities receiving remittances (Vaioleti et al., 2023: 11).

Many migration partnerships already incorporate pre-departure training (Hooper and Le Coz, 2020), and some already incorporate training in the country of destination for use in the country of origin (Bedford et al., 2020; Hooper, 2019). Training associated with programme participation could include climate literacy considerations. Depending on some key factors, such as the geographical distribution of migrants in the country of destination (Curtain and Howes, 2020), this may be most easily provided in the country of destination or upon return. Some skills could

52 Behaviour change interventions have previously been used alongside cash transfer projects, and have been found to considerably improve the benefits for targeted development outcomes (see e.g., Ahmed et al., 2024; Premand and Barry, 2020; Field and Maffioli, 2021).

also be transferred 'on-the-job' when there are overlaps between practices and conditions in the country of origin and destination (such as in agricultural work) as experiences in the Pacific indicate (Dun et al., 2023).

Remittance use choices by migrant-sending households are not always optimal for climate adaptation. Training in climate-aware practices could be provided to migrants and migrant-sending households to increase remittances' impact.

8.3.2 Complementing migration programmes with 'flanking' development projects

Climate-conscious migration programmes offer an unusual opportunity to significantly increase the amount of money present in low-income areas. 'Flanking' development projects, separate from the migration programme but organised to run in parallel, may be useful in maximising the beneficial effects of this influx.

Remittances' impact for adaptation is greater in enabling environments (Bendandi and Pouw, 2016; Huckstep and Clemens, 2023). When migrant-sending households enjoy greater financial inclusion, for example, remittances' development impacts are likely to be greater (Olivié and Santillán O'Shea, 2022). For this reason, donor agencies' 'flanking' projects could potentially provide support in accessing credit or assistance with entrepreneurship, key mediators in the effects of remittances (Bossavie et al., 2021; Koczan et al., 2021).[53] Reports from the TCLM programme suggest that in addition to access to higher earnings in Spain, opportunities to access entrepreneurship training and credit lines in Colombia were also considered important in fostering a positive impact (Zapata-Barrero et al., 2009; see Box 8). The entrepreneurship training was considered valuable by participants, but could be improved upon: 49.5 percent of migrants' projects were found to be unprofitable or unsustainable (Mejía et al., 2009). This is not a woeful success rate, but could potentially be improved through context-specific help for returning migrants.[54]

At the household level, the impacts can be greater when programme participants have access to migration opportunities for several years in a row. This allows migrant households the time to respond to immediate pressures, such as debt repayments, and then save for investments. In India and China, for example, the duration for which a household received remittances is found to have a significant and positive association with deliberate household- and community-level engagement in adaptive practices (Banerjee et al., 2017; Banerjee et al., 2018).[55]

53 The focus of these programmes must be informed by context. For example, remittances can also substitute for credit in contexts of low financial inclusion, allowing entrepreneurship to occur even where support is lacking (Clemens and Ogden, 2014; Vasco, 2011; Hagen-Zanker, 2015).

54 In high-income countries, approximately 40–50 percent of businesses fail within five years (Kritikos, 2014).

55 This pattern is found in numerous contexts, e.g., among participants in New Zealand's RSE scheme (Bedford et al., 2020); Vanuatu (Bailey and Kautoke-Holani, 2018); Tajikistan (Babagaliyeva et al., 2017); and Mexico (Basok, 2003).

In some contexts, community and government actors may also be able to encourage remittances to be used for collective projects, such as through remittance matching programmes or local projects supporting public goods (see Olivié and Santillán O'Shea, 2022; Huckstep and Clemens, 2023). This phenomenon is especially well-noted in the Pacific context (see e.g., Brown et al., 2014b), where remittances have been used for community libraries, water infrastructure, and sanitation systems (BASE, 2023). This will not always be possible: many vulnerable migrant-sending households are likely to need to use all remittances received for immediate needs. In addition, willingness to contribute funds to local public goods is also crucially mediated by migrants' trust in local decision-making processes (Huckstep and Clemens, 2023). In Senegal, for example, migrants report willingness to use remittances for local public goods, but are reluctant to delegate responsibility for their funds for investments in areas about which they have limited knowledge (Dimé et al., 2018). Initiatives that support trust in projects pooling money for local public goods could thus be useful in areas benefiting from climate-conscious migration programmes.

'Flanking' development projects—such as initiatives providing migrants with access to credit—can increase the adaptation impact of remittances.

8.3.3 Rigorously evaluating migration programmes

Pilot programmes should be subject to rigorous impact evaluation. Impact evaluations of migration programmes have been conducted in a limited number of settings, notably in the Pacific (e.g., Bedford et al., 2020; Gibson et al., 2013). Very few, however, have so far incorporated the impact of remittances and knowledge gains on adaptation to climate change and reductions in vulnerability to climate shocks. Publicly accessible independent evaluations would be important both for building the knowledge base, and for ensuring that programmes claiming to target climate-vulnerable populations do indeed do so.

Given the intent of the proposed migration programmes to reduce vulnerability to climate shocks, evaluations should consider not only their impacts upon earnings and diversification, but also upon participants' resilience to slow- and sudden-onset climate events. Given the multi-dimensional nature of vulnerability and adaptation, evaluations should be undertaken using multi-disciplinary frameworks (Fisher, 2023).

Pilot programmes should be carefully evaluated to assess their success and generate lessons for use elsewhere.

8.4 Reducing the risk of overstaying

Previous development-oriented migration programmes have been shut down on the grounds that too many migrants overstay. This section reviews whether this is reasonable, and suggests ways of reducing the risk.

The idea that migrants overstay their visas has been used as a justification to restrict access to migration opportunities, albeit perhaps as 'cover' for a political motive: the Haiti-U.S. programme (see Box 2), despite its very high returns and development impact, was closed on these grounds (Devia, 2020; Hagen-Zanker et al., 2017). There is a risk that policymakers could justify not targeting labour migration pathways towards climate-vulnerable communities on the grounds that this demographic may be more likely to overstay visas. It is uncertain whether migrants from climate-vulnerable countries are in actual fact more likely to overstay, but it is both possible and mitigable.

Overstay rates are typically higher when there is a larger wage differential between the country of origin and destination (Auriol et al., 2023); climate vulnerability is determined in part by economic under-development (Fankhauser and McDermott, 2013; Hallegatte et al., 2020), suggesting that the risk may indeed be greater. Overstay rates are not guaranteed to be high, however, and can be brought down through a variety of approaches. New Zealand's RSE programme saw overstay rates of just 0.86 percent over its first six years (Gibson and McKenzie, 2014). In the TCLM programme (see Box 8), between 93 and 97 percent of participants returned from Spain to Colombia at the end of their visas (Charpin and Aiolfi, 2011); in the UK, recruiters' contracts mandate a return rate of at least 97 percent (Dugan, 2023b). A pilot circular migration scheme between Senegal and Spain in 2019 saw only 18 workers out of 47 return home; in a 2022 pilot programme, all 17 participants did return to Senegal after (undisclosed) shifts in migrant selection practices (InfoMigrants, 2023).

One approach proposed by recent research is to place tighter controls and sanctions on employers, and to set the cost of work visas at a low 'eviction' price. This describes a price low enough to drive smugglers out of business, incentivising migrants to prefer to adhere to a low-priced visa regime rather than take the higher risk of depending on irregular work in the informal sector. This requires good and updated state knowledge of the informal labour market, and targeted sanctions against those employing overstaying migrants (Auriol et al., 2023). Another possible option could be the use of compulsory savings accessible only upon return to the country of origin. This has previously been attempted by Ministries of Labour in Caribbean migrant-sending countries participating in the Canadian Seasonal Agricultural Worker Programme and U.S. H-2A programme, which sought to both incentivise savings for development purposes and to discourage overstaying (Wells et al., 2014; Jupart, 2023). Given the administrative burden and paternalism of such a scheme, however, it is likely to be a last option.

In New Zealand, a suite of policy choices, in tandem with strong country of origin norm-based incentives against overstaying, have kept overstaying rates to below one percent. These include the incentive to migrants of access to future re-employment; employers' obligation to fund the deportation costs of overstaying workers; and protection of migrant workers from debts (IMSED Research, 2009; Gibson and McKenzie, 2014; Duggan, 2013). Migrants report overstaying due to unpaid debts incurred during recruitment (Dugan, 2023b; 2024). New Zealand's experience suggests that a programme that (i) reduced migrants' exposure to indebtedness; (ii) offered the possibility

of re-selection; and (iii) worked with communities to carefully select participants on the basis of character and connections to the area of origin, could reduce the risk of overstaying.

It is possible, but unproven, that migrants from extremely climate-vulnerable communities may be more likely to overstay visas. Experiences from other migration programmes show that this challenge is not insurmountable.

9. Conclusion

The role of migration for adaptation has long been recognised. 'Migration as adaptation' has even become a relatively dominant paradigm within academic discussion of the climate-migration nexus (see e.g., McLeman, 2016; Gemenne and Blocher, 2017). It has not yet, however, become widespread policy reality. This paper has argued that countries of destination should seek to target migration opportunities towards those communities able to derive the greatest marginal benefit. To incentivize this shift, migration programmes proactively managed to benefit climate-vulnerable households can, this paper has argued, be eligible to both use climate finance and, through the new mobilisation of remittances to support adaptation, mobilise private climate finance. We find that international low-skill migration can provide highly climate-vulnerable households with access to significant amounts of finance for adaptation, at extremely efficient rates of mobilisation. The strength of this incentive is uncertain, but should be seen as part of wider efforts to improve the coherence of domestic and development policies.

This proposal could generate large new flows of climate finance directly to the most vulnerable at the local level.[56] In so doing, it could transform household and community adaptive capacity. It would be a valuable addition to the set of tools currently available for mobilising private finance for adaptation. Adaptation finance generally, and mobilised private finance for adaptation in particular, have for many years been falling far short of the necessary targets. Needs for adaptation funding will only continue to rise, and climate finance flows from Annex II countries must continue to grow. Part of these needs could be met through targeted remittance programmes.

56 We find that depending on scale and the success of programme management, hundreds of millions or even billions of dollars could be mobilised.

Appendix: Criteria for assessing remittances' eligibility as climate finance (adapted from Bendandi and Pauw, 2016)

Criterion	Interpretation for Analysing Remittances	Possibility of Remittances' Eligibility
Predictable	Can recipients anticipate these flows, allowing them to plan adaptation?	Remittances are often more predictable than ODA or FDI flows at the national level. Where households participate in programmes repeatedly across multiple years, remittance flows can even be predictable at the household level. Within regular circular migration programmes, participating countries could expect a regular and predictable annual flow.
Sustainable	Are remittances a stable financing source allowing medium to long-term adaptation?	Remittances are a self-generating source. Where they are generated through a deliberately targeted and maintained migration programme, they can be a sustainable financial flow to a given migrant country of origin.
Offer improved access to financing for developing countries	Do remittances provide direct access to funding?	Remittances flow directly to the household level; climate finance currently struggles to reach this level. For countries less able to use direct budgetary support, or less eligible for FDI due to poor credit ratings, this direct-to-household support may be especially useful.
Adequate for implementation of adaptation actions	Could remittances contribute substantially to adaptation needs in developing countries?	At the national level, remittances would be a complement to other climate finance flows. At the household level, remittances could support adaptation in a range of ways, especially with support from 'flanking' development interventions.
Scaled up	Are remittances an increasing flow?	Remittance flows are increasing year-on-year. Climate finance-eligible remittance flows *could* increase year-on-year, depending on how programmes are structured and expanded. More importantly, new remittance climate finance flows would contribute to a cumulative scaling up of climate finance.
New and additional	Can remittances be recorded as new and additional versus former ODA levels?	Remittances would be new and additional. They could be facilitated by ODA, but would be separate.
Prioritised for the most vulnerable developing countries	Are the most vulnerable countries targeted for access to remittance flows?	Access to remittance sources would be prioritised for highly climate-vulnerable communities, typically located within particularly vulnerable countries of origin.
Mobilised to address developing country needs	Is there an enabling environment allowing remittances to be used for adaptation?	Remittances can support adaptation even when simply used to supplement consumption or support livelihood diversification. Evidence from the Pacific and elsewhere indicates that with support, remittance recipients can use inflows for deliberate climate adaptation.
Transparency	Are remittances a transparent flow from the source to the end users?	Remittances are typically not transparent. Individual programmes would incorporate greater transparency, e.g., through the monitored use of digital remittance conveyors.
Balanced allocation between adaptation and mitigation	Do remittances prioritise adaptation over mitigation?	Remittances would be almost exclusively used for adaptation, and thus could contribute to addressing the current mitigation-adaptation imbalance.

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Annex: Detailed walkthrough of programme remittance classification

Sam Huckstep and Jonathan Beynon

This Annex presents in greater detail the calculations of mobilised private climate finance and leverage ratios presented in Section 5.4.

Calculating mobilised private climate finance in the context of climate-targeted migration programmes

A country of destination considering the use of a climate-conscious migration programme must be satisfied that the amount of mobilised private climate finance raised will sufficiently exceed the cost of creating the programme. To do so, it must be able to estimate the amount of remittances sent and the possible cost of running the programme.

The steps for making this estimate are set out below:

1. Calculate the costs of running the migration programme, spreading upfront costs in both partner countries and the annual costs of the programme across the programme's anticipated lifespan.
2. Estimate the number of migrants to take part; their earnings through participation; the proportion of earnings expected to be remitted; and the cost of sending remittances.
3. Estimate the size of participation costs and, if applicable, opportunity costs, for deduction from remittance totals.
4. Assess whether the programme would obtain a 'principal' Rio marker tag, and calculate mobilised remittances if the coefficient is reduced.
5. Calculate the leverage ratio of programme funding to mobilised private climate finance to assess whether a climate-conscious migration programme offers value for money.

The amount of climate finance mobilised through a programme's remittances can be calculated using the following formula:

$$\textit{Climate finance mobilised via remittances} = \alpha(\beta(\gamma - (\gamma\delta)[-\varepsilon] - \eta))$$

α – total number of migrants

β – climate finance coefficient

γ – average amount remitted per migrant: the product of *average percentage of earnings remitted* and *average earnings* (for which inputs are *hours worked*; *earnings per hour*; and *tax rates*)

δ – cost of sending remittances, as a percentage

ε – opportunity cost [if applicable under interpretation of UNFCCC guidance]

η – participation cost

A worked retrospective example: the Australia Seasonal Worker Programme

This section sets out how the amount of climate finance mobilised by a climate-conscious migration programme could be estimated and the programme's leverage ratio calculated. It uses the historical example of the Pacific – Australia's Seasonal Worker Programme (SWP), calculating mobilisation as if the programme had been managed as proposed in the paper. The mobilisation ratio is ultimately estimated to be approximately 1:1.83. This would be better than many alternatives.

Australia's Seasonal Worker Programme (SWP) operated from 2008 to 2021, graduating from pilot status in 2012 and becoming uncapped in 2015. Its key objectives were to assist Australian employers in agriculture and accommodation to fill domestic workforce gaps, and to contribute to economic development in low-income countries of origin in the Pacific. It was not an aid programme, but did have some aid-funded components (Curtain and Howes, 2020). Seasonal workers were able to enter Australia for nine months in any twelve-month period. Workers could not bring dependents, but had the same rights as Australian farm workers and are taxed at a flat rate of 15 percent. The programme placed extensive obligations on employers, including obliging them to loan migrants the full cost of domestic and international travel, in addition to providing an AU$300 (US$254) subsidy;[57] provide accommodation; and ensure pastoral care (Curtain and Howes, 2020).[58] The programme was extensively modelled on New Zealand's Recognised Seasonal Employer scheme. At the end of 2021, the programme was combined with the Pacific Labour Scheme under the new, streamlined, Pacific Australia Labour Mobility (PALM) scheme.

The SWP did not target vulnerable populations, reducing its effect for poverty alleviation (World Bank, 2018): this section treats it as if it *had* been well-targeted towards climate-vulnerable populations, allowing estimates of the finance flows mobilised. It is selected for this purpose due to the relatively good accessible data regarding both programme costs to the Australian government and migrants' costs and remittances.

Assessing programme costs to the country of destination government

A draft 2014 document on the programme design of the SWP gives an indicative idea of programme costs. During 2012–2014, total Australian aid programme expenditure on the SWP came to around AU$6.7 million over two years (US$5.7 million).[59] This included around AU$800,000 a year (US$681,200) in capacity building for countries of origin. It also included training components pre- and post-migration in areas such as horticulture, financial literacy, and business skills

57 All USD figures throughout this section are adjusted for inflation to 2023 values, to allow comparability with possible contemporary programmes.

58 During the period of the pilot, employers were obliged to provide an AU$500 travel subsidy (Australian Government, 2014).

59 See Appendix for an incomplete table showing facilitation costs for the early SWP pilot programme. The table does not fully cohere with estimated costs elsewhere in the 2014 Australian Government document, but does provide an indicative example of spending areas and associated costs.

(Australian Government, 2014). Over the initial four years of the SWP, from 2012–2016, the programme was estimated to cost approximately AU$20 million (US$16.9 million) (Australian Government, 2011). This is understood to be the cost across government, including indirect costs to departments not involved in core programming.

During 2012–2014, 3,487 workers participated in the programme (Australian Government, 2014).[60] This sets an initial programme cost to the government of around AU$1,900 (US$1,560) per migrant worker, likely decreasing as capacity building became less necessary and the upfront cost to the Australian Government was spread across a larger body of migrants. If the AU$1.6 million (US$1.36 million) of up-front capacity-building expenses is assumed to be repaid over the subsequent ten years of implementation, the programme cost an initial AU$1,500 (US$1,274) per migrant.[61] This roughly accords with the pre-programme estimate, which suggested that during the first four years of the programme there would be an approximate cost of AU$1,650 (US$1,450) per migrant (Australian Government, 2011).

Estimating participation costs to migrants

Total participation costs paid by migrants in the SWP include the purchase of a passport ahead of departure; police clearance and medical check-ups to meet participation checks; visa costs; internal transport ahead of departure; the worker's share of the subsidised airfare; and clothing costs (Gibson and McKenzie, 2011).

Employers were obliged to provide migrants' airfare, visa costs, work clothes, domestic travel, and other costs in advance, and were refunded directly from workers' pay (Doyle and Howes, 2015; Curtain and Howes, 2020). To avoid double-counting, visa costs, airfare, and required clothing are not included in the calculation of participation costs *for the SWP pilot*: in the programme under consideration, these costs are already captured by reduced remittance totals as a result of the at-source deductions. In addition, many migrants participated several years in a row (Doyle and Howes, 2015). The cost of the passport is therefore halved, recognising that by 2014 half of participants were returnees and did not need to pay for a passport each year (Curtain and Howes, 2020).

Total participation costs are estimated to have come to approximately AU$307,000 (US$266,000) over the two-year period for all 3,487 participants. This estimate uses Gibson and McKenzie (2011)'s estimate for the preceding pilot. It must be noted that total participation costs were significantly

60 This was fewer than the 4,000 migrant workers intended to be recruited, and reflected poor demand for participation due to lack of employer awareness of the scheme; the problem was gradually corrected (Doyle and Howes, 2015; Curtain and Howes, 2020).

61 The decision to amortise the costs rather than incorporating them fully into the ratio follows Australia's mid-point evaluation in recognising that "capacity development is a long-term investment… [which] will take time to show benefits" (AusAid, 2013: 6). This amortisation approach still overweighs upfront costs for the period of focus: it spreads the costs across years and then participants, rather than on a true per-migrant basis (later years had many more participants).

higher, but almost all are captured by pre-remittance deductions from wages managed by employers following pre-migration loans.

Estimating opportunity costs

The total opportunity cost incurred is estimated to be approximately AU$7 million (US$6.1 million). This is the cost used below for calculating the final leverage ratio.[62] This is calculated using estimates for the immediate precursor to the SWP, the 2008-2011 Pacific-Australia Seasonal Worker Pilot Scheme, for which the opportunity cost during the six months of participation was estimated to be an average of AU$2,000 (US$1,755). This took into account the average of AU$887 (US$780) in wages that would have been earned during the period by the 38 percent of migrants holding jobs in their country of origin, and an estimated AU$1,200 (US$1,053) average contribution of labour to household agriculture. This estimate suggests that participation in the pilot resulted in an average increase in net incomes of 39 percent (Gibson and McKenzie, 2011).

Pre-programme surveys from the early SWP showed that 16 percent of workers were from households earning less than US$1 per capita per day (approximately AU$1.5), and 40 percent from households earning less than US$2 per capita per day (approximately AU$3) (Australian Government, 2014). By 2017, earnings in both Australia and the Pacific had risen considerably, and migrant participants in the SWP could remain in Australia for up to nine months. 65 percent of SWP participants in 2017 were unemployed before migration; those who were employed, however, earned an average of AU$163 net per week. In 2017, the average opportunity cost would therefore have been around AU$2,050 (US$1,630) over nine months, the relatively lower total per month resulting from better targeting of unemployed populations for participation.[63] Working in Australia increased their earnings by 4.3 times (World Bank, 2018).

Calculating a Rio marker-adherent leverage ratio

Gibson and McKenzie (2011) calculate that the average migrant participating in the SWP remitted AU$5,000 (US$4,465). With a total of 3,487 participants (Australian Government, 2014), approximately AU$17.4 million (US$15.6 million) was thus remitted.

Deducting participation costs leaves approximately AU$16.7 million (US$14.67 million). From this must be deducted the opportunity cost of participation, which totals approximately AU$7 million (US$6.1 million). This gives a net benefit of AU$9.7 million (US$8.5 million).

62 It should be noted, however, that for subsequent migrants this cost may have been lower: Gibson et al. (2014) observe that some Samoan workers participating in New Zealand's RSE scheme, for example, were required by community leaders to plant extra crops before leaving in order to provide their family with an easily accessible food source in their absence.

63 To this could be added the approximately AU$1,200 (US$780) suggested by Gibson and McKenzie (2011) to be contributed to household agricultural production by the average migrant; as noted, however, the size of this contribution will vary.

The Australian government spent approximately AU$6.7 million (US$5.88 million) on programme costs, meaning that this pilot programme provides a leverage ratio of 1:1.45 if capacity-building costs are not amortised, and a ratio of 1:1.83 if up-front costs are amortised across the subsequent ten years (see n5 of this Annex). This assessment of a hypothetical programme assumes that a 'principal' Rio marker is assigned; with a 'significant' Rio marker and a coefficient of 50 percent, a ratio of 1:0.92 would be obtained. Even with a 50 percent coefficient, the leverage ratio remains considerably better than ratios generated through other mobilisation initiatives (see section 3).

It is worth noting that this sketch of an example leverage ratio remains relatively crude, using estimates available in the public domain: calculations prepared by officials running a programme in which such estimates are required by design, or produced through a formal evaluation, would be considerably more accurate.

It is also worth noting that the leverage ratio itself is that of a *pilot* project. A fully developed programme in a more enabling environment *could* yield an improved ratio:

1. The schemes upon which these estimates are based were rated "below adequate" for effectiveness and merely "adequate" for impact by external evaluators (AusAID, 2013: 6–7): and lessons learned have subsequently increased the effectiveness of temporary migration programmes;
2. The Australian Government's programme costs, last reported for the period 2012–2014, in all likelihood reduced considerably over time as country of origin capacity grew, meaning that "as the program expands, this "return on investment" will grow substantially larger" (Australian Government, 2014: 33);
3. The SWP initially struggled to create employer demand, leading to a lower flow of migrant workers, lower remittances, and a lower ratio: this was subsequently corrected (Doyle and Howes, 2015);
4. Workers in the initial two years of the SWP remitted an average of only AU$5,000 per year (McKenzie and Gibson, 2011), versus the considerably higher average of AU$8,800 (World Bank, 2018) as the programme developed;
5. In 2014 the cost of remitting earnings to countries of origin averaged 21 percent (Australian Government, 2014); by 2017, Western Union sending costs were approximately half that (World Bank, 2018), with considerably cheaper options now available (Maeda et al., 2024a; Bedford, 2021b);
6. Participants were taxed at a flat rate of 15 percent (Curtain and Howes, 2020): migrant workers in other countries (e.g., New Zealand or the UK) face lower or no taxes; and
7. Opportunity costs for migrants selected from different contexts may be considerably lower, especially if lowest-income and unemployed populations are successfully targeted (see 5.3.2).

- **Using data from the early years of Australia's SWP, a pilot programme eligible for mobilising climate finance via remittances is estimated to have a 1:1.83 leverage ratio.**

Leverage ratios are likely to have improved as programme efficiency increases and the programme scales up, though will be lower if the programme's development aims are not considered to be the principal objective.

Modelling a climate-conscious UK Seasonal Worker Visa Scheme

This section sets out how a country of destination interested in managing a climate-conscious migration programme could assess possible amounts of mobilised private climate finance. To illustrate the steps needed for this assessment and demonstrate possible totals, we use the hypothetical example of a version of the UK's seasonal worker visa scheme (SWVS) retooled to recruit climate-vulnerable migrant workers. Depending on the programme's success in managing several key factors, possible leverage ratios range from unattractive to extremely competitive.

In each category, a range of possible inputs is assumed in the context of the UK's SWVS, often using examples from analogous previous migration programmes. At the end of the section, the table shows indicative totals of mobilised climate finance, varying according to the key factors above, and the amount of public finance that could be used to implement an eligible programme while obtaining a favourable leverage ratio according to different benchmarks. The volumes of mobilised climate finance, and associated possible leverage ratios, vary substantially with the assumptions made.

Numbers of migrants recruited

Between 2019 (when the programme was restarted) and 2022, nearly 74,000 seasonal migrant workers were recruited through the Seasonal Worker Scheme (McKinney et al., 2023). In 2022, 34,532 were recruited; in 2023, an initial 45,000 visas were granted, with up to 10,000 further to be considered (Dugan, 2023a). In the table, two scenarios for the number of migrant participants are assumed: a pilot project of 1,000 migrants (2.2 percent of the programme's total), and a fully scaled programme in which 50,000 seasonal workers are selected via eligible processes.

Average number of hours worked

From 2022, seasonal workers must be guaranteed 32 hours of paid work a week, following previous problems of underemployment (Dugan, 2023a). A survey of seasonal migrant farm workers in Scotland suggests that migrants worked an average of 43 hours a week, and that 46 percent would prefer longer hours (Dickson et al., 2023). Recruiting agencies are reported to promise migrants 48 hours per week (Najibullah, 2022), with hours possibly extended to 60-70 hours a week during peak harvest periods (Siddiqui, 2023). Often, however, migrants have been under-employed. In the table, a range of possible average weekly hours are inputted, including:

- 32 hours per week, the legal minimum;
- 43 hours per week, the average reported by Dickson et al. (2023) in Scotland; and
- 48 hours per week, reported by interviewees in a recent study (Thiemann et al., 2024).

Calculating pay

From 2022, seasonal workers must be paid at Skilled Worker rates of £10.10 (US$13) per hour (Scottish Government, 2022); some workers are paid more (MAC, 2024). In the table, it is assumed that employers will pay the minimum legal wage. Overtime is paid at a higher rate of £14.25 per hour; workers are eligible for overtime pay if they work more than 48 hours in a week or 8 hours in a day (Scottish Government, 2022). For convenience, overtime pay is not included in our calculations. In all probability, many migrants would receive overtime pay for some weeks, meaning that total pay would be somewhat higher. Seasonal Worker visas currently last six months (McKinney et al., 2023). The data available suggests that most migrant workers were satisfied with their pay (MAC, 2024).

A migrant working an average of 48 hours a week over the six months of the visa would earn a total of around £11,600 (US$15,000). Migrants are eligible for the UK personal tax allowance of £12,570, but on their earnings would pay an initial at-source tax of approximately £2,000. This can be reclaimed, but many migrants struggle to do so, especially after leaving the UK (McAndrew et al., 2023).[64]

Percentage of earnings remitted

There are no estimates available for the proportion of earnings remitted by migrant participants in the UK's Seasonal Worker Scheme, therefore a range of remittance proportions from other contexts are applied:

- 42 percent of net earnings, the amount sent by participants in New Zealand's RSE scheme (Nunns et al., 2020); and
- 60 percent of net earnings, the amount sent by participants in Australia's Pacific Labour Scheme (Doan et al., 2023b).
- 77 percent of net earnings, the amount sent by participants in Canada's Seasonal Agricultural Worker Programme (Wells et al., 2014).

This range does not include the highest reported remittance rate. Haitian agricultural migrants using the U.S. H-2A visa after the 2011 earthquake (see Box 2) remitted on average 80–85 percent of net earnings (Clemens and Postel, 2017). It is possible that other migrants could remit similar proportions, but this is an outlier. Evidently, higher wages will allow a greater percentage of wages to be remitted rather than spent in the country of destination, and costs of living in the country of destination will also affect migrants' ability to save and remit.

64 The Migration Advisory Committee has recommended the creation of a clearer process for tax reimbursements (Strauss and Telling, 2024).

Opportunity costs

As discussed in section 5.3.2, the opportunity cost of migrating may need to be deducted from the total mobilised amount. These amounts will vary according to conditions in the area of origin; the extent to which vulnerable (potentially unemployed) populations are successfully targeted; and the extent to which other actors—such as women or hired labourers—may fill the labour gap of the departing migrant. The amounts used in the table vary from £300 (US$400) (following the World Bank's definition of extreme poverty as subsistence on less than US$2.15 per day), representing a programme that targets vulnerable populations relatively successfully, up to the higher £1,000 (US$1,300) opportunity cost estimated by Gibson and McKenzie (2011) in the case of New Zealand's RSE scheme.[65]

Participation costs

Participation costs must be deducted from the final amount of mobilised climate finance. Legally, participants in the Seasonal Worker Scheme should only be charged for their visa (£259; US$334) and personal logistics, such as airfare. In 2022, two-thirds of migrant workers paid participation costs; the average amount paid was £550 (US$700), and only 12 percent of workers paid more than £1,000 (US$1,300) (Defra and Home Office, 2024).[66]

Some estimates suggest higher participation costs, e.g., around £2,000 (US$2,580) for Nepalese workers (Mellino et al., 2022), and around £1,300 (US$1,700) for Indonesian participants (McAndrew et al., 2023). Migrant workers are also often illegally charged large recruitment fees by brokers, in some cases totalling thousands of pounds (Mellino and Das, 2022; Dugan, 2022; McAndrew et al., 2023). In a survey, 9.1 percent of respondents reported paying recruitment fees (Defra and Home Office, 2024). These are not included in the estimates of participation costs for example scenarios used in the table, below:

- £300 (US$385), assuming that most participation costs are paid by employers or the state and then recovered from migrants' pay-checks;
- £550 (US$750), the median amount paid by participants in the UK's current scheme (Defra and Home Office, 2024);
- £750 (US$970), the median amount paid by participants in New Zealand's RSE scheme (ILO, 2022);
- £1,500 (US$1,900), a higher-range legal participation cost for seasonal migrants in the UK (Defra and Home Office, 2024; McAndrew et al., 2023).

65 In some cases, e.g., where migrants are not working and consume more than they contribute to household value, the opportunity cost could be zero (McLeman and Hunter, 2011).

66 47 percent of participants said they had paid less than £500 (US$645), 34 percent between £500 and £999 (US$1,300), 12 percent between £1000 and £2,999 (US$3,870), and 6 percent between £3,000 and £4,999 (US$6,450). Only 9.6 percent of respondents had paid nothing before arrival in the UK. However, 90 percent of Indonesian respondents, and 49 percent of Nepalese, reported paying over £1,000 (US$1,300). The survey was conducted in 2022, and received 4,290 responses (12.4 percent of participants) (Defra and Home Office, 2024).

It is likely that where participation costs are extremely high, use of the programme will be under-incentivised due to a low total in mobilised climate finance. This would be due to (i) low residues following deductions or (ii) a low Rio marker coefficient if the programme was in fact selecting lower-vulnerability migrants able to pay higher costs. A programme with an extremely high participation cost can also risk having a net negative effect, if migrants must accept large debts in order to participate (see McAndrew et al., 2023; Box 10). Evidently, success in lowering participation costs will significantly increase the amount classifiable as mobilised private climate finance. In the case of Australia's SWP, participation fees to be deducted from remittances totalled around US$80: most fees were supported by employers, and subsequently removed from wages before remittances could be sent.[67] Where participation costs are pre-paid by employers and then removed from the migrants' wages before remittance, they need not be deducted: they are already captured in reduced totals available for remittances.

- **Migration programmes targeted towards climate-vulnerable households could allow extra finance for adaptation to be 'crowded in', complementing existing climate finance. High-income countries have an incentive to increased mobilised private climate finance.**

Remittance-sending costs

High remittance sending costs reduce the amount of money classifiable as climate finance. As is discussed in section 7.3, remittance sending costs often remain far higher than the global target of 3 percent. A range of remittance sending costs are used, reflecting the fact that schemes may recruit from multiple different regions and that sending rates can vary with policy and market conditions:

- 2 percent, the charge made by the lowest-cost remittance service provider in the Australia-Tonga corridor (Maeda et al., 2024);
- 4 percent, the global average cost of sending money using a mobile operator (Ratha et al., 2023);
- 6 percent, the global average cost of sending US$200 in the second quarter of 2023 (Ratha et al., 2023); and
- 8 percent, the average cost of sending to Sub-Saharan Africa (Ratha et al., 2023).

Evidently, if remittance costs are brought down, the amount of climate finance successfully mobilised will increase.

Rio marker classification

Currently, no climate-vulnerability criteria is used in selecting workers. Ukraine, Kyrgyzstan, and Uzbekistan receive nearly half of all visas (McKinney et al., 2023); these are not highly

67 A similar scheme is recommended in the UK context by the Migration Advisory Committee (MAC, 2024).

climate-vulnerable countries. For the purpose of indicative projections, the table uses a range of possible climate finance coefficients:

- 30 percent, the lowest coefficient normally allocated in the case of a 'significant'-tagged project;
- 50 percent, the coefficient typically allocated by the UK to a 'significant'-tagged cash transfer project (see Box 6); and
- 100 percent, the coefficient typically allocated for a 'principal'-tagged project, and the coefficient allocated to two cash transfer projects managed by the World Bank (see Box 5).

Calculating amounts mobilised

As can be seen in the table, possible totals mobilised vary considerably depending on the key factors listed. Where participation costs cannot be kept down, it will often be the case that a climate finance-eligible programme is not economically sensible: generating mobilised private climate finance via remittances becomes much more challenging.

These programmes may thus generate enough mobilised private climate finance to present an adequate incentive to country of destination governments when:

- Migrants can be expected to have reliable access to work, with decent wages;
- A reasonably high percentage of remittances is expected to be sent;
- The programme will merit a high 'significant' coefficient or a 'principal' tag under Rio marker guidelines;
- Opportunity costs are kept low by adequate targeting of vulnerable populations;
- Participation costs can be minimised; and
- The cost of sending remittances is not prohibitively large.

- **The formula for calculating mobilised climate finance via remittances means that programmes will be effective when they ensure migrants' access to decent work; create an enabling environment for sending remittances; meet Rio marker guidelines; target migrants with low opportunity costs; minimise participation costs; and keep remittance costs low.**

Leverage ratios for public spending

Following forecasts of possible mobilised totals, estimates can also be made for the leverage ratio of mobilised finance to public funding committed to implementing the proposed programme. To gauge very roughly what the example programme's leverage ratio could be, we use the costs of Australia's pilot SWP. The SWP cost approximately US$1,560 per migrant during its first two years. Costs were expected to decline in subsequent years. If we amortise the up-front capacity-building costs across

the ten years of operation 2012-2022, the average programme cost of each migrant in the first two years was approximately US$1,270.

Using this as a crude indicator, a pilot UK Seasonal Worker Scheme, with 1,000 participants, would cost approximately US$1.27 million. If the programme was managed successfully, such that it targeted climate-vulnerable, low opportunity-cost participants; obtained a 'principal' Rio marker; ensured low remittance costs; minimised participation fees; and ensured migrants had adequate working hours, it could feasibly generate at least £4.9 million (US$6.4 million) classifiable as mobilised private climate finance (rising to £8.2 million (US$10.7 million) if highly successful). This would offer an outstanding leverage ratio of 1:4.8. Even if programme costs per migrant were double, or triple, those used in this estimate, a leverage ratio of greater than 1:1 would still be achieved. Alternatively, even if the programme only obtained a 'significant' Rio marker with a 30 percent coefficient, it would still have a positive ratio of 1:1.4.[68] Other configurations of key factors could generate higher (or inferior) amounts of mobilised finance, and better, or unsupportable, ratios.

As can be seen in the table, not all configurations of factors will generate enough mobilised climate finance to obtain an attractive leverage ratio. Programme costs are likely to be needed for activities including:

- Selecting climate vulnerable migrants in the country of origin;
- Reducing participation costs, e.g., by establishing bilateral organisation of the migration programme, subsidising participation, and policing recruiters and employers;
- Providing pre- and post-migration training;
- Regulating employers in the country of destination;
- Collaborating with remittance service providers to measure total remittances sent; and
- Evaluating the effectiveness of the programme.

These estimates, based on the SWP's figures, assume that the country of destination government will manage and fund most elements of programming. Some of the costs of running an eligible programme will be up-front fixed costs, amortised over subsequent years; others, such as selection of migrants or efforts to reduce participation costs, will be unavoidable perennial costs, although may reduce with experience and scale.

In the table, scenarios cover a 'pilot' programme with 1,000 participants, and a 'scaled' programme with 50,000 participants. For the 1,000-participant pilot scenarios, the SWP pilot's per-migrant cost of £1,020 (US$1,274) is used. For the 50,000-participant scaled programmes, it is assumed that implementation costs will fall due to learning curves and economies of scale. Costs are assumed to

68 In addition, a positive leverage ratio may not be necessary to make a climate-conscious programme sustainable for policymakers in the country of destination. Where the state is already funding a labour migration programme and could target it to climate-vulnerable populations at an acceptable cost, the benefit of mobilising private climate finance need only outweigh the additional costs imposed.

reduce to £800 (US$1,050) per migrant, conservatively higher than the per-migrant costs allocated in the 2022–2023 Australian Budget for the PALM scheme (Commonwealth of Australia, 2022; Australian Government, 2023).[69]

It is possible that costs could be reduced from the US$1,274 estimated for Australia's programme. This could be achieved either through scaling the programme, expected to increase its efficiency, or by limiting state-funding to the core climate-relevant elements and obliging the private sector to take on more costs.

It is also possible that per-migrant programme costs may be lower than the estimates following Australia's programme costs even before scaling. A targeted migration programme from India to Gulf Cooperation Council countries successfully assisted international emigration from vulnerable households without experience in sending migrants, supporting new emigration among a highly disadvantaged population and achieving major development benefits. Strikingly, the programme cost only US$200 per participant (Gaikwad et al., 2022). If this was replicable, leverage ratios would range from 1:7.4 to 1:66.3. If per participant programme costs are set at US$750, midway between costs in the India – GCC programme and those of Australia's SWP, leverage ratios would range from 1:2.4 to 1:17.7.

- **Estimates of leverage ratios for a hypothetical climate-conscious migration programme could significantly exceed current leverage ratios for other development programmes, although are very sensitive to the assumptions applied. This does however suggest that mobilisation could be an attractive incentive for a country of destination to shift policy towards making migration programmes more climate-conscious.**

69 This uses the 2022–2023 Budget's figure of AU$67.5 million over four years (Commonwealth of Australia, 2022), rather than the 2023–2024 Budget's figure of AU$370.8 million over four years (Commonwealth of Australia, 2023), which included a vastly expanded range of activities (DFAT, 2023) beyond the scope of the proposed approach. It assumes that recruitment will remain at around 38,000 per year, the same level as 2022–2023 (Australian Government, 2023).

ANNEX TABLE. Mobilisation scenarios for the UK's SWVS

Scenario	Factors Universal to Migration Programmes					Factors Specific to Climate Finance Mobilisation				Programme Success				Per-Migrant Climate Finance as % of 4th-Quintile Income in Kenya
	Number of Hours Worked per Week by Average Migrant	Average Earnings, £	Percentage of Earnings Remitted	Cost of Sending Remittances	Average Amount Remitted per Migrant, £	Average Opportunity Cost, £	Average Participation Costs per Migrant, £	Rio Marker Coefficient	Average Mobilised Climate Finance per Migrant, £	Total Eligible as Climate Finance after Deductions, Pilot, £m	Leverage Ratio, Pilot Programme	Total Eligible as Climate Finance after Deductions, Scaled Programme, £m	Leverage Ratio, Scaled Programme	
1	48	11,635	77%	2%	**8,780**	300	300	100%	**8,180**	8.2	1:8.1	409.0	1:10.2	1266
2	48	11,635	77%	2%	**8,780**	300	300	50%	**4,090**	4.1	1:4	204.5	1:5.1	633
3	43	10,423	60%	4%	**6,004**	600	550	100%	**4,854**	4.9	1:4.8	242.7	1:6	751
4	43	10,423	60%	4%	**6,004**	600	550	30%	**1,456**	1.5	1:1.4	72.8	1:1.8	225
5	43	10,423	42%	6%	**4,115**	600	750	100%	**2,765**	2.8	1:2.7	138.3	1:3.4	428
6	32	7,757	42%	8%	**2,997**	1,000	1,000	50%	**499**	0.5	1:0.4	24.9	1:0.6	77
7	43	10,423	60%	6%	**5,879**	0	550	30%	**1,599**	1.6	1:1.5	79.9	1:1.9	247
8	48	11,635	42%	8%	**4,496**	0	750	100%	**3,746**	3.7	1:3.7	187.3	1:4.6	580

Scenarios

1. A highly successful programme with a 'principal' Rio marker.
2. A highly successful programme with a 'significant' Rio marker at a 50 percent coefficient.
3. A successful programme with a 'principal' Rio marker.
4. A successful programme with a 'significant' Rio marker at a 50 percent coefficient.
5. An unsuccessful programme with a 'principal' Rio marker.
6. A highly unsuccessful programme with a 'significant' Rio marker at a 30 percent coefficient.
7. A successful programme with a 'significant' Rio marker at a 30 percent coefficient and without the deduction of opportunity costs.
8. A highly successful programme with a 'principal' Rio marker and without the deduction of opportunity costs.

Appendix: indicative migration programme costs over two years' pilot (Australian Government, 2014)

	Labour Mobility Initiative Budget Summary (AUD)		Bilateral Activities	Regional Activities	Managing Contractor	Total
	Cost Category	Description of Costs				
I	Project Personnel	Costs of LMI technical advisers	*Incomplete*	*Incomplete*	*Incomplete*	*Incomplete*
II	Office Support Costs	Managing contractor operational costs, administration, finance, audit	0	0	240,000	240,000
III	Technical assistance and training	Unallocated technical assistance, capacity building, training and other activity support based on annual and country plans	460,000	150,000	0	610,000
IV	Equipment/Supplies	Costs for all non capital expenditures: laptops, computers, printers, furniture, computer supplies	120,000	40,000	36,000	196,000
V	Travel	Travel for project staff based on Australian government guidelines	926,000	134,000	20,000	1,080,000
VI	Program Activity Costs	Costs of implementing activities contained in annual and regional/ country plans.	2,370,000	530,000	0	2,900,000
VII	Pilot Program Costs	Women in agriculture, small island states and disability pilot costs	580,000	240,000	0	820,000
VIII	Monitoring and Evaluation	Design and delivery of tools and systems, database development, evaluation visits	*Incomplete*	*Incomplete*	*Incomplete*	*Incomplete*
IX	Research and Learning	Analysis of existing material and commissioning of new research studies.	600,000	240,000	0	840,000
X	Management and Regional Meetings	Steering Committee, Reference Group, management services	0	250,000	90,000	340,000
		Total per year	**5,056,000**	**1,584,000**	**146,000**	**7,026,000**