Scoping Review on Innovative Climate Financing for Social Protection in Rural Areas

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EXECUTIVE SUMMARY

This scoping review investigates the potential for channelling innovative climate finance into social protection systems with a specific focus on rural populations. Given the escalating global impacts of the triple planetary crisis (UNFCCC, 2022) – climate change, biodiversity loss, and pollution – social protection is increasingly recognised as a vital policy tool for advancing climate adaptation and mitigation, supporting the Just Transition, and responding to losses and damages.

This scoping review presents four promising climate finance instruments – sustainable bonds, debt swaps, carbon and biodiversity credits, impact bonds – that could be used to mobilise new resources for government-led social protection. It analyses each instrument's thematic alignment with both social protection and climate action; its potential to ensure a predictable and sustainable funding flow toward national financial systems; and its accessibility for governments of low and middle-income countries (LMICs) and small island developing states (SIDS). Finally, the review assesses their potential impact on vulnerable populations (including rural populations) and synthesises the evidence of success from other sectors. We also explore how blended finance models can be leveraged as an overarching approach to strengthen social protection systems. The study is distinctive in that it prioritises how these instruments can support social protection systems to contribute to long-term adaptation and mitigation goals rather than focusing on their role in shock response.

1.1 The current landscape and evidence gap

There is a growing awareness of the significant role that social protection can play in advancing climate objectives. As outlined by Costella and McCord (2023), social protection offers five critical functions linking it directly to climate action: social protection (i) reduces underlying vulnerability to climate change; (ii) provides shock-responsive support against climate disasters; (iii) actively promotes a Just Transition by offsetting the welfare impacts of climate policies; (iv) facilitates climate adaptation; and (v) can directly contribute to mitigation by reducing emissions and enhancing carbon sequestration. This multi-functional, integrated approach positions social protection as a fundamental and comprehensive tool for building global climate resilience and achieving both social and environmental sustainability.

International climate finance already funds social protection, primarily through public and multilateral channels such as the Green Climate Fund (GCF) or bilateral climate finance. There are known examples of climate funds financing projects involving cash transfers, 'cash plus' approaches and public works for climate adaptation and mitigation, including in rural areas. Moreover, disaster risk financing is commonly used for shock response through social protection. However, significant evidence gaps persist around linking innovative financing mechanisms to social protection systems strengthening and long-term climate objectives.

Not all climate finance is channelled through government systems. While there is currently an ongoing shift toward more programme-based and system-level financing, climate finance is currently primarily used to finance pilots and projects. Channelling finance through national public financial management (PFM) offers opportunities for scalability, sustainability, and national ownership. However, this model is not always accessible to countries with high levels of debt and that might lack the domestic capacity needed to engage with complex financial products, which in turn can restrict private capital flows.

While the private sector contributes to more than half of total global climate finance, the potential for mobilising private climate finance into social protection is not well understood and remains outside the scope of most existing work. Incentivising private sector investment requires demonstrable returns. Private sector actors increasingly seek to balance commercial returns with social and environmental impact, presenting a critical opportunity. Generating some level of return on investment remains necessary, alongside the adoption of rigorous results-based financing models where social protection demonstrates clear climate impact.

1.2 Key findings and strategic implications

Research questions

The scoping review explored the potential of innovative financial instruments to fund social protection systems for inclusive climate action. Key findings are summarised across four core research questions:

To what extent can social protection and climate action objectives be embedded into innovative climate finance instruments?

While most climate finance instruments do not inherently prioritise social outcomes, applicability to social protection hinges on embedding both social and climate objectives from the design stage to ensure the delivery of dual social and climate outcomes.

Can financing be channelled through government PFM systems and can innovative instruments be used to strengthen social protection systems?

Some instruments, such as sovereign bonds, offer the option of channelling financing through the PFM system and to finance government-run programmes. While channelling climate finance through a government's PFM system offers the necessary scale and ensures direct national ownership for strengthening social protection systems, it is not always the most practical or even the ideal route for channelling innovative finance. Further, in some cases, a condition for private sector engagement can be that financing is channelled outside government systems.

What potential do innovative instruments have to direct finance to vulnerable and marginalised populations as part of both adaptation and mitigation efforts?

The review has confirmed the strong potential for innovative climate finance to support the most vulnerable, particularly those in rural areas, but this requires a specific design intent. Successfully reaching vulnerable rural populations, in line with the national social protection system's objectives and priorities, is dependent on explicitly integrating this focus into the design of the financial instrument from the start as it is difficult to add once the instrument is already in place.

Can the innovative instruments support financial sustainability objectives and provide predictable finance, and can governments easily access and utilise them?

While innovative climate finance instruments cannot replace traditional domestic and donor-based funding for social protection, they can support national financial sustainability objectives. Predictability depends on each instrument, with some instrument being contract-based with fixed terms while others are subject to market fluctuations. Accessibility is directly linked to a country's income level and credit rating, and also to technical capacity.

1.3 Innovative climate finance instruments and approaches

- **Sustainable bonds are the most promising option at scale**. Sustainability and social bonds are some of the most promising instruments for financing social protection systems at scale due to their clear alignment with national government financing frameworks and their explicit focus on achieving social outcomes, alongside climate objectives. However, they are best suited to countries with stronger credit ratings and debt sustainability; they are largely inaccessible to countries with high debt burdens or limited market access.
- **Debt swaps can create fiscal space but carry trade-offs**, as savings are typically channelled through trust funds outside national PFM systems, thus limiting government control over allocations. They are particularly relevant for highly indebted low- and middle-income countries (LMICs) where debt restructuring is politically feasible. While savings from debt-for-climate and debt-for-nature swaps are traditionally earmarked for environmental/climate projects, they can be used to address both social and climate objectives.
- **Carbon and biodiversity markets offer potential for revenue generation to help sustain traditional financing for social protection**. Governments can sell credits to complement financing or scale up programmes and projects that combine conservation or emissions reduction with strong social co-benefits for vulnerable groups, which can be done in a way to strengthen national social protection systems. However, high transaction costs and stringent monitoring requirements remain significant barriers for LICs.

- **Impact bonds are best suited for pilots and targeted projects, where outcomes can be clearly measured.** They can channel private finance to social protection and climate action without generating sovereign debt. Impact bonds are more likely to involve non-governmental actors as service providers.
- **Blended finance models are highly flexible and catalytic**, combining concessional public or philanthropic capital with private investment. Public funds (including ODA) remain critical to de-risk and attract private investment. Blended finance can be used to support various components of the social protection system, such as technical assistance, system strengthening and service delivery.

1.4 Key insights

- **Innovative climate finance can take different funding pathways to support social protection and inclusive climate action objectives.** The scoping study identified three key pathways through which innovative climate finance can be channelled: (i) Leveraging blended finance; (ii) Increasing fiscal space; and (iii) Financing channelled outside national systems.
- **What works in one context may be entirely inappropriate in another.** Since no single financial instrument is universally suitable, a diagnostic approach that prioritises understanding a country's national circumstances, including institutional capacity, political will, national priorities, and fiscal position, is essential.
- Different financial instruments are better suited to specific types of investments, from pilots, projects and programmes to more focused systems strengthening functions, such as operational systems development, policy development and capacity strengthening.

1.5 Enabling factors

- **Explicit targeting and integration are needed from the design stage.** Most climate finance instruments do not inherently require social objectives, making an intentional and integrated approach to design essential for achieving dual social protection and climate outcomes.
- **Technical assistance is essential**. While innovative financing mechanisms present a crucial opportunity, their application requires a degree of caution and robust institutional capabilities. The successful utilisation of any complex instrument requires substantial technical assistance and capacity building for national governments, especially social protection actors.
- **A diversified funding architecture is critical, leveraging a range of complementary partners**. Domestic and international, public and private, sources of funding are needed to align the unique strengths of each partner and support financial sustainability objectives.

1.6 Barriers

- **The finance is there, but the case is not.** There is a deep disconnect between the social protection and climate finance sectors. Climate financiers, especially private investors, often fail to see social protection as a strategic climate tool, limiting engagement due to the lack of a shared narrative and a clear investment case.
- **The investment case lacks evidence**. Attracting climate finance is challenging because of the limited evidence base and lack of measurable climate impact data from existing national social protection programmes. Private investors demand clear, results-based metrics, making it necessary to develop pilot projects that rigorously demonstrate tangible adaptation and mitigation outcomes.
- **Technical knowledge gaps restrict the sector's access to climate finance.** The social protection sector currently faces a significant barrier due to its limited technical understanding of the climate finance landscape. Upgrading the technical capacity of social protection experts, at national and global levels, is essential, and this must include knowledge of private sector operating models and sustainable finance incentives.
- **Lack of integrated national policy frameworks obstruct climate finance mobilisation.** Mobilising finance is hindered by the lack of coherent policy alignment between national social protection and climate action frameworks. Without a strongly aligned policy structure that embeds both objectives,

innovative finance may be difficult to attract, or when mobilised, may result in the creation of parallel systems that undermine government ownership.

- **National governments need to set the agenda.** A lack of strong political commitment often causes social protection objectives to be overlooked in high-level financial discussions. When governments in lower income countries view social protection as a strategic investment, it unlocks the viability of complex financing instruments like sustainable bonds.
- **The climate finance sector's focus on financing individual projects clashes with the need for system-level investment.** The climate finance sector's preference for a project-based financing approach creates a structural hurdle for system-wide investments in social protection. The social protection sector must better understand this model's requirements to effectively leverage it for funding national programmes and system strengthening.

1.7 Recommendations

- **Integrate social protection in climate strategies**, including Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and other strategic policy frameworks.
- **Prioritise building a case for social protection for the climate finance sector**, using robust data and methodologies that clearly demonstrate that government-led social protection programmes can achieve specific, measurable climate outcomes.
- **Learn from successful implementation in other sectors**, with a focus on overcoming access barriers, maximising the potential of blended finance models, attracting and delivering a return on investment, and securing strong government leadership.
- **Develop standardised, replicable financing models and structures** to help reduce costs, increase efficiency and improve accessibility to diverse markets.

Based on these findings, while innovative climate finance alone is not a comprehensive solution to address the significant financing gaps of the social protection sector, we conclude that it has the potential to be a vital, complementary resource alongside traditional sources of funding. This report is intended to serve as a springboard for further inquiry and action, offering a roadmap for policymakers, practitioners, and investors to conduct more detailed investigations and pilot projects that can bridge theoretical models and applications with real-world implementation.

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GLOSSARY

Additionality: Requirement in climate or carbon finance that the project's emission reductions or positive outcomes would not have occurred without the specific investment or funding mechanism.

Biodiversity credits: A market-based, tradable instrument where a single unit represents the verified positive outcome of protecting, conserving, or restoring natural environments.

Blended finance: A strategic approach that uses catalytic capital (e.g., from public or philanthropic sources) to lower risk and attract significant additional private sector capital for sustainable development and impact.

Bond: A financial instrument that enables an entity (such as a government) to raise money through debt capital – in essence, borrowing the money. The entity needing the money issues the bond and agrees to pay the lenders an agreed interest on a regular basis until the term of the bond expires.

Carbon credits: A tradable unit representing the reduction or removal of one tonne of carbon dioxide equivalent (CO2e) from the atmosphere.

Carbon markets: Mechanisms that allow for the buying and selling of carbon credits, comprising both compliance markets (mandated by regulation) and voluntary markets.

Climate adaptation: The process of adjustment to actual or expected climate change impacts, aiming to reduce vulnerability and enhance resilience.

Climate mitigation: Efforts to reduce the sources or enhance the sinks of greenhouse gases (GHGs) to limit the extent of long-term global warming (e.g., renewable energy).

Concessionary loans: Loans offered on terms substantially more generous than market loans, typically featuring lower interest rates and/or longer grace periods.

Debt: Borrowed funds owed to creditors, including bonds and loans. Sovereign debt is the debt owed by a national government.

Debt-for-nature (DFN) swap: A transaction where a portion of a country's external debt is reduced or cancelled in exchange for a governmental commitment to invest local currency funds into domestic conservation or climate programmes.

Development impact bonds (DIBs): A form of Impact Bond where the Outcome Funder is an external donor or aid agency, often targeting development outcomes in low- and middle-income countries.

Equity: In finance, this refers to a partial ownership interest in an asset or company, forming part of the capital. In a development context, this represents non-debt financing.

Green bond: A bond where the proceeds are exclusively earmarked for financing projects that have a demonstrable positive environmental or climate benefit.

Guarantees: De-risking tools, often used in blended finance, which commit a third party (e.g., a development bank) to cover investor losses in the event of default or non-performance.

Impact: The highest-level, long-term positive change resulting from an intervention (e.g., sustained poverty reduction, reduced mortality). For finance, impact refers to positive, measurable social and/or environmental results achieved alongside a financial return, with a focus on intentionality and measurement.

Impact bonds: Outcome-based contracts that use private capital to fund service delivery, with the repayment and return contingent upon achieving specified social or environmental results.

Impact investing: Investing with the explicit intent to generate positive, measurable social and environmental impact alongside a financial return.

Innovative finance: A broad term for non-traditional finance mechanisms that seek to mobilize private capital, manage risk, or link funding to measurable results to address global challenges.

Intermediary: An entity (e.g., fund manager, NGO, private sector) that manages relationships and transactions between investors, service providers, and outcome funders.

Internal rate of return (IRR): A financial metric used to evaluate the profitability of an investment, representing the compound return of cash flows over time.

Investors: Individuals or institutions providing funds to financial instruments or enterprises, aiming for financial returns and/or impact.

Outcome-based financing (OBF): A funding model where payments are made only upon the verified achievement of pre-agreed performance metrics or outcomes.

Outcome funder: In an impact bond, the party (government, donor, or foundation) that commits to paying the Investors or Intermediaries when predefined Outcomes are successfully achieved.

Public financial management (PFM): The systems and processes used by a government to manage public money, including revenue collection, budgeting, spending, accounting, and reporting.

Results-based financing (RBF): A broad funding concept that ties the disbursement of funds to the achievement of measurable performance targets, encompassing outcome-based financing.

Risk: In development, this refers to risks to project delivery. In finance, it refers to the likelihood of losing the invested principal or the failure to meet the expected financial return.

Service provider: The frontline entity (e.g., NGO, private firm) responsible for the direct delivery of the social, environmental, or resilience-building services on the ground.

Social impact bonds (SIBs): A form of Impact Bond where the Outcome Funder is typically a domestic government entity, often funding social interventions in higher income countries.

Sustainable bonds: Debt instruments issued by governments, businesses, and development institutions to finance projects that have environmental and/or social benefits. Sustainable bond is an umbrella term that includes green, social, and sustainability bonds.

Sustainability bonds: A type of sustainable bond where proceeds are used to exclusively finance a mix of both green (environmental) and social projects.

Taxonomy: A system of classification that defines which economic activities, projects, or investments are considered environmentally, socially, or sustainably aligned, often guiding investment flows.

Technical assistance: Specialised advisory support (non-financial) provided to an entity to enhance capacity for structuring, implementing, or managing complex financial instruments.

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ABBREVIATIONS

ACMI	Africa Carbon Markets Initiative
DFC	Debt-for-climate
DFI	Development finance institution
DFN	Debt-for-nature
DIB	Development impact bond
DMO	Debt management office
ESG	Environmental, social, and governance
FAO	Food and Agriculture Organization of the United Nations
GCF	Green Climate Fund
GEF	Global Environment Facility
GFCR	Global Fund for Coral Reefs
ICMA	International Capital Market Association
IDB	Inter-American Development Bank
IFI	International financial institution
ILO	International Labour Organization
IMF	International Monetary Fund
INNFF	Integrated national financing framework
IPCC	Intergovernmental Panel on Climate Change
LICs	Low-income countries
LMICs	Low and middle-income countries
MDB	Multilateral development bank
MICs	Middle-income countries
MPA	Marine Protected Areas
MRV	Monitoring, Reporting, and Verification
NDC	Nationally Determined Contributions
NGO	Non-government organisation
ODA	Official Development Assistance
PFM	Public financial management
PSNP	Productive Safety Net Programme
SDG	Sustainable Development Goal
SeyCCAT	Seychelles Conservation and Climate Adaptation Trust
SIB	Social impact bond
SIDS	Small island developing states
SRSP	Shock-responsive social protection
STAAR	Social Protection Technical Assistance, Advice and Resources
TAF	Technical assistance facilities
TNC	The Nature Conservancy

UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	US Agency for International Development
VCM	Voluntary carbon market
WFP	World Food Programme

INTRODUCTION

Innovative finance is needed to bridge the widening gap between traditional public funding and the massive investment required to ensure social protection systems can be leveraged effectively for climate action. This scoping study was commissioned by the Food and Agriculture Organization of the United Nations (FAO) and STAAR to provide insights into emerging and innovative forms of climate finance that could be directed toward social protection and inclusive climate action with a focus on rural contexts. We move beyond conventional multilateral and public finance channels (Hopper et al., 2024), examining market-based instruments, novel debt mechanisms, and blended finance models. We assess their potential to support sustainable pathways for protecting vulnerable populations while simultaneously advancing climate objectives.

As climate change accelerates, the world's most vulnerable populations face a dual challenge: they are disproportionately affected by climate impacts while having the least capacity to adapt (IPCC, 2023). LMICs and SIDS find themselves at the centre of this crisis, with extreme weather events and shifting agricultural patterns threatening both immediate livelihoods and long-term development gains. At the same time, the necessary transition to low-carbon economies – while essential for global climate stability – risks imposing additional burdens on already vulnerable communities through policies such as carbon pricing, energy subsidy reforms, and restrictions in access to natural resources (Costella & McCord, 2023).

There is a growing awareness of the significant role that social protection can play in advancing climate adaptation and mitigation, supporting the Just Transition, and in responding to losses and damages, including in rural settings (International Labour Organization, 2023; Aleksandrova and Costella, 2021; Agrawal *et al.*, 2019; Bhalla *et al.*, 2024; Costella *et al.*, 2023; Costella and McCord, 2023; FAO and Red Cross Red Crescent Climate Centre, 2019). An integrated approach is increasingly seen as essential for achieving inclusive climate action. For example recent guidance from the Task Force on Linking Adaptive Social Protection and Climate Financing (2024) - in contribution to the Nationally Determined Contributions Partnership - from the Universal Social Protection 2030 (USP2030) Working Group on Social Protection and Climate Change (2023; 2024) emphasising that directing climate finance toward social protection is a strategic investment in promoting climate-resilient and low-carbon development that ensures climate justice and leaves no one behind.

Currently, most international climate finance channelled into social protection comes from multilateral sources of adaptation finance and climate funds (Sengupta & Sivanu, 2023; Aleksandrova *& al.* 2024; FAO & GCF, 2025; Hopper *et al.*, 2024). When climate funds do support social protection, activities typically involve cash transfers to address shocks or build adaptive capacity, and climate-positive public works programmes (such as those that support ecosystem restoration), often with 'plus' components in rural contexts related to supporting climate-smart farming practices, and strengthening the resilience and adaptive capacity of smallholder producers (Sengupta & Sivanu, 2023; Aleksandrova & al. 2024; FAO & GCF, 2025). However, a persistent challenge exists in channelling the funds directly to governments: climate-funded social protection often remains delivered via individual projects that bypass national PFM systems.

So far, limited attention has been paid to innovative climate finance instruments that could be channelled toward social protection. While private sources of finance represent over half of total global climate finance (Climate Policy Initiative, 2025), the potential for mobilising those sources of finance for investments into social protection is not well understood and remains outside the scope of most existing work. This is particularly critical given the current constrained development financing context, the acknowledged need to significantly scale up adaptation financing and the increasing focus on securing new and additional finance to address loss and damage caused by climate change. Thus, there is a need to map the different types and scale of innovative climate finance instruments, to assess their relevance and appropriateness for social protection, and to ensure that the social protection sector understands both their potential and their limitations.

The timing of this analysis is critical. As countries are updating their Nationally Determined Contributions (NDCs) and adapting their social protection systems to meet evolving climate needs, there is

an unprecedented opportunity to align climate and social objectives. Recent global discussions and initiatives, notably the Belém Declaration on Hunger, Poverty, and People-Centered Climate Action at COP30 (COP30, 2025) and through the USP2030 Working Group on Social Protection and Climate Change (2024), the Global Alliance Against Hunger and Poverty (2025a & 2025b), the Sevilla Platform for Action (2025) and among G20 Development Ministers (G20, 2025a), have underscored the urgency of this integration.

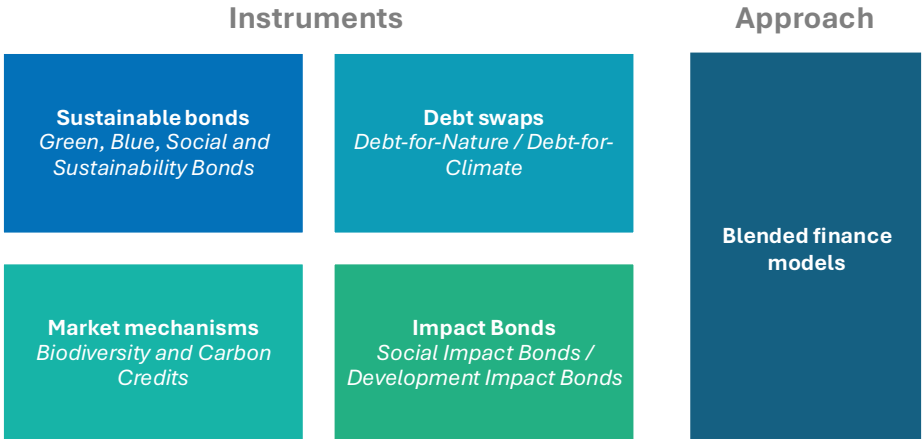
As a scoping study, this report aims to support a diverse audience – including policymakers, development practitioners, climate funds, and the private sector (e.g. commercial banks and institutional investors) – in better understanding the potential entry points for linking innovative climate finance and social protection. The report offers an overview of how these innovative climate finance instruments and approaches can be structured and applied to finance social protection to address climate vulnerability with a focus on rural areas. Specifically, we offer practical illustrations of how these instruments can be structured and applied, with the aim of providing valuable lessons and best practices for governments and policymakers, as well as for multilateral agencies, NGOs, MDBs, consultancies, and the private sector.

SCOPE AND METHODOLOGY

This scoping study examines the landscape of innovative climate finance instruments and approaches[1] that have been identified as potentially relevant for funding social protection, with particular attention on addressing the climate challenges faced by rural and agrifood-system dependent populations in LMICs and SIDS.[2] While drawing insights from diverse sectors and contexts, our primary focus remains on mechanisms accessible to national governments and compatible with the PFM systems in these settings.

The report investigates a range of emerging and more mature financing instruments, with a focus on sustainable bonds, debt swaps, carbon markets, and impact bonds. Rather than providing an exhaustive catalogue of all possible instruments, we provide a deep dive into selected promising and innovative financing options, in the context of a broader overview of the innovative climate finance landscape. **We also explore how blended finance models, as an overarching financing approach, can be used to attract private sector investments to support social protection systems.**

Figure 1: Innovative financing instruments and approach studied



Source: Author's own work

[1] In the context of climate finance, the terms 'instruments' and 'approaches' refer to distinct levels of action within the climate finance architecture. The key difference lies in their function: instruments are the financial tools used to transfer value (e.g. grants, loans, and bonds), while approaches define the strategic modality or framework governing the action (e.g. blended finance or results-based financing). For this report, while we recognise the technical distinction between climate finance instruments and approaches, the term 'climate finance instrument' is often used as a broad proxy for both, aiming to lighten the text and simplify readability.
[2] Due to their particular characteristics, many SIDS categorised as upper-middle-income or high-income countries are still disproportionately vulnerable to climate change.

The research questions our study investigates are as follows:

- **Alignment with social protection and climate action objectives:** To what extent can social protection and climate action objectives be embedded into the instruments?
- **Potential for applicability to national social protection systems**: Can financing be channelled through government PFM systems? Can the instrument be used to strengthen social protection systems?
- **Potential impact on vulnerable populations**: What potential does the instrument have to direct finance to vulnerable and marginalised rural populations as part of both adaptation and mitigation efforts?
- **Potential for sustainability, predictability, and accessibility for governments**: Is the instrument supporting financial sustainability objectives and providing predictable finance, and can governments easily access and utilise it?
- **Evidence of success**: Is there documented evidence or case studies demonstrating the success of the instrument in other related sectors?

Our methodology combined desk research and key informant interviews. The desk research focused on documented examples where the financial instruments have been applied to date, including a comprehensive review of academic literature, policy documents, project reports, and evaluation studies. The review examined examples of implementation in other relevant sectors considering that we purposefully selected instruments with limited to no known application to social protection at present.

The primary research for this study consisted of semi-structured interviews with a total of 14 key informants, purposively selected to provide in-depth qualitative insights from different geographies and contexts. The interviews were conducted with two distinct stakeholder groups: nine climate finance practitioners working at both country and global levels, and five technical experts from international organisations and research institutions with relevant knowledge of climate finance and social protection. Interviews were conducted between April and August 2025.

We began by identifying new, emerging, and innovative forms of climate finance with potential relevance for social protection and inclusive climate action in rural areas, with a focus on building resilience and adaptive capacities over the long term as well as contributing to climate mitigation and a just transition. Following a review of a long list of 11 potential innovative finance instruments and approaches, in collaboration with FAO and STAAR we shortlisted five (four instruments and one approach) for detailed analysis in this scoping report.

The selection process was based on the following criteria:

- Thematically aligned, with promise for both social protection and climate action[3];
- Able to support long-term building of resilience and adaptive capacities, rather than a focus on shock response;
- Potential to support government systems in LMICs and SIDS; and
- Innovative financial instruments with limited or no known examples of use for social protection to date.

For an overview of the instruments that were excluded from the study, see page 9 (section ‘Innovative financial instruments and approaches’) and Annex 1.

This study provides an initial exploration of how innovative climate finance could be applied to social protection, but its findings are subject to several limitations. First, the research relied on a small sample of key informant interviews. Although these interviews provided valuable insights, they may not represent the full range of perspectives and expertise. In addition, the desk research is limited to published literature and may not include the most recent developments in the fast-evolving field of climate finance. Second, the

[3] Climate finance does not inherently include an explicit social focus or the protection of vulnerable populations as a primary objective. For instance, some climate investments are aimed at large-scale infrastructure development (such as seawalls or energy grids) or projects that benefit the general population rather than being specifically targeted at vulnerable households. Therefore, intentional thematic alignment is required to ensure that climate finance is strategically deployed through mechanisms, like social assistance programmes, that specifically address the social dimensions of climate vulnerability. Thematic alignment refers to financial instruments that directly and promisingly intersect with both climate action and social protection.

analysis focused on innovative financial instruments or approaches that have the potential to be used for social protection, but which are not currently applied in this way. This approach, while intentional, means the study could not draw on extensive operational data. As a result, the findings are based on theoretical assessments and models that identify the preconditions for successful implementation, such as strong government involvement, rather than drawing on empirical examples in each case. Because of these limitations, this study should be viewed as providing an initial scoping of potential innovative financing options, rather than as a definitive guide to instrument selection and implementation.

ANALYTICAL FRAMEWORK

Social protection and climate change

The Social Protection Interagency Cooperation Board (SPIAC-B) defines social protection as 'a set of policies and programmes[4] aimed at preventing and protecting all people against poverty, vulnerability and social exclusion, throughout their life cycle placing a particular emphasis on vulnerable groups' (SPIAC-B, n.d.). Collectively, these policies and programmes make up national social protection systems. While a variety of actors might be involved in the design, delivery, and financing of different components of such systems, it is governments that ultimately bear responsibility for the system as a whole, including its financing. Our analysis builds on the five functions linking social protection and climate action in the framework developed by Costella and McCord (2023):

- **Reducing underlying vulnerability to climate change**. Reducing underlying vulnerabilities is one of the core functions of social protection. This can be achieved by directly reducing income poverty, contributing to human development and productive outcomes such as education, health, and productive livelihoods, and supporting increased equity, inclusion, and social justice. Social protection can also be leveraged to build resilience, including in relation to climate shocks.
- **Responding to climate shocks and disasters**. Social protection can mitigate the impacts of specific shocks by transferring cash to cushion their effects. This is often referred to as 'shock-responsive social protection' (SRSP) and is based on the concept of scaling up provision in response to crises. The main distinction between social protection's traditional focus and climate shock response is the increased focus on covariate shocks.
- **Offsetting the negative welfare impacts of climate transition or climate change policies.** Such policies may include carbon pricing, energy subsidy removal, industrial restructuring or restrictions in access to natural resources as part of the transition to net zero. Social protection initiatives can support this transition by providing cash transfers to support those whose income security is affected by interventions that affect prices, providing income replacement in the form of unemployment or pension benefits. Alternatively, they can involve active labour market policies to support those experiencing labour market challenges, for example due to industrial restructuring or new environmental policies. These social protection interventions work in alignment with the Just Transition agenda.
- **Facilitating and enabling climate change adaptation options**. Social protection can be used to build adaptive capacities and resilience through climate adaptation measures. For example, social assistance interventions can be combined with asset transfers or skills training to contribute to improved employment or livelihoods, while public works programmes or environmentally conditioned cash transfers can incentivise improved natural resource management and behavioural changes.
- **Contributing to reduced greenhouse gas emissions and carbon sequestration.** Some social protection interventions, such as public works programmes or environmentally conditioned cash transfers, have the potential to contribute directly to the reduction of GHG emissions or enhancing their removal from the atmosphere, for example through carbon sequestration as a result of afforestation.

[4] In general, social protection includes three main types of programme: social assistance, social insurance, and labour-market programmes.

This scoping study seeks to identify what innovative climate financing instruments and approaches might be available to build long-term resilience to climate change rather than focusing on response before, during and after shocks (WFP, 2023; Aleksandrova *et al.*, 2024). This is due to the limited evidence base on innovative financing instruments that can channel finance towards social protection for longer-term climate adaptation and mitigation objectives in contrast to SRSP and disaster-risk financing (DRF). Ultimately, this means that the study focuses on functions 1, 3, 4, and 5 as set out above, but does not address function 2 ('responding to climate shocks and disasters'). Accordingly, the study does not focus on SRSP and DRF given the fields are already relatively advanced. Further, the study does not focus on humanitarian response and social protection programmes implemented by development partners and non-governmental actors, unless these are implemented in collaboration with government and are integral to the national social protection system.

Our analysis explores how these different functions of social protection in relation to climate action can be financed and delivered in a rural context to address the unique vulnerabilities faced by rural populations (Bhalla *et al.*, 2024). These vulnerabilities often include reliance on volatile agricultural incomes, limited access to essential services, and susceptibility to environmental shocks. At the same time, rural populations also possess valuable indigenous knowledge and local capacity that can be leveraged to effectively address climate-related risks. This includes a deep understanding of their local environment, weather patterns, and traditional practices for land and resource management. By incorporating this knowledge, and supporting them to provide key services, they can play an important role in supporting the successful design and implementation of integrated social protection and climate action. Some examples of social protection interventions are presented in Figure 2 below.

Figure 2: Linking social protection and inclusive climate action in rural areas

Functions	Examples of social protection interventions in rural areas
Function 1: Reducing underlying vulnerability to climate change and enhancing resilience	• **Cash transfers:** Providing regular cash to rural households to support human capital development and build underlying resilience and adaptive capacity. • **Asset-building:** Supplying agricultural inputs alongside regular cash transfers to small-scale farmers and pastoralists or building community assets through public works.
Function 2: Responding to climate shocks and disasters	• **Forecast-based financing:** Distributing cash payments to farmers and fishers in a coastal region before a predicted typhoon. • **Rapid cash assistance:** Providing cash transfers to rural communities immediately following a major natural disaster to aid in immediate recovery and rebuilding.
Function 3: Offsetting the negative welfare impacts of climate transition policies	• **Income support**: Providing income for rural workers where subsidies are withdrawn or access to natural resources are affected as they transition to more sustainable practices. • **Job training**: Offering skills training for on-farm/off-farm livelihood diversification or for new "green" jobs in rural areas, operating and maintaining solar or wind power facilities.
Function 4: Facilitating climate change adaptation	• **Cash plus**: Combining cash payments and complementary support to smallholder farmers for adopting drip irrigation systems or planting climate-resilient crop varieties. • **Livelihood diversification**: Providing grants to help rural social protection beneficiaries to start non-farm activities, such as beekeeping, food processing, or agroforestry.
Function 5: Contributing to climate change mitigation	• **Environmentally conditioned cash transfers**: Incentivizing poor rural households to install renewable energy sources or participate in sustainable reforestation efforts. • **Public works programmes**: Employing rural residents in large-scale projects to support afforestation and land restoration, sequestering carbon from the atmosphere.

Innovative climate finance and social protection

This study examines climate finance for long-term system-building objectives in social protection and inclusive climate action, with a focus on those financing options accessible to national governments in LMICs and SIDS. It explores how these financial instruments can be leveraged to support systems that deliver the different functions of climate action set out above alongside core social

protection objectives. The analysis also addresses key challenges relating to access and sustainability considerations for these mechanisms.

Climate finance refers to the flow of funds dedicated to addressing climate change. The United Nations Framework Convention on Climate Change (UNFCCC) provides a comprehensive definition: 'Climate finance aims at reducing emissions and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts.' This definition encompasses both mitigation (reducing GHG emissions) and adaptation (adjusting to the impacts of climate change) efforts.

Within the context of international climate diplomacy, climate finance often implies 'new and additional financial resources' provided by developed countries to developing countries (Carbon Brief, 2022). This financial support, from both public and private sources, is designed to help developing countries meet the costs of reducing GHG emissions and adapt to the impacts of climate change. The Taskforce on Access to Climate Finance[5] designed key principles to increase access to climate finance globally. Those principles aim ultimately to improve the predictability, flexibility, transparency, affordability, and speed of disbursement of climate finance in climate-vulnerable developing countries (see Box 1).

Box 1 Principles on Access to Climate Finance

PRINCIPLES ON ACCESS TO CLIMATE FINANCE

Principle 1: Country ownership

National priorities must be the framework for providers' support, ensuring that initiatives are aligned with the country's own strategic vision and needs. Programmes and projects should be owned and driven by recipient governments and the communities they intend to benefit.

Principle 2: Harmonisation of processes and alignment of finance

The processes of accessing climate finance should be streamlined and coordinated at every stage. This offers a more strategic, coherent, and efficient approach for recipients. Climate finance should be aligned with integrated national plans and architecture rather than fragmented support.

Principle 3: Responsiveness to country needs and climate vulnerability

Climate finance should clearly respond to the self-defined needs and priorities of recipients. This includes directing support to countries and communities with the greatest immediate needs and the lowest capacities to access funds, consistent with the Paris Agreement goals.

Principle 4: Flexibility and innovation

Providers should adopt more innovative and agile approaches alongside proportionate risk management processes. This ensures that climate finance delivery is more effective and responsive to variations in local capacity and need.

Principle 5: Transparency and accountability

Climate finance should be predictable and transparent. It must also yield measurable progress toward recipient countries' climate capabilities and climate goals, ensuring accountability for the funds disbursed.

Climate finance is typically categorised by source, mechanism for delivery, and end-use. The mechanism for delivery includes the route financing takes and the financial instrument used (e.g. grants,

[5] The Taskforce on Access to Climate Finance is a joint initiative involving the participation of climate-vulnerable developing countries, bilateral and multilateral climate finance providers (including national governments, dedicated climate funds, and international financial institutions), and other relevant organisations and initiatives. The Taskforce was established following the Climate and Development Ministerial, convened by the UK COP26 Presidency in March 2021, in response to the concerns of climate-vulnerable developing countries that existing mechanisms for accessing climate finance are often slow, complex, resource-intensive, uncertain, and project based, making it extremely difficult for those countries to access the finance they need at sufficient scale and speed.

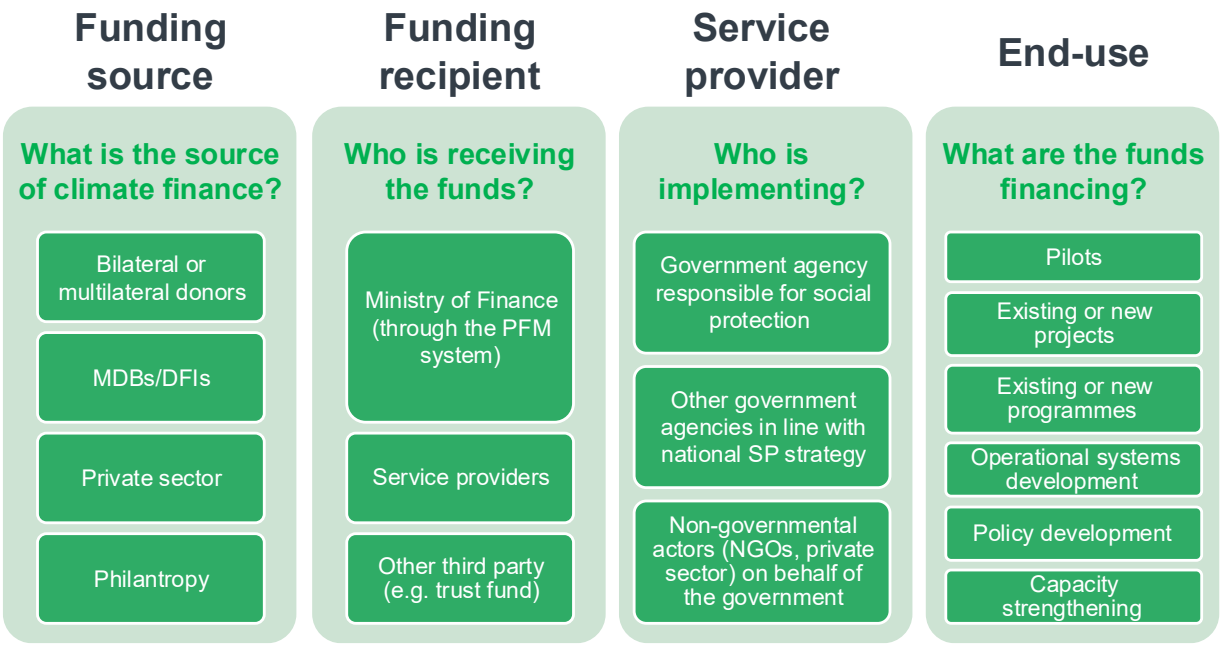
loans, debt, equity, etc.). The end-use is often categorised first by whether it is focusing on addressing mitigation or adaptation (or a combination of both) and what the funds are used for.

To maximise the effectiveness, sustainability, and long-term impacts of social protection as an instrument for inclusive climate action, it is critical to move beyond isolated interventions and, wherever possible, strengthen the wider national social protection system. Accordingly, funding flows must be fully aligned with national priorities and establish government as the central delivery stakeholder. A model demonstrating full government ownership at every step of the delivery mechanism would include the following:

- **The funding recipient** is the government, with finance flowing entirely through the national PFM system and domestic budget.
- **The service provider** is a core government agency responsible for social protection or other agencies delivering services in line with the national social protection system.
- **The end-use** supports government-led pilots, projects, or ongoing programmes delivered and managed through those established national systems.

However, in reality, the picture is often more complex. To enable innovative climate finance to effectively support social protection systems, alternative pathways and stakeholders may come into play, as outlined in Figure 3 below. These pathways mean that the funding recipient and service provider may be non-governmental actors, and the financing may bypass the national PFM system by flowing directly to implementers or third parties. This occurs for several common reasons, including operational considerations, specific donor preferences, or a country's limited domestic capacity to structure and absorb innovative financing instruments, particularly those dependent on commercial capital (Benni *et al*., 2025).

Figure 3: Funding flows linking climate finance and social protection



Although a fully government-owned financing pathway ensures national ownership and direct alignment with government priorities, this model often limits system flexibility and the potential to attract innovative finance, particularly private capital. Conversely, the model presented in Figure 3 reveals a more realistic, yet possibly fragmented landscape characterised by non-governmental actors and alternative financing routes that often bypass national systems. While this flexibility allows the attraction of additional resources and private finance, it concurrently introduces coordination challenges and potential risks of creating parallel systems that must be recognised and mitigated. Understanding this

divergence is crucial for identifying strategic entry points to strengthen the contribution of climate finance to sustainable social protection systems, programmes and outcomes.

As highlighted above, climate finance can support different aspects of a national social protection system. There are no universally agreed or official definitions for what constitutes a pilot, project, programme, or system within the social protection sector. Box 2 presents the definitions used for the purpose of this report.

Box 2 What aspects of social protection are funds financing?

WHAT ASPECTS OF SOCIAL PROTECTION ARE FUNDS FINANCING?

Pilot: In the context of sustainable development, a pilot is a small-scale, limited-duration trial of a new intervention or approach. Its purpose is to test feasibility, gather data, and manage risk before committing to a larger project or programme.

Project: A project is a time-bound undertaking, with a specific budget and a focus on delivering agreed outputs.

In climate finance: A project represents a specific investment, such as the construction of a solar power plant or a reforestation initiative. Climate finance often uses a project-based financing approach. Projects can be implemented with government, or in parallel to government systems.

In social protection: The term 'project' is commonly used to describe time-bound interventions financed by donors, either implemented directly by NGOs or United Nations agencies, or channelled as loans/grants to governments (for example, World Bank support is often framed as a project (World Bank, n.d.)). While projects may span several years and can align with national strategies, they are typically characterised by a clearly defined set of outputs and outcomes, with a relatively narrow scope compared to broader programmes or systems.

Programme: A programme generally refers to a broader, long-term, and strategic effort that coordinates multiple related activities or services to achieve a sustained outcome or policy objective. Unlike a project, a programme is not defined by specific deliverables but by its contribution to lasting change. Programmes often contain sub-components (e.g. a public works component within a broader social protection programme) and may also serve as an umbrella framework under which related projects are implemented (such as NGO-led graduation initiatives implemented in line with a national graduation strategy).

System: A system is the comprehensive institutional framework that enables and sustains all other activities. It includes the policies, laws, regulations, pilots, projects, programmes, organisational structures, and delivery mechanisms that work together to achieve a policy objective. A system is not a temporary intervention; it is the fundamental structure of governance. Ways to support a system include, amongst others, operational systems development, policy development, and capacity strengthening.

INNOVATIVE FINANCE INSTRUMENTS AND APPROACHES

Shortlisting process

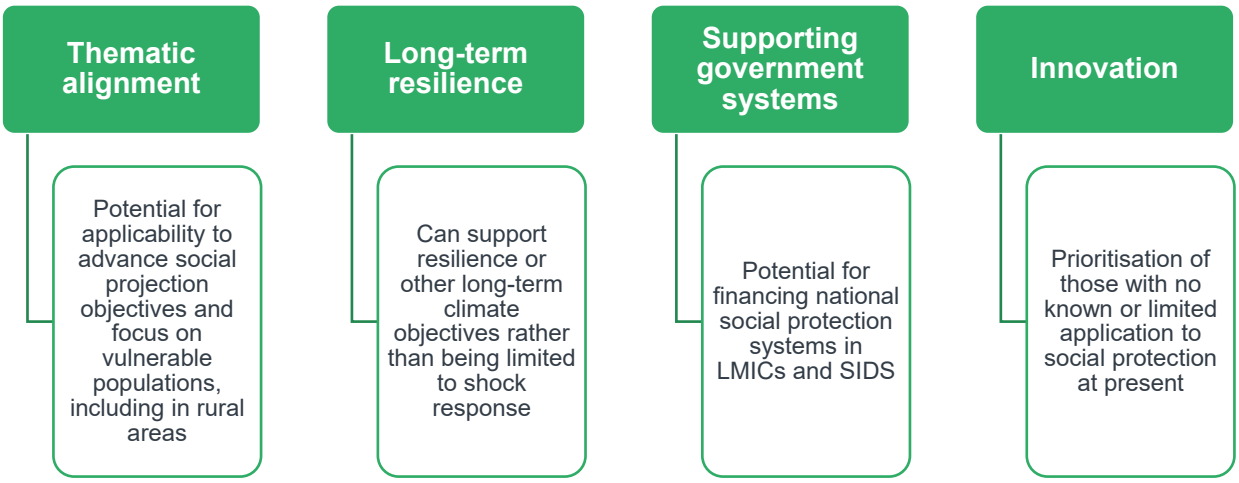
The landscape of climate finance is evolving rapidly, with a growing emphasis on innovative financial instruments and approaches that can mobilise capital beyond traditional public sources to address climate change. Innovative climate finance instruments are often designed to attract private investment, create new revenue streams, and improve the efficiency of financing for climate-related projects. Our initial review included a total of 11 innovative climate finance instruments and approaches, as outlines in table 1.

Table 1: Innovative climate finance instruments and approaches

Instruments/approaches	Short definition
Blended finance	A financing approach that uses public or philanthropic capital, often patient and risk tolerant, to attract additional private capital for impact investments.
Catastrophe bonds	A type of insurance-linked security that governments or other entities can use to raise funds for disaster recovery after a predefined event, such as a climate-related hazard, occurs.
Climate-related bonds	Debt instruments that earmark proceeds for projects with environmental or social benefits. This includes green bonds, blue bonds, and social bonds.
Climate-resilient debt clauses	A provision in a loan agreement that allows a country to suspend debt repayments for a specified period after a major climate-related disaster, freeing up fiscal space for emergency response.
Contingent loans	Pre-approved loans from development banks or bilateral donors that become available for disbursement when a predefined trigger event, such as a state of emergency, is declared.
Crisis modifiers	Flexible financing mechanisms embedded within a project or programme that allow for the rapid reallocation of funds in response to a crisis or disaster.
Debt-for-climate (DFC)/Debt-for-nature (DFN) swaps	A transaction whereby a portion of a country's foreign debt is forgiven or restructured in exchange for the debtor nation's commitment to invest the equivalent funds for specific domestic environmental or climate projects.
Impact investing	The deployment of funds into investments that are intended to generate a measurable, beneficial social or environmental impact alongside a financial return. Impact bonds are an impact investing instrument.
Market mechanisms	Market-based systems that use financial incentives, such as tradable credits, to encourage positive environmental outcomes. This includes carbon credits and voluntary carbon markets.
Parametric insurance	Insurance that makes payouts based on a predefined trigger (e.g. wind speed or rainfall amount) rather than on an assessment of damages.
Shock-resilient loans	A type of contingent loan that can be quickly disbursed to a country following a shock to help with immediate relief and recovery efforts.

To ensure a focused analysis for this report, a comprehensive review of the instruments and approaches above was undertaken against a set of four key criteria, leading to the prioritisation of five (one approach and four instruments) for in-depth analysis. The selection criteria applied to narrow the focus are outlined in Figure 4.

Figure 4: Four key assessment criteria



The instruments selected – sustainable bonds, debt swaps, market mechanisms, impact bonds – and the approach selected – blended finance – were chosen for the following reasons:

- **Thematic alignment**: Not all climate finance instruments are designed or suitable for social protection. This criterion assessed the explicit potential for a climate finance instrument to support the dual objectives of climate action and social protection. Accordingly, we focused on instruments that move beyond solely climate adaptation or mitigation objectives to include either explicit or implicit social objectives, or strong co-benefits. Furthermore, the selection focused on instruments with the potential to support the specific needs of vulnerable populations in rural areas who are often disproportionately affected by climate change. For example, the shortlisted instruments like climate-related bonds and debt swaps were selected because their clear thematic focus on climate resilience provides a strong foundation upon which to build explicit social protection linkages. Similarly, market mechanisms were favoured due to the potential for the revenue generated to be strategically redistributed to support both core climate objectives with a focus on protecting vulnerable populations. Impact investment (including impact bonds) was prioritised due to its explicit social benefit objective, which can be complemented by climate objectives.
- **Potential for supporting long-term resilience:** We prioritised instruments that could support long-term resilience building or related climate objectives rather than being limited to SRSP. As explained above, this is because the evidence base is more developed for linking disaster risk financing and social protection. For this reason, instruments and approaches primarily designed for shock responsiveness, such as catastrophe bonds, shock-resilient loans, and crisis modifiers, were excluded.
- **Relevance to government systems:** The selection heavily favoured instruments with the potential to channel finance through national government systems, which is key to scaling and sustaining social protection and climate action. Consequently, options such as crisis modifiers, which are mainly used by international actors, were deemed unsuitable. Moreover, the shortlisted options demonstrate a stronger potential for practical application and scalability. While some innovative instruments, like the climate-resilient debt clause, were noted for their limited geographical relevance or nascent status, the chosen five possess a growing evidence base in other sectors or a clear path for further exploration and application to social protection systems. Impact bonds were prioritised within the impact investing category due to their specific applicability in LICs and LIMCs.
- **Innovation and knowledge gap:** The selection prioritised instruments that currently have limited or no known example of use for social protection, specifically to advance the debate and explore new frontiers for funding in this nexus. This rationale supported the inclusion of instruments like debt swaps, sustainable bonds, market mechanisms, and impact investment. Despite their currently limited explicit linkages to social protection, these represent promising areas for generating new financing options. Conversely, contingent loans from MDBs and bilateral donors were excluded from the study

as they are considered less innovative instruments in the climate finance landscape. However, we opted to include blended finance because, as an innovative financing approach rather than a single instrument, it holds particular potential to mobilise new sources of capital by blending public and private finance to support social protection and inclusive climate action.

The full details of all 11 instruments, including the initial assessment against each criterion, is provided in Annex 1.

Overview of instruments selected

The following section provides an overview of the selected promising climate finance instruments, outlining how they could be applied to social protection and inclusive climate action.

Each of the innovative climate finance instruments we have explored offers distinct scales of funding and project durations, as outlined in Table 2. The level of funding can range from millions to billions of dollars, while the project duration can vary from as short as two years to as long as three decades. This diversity in scale and duration means that these financial instruments can be tailored to a wide range of social protection and climate action initiatives, from small-scale pilot projects to large, national-level programmes.

Table 2: Funding level and duration

	Level of funding	Typical duration of funding
Sustainable bonds	**High -** Multi-million to multi-billion dollar range. Examples include: a €500 million sustainability bond from Benin and social bonds worth several billion from the African Development Bank.	**Long term** (5–30 years)
Debt swaps	**Moderate** - Typically, tens or hundreds of millions of dollars. Examples include: the Belize DFN swap at US$ 553 million, the Barbados DFC swap at US$ 125 million, and the Seychelles DFN swap at S$ 21.6 million.	**Long term** (5–30 years)
Market mechanisms	**Moderate** - Highly variable, ranging from hundreds of thousands to millions of dollars annually per project. Examples include a project led by Terrasos that resulted in a US$ 7 million sale of biodiversity credits across Latin America.	**Short to long term**. The funding is tied to the project's ability to generate and sell credits. This can be a long-term process, i.e. 2–20 years
Impact bonds	**Low** - Typically low millions of dollars per bond (less than US$ 5 million).	**Short-medium term.** Typically spans 3–10 years

Table 3 below provides a comparative overview of the four selected instruments in relation to their potential for financing social protection systems and inclusive climate action. This comparative analysis focuses on key dimensions critical for policymakers and practitioners in line with our research questions, covering: thematic alignment with social protection and climate action; potential applicability for financing social protection and for funding which flows through national public financial systems; potential impact on vulnerable populations (including rural populations); financial sustainability considerations; predictability and accessibility of instruments for governments; and demonstrated success in other related sectors.

Table 3: Overview of innovative climate instruments

Research question sub-components	Sustainable bonds	Debt swaps	Market mechanisms	Impact bonds
Thematic alignment (social protection and climate action)	High – Sustainability bonds have clear alignment with social protection and climate action. Social bonds are suited for social protection projects, but can be designed with climate co-benefits. Green and blue bonds are suited for climate projects, but alignment with social protection is more challenging.	Moderate – Yes. Designed to contribute to climate objectives. No formal requirement for social co-benefits, but those are assumed. Can be adapted as a debt-for-social protection swap.	Moderate – Designed to contribute to climate objectives. No formal requirement for social co-benefits, but those are assumed.	High – Designed to achieve social and/or environmental impact.
Potential for applicability to finance social protection systems	Moderate – Sovereign sustainable bonds and social bonds could potentially finance social protection pilots, projects, or programmes, either government run or implemented by non-governmental actors.	Moderate – The freed-up fiscal space from debt service savings could potentially be channelled into a national fund aligned with national social protection and climate policy frameworks. Funding to support pilots or projects implemented by non-governmental actors.	Moderate – Returns from credit sales by a government could be used to fund social protection programmes, such as public works. Can be used to finance government-led pilots, projects, or programmes.	Low – Traditionally a project-based instrument for non-governmental actors. Unlikely to apply to a national programme at scale.
Funding flow toward national public financial systems	High – Financing from bonds flows through the government's PFM system and increases fiscal space. Government agencies and non-governmental actors (NGOs, private sector) can apply for funding and implement services.	Moderate – Government savings from the debt swap go into a trust fund, outside the government's PFM system. Government agencies and non-governmental actors (NGOs, private sector) can apply for funding and implement services.	High – Governments can receive funding if they sell carbon or biodiversity credits, leading to increased fiscal space.	Low – Funding flows directly to service providers or an intermediary, rather than a national system.
Potential impact on vulnerable populations	High – Can be designed with a focus on the most vulnerable populations, including in rural areas.	High – Could be designed with a focus on the most vulnerable populations, including in rural areas.	High – Could be designed with a focus on the most vulnerable populations, including in rural areas.	High – The focus on predefined, measurable outcomes can lead to highly positive and targeted impacts on vulnerable groups, including in rural areas.
Financial sustainability	Low – Potential concerns over servicing long-term debts.	High – Decreases the debt burden.	Low – Subject to market fluctuations.	Low – Project-specific funding only.
Predictability	Moderate – Vulnerable to market volatility, making them more risky and less predictable than other instruments.	High – Predictable for the duration of the project.	Low – Subject to market fluctuations.	Moderate – Tied to achieving specific predefined outcomes.
Accessibility for governments of LMICs and SIDS	Low – Dependent on national credit ratings and may not be accessible to LMICs and SIDS with poor credit ratings.	Low to moderate – Process can be complex and requires significant negotiation with creditors.	Low – Requires setting up a fit-for-purpose regulatory environment and strong results-based monitoring framework. LICs and SIDS with already small carbon footprints can generate relatively few resources from carbon markets.	Low – Model is complex and requires capacity for designing and managing the outcome-based contracts. DIBs are typically set outside governments.
Evidence of success in other sectors	Yes – For example, Benin's sustainable bond involved economic inclusion, school feeding and health subsidies.	Yes – For example, Belize's DFN swap, Barbados's DFC swap, and Seychelles' DFN swap all focused on climate action.	Yes – For example, Terrasos' biodiversity credits in Latin America.	Yes – In social sector (village enterprise's graduation DIB), health, education, and water, sanitation, and hygiene (WASH) sectors.

The instrument overviews presented below include the following elements - availability, reliability of investors, cost, expertise and pre-existing systems required, and set-up time - which are key practical and operational considerations that determine the feasibility and suitability of different financial instruments. They provide a structured framework for evaluating whether they can be effectively implemented and sustained by a particular country.

Figure 5: Overview of relevant elements

- **Availability** – The extent to which the instrument is practically accessible to the target countries. This includes restrictions based on geographical location, a country's economic status (e.g. its debt-to-GDP ratio or credit rating), and specific debt characteristics (e.g. creditor type, debt currency, etc.). Some instruments are only available in certain geographies or to countries with a particular economic (or other) status, such as a low debt burden.
- **Reliability of investors** – The risk that the instrument may fail to release finance as expected due to external variables. This focuses on market-specific risks (e.g. volatility in market conditions, investor appetite, or currency fluctuations) that directly impact the predictability of funding streams.
- **Cost** – The total financial burden associated with the instrument. This covers the considerable variation in set-up costs (transaction fees, advisory services, etc.), ongoing management and administration costs, and the long-term cost of servicing the debt or fulfilling the financial commitment.
- **National government expertise required** – The comprehensive set of technical and institutional abilities required within a government. This includes the capacity to: i) manage complexity (structure transactions, comply with reporting); ii) engage the private sector (negotiate terms, secure guarantees); and iii) deliver results (integrate funding into domestic social protection systems and demonstrate verifiable climate and social impact).
- **Pre-existing systems required** – The foundational domestic, institutional and regulatory infrastructure necessary for the instrument to function. This includes the need for specific historical data (e.g. disaster loss data), robust PFM systems, established regulations, and/or necessary legal and fiduciary considerations. For example, some instruments require specific historical data to be available or require specific regulations or legal considerations.
- **Set-up time** – The time required from initial conceptualisation to the release of first funds. This element assesses the duration and complexity of the structuring, negotiation, and legal processes, which can be a significant practical barrier. Some instruments can take a long time to set up.

For each instrument, we give examples of its application in other related sectors and present its potential applicability to social protection and inclusive climate action.

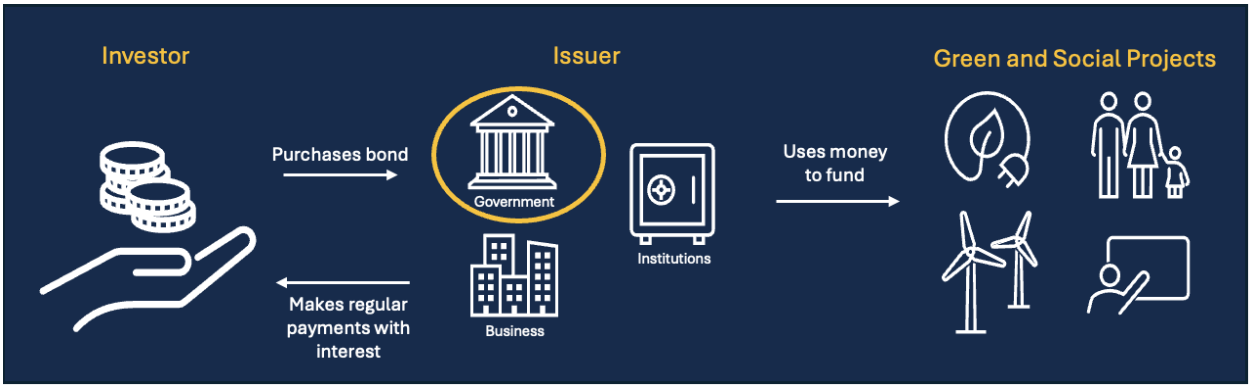
INSTRUMENT 1: SUSTAINABLE BONDS

Sustainable bonds are debt instruments issued by governments, businesses, and development institutions to finance projects that have environmental and/or social benefits. This contrasts with conventional sovereign bonds, where proceeds fund general government operations.

The concept of sustainable bonds first appeared in 2007, with the introduction of green bonds when the European Investment Bank issued a Climate Awareness Bond where proceeds were specifically linked to renewable energy (Boulle, 2014). What started as a niche market led by MDBs and a few investors has now grown into a trillion-dollar market where proceeds support a wide range of programmes and projects (World Bank, 2019).

Figure 6 below shows how sustainable bonds work, with investors (including pension funds, sovereign wealth funds, asset managers, banks, and investment funds) purchasing bonds from issuers on capital markets and issuers committing to using the funds for eligible environmental and social programmes and projects.

Figure 6: How sustainable bonds work



Source: Author's own work

This case study focuses on bonds issued by governments (also known as sovereign sustainable bonds) from LMICs, as these bonds are the most relevant for social protection.

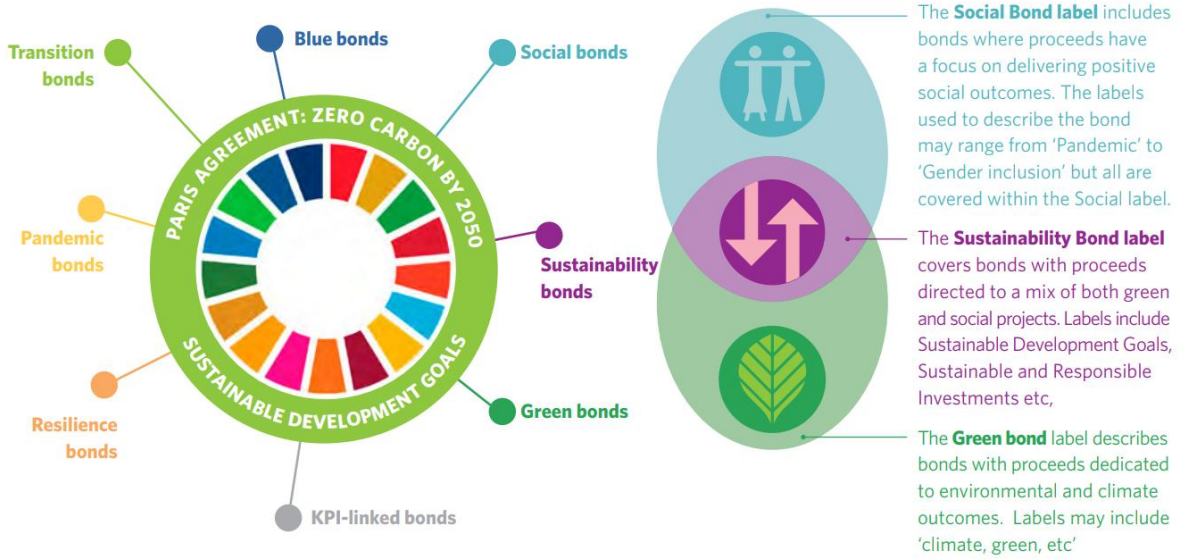
Sovereign sustainable bonds are similar to a loan where a government borrows funds from private sources and has to pay these funds back with interest, generating a debt. Bonds create additional fiscal space for governments in the short term, allowing them to spend more on environmental and social programmes. However, there is a risk for sustainability in the long run if the government cannot meet its repayment obligations. Sustainable sovereign bonds typically mature in the medium to long term (10–15 years). For instance, if a bond is used to fund social protection this means there is increased fiscal space for social protection expenditure over the duration of the bond, but there is an obligation for the government to pay back the investors in accordance with the payment terms.

A series of voluntary guidelines and principles exist for sustainable bonds, to ensure transparency, disclosure, and integrity in the market. The most prominent are the International Capital Market Association (ICMA) bond principles,[6] which have four key components:

- the **proceeds are used** to fund eligible green or social projects;
- there is a **process for project evaluation and selection**, based on environmental and social impact;
- there are transparent tracking and **management of proceeds**; and
- there is regular and up-to-date **reporting** on the use of the proceeds.

[6] These include the Green Bond Principles, Social Bond Principles, and Sustainability Bond Guidelines.

Figure 7 Different types of sustainable bonds



Source: Climate Bonds Initiative, 2021b

While the terms 'sustainable bond' and 'sustainability bond' are similar and are sometimes used interchangeably in practice, they have subtly different meanings. 'Sustainable bond' is an umbrella term that includes green, social, and sustainability bonds. 'Sustainability bonds' are a type of sustainable bond where proceeds are used to exclusively finance a mix of both green and social projects.

KEY CONSIDERATIONS FOR SOCIAL PROTECTION FOR INCLUSIVE CLIMATE ACTION

In the case of social protection, sustainable bonds can offer financing through capital markets on more favourable terms (i.e. with lower interest rates) than conventional sovereign bonds. This lower cost is a result of the increasing demand from investors to invest in projects that have a positive environmental and social impact.

To implement sustainable bonds that are linked to social protection, several key elements need to be in place:

- **A national development strategy that defines the role of social protection**, as investors prefer sustainable bonds as an instrument within a coherent national vision, rather than an opportunistic or isolated gesture.
- **National capacity to set up and issue sustainable bonds**, with strong coordination between the ministry of finance and the ministries responsible for social protection.
- **Strong monitoring and reporting systems**, as investors require regular reporting on projects that are funded and their contribution to social and environmental objectives.

While sustainable bonds offer an opportunity to access finance through capital markets, they are not an appropriate instrument for all countries, particularly those with poor credit ratings, high national debt burdens, and a weak track record of loan repayment, as investors are unlikely to offer favourable terms in such cases.

Below, we outline some of the main challenges and opportunities that LICs, LMICs and SIDS governments face in issuing sovereign bonds, including for financing social protection.

A) Availability and reliability of investors

Despite growth in the sustainable bond market, **LICs and SIDs have limited access to sustainable bonds.** In 2022, of the 43 countries that accessed the sustainable bond market, none were LICs (UNDP, 2023). To date, a total of US$ 147.9 billion in sustainable bonds have been issued by LMICs. The majority of these bonds are concentrated within a small group of middle-income countries, notably Chile (US$ 49.7 billion), Mexico (US$ 16.7 billion), and Thailand (US$ 14.7 billion) (World Bank, 2025). The limited availability of sustainable bonds for LICs highlights a key limitation of these instruments in financing social protection for climate action in these contexts.

Access to sustainable bonds is limited by a country's ability to take on and service new debt, its credit rating, and investor perceptions. Fifty-two out of 137 LMICs are either already in debt distress or at high risk of debt distress (UNDP, 2023). International investors, who are the main buyers of these bonds, are hesitant to lend to countries with deteriorating financial situations and poor credit ratings, due to the higher risks involved. Against this background, several de-risking measures have been taken by LMICs to improve the demand for sustainable bonds.

DE-RISKING THE SEYCHELLES 2018 BLUE BOND

In 2018, the Seychelles issued a US$ 15 million, 10-year sovereign Blue Bond with a 6.5% coupon rate. To help manage the risk of the bond, the design of this bond took a blended finance approach. The bond is partially guaranteed by a US$ 5 million guarantee from the World Bank (specifically, the International Bank for Reconstruction and Development). Additionally, to subsidise the costs of the bond the Global Environment Facility (GEF) is providing a concessional loan of US$ 5 million with an interest rate of 0.25, reducing the effective interest rate of the Blue Bond from 6.5% to 2.8%. The Rockefeller Foundation also provided a grant of US$ 425,000 to cover transaction costs (CABRI, n.d.).

Sustainable bonds are able to raise funds through capital markets but are vulnerable to market volatility. When issued, many sustainable bonds are oversubscribed, highlighting high demand and ability to raise funds. For example, Fiji's Green Bond received 162.4 million Fijian dollars (FJD) worth of bids for a FJD 100 million bond, while Benin's 2021 €500 million Eurobond received €1.2 billion of bids. However, the ability to successfully issue a bond can be contingent on prevailing global financial conditions, with factors like global interest rates, investor sentiment, and market volatility playing a role.

B) Costs of set-up, ongoing management, and servicing debt

Sustainable bonds have high transactional costs. The costs involved in completing a transaction include fees paid to financial advisers, legal advisers, credit rating agencies, and external reviewers. This is in addition to internal costs incurred by the government. These bonds also come with indirect costs that are paid by the issuer to the underwriter (typically an investment bank or syndicate of banks) for the service of bringing the bond to market (Government Finance Officers Association, 2013). Governments often receive technical or financial support from multilateral banks, NGOs, or United Nations organisations to help cover these costs. For example, the Seychelles Blue Bond transaction costs were covered by a US$ 425,000 grant from the World Bank, while Fiji's 2017 Green Bond received technical support from the International Finance Corporation to support the transaction.

C) Expertise and pre-existing systems required

Issuing a sovereign sustainable bond is a technically demanding process that requires a skillset that is both broad and specialised, and which exceeds that needed for a vanilla bond. It requires macro-fiscal analysis, stakeholder coordination, adherence to the International Capital Market Association principles, sound project selection, and transparent reporting. Developing countries often face capacity gaps in these areas (UNDP, 2025). Countries' debt management offices (DMOs) are the traditional actors involved in issuing vanilla bonds, but they may not have the skillset required to issue sustainable bonds. If a country seeks to issue a sustainable bond, its DMO may need to build its capacity for developing sustainable bond frameworks, establishing project selection governance, implementing proceeds

management systems, and impact reporting. Where there are capacity constraints, institutions like the World Bank, United Nations Development Programme (UNDP), the International Monetary Fund (IMF), and other partners can provide technical assistance.

Sustainable bonds are rarely standalone financial transactions: rather, they are usually tied to and aligned with the issuing government's national development strategy and public policy. This ensures that the bond is a financing instrument that is tied to a coherent national vision, rather than an opportunistic or isolated gesture. Sustainable bonds can be tied to a national development plan, a climate-focused strategy (such as NDCs), or a financing strategy like an integrated national financing framework (INNFF). Several countries are developing INNFFs and these are typically led by the ministry of finance to ensure the long-term sustainability of sovereign debt by enhancing domestic revenue mobilisation, the effectiveness and efficiency of expenditure, and its alignment with sustainable development priorities (UNDP, 2023).

Sustainable bonds also require issuers to have essential legal and fiscal architecture in place, in the form of a strong PFM system.

If bonds are issued on a domestic market, functional capital markets are essential. Most sovereign thematic bonds from LMICs have been issued in hard currencies like the US dollar or Euro on international capital markets, to attract a global investor base (Hussain et al., 2022). Pioneers like Mexico and Uzbekistan have also successfully tapped their domestic markets, allowing bonds to collect financing in the local currency (UNDP, 2023). However, such an approach of course requires domestic capital markets.

D) Set-up time

Most LMICs are able to set up and issue a sovereign sustainable bond within a year; however, it can take longer to make the decision to issue a bond. One study found that 83% of sustainable bonds in emerging markets were issued in less than a year. This process involved speaking to primary dealers and investors, as well as engaging in internal debates (Climate Bonds Initiative, 2021b). However, in many contexts a lot of work goes on in the background for several years before the formal decision is made to issue a sustainable bond. For example, Thailand was able to issue a sustainable bond in three to four months, but it took a couple of years to make the decision to issue the bond (Climate Bonds Initiative, 2021b).

BENIN SDG EUROBOND

In 2021, Benin issued a €500 million Sustainable Development Goal (SDG) Eurobond to fund 57 social development projects. This innovative approach was part of a long-term national strategy, with the bond's framework explicitly linked to the country's development plans. Despite being an LIC, Benin was able to raise this bond due to a well-defined issuance strategy, growing investor confidence in Benin's economic management and reforms, and the innovative and appealing nature of the SDG-linked investment. The bond, with a 12.5-year maturity, was designed to align with the long-term nature of these projects. The issuance was highly successful, being almost 300% oversubscribed and achieving a lower interest rate, or 'greenium', than standard bonds.

This success was due to Benin's strong credit history and a robust framework that included independent second-party opinions, boosting investor confidence. A significant portion of the funds was allocated to supporting vulnerable populations through initiatives like free healthcare and school feeding programmes. *See Annex 2 for further details.*

E) Applicability to social protection and climate action

Sustainable bonds offer an opportunity for LMICs to directly support their social protection systems and programmes. While most sustainable bonds have a focus on green projects, social bonds and sustainability bonds are an important growing market. This is especially true in LMICs, where since 2015 sustainability bonds accounted for 46% of the cumulative amount issued by emerging market sovereigns (World Bank, 2025). Several national sustainable bond frameworks, including those of Fiji

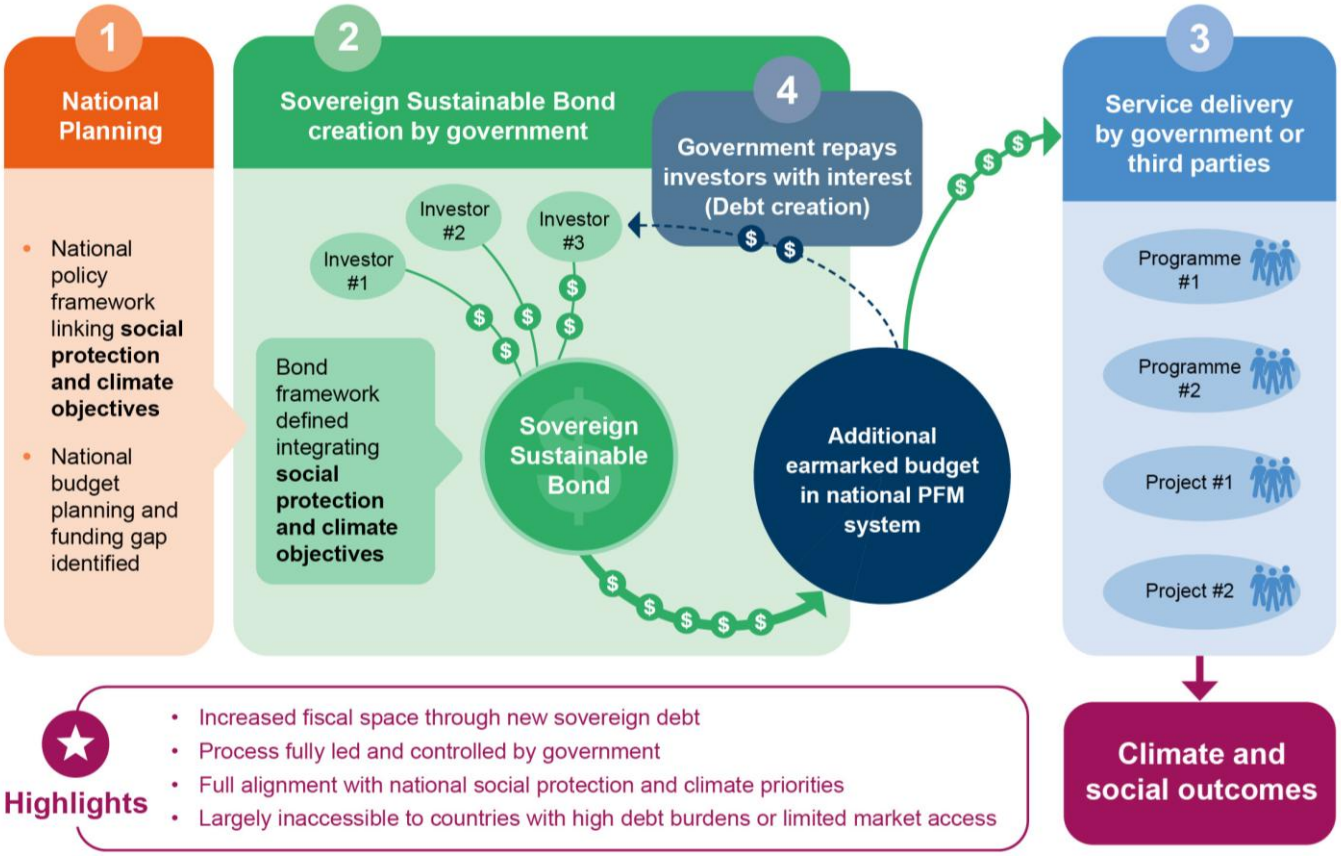
(Government of the Republic of Fiji, 2022) and Benin (Government of the Republic of Benin, 2021a), identify how proceeds from sustainability bonds and social bonds can be used to fund social protection programmes. These include programmes with objectives on employment generation, socioeconomic advancement and empowerment, and enhancing access to essential services.

Given the growing size of sustainable bond markets, as well as the growing ability of LMICs to access them through various de-risking measures, LMICs should increasingly be able to utilise sustainable bonds to finance social protection for inclusive climate action. Countries seeking to do this need to have the following elements in place:

- **A robust national development plan that recognises social protection as a tool that can be used to achieve its goals.** Sustainable bonds that are linked to national development strategies and contribute towards a coherent long-term development plan are in high demand from investors. It is crucial that the role of social protection is defined in national documents: this will open the door for these bonds to fund social protection programmes. Social protection should be integrated into NDCs as a vital tool to enhance resilience and ensure equitable progress toward climate goals. Sustainable bond frameworks should also recognise social protection programmes as eligible for funding.
- **A strong ministry responsible for social protection that is capable of advocating effectively for, and influencing, the ministry of finance to issue sustainable bonds to fund social protection.** As bonds are issued by the ministry of finance, the ministry responsible for social protection should be able to coordinate with that ministry and make a case for social protection funding. The ministry responsible for social protection should also be able to work closely with the ministries of environment and agriculture to promote inclusive climate action (i.e. to ensure that these actions are embedded in national climate policies and plans and, conversely, that climate action is embedded in social protection policies and plans).
- **A portfolio of programmes with demonstrated positive impact for both climate action and social protection, accompanied by robust monitoring and evaluation tools.** This ensures that the bond can adhere to the ICMA principles, which require project selection based on impact and the transparent monitoring and reporting of programme progress. Having these systems in place will reduce the cost of the bond, as well as increase investor confidence.
- **The fiscal space to take on debt, a strong credit rating, with a history of paying back debts, and the capacity to issue sovereign sustainable bonds.** Sustainable bonds are not a viable option for all countries. Many LICs struggle to take on additional debt, and investors will be concerned about LICs' ability to pay back loans. To offset this risk, investors will likely offer terms with higher interest rates to countries with a poor credit rating. Having the capacity to issue a bond is also important. A this involves specialised technical, legal, financial, and policy expertise, many LMICs will need to rely on technical assistance from development partners.

The diagram below presents a potential scenario for channelling sovereign sustainable bonds financing into a social protection system. It illustrates a process where a government, through national planning, creates a sovereign sustainable bond to attract investment. This bond generates new debt from investors, providing the government with increased fiscal space. The funds raised are then directed into the national budget, through an earmarked budget line, to finance the implementation of various projects. These projects, which can be implemented by government or by a third party, are designed to deliver both climate and social outcomes, aligning with national priorities.

Figure 8 Illustrative sustainable bonds funding



Source: Author's own work

INSTRUMENT 2: DEBT SWAPS

DFN and DFC swaps are financial tools designed to tackle two problems at once: growing national debt and the worsening climate crisis. These arrangements allow countries that owe money to repay their loans on better terms, and then to use the money saved to fund important environmental and climate actions.

Technically, DFN swaps are financial deals that reduce a country's external debt obligation. The savings from these reduced debt payments can be rediverted to fund conservation or climate-related initiatives in the local currency (White & Case LLP, 2024). This gives countries more financial breathing room for environmental projects (Norton Rose Fulbright, 2023). Historically, DFN swaps have focused on biodiversity conservation or the protection of natural resources. DFC swaps are a newer, more complex form of swap, often larger in scale compared to DFN swaps. DFC swaps serve a similar function, redirecting debt payments toward investments in climate action, which helps both the country's finances and its ability to withstand climate impacts (Georgieva *et al*., 2022). DFC swaps can have a larger mandate that includes adaptation and mitigation and are not necessarily limited to conservation efforts.

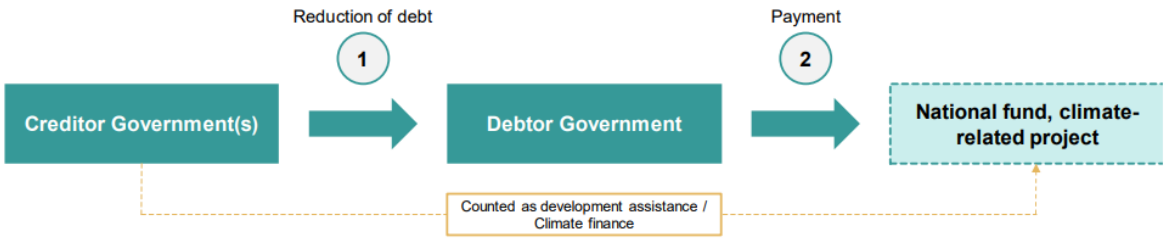
Through these swaps, a country's debt is either bought back at a reduced price by a third party, or a new, cheaper loan is provided to the country. The money saved from these better debt terms is then committed by the country to specific environmental or climate projects or programmes (Norton Rose Fulbright, 2023). During this process, discussions involve not just environmental goals but also how these projects can help local communities. For example, they consider how the projects can improve public health, create jobs, or ensure access to essential resources like clean water and food. Thus, there is potential to build in social protection measures at the design phase.

Typical actors in these swaps include government lenders, non-profit organisations (who serve as go-betweens), MDBs and IFIs, private financial companies/banks, development finance corporations, and foundations that may pitch in with grants.

Swaps can be bilateral or multipartite, so the complexity of the structuring can vary:

» **Bilateral**: In a bilateral DFN swap, a creditor government reduces the debt owed by a debtor government. In exchange, the debtor country commits to allocating an agreed-upon amount of local currency toward a specific environmental project, such as nature conservation. This model typically involves official government-to-government arrangements and constitutes a form of bilateral financial assistance. The creditor incurs a direct financial loss by reducing the debt owed, while the debtor commits to investing the equivalent amount in the agreed-upon conservation project (Green Climate Fund, 2024).

Figure 9: Bilateral swap model

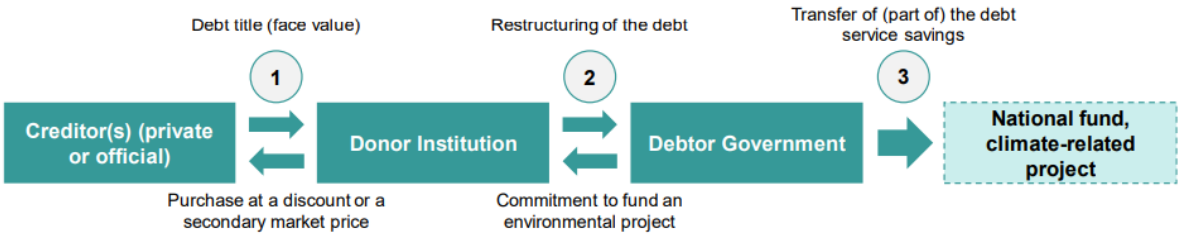


Source: Global sovereign advisory

» **Multipartite debt swap**: There are two types of multipartite debt swap mechanism. The first entails a third-party entity, typically NGOs or philanthropic foundations, acquiring a portion of the debtor country's outstanding debt from creditors on the secondary market at a discounted price. This acquired debt is then restructured, in return for which the debtor country commits to allocating funds toward climate-related projects. Alternatively, the debtor country may directly repurchase its own outstanding debt from creditors at a discount and **allocate the freed-up funds** toward climate commitments through the following mechanisms:

- The country raises funds through grants or highly concessional loans from donors such as foundations, development finance institutions (DFIs), and bilateral partners. These funds are then used to buy back the outstanding debt from creditors.
- The country seeks financing from commercial investors to buy back its own debt. To make this option more attractive to investors, credit enhancement mechanisms are typically provided by a third party (Green Climate Fund, 2024).

Figure 10: Multipartite swap model



Source: Global sovereign advisory

Debt swaps have been around since 1984, but today's DFN and DFC swaps, like the recent agreements in Belize, Seychelles, Barbados, Ecuador, and Gabon, represent a new way of structuring these swaps with innovative features, including the use of blue bonds and more involvement from the private sector (White & Case LLP, 2024). Sustainable bonds can be part of DFC and DFN structuring, providing a way to refinance existing debt with new, lower-cost financing from private investors.

KEY CONSIDERATIONS FOR SOCIAL PROTECTION FOR INCLUSIVE CLIMATE ACTION

Debt swaps increase fiscal space by improving repayment terms on existing loans and by ensuring governments commit to invest those savings in nature conservation or climate action. DFC swaps specifically redirect debt repayments toward investing in climate action.

While neither DFN nor DFC swaps have formal requirements for social co-benefits, there are a few avenues where these instruments can finance social protection:

- The freed-up finance is normally channelled to a dedicated trust fund specifically for nature and environment projects whose specific focus is a subject for negotiation. The incorporation of social protection into the design of these swaps could therefore potentially form part of these negotiations.
- The broad nature of climate and nature conservation efforts that DFN and DFC swaps can finance mean that these instruments could potentially fund initiatives to incorporate social protection into climate action through all four functions highlighted above (i.e. reducing underlying climate vulnerability, climate mitigation, offsetting negative impacts of climate transition efforts, and facilitating climate change adaptation).

The most impactful debt swaps happen when the country's debt is already being traded at a very low price in secondary markets (Owen, 2022). This means the lower the price of the debt, the greater the debt reduction that can be achieved. In essence, the possibility for a significant swap to be set up often points to existing, potentially serious financial trouble in debtor countries. Thus, these deals are not universally applicable but rather arise from specific conditions of financial vulnerability.

The impact of DFN and DFC swaps on social protection should be seen within a larger framework of development finance and debt relief, and not as a replacement for bigger, more fundamental financing or direct grants.

A) Availability and reliability of investors

The reasons for investors to participate are varied. For lenders, turning high-risk debts into investments in climate projects helps manage credit risk and prevent unpaid debts from piling up (Darouich *et al*., 2023). A main goal for everyone involved is to promote nature conservation and climate action.

Attracting and keeping reliable investment in debt swaps involves several challenges. The deals are often small (often in the tens of millions of US dollars) and might not interest investors. The fact that many parties are involved in these deals can make them complicated, which can also discourage investors (Norton Rose Fulbright, 2023). Thus, deals that have an additional layer of guarantees are more attractive to investors.

Lastly, a prerequisite for DFC swaps is that countries are in situations of financial vulnerability, as these deals are most effective when a country's debt is already trading at a low price.

B) Costs of set-up and ongoing management

Setting up and managing the swaps involves significant costs. A key feature of these swaps is their high transaction costs. As mentioned earlier, the swaps require financial arrangements that involve many different groups, including the country owing the debt, various lenders, donors, non-profit organisations, and commercial banks (Norton Rose Fulbright, 2023). The stages of preparing the deals, negotiating, and putting them into action are complicated and expensive (Norton Rose Fulbright, 2023). In the case of this particular financial mechanism, costs are a function of the long negotiation process involved.

Beyond the initial set-up, there are substantial costs related to designing, implementing, and monitoring projects. The long-term success of these swaps also depends on the debtor government's continued ability and willingness to fulfil its environmental and climate commitments, which can be put at risk by unexpected changes in government finances, climate-related events, or problems with how things are managed.

C) Expertise and pre-existing systems required

A set of specific skills is needed both at the country level and within the other organisations involved. This includes expertise and skills for debt management expertise, financial negotiation (Owen, 2022), programme implementation and monitoring, and existing legal and governance frameworks.

In some cases, existing systems can be leveraged. For example, already-established public indebtedness legal structures were adapted for the 2022 swap in Barbados, including contractual provisions for disaster clauses developed as part of the country's 2019 debt restructuring. The swap also built upon established relationships between the Government of Barbados, the Inter-American Development Bank (IDB), and The Nature Conservancy (TNC).

Having robust PFM frameworks is another important factor. The IMF suggests that structuring deals around broad climate goals and supporting government spending on climate is most effective in countries that already have robust government money management and policy frameworks (Georgieva *et al*., 2022). In the case of Belize's swap, setting up 'key financial, legal, and policy frameworks, as well as a financial strategy to restore debt sustainability', was a requirement for finalising the deal (The Commonwealth, 2023).

Go-between organisations play a significant role in filling skill gaps. International conservation organisations, such as TNC and Conservation International, as well as MDBs, have historically started or arranged most of these swaps, providing technical and financial expertise (TISE Group, 2025). The creation of independent trust funds, like the Seychelles Conservation and Climate Adaptation Trust (SeyCCAT) or the Galapagos Life Fund in Ecuador, which are new organisational structures specifically designed to manage and distribute the money generated by these swaps, also requires specific expertise (The Commonwealth, 2020).

D) Set-up time

The process of setting up DFN and DFC swaps is complex and takes a long time. They typically require two to four years from the initial stages of preparation to full implementation (Norton Rose Fulbright, 2023). Several factors contribute to lengthy timeframes, including finding suitable projects, coordination with multiple stakeholders, long negotiations, complex structuring processes, and the legal checks required (Sharma, 2025).

SEYCHELLES 'BLUE ECONOMY' DFN SWAP

In 2015, the Seychelles completed the world's first 'Blue Economy' DFN swap, restructuring US$ 21.6 million of its national debt. The deal, facilitated by TNC with support from the World Bank and the GEF, established a new special purpose vehicle: the SeyCCAT. This public–private trust, created by a special parliamentary act, became operational in 2016 to manage the debt conversion's proceeds.

SeyCCAT's mandate extends beyond conservation to include social co-benefits. It is designed to support the Seychelles' Blue Economy Strategic Policy Framework, which aims to combine economic development with environmental protection. The trust's initiatives focus on developing climate adaptation and social resilience plans. Through its Blue Grants Fund, the SeyCCAT has financed 87 projects to date that promote sustainable fisheries, empower local communities, and support aquaculture businesses, thereby integrating social and economic objectives into its conservation efforts. The trust has also leveraged further funding, including a 2018 Blue Bond, to expand its focus on sustainable fisheries and aquaculture. *See Annex 2 for further details.*

D) Applicability to social protection and climate action

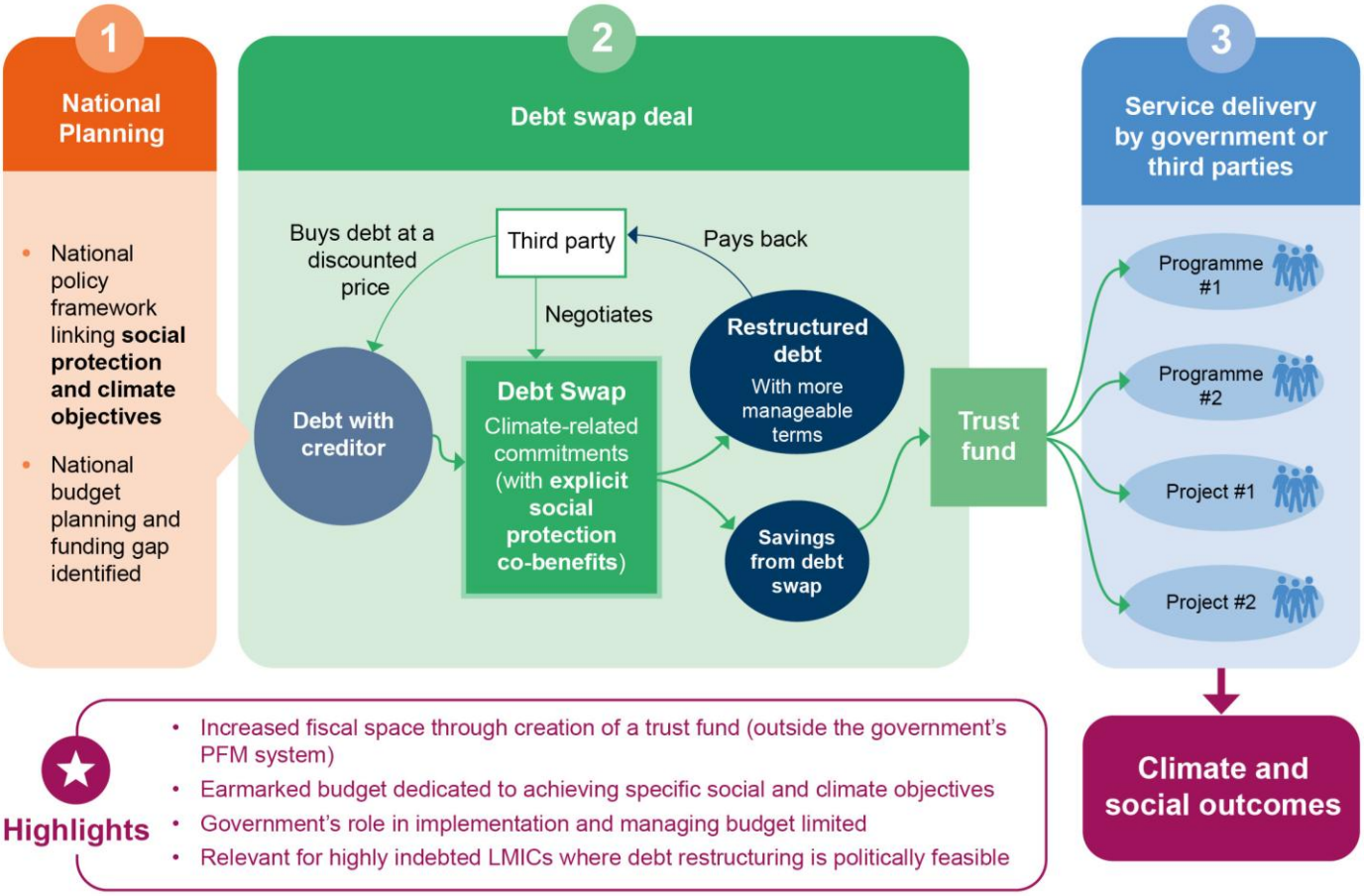
While DFN and DFC swaps primarily target environmental and fiscal benefits, their long-term success and effectiveness are inextricably linked to their social impacts. Possible linkages between social protection programming and swaps are provided below:

- **Linkage to social protection programming, with a focus on reducing underlying vulnerability to climate change and enhancing resilience and facilitating climate change adaptation:** The financial savings from a swap can be used to fund social protection programmes like cash transfers that can, for instance, be combined with seed capital and training for climate-resilient agricultural practices or to help diversify rural livelihoods. The financial savings could also be used to provide grants or low-cost loans targeted at social protection beneficiaries to help individuals start off-farm businesses or adopt climate-adaptive agricultural practices in rural areas.
- **Freeing up fiscal space:** While not suitable for heavily indebted countries, the mechanism does help free up fiscal space that could be channelled to social protection programming. The extent of the redirection depends on the type of arrangement involved in the swap. In a bilateral arrangement, the government benefits from lower debt repayments and/or debt service, which would create fiscal space. The resources freed up from debt relief could be redirected toward social protection initiatives should the government choose. However, in a multipartite arrangement, a third party outside government receives the funds (e.g. an NGO), limiting the potential of this type of instrument for financing government-led social protection programmes.
- **DFC swaps could be used to support climate action through social protection:** Environmental protection activities can require labour and infrastructure development. This can create jobs in construction, monitoring, and maintenance, providing employment opportunities for local communities. If a debt swap was used to fund infrastructure, governments could link it with social protection, for example by including active labour market policies or social assistance measures, such as skills development or public works programmes, in their project proposals.
- **Applying the debt swaps to social protection: While** not directly linked to climate-related programming, debt-for-social protection swaps could be an innovative mechanism to address the dual

challenges of unsustainable debt burdens and insufficient social spending in LICs. This approach involves creditors restructuring a portion of a country's debt in exchange for the government committing to invest the freed-up resources directly into specific social protection programmes (De Schutter, 2025).

Figure 11 below illustrates a potential debt swap transaction aimed at financing social protection and climate projects. Following national planning and the identification of a funding gap, a government enters into a debt swap deal with a creditor. Savings from the debt swap are put in a trust fund, governed by a dedicated body, which allocates these ring-fenced funds to various short-term projects that are designed to achieve specific social and climate objectives. This approach creates increased fiscal space outside the government's direct budget, enabling the funding of individual projects that deliver both climate and social outcomes.

Figure 11: Illustrative debt swap funding flow



Source: Author's own work

INSTRUMENT 3A: CARBON CREDITS

Carbon markets create a market-based solution for reducing GHG emissions by internalising the environmental cost of pollution. They are designed to mitigate climate change by assigning a monetary value to GHG emissions. These markets facilitate the buying and selling of carbon credits, each representing the reduction or removal of one tonne of carbon dioxide equivalent (CO_2e) from the atmosphere.

There are two existing pathways for carbon credits: through mandatory compliance mechanisms and through flexible voluntary initiatives:

- **Compliance carbon markets** are legally mandated systems established by governments (United Nations Environment Programme (UNEP). High-emission industries are required to meet specific emission reduction targets. Companies either receive or purchase emission allowances, and those that reduce their emissions below their allocated cap can trade their surplus allowances to entities needing to cover excess emissions. Non-compliance with these mandatory targets typically results in penalties. Examples include the European Union Emissions Trading System (EU ETS) and California's cap-and-trade programme. Prices in compliance markets are generally higher than in voluntary markets, reflecting the mandatory demand and limited supply, ranging between €80 and €90 per tonne in the EU ETS (Grasfeld, 2025).
- **Voluntary carbon markets (VCMs)** are driven by companies and individuals who choose to offset their unavoidable emissions of their own volition (UNEP, n.d.). This market operates through internationally recognised standards, such as the Verified Carbon Standard, Gold Standard, Plan Vivo, and Climate Action Reserve, which ensure the quality and integrity of the projects. This carbon market mechanism supports a diverse range of projects; examples include renewable energy installations, forest conservation, methane capture, and energy efficiency interventions.

Here we focus on VCMs, where there is more scope to foster innovation in development and implementation (Grasfeld, 2025), enable wider participation, including at the community level, and channel finance to climate solutions that produce social co-benefits. This is largely a project-driven model, which allows for the integration of social co-benefits. Projects can be designed from their inception to address community wellbeing, poverty reduction, and improved livelihoods alongside their primary climate impact. Therefore, there can be a direct connection between the operational model of VCMs and social co-benefits.

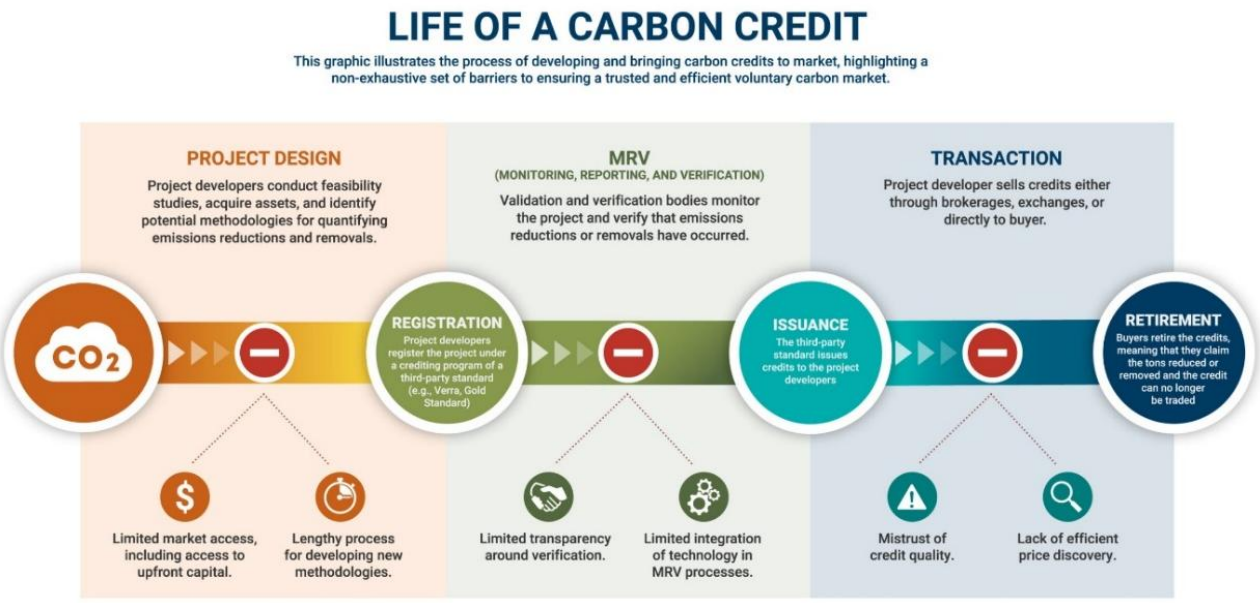
In a VCM, carbon offsets are generated by projects specifically designed to reduce or remove GHG emissions from the atmosphere. Results in VCMs are defined and monitored against internationally recognised performance indicators for carbon mitigation. These indicators and methodologies have been developed and are overseen by independent bodies such as Verra (Verra, n.d.), Gold Standard (Gold Standard, n.d.), and Plan Vivo (Plan Vivo, n.d.). Projects undergo independent audits following these methodologies that verify the actual tonnes of emissions avoided or reduced (Climate Impact Partners, n.d.). These auditors confirm emission reductions are real by assessing key indicators such as additionality, permanence, and prevention of double counting. Once verified, the carbon credits are issued, making them available for purchase and sale. Participants in this ecosystem include:

- **Purchasers**, typically companies or institutions, acquire these carbon credits to offset their own emissions or to support climate initiatives (JPMorgan Chase & Co., 2023). These are the 'investors' for this type of instrument, and they form the demand side of carbon credits.
- **Project developers**, who are responsible for designing, developing, and operating the carbon projects that generate these credits (JPMorgan Chase & Co., 2023). These actors are responsible for the supply of carbon credits. Project developers often include the private sector, NGOs, governments, and public agencies or community-based organisations.
- **Intermediaries** such as brokers and traders help the market function by buying and selling credits, which makes it easier for buyers and sellers to find each other.
- **Project owners:** This is the entity that holds the legal rights to the land, resources, or project that generates the carbon credits. They are the ones to whom the verified credits are officially issued, and they have the authority for selling, transferring, or retiring the credits.

» **Standard-setting bodies and registries** (such as Verra and Gold Standard) and **third-party verifiers**, who establish the rules, track credits, and conduct independent audits (JPMorgan Chase & Co., 2023).

In terms of the mechanism, there are clear and legally binding rules on financial governance and distributing benefits. These rules are detailed in what are known as benefit-sharing agreements. These agreements are a critical component of the project's documentation and are required by the major standard-setting bodies, including Verra and Gold Standard. They outline exactly how revenue from the sale of carbon credits will be distributed among all beneficiaries. The specific terms of these agreements detail how funds will be managed, who will manage or hold the funds, how cash payments will be made, and/or which (if applicable) non-monetary benefits will be provided.

Figure 12: The lifecycle of a carbon credit



Source: Carbon Free Zone, 2022

KEY CONSIDERATIONS FOR SOCIAL PROTECTION FOR INCLUSIVE CLIMATE ACTION

Carbon markets can provide a source of additional finance for either climate action that provides social co-benefits or can be used to support certain social protection initiatives – such as active labour market programmes, environmentally conditioned cash transfers or public works schemes – that can clearly demonstrate emissions reductions or removal of GHG from the atmosphere. For these projects to be financed by carbon markets, they have to demonstrate regular carbon reduction or removal. They are mainly suitable for financing social protection projects that contribute directly to climate mitigation or facilitate climate change adaptation.

As VCMs are based on proven results, they are suitable for expanding proven social protection programmes that are already operational. Any carbon project must prove that additional climate finance would lead to one of the following: an increase in geographic scale, an improvement in implementation, or an increase in the longevity of the programme that would not be achievable otherwise. In other words, it cannot be used to replace existing government financing commitments.

Carbon markets are not well suited for LICs as these economies typically have small carbon footprints, and consequently limited scope to demonstrate significant emissions reductions. This means they would only be able access modest financial resources via carbon markets. The structure of carbon markets favours countries with higher baseline emissions, while offering little benefit to poorer countries that have contributed least to the climate crisis.

A) Availability and reliability of purchasers (investors)

This is a function of the global demand for credits (driven largely by corporate and institutional climate pledges), and the availability of functioning and reliable carbon credit projects. Investors could include large corporations, financial institutions, and other organisations looking to voluntarily offset carbon emissions. The carbon market is maturing, as evidenced by rising institutional investor participation, and this can help position carbon markets as a substantial source of funding for climate projects. For developing countries, ensuring a steady stream of investors entails operationalising the creation of domestic carbon credit markets through regulatory interventions. VCMs, meanwhile, complement compliance carbon markets by providing an opportunity for projects that would not otherwise be feasible and to go beyond what is a legal requirement.

B) Costs of set-up and ongoing management

Developing and managing carbon projects involves significant financial commitments to cover both initial set-up expenses and recurring operational costs. Understanding these costs is crucial for project viability and for attracting necessary investment. While costs also vary by scale and local/country conditions (FG Capital Advisors, n.d.), a summary of set-up costs by type/sector of project is provided below:

- **Nature-based projects** include activities like afforestation, reforestation, and REDD+, and could require a set-up investment ranging from US$ 150,000 to US$ 500,000 for the initial two years. This budget covers components such as feasibility studies, the project design document, baseline studies, the establishment of Monitoring, Reporting, and Verification (MRV) systems, community engagement efforts, legal set-up, validation processes, and registry fees. For very large-scale reforestation initiatives – such as those involving more than 20,000 hectares – the upfront costs can surpass US$ 1 million.
- **Technology-heavy/industrial projects** like direct air capture or carbon capture and storage have higher capital requirements. Their set-up costs can range from US$ 500,000 to over US$ 10 million. This figure covers feasibility assessments, laboratory testing, the procurement and scaling of specialised technology, application of specific methodologies, and the necessary validation, legal, and registry fees.
- **Small-/micro-scale projects** typically have lower set-up costs, ranging from US$ 50,000 to US$ 150,000. Such projects are often supported through grants or results-based financing mechanisms, reflecting their community-centric nature and potential for direct social impact. This could include clean cookstove provision, biogas, small hydro, and smallholder agroforestry projects.

In terms of ongoing management, it is the continuous MRV process that forms the bulk of the costs. Annual monitoring for nature-based projects, for instance, can cost between US$ 10,000 and US$ 50,000 per year (FG Capital Advisors). Registry, issuance, and transfer fees are also ongoing costs (Climate Action Reserve, n.d.). MRV work is typically completed every one to five years, depending on the specific methodology deployed by the project, to enable the issuance of new carbon credits.

Costs, in general, also vary depending on the geography in question, and additional costs can be incurred due to adverse events or unanticipated challenges such as land tenure issues, validation concerns, legal matters, and carbon market price variability.

C) Expertise and pre-existing systems required

A diverse range of skills and systems are required to set up and manage carbon markets. This includes technical expertise with respect to methodologies, quantification of GHG emissions and removals, and conducting environmental impact assessments (UNFCCC, n.d.). Project developers need to have legal and regulatory knowledge to ensure full compliance with national and international carbon market rules. Financial expertise is needed to design viable financial models, secure investment from various sources, manage complex budgets, and understand carbon credit pricing and market trends. For projects designed to deliver social co-benefits, genuine and effective community engagement is critical. Lastly, projects require significant expertise on MRV. This includes proficiency in setting baselines,

assessing additionality, and mitigating unintended carbon leakage, all of which are crucial for maintaining the credibility of issued carbon credits (World Bank, 2022).

D) Set-up time

The development of a carbon project from scratch could require a multi-year commitment from its initial concept to the issuance of the first carbon credits. This process can span between 18 and 36 months (Schneider Electric, n.d.). The exact timeline is influenced by the project's complexity and its specific type:

- Projects focused on renewable energy, energy efficiency, or community-based initiatives take an average of 18 to 24 months to issue their first credits.
- Forestry projects, due to their inherent biological cycles and long-term nature, typically require a longer development period, ranging from 24 to 36 months.

The overall operational lifetime of a carbon project, during which continuous monitoring and verification occur, can extend for a considerable period, typically around 15 to 30 years, depending on the specific methodology applied and the nature of the project (Schneider Electric, n.d.).

These timelines necessitate a stable policy and regulatory environment within host countries, predictable market demand from purchasers, and capital from investors. For social protection, this long-term funding potential can be an enabler for sustained development and resilience building within vulnerable communities, providing consistent support over decades rather than short-term interventions.

AFRICA CARBON MARKETS INITIATIVE (ACMI)

The Africa Carbon Markets Initiative, launched at COP27 in 2022, is a collaborative effort designed to expand Africa's engagement in VCMs. Its primary objective is to scale the supply and demand for high-integrity, African-sourced carbon credits while ensuring the benefits are equitably distributed to local communities. The initiative has set ambitious goals, aiming to produce 300 million carbon credits annually by 2030, which is projected to unlock US$ 6 billion in revenue and support 30 million jobs. By 2050, ACMI targets an annual production of over 1.5 billion credits, leveraging more than US$ 120 billion and supporting 110 million jobs.

ACMI's core strategy involves assisting African governments in developing country-specific carbon market activation plans. So far, only Kenya has launched a plan, while Nigeria and Malawi are taking steps to operationalise the initiative. Gabon and Togo have also committed to working with the initiative. Through its partners, ACMI supports various projects that demonstrate clear social co-benefits, such as mangrove restoration, agroforestry, and sustainable grazing management. These projects not only sequester carbon but also protect coastal communities from flooding, improve food security, enhance livelihoods for pastoralist communities, and support direct incentives like alternative livelihood programmes and cash transfers. *See Annex 2 for further details.*

E) Applicability to social protection and climate action

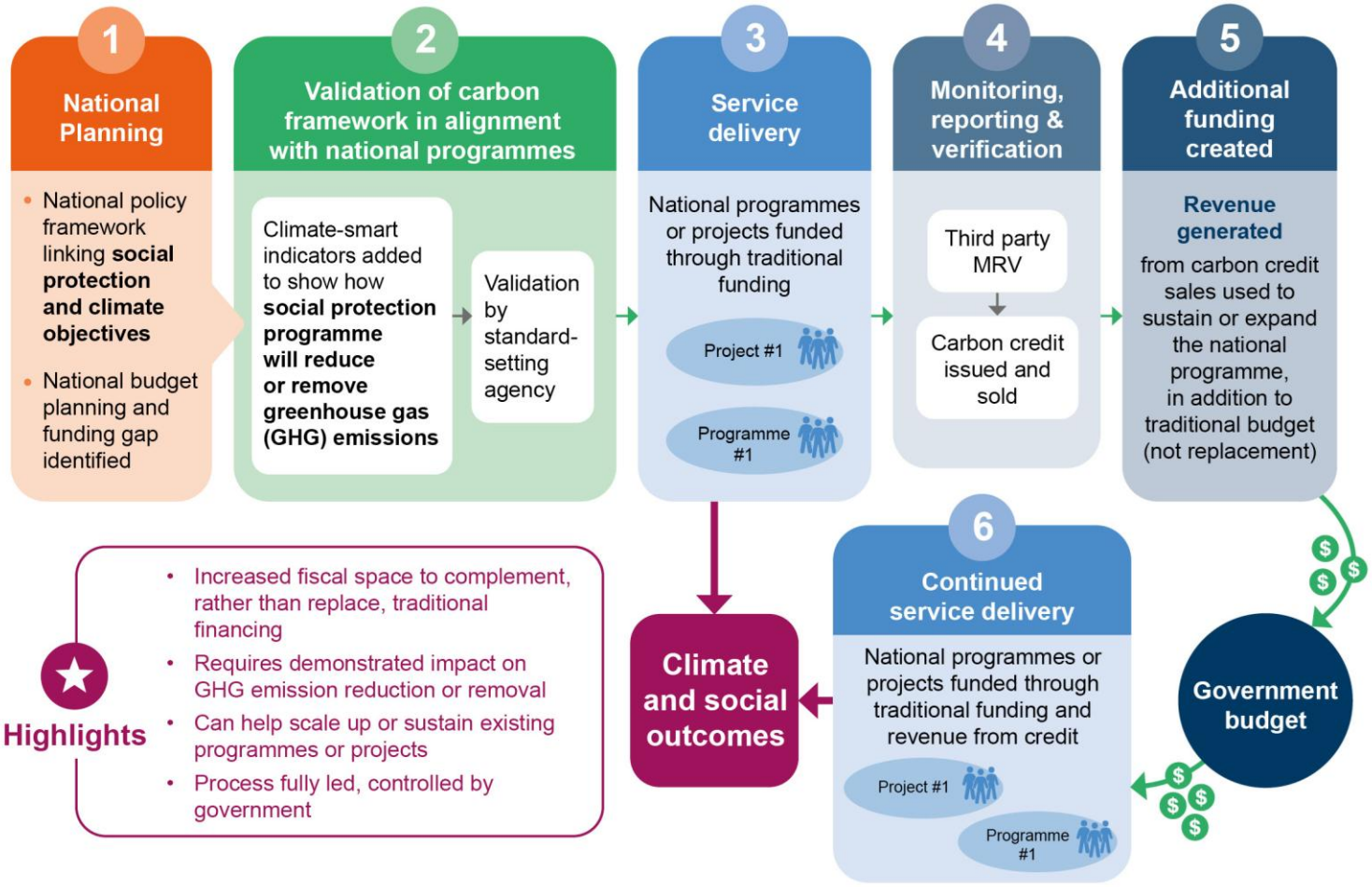
Carbon markets, particularly within the voluntary segment, can potentially serve as a conduit for channelling finance toward projects that achieve significant emissions reductions but also deliver co-benefits to local communities. Some options for linking carbon supply creation to social protection are provided below:

- **Linkage to social protection programming in rural areas, with a focus on climate change mitigation in rural areas:** Revenue from the generation of carbon credits can be used to fund public works programmes that employ rural residents in activities such as reforestation, deploying nature-based solutions, and sustainable land management. This provides an avenue for employment and income while directly enhancing carbon sequestration, serving as both a climate mitigation and social protection tool.

- **Government public works programmes, which have traditionally been designed to provide employment and develop infrastructure, can potentially be reoriented as climate-smart initiatives.** This involves engaging participants in activities that directly contribute to climate mitigation and adaptation. These programmes could offer temporary employment or provide essential skills training. Activities could focus on natural resource management, such as large-scale land restoration, afforestation, reforestation, or the implementation of sustainable agricultural practices. When public works activities involve afforestation or reforestation, they directly sequester carbon dioxide from the atmosphere, providing the scope for generating verifiable carbon removal credits. Projects focused on preserving existing green spaces or preventing the degradation of natural lands can generate carbon credits by preventing emissions from land-use change. If the carbon sequestered or avoided through these activities is measured, independently verified, and certified against recognised standards, this could pave way for the issuance of credits that can be sold to finance the programme or provide additional revenue streams.
- A hypothetical example would involve linking Ethiopia's Productive Safety Net Programme (PSNP) to carbon credit generation (Cornell eCommons, 2015). The PSNP has a public works programming component that focuses on rehabilitating degraded lands and building essential community infrastructure, including participatory watershed management interventions, which have the potential to deliver significant climate change mitigation benefits. These benefits arise from sequestering carbon in soils and biomass, and reducing GHG emissions from agricultural, forestry, and other land use sectors (Pandey, 2025). This approach is common to a number of current public works programmes. A study conducted within PSNP's Climate Smart Initiative demonstrated that these interventions consistently result in net positive carbon benefits across diverse agro-ecological zones. Given that PSNP projects cover hundreds of thousands of hectares, a case could be made to embed methodologies for quantifying these carbon benefits into future phases of the programme (Pandey, 2025). This would facilitate access to carbon markets and wider climate finance opportunities.
- A critical consideration for linking this type of intervention to carbon markets would be the principle of additionality. Where these are existing programmes, any 'project' established under it would need to demonstrate that additional climate finance would lead to an increase in geographic scale, an improvement in implementation, or an increase in the longevity of the programme that would not be achievable otherwise (Cornell eCommons, 2015). This ensures that carbon revenues genuinely contribute to new or enhanced climate action.

Figure 13 **below outlines a scenario where carbon finance is used to supplement the traditional funding of a national social protection programme.** Following national planning, a programme is implemented using traditional government funding. However, climate-smart indicators are incorporated into the programme's design to demonstrate its ability to reduce or remove GHG emissions. A third party validates this, allowing for the issuance and sale of carbon credits. The revenue generated from these credits is then returned to the government budget, creating additional funding to scale up or sustain the existing national programme. This approach generates increased fiscal space to complement, rather than replace, traditional financing. The same scenario could be applied using a project-based financing approach.

Figure 13: Illustrative carbon credits funding flow (when sold by government)



Source: Author's own work

INSTRUMENT 3B: BIODIVERSITY CREDITS

Biodiversity credits are a market-based mechanism focused on the protection and restoration of natural environments. They are a financial tool designed to channel private investment directly into projects that measurably protect and restore nature. Those projects are often run by communities and organisations doing on-the-ground conservation or restoration work. Biodiversity and climate action are deeply intertwined, with the state of one directly influencing each other. The effects of climate change are a primary driver of biodiversity loss. Intact and diverse ecosystems act as significant carbon sinks, naturally absorbing and sequestering carbon dioxide from the atmosphere – a process that is crucial for climate mitigation. These links have led to the development of integrated strategies known as nature-based solutions.

Funds generated through biodiversity credits finance projects that measurably enhance biodiversity while also generating tangible social and economic benefits for vulnerable local populations, such as providing sustainable livelihoods, respecting Indigenous Peoples' rights, and strengthening community resilience. Biodiversity credits can support a wide range of activities, such as promoting sustainable agriculture, restoring degraded ecosystems through reforestation and coral reef restoration, and protecting endangered species by securing their habitats.

There can be two routes to how biodiversity credits operate in a given country: voluntary or jurisdictional. Voluntary biodiversity credits allow companies and donors to fund conservation and restoration efforts for a measured positive impact, while jurisdictional biodiversity credits operate within government-administered and regulated frameworks, often tied to compliance or offsetting specific environmental impacts.

A biodiversity credit is defined as 'a certificate that represents a measured and evidence-based unit of positive biodiversity outcome that is durable and additional to what would have otherwise occurred'.[7] A biodiversity credit is a certificate representing a measured and verifiable positive biodiversity outcome that would not have occurred without the project's intervention. In this context, the certificate is a formal, tradable document – much like a bond or a stock certificate – that serves as legal proof of the conservation outcome. This document, often recorded on a public registry, gives the holder a clear, verified claim that they have contributed to a specific, additional benefit for nature, ensuring transparency and preventing the outcome from being sold more than once.

This emphasis on 'additionality', which means that the conservation outcome would not have happened without the credit, is foundational. Designed to be net positive, biodiversity credits go beyond simply compensating for negative impacts on the environment but also aim to leave the natural environment in a measurably better state than it was before, creating a net gain in biodiversity.

Biodiversity markets have two aspects:

- **Supply side:** This constitutes the mechanism through which biodiversity credits are generated. Depending on the specific project set-up, this could include actors such as local communities, local stewards, a special purpose vehicle, and/or a project manager.
- **Demand side:** This constitutes the buyer/investor. Companies that buy biodiversity credits range from property developers or construction firms fulfilling regulatory requirements for their projects to a variety of sectors like consumer goods, finance, and technology making voluntary commitments to meet sustainability goals.

Biodiversity credit trades take place in the following steps:

- Conservation and restoration projects are designed, implemented, and then independently verified to quantify a positive outcome for nature. This could be done by a dedicated company or a conservation NGO.
- Verified outcomes are packaged as tradable credits that buyers can purchase to fund projects and meet their own nature-positive commitments.

[7] The Biodiversity Credit Alliance

- Payments to beneficiaries directly once predefined environmental and management milestones are achieved. These are known as 'Payments for Ecosystem Services'. Beneficiaries can range from Indigenous Peoples and local communities to private or public landowners. In some cases, project developers can consolidate the management of smaller land parcels from multiple owners.
- Implementation tools include enabling actions such as environmental education and skill development.

Biodiversity credits are potentially a compelling financial tool for the private sector:

- They help companies demonstrate they are meeting their voluntary commitment to protect nature, which is increasingly important for their reputation and their ability to attract and retain customers and investors.
- By investing in these credits, companies can address their environmental impact before the government forces them to. This strategy helps them get ahead of the curve, demonstrating environmental responsibility and preparing them for future laws, which could save them from potential fines and higher costs later on.
- A practice called 'insetting' allows companies to invest in nature conservation within their own supply chains. This helps them address direct risks to their business, such as deforestation or water scarcity, which could disrupt the production of their raw materials.
- The credits' appeal is further enhanced by the potential for 'stacking', which is when a single project, such as restoring a forest, can generate multiple types of credits (e.g. both a biodiversity credit and a carbon credit). This dual benefit makes the investment more attractive and efficient for companies looking to address both climate change and nature loss simultaneously.

KEY CONSIDERATIONS FOR SOCIAL PROTECTION FOR INCLUSIVE CLIMATE ACTION

Biodiversity credits hold significant potential for social protection and climate action, particularly for local populations who are often the primary stewards of biodiversity. These credits can provide new sources of income, create sustainable livelihoods, and strengthen the rights of vulnerable populations and their capacity to manage their ancestral lands. They provide new financing that can be invested in healthy ecosystems to build community resilience against climate shocks, improve food and water security, and reduce poverty. Moreover, biodiversity credits offer a financial mechanism for supporting sustainable agricultural practices, such as agroforestry, habitat restoration, and reduced pesticide use.

A key principle of a fair and effective biodiversity credit market is that the finance generated should directly support the people and groups who are best positioned to carry out the conservation work, in line with community needs. For biodiversity credits to be considered high integrity and credible, social co-benefits and equitable sharing of benefits are increasingly becoming mandatory, with a focus on a fair and equitable distribution of benefits. Major frameworks and standards for biodiversity credits emphasise these elements as non-negotiable safeguards. However, while this is a natural fit for community-based and small-scale programmes, it may be challenging to apply at scale by national governments.

The revenue from biodiversity credits could, in theory, be distributed to communities and individuals by leveraging a country's existing social protection infrastructure. This innovative approach would leverage established payment systems, like those used for delivering cash transfers or pensions, or targeting systems to ensure that the financial benefits of conservation work reach the people on the ground effectively and efficiently. Moreover, the revenue from biodiversity credits could be used to support programmes prioritised under the national social protection framework; for instance, public works programmes in particular biodiverse areas or cash plus and environmentally conditioned cash transfer programmes that incentivise conservation actions. National, regional, and local governments could also potentially generate credits from public lands. However, to date, most biodiversity credit projects are implemented outside of government systems, through localised approaches. The lack of government regulations could create barriers for application in LMICs.

A) Availability and reliability of the overall market for biodiversity credits

The market for biodiversity credits is currently limited but is projected to grow, and there is also potential for them to be integrated into existing markets, including carbon markets (TNC, 2024). Biodiversity credits are still being viewed as philanthropy because they are not linked to a common global market and both supply and demand are limited. However, it is projected that the market could reach US$ 8 billion annually by 2030 and over US$ 40 billion by 2050 (Biodiversity Credit Alliance, n.d.). Eight of the most developed schemes cover over 800,000 hectares with approximately US$ 8 million in funding pledged to date (Biodiversity Credit Alliance, n.d.). Challenges remain regarding investor reliability and demand. However, it is easier to set up new projects when regulations are already set in place or where biodiversity credits are part of mandatory offset programmes (as is the case for the UK biodiversity net gain system).

B) Costs associated with setting up biodiversity projects

Costs primarily encompass initial set-up and ongoing management. The pricing of biodiversity credits is often determined by factoring in the costs of creating and maintaining habitats over the long term**.** This could include a fixed base that covers the cost of management, representing the breakeven point at the project's outset, such as US$ 10 per hectare for 10-year conservation. The revenue generated from selling biodiversity credits is intended to include payback for initial set-up.

Initial set-up costs also involve putting regulatory frameworks in place, such as conducting detailed ecological assessments to obtain a baseline, and independent verification. While well-established verification bodies like Verra and Gold Standard are developing new methodologies and standards specifically for nature and biodiversity, this is still a dynamic process, and a single universal metric is not yet available. The development and refinement of methodologies remain context specific, and to accurately measure and verify biodiversity gains also represents an ongoing cost.

C) Expertise and pre-existing systems required

Robust regulatory frameworks and government-led incentives are critical to promoting biodiversity credit projects in-country, and also to ensuring that the interests of end-beneficiaries are adequately protected. Governments play a critical role in establishing and regulating these frameworks, which are necessary for scalability and to drive demand. Clear guidelines for credit issuance, claims, and governance, along with grievance mechanisms and data sovereignty, are vital.

Only a few countries are actively operating biodiversity crediting mechanisms where supporting regulations have been set up, such as Colombia, India, and Costa Rica. The lack of government regulations could make setting up biodiversity credit markets difficult in new geographies, especially in LMICs where public resources to set the necessary mechanisms up might be limited.

Developing and implementing biodiversity credit schemes requires a range of expertise and robust pre-existing systems. A fundamental requirement is the ability to accurately verify biodiversity gains, which, as mentioned earlier, is complex due to contextually driven factors. There is no single, universal metric for biodiversity so far, making standardised monitoring systems challenging to establish globally.

Other key expertise and systems include ecological assessment and monitoring, methodology development, and financial/market expertise.

D) Set-up and project time

A habitat bank is a site where land is manged, restored, or created in order to generate biodiversity credits that can be sold to developers needing to offset environmental impacts. **The time required to set up and implement biodiversity credit projects can vary significantly, depending on the complexity of the ecological restoration being considered and the status of the market.** The time it takes to restore or create habitats also varies depending on the specific ecological conditions and techniques used. For

example, ponds and wetlands might take two to three years to establish, grasslands 10–20 years, and woodlands 30+ years (Barker, n.d.). However, the time required for a habitat bank to become operational (i.e., "come forward") can be much shorter than the full ecological restoration period, with some models, like those employed by Terrasos, taking approximately 18 months (Barker, n.d.). A significant factor influencing set-up time is the need for independent verification of conservation and restoration work by standards bodies, which can entail a lengthy review process before credits are issued.

On the **supply side,** the process involves identifying a threatened habitat and partnering with landowners/communities, conducting baseline land and ecological assessments, setting up partnerships and financial disbursement agreements with landowners/communities, and finalising credit sales.

On the **demand side,** the process involves identifying the biodiversity project for investment, procuring credits, and managing communication and claims.

EXAMPLE OF BIODIVERSITY CREDIT

Terrasos is a private company that structures and operates habitat banks in Latin America, primarily in Colombia, to fund biodiversity conservation through the sale of biodiversity credits. To date, the company has sold US$ 7 million worth of credits, which are used to finance comprehensive, 30-year management plans for designated conservation areas. These habitat banks are formally registered and involve activities such as the preservation and restoration of threatened ecosystems like tropical rainforests and dry forests (see Annex 2).

Terrasos currently operates 12 habitat banks across Colombia, including the first one in Latin America and another registered by an Afro-Colombian community. These projects not only deliver environmental benefits like ecosystem restoration and species protection but also provide significant socioeconomic co-benefits. The initiatives create new employment opportunities, develop skills among the local workforce, and establish direct income streams for Indigenous Peoples and local communities through mechanisms such as cash transfers. The Yerrecuy Habitat Bank, for example, is community driven, with a local Afro-Colombian organisation acting as a key stakeholder, ensuring that benefits are distributed directly to the community. *See Annex 2 for further details.*

E) Applicability to social protection and climate action

The financial mechanisms of biodiversity credits and habitat banks hold potential to extend beyond ecological restoration, offering pathways for linkages to social protection programming through the creation of employment, income opportunities, and direct community benefits:

- **Linkage to social protection programming in rural areas, with a focus on reducing underlying vulnerability to climate change and enhancing resilience and facilitating climate change adaptation:** The funds generated can support projects that enhance the resilience of both the natural environment and the rural communities dependent on it. The employment generated from these projects can be structured as a social protection measure that provides income while helping rural communities adapt to a changing climate.
- **There is room for innovative pilot models where the central government can be involved as the primary stakeholder (*developer)* during project set-up.** In such a model, the government could create a national biodiversity credit scheme where credits are generated by smallholder farmers, Indigenous Peoples, and local cooperatives for implementing verified biodiversity conservation and restoration practices on their land. One example is the Green Credit Programme in India, which is not a pure biodiversity credit scheme but rather a central government scheme that offers incentives for 'green activities' across a broad range of adaptation activities. The government could also provide support through the provision of technical assistance. It would be possible to explore the linkage of such initiatives to existing social protection programming.
- **Using government-owned land or land under public trust to generate biodiversity credits could be an interesting model.** Under this schema, the government, with its clear land tenure, would be the primary beneficiary of credit sales. This might allow the project to be developed by a private sector

developer, which would bring in the required expertise. The revenue from the biodiversity credit sales could then be channelled directly into existing social protection programmes or used to fund new initiatives that focus on skills training for green jobs and sustainable livelihoods. The funds could also be used to finance, for example, basic income support for those living in or near ecologically sensitive areas. However, it should be emphasised that this approach is hypothetical at this stage and remains untested.

INSTRUMENT 4: IMPACT BONDS

Impact investing is an umbrella term used to describe different types of investments made with the intention of generating positive and measurable social and/or environmental impact, alongside a financial return (GIIN, n.d.; Shome *et al.*, 2023). Financial returns can range from below-market to market-rate returns, depending on the investor's strategy.[8]

Impact bonds are an impact investing instrument that show particular promise for channelling private finance in LMICs (Social Finance, n.d.). They are outcome-based contracts that incorporate the use of private funding from investors to cover the upfront capital required to set up and deliver services. They are not 'bonds' in the conventional sense, in that they do not create fixed sovereign debt obligations and repayment is not done through fixed interest payments. They also differ in that repayment to investors is contingent on the achievement of pre-agreed outcomes.

Impact bonds are an innovative financing tool with broadening global application. Two types of impact bonds are particularly relevant for social protection and climate action:

- **Social Impact Bonds (SIBCs):** These are outcome-based financing instruments whereby investors provide upfront capital for social and/or environmental projects[9] that is repaid by outcome payers, which are often national governments, if agreed-upon outcomes are achieved (Seshasayee, 2024). SIBs are usually implemented in MICs or high-income countries.[10]
- **Development Impact Bonds (DIBs):** These are a variation of SIBs that are applied in LMICs and were first introduced in 2012 (UK Department for International Development, 2019; Mishra and Dash, 2022). Unlike SIBs, DIBs do not involve domestic financing (Government Outcomes Lab, n.d., b). This case study focuses mainly on DIBs, due to their applicability to LICs.

By 2025, at least 240 SIBs and 19 DIBs were documented (Gustafsson-Wright and Painter, 2025). Of those, at least 79 impact bonds focused on social welfare and five focused on the environment, WASH, and agriculture.[11] A total of 18 DIBs and 16 SIBs have been implemented in LMICs to date.

Impact bonds often utilise outcomes-based financing (Brookings Institution, n.d.) mechanisms. Outcome-based financing ensures that the bonds are tied to the achievement of independently verified measurable outcomes. Those mechanisms are mostly implemented through public–private partnerships (Escalante and Orrego, 2021).

DIBs employ intricate structures, which are designed to mitigate the financial burden and risk for governments in LMICs. DIBs often involve a partnership between the following actors:

- *Investor (or pre-financer)*: Provides upfront working capital. Can be a private investor, government, or DFI.
- *Implementer (or service provider):* Delivers the service. Can be an NGO or a private sector provider.
- *Evaluator*: Independently verifies the results.

[8] Investments that obtain below-market returns, which are also known as 'concessionary capital', are investments where investors accept lower financial returns for greater social or environmental impact. This approach is often used for riskier ventures or underserved markets where achieving market-rate returns is not feasible, and it may involve patient capital with longer payback periods. Market-rate returns, in contrast, are investments designed to deliver competitive financial returns alongside positive social or environmental impact.
[9] Social projects in this context refer to specific services or initiatives that are typically supported by time-bound financing impact bond contracts, and are designed to address pressing social issues.
[10] Social Finance pioneered the world's first SIB in 2010. Since then, philanthropic foundations such as the Rockefeller Foundation have led the implementation of SIBs at scale.
[11] Social welfare refers to initiatives that are aimed at addressing homelessness, poverty reduction, and child and family welfare (Gustafsson-Wright and Painter, 2025).

- *Outcome funder (or outcome payer)*: Repays the investor only if pre-agreed outcomes are achieved, potentially with a premium (return on investment). Can be a DFI, philanthropic entity, bilateral donor, multilateral institution, or private sector actor.
- *Strategic partner*: Governments (at national or local levels) can play a crucial role in ensuring the bond's success and alignment with national goals. This role can be contractual or non-contractual. This engagement avoids the creation of parallel systems.

In practice, these arrangements can be highly complex, often involving multiple investors, implementers, outcome funders, and strategic partners. To help manage this complexity, in some cases specialised organisations or intermediaries are brought in to provide project management, stakeholder management, and administrative support.

Figure 14: Stakeholders involved in impact bonds

Source: Author's own work

KEY CONSIDERATIONS FOR SOCIAL PROTECTION FOR INCLUSIVE CLIMATE ACTION

Impact bonds can help channel private finance toward social protection and climate action without generating sovereign debt. The outcome-based financing model incentivises private sector investment, combined with contributions from bilateral donors and philanthropic organisations, often implemented through public–private partnerships and blended financing models.

Impact bonds link multiple organisations via outcomes-based contracts, where payment is only made following the achievement and verification of a predefined set of social outcomes. Although some impact bonds involve national governments as strategic partners, co-investors, or outcome funders, public sector implementation remains uncommon in LICs due to the need for greater delivery capacity, flexibility, and effective risk management.

These instruments can finance multi-year projects that build household and community resilience to climate shocks, as well as other social protection objectives. They are unlikely to apply to national programmes applied at scale but could finance regional or localised interventions during a set period of time as part of or in line with national systems. They could apply to projects aimed at: (i) reducing underlying climate vulnerability; (ii) offsetting certain negative impacts of climate transition policies on vulnerable groups; (iii) facilitating climate adaptation; and (iv) contributing to climate mitigation efforts.

Impact bonds offer a number of key benefits by moving away from traditional, activity- or output-based funding models. Their structure provides flexibility to adapt and innovate during the

delivery phase, as service providers are not locked into rigid budgets and can adjust their approach to improve outcomes. This focus on the end-user and actual impact can drive better performance and cost-effectiveness. Furthermore, the significant upfront work required to agree on objectives and measurable results increases the chances of successful implementation by ensuring all partners are aligned from the very beginning. This strong alignment among all actors throughout the project's life cycle is a core strength of the model.

A) Availability and reliability of investors

DIBs are designed to be available for LMICs. They explicitly aim to bridge the financing gap for social programmes in resource-constrained environments and could therefore support the financing of national systems. However, direct government engagement in DIBs remains limited due to factors including insufficient technical capacity to structure complex outcome-based contracts and limited familiarity with performance measurement frameworks and flexible service delivery models. Consequently, most DIB implementation occurs through non-governmental actors and with limited involvement from national governments.

Private investors are increasingly keen to engage with impact bonds that support projects with environmental and social objectives. However, robust performance measurement and quality service delivery are crucial for attracting private investment (Rezki and Maizar, 2022; Roy *et al*., 2018) and attributing outcomes to specific interventions can be difficult due to complex socioeconomic environments and confounding factors. Some social protection and climate action outcomes, such as improved resilience, materialise over longer time horizons than typical impact bond payment cycles, meaning they therefore may not be a suitable target for impact bonds.

Impact bond investors typically pursue 'blended returns' combining financial gains with measurable impact, accepting below-market returns in exchange for demonstrable benefits (Drew and Clist, 2015). SIB investors in developed markets exhibit conservative risk appetites, prioritising social returns over financial gains with investment decisions often disconnected from conventional market logic (Mazzuca *et al*., 2023). DIB investors face more complex risk environments with higher non-repayment probability due to LIC-specific challenges including currency volatility, political instability, and weaker institutional frameworks. While DIB investors share similar social motivations to SIB investors, they must account for these elevated risks when structuring investments.

The risk of non-repayment when outcome metrics are not achieved creates substantial exposure for investors (Impact Investing Institute, n.d., b). This may encourage impact bonds to focus on pre-existing programmes that have proven impact. Guarantees by governments or donors can de-risk impact bond investments for funders, thereby widening the investor base and easing the process of raising capital. However, it is crucial to structure these carefully to ensure incentives remain aligned with the achievement of the intended outcomes (Center for Global Development, n.d.).

B) Costs of set-up and ongoing management

DIBs incur substantial costs across three main categories: project design and structuring, implementation and oversight, and verification/evaluation. These costs often prove to be disproportionately high relative to project size. Transaction costs for design and structuring are particularly burdensome due to the novelty of the mechanism, complexity of contractual structures, and the need for all parties to agree on metrics, measurement frameworks, and payment structures. Evaluation costs, especially if based on randomised controlled trials, can be very high. These high fixed costs necessitate that DIBs achieve sufficient scale to be cost-effective.

C) Expertise and pre-existing systems required

Lack of familiarity with these financing instruments presents barriers to adoption within the social protection and climate sectors, and more specifically for national governments. To address this, there is a need for technical support from specialised actors like private sector firms working in impact investing, DFIs, and foundations. Impact bonds require having a pre-existing implementation model with

proven impact and ideally a pre-existing outcome-based management approach. Sophisticated monitoring and evaluation and impact measurement capacity are also required.

While DIBs and SIBs can be attractive financing mechanisms, they present significant structural and operational challenges that have limited their effectiveness and adoption to date (Roy *et al.*, 2018; Instiglio, 2022). Due to their complexity, these instruments require extensive coordination among multiple stakeholders. The involvement of specialised intermediaries or the development of standardised partnership models can help to move beyond *ad hoc* arrangements, addressing some of the challenges that are typically faced.

D) Set-up time

DIBs require extensive preparation periods before implementation. They vary in the time they take to develop – between several months to several years – reflecting the complex multi-stakeholder negotiations needed. The set-up process involves aligning diverse parties around specific social outcomes, performance metrics, and risk allocation arrangements.

VILLAGE ENTERPRISE'S DEVELOPMENT IMPACT BOND

The Village Enterprise DIB, which ran from 2017 to 2020 in Kenya and Uganda, was a landmark initiative financing poverty alleviation for ultra-poor rural populations. This US$ 5.32 million DIB, the first of its kind for poverty alleviation, funded a graduation programme aimed at supporting vulnerable households, particularly women. The project did not directly involve national governments in its design, although it did engage local government stakeholders in implementation and oversight.

The DIB was structured through a complex partnership model. Working capital was provided by nine pre-financiers (investors), while three outcome payers – including the US Agency for International Development (USAID) and the UK Foreign, Commonwealth and Development Office (FCDO) – committed to paying based on results.

The success of the intervention was measured by its impact on household consumption and assets, with outcomes verified through an independent randomised controlled trial. The DIB structure was beneficial for investors, who earned an 8.33% internal rate of return, and for the service provider, Village Enterprise (an NGO), which was incentivised to innovate and maximise impact. The financial risk was mitigated by spreading the working capital across multiple investors and outcome funders. *See Annex 2 for further details.*

E) Applicability to social protection and climate action

Impact bonds present opportunities to strengthen social protection and climate action in LMICs. The idea that impact bonds can contribute to achieving long-term sustainable development objectives is not new; this form of innovative finance has been increasingly recognised and explored over the past decade.

However, to date, impact bonds have not yet channelled financing directly into national social protection systems through domestic budgets. While DIBs often target vulnerable groups and support social goals, their application has generally focused on funding specific, often time-bound or pilot, interventions. This is because their outcome-based financing model requires clearly measurable outcomes within defined timeframes, making them better suited to discrete projects with quantifiable impacts rather than broad social protection programmes embedded in national systems.

Global examples illustrate that impact bonds, including DIBs and SIBs, can be structured such that governments play significant roles, either as outcome co-funders or strategic partners in the bond's implementation. Examples include the following:

- The **Skill Impact Bond in India** leveraged a government-affiliated public–private partnership organisation under the Ministry of Skill Development & Entrepreneurship – the National Skill Development Corporation – which acted as a risk investor (NSDC, n.d.).
- One of Africa's first DIBs, the **Mozambique Malaria Performance Bond,** was a private initiative that was implemented on behalf of the Government of Mozambique. This arrangement ensured the interventions aligned with national health strategies and contributed to strengthening their existing health systems and malaria control efforts (Dalberg, n.d.).
- The **Colombia Workforce Development Social Impact Bond (*Empleando Futuro*)** was a landmark initiative that provided essential skills training and employment support to vulnerable, unemployed individuals (Pellizzari, 2020). The Government of Colombia, through its Department of Social Prosperity, co-financed the SIB. This was the first fully contracted impact bond in a developing country with direct government outcome funding (Government Outcomes Lab, 2022).
- **South Africa's Early Childhood Development Social Impact Bond Innovation Fund** was the first middle-income-based initiative to fund an impact bond for early childhood development. In this case, the government also acted as an outcome co-funder, as part of a public–private partnership.

In impact bonds, governments are usually not the implementers, with service delivery outsourced to NGOs or private service providers due to the stringent requirements of outcome-based models. Outsourcing service provision enables governments to benefit from the expertise of non-governmental actors, but limits the potential for these bonds to finance ongoing social protection systems.

What follows sets out scenarios for impact bonds (either DIBs or SIBs) to channel financing to government social protection systems:

- ***Scenario 1: Government as a key strategic partner*** – Building on the experience from Mozambique and India (summarised in the bullets above), the government plays a crucial role in defining the core objectives, designing the programme, and establishing the measurement framework. This ensures the DIB is aligned with national policies, sectoral strategies, and existing public systems, promoting coherence rather than fragmented interventions. In this scenario, all financial risks are moved to investors and outcome funders, with the government retaining oversight but being shielded from the direct financial burden and risks.
- ***Scenario 2: Governments can be engaged as an outcome co-funder*** (only applicable to SIBs) – Building on the experience from South Africa and Colombia (summarised above), the government commits to paying for predefined, independently verified results, shifting performance risk away from public funds. This approach allows governments to optimise public spending by only paying for what works, while simultaneously leveraging financing from a diverse range of partners through public–private partnerships.
- ***Scenario 3: Government as an early-stage co-investor (blended capital approach)*** – The government contributes a portion of the upfront working capital, alongside other investors. This strategic co-investment signals strong government commitment and helps to de-risk the impact bond, potentially attracting greater private sector participation and fostering a deeper, shared ownership in the bond's success.

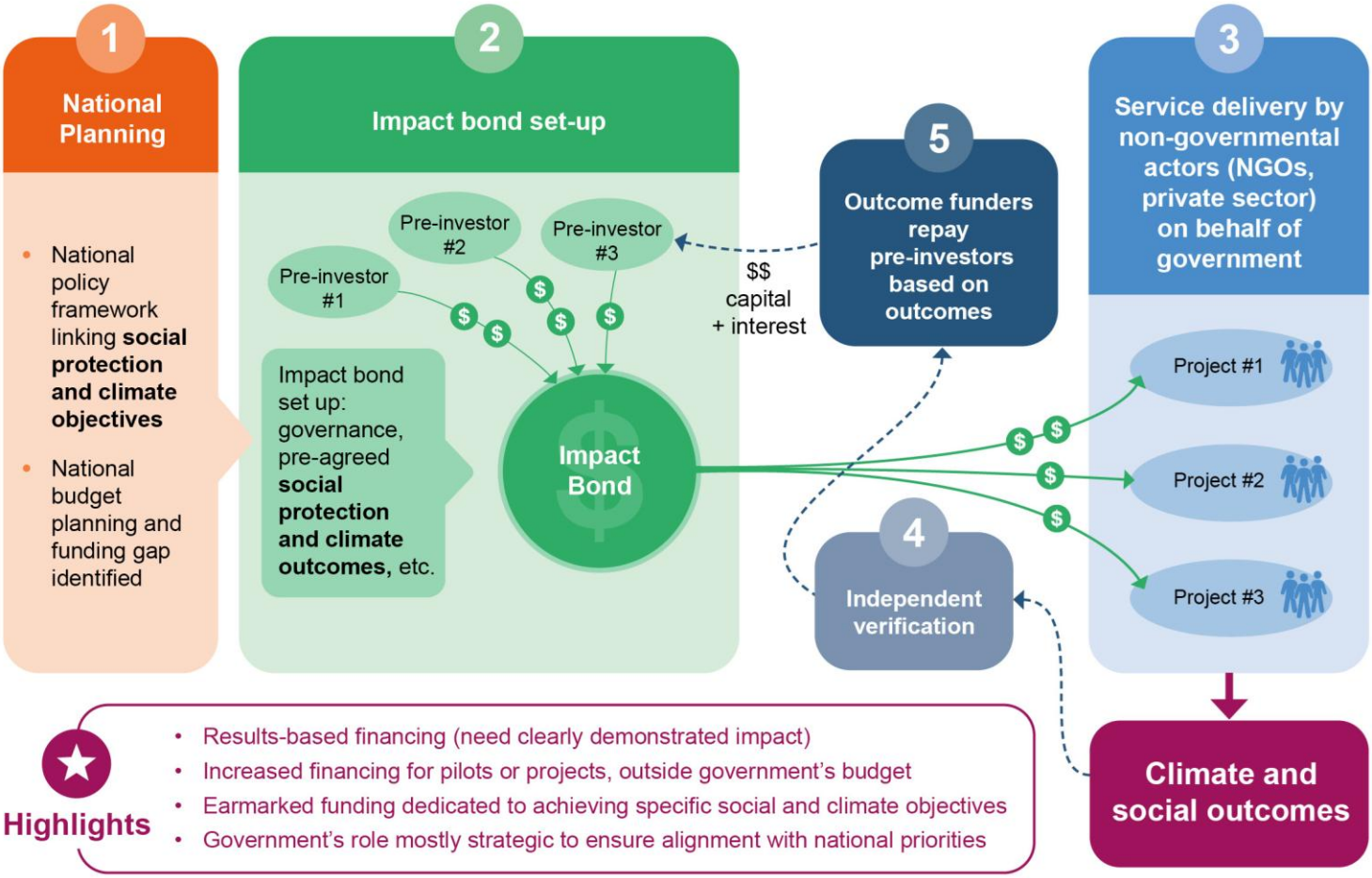
Impact bonds are likely to be more suitable for targeted projects or programmes in areas of high climate vulnerability, rather than for financing comprehensive national social protection programmes. The distinction between targeted geographical interventions (such as cash transfers or skills development programmes in environmentally sensitive areas) and broad-based national programmes (embedded in comprehensive social protection systems) suggests that impact bonds may be better suited to the former, where outcomes can be more precisely defined, measured, and attributed to specific interventions within manageable implementation timeframes.

For programmes incorporating both social protection and climate objectives, partnerships could span both domains, involving multilateral climate funds alongside traditional social development donors, conservation organisations with an interest in the protection of vulnerable groups, and private sector entities committed to both environmental sustainability and social outcomes. Such integrated programmes might attract funding from climate finance mechanisms seeking social co-benefits, DFIs prioritising climate-resilient social systems, and impact investors interested in dual environmental and social returns.

Finally, in times of scarce resources and shrinking budgets, impact bonds can improve the value for money of social protection services. Because outcome payers only pay for successful results, the model removes the perceived and real risks of non-performance for service delivery.

The diagram below (figure 15) illustrates a potential impact bond transaction for financing social protection and climate action. Following national planning, a funding gap is identified, leading to the impact bond being set up. This involves pre-investors providing capital to fund projects. The capital is used to implement projects by service providers under a national framework. After the projects deliver pre-agreed climate and social outcomes, an independent third party verifies the results. This verification triggers outcome funders to repay the pre-investors, with interest, based on the success of the outcomes. The government's role is largely strategic, ensuring that the projects align with national priorities. This approach creates increased funding for social protection and climate initiatives that operates outside of the government's direct budget.

Figure 15: Illustrative impact bonds funding flow



Source: Author's own work

OVERARCHING APPROACH: BLENDED FINANCE

To support the overall objective of ensuring that social protection systems are adequately resourced to support inclusive climate action, no single source of climate finance is likely to be sufficient. This is not simply an issue of scale but reflects the fact that different sources of finance have distinct comparative strengths that complement each other. For example:

- **Bilateral and multilateral sources** have great diversity and can typically also support investments required in the wider enabling environment.
- **Grants from philanthropic organisations** can spur science and innovation and contribute to blended finance mechanisms.
- **Innovative financing mechanisms, involving private sector financing,** are likely initially funded by grants or philanthropy as pilots, and then mature to become market mechanisms for ongoing sustainable projects.

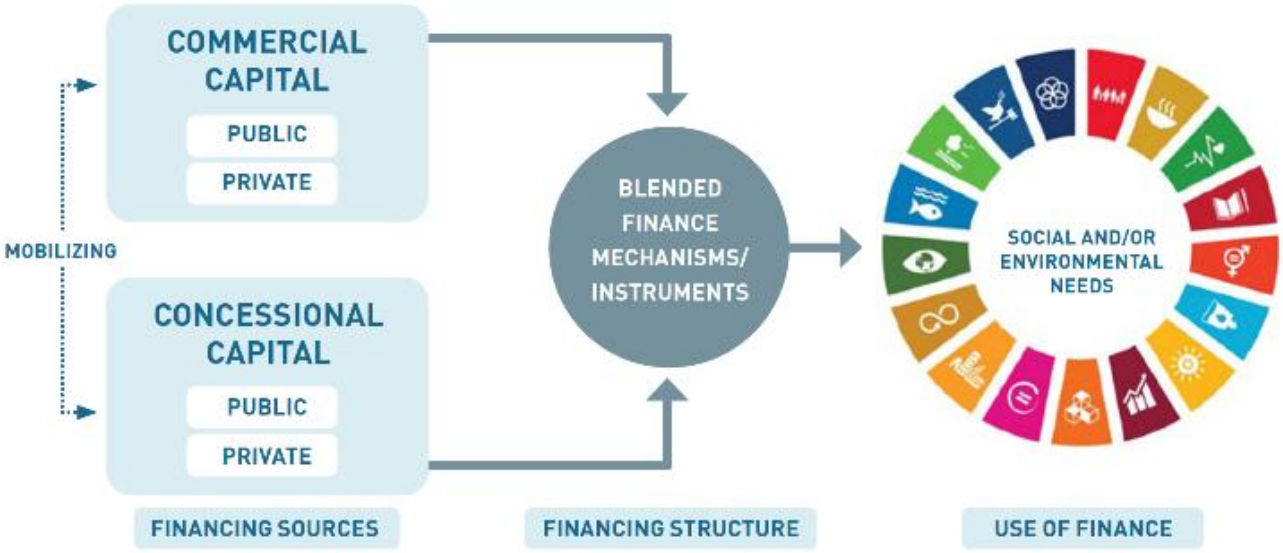
It is essential to understand the climate finance landscape and identify the most appropriate instruments or mechanisms to meet national circumstances. Innovative financial instruments differ enormously in how much finance they typically provide, when funding is released, and the cost of setting them up, as well as on maintaining the instrument and the necessary expertise and pre-existing systems that need to be in place. Depending on each of these factors, instruments will be best suited to different functions of social protection in relation to climate change. Put simply, very different financial instruments will be needed to reduce the underlying vulnerability to climate change of smallholder farmers, compared with responding to climate shocks or offsetting the negative welfare impacts of the climate transition.

Blended finance is the use of catalytic capital from public or philanthropic sources to increase private sector investment in sustainable development. For investors, blended finance offers a pathway to achieve measurable social and environmental outcomes alongside financial returns. It is an approach used to mobilise investments, rather than an instrument, with public and philanthropic capital being invested to leverage private sector finance for both adaptation and mitigation projects in light of decreasing aid budgets. While shrinking aid budgets have amplified interest in blended finance, the approach itself predates the current financial climate and has been evolving for more than a decade as a tool to address the gaps in sustainable development financing.

The investor landscape for blended finance is diverse, comprising various types of stakeholders with distinct motivations and risk appetites. Some of these actors include:

- **Public/philanthropic investors (concessional capital):** These entities are the primary providers of catalytic capital, deploying funds on below-market terms through instruments such as concessional debt/equity, guarantees, or insurance. Their role is to de-risk projects and reduce the overall cost of capital. This includes bilateral development agencies, national ministries of finance, foundations, and DFIs. The GEF and GCF also participate in blended finance projects, especially for climate change mitigation.
- **Private sector investors:** These investors generally seek market-rate financial returns. They include commercial banks, institutional investors, impact investors, and local financial intermediaries. Occasionally, foundations and philanthropic organisations also invest directly, without offering concessional finance.

Figure 16: Blended finance structuring



Source: OECD, 2018

Blended finance combines concessional finance from donors and other third parties, as well as public finance from DFIs, with commercial capital (International Finance Corporation, 2023). According to a 2025 study, on average every dollar of concessional capital attracted US$ 3.76 in commercial capital from both DFIs/MDBs and the private sector in 2024 (Convergence, 2025). The concessional finance used to leverage commercial capital is typically provided by governments, development agencies, multilateral banks, or philanthropic organisations (Public-Private Partnership Resource Center, n.d.). Blended finance deals that focus on specific project-level interventions initially started off in the infrastructure sector and most are still primarily used for this purpose, but they have since been extended to finance other sectors relevant to social protection in rural areas, including agriculture, health, education, and marine protection. There are now a variety of sector-specific blended finance facilities and funds in place, such as the Global Climate Partnership Fund for climate change mitigation, the Agri-Business Capital Fund for agricultural SMEs, and the Althelia Biodiversity Fund for nature conservation projects.

The main types of blended finance mechanisms are classified from a financial perspective as: **risk mitigation products**, such as guarantees; **catalytic capital approaches**, which include equity investments or debt instruments in the form of concessional loans; and **performance-based instruments**, such as contingent grants and loans (STAP, 2024). A fourth category is **grants** in the form of technical assistance, which are often deployed for capacity building and to prepare the sector to receive catalytic funding. Table 4 provides an overview of each of these mechanisms.

Table 4: Overview of blended finance mechanisms

Blended finance mechanism	Definition	Role of concessional finance
Risk mitigation products	These products protect private investors from specific risks, such as political, currency, or credit risks. Examples include guarantees, insurance, and hedges.	By taking on a portion of the risk, it makes the overall project more attractive to private investors and enables them to participate. Issues such as stringent requirements for collateral (especially for new sectors) can also be addressed through these risk mitigation products.
Catalytic capital approaches	This involves providing capital in the form of equity or loans to a project. This capital is structured to be more	Concessional loans and equity are the primary forms of catalytic capital. They are offered at below-market rates or with more flexible terms, which helps to attract

	patient, flexible, and risk tolerant than standard private investment.	private investors by improving the project's financial returns and mitigating early-stage risks.
Performance-based instruments	These instruments tie payments or loan terms to the achievement of predefined project milestones or outcomes. This includes contingent grants and loans, as well as convertible instruments.	The performance-based instruments provide payouts. A contingent loan might be forgiven or converted into a grant if a project successfully meets its social or environmental targets.
Grants	Grants are direct, non-repayable funds. They are often used to cover costs that are not directly profitable but are essential, often catalytic, for a project's success. This includes technical assistance.	The support is for activities such as capacity building, feasibility studies, and project preparation. This helps to de-risk projects for private investors by ensuring they are well planned and have the necessary technical and institutional foundations in place before commercial funding is deployed.

Blended finance is making an increasingly significant contribution to climate adaptation and mitigation, including in LMICs, as outlined in Box 3.

Box 3 State of blended finance

STATE OF BLENDED FINANCE

Convergence, the Global Network for Blended Finance, has published a recent overview of the state of blended finance to mobilise capital for climate action (2024), which highlights the following:

Climate adaptation vs mitigation: Climate mitigation continues to dominate the blended finance landscape, focusing primarily on large-scale, revenue-generating projects like renewable energy. Adaptation projects severely lag mitigation, receiving only a small fraction of overall climate finance.

Contribution of different sectors: Public sector commitments – comprising concessional and commercial capital from DFIs, MDBs, and development agencies – represent over 50% of total blended finance mobilisation for climate, with the private sector contributing around 40%. ODA remains the essential catalytic capital; it is the public money that absorbs risk and makes transactions possible for the private sector. Development agencies and multi-donor pools are the largest source of concessional finance, accounting for 65% of total concessional commitments in the last three-year period. DFIs/MDBs play a central role as deal originators and providers of commercial debt, but the market is seeing commercial capital from the private sector surpass their direct contributions. Development agencies most frequently use technical assistance grants in blended deals.

Funding scale: Blended finance is reaching the scale needed to address large infrastructure and climate challenges. Deal sizes are trending upward, with the median size increasing from US$ 38 million (2020–2023) to US$ 65 million (2024).

Geographical spread: From 2021 to 2023, LMICs were the most frequent targets in the climate-related blended finance landscape, with fewer projects implemented in LICs. LICs accounted for only 23% of transactions, with a median deal size of US$ 43 million. There is growing recognition surrounding the importance of scaling private climate finance for LICs. A total of 41% of climate-blended finance transactions targeted sub-Saharan Africa, with a focus on sustainable agribusiness and renewable energy. East Asia and the Pacific, together with South Asia, represent the second most frequently targeted region for climate-focused blended finance.

Funding flows: Blended finance primarily works through market mechanisms, providing capital to private entities that then deliver projects, rather than financing public budgets or government-led programmes directly. The majority of blended finance flows to financial institutions and private corporations (e.g. developers and agri-businesses), not directly to governments.

Activities funded: Blended finance activity for climate continues to be heavily focused on two sectors: energy and financial services. The bulk remains focused on mitigation (clean energy), which is the most easily commercialised sector. In addition, agriculture has witnessed increased momentum in the blended finance market.

Technical assistance facilities (TAFs) are a crucial component of innovative climate finance, and are financed by grants as part of blended finance agreements. TAFs are a key instrument for de-risking projects to make them attractive to a wider range of investors (Convergence, 2019; African Development Bank Group, n.d.). They are non-commercial instruments that are often used to complement larger financial mechanisms, such as blended finance funds and climate-related bonds. They are designed to bridge the significant gap between the availability of innovative finance and the technical and institutional capacity required to access and deploy it effectively.

The primary function of TAFs is to provide expertise to address a range of challenges that can hinder climate-smart investments. A major barrier to attracting investment in developing economies is the lack of 'bankable' projects. TAFs address this by funding early-stage activities such as project preparation, feasibility studies, and financial structuring. These de-risks potential investments for private and public financiers, helping to create a robust pipeline of viable projects that are attractive to a broader range of investors (Convergence, 2019).

TAFs are financed through a variety of public sector sources. The majority of funding comes from DFIs, MDBs, or bilateral donors. The European Union, for example, provides funding for TAFs through frameworks like the European Fund for Sustainable Development Plus (EFSD+) to support its strategic objectives in developing countries (European Investment Bank, n.d.). While mostly financed through grants, some TAFs utilise a model of recoverable grants, where the funds must be repaid if the project becomes commercially successful, thereby proving the viability of the business case (Proparco, 2022).

The use of TAF financing can be instrument specific or broad based. Instrument-specific TAFs are directly tied to a particular financial transaction, providing the technical support needed for a specific project to close a deal (Convergence, 2019). In contrast, broad-based TAFs focus on creating a more favourable ecosystem for investment by working at a systemic level. This involves providing policy advice and capacity building to governments to strengthen regulatory frameworks and institutions, which in turn unlocks markets and lays the groundwork for future investment across entire sectors (OECD, 2025). This dual approach allows TAFs to both facilitate immediate investments and foster the long-term, systemic change necessary for sustainable climate finance.

EXAMPLE OF BLENDED FINANCE

The AGRI3 Fund is a blended finance initiative co-created in 2020 by UNEP and Rabobank, with support from other partners. It aims to raise US$ 1 billion to promote sustainable agriculture, protect natural forests, and improve rural livelihoods in LMICs. The fund de-risks private investment by using public and philanthropic capital to provide partial risk guarantees and other credit enhancement instruments (such as guarantees).

Two examples illustrate the fund's impact. In Brazil, the Renova Pasto Loan Product provides farmers with financing to restore degraded pastureland. This initiative helps reduce deforestation and aligns with the Brazilian government's policy objective to recover 40 million hectares of degraded land. In this case, AGRI3 is providing a financial guarantee that will enable a local bank to lend a much larger private loan for the project. Early results show the project is successfully renovating pastureland and accelerating compliance with the Brazilian forest code. In Nicaragua, the fund supports a coffee cooperative, providing smallholder farmers with loans for inputs and harvest finance. This has led to increased productivity and improved living conditions for farmers, with reports of house repairs and better diets. The project also assists with maintaining fairtrade and organic certifications, ensuring a sustainable and economically viable model for the community.

Applicability to social protection and climate action

Blended finance can be used to finance social protection and climate action. When concessional finance is mixed with commercial investments, it lowers the risk for private investors. This attracts more private sector financing in areas such as healthcare, education, climate mitigation as well as adaptation, especially in communities that are often overlooked. For instance, impact bonds use a blended finance model that seeks to leverage impact investments from both public and private sources. DFN or DFC swaps can also incorporate a blended finance approach.

There are substantial mitigation and adaptation opportunities in climate-smart agrifood systems. There is a growing recognition that this transition can accelerate through blended finance interventions. Investing in climate-smart practices across the value chain, from production and processing to distribution and consumption, can deliver significant mitigation and adaptation outcomes, while generating substantial co-benefits for gender equity, poverty reduction, and community health and nutrition (Kirchherr *et al.*, 2025). There are now proven blended finance models in the agriculture sector, which has historically suffered from high perceived investment risks, fragmented markets, and limited financial returns. These models can involve government participation. For instance, governments can utilise blended finance to provide grants or guarantees to microfinance institutions that offer loans to smallholder farmers for investing in climate-resilient technologies and practices. Government entities could also design or participate in the technical component that forms a part of the blended finance structure in a majority of projects.

The technical assistance facilities financed through blended models offer a strong potential for social protection systems. Successful deployment of innovative financial instruments involving national governments requires substantial technical assistance, either through dedicated facilities established per instrument or through comprehensive support for overall sustainable financing strategies at the country level. Technical assistance is particularly critical to support governments developing a clear framework for effectively integrating climate and social protection objectives into the design of new financial instruments.

Blended finance is one of the key pathway funding pathways available for channelling innovative climate finance to support various components of social protection systems, supporting service delivery, policy development and capacity strengthening.

KEY FINDINGS

Innovative climate finance instruments offer diverse pathways to strengthen social protection systems while advancing climate objectives, yet their effectiveness depends fundamentally on strategic selection and contextual appropriateness. This section synthesises key findings from the scoping review, examining how different financial mechanisms can channel resources to vulnerable populations while supporting climate objectives. We start with an examination of financing pathways followed by instrument-specific insights and reflections on strategic instrument selection.

Addressing our research questions

The scoping review explored the potential of innovative financial instruments to fund social protection systems for inclusive climate action, with a particular emphasis on rural areas. Key findings are summarised across four core research questions:

1 To what extent can social protection and climate action objectives be embedded into innovative climate finance instruments?

While most climate finance instruments do not inherently prioritise social outcomes, applicability to social protection hinges on embedding both social and climate objectives from the design stage to ensure the delivery of dual social and climate outcomes.

2 Can financing be channelled through government PFM systems and can innovative instruments be used to strengthen social protection systems?

Some instruments, such as sovereign bonds, offer the option of channelling financing through the PFM system and to finance government-run programmes. While channelling climate finance through a government's PFM system offers the necessary scale and ensures direct national ownership for strengthening social protection systems, it is not always the most practical or even the ideal route for channelling innovative finance. Further, in some cases a condition for private sector engagement can be that financing is channelled outside government systems.

3 What potential do innovative instruments have to direct finance to vulnerable and marginalised populations as part of both adaptation and mitigation efforts?

The review has confirmed the strong potential for innovative climate finance to support the most vulnerable, particularly those in rural areas, but this requires a specific design intent. Successfully reaching vulnerable rural populations, in line with the national social protection system's objectives and priorities, is dependent on explicitly integrating this focus into the design of the financial instrument from the start as it is difficult to add once the instrument is already in place.

4 Can the innovative instruments support financial sustainability objectives and provide predictable finance, and can governments easily access and utilise them?

While innovative climate finance instruments cannot replace traditional domestic and donor-based funding for social protection, they can support national financial sustainability objectives. Predictability depends on each instrument, with some instruments being contract based with fixed terms, with others are subject to market fluctuations. Accessibility is directly linked to a country's income level and credit rating, and also to technical capacity.

Pathways for channelling innovative climate finance

The scoping study identified three key pathways through which innovative climate finance can be channelled to strengthen national social protection systems, as presented in Table 5.

Table 5: Pathways for channelling climate finance into national social protection systems

Pathways	Description
Leveraging blended finance	Blended finance models can support various components of social protection systems. This approach strategically combines different funding pathways, such as using grants to finance technical assistance or system strengthening, while complementing private sector investments or philanthropy funding to support the implementation of specific social protection projects or programmes. This flexibility allows for targeted support to different elements of the social protection system.
Increasing fiscal space	Some financial instruments – such as sustainable bonds, debt swaps and carbon and biodiversity credits – have the potential to help free fiscal space which could then be allocated to social protection. This is achieved through earmarked funding or more broadly through additional funding that can be allocated by governments or on behalf of government according to national priorities.
Financing outside national systems	Some financial instruments – such as impact bonds – can generate funding to address social protection and climate objectives while being channelled outside a country's national PFM system. This approach allows non-governmental actors to receive direct funding to implement services on behalf of the government. This model is typically applied to specific projects rather than national-scale programmes.

Key insights from each instrument and approach

Sustainable bonds (green, blue, social, and sustainability bonds): Sustainability and social bonds are some of the most promising instruments for financing social protection systems at scale due to their clear alignment with national government financing and their explicit focus on achieving social outcomes, alongside climate objectives. They allow governments to raise capital in financial markets, often on more favourable terms (lower interest rates), and channel the proceeds through the PFM system, directly increasing the fiscal space for eligible social and/or climate projects or programmes. Sustainable bonds operate under a clear governance framework, often defined by the issuing government, which outlines how the raised financing will be disbursed and managed. The funds raised through the bonds can then be channelled to governmental or non-governmental actors involved in the service delivery of social protection projects or programmes.

Debt swaps (debt-for-nature and debt-for-climate swaps): Debt swaps generate increased fiscal space for a country by reducing debt service payments. While savings are traditionally earmarked for environmental/climate projects, they can be used to address on both social and climate objectives. The resulting savings from a debt swap are typically placed into a trust fund, which is outside the government's direct PFM system, meaning the government may not have full control over the funding allocation. If the debt swap is designed with an explicit social protection focus, the funds could then be channelled to governmental or non-governmental actors involved in the delivery of social protection projects or programmes.

Carbon and biodiversity markets: Carbon and biodiversity markets provide opportunities for generating finance at scale. Governments can generate revenue by selling credits, which could then be used to fund projects aligned with national priorities or social protection programmes (e.g. climate-positive public works). Biodiversity credits are particularly relevant for rural areas, as they can be structured to create employment and income opportunities for smallholder farmers and local communities, linking environmental restoration with social protection measures. However, their viability for LICs requires careful assessment due to these countries' often lower initial carbon footprints.

Impact bonds: SIBs and DIBs can channel private finance to social protection and climate action without generating sovereign debt. They are unlikely to be applicable to national programmes at scale but are well suited for targeted, localised, or regional interventions with clearly measurable and attributable outcomes. The outcome-based financing model, where the funder only pays for successful results, helps improve the

value for money of services. However, it is critical to recognise that, funding flows bypass the national PFM system, going directly to non-governmental service providers or intermediaries.

Blended finance: Blended finance is a strategic approach that uses patient, risk-tolerant public or philanthropic capital to de-risk investments and attract commercial private capital. It offers high flexibility, allowing different funding streams (e.g. grants, guarantees, concessional loans, private sector investment, etc.) to be combined to support various components of the social protection system, such as technical assistance, system strengthening and service delivery. For investors, blended finance offers a pathway to achieve measurable social and environmental outcomes alongside financial returns. However, ODA and public finance remain critical to attracting private finance.

Considerations for instrument selection

Since no single financial instrument is universally suitable, governments must adopt a diagnostic approach, as part of a broader sustainable financing strategic planning process, that carefully assesses national priorities as well as specific institutional capacities and fiscal positions before selecting an instrument. Crucially, the successful deployment and utilisation of any complex instrument requires substantial technical assistance and capacity building for national governments, often facilitated through blended finance models.

Financial instruments are not one-size-fits-all solutions; their true value lies in their potential to address different financial needs for integrating social protection and climate objectives. The study reveals that successful instrument selection requires an evaluation of factors ranging from institutional capacity, political will, and fiscal positioning to policy coherence and risk tolerance. What proves effective in one context may be entirely inappropriate in another, depending on how these various elements align with the specific characteristics and requirements of different financial mechanisms. This contextual dependency necessitates a diagnostic approach that prioritises understanding of national circumstances over generic instrument preferences. Box 4 presents key considerations and questions that can be used to guide this exploration.

Box 4 Key considerations

KEY CONSIDERATIONS IN IDENTIFYING APPROPRIATE CLIMATE FINANCE INSTRUMENTS OR APPROACHES FOR SOCIAL PROTECTION AND CLIMATE ACTION

When exploring the most appropriate financing mechanism, decision makers should evaluate several critical factors:

Government capacity and involvement: What level of government engagement is required for fund management and service delivery? Consider the ministry of finance's capacity to navigate complex financial instruments, line ministries' ability to develop robust monitoring frameworks and outcome-based programmes, and institutional capacity to deliver innovative services with flexibility.

Intervention scope and maturity: What type of intervention requires funding – a pilot to test out a new model of intervention, a geographically targeted project, or a national-scale programme? Is it a proven model with demonstrated social and climate co-benefits, or an innovative approach requiring testing?

Financial requirements: How much funding is needed and over what timescales?

National policy framework: Is there an established policy framework linking social protection and climate action, and does it reflect the priorities of both sectors? Is social protection integrated into NDCs, national adaptation plans and national taxonomy systems,[12] and are climate objectives embedded in national social protection policies?

Fiscal context: What is the country's current fiscal position and debt sustainability outlook?

[12] National taxonomy systems are standardised, country-specific classification frameworks designed to define which economic activities, assets, or projects are considered environmentally sustainable (often called 'green taxonomies') or socially sustainable ('social taxonomies').

Donor landscape and risk perceptions: What is the existing donor environment regarding channelling funds through government systems? Are there concerns about potential mismanagement or governance risks which might deter private investors?

National financing strategy: What traditional financing is accessible through domestic budgets, bilateral and multilateral donors, philanthropic sources, or DFIs and MDBs? Who currently finances the social protection and climate sectors?

The optimal financing instrument will vary depending on how these factors align, requiring a tailored approach that matches the specific country context and programme objectives.

Different financial tools are better suited to specific types of investments, from pilot projects to more focused systems strengthening functions. While climate finance is often project or pilot based – which is primarily driven by the preferences of investors and the nature of climate projects (focusing on innovation and localised tangible outcomes) – there is a broader movement emerging that advocates for a programmatic lens and holistic financing frameworks (CIF, 2022; Oliver *et al*., 2018). This approach aims for more sustainable project planning and implementation, with a focus on long-term sustainability and system strengthening.

The analysis above shows that, to date, certain innovative climate finance tools are better equipped for this holistic approach. For instance, sustainable bonds, debt swaps, and market mechanisms are all considered suitable for funding pilots, projects, and programmes. However, the analysis reveals that debt swaps and blended finance in particular are distinguished by their potential to also finance crucial systems strengthening functions, such as operational systems development, policy development, and capacity strengthening. In contrast, impact bonds are primarily limited to funding pilots and projects, although they can potentially be leveraged to build capacity. This distinction is crucial because it helps policymakers and development partners select the right financial tool for their specific needs, whether it is testing a new idea, implementing a large-scale programme, or building the fundamental institutional capacity of a country to manage and address climate and social objectives.

Table 6: Financing flow and end use

Legend: Likely ✔ / Uncommon but theoretically possible ✓

Financial approach / instrument	Pilots	Projects	Programmes	Operational systems development	Policy development	Capacity strengthening
Sustainable bonds	✔	✔	✓			
Debt swaps	✔	✔	✓	✔	✔	✔
Market mechanisms	✔	✔	✓			
Impact bonds	✔	✔				✓
Blended finance	✔	✔	✔	✔	✔	✔

CONCLUSIONS AND RECOMMENDATIONS

Evidence is limited on how to channel climate finance to social protection, even when using traditional public funding streams. This complexity is amplified when considering innovative financial instruments. The social protection sector and governments in LMICs are largely unaccustomed to mobilising private finance. The following section draws on the findings above to present some key enabling factors and barriers, and on this basis to set out some priorities for action.

Enabling factors

The analysis reveals several critical enabling factors that can facilitate the successful deployment of innovative climate finance mechanisms for social protection and inclusive climate action in LMICs and SIDS. These factors, when present and strategically leveraged, significantly enhance the prospects for achieving integrated social and climate outcomes while building sustainable, nationally owned systems that serve vulnerable populations, particularly in rural contexts.

- **Design integration from inception:** Most climate finance instruments do not inherently require social objectives, making an intentional and integrated approach to design essential for achieving dual social protection and climate outcomes. Financial instruments that embed both social protection and climate objectives from the outset – rather than retrofitting social considerations after approval – are significantly more likely to deliver intended results across both dimensions. The explicit prioritisation of priority target groups at the design stage, such as vulnerable rural populations, is similarly critical.
- **Technical assistance and capacity-building support:** Successful deployment of innovative financial instruments involving national governments requires substantial technical assistance, either through dedicated facilities established for each instrument or through comprehensive support for overall sustainable financing strategies at the country level. Technical assistance is particularly critical to support governments developing a clear framework for effectively integrating climate and social protection objectives into the design of new financial instruments. This also includes support for compliance requirements, engagement with technical stakeholders, design of monitoring frameworks, and development of institutional capacity to help manage complex financial instruments.
- **Diversified funding architecture and partnerships:** An important enabler is a diversified funding architecture supported by strategic partnerships. This involves different types of funders playing complementary roles, particularly through blended finance arrangements. For example, domestic financing from national budgets signals a government's strong commitment, which can then be leveraged to attract additional resources. DFIs and MDBs can develop innovative financial products and provide co-financing, while philanthropic donors can help to de-risk private investment. The private sector is increasingly motivated by environmental, social, and governance objectives, which encourages these actors to prioritise social outcomes in their climate-related investments. By aligning the unique strengths of each partner, from domestic and bilateral donors to philanthropic and private funders, a comprehensive and more robust financial architecture can be built to support social protection and climate action.

Barriers

Despite growing recognition of the potential for social protection systems to contribute to climate change objectives, there are some foundational barriers limiting the social protection sector's access to innovative climate finance. Key challenges include the following:

- **Conceptual and sectoral disconnect:** A primary barrier lies in the persistent conceptual ambiguity and lack of alignment between the climate finance community, private investors, and the social protection sector. Climate actors and financiers often view social protection as a traditional welfare tool focused on poverty reduction, rather than a strategic instrument for building accelerating climate action. This disconnect is compounded by the absence of a shared, cohesive narrative that clearly demonstrates how social protection systems intersect with and support climate objectives. Without a common language and a clear investment case, it is difficult for climate financiers – particularly private actors – to engage with and channel capital into this sector.

- **Limited understanding and technical capacity in relation to climate finance**: The social protection sectors' limited understanding of the climate action and climate finance landscape is a significant barrier to engagement. It is critical that the sector invests in building the technical capacity of social protection experts at all levels, including at global, regional and national levels. This upskilling must also cover increasing understanding of the private sector's operating models, incentives, and modalities for sustainable development engagement.
- **Limited evidence base and measurable impact:** A major barrier to channelling innovative climate finance into social protection is the limited evidence base and lack of measurable climate impact. Many social protection programmes in LMICs are not explicitly designed with climate objectives in mind. This means they are often not seen as viable channels for climate finance. Private investors, in particular, are driven by results-based models and require clear, quantifiable metrics to justify their investments. While some integrated programmes exist, they are often small scale or lack the rigorous data and monitoring frameworks needed to attract private finance at scale. To overcome this, there is a need to build evidence through pilot projects, particularly via public–private partnerships, to demonstrate that social protection can deliver tangible climate adaptation and mitigation outcomes beyond broadly reducing vulnerability and responding to shocks.
- **Policy misalignment and government ownership:** A key barrier to mobilising innovative climate finance in a way that will strengthen rather than weaken national systems is the lack of pre-existing alignment between national policy frameworks for climate action and social protection. Innovative instruments such as impact bonds often operate outside of traditional government budgetary and delivery systems. Without a strong, guiding policy framework, these instruments risk creating parallel systems that undermine long-term institutional capacity, policy coherence, and government ownership. To successfully leverage innovative climate finance, a strong policy framework is required that ensures triple alignment: social protection is integrated into climate policies, climate objectives are embedded in social protection strategies, and both are reflected in national climate finance frameworks. The absence of this alignment currently limits the ability of LMICs to mobilise innovative climate finance for social protection. Addressing this gap is essential to achieving country ownership, coherence across sectors, and long-term impact for vulnerable communities.
- **Political will:** A significant barrier for channelling innovative climate finance is the lack of a strong political commitment to social protection. This is often reflected in the position of the social protection ministry within national budgetary and policy processes. In many countries, ministries of finance may view social protection as a costly expenditure rather than a strategic investment, which can limit its consideration in high-level discussions around innovative financing instruments like debt swaps or sustainable bonds. Without political will at the highest levels, led by the ministries of finance and planning, social protection objectives can be sidelined during complex negotiations for climate-related financing. Conversely, when there is a clear, politically supported mandate to integrate social protection with climate action, these financial instruments become far more viable and can be designed to deliver both social and environmental benefits from the outset. This ensures that the system is resilient enough to not only attract but also effectively deploy innovative funding.
- **Project-based vs system-based financing:** The climate finance sector typically favours a pilot or project-based financing approach. The social protection sector must recognise and understand this 'project-based' model, including its specific requirements and limitations, to effectively leverage it. This requires navigating a crucial strategic trade-off: while channelling funds through the national government system is key to support long-term sustainability and ensure budget alignment, a model exemplified by instruments like sustainable bonds, this 'government-led' approach is not accessible to all countries. Most innovative sources of climate finance require a more complex set-up sometimes operating outside public systems. This is often a requirement to engage private investors. Attracting innovative climate finance requires the social protection sector to adopt a strategic paradigm wherein government ownership is refocused on policy and strategy, not just implementation, to avoid systemic fragmentation.

Priorities for action

1. **Integrate social protection in climate change strategies**: Social protection can play a foundational role in reaching climate goals. To unlock this potential and ensure social protection is seen as a core component of climate action, it is critical that it is formally and operationally integrated into key national climate and finance documents, such as Nationally Determined Contributions, National Adaptation Plans, and national taxonomy systems. To be effective, integration must move beyond a simple mention, ensuring social protection becomes an actionable and financeable component of national climate action framework. Achieving this requires: (i) strategic recognition of the sector's role as an instrument to manage climate-related risks, to support adaptation and mitigation priorities and to support Loss and Damage; (ii) clear operational planning to outline how existing or new social protection programmes or projects can contribute to concrete climate actions; and (iii) embedding social protection in climate implementation plans, financing plans and M&E frameworks.
2. **Prioritise building a case for social protection for the climate finance sector:** The core challenge for the social protection sector is making a clear case to attract the climate finance market and, more specifically, the private sector. To achieve this the sector must invest in robust data and measurement methodologies that can prove social protection programmes achieve specific, measurable climate outcomes (e.g. increased household resilience, verifiable mitigation gains, or adaptation effectiveness), which is the necessary technical language to engage climate finance actors and private market-based financing. Moreover, a clear case must be built illustrating how the established structure of national social protection systems can benefit the climate adaptation and mitigation sectors by delivering impact at scale. Governments may need technical support to develop sound programme designs that inherently achieve dual climate and social objectives, coupled with robust monitoring and evaluation frameworks that can rigorously track and demonstrate this proven impact to investors.
3. **Learning from success:** There is a need to further investigate successful models like the Benin sustainability bond and impact bonds related to skills development and economic inclusion. This analysis must focus on distilling key lessons regarding how these 'champions' successfully overcame access barriers, maximised the complementary contributions of diverse stakeholders, attracted and delivered a return on investment for the private sector, and secured strong government leadership. The resulting findings can provide a replicable blueprint to guide other countries in the identification of suitable instruments.
4. **Develop standardised, replicable financing models:** Replicability of blended finance models and financial structures can help reduce costs, increase efficiency and make them more accessible to diverse markets. There is a need to design and pilot standardised, modular financing models that can be easily replicated. This could include blended finance structures that can apply to social protection interventions (e.g. with a clear case made for returns on investments) or the creation of regional instruments.
5. **Clarify the role of development banks and financial institutions:** Further investigation and analysis are critically needed to define the catalytic role of MDBs and IFIs in bridging the gap between innovative climate finance and national social protection systems. This analysis should focus on how MDBs and IFIs can best use their concessional capital, guarantees, and preferred creditor status to, for example, de-risk bonds issued by countries with lower credit ratings to finance social protection systems. It should also identify where MDBs and IFIs can provide targeted technical assistance and capacity building to help governments structure complex deals and build the PFM capacity necessary to absorb and track innovative finance effectively.

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1. ANNEX: THE SHORTLISTING PROCESS

This table presents the shortlisting criteria implementation to review the long list of instruments considered for the scoping study, against selection criteria: thematic alignment, long-term resilience objectives, support to government systems, and innovation. This table reflects the initial assessment used to select instruments for this study.

Financing instrument or approach	Thematic alignment	Long-term resilience	Supporting government systems	Innovative financial instrument	Included in the study
Blended finance	Blended finance is an approach, not an instrument or end solution. However, it can create investment opportunities in developing countries, crowding in additional private sector funds, and is increasingly used to finance sustainable development..				
Catastrophe bonds	Yes	No – focus on shock response, and only for the most infrequent, severe types of shock	N/A	Yes	No
Climate-related bonds	Yes – No known examples of linking explicitly to social protection but potential to contribute to social protection outcomes	Yes	Unclear – Limited evidence base on social projects that have generated financial returns to mobilise private investment	Yes	Yes
Climate-resilient debt clauses	Unclear	Yes	Unclear – Limited geographical relevance now beyond SIDS	Yes	No
Contingent loans	Yes	Yes	Yes – Potential to provide a significant amount of finance	Yes – No known examples of linking explicitly to social protection	No – Interest to focus on more innovative instruments
Crisis modifiers	Yes	No	No – Mainly used by international actors and so there is less likelihood of them being used to channel funds to government programmes	Yes – mostly used for humanitarian response	No

Debt-for-climate (DFC)/Debt-for-nature (DFN) swaps	Yes – Focus on climate resilience	Yes	Potential to free up fiscal space in domestic budget, but still generates debt	Yes	Yes
Impact investing	Yes	Yes	Unclear – Limited evidence base available	Yes – Significant emergence of and increase in accelerators, venture capital funds, and private equity funds focused on climate change specifically	Yes – Focus on impact bonds as most promising instruments
Market mechanisms	Yes – Redistribution of the revenue created could be redistributed to support social protection and climate action objectives	Yes	Unclear if they can be channelled through government systems	Yes	Yes
Parametric insurance	Yes – Potential for them to be used in combination with contingency funds and catastrophe bonds	No – Focus on shock response. Potential to use for anticipatory action for farmers and the rural poor	Yes	No – Possibility to explore innovative ways for direct social protection and livelihood protection outcomes	No
Shock-resilient loans	Unclear	No – Only relevant for shock response	Unclear	Yes	No

2. ANNEX: EXAMPLES

2.1 Sustainable bond example

2.1.1 Benin sustainable bond

A key example of the use of a sustainable bond is Benin's €500 million SDG 2021 Eurobond, which financed 57 high-impact projects, with a significant focus on social spending. An SDG bond is a type of sustainable bond that is tailored to financing projects that directly contribute to the achievement of the United Nations' SDGs. The bond had a 4.95% coupon rate, with a maturity of 12.5 years. Repayment will be in three equal instalments, in 2033, 2034, and 2035. This is designed to align with the long-term nature of SDG projects.

The SDG Eurobond is firmly rooted in Benin's national long-term development plans and is part of a deliberate strategy to finance the pursuit of these development objectives via innovative finance. The SDG Eurobond's framework is explicitly linked to key planning documents, including the Government Action Programme 2021–2026 and the National Development Plan 2018–2025, both of which are designed to achieve the country's priority targets (Government of the Republic of Benin, 2021a). The groundwork for this bond began to be laid as far back as 2016, when the Beninese government initiated a coordinated approach to internalising the SDGs, a process that involved methodically prioritising the most critical targets for the country and undertaking a comprehensive costing exercise to understand the financial requirements (Montcho, 2022).

The SDG Eurobond was well received in the market and achieved a 'greenium' (i.e. a lower interest rate than that for a vanilla bond). When the bond was issued it was heavily oversubscribed, by almost 300%, receiving €1.2 billion worth of orders (Government of the Republic of Benin, 2021b). This demand allowed the bond to have a lower cost, with an interest rate that was 0.2% lower than other vanilla bonds issued by Benin (Government of the Republic of Benin, 2021b). Several factors contributed to this reduced rate, including Benin's robust credit history and macroeconomic stability, as well as an SDG bond framework that was aligned with the ICMA principles. The bond also included independent second-party opinions from Vigeo Eiris and a commitment to independent monitoring by the Sustainable Development Solution Network, boosting investor confidence (Sustainable Development Solution Network, 2022). Additionally, the timing of the bond's issuance coincided with a period of unprecedented growth and momentum in the global sustainable finance market (International Finance Corporation, 2022), which contributed to the high demand and lower cost.

From the €500 million raised, the government designated an allocation portfolio of €485.4 million to be distributed among 57 existing and new government projects and programmes across the country. A defining characteristic of this portfolio is its pronounced focus on social development and support for vulnerable populations. The framework explicitly identifies young people and women as the primary target beneficiaries of the funded interventions.

Key interventions include the following:

- **Supporting free healthcare to vulnerable groups:** Between 2018 and 2021, the programme financed free malaria treatments malaria for 699,918 people living in poverty, 600,716 of whom were children.
- **Funding the National Integrating School Feeding Programme:** Approximately US$ 100 million from the SDG Eurobond doubled the programme's reach, to over 1.2 million children. School feeding is recognised as a cornerstone in Benin's social protection system (WFP, n.d.).
- **Funding support programmes like Azoli**, which promotes economic and social inclusion for low-skilled and out-of-school youth, with a particular focus on girls and those from disadvantaged backgrounds.

2.2 Debt swap examples

2.2.1 Belize's DFN swap

This deal was structured as follows:

- The Belize DFN swap, which was completed in November 2021, involved TNC lending money to Belize to buy back all of its external commercial debt, known as the 'superbond,' which was worth US$ 553 million (equal to 30% of Belize's total economic output) (Owen, 2022).
- The buyback was done at a reduced price of 55 cents per dollar ((Owen, 2022). The money for this deal came from issuing US$ 364 million in 'blue bonds,' arranged by Credit Suisse (Owen, 2022).
- A crucial part of the deal was the political risk insurance provided by the US International Development Finance Corporation, which allowed the blue bonds to get a strong rating for borrowing money (Aa2 by Moody's). This, in turn, meant a low interest rate, a 10-year period before they had to start paying back the main loan amount, and a long repayment period of 19 years (Owen, 2022).
- In exchange for this financial relief, Belize promised to invest about US$ 4 million annually in marine conservation until 2041, with a specific goal of doubling its protected ocean areas from 15.9% to 30% of its oceans by 2026 (Owen, 2022).
- A fund set aside for long-term use of $23.5 million was also created to ensure continued conservation funding beyond 2040 (Owen, 2022).

In terms of costs and savings, the swap significantly reduced Belize's external debt by 10% of its economic output. This meant a US$ 189 million reduction in the main debt amount (from US$ 553 million to US$ 364 million) (The Nature Conservancy, n.d.). Over 20 years, the deal is estimated to generate US$ 180 million in long-term sustainable conservation funding and lower debt payments by US$ 200 million (Briceño and Morris, 2023).

In terms of climate benefits, the focus was on marine conservation commitments. Belize committed to several key conservation actions, including:

- Protecting 30% of its ocean area by 2026;
- Developing a transparent and participatory marine spatial plan; and
- Establishing an independent conservation fund, the **Belize Fund for a Sustainable Future**, to allocate funds to in-country partners.

Other co-benefits: Protecting vibrant marine life indirectly supports the wellbeing of communities that depend on these resources. Marine spatial planning promotes inclusive and participatory planning processes, ensuring that diverse stakeholders – including local communities and Indigenous Peoples – have a voice in decision making and can benefit through improved livelihoods, which are intrinsically linked to the sustainable management of vulnerable ecosystems. Since becoming operational, the Belize Fund has invested a total of US$ 12.95 million into marine conservation initiatives. This includes US$ 6 million across its three grant cycles to 23 non-government entities and a strategic partnership under its Grants Award Program, as well as allocation of US$ 6.95 million for three years to six government agencies under its Government Strategic Allocation Program to support the achievement of the conservation commitments (Belize Fund for a Sustainable Future, n.d.). Projects funded through grants include community-based mangrove restoration and sustainable fisheries.

2.2.2 Barbados DFC resilience operation

Barbados successfully completed its DFC resilience operation in November 2024, aiming to replace more expensive existing debt with more affordable financing (Inter-American Development Bank, 2024). The deal was structured as follows:

- A special loan was set up, which was tied to environmental goals (the Sovereign Sustainability-Linked Loan). The loan was strengthened by a US$ 300 million guarantee, with US$ 150 million each provided by the IDB and the European Investment Bank. These guarantees allowed Barbados to get a long-term loan in its local currency under favourable conditions, arranged by CIBC Caribbean (Inter-American Development Bank, 2024).

- The environmental targets built into the loan are directly linked to the amount and quality of recycled water produced by an upgraded plant. If these targets are not met, there is a financial penalty, which then goes into the Barbados Environmental Sustainability Fund, a dedicated fund for environmental investments (Inter-American Development Bank, 2024).
- The loan includes special conditions for disasters or pandemics, allowing for delaying main loan payments for up to two years in the event of major shocks (Central Bank of Barbados, 2025).
- The operation generated US$ 125 million in money saved, set aside for new resilience investments (Inter-American Development Bank, 2024). It also rearranged US$ 592.7 million in local debt, reducing interest payments without increasing the country's overall debt (Central Bank of Barbados, 2025).
- Interest savings are estimated at US$ 220 million over a 10-year period (Central Bank of Barbados, 2025). The IDB and the GCF are providing US$ 110 million in initial money for the project, including a US$ 40 million grant from the GCF.

Other co-benefits: This transaction directly helps safeguard public health by reducing ocean and groundwater pollution through improved sewage treatment and water recycling, protecting groundwater quality. It improves water and food security by increasing water availability for agricultural irrigation, which is vital given that the country is facing water scarcity and challenges with food imports. The swap indirectly protects vulnerable populations from the social and economic disruptions caused by climate disasters, such as displacement, loss of livelihoods, and health crises (Inter-American Development Bank, 2024).

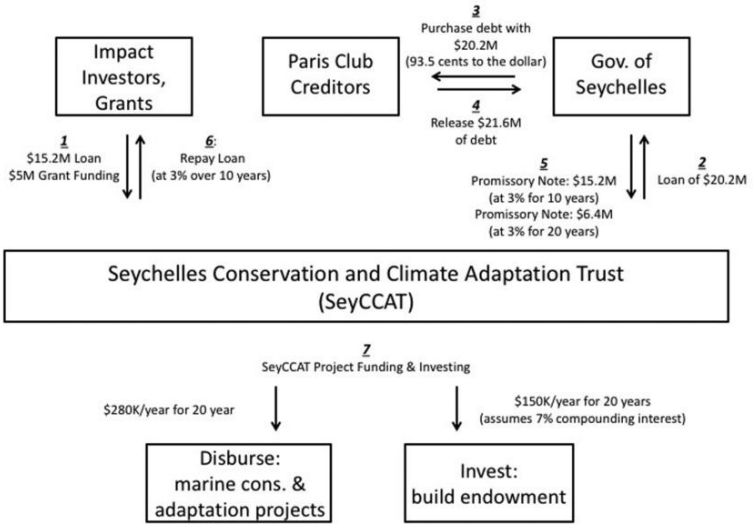
2.2.3 Seychelles DFN swap

The Seychelles DFN swap was completed in 2015 and is the world's first 'blue economy' DFN swap (The Commonwealth, 2020). Discussions with TNC on the debt swap started in 2011, and the debt conversion was formally completed in 2015 (The Commonwealth, 2020). TNC played a key role in supporting this debt conversion (Chamon *et al.*, 2022). The swap was structured as follows:

- The swap rearranged US$ 21.6 million of national debt owed to Paris Club members, resulting in a direct debt reduction of this amount.
- This was supported by a US$ 5 million World Bank guarantee and supported by a US$ 5 million low-interest loan from the GEF (The Commonwealth, 2020).
- The swap resulted in the formation of a special vehicle: the SeyCCAT (The Commonwealth, 2020). This is because TNC was not able to directly fund the government. SeyCCAT became operational in 2016 after internal structures were set into place.[13] It is the first public–private trust in the country and was established through a special act of the Seychelles parliament.
- SeyCCAT started investing in local projects in 2017 and also attracts capital from philanthropic organisations and continues to leverage other innovative mechanisms to boost its assets (The Commonwealth, 2020).
- SeyCCAT also attracted follow-up funding through a Blue Bond, which was issued in 2018 and which raised US$ 15 million. Proceeds from this bond have been split between SeyCCAT and the government, with SeyCCAT using the funding to focus on sustainable fisheries and aquaculture, looking to address key areas of biodiversity loss.
- SeyCCAT is structured such that the government is a minority board member. This allows the integration of national policy goals or strategies with the way SeyCCAT orients its programming.

[13] Key informant interview with SeyCCAT (The Commonwealth, 2020).

Figure 17: Seychelles DFN swap model



Source: SeyCCAT (n.d.)

Other co-benefits: The swap supports the Seychelles Blue Economy Strategic Policy Framework, which combines economy, environment, and society, aiming for economic diversification and resilience. SeyCCAT's goals include developing and implementing risk reduction and social resilience plans to support climate change adaptation, and its Blue Grants Fund has directly supported projects that empower fisheries and promote aquaculture businesses. SeyCCAT has also actively sought to involve local communities and civil society organisations through capacity-building sessions (The Commonwealth, 2020). By 2024, SeyCCAT had financed 87 projects that advance marine conservation, sustainable fisheries, and other key areas within the blue economy sector. This has involved various approaches, such as supporting Seychelles' NDCs, conducting research, building capacity, and improving the market for the blue economy.

2.2.4 Other examples of swaps

In recent years, there have also been several bilateral DFN swaps. For instance:

- **Germany is engaged in a DFC swap with Kenya**, whereby the Kenyan government will provide the equivalent of €60 million over several years for agreed projects, and upon successful implementation Germany will waive debt repayments in the equivalent amount. These funds will support existing Kenyan–German cooperation projects in renewable energy and sustainable agriculture, including investments in climate resilience projects to increase food security and youth employment in western Kenya and improving rural roads to ensure farmers have better access to markets (BMZ, 2023). This has been structured as a conditional swap, where the debt waiver comes after the commitments have been met. Implementation of activities started in 2024.
- **Egypt and Germany signed a debt swap agreement worth €54 million in 2023.** This debt conversion is financing three transmission lines to connect wind farms to Egypt's national power grid. Two substations that have reached the end of their service life will be rebuilt (BMZ, 2023). Germany is also in talks with Egypt for a new €100 million debt swap deal, expected to be disbursed in two tranches in December 2025 and June 2026 (Narayanan, 2025). This new deal builds on a longstanding programme between the two countries, converting portions of Egypt's debt to Germany into local investments in priority sectors such as education, climate, and infrastructure, bringing the total value of debt swaps between the two countries to €340 million.
- **DFN swap finalised between the US and Indonesia in January 2025.** This agreement redirects over US$ 35 million of Indonesia's debt to the US toward the protection and restoration of Indonesia's high-priority coral reef ecosystems, specifically in the Bird's Head and Lesser Sunda-Banda seascapes (Global Fund for Coral Reefs, 2024). Indonesia's deal was made possible under the Tropical Forest and Coral Reef Restoration Act, which allows countries to reduce their debt to the US in exchange for commitments to conserve forests and coral reefs (McCoy, 2025).

2.3 Carbon credits examples

2.3.1 The Livelihoods Fund

The Livelihoods Fund was set up in 2011 for leveraging carbon finance to drive sustainable development. Carbon credits are generated through the implementation of various long-term projects focused on ecosystem restoration and sustainable development, such as afforestation, reforestation, agroforestry, and rural energy initiatives. These projects are designed to either reduce or remove GHG emissions from the atmosphere.

The Livelihoods Carbon Funds[14] finance these initiatives, and the carbon credits are issued once the emission reductions or removals are independently audited and verified. The funds rely on an innovative business model, where corporates, financial investors, and institutions join forces to invest in long-term carbon compensation projects, with strong benefits for local communities (Livelihoods Funds, n.d., a). These verified credits, each representing one tonne of CO_2e reduced or removed, are then made available for purchase. The long-term projects, typically spanning 10 to 20 years, focus on large-scale ecosystem restoration and the creation of sustainable supply chains.

In addition to reducing or removing GHGs, projects are designed to deliver integrated social, environmental, and economic impacts:

- **Improved livelihoods:** Projects enhance access to essential goods and services, including education, clean water, and healthcare (Livelihoods Funds, n.d., b).
- **Economic empowerment:** Smallholder farmers are helped through the introduction of efficient agricultural practices, providing them with financial support and improved access to markets. These initiatives generate new income streams and diversify livelihood options (Livelihoods Funds, n.d., b).
- **Environmental restoration:** Projects prioritise broader environmental benefits such as soil and water conservation, biodiversity preservation, and the creation of resilient ecosystems (Livelihoods Funds, n.d., b).

The Livelihoods Fund's portfolio includes diverse projects across various geographies:

- **Agroforestry projects:** Initiatives in Tamil Nadu (India), Rwanda, and Kenya (Mount Elgon) integrate trees into farming systems. This improves soil health, enhances water security, and boosts food production, directly benefiting thousands of farmers.
- **Mangrove restoration:** Large-scale projects in the Sundarbans (India), Senegal, and Indonesia involve planting mangrove trees. These efforts protect vulnerable coastal communities from natural disasters like storm surges and flooding, revitalise coastal villages, and create new economic opportunities through improved fisheries.
- **Rural energy projects:** Initiatives in Malawi, Nepal, and Peru focus on distributing highly efficient cookstoves or implementing rural energy solutions to combat deforestation. These projects improve household health by reducing indoor air pollution and lessen the pressure on natural forests, benefiting tens of thousands of families (Livelihoods Funds, n.d., b).
- **Sustainable supply chains:** A project example is sustainable shea sourcing in Ghana, which directly supports 13,000 women farmers. This ensures fair income and empowers women within the agricultural supply chain, contributing to gender equality and economic stability (Livelihoods Funds, n.d., b).

The Livelihoods Fund provides a robust and replicable model for leveraging carbon finance to achieve comprehensive sustainable development. By offering upfront financing and committing to long-term engagement, it effectively addresses critical financial barriers that often hinder community-based projects. This approach demonstrates that carbon markets can serve as a direct engine for poverty reduction and community resilience.

[14] The Livelihoods Carbon Fund #1 was launched in 2011; Livelihoods Carbon Fund #2 was created in 2017; Livelihoods Carbon Fund #3 was launched in 2021.

2.3.2 ACMI: Catalysing green growth and jobs

ACMI was launched at COP27 and is a collaborative effort designed to significantly expand Africa's participation in VCMs. ACMI's objective is to scale both the supply and demand for high-integrity African-sourced carbon credits, ensuring that the benefits are shared equitably with local communities (Sustainable Energy For All, n.d.). **This is a broader initiative to increase the supply of carbon credits in the region and not a project in itself, but we highlight this as an avenue for cooperation on incorporating social protection programming during the design phase of projects.**

ACMI's objectives include the following:

- By 2030, ACMI aims to produce 300 million carbon credits annually, which is projected to unlock US$ 6 billion in revenue and support 30 million jobs (Sustainable Energy For All, 2022).
- By 2050, the initiative targets over 1.5 billion credits produced annually in Africa, leveraging over US$ 120 billion and supporting more than 110 million jobs (Sustainable Energy For All, 2022).

ACMI's key strategy involves supporting African governments in developing and implementing country-specific carbon market activation plans. Kenya has already launched its plan, and other countries including Nigeria, Malawi, Gabon, and Togo are committed to collaborating with ACMI (Sustainable Energy For All, n.d.).

While ACMI primarily focuses on creating an enabling environment and scaling the market, the types of projects it promotes and supports through its partners demonstrate clear social co-benefits. Examples of such projects that align with ACMI's objectives include:

- **Mangrove restoration (e.g. Kenya):** Projects in areas like Lamu County, Kenya, involve local women's associations in planting mangroves. These initiatives sequester carbon, protect coastal communities from flooding and erosion, support marine biodiversity, and provide alternative livelihoods through sustainable fishing practices (TNC, 2022).
- **Agroforestry and on-farm tree planting (e.g. Kenya, Sierra Leone):** Such projects encourage smallholder farmers to integrate trees into their agricultural landscapes to improve soil health, enhance food security, and provide additional income streams from tree products (TNC, 2022).
- **Sustainable grazing management (e.g. Tanzania, Kenya):** Projects that improve grassland management practices lead to increased soil carbon sequestration, enhanced grass productivity for livestock, and improved water management across landscapes. These directly benefit pastoralist communities by strengthening their livelihoods and resilience to climate variability (TNC, 2022).
- **Direct community benefits:** Many projects supported by carbon finance introduce direct incentives, such as alternative livelihood programmes and cash transfers to individuals or communities. These mechanisms ensure that carbon finance directly contributes to local development goals (TNC, 2022).

2.3.3 Ethiopia's carbon markets

Ethiopia has been actively engaged in carbon markets for over a decade, participating in the United Nations Clean Development Mechanism since at least 2012. Recently, Ethiopia issued a 'Forest Development, Protection, and Utilization' regulation that legalised carbon trading within the country (Mengesha, 2024). This regulation outlines service fees for forest developers (5% to the federal government and 15% to regional governments) and establishes a revenue-sharing mechanism for community and participatory forest development projects, where 80% of revenues from carbon sales and other sources goes directly to communities, with the remaining 5% and 15% allocated to the federal and regional governments, respectively (Mengesha, 2024). Ethiopia is also developing a comprehensive National Carbon Market Strategy to guide its engagement in both international and domestic carbon markets to include other sectors. Ethiopia aims to generate 300 million carbon credits annually, with a target of US$ 6 billion in income and 30 million new jobs by 2030 (Tenkir, 2023).

With support from the German Agency for International Cooperation (GIZ), an organisation called Good Carbon in collaboration with the Menschen für Menschen Foundation has launched voluntary biodiversity and CO_2 compensation projects (Wienken, 2025). The projects are located in southern and southwestern Ethiopia, where up to 7,000 hectares of African montane forest will be restored in close cooperation with the local population. Over the next 40 years, this initiative is expected to sequester approximately 2.3

million tonnes of CO_2, regenerate biodiversity, and protect more than 300,000 local residents from landslides. It will also contribute to improved healthcare, education, clean water access, and economic opportunities in the region (Wienken, 2025). One of the highlights of this project is that it was developed in close collaboration with the local communities. At least 50% of revenue from carbon credit certificates will be directly paid out to local residents, fostering long-term, self-sustaining development in addition to other investments in local community infrastructure (Wienken, 2025). This project took two years to develop.

2.4 Biodiversity credits example

2.4.1 Terrasos habitat banks

Terrasos is a private company that specialises in structuring and operating environmental investments. The company's ongoing projects are in Latin America, and they have already sold US$ 7 million worth of biodiversity credits (Cavano, 2024). The company sets up 'habitat banks', through which companies purchase biodiversity credits. These 'banks' are designated areas, which can be either privately or publicly owned, managed specifically for their significant natural value. Within these areas, a range of conservation activities are undertaken, including the preservation, restoration, enhancement, or general conservation of biodiversity (Terrasos, n.d.).

The biodiversity credits that are bought by investors fund comprehensive, 30-year management plans, which are monitored for quantifiable biodiversity gains and backed by technical, financial, and legal guarantees. The credits, in some cases, could also fund the site's acquisition or long-term management under contractual agreements. Terrasos has a large presence in Colombia, where it operates 12 habitat banks. Habitat banks are formally registered with the Ministry of Environment and Sustainable Development, which has issued administrative acts regulating habitat banks.

While the environmental benefits accrued so far include ecosystem restoration and species protection, there are socioeconomic benefits, such as livelihood diversification, that are also expected from Terrasos' habitat banks. Habitat banks provide a sustainable way to tackle biodiversity loss while contributing to the bioeconomy. Projects such as Yerrecuy directly involve the community in the way benefits are distributed, treating them as key partners throughout the process. In Yerrecuy's case, the habitat bank is registered by the Afro-Colombian community through a private, non-profit ethnic territorial organisation called ASOCASAN. The organisation, which governs the Afro-Colombian Collective Territory, is a key stakeholder across the entire lifecycle of the project. Key channels of socioeconomic benefits include the following:

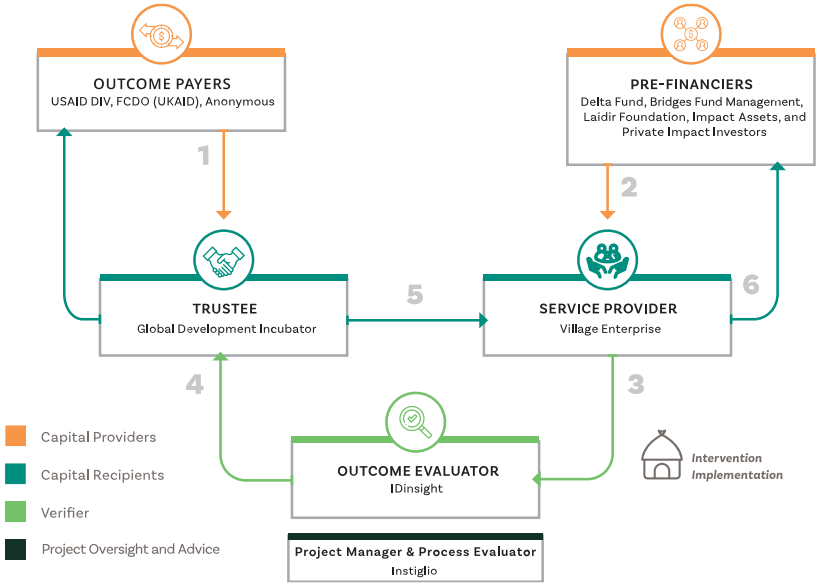
- **Job creation:** The projects generate new employment opportunities for local residents and facilitate the development of new skills and knowledge among the workforce involved.
- **Benefit distribution:** These projects establish direct income streams for Indigenous Peoples and local communities. Projects involve cash transfers to beneficiaries once conditions for biodiversity preservation are met. These conditions are pre-set, in consultation with all the stakeholders involved and after careful consideration of all the associated costs and expenses of the project.

2.5 Impact bonds example

2.5.1 The Village Enterprise DIB

The Village Enterprise DIB, implemented in Kenya and Uganda from 2017 to 2020, serves as a landmark example of a DIB addressing poverty alleviation and livelihood support (Village Enterprise, 2022). While this initiative did not involve national governments in the design and management of the DIB, government stakeholders were involved in the implementation of services at the local level and the oversight of the evaluation of the DIB. Although it does not directly illustrate the role of DIBs in financing social protection systems, its strong sectoral relevance to social protection still offers valuable insights for future government engagement in similar programmes.

Figure 18: Village Enterprise impact bond model



Source: Village Enterprise (n.d.)

The Village Enterprise DIB was built on a complex partnership model involving nine pre-financiers (i.e. investors), primarily foundations and private impact investors, who provided the working capital. Three *outcome payers* (i.e. outcome funders), including two bilateral donors (USAID and FCDO), committed to pay based on results. The initiative was further supported by one partner providing project management and a process evaluation (Instiglio) and another conducting an independent verification (IDInsight). The fund was administered through a dedicated fund trustee (Global Development Incubator). Village Enterprise served as the service provider.

This was the first DIB focused on poverty alleviation, and it aimed to support ultra-poor rural populations – especially women. This US$ 5.32 million DIB directed US$ 4.28 million of outcome funding used towards the implementation of a graduation intervention (see Table).

Table 7 : Village Enterprise DIB value (Instiglio, 2022)

Total DIB value	US$ 5.32 million
Outcome funding (implementation)	US$ 4.28 million (80.45%)
Operational costs	US$ 1.04 million (19.6%) *including approx. US$ 478,000 for the evaluation/randomised controlled trial*

The DIB structure allowed investors to earn a significant internal rate of return (8.33%) through the premium paid by outcome funders based on the bond contract terms.

The success metrics measured the causal impact of the intervention on household consumption and assets (Njogu-Ndongwe *et al.*, 2022). These are standard metrics for evaluating economic inclusion and graduation programmes. The outcomes were independently verified through a randomised controlled trial.

Key success factors for this DIB include:

» **For the investors:** This DIB was used to fund an existing programme design that had already been proven to deliver the expected outcomes/impact, as demonstrated through a previous trial. This helped to reduce the risks associated with the results-based financing model. The overall working capital was split between nine investors, which helped to reduce the risk for each individual investor. Similarly, the fact that the outcome funding was shared between multiple donors helped reduce the burden on each individual agency. In this case, the amount available for outcome payments by the

private funder was contingent upon Village Enterprise and Instiglio finding matching funds from other outcome payers.

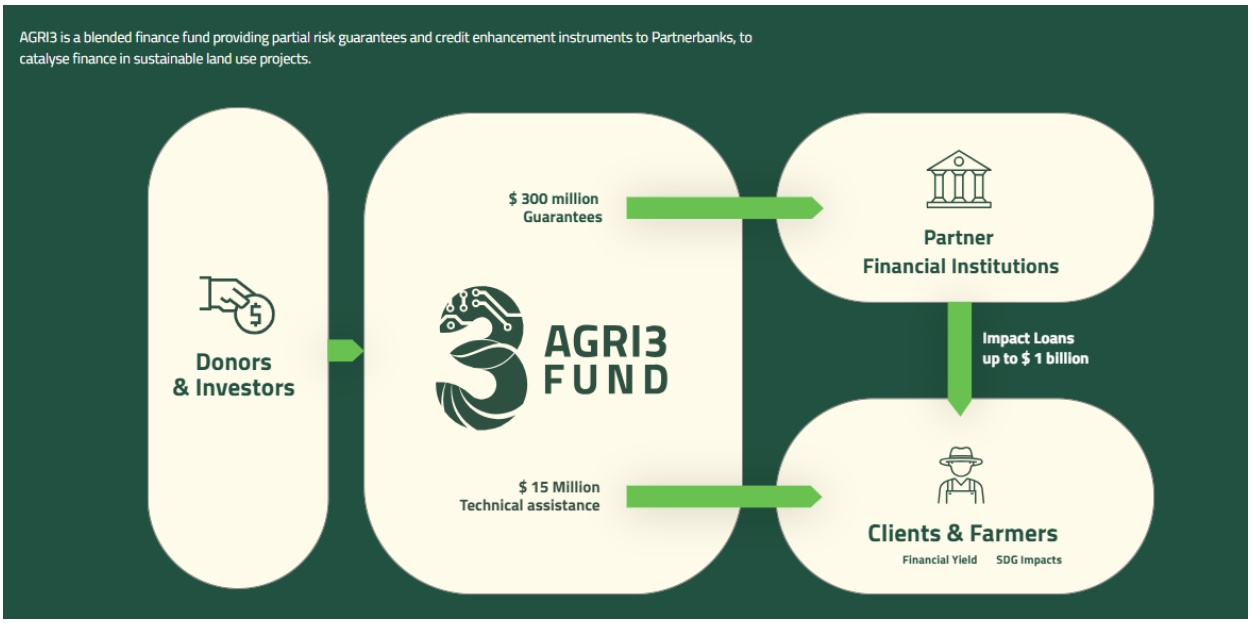
» **For the service provider**: The financing model was also seen as a good fit as it provided the flexibility and performance incentives required to respond to suboptimal results by pivoting the intervention, foster innovation, increase cost-effectiveness, and achieve maximal impact.

2.6 Blended finance examples

2.6.1 Agri3 Fund

The AGRI3 Fund was co-created in 2020 by UNEP and Rabobank, in collaboration with IDH and FMO, the Dutch Entrepreneurial Development Bank. GEF has also supported the fund through an equity investment.

Figure 19: How Agri3Fund works



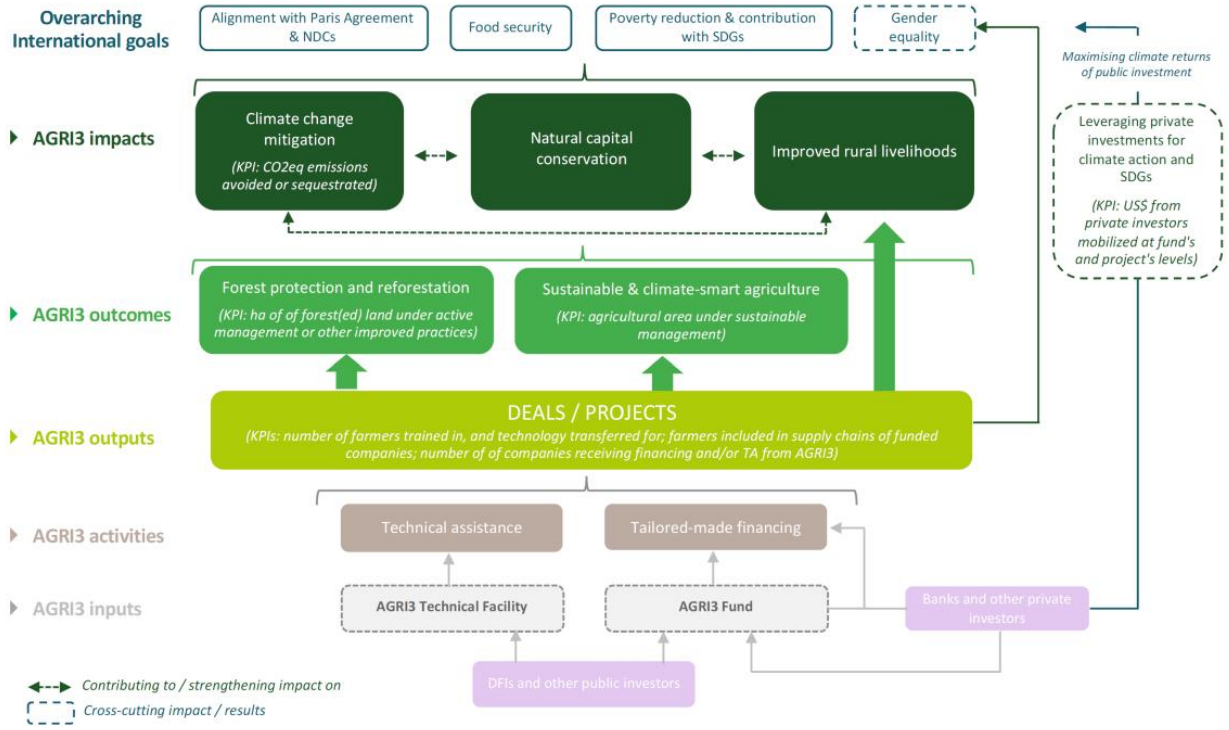
Source: Agri3Fund (n.d.)

The fund has the following objectives:

» Protection of existing natural forests and restoration of natural ecosystems;
» Promotion of sustainable agriculture; and
» Improvements in rural livelihoods (AGRI3 Fund, n.d., a).

The fund aims to raise US$ 1 billion, and strategically focuses its efforts on LMICs, prioritising regions where forests or other natural ecosystems face a high risk of conversion to agricultural production. AGRI3 operates as a blended finance fund, a mechanism specifically designed to combine public or philanthropic capital with private investment in order to de-risk projects and advance the SDGs. The fund primarily deploys partial risk guarantees, credit enhancement instruments, and has a separate technical assistance facility.

Figure 20: The AGRI3 Theory of Change



Source: SEO Amsterdam Economics and MDF Training & Consultancy, 2024

Examples of projects funded by AGRI3 include:

- **Renova Pasto Loan Product (Brazil, 2020):** This is an innovative loan product with the specific purpose to support the renovation of degraded pastureland. It is meant to serve farmers who wish to restore their degraded pasturelands and accelerate their compliance with the forest code, a product that the relationship managers of the PFI promote (SEO Amsterdam Economics and MDF Training & Consultancy, 2024). Early results suggest that the project has led to pastureland renovation, reduced pressure to cut forests, and accelerated compliance with the Brazilian forest code. Progress included restoration of Areas of Permanent Protection and pastureland recovery being on track. In this case, the project matches the policy objectives of the Government of Brazil, as recovery of degraded pasturelands is an explicit policy objective of the Ministry of Agriculture. The ministry has stated the need for investment resources to recover 40 million hectares of degraded land over 10 years, mostly for conversion into crop land, but also for intensive animal breeding.
- **Coffee sector (Nicaragua, 2022):** This project supports smallholder coffee farmers by providing input and harvest finance to boost productivity and incomes (AGRI3 Fund, n.d., b). Farmers have reported improved living conditions, including house repairs, transportation purchases, and better diets.[15] The project also helps maintain fairtrade and organic certifications for cooperative members. The client is a cooperative that operates in the rural region of San Juan del Río Coco, which buys, processes, and exports coffee. It provides cooperative members (smallholder farmers) with organic fertilisers and training in wastewater treatment and soil conservation (AGRI3 Fund, n.d., b).

2.6.2 Global Fund for Coral Reefs (GFCR) – Blue Alliance

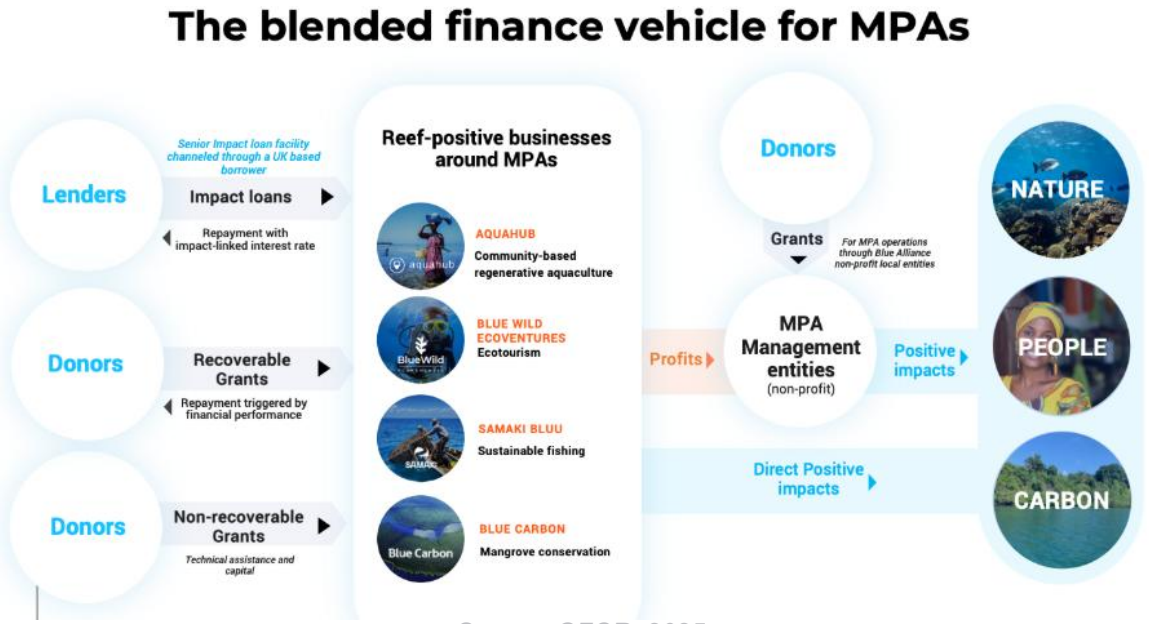
GFCR is a blended finance vehicle that channels public, philanthropic, and private capital into conservation efforts for coral reefs and the communities that depend on them. To date, it has combined various financial instruments, such as grants, concessional loans, and equity investments, to reduce risk and attract private sector investment in 'reef-positive' businesses and projects. The fund has so far mobilised over US$ 225 million and supported more than 100 enterprises. These investments have led to

[15] file:///C:/Users/sakhan/Downloads/2023-103-Evaluation-of-the-AGRI3-Fund.pdf

the creation of over 1,300 direct jobs (UNDP, 2024). The GFCR's efforts have also strengthened the livelihoods of over 30,000 individuals and improved the management of millions of hectares of marine and coastal protected areas, impacting approximately 3.8% of the world's remaining coral reefs (UNDP, 2024).

One of the GFCR's interventions is its participation in the Blue Finance Facility, a targeted impact loan vehicle. The GFCR provided early-stage capital and design support to help launch this facility, which is spearheaded by an organisation called Blue Alliance and supported by private sector partners like BNP Paribas (UNDP, n.d.). The facility is designed to provide businesses within Marine Protected Areas (MPAs) with upfront and early-stage financing. The businesses contribute financially to MPA management through dividends and/or revenue sharing (Blue Alliance, 2024). In this model, Blue Alliance co-manages the MPAs with the designated government entity.

Figure 21: The blended finance vehicle for MPAs



Source: GFCR, 2025

Through this partnership, the GFCR supports the development of sustainable enterprises in countries including the Philippines, Indonesia, and Tanzania. These enterprises include community-based aquaculture, ecotourism, and sustainable fisheries, which create jobs and improve local livelihoods for vulnerable populations. They also generate revenue streams that contribute to the long-term, self-sustaining management of the MPAs. The initiative has resulted in enhanced biodiversity protection and effective control of destructive fishing activities across 1.7 million hectares of coral reef ecosystems (Blue Alliance, 2025). It has also successfully supported the development of 12 reef-positive enterprises, with three generating annual revenues exceeding US$ 300,000 (Blue Alliance, 2025). A key long-term goal is for these MPAs to become financially self-sustainable and independent from donor funding, and to link the health of marine ecosystems directly to local food security via sustainable aquaculture and fishing practices.

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