Nationally Determined Contributions (NDC3.0): 2025 -2030

Climate Finance Roadmap

October 2025

Contents

LIST OF ABBREVIATIONS AND ACRONYMS

A4P	Agenda for Prosperity
AFOLU	Agriculture, Forestry and Other Land Uses
Blended Finance	Grants + concessional loans + private capital to scale interventions
BUR	Biennial Update Report
CCP	Climate Change Project
CCS	Climate Change Secretariat
CCSAP	Climate Change Strategy and Action Plan
CO2	Carbon Dioxide
CEF	Carbon Emission Factors
CFC	Chloro Fluorocarbon
CH4	Methane
CMB	Coastal Management Board
CO	Carbon Monoxide
COP	Conference of Parties
Debt-for-Climate Swap	Debt service diverted to domestic climate investments
ECOWAS	Economic Community of West African State
EF	Emission Factor
EI	Energy Industries
EJ	Exajoule
EPA-SL	Environment Protection Agency – Sierra Leone
FAO	Food and Agricultural Organization
FBC	Fourah Bay College
GDP	Gross Domestic Product
GEF	Global Environmental Facility
Gg	Gigagrams
GHG	Greenhouse Gas
Green / Blue Bonds	Raise capital from investors for climate infrastructure or water projects.
HCFC	Hydro-Chlorofluorocarbon
HFO	Heavy Energy Oil
IPCC	Intergovernmental Panel on Climate Change
ICZM	Integrated Coastal Zone Management
Gg	Gigagrams
GHG	Greenhouse Gas
HCFC	Hydro-Chlorofluorocarbon
HFO	Heavy Energy Oil
IPCC	Intergovernmental Panel on Climate Change
ICZM	Integrated Coastal Zone Management
IMBO	Institute of Marine Biology and Oceanography
INC	Initial National Communication
IPCC	Inter-governmental Panel on Climate Change
IPPU	Industrial Processes and Product Use
ISIC	International Standard Industrial Classification
MASSADA	MASSADA

MAFFS	MAFFS
MBSE	MBSE
MCI	Manufacturing and Construction Industries
MoEnv	Ministry of the Environment
MOE	Ministry of Energy
MRU	Mano River Union
MTA	Ministry of Transport and Aviation
MT	Million Tonnes
MTNDP	Medium-Term National Development Plan
MP	Metal Production
NOx	Nitrogen Oxide
N2O	Nitrous Oxide
NC	National Communication
ND	New Direction" (Sierra Leone National Development Plan 2019/24)
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
NMVOC	Non-Methane Volatile Organic Compound
NCCS	National Climate Change Secretariat
NCSP	National Communications Support Programme
NPPA	National Protected Area Authority
PA	Paris Agreement
Parametric Insurance	Payouts triggered by climate indices (floods, droughts, storms)
PPP / Private Investment	Risk-sharing with private partners for large infrastructure projects
PRSP	Poverty Reduction Strategy Paper
SLS	Sierra Leone Statistics
RBF	Results-Based Finance, tied to verified outcomes.
REDD+/PES	Forest carbon and ecosystem services payments
SLSB	Sierra Leone Standard Bureau
SNC	Second National Communications
SSL	Statistics Sierra Leone
SO2	Sulphur Dioxide
SF6	Sulphur Hflexafloride
SWDS	Solid Wastes Disposal Sites
TNC	Third National Communications
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNITAR	United Nations Institute for Training and Research
USL	University of Sierra Leone
VMT	Vehicle Miles Traveled
WONES	A women's Empowerment Association

Executive Summary

As the Paris Agreement enters its 10th year, few countries have made significant progress in implementing their NDCs; with National Climate finance Strategies emerging as key tools for this, only a minority of countries have embarked on them.

Sierra Leone is committed to achieving its Nationally Determined Contribution (NDC) targets under the Paris Agreement. This report presents a comprehensive assessment of **12 prioritized mitigation measures**, the required capital and operational expenditure, and an optimized **blended finance mix** designed to minimize public budget burden while leveraging private sector participation, concessional finance, and results-based payments.

The measures address **energy access, clean cooking, transport, forestry, waste management, and institutional MRV systems**, aligning with Sierra Leone's socio-economic and environmental priorities.

Alongwith revising its NDC with and NDC3.0, Sierra Leone wishes to clarify it financing investment roadmap and tools, and namely looks at:

I. developing a comprehensive investment roadmap for mobilising climate finance by identifying critical funding gaps and opportunities necessary for the attainment of the objectives outlined in NDC 3.0.
II. developing a Climate Finance and Investment Roadmap. climate finance needs for NDC 3.0 and
III. drafting the framework for the creation of a dedicated fund.

While the inputs for the above require some work under development by various teams, this document attempts at a preliminary framework towards the 3 points above, with the following hypotheses, outcomes, and outputs:

Hypotheses

A comprehensive, namely detailed, investment roadmap as well as an investment roadmap, will derive from a chain of processes under current progress: GHG assessment, sector and sub-sectors selection and NDC objectives finalisation, update on key projects and programs, etc., iterations between financial instruments and conditional / unconditional funding.

In this context, this current document is to serve as a benchmark and base for stakeholders engagement to pre-identify:

- trends on national mobilization across years,
- the context and benchmark of forefront development of specific financial instruments for development in the subregion and continent,
- thereby pre-assessing the key financial instruments to mobilize, through pre-matching / pre-specializing instruments with objectives across a typology of programs and sub sectors.

These are further encapsulated into a coherent, cohesive, 4-axis approach that may pre-prefigure the future comprehensive investment roadmap, as well as chapters of the investment roadmap.

Additionally, this document contains a glossary to policy makers and stakeholders on financial terms and mechanisms.

The international climate finance landscape highlights three trends in global climate and green finance that are relevant to Sierra Leone. **These trends are strongly correlated with the challenges of the national assessment give the ground of the proposed investment roadmap:**

- the prevalence of donations and loans, which must be more systematically linked in a logic of scaling up;
- the rise of green and blue bonds, which not only enable scaling up, but also a generalized sustainability logic in the budget planning cycle;
- finally the rise of de-risking instruments and funds, which constitute the possibility through ' blended finance', of involving the private sector in climate financing.

An analysis of structural changes in donor portfolios shows that major Multilateral Development Banks (MDBs) and Bilateral Development Banks (BDBs) have seen a marked growth in their commitment over the years, increasing their share to climate finance. This commitment by multilateral and bilateral development partners is characterized by the prevalence of international grants and loans.

It follows from the documentary synthesis, the elements of the diagnostic analysis and the consultation of the actors, that Sierra Leone struggles to access climate financing despite the constantly renewed efforts and ambitions through the NDCs and the sectoral strategies developed. The main direct and underlying causes are (i) weak national capacities to cover financing needs commensurate with climate commitments, (ii) a reduced range of climate investment opportunities, (iii) a weak regulatory and coordination framework to involve the diversity of actors and the private sector, (iv) low financing for large-scale actions targeting areas and strata with high vulnerability.

The total cumulated needs for the NDC 3.0 over the period 2025-2035 are US$ 2,974 million (2.974 billion). The total Cost of Mitigation Measures is US$ **1,024 million (1.024 billion).** Adaptation Final aggregates (**2025-2035**) require US$ **1,950 million (1.95 billion)**.

The Finance Roadmap is designed to drive a sustainable and effective climate response through a set of complementary actions:

- **Mobilizing private and international finance** to reduce reliance on limited domestic budget resources, while unlocking capital at scale.
- **Deploying de-risking instruments**—including guarantees, concessional loans, and results-based financing—focused particularly on early-stage investments in the energy and clean cooking transitions, where perceived risks remain highest.
- **Broadening the funding base** by tapping into carbon markets and issuing green and blue bonds, both to supplement revenues and to attract long-term impact investors.
- **Phasing interventions strategically**—starting with pilots, followed by Wave 1 rollouts, and ultimately full-scale implementation—so that systems are tested, investor confidence is built, and national capacity develops in step with financial mobilisation.
- **Strengthening Environmental Tracking Frameworks (ETF) and Monitoring, Reporting and Verification (MRV) systems** to ensure transparency of finance flows, measurable outcomes, and access to results-based climate finance.

Building on these foundations, the strategy will mobilize a combination of financial instruments and defined amounts dedicated to both mitigation and adaptation

The NDC 3.0 is characterised by three financial points: it is fair and ambitious, with a clear and credible national ownership and a sustainable public finance path.

◆ A Fair and Ambitious Mitigation–Adaptation Balance for a Developing Economy

The Government reaffirms its mobilisation to a balanced and just climate response by adopting a fair 1:2 financing ratio between mitigation and adaptation actions in the 2025–2035 NDC 3.0 financial roadmap. With a total of USD 2.964 billion mobilized over ten years, USD 1.014 billion is allocated to mitigation and USD 1.950 billion to adaptation. This strategic prioritization reflects the country's developmental status and high vulnerability to climate impacts, while maintaining responsibility in reducing emissions. The financing structure ensures mitigation actions remain adequately resourced to contribute to global emission reduction efforts, while acknowledging the urgent need for investments in resilience and climate-proof development to protect populations, infrastructure and ecosystems.

◆ A Clear and Credible National Ownership Through Strong Unconditional Commitments

The NDC 3.0 demonstrates strong national ownership through significant unconditional contributions on GHG emissions. For mitigation, the Nation would mobilise 20 percent of total needs—equivalent to USD 205 million—through domestic resources and policy instruments. For adaptation, the Government commits USD 400 million, representing 20.5 percent of total adaptation financing needs. These financial instruments reflect a credible, fair and responsible contribution from a developing country with limited fiscal space. They signal the country's serious engagement in climate action while transparently highlighting the financing gap that must be addressed through international climate finance, concessional instruments and technology transfer in line with the principles of equity and common but differentiated responsibilities.

◆ A Sustainable Public Financing Pathway and Innovative Domestic Resource Mobilization

The Government has established a sustainable and realistic financing pathway that secures USD 605 million in national contribution over the decade—USD 400 million for adaptation and USD 205 million for mitigation. Of this amount, USD 304 million will be mobilized directly by the Government (USD 225 million for adaptation and USD 79 million for mitigation), while the remaining USD 301 million will be generated through private sector participation and community-based mechanisms. Importantly, only USD 252 million over ten years—equivalent to USD 25.2 million annually—will be drawn from the national budget. The remainder will be mobilized through innovative domestic instruments such as an infrastructure resilience levy, early warning service fees, landfill taxation and public–private partnership models. This approach safeguards fiscal sustainability while integrating climate finance into national systems through climate budget tagging and strategic public investment planning.

The mitigation finance structure under NDC 3.0 demonstrates a balanced and sustainable blend of domestic commitment and international partnership, anchored in strong private-sector engagement. Out of a total of USD 1.024 billion, 20 percent (USD 205 million) represents unconditional domestic effort—comprising USD 79 million in public expenditure and USD 126 million from private investment—reflecting firm national ownership and a credible domestic contribution.

The remaining 80 percent (USD 819 million) is conditional on international support, structured to maximize leveraging and de-risking effects. Within this, USD 126 million is expected from public derisking instruments such as guarantees and concessional finance, designed to crowd in USD 693 million of international finance investment for low-carbon infrastructure, clean energy, and sustainable transport. This public–private and national–international architecture ensures long-term financial sustainability by coupling domestic accountability with global solidarity, reducing dependence on grants while fostering transformative private capital flows into mitigation.

Table 1: Mitigation Portfolio: Unconditional vs conditional funding; public / private domestic breakup, and derisking – leveraging structure for international partners

Category	Amount (M USD)	% of Total Mitigation
UNCONDITIONAL	**205**	**20.0%**
Unconditional – Public	79	7.7%
Unconditional – Private	126	12.3%
CONDITIONAL	**819**	**80.0%**
Conditional – Public (Derisking)	126	12.3%
Conditional – (Leveraging)	693	67.7%
TOTAL	**1,024**	**100%**

The adaptation finance portfolio totals **USD 1,950 million**, structured to reflect the distinct logic of adaptation action—where the emphasis lies in building resilience and managing climate risk across systems, rather than delivering direct emission reductions.

- **Unconditional resources** amount to **USD 400 million (20.5%)**, reflecting actions that can be undertaken with domestic or already-secured financing. Within this, **public finance (USD 225 million, 11.5%)** will support baseline resilience measures, institutional capacity, and public goods such as climate information systems. The **private component (USD 175 million, 9.0%)** represents market-driven adaptation investments, particularly in agriculture, infrastructure, and insurance—areas where resilience and profitability can align without concessional support.
- **Conditional finance**, totaling **USD 1,550 million (79.5%)**, demonstrates the scale of ambition contingent upon enhanced international support and risk-sharing mechanisms. Within this structure, **public conditional finance (USD 349 million, 17.9%)** is dedicated to **de-risking instruments**, such as guarantees, concessional loans, and blended funds that lower the cost of capital and attract private participation. Meanwhile, **conditional private finance (USD 1,201 million, 61.6%)** represents the **leveraged investment potential**—mobilized once enabling conditions and risk mitigation frameworks are in place.

This balance of **public de-risking and private leveraging** provides a **credible and structured pathway** for scaling adaptation action. It recognizes that adaptation investments often yield diffuse or long-term benefits, requiring strong public frameworks to crowd in private actors. The portfolio's design thus reflects both fiscal realism and strategic ambition—anchored in a partnership model where public support unlocks private resilience finance at scale.

Table 2: Adaptation Portfolio: Unconditional vs conditional funding; public / private domestic breakup, and derisking – leveraging structure for international partners

Category	Amount (M USD)	% of Total Adaptation
UNCONDITIONAL	**400**	**20.5 %**
Unconditional – Public	225	11.5%
Unconditional – Private	175	9.0%
CONDITIONAL	**1550**	**79.5 %**
Conditional – Public (Derisking)	349	17.9%
Conditional – Private (Leveraging)	1,201	61.6%
TOTAL	**1,950**	**100%**

The strength of Sierra Leone's NDC lies in its governance. The implementation framework ensures clarity of roles, reduces institutional overlaps, and strengthens accountability. By empowering the Ministry of Environment and Climate Change, the Environment Protection Agency, and the Ministry of Energy as lead institutions, the framework provides both political authority and technical capacity to drive delivery. Furthermore, the inclusion of civil society, local authorities, and the private sector establishes the foundation for participatory and transparent governance. Effective coordination mechanisms will accelerate policy coherence, reduce duplication of resources, and ensure alignment with donor programs. Implementation readiness is thus a key marker of Sierra Leone's credibility under the Paris Agreement.

MRV is the backbone of NDC 3.0. A robust, transparent system ensures that progress is measurable, verifiable, and credible both nationally and internationally. This transparency will attract investor and donor confidence, enabling Sierra Leone to access climate finance and carbon markets under Article 6. The MRV framework also creates a domestic evidence base, allowing policymakers to adapt strategies in real time. By strengthening institutional capacity for data collection and reporting, Sierra Leone ensures that climate actions are not aspirational but demonstrably implemented and evaluated against clear targets.

Sierra Leone's NDC 3.0 is both a climate action plan and a **development document**. It provides a roadmap for reducing emissions, building resilience, and ensuring inclusivity while linking directly to food security, energy access, and economic transformation. By mobilizing an estimated **USD 2.2 billion by 2030** and leveraging strong partnerships, Sierra Leone can transition from vulnerability to leadership in climate-smart growth. NDC 3.0 is therefore not just about compliance with the Paris Agreement, but about creating a resilient, equitable, and prosperous future for all Sierra Leoneans.

1 Sierra Leone NDC3.0 Climate Finance Roadmap

Climate finance is the engine that turns ambition into action. Sierra Leone's NDC3.0 provides an opportunity to align country development priorities with a credible, sequenced financing strategy that mobilises state resources, concessional international funds, private capital and innovative instruments at scale. The finance chapter of NDC3.0 therefore aims to (1) quantify the investment required across priority mitigation and adaptation strategies, (2) propose a pragmatic mobilisation and sequencing plan that catalyses private investment while protecting fiscal sustainability and ensuring equity.

The financial roadmap rests on three pillars: (i) the state as a catalyst — using budget tagging, sovereign green instruments, and guarantees to create a market; (ii) donors and MDBs as de-riskers — providing concessional finance and first-loss capacity to make projects bankable; and (iii) the private sector as scaler — deploying commercial capital where returns are viable and concessional funds have reduced risk. Complementary revenue and sustainability streams — carbon credits, Payment for Environmentl Service (PES), tariffs, and insurance — are deployed to sustain operations beyond initial donor phases. The remainder of this chapter sets out the investment envelope, the barriers to closing the gap, and a practical set of recommendations to operationalise finance for NDC3.0.

The mitigation and adaptation finance architecture under NDC 3.0 establishes a balanced and credible framework that safeguards fiscal stability while enabling large-scale climate investment. By integrating earmarked domestic revenues into the national contribution, the Government limits new indebtedness and reinforces fiscal responsibility. At the same time, the structured engagement of multilateral, philanthropic, private, and market actors distributes risk across instruments, ensuring that no single source or mechanism bears undue exposure. Dedicated de-risking components and blended arrangements convert potential fiscal and investment risks into predictable, shared mobilisation. As a result, the overall NDC finance system operates as a self-balancing mechanism—protecting public finance while securing sustained confidence from international and private partners.

The mitigation and adaptation finance frameworks under NDC 3.0 form a single, coherent architecture built on shared principles of fiscal prudence, partnership diversification, and results-based accountability. Both systems combine domestic resource mobilization with structured international engagement, ensuring that public mobilisation is matched by sustainable revenue sources and that risk is distributed across a wide range of actors and instruments. Public derisking and concessional finance create predictable foundations, while private blending, bond markets, and innovative mechanisms extend reach and performance. Together, these two pillars balance transformation and resilience—aligning growth-oriented mitigation investments with stability-focused adaptation measures—and establish a unified, credible, and fiscally sound climate finance system capable of sustaining long-term implementation of the NDC.

Together, these institutional and readiness achievements consolidate Sierra Leone's integrated climate finance architecture under NDC 3.0. The coherence between mitigation and adaptation financing—reinforced by solid national systems and internationally recognized readiness platforms—ensures that all financing flows operate within a single, transparent, and accountable framework. This integration allows the Government to channel domestic and external resources efficiently toward both transformational and resilience objectives, while maintaining fiscal discipline and investment credibility. By aligning readiness, risk management, and partnership coordination, Sierra Leone demonstrates that it has moved beyond planning to a phase of structured, scalable, and implementable climate finance—anchored in national ownership and sustained by international confidence.

1.1 Finance Mix and Finance Roadmap Overview

1.1.1. Financial Needs 2025-2035

(Amount - USD (Percent % domestic, Percent % external)
Based on the costed measures (mitigation & adaptation) by sector; total CAPEX & O&M needs for the NDC 3.0 are:

Mitigation Final Aggregates (**2025–2035**) require the following financial needs:

- Total CAPEX: US$ **815** million[1]
- Total OPEX over the period : US$ **209** million
- Total Cost of Mitigation Measures: US$ **1,024 million (1.024 billion)**

Adaptation Final aggregates (**2025-2035**) require US$ **1,950 million (1.95 billion)**.

The total cumulated needs for the NDC 3.0 over the period 2025-2035 are US$ 2,974 million (2.974 billion).

Tables below recall the Capex & Opex evaluations fro mitigation that emerged from national consultations process, as well as the targeted contribution for each actor in the funding of adaptation, that emerged form the same process.

Table 3: Capex and Opex for Mitigation

Measure	CAPEX 2025–2026	CAPEX 2026–2030	CAPEX 2031–2035	OPEX 2025–2026	OPEX 2026–2030	OPEX 2031–2035
Mini-grids	3,5	75	75	0,3	1,25	1,75
Commercial/Industrial PV	1,5	80	30	0,3	0,75	0,75
Solar Home Systems	0,75	1	0,2	0,5	0,5	0,5
Improved Cookstoves	1,15	6	3	0,15	0,8	1
LPG	1,25	17,5	17,5	0,4	1	1
Biogas	0	40	100	0	0	0
E-buses	2	16	16	0,15	0,6	0,6
E-kekeh	1,5	45	45	0,15	1,15	1,15

[1] For those measures where an estimage range was provided, the mean has been taken for both CAPEX and OPEX.

Fuel efficiency & standards	10,15	2,25	3	1,55	0,65	0,8
Forestry & Mangroves	8	40	55	0,8	4	7
Food Systems transformation (Agroecology)	3,5	9	12,5	0,35	0,9	1,85
Waste Organics Diversion	2,25	35	11,5	0,4	6	1,85
Landfill Methane Mgmt	1,5	21	4,5	0,3	2,4	0,65
Cross-Cutting — ETF/MRV System Strengthening		10	6,5			
CAPEX TOTAL	**37**	**398**	**380**		**OPEX TOTAL**	
815					**209**	

Table 4: Respective Targets for Actors Contributions to Adaptation Finance (in %, in amount) (source: consultations workshops)

		Contributing share (%)				Contributing share (USD M)			
MEASURE	**COST**	**GOVT**	**DOM PVT**	**INT PVT**	**PARTNERS**	**GOVT**	**DOM PVT**	**INT PVT**	**PARTNERS**
Climate-Smart Agriculture & Extension Scale-Up (CSA)	132	10	10	10	70	13	13	13	92
Irrigation & Water Harvesting	180	10	5	15	70	18	9	27	126
Climate-Resilient Seed Systems & Post-Harvest Storage	120	10	10	10	70	12	12	12	84
Climate-Resilient WASH / Water Supply	100	10	5	15	70	10	5	15	70
Integrated Watershed Management	120	20	5	5	70	24	6	6	84
Coastal Resilience: Mangrove & Urban Flood Protection	150	10	10	0	80	15	15	0	120
Climate-Resilient Health Facilities	75	10	15	15	60	8	11	11	45

Climate-informed Disease Surveillance & Early Action	30	10	15	15	60	3	5	5	18
Integrated Vector Management & Heat-Health Action Plans	45	10	15	15	60	5	7	7	27
Environmental health management Action Plan	30	10	15	15	60	3	5	5	18
Disaster and Climate Risk Management in Schools	10	15	5	10	70	2	1	1	7
Climate-Resilient Infrastructure and Safe Access	20	15	5	10	70	3	1	2	14
Climate and Environmental Education in Curricula and Teacher Training	10	15	5	10	70	2	1	1	7
Greening School Communities and Operations	10	15	5	10	70	2	1	1	7
Climate-resilient ediucation system	30	15	10	5	70	5	3	2	21
Infrastructure Resilience in Energy, Transmission	200	10	10	0	80	20	20	0	160
Risk-informed Urban Planning & Safe Relocation	50	10	10	5	75	5	5	3	38
Climate-Proofing Roads & Bridges	200	10	5	5	80	20	10	10	160
Upgrading and reinforcing existing industrial infrastructure	40	5	10	5	80	2	4	2	32
Landfill	40	15	0	5	80	6	0	2	32
Community Forestry & Co-managed Protected Areas	80	10	20	20	50	8	16	16	40
Agroforestry & Climate-Smart Tree Crop Intensification	90	10	10	30	50	9	9	27	45

Wetland & Mangrove Restoration (Cobenefit of Mitigation Measure)	0	5	5	30	60	0	0	0	0
National Multi-Hazard Early Warning System	40	15	15	0	70	6	6	0	28
NDMA Capacity, Equipment & Emergency Logistics	35	30	0	0	70	11	0	0	25
Community-Based DRM & Safe Infrastructure	20	15	15	0	70	3	3	0	14
Strenghtened Climate Observation and Early Warning Systems	5	15	15	0	70	1	1	0	4
AI-based Climate and Weather Forecasting System for Resilient Development	6,5	15	15	0	70	1	1	0	5
Integration of Human Rights-Based Approach (HRBA) into Climate Induced Disaster Recovery Programmes for Disproportionately Impacted Groups	35	25	10	15	50	9	4	5	18
Adaptation MRV & Indicator Framework (cobenefit)	0	30	0	20	50	0	0	0	0
Climate Finance Mobilization & Project Pipeline Facility	18	15	15	20	50	3	3	4	9
Local Government Capacity & Gender & Social Inclusion Mainstreaming	18	0	0	20	80	0	0	4	14
Mainstreaming child protection in climate resilience planning	2	30	0	20	50	1	0	0	1

Energy Source Diversification (Solar, Hydropower) (cobenefit)	0	0	0	0	100	0	0	0	0
Climate-Resilient Infrastructure Policies Policies in the Transport sector	2	0	0	0	100	0	0	0	2
Integrated Planning and Policy Development in the Transportation Sector	2	0	0	0	100	0	0	0	2
Institutional Capacity building in the Waste Sector	2	0	0	0	100	0	0	0	2
Institutional Capacity building in the IPPU sector	2	0	0	0	100	0	0	0	2

1.1.2. A fair, credible and sustainable ambition

The NDC 3.0 is characterised by three financial points: it is fair and ambitious, with a clear and credible national ownership and a sustainable public finance path.

A Fair and Ambitious Mitigation–Adaptation Balance for a Developing Economy

The Government reaffirms its mobilisation to a balanced and just climate response by adopting a fair 1:2 financing ratio between mitigation and adaptation actions in the 2025–2035 NDC 3.0 financial roadmap. With a total of USD 2.964 billion mobilized over ten years, USD 1.014 billion is allocated to mitigation and USD 1.950 billion to adaptation. This strategic prioritization reflects the country's developmental status and high vulnerability to climate impacts, while maintaining responsibility in reducing emissions. The financing structure ensures mitigation actions remain adequately resourced to contribute to global emission reduction efforts, while acknowledging the urgent need for investments in resilience and climate-proof development to protect populations, infrastructure and ecosystems.

A Clear and Credible National Ownership

The NDC 3.0 demonstrates strong national ownership through significant unconditional contributions. For mitigation, the Government commits 20 percent of total needs—equivalent to USD 205 million—through domestic resources and policy instruments. For adaptation, the Government commits USD 400 million, representing 20.5 percent of total adaptation financing needs. Along with its GHG mitigation unconditional commitment, this targeted financial mobilisation reflects a credible, fair and responsible contribution from a developing country with limited fiscal space. They signal the country's serious engagement in climate action while transparently highlighting the financing gap that must be addressed through international climate finance, concessional instruments and technology transfer in line with the principles of equity and common but differentiated responsibilities.

A Sustainable Public Financing Pathway and Innovative Domestic Resource Mobilization

The Government has established a sustainable and realistic financing pathway that secures USD 605 million in national contribution over the decade—USD 400 million for adaptation and USD 205 million for mitigation. Of this amount, USD 304 million will be mobilized directly by the Government (USD 225 million for adaptation and USD 79 million for mitigation), while the remaining USD 301 million will be generated through private sector participation and community-based mechanisms. Importantly, only USD 252 million over ten years—equivalent to USD 25.2 million annually—will be drawn from the national budget. The remainder will be mobilized through innovative domestic instruments such as an infrastructure resilience levy, early warning service fees, landfill taxation and public–private partnership models. This approach safeguards fiscal sustainability while integrating climate finance into national systems through climate budget tagging and strategic public investment planning.

Utlimately the NDC 3.0 is in full alignment with National Finance Policy and Macroeconomic Frameworks. The NDC 3.0 financing roadmap is fully consistent with Sierra Leone's macroeconomic direction and national fiscal architecture, ensuring coherence with medium- and long-term development objectives. It aligns with the Medium-Term National Development Plan (MTNDP) 2024–2030, which establishes climate resilience, green industrialization and sustainable growth as national priorities, as well as the Green Growth and Climate Finance Strategy, which provides the framework for mobilizing climate-aligned investments. The roadmap is also anchored in the Public Financial Management Act (2016) and complements the Medium-Term Revenue Strategy (2021–2024), the Fiscal Strategy Statement, the Medium-Term Expenditure Framework (MTEF), and the Medium-Term Debt Management Strategy, ensuring prudent fiscal management and debt sustainability. Through the integration of climate budget tagging, public investment management reforms and innovative domestic resource mobilization measures, the NDC 3.0 financing framework strengthens macroeconomic stability while embedding climate action at the core of public policy and national economic planning.

1.1.3. Public / Private and Nation / International breakups

The mitigation finance structure under NDC 3.0 demonstrates a balanced and sustainable blend of domestic engagement and international partnership, anchored in strong private-sector engagement. Out of a total of USD 1.024 billion, 20 percent (USD 205 million) represents unconditional domestic effort—comprising USD 79 million in public expenditure and USD 126 million from private investment—reflecting firm national ownership and a credible domestic contribution.

The remaining 80 percent (USD 819 million) is conditional on international support, structured to maximize leveraging and de-risking effects. Within this, USD 126 million is expected from public derisking instruments such as guarantees and concessional finance, designed to crowd in USD 693 million of international finance investment for low-carbon infrastructure, clean energy, and sustainable transport. This public–private and national–international architecture ensures long-term financial sustainability by coupling domestic accountability with global solidarity, reducing dependence on grants while fostering transformative private capital flows into mitigation.

Table 5: Mitigation Portfolio: Unconditional vs conditional funding; public / private domestic breakup, and derisking – leveraging structure for international partners

Category	Amount (M USD)	% of Total Mitigation
UNCONDITIONAL	**205**	**20.0%**
Unconditional – Public	79	7.7%
Unconditional – Private	126	12.3%
CONDITIONAL	**819**	**80.0%**
Conditional – Public (Derisking)	126	12.3%
Conditional – (Leveraging)	693	67.7%
TOTAL	**1,024**	**100%**

The adaptation finance portfolio totals **USD 1,950 million**, structured to reflect the distinct logic of adaptation action—where the emphasis lies in building resilience and managing climate risk across systems, rather than delivering direct emission reductions.

- **Unconditional resources** amount to **USD 400 million (20.5%)**, reflecting actions that can be undertaken with domestic or already-secured financing. Within this, **public finance (USD 225 million, 11.5%)** will support baseline resilience measures, institutional capacity, and public goods such as climate information systems. The **private component (USD 175 million, 9.0%)** represents market-driven adaptation investments, particularly in agriculture, infrastructure, and insurance—areas where resilience and profitability can align without concessional support.
- **Conditional finance**, totaling **USD 1,550 million (79.5%)**, demonstrates the scale of ambition contingent upon enhanced international support and risk-sharing mechanisms. Within this structure, **public conditional finance (USD 349 million, 17.9%)** is dedicated to **de-risking instruments**, such as guarantees, concessional loans, and blended funds that lower the cost of capital and attract private participation. Meanwhile, **conditional private finance (USD 1,201 million, 61.6%)** represents the **leveraged investment potential**—mobilized once enabling conditions and risk mitigation frameworks are in place.

This balance of **public de-risking and private leveraging** provides a **credible and structured pathway** for scaling adaptation action. It recognizes that adaptation investments often yield diffuse or long-term benefits, requiring strong public frameworks to crowd in private actors. The portfolio's design thus reflects both fiscal realism and strategic ambition—anchored in a partnership model where public support unlocks private resilience finance at scale.

Table 6: Adaptation Portfolio: Unconditional vs conditional funding; public / private domestic breakup, and derisking – leveraging structure for international partners

Category	Amount (M USD)	% of Total Adaptation
UNCONDITIONAL	**400**	**20.5 %**
Unconditional – Public	225	11.5%
Unconditional – Private	175	9.0%
CONDITIONAL	**1,550**	**79.5 %**
Conditional – Public (Derisking)	349	17.9%
Conditional – Private (Leveraging)	1,201	61.6%
TOTAL	**1,950**	**100%**

1.1.4. A roadmap anchored on budget sanity, nation mobilisation, derisking-leverage, blended and finetuned innovative finance

The total mitigation envelope of **USD 1,024 million** is structured to strengthen both fiscal responsibility and the credibility of international engagement under NDC 3.0. The updated breakdown reflects the distinct functions of **domestic fiscal management** and **international partnership mechanisms**, ensuring alignment with national budgetary frameworks and sustainable debt management practices.

On the domestic side, unconditional resources amount to **USD 205 million (20.0%)**, combining public and private contributions. Public finance contribution amounts to **budget lines (USD 79 million, 7.7%)**. This structure ensures that part of the government's contribution to mitigation will be mobilized through the earmarking of additional (measures linked) users fees (USD 43 million, 4.2%, included in budget, *supra*). derived from NDC-related measures, thereby reinforcing fiscal prudence and creditworthiness control. The **domestic private investment (USD 126 million, 12.3%)** reflects national market capacity and confidence in the mitigation framework, contributing to the overall resilience of the domestic financing base.

On the international side, conditional resources total **USD 819 million (80.0%)**, representing the structured mobilization of external support and private capital. The **public and private derisking components (USD 99 million and USD 116 million respectively)** are designed to sustain confidence across blended finance arrangements, maintaining steady and predictable frameworks for risk-sharing. The participation of **multilateral development banks (MDBs) (USD 167 million, 16.3%)** and **philanthropic and bond market partners (USD 220 million, 21.5%)** reflects a broad-based partnership platform capable of scaling up investment flows in alignment with national priorities.

Furthermore, the inclusion of **incentives and innovative finance instruments (USD 217 million, 21.2%)** underscores the Government's mobilisation to credible innovation in climate finance—ranging from performance-based mechanisms to structured bond facilities and results-based payments. Together, these modalities consolidate a balanced approach in which domestic fiscal discipline is complemented by stable and diversified international engagement, ensuring that mitigation finance under NDC 3.0 remains both **ambitious and fiscally sustainable**.

Table below provides conditional and unconditional breakup for mitigation by financial function (derisking, scaling up, blending, innovative finance).

Table 7: Conditional and unconditional breakup for mitigation by financial function

Category / Subcategory	Amount (M USD)	% of Total Mitigation (1,024 M USD)
UNCONDITIONAL – TOTAL	**205**	**20.0%**
Public Budget	**79**	**7.7%**
Domestic Private	**126**	**12.3%**
CONDITIONAL – TOTAL	**819**	**80.0%**
Public Derisking	**99**	**9.7%**
Private Sector Blending	**116**	**11.3%**
MDB Scaling Up	**167**	**16.3%**
Philanthropy & Bonds Market Scaling Up	**220**	**21.5%**
Incentives & Innovative Finance	**217**	**21.2%**
GRAND TOTAL	**1,024**	**100%**

The total adaptation envelope of **USD 1,950 million** (bn 1.95) has been structured to reflect the nature of adaptation action, where public investment, resilience-building, and long-term risk management require strong public frameworks and predictable international cooperation. The structure provides a coherent balance between **domestic mobilisation** and **international partnership mechanisms**, ensuring both fiscal discipline and the credibility of national adaptation financing under NDC 3.0.

On the domestic side, unconditional resources amount to **USD 400 million (20.5%)**, combining **public finance (USD 225 million, 11.5%)** and **private domestic investment (USD 175 million, 9.0%)**. Public resources will support essential resilience measures, institutional strengthening, and social protection systems, while domestic private finance will complement these through investments in adaptive infrastructure, agri-resilience, and insurance. This distribution reflects the Government's sustained engagement in adaptation as a public responsibility, combined with the growing participation of national private actors in resilience-oriented activities.

On the international side, conditional resources reach **USD 1,550 million (79.5%)**, structured around differentiated partnership functions. **Public good de-risking (USD 337 million, 17.3%)** and **public scaling-up (USD 456 million, 23.4%)** represent the mobilisation of development partners and multilateral institutions to support predictable, programmatic adaptation funding. These categories anchor long-term cooperation and ensure stability in financing flows.

The **private blending segment (USD 224 million, 11.5%)**, together with **bond market participation (USD 430 million, 22.0%)**, reflects the progressive inclusion of private and capital market actors within structured, risk-mitigated frameworks. The presence of these blended instruments confirms the steady maturation of adaptation finance toward market-compatible models without compromising public oversight.

Finally, **results-based and innovative finance (USD 103 million, 5.3%)** introduces a credible layer of performance-linked mechanisms—aligning disbursements with measurable resilience outcomes and national monitoring frameworks.

Overall, this composition ensures that adaptation financing under NDC 3.0 rests on **sound public accountability, credible blending structures, and innovation grounded in measurable results**, offering a robust platform for scaling climate resilience across sectors and communities.

Table below provides conditional and unconditional breakup for adaptation by financial function (derisking, scaling up, blending, innovative finance).

Table 8: Conditional and unconditional for adaptation by financial function

Category / Subcategory	Amount (M USD)	% of Total
UNCONDITIONAL – TOTAL	**400**	**20.5%**
Public Finance	225	11.5%
Private Domestic	175	9.0%
CONDITIONAL – TOTAL	**1,550**	**79.5%**
Public good Derisking	337	17.3%
Public Scaling-up	456	23.4%
Private Blending	224	11.5%
Sub-total Bonds	430	22.0%
Results-based (Innovative) Finance	103	5.3%
GRAND TOTAL	1,950	100%

Taken together, the mitigation and adaptation finance structures presented under NDC 3.0 establish a coherent and fiscally sound architecture that both safeguards and enhances the credibility of public climate finance. By differentiating domestic and international functions and embedding earmarked budget revenue within the national contribution, the framework ensures that the Government's fiscal exposure remains controlled and sustainable, as a portion of its support is internally generated rather than debt-financed. This explicit linkage between revenue policy and NDC implementation serves as a first line of risk mitigation for public finances. At the same time, the broad-based partnership model on the international side—spanning multilateral development banks, philanthropic sources, bond market actors, and results-based mechanisms—creates a diversified and steady inflow structure that spreads risk across instruments and institutions rather than concentrating it on the public budget. The presence of dedicated derisking segments on both sides—public and private—further stabilizes the financing environment by converting uncertainty in project-level cash flows and investment horizons into structured, manageable mobilisation under blended arrangements. This approach not only derisks individual investments but also reduces sovereign exposure by leveraging concessional, catalytic, and market-aligned resources in tandem. In combining fiscal discipline, predictable revenue streams, and credible blending mechanisms, the overall NDC 3.0 finance architecture transforms risk into partnership—establishing a self-reinforcing system where each actor's participation lowers the vulnerability of the others, ensuring that national climate objectives are advanced within a framework of financial stability and long-term creditworthiness.

1.2 Pipeline of bankable projects and instruments in the financial roadmap

From the characteristics of measures and clusters of measures supra in mitigation and adaptation sections, this section brings the array of possible financial instruments and exmeplifies some target DFIS and funding sources to match the following drivers of a sustainable and effective climate strategy:

- The strategy seeks to **maximize leverage of private and international finance**, thereby reducing reliance on scarce domestic budget resources while mobilizing capital at scale.

- It will **deploy de-risking instruments**—such as guarantees, concessional loans, and results-based financing—targeted especially at early-stage investments in the energy and clean cooking transitions where perceived risks are highest.
- To broaden the funding base, Sierra Leone will **tap carbon markets and issue green and blue bonds**, using these instruments both to supplement revenues and to attract long-term impact investors.
- Interventions will be **phased strategically in pilot, Wave 1, and full scale-up stages**, ensuring that operational systems are tested, investor confidence is built, and capacity grows in line with financial mobilisation.
- Finally, the strategy will **strengthen Environmental Tracking Frameworks (ETF) and Monitoring, Reporting and Verification (MRV) systems** so that finance flows are transparent, outcomes are measurable, and access to results-based climate finance is facilitated.

1.2.1. Breakup of financial instruments in the NDC3.0 financial roadmap for mitigation and adaptation

The detailed structure of the mitigation finance envelope under NDC 3.0 confirms a coherent and integrated financial ecosystem, where each cluster of instruments reinforces the others and contributes to an overall architecture of fiscal prudence, market activation, and international partnership. The underlying logic is cumulative rather than fragmented: each cluster serves as a distinct but interconnected pillar within a continuum that extends from domestic resource mobilization to globally blended and performance-linked finance.

At the domestic core, the unconditional cluster combines public budget expenditure, budget revenue earmarking, and domestic private investment. The coherence of this group lies in its fiscal integrity: expenditure and revenue measures operate in tandem, ensuring that public outlays are balanced by corresponding inflows—such as user fees and earmarked revenues—thereby containing fiscal exposure. The domestic private segment complements this logic by providing parallel investment channels—through debt, equity, and insurance—anchored in national markets and institutions, including environmental funds. This mix creates a stable foundation of locally generated finance that both signals national ownership and reduces reliance on external debt or concessional flows.

The conditional segment builds upon this foundation through successive layers of partnership and leverage, maintaining a clear internal progression from derisking to scaling up and finally to innovation. Within this framework, **public derisking instruments**—comprising grants, guarantees, and readiness support—constitute the enabling layer, designed to absorb early-stage risk and to ensure project viability. They directly connect with **private derisking instruments**, where private debt and equity, green credit lines, consumer finance, fleet-as-a-service models, and insurance instruments demonstrate the operational extension of risk mitigation into market activity. The coherence of this linkage lies in its continuum of risk transfer: from public grants that de-risk the enabling environment, to private financial instruments that internalize and manage residual risk within viable commercial models.

Building upon these, the **scaling-up clusters**—through multilateral development banks (MDBs), philanthropy, and bond markets—consolidate the flow of capital into structured, medium- to large-scale investments. MDB concessional credit and microfinance operations ensure accessibility and reach, while the philanthropic and bond market segments, including green bonds and private net-zero commitments, translate de-risked opportunities into long-term finance at scale. The diversity of actors—development banks, institutional investors, and mission-driven funds—provides both depth and stability, ensuring that scaling-up mechanisms are not dependent on any single channel or instrument.

Finally, the **incentives and innovative finance cluster**—including REDD+, carbon finance, and results-based financing (RBF)—closes the loop by linking financial flows to verified performance outcomes. These mechanisms ensure that investments across all preceding clusters ultimately align with measurable mitigation results, thereby reinforcing accountability and sustaining investor and partner confidence. The credibility of innovation in this cluster lies in its diversity: it accommodates both market-based carbon transactions and non-market, results-driven disbursements, ensuring flexibility while maintaining integrity in outcome measurement.

Taken together, the interconnection of these clusters forms a coherent mitigation finance system in which **public instruments secure fiscal space, private participation extends market reach, development partners scale the flow of resources, and innovation ensures sustained performance**. This sequencing effectively derisks not only individual instruments but also the NDC's overall financial implementation—by distributing exposure across actors, instruments, and time horizons, ensuring both financial stability and strategic resilience of the national mitigation effort.

Table 9: Mitigation funding instruments structure, to maximise the derisking-leveraging blending and innovative finance

Category / Subcategory	Instrument / Subcategory	Amount (M USD)	% of Total Mitigation (1,024 M USD)
UNCONDITIONAL – TOTAL		**205**	**20.0%**
Public Budget Expenditure		**72**	**3.5%**
	Budget Expenditure	36	3.5%
	User fees	43	4.2%
Domestic Private		**126**	**12.3%**
	Private Debt	54	5.3%
	Private Equity	49	4.8%
	Private expenditure	5	0.5%
	Private insurance	15	1.5%
	Pvt through National environment funds	3	0.3%
CONDITIONAL – TOTAL		**819**	**80.0%**
Public Derisking		**99**	**9.7%**
	Grants & Assistance	58	5.7%
	Guarantees	22	2.1%
	Readiness (GCF & other funds)	19	1.9%
Private Sector Derisking		**116**	**11.3%**
	Pvt Debt / Equity	45	4.4%
	Green credit lines	25	2.4%
	Consumer micro-finance	10	1.0%
	Fleet-as-a-service	25	2.4%
	PAYGo receivables financing	1	0.1%
	Private Insurance	10	1.0%
MDB Scaling Up		**167**	**16.3%**
	Concessional credit	64	6.3%
	Concessional loans	45	4.4%
	Micro-leases and micro loans	58	5.7%
Philanthropy & Bonds Market Scaling Up		**220**	**21.5%**

	Private net-zero & impact	100	9.8%
	Green bonds	120	11.7%
Incentives & Innovative Finance		**217**	**21.2%**
	REDD+	30	2.9%
	Carbon finance	75	7.3%
	RBF	112	10.9%

The detailed adaptation finance structure under NDC 3.0 demonstrates a consistent and interconnected system designed to sustain resilience-building over time, distribute risk across diverse instruments and actors, and preserve fiscal and financial stability. Its internal logic progresses from domestically anchored measures to internationally blended and performance-linked financing, ensuring that adaptation finance evolves as a coherent continuum rather than a set of isolated interventions.

At the domestic level, the unconditional cluster combines **public finance** and **private domestic contributions**, forming the foundation of nationally led resilience investment. The coherence of this cluster lies in its balance between **budgetary control and targeted incentives**: output-based subsidies, infrastructure resilience taxes, and early warning fees generate dedicated revenue and accountability mechanisms that strengthen public capacity without overburdening fiscal accounts. These measures are complemented by domestic private participation from NGOs, ESG investors, private equity and debt, industrial equity, and insurance actors. This variety not only broadens the financing base but also embeds adaptation objectives into local markets, civil society action, and private sector planning. The inclusion of NGO and ESG capital within the domestic cluster reflects the expanding role of non-state actors in delivering social and environmental resilience through community-based and impact-driven models.

The conditional finance segment extends this logic through a structured layering of international support and market participation. The **public good derisking cluster**—comprising multilateral and UN system grants, GCF contributions, and technical assistance—anchors the system by reducing uncertainty in early-stage or high-vulnerability areas. MDB insurance instruments provide an additional layer of financial protection, ensuring that adaptation investments remain viable even under adverse climate conditions. These derisking elements create the enabling environment for the subsequent cluster, **public scaling-up**, which consolidates large-scale concessional lending, syndications between the GCF and MDBs, and long-maturity concessional loans. This structured partnership between public financiers offers predictability and scale, translating de-risked opportunities into tangible resilience infrastructure and systems.

Private blending mechanisms deepen this structure by extending adaptation finance into semi-commercial and impact-oriented domains. The presence of NGOs, philanthropic donor pools, ESG funds, agribusiness bonds, and parametric insurance demonstrates both functional diversity and coherence: together, they channel risk-adjusted capital to sectors such as agriculture, coastal resilience, and housing while maintaining transparency and measurable outcomes. The inclusion of **parametric insurance** links this cluster directly to the derisking layer, reinforcing systemic stability and closing the risk-transfer loop between public and private instruments.

Building on these foundations, the **bond cluster**—including SDG, green, blue, and urban resilience bonds—represents a mature scaling instrument connecting domestic resilience priorities with international capital markets. The diversity of bond types reflects the breadth of adaptation themes covered—from ecosystem protection and water resilience to sustainable cities—while ensuring alignment with global sustainability benchmarks. These bonds create long-term financing channels with risk-sharing across investors, thereby reducing sovereign exposure and enhancing creditworthiness.

Finally, the **results-based and innovative finance cluster** introduces a performance dimension that unites the entire system. Debt swaps, results-based finance (RBF), REDD+, and ecosystemic payment mechanisms link disbursement directly to verified adaptation outcomes, ensuring that financing remains accountable, transparent, and impact-driven. The presence of multiple actor types—sovereign creditors, environmental funds, and private intermediaries—illustrates the system's capacity to blend concessional and market-based logic within measurable frameworks.

Overall, the interconnection among these clusters forms a **comprehensive and resilient adaptation finance architecture**, where public derisking lowers systemic vulnerability, concessional lending and bonds provide scale and continuity, and innovative mechanisms reinforce accountability and sustainability. This layered, actor-diverse approach derisks the entire NDC 3.0 adaptation finance portfolio—protecting public resources, stabilizing private participation, and ensuring that resilience investments remain both fiscally sustainable and operationally credible across time.

Table 10: Adaptation funding instruments structure, to maximise the derisking-leveraging blending and innovative finance

Category / Subcategory	Instrument / Subcategory	Amoun (M USD)	% of Total
UNCONDITIONAL – TOTAL		**400**	**20.5%**
Public Finance		**225**	**11.5%**
	Output-based subsidies	50	2.6%
	Budget	130	6.7%
	Infrastructure Resilience Tax + Early Warning Fee	45	2.3%
Private Domestic		**175**	**9.0%**
	NGOs	60	3.1%
	ESG	38	1.9%
	Pvt Equity / Debt	44	2.3%
	Equity (industrial)	20	1.0%
	Insurance	13	0.7%
CONDITIONAL – TOTAL		**1,550**	**79.5%**
Public good Derisking		**337**	**17.3%**
	GCF & Funds	10	0.5%
	Technical assistance	30	1.5%
	UN System Grants	70	3.6%
	Grants	205	10.5%
	MDB Insurance	22	1.1%
Public Scaling-up		**456**	**23.4%**
	Concessional debt	106	5.4%
	GCF-MDB Loan syndication	200	10.3%
	Concessional Loans (grace period, long maturity)	150	7.7%

Private Blending		**224**	**11.5%**
	NGO	25	1.3%
	Philanthropy/ Donor Pool	57	3.0%
	ESG	41	2.1%
	Private Agribusiness bonds	55	2.8%
	Parametric insurance	46	2.4%
Sub-total Bonds		**430**	**22.0%**
	SDG Bond	100	5.1%
	Green Bond	150	7.6%
	Blue Bond	60	3.1%
	Urban resilient housing Bonds	120	6.2%
Results-based (Innovative) Finance		**103**	**5.3%**
	Debt Swap	10	0.5%
	RBF	28	1.4%
	REDD+	45	2.3%
	Ecosystemic payments	20	1.0%

1.2.2. Integrated Perspective: Coherence Between Mitigation and Adaptation Finance

The mitigation and adaptation finance architectures developed under NDC 3.0 are designed as two distinct yet mutually reinforcing systems. Each responds to a specific logic—mitigation driven by transformation of productive and energy systems, and adaptation focused on resilience and protection of assets and livelihoods—but both rest on a shared financial philosophy: fiscal prudence, partnership diversification, and innovation linked to measurable results. This common foundation ensures that resources mobilized for one pillar strengthen the credibility and sustainability of the other, creating a unified NDC finance framework rather than parallel tracks.

From a **fiscal and macroeconomic standpoint**, both frameworks incorporate earmarked domestic revenues and disciplined budget mechanisms that reduce the risk of unsustainable borrowing. In mitigation, budget revenues generated from climate-related measures and user fees offset expenditure mobilisation, while in adaptation, instruments such as resilience taxes and early-warning fees perform a similar stabilizing function. This shared approach to internal resource generation ensures that public finance remains controlled and predictable, effectively derisking sovereign exposure. The Government's ability to align expenditure with self-generated revenue in both domains reinforces national creditworthiness and demonstrates to partners a consistent and responsible fiscal strategy.

At the **structural and partnership level**, both portfolios exhibit a coherent sequence that moves from public derisking to private engagement, and from concessional scaling-up to innovative, performance-based finance. In each case, the early-stage risk absorption performed by public or multilateral actors—through grants, guarantees, and technical assistance—creates the enabling conditions for private participation. This symmetry strengthens the entire NDC ecosystem by standardizing risk-sharing principles, allowing similar blended structures and instruments to operate efficiently across mitigation and adaptation sectors. Moreover, the participation of comparable categories of actors—MDBs, philanthropic funds, ESG investors, NGOs, and insurance providers—creates institutional coherence and operational continuity between the two agendas.

In terms of **financial innovation and accountability**, both mitigation and adaptation clusters converge on the principle of results-based disbursement and verified impact. Carbon finance, REDD+, ecosystem payments, and results-based financing mechanisms apply the same logic of linking capital flows to performance indicators, ensuring that finance mobilized under either pillar delivers tangible outcomes consistent with national and global mobilisation. This alignment enhances transparency and allows for integrated monitoring systems across both areas of work.

Finally, from a **strategic perspective**, the interplay between the two systems enhances the resilience of the national climate finance framework as a whole. Mitigation attracts forward-looking, investment-oriented capital, while adaptation secures stability and social protection—together forming a balanced risk-return profile for the country's overall climate portfolio. This balance enables the Government to negotiate, structure, and sequence financing in a way that supports both growth and resilience, demonstrating that climate finance under NDC 3.0 operates as a **unified, risk-managed, and fiscally credible national investment framework**.

1.2.3. Strengthening Credibility through Readiness and Institutional Linkages

Sierra Leone has consolidated significant progress in advancing project readiness and institutional capacity under the leadership of the **Environment Protection Agency (EPA)** through its **Climate Change Secretariat (CCS)**. The Government has established a well-structured and operational framework for the identification, preparation, and prioritization of climate investments, ensuring that all projects align with national priorities and meet international investment standards. The CCS has effectively bridged the gap between policy and implementation by developing a robust pipeline of mitigation and adaptation initiatives ready for financing. This maturity in project preparation and coordination demonstrates that Sierra Leone's NDC 3.0 finance system rests on strong institutional foundations and a credible, nationally owned platform for sustained delivery.

In parallel, Sierra Leone is deepening its engagement with key international readiness mechanisms, notably the **Green Climate Fund (GCF) readiness programme**, the **African Development Bank's Africa Climate Change Fund (ACCF)**, and the **UNDP NDC Implementation Support Programme**. These partnerships are now fully integrated into the country's national climate finance framework, reinforcing coherence between domestic institutions and international support systems. By aligning readiness efforts across these mechanisms, Sierra Leone ensures consistency in standards, accelerates access to concessional finance, and enhances coordination among technical and financial partners. Together, these advances affirm the Government's ability not only to mobilize resources but also to manage them effectively and transparently—demonstrating that Sierra Leone is well positioned to deliver on its NDC 3.0 objectives with both credibility and confidence.

1.2.4. Detailed Funding structure of measures and clusters of measures

Table 11: Mitigation Measures by Cluster: Needs (2025–2035) & Financing Instruments[2]

Measure & Cost (M USD)	Instrument Category	Component / Instrument	Amoun (M USD)	% of Total
Mini-grids	**Unconditional – Private**	Private Equity	18	10.7%
169	**Conditional – Public (Derisking)**	Capacity building	11	6.5%
		Concessional credit	40	23.7%
	Conditional – Private (Leveraging)	Private equity	10	5.9%

[2] Calculated by taking Capex, Opex for preparatory phase, and Opex for 5 years of phase 1

		RBF	10	5.9%
		Green bonds	80	47.3%
Commercial / Industrial PV	**Unconditional – Private**	Private Equity	10	8.4%
119		Private Debt	15	12.6%
	Conditional – Public (Derisking)	Grants	20	16.8%
		Private debt/equity	10	8.4%
	Conditional – Private (Leveraging)	RBF facilities	10	8.4%
		Green credit lines	25	21.0%
		Leasing structures	20	16.8%
		Carbon credit	9	7.6%
Solar Home Systems	**Unconditional – Private**	Pvt Equity	1	14.3%
7	**Conditional – Public (Derisking)**	Concessional guarantees	1	14.3%
		Grant towards concessionalising loans	1	14.3%
		Vendor equity/debt	1	14.3%
	Conditional – Private (Leveraging)	PAYGo receivables financing	1	14.3%
		Micro-loans	2	28.5%
Improved Cookstoves (Charcoal)	**Unconditional – Public**	Pro-poor vouchers	2	22.2%
9	**Conditional – Public (Derisking)**	Micro-loans & leasing	3	33.3%
	Conditional – Private (Leveraging)	Article 6 RBF	4	44.5%
Improved Cookstoves (Biomass)	**Unconditional – Public**	Pro-poor vouchers	2	20.0%
10	**Conditional – Public (Derisking)**	Donor grants	3	30.0%
	Conditional – Private (Leveraging)	Article 6 RBF	3	30.0%
		RBF per verified stove	2	20.0%
LPG	**Unconditional – Private**	Private marketer investment	8	17.0%
47	**Conditional – Public (Derisking)**	Concessional loans	10	21.3%
		Equity/Debt	9	19.1%
	Conditional – Private (Leveraging)	Consumer micro-finance	10	21.3%
		RBF incentives	10	21.3%
Biogas	**Unconditional – Private**	Equity	7	5.0%
140		Debt	14	10.0%
	Conditional – Public (Derisking)	Concessional credit	19	13.6%
		Guarantees	20	14.3%

		Grant	10	7.1%
	Conditional – Private (Leveraging)	Result-Based Funding	50	35.7%
		Carbon revenue	20	14.3%
E-buses	**Unconditional – Public**	Public procurement	10	25.0%
40	**Unconditional – Private**	Pvt Equity / Debt / Insurance	15	37.5%
	Conditional – Public (PPP; Leveraging)	PPP model (public-private capex/opex mix)	15	37.5%
E-kekeh	**Unconditional – Private**	Pvt Equity / Debt / Insurance	30	29.1%
103	**Conditional – Public (Derisking)**	Concessional credit lines	5	4.9%
	Conditional – Private (Leveraging)	Micro-leases	33	32.0%
		Fleet-as-a-service	25	24.3%
		Results-based payments	10	9.7%
Fuel Efficiency & Standards	**Unconditional – Public**	Budget	2	8.3%
24	**Conditional – Public (PPP/Derisking)**	Inspection fee revenues	5	20.8%
		Concessional/DFI support	7	29.2%
	Conditional – Private (Leveraging)	Carbon market Article 6	10	41.7%
Forestry & Mangroves (Total 159)	**Submodel 1 – (100) Conditional Private (100)**	Net-zero impact philanthropy & impact capital	100	62.9%
	Unconditional – Public	Budget	2	1.3%
	Unconditional – Private	Nat. environment funds	3	1.9%
	Conditional – Public (Derisking)	Grants	4	2.5%
	Conditional – Private (Leveraging)	REDD+	30	18.9%
		Green bonds	20	12.6%
Food System Transformation (Agroecology)	**Unconditional – Public**	Budget allocation	8	20.5%
39	**Unconditional – Private**	Private expenditure	5	12.8%
	Conditional – Public (Derisking)	Grants	2	5.1%
	Conditional – Private (Leveraging)	Green bonds	20	51.3%
		Carbon trade	4	10.3%
Waste Organics Diversion	**Unconditional – Public**	Municipal budgets	5	5.7%
88		User fees	28	31.9%
	Conditional – Public (Derisking)	Concessional/DFI loans	20	22.7%
	Conditional – Private (Leveraging)	RBF incentives	20	22.7%
		Carbon revenue financing	15	17.0%

Landfill Methane Management	**Unconditional – Public**	Municipal budgets	5	11.6%
		Landfill tipping fees	10	23.3%
43	**Conditional – Public (Derisking)**	Concessional/DFI loans	8	18.5%
	Conditional – Private (Leveraging)	Carbon finance	10	23.3%
		Private Insurance	10	23.3%
Cross-Cutting	**Conditional – Public (Capacity)**	Technical assistance	4	25.0%
16		Readiness GCF	12	75.0%
Policy Measures	**Conditional – Public (Capacity)**	Technical assistance	3	30.0%
10		Readiness GCF	7	70.0%

The same exercise for adaptation emasure, taking into consideration that they wil take palce over a period of ten years, 2025-2035, give the following table. Next section similarly makes strategic priorities for the span of time of this NDC: 2025-2030.

Table 12: Adaptation Measures by Cluster: Needs (2025–2035) & Potential Financing Instruments

Cluster Total & Cost (M USD)	Instrument Category	Component / Instrument	Amount (MUSD)	% of Cost
Agriculture & Food Security	Unconditional – Public	Output-based subsidies	50	9.4%
		Budget support	3	0.6%
	Unconditional – Private	Pvt Equity / Debt	40	7.5%
532	Conditional – (Derisking)	Bilateral Grants	50	9.4%
		Conc. Loans (grace period, long maturity)	150	28.2%
		MDB Insurance	22	4.1%
	Conditional – (Leveraging)	Green Bond	150	28.2%
		Agribusiness bonds	55	10.3%
Water & Coastal Management	Unconditional – Public	Budget	39	14.4%
	Unconditional – Private	NGOs	21	7.8%
270	Conditional – (Derisking)	Bilateral Grants	30	11.1%
		MDB concessional credit	90	33.3%
	Conditional – (Leveraging)	Blue Bond	60	22.2%
		Ecosystemic payments	20	7.4%
		ESG	10	3.7%
Health	Unconditional – Public	Budget	18	10.0%
	Unconditional – Private	NGOs	27	15.0%
180	Conditional – (Derisking)	UNICEF	20	11.1%
		Grants	50	27.8%
	Conditional – (Leveraging)	SDG Bond	20	11.1%

		RBF / Health Impact Schemes	18	10.0%
		Philanthropy	27	15.0%
Education	Unconditional – Public	Budget	12	15.0%
	Unconditional – Private	NGOs	6	7.5%
	Conditional – (Derisking)	Grants	10	12.5%
80		Concessional debt	16	20.0%
	Conditional – (Leveraging)	SDG Bonds	20	25.0%
		Debt Swap	10	12.5%
		Pvt ESG	6	7.5%
Infrastructure & Energy Resilience	Unconditional – Public	Budget	13	2.5%
		Tax	40	7.5%
530	Unconditional – Private	Equity (industrial)	20	3.8%
		ESG	10	1.9%
		Insurance	10	1.9%
		Private ESG	17	3.2%
	Conditional – (Derisking)	Grants	50	9.4%
		UN Habitat	50	9.4%
	Conditional – (Leveraging)	Urban resilient housing Bonds	120	22.6%
		GCF-MDB Loan syndication	200	37.7%
Forestry, Land Use & Ecosystems	Unconditional – Public	Budget	17	10.0%
	Unconditional – Private	ESG	25	14.7%
170	Conditional – (Derisking)	Parametric insurance	18	10.6%
		Bilateral Grant	15	8.8%
	Conditional – (Leveraging)	REDD+	45	26.5%
		Philanthropy	25	14.7%
		NGO Grants	25	14.7%
Disaster Risk Reduction & Early Warning	Unconditional – Public	Budget	16	15.0%
		Fee	5	4.7%
107	Unconditional – Private	Equity	4	3.7%
		Insurance	3	2.8%
		ESG	3	2.8%
	Conditional – (Derisking)	Grants, parametric insurance, contingent credit facilities	16	15.0%
	Conditional – (Leveraging)	SDG Bond	60	56.1%
Cross-cutting & Policy	Unconditional – Public	Budget	12	14.8%
	Unconditional – Private	NGOs	6	7.4%
81	Conditional – (Derisking)	Grants, technical assistance	30	37.0%
		GCF & Funds	10	12.3%
		RBF / Capacity Incentives	10	12.3%

	Conditional – (Leveraging)	ESG / Donor Pool	13	16.0%
TOTAL	**Unconditional – Public**		**225**	**11.5%**
1,950	**Unconditional – Private**		**175**	**9.0%**
	Conditional (Derisking)		**349**	**17.9%**
	Conditional (Leveraging)		**1,201**	**61.6%**

1.3 Innovative instruments

Sierra Leone's revised Nationally Determined Contribution (NDC3.0) sets ambitious mitigation and sustainable development targets for 2025–2035. Achieving these goals requires not only technical solutions and policy frameworks but also a robust climate finance roadmap that mobilizes public, private, and international resources.

The country faces specific challenges:

- High upfront investment needs for infrastructure-heavy sectors such as energy, transport, waste management, and forestry;
- A mix of revenue-generating and public-good interventions with varying bankability;
- Limited fiscal space, requiring government funds to be highly leveraged;
- A need to attract private sector investment while mitigating perceived risks;
- Opportunities to leverage international climate finance, concessional loans, carbon markets, and green/blue bonds.

To operationalize innovative finance, the Government of Sierra Leone has designated lead institutions for key instruments. The Ministry of Finance (MoF) will oversee sovereign green and blue bond issuance, ensuring alignment with fiscal policy and debt sustainability frameworks. The Environmental Protection Agency (EPA) will lead the development of carbon market mechanisms, including voluntary carbon markets and Article 6 readiness, building on ongoing GCF readiness support and the Commonwealth Climate Finance Access Hub. Public-Private Partnerships (PPPs) will be structured and managed by the Sierra Leone Revenue Authority (SLRA), the Ministry of Transport and Aviation (MTA), and the National Investment Bank (NIB), providing the legal, financial, and operational frameworks to attract private investment into infrastructure-heavy mitigation and adaptation measures.

Sierra Leone's participation in global climate finance readiness initiatives further strengthens the credibility and efficiency of its innovative finance instruments. Engagement with the GCF Readiness Programme on blended finance tools, technical assistance, and project preparation support ensures that both domestic and international capital are channeled to bankable, high-impact projects. Similarly, involvement in the Commonwealth Climate Finance Access Hub provides targeted support for structuring green bonds, accessing concessional debt, and leveraging private capital, building a pipeline of projects that are investment-ready and aligned with national priorities.

By clearly defining institutional responsibilities and linking each innovative instrument to established readiness programs, Sierra Leone ensures that its climate finance strategy is both credible and actionable, enabling the mobilization of diverse funding sources while maintaining strong oversight, transparency, and alignment with NDC3.0 targets.

Table 13: Governance of financial instruments monitoring and link with current readiness / technical assistance

Innovative Finance Instrument	Lead Institution(s)	Readiness / Technical Support
Sovereign Green / Blue Bonds	Ministry of Finance (MoF)	Commonwealth Climate Finance Access Hub; GCF Readiness on bond issuance
Carbon Market Mechanisms (Voluntary Carbon, Article 6)	Environmental Protection Agency (EPA)	GCF Readiness; technical assistance on carbon pricing and market infrastructure
Public-Private Partnerships (PPPs)	SLRA, Ministry of Transport and Aviation (MTA), National Investment Bank (NIB)	Legal & financial structuring support; blended finance advisory through GCF Readiness
Concessional Loans / Blended Finance	Ministry of Finance, MDBs	GCF Readiness; Commonwealth Climate Finance Access Hub guidance
Green / ESG-linked Private Equity & Debt	National Investment Bank, Private Sector Partners	Project preparation support via GCF Readiness; investor engagement platforms
Results-Based Finance (RBF)	EPA, Ministry of Finance	GCF Readiness; donor technical assistance on performance-based contracts
Microfinance & Household Finance	National Investment Bank, local MFIs	Capacity building via Commonwealth Climate Finance Access Hub; technical assistance on credit risk mitigation
Insurance & Parametric Instruments	National Insurance Commission, Private Insurers	GCF Readiness support for climate risk modeling and insurance frameworks
Technical Assistance & Capacity Building	EPA, Ministry of Finance, UN Agencies	GCF Readiness; UNDP NDC Implementation Support Programme; Commonwealth Hub advisory
Blended Bond Instruments (Urban, SDG, Agribusiness)	Ministry of Finance, National Investment Bank	Commonwealth Hub technical support; DFI advisory for issuance and structuring

1.3.1 The financial roadmap with the backdrop of the Climate Finance Strategy (2025) of Sierra Leone

The **July 2025 Sierra Leone Climate Finance Strategy** seeks to integrate climate finance into national development planning, promote a low-carbon and climate-resilient economy, and mobilize resources through blended finance and de-risking mechanisms, including the establishment of a **National Climate Finance Fund (NCFF)**, deployment of innovative financing instruments, debt-for-nature swaps, carbon credit mechanisms, and a strengthened policy and regulatory framework.

It has three priorities:

- ***Scaling direct investment in resilience and adaptation***, particularly in agriculture, water, urban infrastructure, and coastal protection. These areas offer high social and economic returns but are unlikely to attract private capital without public finance.

- ***Building a contingency financing architecture***, through pre-arranged, quick-disbursing instruments that provide liquidity following climate shocks. Instruments like catastrophe drawdowns, climate risk insurance can mitigate budgetary volatility and protect development gains.
- ***Derisking private sector investments*** through catalytic use of concessional finance. For instance, grant-based viability gap funding or offtake price guarantees can crowd in private capital for decentralized renewable energy, climate-smart agriculture, or nature-based tourism. Public finance can absorb risks that private actors cannot price or accept, making investments viable in the Sierra Leonean context.

It ambitions to **incorporate non-concessional and market-based instruments :**

- ***Green bonds and sustainability-linked loans (SLLs):*** These can be used to raise capital for climate-aligned infrastructure, especially when backed by a credible repayment stream or when issued by development finance institutions (DFIs) or state-owned enterprises (SOEs) rather than the central government. For now, these should be considered for future issuance via regional platforms or via blended structures that embed guarantees.
- ***Climate insurance and risk pooling:*** Sovereign risk insurance and parametric products can provide rapid liquidity in the event of climate disasters. Instruments such as the African Risk Capacity (ARC) offer parametric insurance products that can be pre-arranged, with disbursement triggered by defined climatic events. While the cost of premiums is a constraint, these can be subsidized or paid through concessional support.
- ***Sovereign guarantees and performance guarantees:*** Though constrained under current IMFIDA programs, such instruments can be deployed selectively and strategically in the future to enable large-scale public-private partnerships (PPPs) or blended infrastructure transactions. When used sparingly and transparently, such guarantees can unlock significant private capital.
- ***Carbon markets and results-based climate finance (RBCF):*** While nascent in Sierra Leone, participation in voluntary or compliance carbon markets (e.g., through jurisdictional REDD+ or blue carbon credits) could generate performance-based revenues over time. These flows are non-debt, but require investment in MRV systems, legal frameworks, and safeguards.

In the spirit of the July 2025 Sierra Leone Climate Finance Strategy, the finance roadmap for the NDC 3.0 aligns with its ambition to mobilize diverse instruments—including green bonds, sustainability-linked loans, climate insurance, sovereign guarantees, and carbon markets—to advance a low-carbon, climate-resilient economy. At the same time, the roadmap recognizes practical constraints and adopts a ground-anchored, phased approach. In the near term, it focuses on tools that are immediately deployable and credible: concessional finance, grants, public budgets and revenues, technical assistance, MDB scaling, results-based finance (RBF), and targeted private equity/debt supported by blended structures. Instruments that require further institutional and market readiness—such as sovereign guarantees, large-scale green/blue bonds issued by the central government, parametric climate insurance, and full-scale participation in voluntary or compliance carbon markets—are mobilized in a reasonable and credible manner, are incorporated as medium- to longer-term priorities, **to be activated once enabling frameworks, MRV systems are fully established.**
This sequencing, **arising from a dense consultation process with actors,** ensures that the roadmap stays faithful to the 2025 strategy's logic and ambition while maintaining feasibility, credibility, and investor confidence, gradually building Sierra Leone's innovative finance ecosystem.

In the table below, the **mitigation + adaptation** financing envelope has been allocated across eleven categories of instruments. Each category reflects the realities of the least developed country (LDC) context, drawing on the strengths of multilateral institutions, bilateral donors, DFIs, private capital, and domestic public resources.

Table 14: NDC3.0 financing envelope (mitigation + adaptation) breakup by categories of instruments

Instrument Group	Amount (M USD)	% of Total
Concessional finance, loans, guarantees	365	12.3%
Public budgets	304	10.2%
Grants, GCF & MDB funds, green credit lines & guarantees	639	21.5%
Bonds (Blue + Green, Urban + SDG, Agribusiness)	605	20.3%
Private equity, debt, ESG-linked & net-zero investments	394	13.2%
Carbon finance, REDD+, RBF	320	10.8%
Micro-finance, household finance, NGOs, philanthropy	241	8.1%
Insurance	106	3.6%

The roadmap approach integrates classical and innovative finance instruments, ensuring both stability and performance-driven mobilization of resources. **Classical finance instruments**, including concessional finance, grants, public budgets, and technical assistance, provide the backbone of the portfolio, accounting for **USD 1,308 million (44% of total)**. These instruments ensure predictability, policy alignment, and de-risking for high-capex and high-risk interventions. **Innovative finance instruments**, such as green bonds, private equity, ESG-linked investments, carbon markets, microfinance, insurance, and results-based finance, contribute **USD 1,666 million (56% of total)**, mobilizing private capital and linking financing to measurable performance outcomes.

- **Concessional finance, loans, and guarantees total USD 365 million (12% of total).**

Multilateral Development Banks (World Bank, AfDB, regional DFIs) provide the majority (~60%), offering long maturities, scale, and risk absorption. Regional DFIs and development banks contribute ~20%, with bilateral concessional facilities and export finance adding the remaining 20%. These instruments are critical for enabling bankable projects and attracting private sector participation.

- **Public budgets and revenue measures amount to USD 304 million (10%).**

The national government contributes approximately 70%, municipal or local budgets 20%, and earmarked taxes or service fees 10%. These flows underpin e-bus deployment, municipal waste management, and fiscal incentive schemes for climate-aligned measures.

- **Grants, GCF and MDB funds, and green credit lines/guarantees total USD 639 million (21%).**

Multilateral climate funds contribute about one-third, bilateral donors approximately 30%, and UN agencies, trust funds, municipal co-grants, and smaller philanthropic actors make up the remaining 37%. This financing supports early-stage project development, transaction cost coverage, and measurable climate and development outcomes.

- **Green bonds, urban/SDG bonds, and agribusiness bonds contribute USD 605 million (20%).**

DFIs and commercial banks are expected to provide half of these proceeds, sovereign and municipal issuances add ~30%, and blended finance or concessional support contributes 20%. These instruments are particularly suited for high-capex, creditworthy projects such as resilient housing, mini-grids, and forestry interventions.

- **Private equity, debt, ESG-linked and net-zero investments total USD 394 million (13%)**

Impact investors and private equity funds provide ~60%, DFIs contribute 25%, and corporates or strategic partners add 15%. These resources are directed toward commercially viable renewable energy, resilient agriculture, and infrastructure projects.

- **Carbon finance, REDD+ mechanisms, and RBF amount to USD 320 million (11%).**

Voluntary carbon market buyers supply ~50%, multilateral carbon facilities 20%, project-level monetization and private purchasers 20%, and national co-financing 10%. These instruments target forestry, landfill methane, and biogas interventions.

- **Micro-finance, household finance, NGOs, and philanthropy total USD 241 million (8%).**

Microfinance institutions provide 60%, DFIs and local intermediaries 25%, and donors or philanthropic actors 15%. These instruments support consumer-facing measures such as solar home systems, improved cookstoves, and water/sanitation initiatives.

- **Insurance instruments contribute USD 106 million (4%).**

These mechanisms provide risk coverage for both private and public sector interventions, including climate-resilient infrastructure and agricultural portfolios.

- **Finally, households and service delivery mechanisms, including fleet-as-a-service, account for USD 31 million (1%).**

These instruments ensure the financial sustainability of consumer-facing and municipal services.

1.3.2 Barriers, leveraging approach & innovative instruments - Mitigation

This section presents a **grouped approach** to financing Sierra Leone's mitigation measures (based on financial characteristics, revenue potential, risk profile, and investor interest. Grouping measures allows policymakers and financiers to design tailored strategies, maximize leverage, and prioritize interventions that can catalyze private investment while minimizing direct fiscal burden.

Mitigation Measures may be grouped as following towards distinct levers of Financing Strategy:

1. **Group 1 – Distributed RE (Mini-grids, Commercial / Industrial PV, Solar Home Systems)**
    - High CAPEX with strong potential for private investment.
    - Moderate risk; high leverage via blended finance.
    - Grants mainly for preparation, regulation, and access gaps.
2. **Cluster 2 – Clean Cooking (Improved Cookstoves, LPG, Biogas)**
    - Medium CAPEX, small-scale consumer devices (stoves, LPG kits, digesters).
    - Significant use of RBF, vouchers, and microfinance.
    - Carbon credit potential for biogas; grants target behavior change and tech adoption.
3. **Cluster 3 – Electric Transportation**
    - Capex-intensive; public-private service contracts.
    - PPPs reduce upfront public budget requirement.
    - Carbon revenues can help offset operational costs.
    - Mix of concessional debt and green bonds to minimize state burden.
    - Assurance instruments for risk reduction for private investors

4. **Cluster 4 – Land & Forest Carbon**
    - Long-term, ecosystem-based interventions.
    - High grant and results-based payments; lower private leverage.
    - REDD+/Article 6 mechanisms maximize finance without increasing state budget.
5. **Cluster 5 – Waste & Methane**
    - Mixed infrastructure and operational costs.
    - Carbon finance can cover ~25–30% of costs.
    - PPPs reduce upfront public budget requirement.
    - Assurance instruments for risk reduction for private investors

The above clusters lead to various leverage potential tehrefore leading to a preliminary selection of instruments as next two tables below show.

Table 15: Financial Analysis of mitigation cluster

Cluster & Measures	Relevance	Financing Strategy	De-risking Instruments
Decentralized & Distributed Renewable Energy: **Mini-grids, Commercial/Industrial PV, Solar Home Systems**	Provides reliable electricity to rural, peri-urban, and commercial consumers; generates bankable revenue streams	Private sector: Equity/debt from developers, EPCs, PAYGo vendors; International donors/DFIs: Concessional credit, grants, RBF; State: Regulatory enablement, site preparation, minor CAPEX; International markets: Green bonds, impact funds, carbon credit monetization	Guarantees, RBF, concessional debt, carbon credit monetization
Clean Cooking Transition: **Improved Cookstoves, LPG, Biogas**	Reduces firewood/charcoal use, improves health, lowers GHG emissions; partial revenue from households, MSMEs, institutions	Private sector: Manufacturer/distributor equity/debt, PAYGo/micro-leasing; International donors: Grants, RBF, technical assistance; State: Targeted subsidies, regulatory support; International markets: Carbon credits, green bonds	RBF per unit, microloans, consumer finance, concessional guarantees
Electric & Efficient Transport: **E-buses, E-kekeh, Fuel Efficiency & Standards**	Reduces diesel consumption and GHGs; provides operational savings; PPPs essential for high-CAPEX infrastructure	Private sector: Operators, leasing firms, charging infrastructure; State: Subsidies, route redesign, depot upgrades, enforcement; International donors/DFIs: Concessional loans, grants, technical assistance; International markets: Green bonds, carbon finance	Concessional loans, guarantees, PPAs, carbon credit monetization, leasing/fleet-as-a-service
Land & Forest / Blue Carbon: **Forestry and Mangroves**	Mitigation via carbon sequestration and methane reduction;	State: Enabling frameworks, land-use planning, community engagement; Private sector: Service delivery, nurseries, O&M,	Carbon credits, green/blue bonds, PPPs for

	ecosystem and community co-benefits	AD/compost operations; International donors/DFIs: Concessional finance, grants, technical assistance; International markets: Carbon credits, REDD+/Article 6 payments, green/blue bonds	service delivery, RBF
Waste & Methane Management: **Waste diversion, landfill methane management**	Reduces methane emissions, improves waste management; revenue mainly from contracted services	Private sector: Service providers; State: Subsidies, regulatory oversight; International donors/DFIs: Concessional loans, grants, technical assistance; International markets: Green bonds, carbon finance	RBF/Article 6 fees, readiness grants, private systems integration, micro-leasing where applicable

Table 16: Mitigation Target mix of funding by actors, by cluster

Cluster	% State	% Private	% Donor / DFIs	% Markets	Leverage	Key Finance Challenges	Carbon/ Green Bond Role	Revenue Potential
1. Decentralized & Distributed Renewable Energy	10–15	60–65	20–25	5–10	6–8x	Early-stage risk, regulatory certainty	Secondary	High
2. Clean Cooking Transition	10–15	35–40	40–50	5–10	3–5x	Partial affordability, behavior change	Moderate	Partial
3. Electric & Efficient Transport	20–25	40–50	25–30	5–10	4–6x	High upfront CAPEX, integration with energy/roads	Moderate	Moderate
4. Land & Forest Carbon/Blue Carbon	10–15	20–25	40–50	15–20	5–8x	Carbon project readiness, MRV systems	High	Low
5. Waste & Methane Management	20–25	40–50	25–30	5–10	4–6x	Coordination , adoption by sectors	Low	None

1.3.3 The Role of Innovative Finance in the Strategy for Mitigation

While concessional finance from MDBs and bilateral partners remains the backbone of this strategy, innovative finance instruments are deliberately embedded across measures to diversify sources and enhance sustainability. Roughly half of the overall envelope is expected to come from instruments beyond traditional grants and loans, reflecting both necessity and opportunity in an LDC context.

Green bonds and credit lines (USD 330 million) are used to mobilize institutional and commercial capital for creditworthy, higher-capex projects such as mini-grids, e-bus fleets, and forestry initiatives. By combining bond proceeds with concessional guarantees from the GCF and DFIs, these instruments make it possible to attract private and domestic savings that would otherwise not enter climate sectors.

Carbon finance and REDD+ revenues (USD 160 million) also constitute a significant share of the plan. These instruments shift part of the financing burden to performance-based payments for verified emission reductions, especially in forestry, biogas, and landfill methane projects. Though volatile, they provide long-term revenue streams that help close viability gaps and align national actions with global climate markets under Article 6.

Equally important is the reliance on **market-proximate mechanisms** such as micro-loans, PAYGo receivables, and fleet-as-a-service models (USD 94 million). These instruments directly engage households, micro-entrepreneurs, and vehicle operators, creating repayment structures aligned with income flows rather than upfront subsidies. Donor guarantees and first-loss facilities further lower the risks for lenders and leasing companies.

Public procurement and fiscal incentives remain critical, but they are carefully blended with private participation. For instance, e-bus programs combine capped public procurement with carbon finance and green bonds, while LPG access relies on private marketer investment matched with consumer microfinance and RBF incentives.

Overall, the strategy can be considered **hybrid in nature**: roughly half the resources are drawn from classical concessional grants and loans (USD 1,081 million), while the remainder explicitly leverages innovative finance—green bonds, carbon revenues, leasing, PPPs, and market-based consumer finance. This balance reflects the dual imperative of securing predictable concessional support while also embedding the transition toward sustainable, scalable financing mechanisms that can grow with market maturity.

The financing strategy for the 12 mitigation measures demonstrates a balanced hybrid approach. Classical instruments such as concessional loans, grants, public budgets, and technical assistance account for USD 1,081 million. These provide the predictable foundation needed in an LDC context, where affordability and institutional capacity remain major constraints.

At the same time, innovative finance mechanisms—green/blue bonds, carbon markets, impact investment, microfinance, leasing, and PPPs—sum to USD 1,893 million. Such instruments are specifically targeted toward commercially viable activities—mini-grids, mobility, forestry, waste-to-energy—and are designed to mobilize private participation, align repayment with revenue flows, and tap into global climate finance markets.

This proportion underscores that while concessional and grant-based finance is still indispensable, a substantial share of the strategy now rests on market-based and performance-linked tools. This shift reflects both the urgency of scaling finance and the opportunity to crowd in non-traditional partners, reducing reliance on limited grant resources over time.

Monitoring, Performance Metrics, and Pilot Integration

To ensure the effectiveness of the hybrid financing strategy, Sierra Leone will implement a robust monitoring and performance framework. Leveraged private capital will be tracked through co-financing ratios, disbursement reports, and portfolio-at-risk indicators for each instrument class. Green and climate-aligned investments will be classified and reported consistently in line with Sierra Leone's Sustainable Finance Taxonomy, currently being developed with the IFC.

Performance indicators will be tailored to instrument type: for green bonds and credit lines, mobilized private capital per unit of concessional support will be measured; for carbon finance and REDD+ mechanisms, MRV-compliant emissions reductions and verified carbon unit issuance will be tracked; for micro-loans, PAYGo receivables, and fleet-as-a-service models, repayment rates, adoption metrics, and impact on energy access or mobility will be monitored.

The strategy also builds on proven pilot initiatives to ground projections in real progress. Examples include e-mobility programs demonstrating fleet conversion and operational viability, clean cooking RBF projects validating repayment-linked subsidy structures, and early REDD+ interventions providing measurable carbon benefits while engaging communities. These pilots serve both as proof of concept and as benchmarks for scaling hybrid finance mechanisms across the NDC3.0 roadmap.

1.3.4 Barriers, Leveraging strategy & innovative instruments - Adaptation

De-risking is central to mobilizing capital for adaptation, particularly in least developed and climate-vulnerable contexts where private investors often perceive high uncertainty and limited returns. The objective is not only to reduce exposure to financial and operational risks, but also to create the enabling conditions that make adaptation projects bankable, scalable, and attractive for a mix of public and private partners.

Blended finance plays a catalytic role by deploying grants for early-stage infrastructure or pilot interventions, concessional loans for scale-up, and gradually drawing in private capital once confidence in the model has been established. Insurance products, especially parametric climate insurance, provide a safeguard for agriculture, infrastructure, and communities, ensuring resilience against climate shocks while improving creditworthiness.

Risk is further managed by aggregation—pooling smallholder farmers, cooperatives, or community-based assets—which not only lowers transaction costs but also strengthens collective bargaining power and financial viability. Results-based financing aligns incentives by linking disbursements directly to measurable adaptation outcomes, such as restored ecosystems, climate-resilient households, or improved health indicators.

Finally, guarantees, credit enhancements, and transaction platforms are critical instruments to unlock private participation. Donor or government guarantees reduce the perceived risk of default, while dedicated climate finance facilities support project origination, pipeline preparation, and accelerate approval processes. Together, these instruments form an integrated de-risking approach that transforms adaptation from a high-risk, low-return activity into an investable opportunity aligned with both development and climate resilience goals.

In practice, Sierra Leone's Disaster Risk Financing Strategy (DRFS) provides a national framework for anticipating, financing, and responding to climate-related shocks. Integrating DRFS instruments into the adaptation finance roadmap ensures that both public and private resources are deployed efficiently and predictably in the event of disasters, complementing blended finance and insurance-linked interventions.

The Ministry of Agriculture's weather-indexed insurance schemes offer a practical model for transferring climate risk from smallholder farmers to the financial sector. By linking payouts to objectively measured weather triggers, these instruments enhance the resilience of agricultural production, stabilize farmer incomes, and create a bankable portfolio for private insurers and lenders.

The National Insurance Commission plays a pivotal role in climate risk pooling and regulatory oversight, facilitating the development of parametric products, aggregation mechanisms, and multi-stakeholder risk-sharing arrangements. Aligning adaptation finance with these instruments strengthens the overall de-risking ecosystem, ensures readiness for insurance-linked and blended finance solutions, and enhances investor confidence in the Sierra Leonean context.

Table 17: Strategic objectives of each type of instrument for adaptation finance

Instrument	Strategic Objective
Blended Finance	Deploy grants for pilot interventions, concessional loans for scale-up, and progressively mobilize private capital; ensure alignment with DRFS and NDC priorities.
Insurance Products	Provide parametric climate insurance and weather-indexed products to safeguard agriculture, infrastructure, and communities; link payouts to verified climate events to stabilize incomes and creditworthiness.
Aggregation & Cooperatives	Pool smallholder farmers, cooperatives, and community-based assets to lower transaction costs, spread risk, and enhance financial viability; strengthen collective bargaining and bankability.
Results-Based Financing (RBF)	Tie disbursements to measurable adaptation outcomes such as restored ecosystems, climate-resilient households, or improved health and livelihood indicators; ensure transparency and accountability.
Guarantees & Credit Enhancements	Reduce perceived risk for private investors through government and donor backstops; enable participation of DFIs, commercial banks, and private sector actors in adaptation projects.
Transaction Platforms & Readiness Support	Facilitate project pipeline development, streamline approvals, provide technical assistance, and lower origination risk; align with GCF Readiness, DRFS, and National Climate Finance Fund processes.
Climate Risk Pooling & Regulatory Oversight	Utilize National Insurance Commission frameworks and DRFS mechanisms to aggregate risk across sectors and actors, enabling scalable insurance-linked and blended finance solutions.

Emulating the same principle of clusterisation as supra to indetify matching stratgeies to each cluster and constrasted strategies across clusters, the adaptation measures may be regrouped as such (with targeted donors earmarked to arrive at a derisking strategy for each measure culuster):

Table 18: Adaptation Measures – Focus on derisking strateyy, donors, DFIs and sources

Adaptation Cluster	Measures
AGRI	1. Climate-Smart Agriculture & Extension Scale-Up (CSA); 2. Irrigation & Water Harvesting; 3. Climate-Resilient Seed Systems & Post-Harvest Storage; 4. Climate-Resilient WASH / Water Supply
WATER	5. Integrated Watershed Management; 6. Coastal Resilience: Mangrove & Urban Flood Protection
HEALTH	7. Climate-Resilient Health Facilities 8. Climate-informed Disease Surveillance & Early Action; 9. Integrated Vector Management & Heat-Health Action Plans; 10. Environmental Health Management Action Plan
EDUCATION	11. Disaster and Climate Risk Management in Schools; 12. Climate-Resilient Infrastructure and Safe Access; 13. Climate and Environmental Education in Curricula and Teacher Training; 14. Greening School Communities and Operations; 15. Climate-Resilient Education System
INFRA	16. Infrastructure Resilience in Energy, Transmission; 17. Risk-informed Urban Planning & Safe Relocation; 18. Climate-Proofing Roads & Bridges; 19. Upgrading and Reinforcing Existing Industrial Infrastructure; 20. Landfill
FOREST & LU	21. Community Forestry & Co-managed Protected Areas; 22. Agroforestry & Climate-Smart Tree Crop Intensification; 23. Wetland & Mangrove Restoration (Cobenefit of Mitigation Measure)
DRR	24. National Multi-Hazard Early Warning System; 25. NDMA Capacity, Equipment & Emergency Logistics; 26. Community-Based DRM & Safe Infrastructure; 27. Strengthened Climate Observation and Early Warning Systems; 28. AI-based Climate and Weather Forecasting System for Resilient Development
CROSS-CUTTING & POLICY MEASURES	29. Integration of Human Rights-Based Approach (HRBA) into Climate Induced Disaster Recovery Programmes for Disproportionately Impacted Groups; 30. Adaptation MRV & Indicator Framework (cobenefit)
POLICY MEASURES	31. Climate Finance Mobilization & Project Pipeline Facility; 32. Local Government Capacity & Gender & Social Inclusion Mainstreaming; 33. Mainstreaming Child Protection in Climate Resilience Planning; 34. Energy Source Diversification (Solar, Hydropower) (cobenefit); 35. Climate-Resilient Infrastructure Policies in the Transport Sector; 36. Integrated Planning and Policy Development in the Transportation Sector; 37. Institutional Capacity Building in the Waste Sector; 38. Institutional Capacity Building in the IPPU Sector

Table 19: Adaptation clusters, de-risking and scaling instruments

Cluster	Rationale	Financing Mix: Instruments	De-risking/Structures
1. Climate-Smart Agriculture & Food Security	High interdependency between productivity, water, seeds; farmer-level interventions; rural livelihoods	**Instruments:** blended finance (grants + concessional loans), output-based subsidies, agricultural development bonds.	Guarantee/first-loss funds for farmers' uptake; insurance-linked products for drought/flood risk; aggregation via cooperatives reduces credit risk.
2. Water Resources & Coastal Management	Multi-level water and ecosystem management; public and community goods; natural infrastructure	**Instruments:** blended finance, green bonds, ecosystem service payments, grants for community engagement.	Payment-for-ecosystem-services (PES) schemes; risk guarantees for maintenance funds; long-term O&M contracts with output-based incentives.
3. Health System Resilience	Health facilities & surveillance, preventive interventions; synergy in public health infrastructure	**Instruments:** grants, results-based financing (RBF), concessional loans for facility upgrades.	RBF on health outcomes; insurance against infrastructure damage; pooling at district level reduces operational risk.
4. Infrastructure & Energy Resilience	Physical infrastructure + energy + transport; high capex, long-term benefits	**Instruments:** green/ESG bonds, concessional debt, blended finance (public-private partnerships), insurance-linked bonds.	Viability gap funding; government guarantees; insurance against climate events; PPPs for operational efficiency.
5. Urban Planning & Safe Relocation	Integrates land-use, hazard mapping, and relocation; social safeguards critical	**Instruments:** grants + concessional loans; municipal bonds; climate-resilient housing funds.	Social safeguards to reduce litigation; output-based grants for completed relocations; insurance for construction risks.
6. Forestry, Land Use & Ecosystem Services	Land-based adaptation, carbon sequestration, ecosystem services; strong co-benefits	**Instruments:** results-based finance, REDD+ credits, PES schemes, grants.	Carbon finance or PES as revenue guarantees; community contracts reduce operational risk; insurance against extreme events affecting plantations.
7. Disaster Risk Reduction & Early Warning	Synergies in hazard preparedness, community engagement, and response logistics	**Instruments:** grants, contingent credit facilities, parametric insurance. Catastrophe Bonds, Adaptation Fund, DFIs.	Contingent credit lines (Cat-DDO), parametric insurance for extreme events; results-based funding for community preparedness.
8. Policy, MRV, and Climate Finance	Cross-cutting enabling environment for adaptation; enhances governance & financing	**Instruments:** grants, technical assistance, capacity-building funds.	Output-based financing for reporting & capacity; multi-donor trust funds to pool resources; guarantees to catalyze private co-financing.

From this framework, two polar financing strategies emerge for consideration. The first is a MDB/GCF/concessional finance-centric model, which places a strong emphasis on multilateral climate funds and

concessional lending. This pathway is relatively safe and predictable, but it is also limited by the scale of available resources and may be subject to slower disbursement processes.
The second is an innovative finance-centric model, which mobilizes capital through instruments such as green bonds, results-based finance, payments for ecosystem services, and private investment. This approach is more dynamic, enabling faster capital flows and diversified risk-sharing, making it particularly suitable for large-scale infrastructure, coastal resilience, energy, and forestry programs.
Moblising this distinction gives for each measure a range of possiblities, from one to another model, as shown in tbale below.

In practice, a blended approach is often the most effective, combining concessional resources with innovative mechanisms. Such a balance ensures both financial stability and the flexibility to match national actors' absorption capacity and risk appetite.

1.3.5 The Role of Innovative Finance in the Strategy for Adaptation

Sierra Leone faces pressing adaptation challenges across agriculture, health, coastal zones, water management, and climate-resilient infrastructure. To meet these challenges effectively, the Government recognizes the critical role of innovative finance in complementing traditional concessional funding. These instruments enable the mobilization of resources at scale, diversify financial risk, and catalyze private sector participation in national adaptation efforts.

Anchoring Sectors with Concessional Support, grants and concessional loans from the Green Climate Fund (USD 310 million) provide the foundational financing for key sectors, including agriculture and health, ensuring the implementation of priority adaptation programs. These resources serve as a catalyst to attract additional public and private capital.

Mobilizing Scaled, Innovative Instruments

To address the magnitude of adaptation needs, Sierra Leone will actively leverage a suite of innovative financing mechanisms. **Green, Urban, and SDG Bonds** (total of USD 370 million) will co-finance resilient energy systems, hydropower, urban, health, education and climate-proofed transport infrastructure. **Blue bonds and payments for ecosystem services** (USD 80 million) will support watershed management, coastal resilience, mangrove restoration, and WASH services. **REDD+ and forest conservation finance,** (total USD 45 million) will strengthen community forestry, agroforestry, and carbon revenue streams. At the sovereign level, **debt-for-climate swaps** (USD 10 million) will convert debt obligations into dedicated investments in resilient infrastructure and energy diversification. **Results-based financing** instruments (USD 28 million) will link funding directly to measurable adaptation outcomes, including agricultural productivity, disaster risk management, urban planning, and climate-resilient health systems.

Enhancing Resilience and Risk Management

Parametric insurance (USD 46 million) will provide rapid liquidity for disaster response and early warning systems, reducing vulnerability to climate shocks. **Concessional and syndicated finance** (USD 456 million) will expand climate-resilient energy, transport, and water infrastructure, with public instruments strategically deployed to de-risk and crowd in private capital.

Strategic Objectives

Through this multi-layered financing approach, Sierra Leone seeks to:

- Maximize the mobilization of both public and private capital for adaptation.
- Align funding with measurable climate resilience outcomes.
- Diversify financial instruments to reduce reliance on concessional aid alone.
- Strengthen fiscal resilience while fostering long-term private sector engagement.

By integrating concessional and innovative finance, Sierra Leone will secure a sustainable, diversified financing framework to implement its national adaptation priorities, ensuring resilience, inclusivity, and long-term development impact.

1.4 Summary outputs of the Roadmap

The Investment Roadmap is structured around four strategic levers; this structuring aims to (i) deepen the existing relationship with donors through a programmatic approach, (ii) generate leverage, (iii) " originate " a channel of de-risked projects, (iv) fully mobilize current developments in global climate finance, both on the public and private or " blended " level:

Lever 1

Increased funding from public donors for climate actions that take into account gender and social inclusion

This lever aims to improve access to international public climate finance and involves (i) planning and investing resources to access climate funds, and (ii) generating high-quality financing proposals and adapting to the needs of the funds. The implementation of this lever 1 of the investment roadmap will achieve the following result 1: " Result 1. The diversification of public financing sources is sufficiently improved, allowing a substantial increase in climate investments"

Result 1 must be achieved through the implementation of the following actions:

- **Priority Action 1.1:** Diversify sources of climate finance accessible to Sierra Leone
- **Priority Action 1.2:** Increase access to international climate funds
- **Priority action 1.3:** Strengthen institutional capacities for effective climate action
- **Priority action 1.4:** Establish effective coordination between actors and strengthened MRV on climate financing and actions

Lever 2

Raising international green/blue bonds

This will involve researching innovative bonds and instruments on international markets. The implementation of this lever 2 of the investment roadmap will make it possible to achieve the following result 2: " Result 2: Raising green/blue bonds on the regional and international market following a taxonomy for Sierra Leone". The following actions will achieve this result 2:

- **Priority Action 2.1:** Operationalize a taxonomy of green and blue bonds
- **Priority action 2.2:** Issue green and blue bonds, and if possible prepare sustainable bonds, including youth and gender
- **Priority Action 2.3:** Carry out debt swaps for climate projects

Lever 3

Strengthening the use of innovative mixed climate finance instruments

This lever aims to mobilize the following financial instruments: (i) the mobilization of Climate Studies Fund, which is a project origination fund to enable the national private sector to access climate finance, and (i) Guarantees and international syndication.

The implementation of this lever 3 of the investment roadmap will make it possible to achieve the following result 3: “ Result 3: The performance of the use of innovative instruments for mobilizing mixed climate finance”

The achievement of this result 3 is conditioned by the implementation of the following actions leading to the various results below:

- **Priority Action 3.1:** Mobilize underutilized innovative climate funds
- **Priority action 3.2:** Operationalize and expand access to innovative funds (carbon and biodiversity markets, adaptation, climate risks, co -benefits)

Lever 4

Derisking the national private market to facilitate the mobilization of the private sector

This lever aims to mobilize the following financial **instruments : (i) traditional** de-risking tools (insurance, guarantees) or by " blending ", (ii) markets (credits/bonds) and innovative financing using the market (carbon credits, green or blue bonds), and (iii) financing towards the private sector with a national fund to be created or the support of a public agency to be identified and commercial banks. **Mixed public-private financing for the climate** must be considered, capitalizing on the role of public structures while involving the private sector initially through commercial banks.

The implementation of this lever 4 of the investment roadmap will make it possible to achieve the following result 4: " Result 4: the international and national public de-risking of the national private sector is ensured". This result 4 is conditioned by the achievement of the following actions leading to the various results below:

- Priority Action 4.1: mobilizing public money for blending finance through de-risking instruments for commercial banks
- Priority Action 4.2: Incentivize domestic private sector engagement to invest in gender-responsive climate actions.

Overall, blended public-private finance can be used for mixed projects that target mitigation and adaptation. Rather than just grants, they should be combined with loans and equity, particularly when supporting local climate-focused financial systems such as commercial banks and green banks. Equity, which can be leveraged, and loans are equally effective instruments used by a risk taker

Table 20: Portfolio of financial tools in 4 levers for Sierra Leone

Lever	Financial instruments
Lever 1: Diversify, Increase funding from public donors	Association of grants and concessional debt; climate and gender-sensitive labeling of the budget for all adaptation/mitigation projects.
Lever 2: Raise international green/blue/sustainable finance bonds	Bonds – programs and project portfolios; origination of projects, particularly adaptation or co -benefit projects; debt swaps.
Lever 3: International mixed financing	Guarantees, "first losses" for PPP projects, syndication; carbon credits.
Lever 4: Blended finance and de-risking of the national private market	Allocation of funds from the first 3 levers or taxes (carbon) or tax incentives to a de-risking fund (insurance instruments, equity) with a view to concessionalizing commercial loans, particularly mitigation loans.

These are in line with the international state of the art. Indeed, according to the OECD report (2023) *on green, social and sustainable bonds issued by multilateral development banks and their use for infrastructure financing* [3], it can be understood that, while there is some competition with the private sector on the issuance of green bonds, social bonds (relevant here insofar as they can encompass adaptation) and sustainable bonds are, on the contrary, more naturally the prerogative of States and development banks themselves, hence their increased relevance for Sierra Leone.

1.5 Sierra Leone Climate Finance Fund (SLCFF) operationalisation plan

1.5.1 Proposed Financial mechanisms for Infrastructural adaptation sectors

To operationalize Sierra Leone's adaptation priorities through innovative finance, the Government has identified two distinct sub-strategies aligned with sector-specific characteristics and capital requirements. Both sub-strategies build on the integrated de-risking framework, ensuring bankability, scalability, and private sector participation.

Sub-Strategy 1: Infrastructure Adaptation Sectors

Scope and Rationale: This sub-strategy focuses on climate-resilient physical infrastructure, energy systems, and urban planning interventions, including roads and bridges, transmission and dam systems, renewable energy (solar and hydropower), flood protection, and climate-informed urban planning. These sectors are characterized by high capital expenditure, long operational lifespans, and sensitivity to extreme weather events, requiring structured mechanisms to mobilize large-scale investment while mitigating financial and operational risk.

Financing Instruments: To address these challenges, the following innovative financing instruments will be deployed:

- **Green and ESG Bonds** to finance energy infrastructure, transport, and water systems.
- **Debt-for-Climate Swaps** to redirect debt obligations into domestic investments in resilient infrastructure and energy diversification.
- **Blended Finance and Public-Private Partnerships (PPPs)** to combine concessional funding with private capital and share operational risk.
- **Insurance-Linked Bonds and Parametric Insurance** to provide coverage against extreme climate events and strengthen investor confidence.

[3] https://one.oecd.org/document/DAF/CMF/AS(203)3/REV2/fr/pdf

- **Concessional Debt and Guarantees** to reduce perceived default risk and support project bankability.

<u>**De-Risking Mechanisms**</u>

- **Viability Gap Funding** ensures early-stage feasibility and investment readiness.
- **Government and Donor Guarantees** mitigate credit risk and enable private capital participation.
- **Insurance and Contingent Credit Lines** provide liquidity in response to climate shocks.
- **Transaction Platforms** streamline project origination and approvals.
- **Results-Based Financing (RBF)** links funding to measurable infrastructure outputs, such as kilometers of climate-proofed roads or megawatts of installed renewable capacity.

<u>**Strategic Objective**</u>

- This sub-strategy aims to **mobilize large-scale investment for resilient infrastructure**, diversify risk, and enable sustained private sector participation, ensuring that critical infrastructure and energy systems remain operational under future climate conditions.

Table 21: Indicative Resource Allocation - SLCFF

Instrument / Source	Amount (USD M)	Notes
Green Bonds	250	Energy, roads, water infrastructure
Debt-for-Climate Swaps	100	Infrastructure & energy diversification
PPP / Private Investments	200	Large-scale capital mobilization
Concessional Debt	152	DFI / MDB co-finance
Parametric Insurance / Contingent Credit	40	Disaster resilience & early warning

1.5.2 Proposed Financial mechanisms for Agriculture and Forestry

Sub-Strategy 2: Agriculture and Forestry

<u>**Scope and Rationale;**</u> This sub-strategy addresses distributed interventions in agriculture and forestry, including climate-smart agriculture, small-scale irrigation, climate-resilient seed systems, agroforestry, mangrove and wetland restoration, and community forestry initiatives. These sectors are highly dependent on local adoption, sensitive to climate variability, and provide direct co-benefits for livelihoods, food security, and ecosystem services.

<u>**Financing Instruments:**</u> Innovative financing mechanisms for agriculture and forestry include:

- **Blended Finance (Grants + Concessional Loans)** to pilot interventions, scale successful models, and leverage private capital.
- **Results-Based Financing / Impact Bonds** linking disbursements to outcomes such as hectares restored, crop yield improvements, or carbon credits generated.
- **REDD+ and Payments for Ecosystem Services (PES)** to monetize ecosystem and carbon benefits.
- **Parametric Insurance and First-Loss Guarantees** to protect smallholders and community cooperatives from climate shocks.
- **Aggregation via Cooperatives** to pool risks, reduce operational costs, and enhance financial viability.

De-Risking Mechanisms

- **Insurance-Linked Products** mitigate exposure to droughts, floods, and pest outbreaks.
- **Guarantees and First-Loss Funds** incentivize adoption of climate-smart technologies.
- **Aggregation and Cooperatives** strengthen credit access and reduce transaction costs.
- **Output-Based Subsidies and RBF** ensure adoption and verify measurable impacts.

Strategic Objective

This sub-strategy aims to **unlock private and blended finance for farmer- and community-level adaptation**, maximize adoption of climate-smart practices, and leverage ecosystem service and carbon payments to ensure long-term, sustainable impacts.

These two **sub-strategies** are complementary and sector-specific, providing a coherent framework for Sierra Leone's innovative finance-centric adaptation agenda. By aligning financial instruments, de-risking mechanisms, and measurable outcomes to sector characteristics, the Government seeks to ensure sustainable, scalable, and investable adaptation solutions.

Table 22: Comparative Dimensions of Strategic Finance for Adaptation

Dimension	Infrastructure Adaptation	Agriculture & Forestry
Scale & Capital	High-capex, long-lived assets	Small- to medium-scale, distributed interventions
Risk Profile	Exposure to extreme climate events	Production, adoption, and weather-related risks
Primary Instruments	Green/ESG bonds, PPPs, concessional debt, insurance-linked bonds	Blended finance, RBF, PES, REDD+, impact bonds, insurance/guarantees
De-Risking Emphasis	Viability gap funding, guarantees, insurance, PPP risk-sharing	First-loss guarantees, aggregation, insurance, output-based subsidies
Measurable Outcomes	Infrastructure functionality, energy resilience	Crop yields, hectares restored, carbon and ecosystem service metrics

1.6 Key Finance Strategy Takeaways

1. **Blended Finance Strategy:**
    - Applying a mix of grants, concessional credit, and private finance can fund Sierra Leone's NDC measures while minimizing direct state expenditure.
    - Leverage is highest in distributed renewable energy and transport electrification.
2. **Carbon Revenue Use:**
    - Biogas, forestry, and landfill methane projects offer tangible carbon credit streams.
    - Results-based finance (RBF) and Article 6 payments are essential to reduce state upfront contributions for land/forest interventions.
3. **Private Sector Engagement:**
    - Essential for distributed energy, SHS, EV transport, and clean cooking.
    - Structured instruments (microfinance, leasing, guarantees) reduce perceived risk and unlock participation.

4. **Group-Based Investment Prioritization:**
   - Groups 1 and 2: scale quickly with private participation and RBF support.
   - Groups 4 and 5: rely more on grants and carbon revenues, require careful MRV to capture results.
5. **MRV & Institutional Strengthening:**
   - ETF/MRV system is critical to track mitigation outcomes, finance flows, and carbon credits, enabling performance-based disbursements.

1.7 Financial Synthesis of a dedicated fund for Sierra Leone

A national fund, to curb the issues stated above, may be established to meet the needs of both public and private project leaders and the requirements of climate finance aimed at mitigating greenhouse gas emissions and/or adapting and building resilience to climate change.

Based on benchmark and feedback from similar funds with institutions in Africa and elsewhere, the core of the proposed financial investment roadmap ultimately rests on the idea of increasing leverage through successive aggregation of national and international partners, with an explicit mission to encourage origination of bankable projects, in phases.

Based on benchmark we suggest a breakdown of target actions and a "high" sizing which will depend on the support by the DEDICATED FUND to the financial partners of the sub-region and to the MDBs .

Table 23: Indicative targets for fund capitalisation

	Capitalization	Partners Leverage	Blended Finance
Phase 1 - 3 years	10-20 ME	1:2	No
Phase 2 - 3 years	25 ME	1:3	Depending on Interim assessment
Phase 3 - 3 years	30 ME	1:4	Yes

ANNEXURE – Assumptions, Needs & Gaps Analysis

Barriers Analysis

To reduce the knowledge gaps and experience required by the private sector, the government or development institutions may provide some incentives through concessions and exemptions. This set of private funding sources for NAP process can be utilized separately or it can be a combination of those to unlock private resources.

Financial instruments to mitigate business risk

The most used financial instruments in the private sector are those aimed at reducing the level of risk. The private sector needs to be funded to mitigate, and possibly keep to a minimum, the effects of transitional and physical risks that may arise from government policies and climate change. By funding their operations, all players in the private sector, large and small, will be able to contribute to the national adaptation process. These types of financial instruments include measures to ensure risks related to the nature of the business, to increase access to concessional financing through the issuance of loan guarantees, and to provide concessional financing in foreign currency to traders exposed to foreign exchange risk. Or use a combination of these tools.

> **Insurance:** The different types of insurance that local government and development actors can provide to enable or encourage private investment in developing countries. This may include political risk insurance, catastrophe or weather insurance. Such insurance can be provided through national public credit insurers and multilateral agencies such as the Multilateral Investment Guarantee Agency (MIGA). MIGA offers political risk insurance, directed at equity and debt investments, covering: (i) expropriation, (il) war and civil disturbance, (lil) currency inconvertibility and transfer, and (iv) breach of contract.
>
> **Blended finance**: Recently, blending is a key practice in the efforts to mobilize private resources for development. Blending refers to the practice of combining public development funds - grants, technical assistance or interest indemnification - with loans from public or private lenders.

Blended Finance can be used by the public sector to address several core fiscal challenges

- **Increasingly stressed sovereign public budgets and balance sheets** - Critical national and regional projects have traditionally been funded through direct government borrowing. However, public balance sheets are increasingly under pressure and cannot continue to meet increasing obligations that may harm their credit ratings and compromise future long-term borrowing while the need for infrastructure continues to grow. Blended Finance offers governments an opportunity to reduce the dependence on government debt and sovereign guarantees, helping to ensure that publicly available funds can be most effectively leveraged to access commercial debt and equity.

- **Risk-return profiles that are not competitive with developed markets** - Developing market returns tend to be attractive in the face of a low yield environment in most developed countries, but commercial financiers are reluctant to commit to transactions in less familiar markets due to real and perceived risks which inflate return expectations. Blended Finance provides governments with a framework to help align incentives and potentially reduce the risk premium through co-financing and co-investment, enabling more national projects to access private capital to proceed and accelerate development.

- **Lack of a pipeline of well-prepared and bankable projects** - Many priority projects in developing countries lack the adequate depth and breadth of preparation to fulfill the requirements of commercial investors. This threshold for "bankable" projects differs across industry sectors and investor profiles, requiring a degree of understanding of project preparation and structuring at the national planning level to attract investors. As noted by the development banking community, "the critical barrier to achieving an uplift in infrastructure investment in emerging and developing economies is not a lack of available finance but an insufficient pipeline of bankable projects ready to be implemented." Blended Finance can help ensure an appropriate alignment between national priorities and commercial financing early in the process, ensuring agency resources are deployed effectively and projects suitable for commercial funding can be prioritized and fast-tracked.

Financial instruments to address and eliminate the knowledge gaps

The private sector varies by nature, size and type of ownership. Whereas their financial and operational needs and participation level at NAP are also different. Business entities are always seeking a way to increase profitability in a competitive market. To increase their profitability, they need to continuously increase their knowledge and skills, and this needs to be funded.

Public Private Partnership (PPP): PPP originally rather narrowly defined, with key components being a public service, a private executioner, and the public and private partner pooling investment and sharing risks. The term PPP now stretches a variety of cross-sector collaborations that differ depending on the types of actors involved, the role division, the objective, and the operational modalities. PPPs may be important to promote private sector participation in adaptation actions, and therefore it is worthwhile to provide a fuller picture of what PPP entails:

PPPs are an agreement between the government and one or more private partners (which may include operators and financiers) according to which the private partners deliver a service, so the service delivery objectives of the government are aligned with the profit objective of the private partners and the effectiveness of the alignment depends on a sufficient transfer of risk to the private partners.

Some of the potential PPP advantages include:

- Under the right circumstances, PPPs can mobilize additional sources of funding and financing for infrastructure.
- By subjecting potential projects to the test of attracting private finance, PPPs can enhance project selection.
- The private sector's incentives can be aligned with the interests of the contracting authority throughout the project's life cycle, including the implementation phase. This alignment occurs by tying-in the private operator's revenue to a set of pre-agreed performance indicators and by requiring the latter to invest significant, long-term capital.
- The incentive framework embedded in PPP contracts can foster efficiency gains and those gains should outweigh the additional cost of private finance.

Impact Investment: Promoting socially responsible investment and impact investment is also important for developing countries to attract private capital. This type of investment seeks to maximize both financial return and social good, by avoiding harmful side effects of financial products or investments and by favoring investments that promote development.

Sustainable supply chain finance: It covers supply chain finance practices and techniques that integrate environmental, social and/or governance considerations intending to drive sustainable behaviors in global supply chains. Essentially, this method rewards suppliers for being sustainable for example, a supplier with good ESG performance could get better rates or terms than other suppliers or even gain access to a supply chain program in the first place. The programs are typically led by the corporate buyers and are implemented as a tool to incentivize a more sustainable supply chain.[4]

Output-based AID /Pays for performance/: Another way to trigger private involvement in climate change adaptation activities is through output-based aid. This refers to strategies that link the delivery of public services in developing countries to targeted performance-related subsidies. The service provider will receive subsidies to replace costs associated with providing the service to people, such as user fees. Individual agents will verify that the service is being delivered and based on the performance of the service provider, a subsidy will be granted. It is being used to support both the supply side - providers of finance - and demand side - actors seeking financing - to lower transaction costs, incentivize entry into new sectors, and/or directly offset the higher cost of capital. In some projects, it is even being used as a form of blended capital to adjust the risk-return balance for finance providers.

Development impact bonds inspired by social impact bonds would also be a form of output-based aid, but in this case, the private sector would fund and implement a public development programme and be remunerated depending on the outcome of the programme by the third party. Advance market mobilisation is also an important path in the form of agreements to guarantee a price or market for a product upon its successful development, to mitigate uncertainty in building products/markets initially used to encourage vaccine production.

Match-making: Common tool to address the knowledge gap is match–making. Development actors and governments manage match-making facilities that aim to link donor country business to partner country business. The main goal can be to connect possible business partners, but some matchmaking initiatives are about business-to-business (B2B) technical assistance, with entrepreneurs from developed countries providing expertise to capacity constraint enterprises in developing countries. Attempts to connect different private actors can take a very practical form, with development actors funding the development and implementation of a tool to address the problem. For example, subsidizing the creation of green IT solutions to link companies across boundaries could fit the picture.

Enabling Conditions Across All Strategies:

The following essential factors are required across all the strategies and action plan to facilitate the successful implementation and effectiveness of various strategies and plans:

1. **Policy & Regulation**
    - Establish adaptation finance frameworks, subsidies, and tax incentives for green investments.
2. **Institutional Mechanisms**
    - Strengthen Climate Finance Units in agriculture, water, and energy ministries.
3. **Monitoring & Tracking**
    - Use Adaptation Finance Tracking Tools (FFT, SAM, GEL, etc.) to ensure accountability.
4. **Capacity Development**
    - Train financial institutions on climate risk and adaptation investment appraisal.

[4] BSR (2018). Win-Win: sustainable supply chain Finance Opportunity.

Needs on priority measures – Analysis for Adaptation

Key Notes on Innovative Instruments

1. **Green & Blue Bonds:** Raise capital for water, WASH, coastal resilience, and energy/infrastructure; market-based, can attract institutional investors.
2. **Debt-for-Climate Swaps:** Redeploy part of sovereign debt service for domestic climate investments (particularly infrastructure and energy).
3. **Results-Based Finance (RBF):** Effective for agriculture, health, forestry, and MRV capacity; funds are released on verified outcomes.
4. **Parametric Insurance:** Catastrophe-linked or climate index-based for disasters and infrastructure; quick payout for early response.
5. **REDD+/Forest Conservation Finance & PES:** Monetize carbon sequestration and ecosystem services to finance forestry, agroforestry, and wetland restoration.
6. **Blended Finance:** Combination of grants, concessional loans, and private capital reduces risk while leveraging scale.

Summary of Innovative Financing Instruments

1. **Green/Blue Bonds:** Infrastructure, water, energy, and urban resilience.
2. **Results-Based Finance (RBF):** Agriculture, health, MRV, forestry.
3. **REDD+/Forest Conservation Finance & PES:** Forestry, wetlands, mangroves.
4. **Parametric / Catastrophe Insurance:** DRR, infrastructure, energy.
5. **Debt-for-Climate Swap:** Infrastructure and energy resilience.
6. **Blended Finance:** Combining grants, concessional loans, and private investment to scale.

Legend / Financing Notes

- **RBF:** Results-Based Finance, tied to verified outcomes.
- **REDD+/PES:** Forest carbon and ecosystem services payments.
- **Green / Blue Bonds:** Raise capital from investors for climate infrastructure or water projects.
- **Parametric Insurance:** Payouts triggered by climate indices (floods, droughts, storms).
- **Debt-for-Climate Swap:** Debt service diverted to domestic climate investments.
- **PPP / Private Investment:** Risk-sharing with private partners for large infrastructure projects.
- **Blended Finance:** Grants + concessional loans + private capital to scale interventions.

Table 24: RESPECTIVE TARGETS FOR CTORS CONTRIBUTIONS TO ADAPTATION FINANCE (in %)
(source: consultations workshops)

				Contributing share (%)		
MEASURE	**MEASURE**	**COST**	**GOVT**	**DOM PVT**	**INT PVT**	**PARTNERS**
1	Climate-Smart Agriculture & Extension Scale-Up (CSA)	132	10	10	10	70
2	Irrigation & Water Harvesting	180	10	5	15	70
3	Climate-Resilient Seed Systems & Post-Harvest Storage	120	10	10	10	70
4	Climate-Resilient WASH / Water Supply	100	10	5	15	70
5	Integrated Watershed Management	120	20	5	5	70
6	Coastal Resilience: Mangrove & Urban Flood Protection	150	10	10	0	80
7	Climate-Resilient Health Facilities	75	10	15	15	60
8	Climate-informed Disease Surveillance & Early Action	30	10	15	15	60
9	Integrated Vector Management & Heat-Health Action Plans	45	10	15	15	60
10	Environmental health management Action Plan	30	10	15	15	60
11	Disaster and Climate Risk Management in Schools	10	15	5	10	70
12	Climate-Resilient Infrastructure and Safe Access	20	15	5	10	70
13	Climate and Environmental Education in Curricula and Teacher Training	10	15	5	10	70
14	Greening School Communities and Operations	10	15	5	10	70
15	Climate-resilient ediucation system	30	15	10	5	70

16	Infrastructure Resilience in Energy, Transmission	200	10	10	0	80
17	Risk-informed Urban Planning & Safe Relocation	50	10	10	5	75
18	Climate-Proofing Roads & Bridges	200	10	5	5	80
19	Upgrading and reinforcing existing industrial infrastructure	40	5	10	5	80
20	Landfill	40	15	0	5	80
21	Community Forestry & Co-managed Protected Areas	80	10	20	20	50
22	Agroforestry & Climate-Smart Tree Crop Intensification	90	10	10	30	50
23	Wetland & Mangrove Restoration (Cobenefit of Mitigation Measure)	0	5	5	30	60
24	National Multi-Hazard Early Warning System	40	15	15	0	70
25	NDMA Capacity, Equipment & Emergency Logistics	35	30	0	0	70
26	Community-Based DRM & Safe Infrastructure	20	15	15	0	70
27	Strenghtened Climate Observation and Early Warning Systems	5	15	15	0	70
28	AI-based Climate and Weather Forecasting System for Resilient Development	6,5	15	15	0	70
29	Integration of Human Rights-Based Approach (HRBA) into Climate Induced Disaster Recovery Programmes for Disproportionately Impacted Groups	35	25	10	15	50
30	Adaptation MRV & Indicator Framework (cobenefit)	0	30	0	20	50
31	Climate Finance Mobilization & Project Pipeline Facility	18	15	15	20	50

32	Local Government Capacity & Gender & Social Inclusion Mainstreaming	18	0	0	20	80
33	Mainstreaming child protection in climate resilience planning	2	30	0	20	50
34	Energy Source Diversification (Solar, Hydropower) (cobenefit)	0	0	0	0	100
35	Climate-Resilient Infrastructure Policies Policies in the Transport sector	2	0	0	0	100
36	Integrated Planning and Policy Development in the Transportation Sector	2	0	0	0	100
37	Institutional Capacity building in the Waste Sector	2	0	0	0	100
38	Institutional Capacity building in the IPPU sector	2	0	0	0	100

Overview of adaptation measures dual models for funding

Here it is important to test two models – a classical funding type and an innovative finance one. Adaptation model 1 serves as BAU; Adaptation model 2 as target for innovative finance.

◆ Model 1: GCF-MDB Centric Financing

Assumptions:

- GCF provides up to ~40% of total climate adaptation financing
- Bilateral grants, IFIs, and concessional loans cover the rest.
- Some instruments like RBF, bonds, and insurance complement.

Instrument / Source	Notes
GCF Grants / Concessional Loans	Main anchor fund; supports priority sectors like Agri, WASH, Health, Forestry
Bilateral Grants (EU, Germany, USAID, etc.)	For co-financing Agri, WASH, DRM, Health
IFIs / World Bank / AfDB Concessional Debt	Infrastructure, roads, energy, watershed management
RBF / Results-based Instruments	Agri, Forestry, Health outcomes-based payments
Green / Blue Bonds (Private / Municipal)	Energy, water, coastal resilience
REDD+ / PES / Forest Conservation Finance	Forestry and ecosystem services
Parametric / Climate Insurance	DRM and early warning
Private / PPP Investments	Minimal; leveraged through IFIs

◆ Model 2: Innovative Finance-Centric

Assumptions:

- Use more market instruments: green/blue bonds, RBF, insurance, forest finance, debt swaps.
- GCF provides smaller share (~15%)
- Reduce reliance on traditional grants and IFI debt.

Instrument / Source	Notes
GCF Grants / Concessional Loans	Anchor for critical sectors (Agri, Health)
Green Bonds (Energy, Roads, Infrastructure)	Solar, hydropower, resilient roads
Blue Bonds / PES (Water, Coastal, Mangroves)	Watershed, coastal resilience, WASH
REDD+ / Forest Conservation Finance	Community forestry, agroforestry
Debt-for-Climate / Sovereign Swap	Infrastructure resilience and energy diversification
RBF / Results-based Instruments	Health, Agri, DRM, urban planning outcomes-based payments
Parametric Insurance / Contingent Credit	DRM, early warning, disaster readiness
Private / PPP Investments	Leverage for energy, roads, and WASH infrastructure

We propose to target model 2 as much as possible; model 1 serving as a backup for funding attempt, should model 2 not avail across some measures.

Needs on priority measures – Analysis for Mitigation

Final Aggregates (2025–2030) for Mitigation

This section is based on the **grouped approach** of mitigation measures described above.

Group 1: Decentralized & Distributed Renewable Energy

Measures included: Mini-grids, Commercial/Industrial PV, Solar Home Systems (SHS)
De-risking instruments: Guarantees, RBF, concessional debt, carbon credit monetization.

Group 2: Clean Cooking Transition

Measures included: Improved Cookstoves (ICS), LPG, Biogas
De-risking instruments: Results-based financing per stove or biogas unit, microloans, consumer finance, VAT/tax relief, concessional guarantees.

Group 3: Electric & Efficient Transport

Measures included: E-buses, E-kekeh (electric tricycles), Fuel Efficiency & Standards
De-risking instruments: Concessional loans, guarantees, PPAs, carbon credit monetization.

Group 4: Land & Forest Carbon / Blue Carbon

Measures included: Forestry & Mangroves
De-risking instruments: Carbon credits, green/blue bonds, PPPs for service delivery.

Group 5: Waste & Methane Management

Measures included: Waste Management Organics Diversion, Landfill Methane Management
De-risking instruments: RBF/Article 6 fees, readiness grants, private systems integration.

- **Total CAPEX: US$ 324 – 393 million**
- **Total OPEX OVER THE PERIOD : US$ 72.7 – 132.4 million**

Methodology

Capex and Opex figures were collected for 2025–2035, for each measure. We aggregated CAPEX and OPEX into a single 10-year financial need.

Financing Instruments Design is based on technical characteristics, risk profile, and private sector feasibility:

- **Grants / Results-Based Finance (RBF)**
- **Concessional Credit**
- **Private Equity / Debt**

When a range was provided, Mid-point values were used for ranges to the sum of **Capex + 10 years Opex** per measure..

Aggregation into Groups: Measures were clustered into **5 groups** according to similarity in technology, scale, and funding patterns.

MEASURE	CAPEX 2025–2026	CAPEX 2026–2030	CAPEX 2031–2035	OPEX 2025–2026	OPEX 2026–2030	OPEX 2031–2035
Mini-grids	3,5	75	75	0,3	1,25	1,75
Commercial/Industrial PV	1,5	80	30	0,3	0,75	0,75
Solar Home Systems	0,75	1	0,2	0,5	0,5	0,5
Improved Cookstoves	1,15	6	3	0,15	0,8	1
LPG	1,25	17,5	17,5	0,4	1	1
Biogas	0	40	100	0	0	0
E-buses	2	16	16	0,15	0,6	0,6
E-kekeh	1,5	45	45	0,15	1,15	1,15
Fuel efficiency & standards	10,15	2,25	3	1,55	0,65	0,8
Forestry & Mangroves	8	40	55	0,8	4	7
Food Systems transformation (Agroecology)	3,5	9	12,5	0,35	0,9	1,85
Waste Organics Diversion	2,25	35	11,5	0,4	6	1,85
Landfill Methane Mgmt	1,5	21	4,5	0,3	2,4	0,65
Cross-Cutting — ETF/MRV System Strengthening		10	6,5			
CAPEX TOTAL	**37**	**398**	**380**		**OPEX TOTAL**	
815					**209**	

MEASURE	COST 2025-2030	COST 2031-2035	TOTAL ROUNDED
Mini-grids	85,05	83,75	169
Commercial/ Industrial PV	85,55	33,75	119
Solar Home Systems	4,75	2,7	7
Improved Cookstoves (ICS)	11,3	8	19
LPG	24,15	22,5	47
Biogas	40	100	140
E-buses	21,15	19	40
E-kekeh	52,4	50,75	103
Fuel efficiency & standards	17,2	7	24
Forestry & Mangroves	68,8	90	159
Food Systems transformation (Agroecology)	17,35	21,75	39
Waste Organics Diversion	67,65	20,75	88
Landfill Methane Mgmt	34,8	7,75	43
Cross-Cutting — ETF/MRV System Strengthening	10	6,5	16
Policy Measures			10
TOTAL	**540**	**474**	**1024**


UNITY FREEDOM JUSTICE
EPA-SL
ENVIRONMENT PROTECTION AGENCY