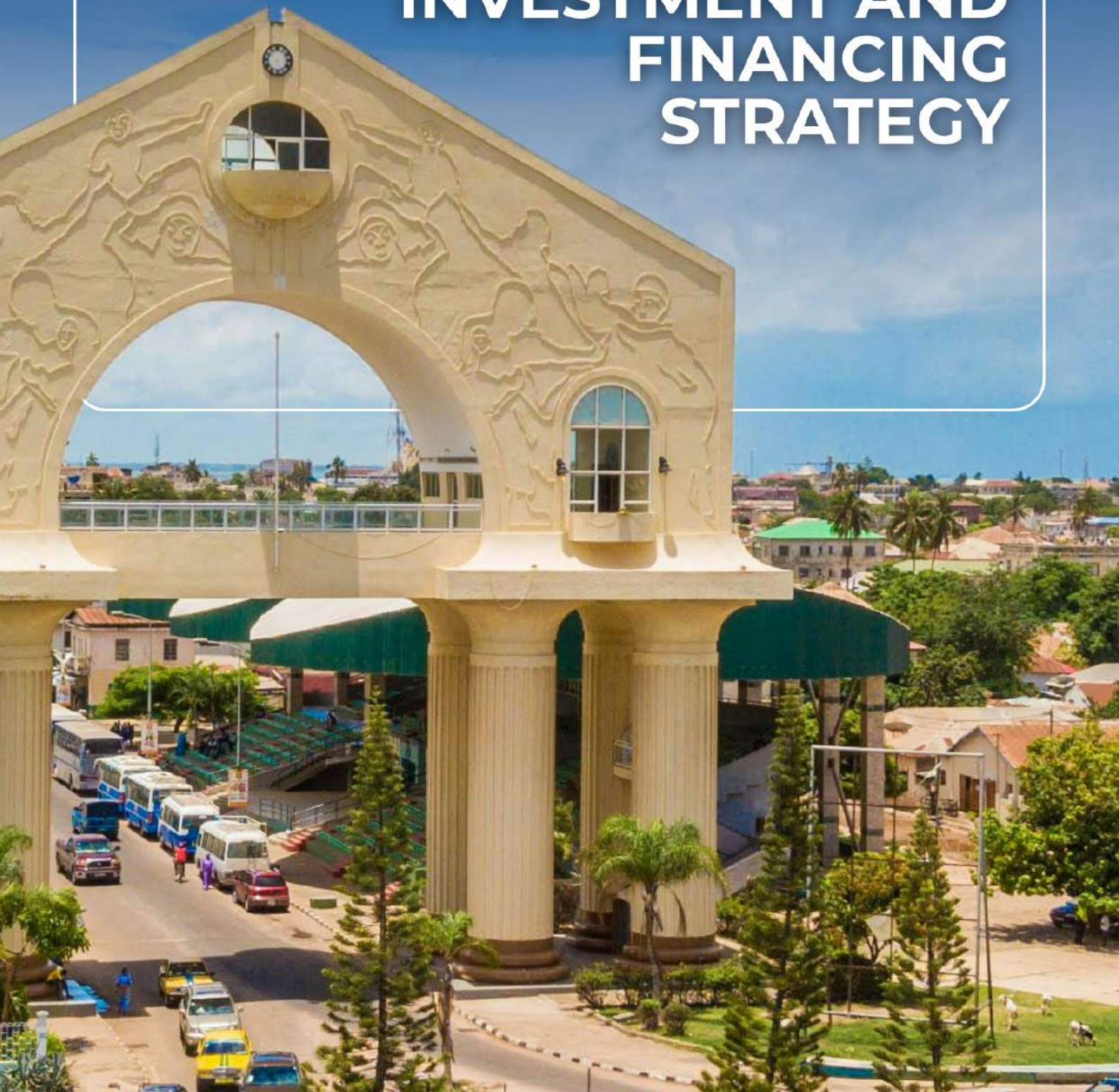
CVF V20 | CLIMATE VULNERABLE FORUM | VULNERABLE TWENTY GROUP

THE GAMBIA CLIMATE PROSPERITY INVESTMENT AND FINANCING STRATEGY



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FOREWORD

Foreword

The Government of The Gambia is pleased to present the Climate Prosperity Investment and Financing Strategy, a national framework designed to align climate action with economic transformation, fiscal resilience, and long-term prosperity for our people.

The Gambia, like many small and climate-vulnerable economies, is navigating an increasingly complex global environment. In recent years, the world has faced a convergence ofcrises—climate change, geopolitical tensions, tightening financial conditions, disruptions to global trade, and volatility in food and energy markets. These shocks are felt most acutely in countries whose economies are deeply integrated into global supply chains and whose development trajectories depend on stable access to affordable imports and capital.

For The Gambia, these global uncertainties intersect with domestic structural realities. Our economy remains heavily dependent on imported staple foods, fuel and industrial inputs. When international prices rise or supply chains are disrupted, the resulting pressures on the balance of payments, foreign exchange reserves and fiscal space are immediate and profound. At the same time, climate change is intensifying risks to agriculture, coastal infrastructure, tourism, water resources, and public health. Floods, droughts and saltwater intrusion not only affect livelihoods and ecosystems, but they also create fiscal pressures and reduce our capacity to respond effectively to economic and environmental shocks. These realities demand a new development approach one that recognises that climate resilience and economic prosperity must advance together.

The Climate Prosperity Investment and Financing Strategy represents The Gambia's response to this challenge. Rather than viewing climate action solely as a cost or a compliance obligation, this Strategy places climate resilience at the centre of economic planning and investment. It consolidates our national climate commitments, development priorities and sector strategies into a single investment framework designed to mobilise capital, strengthen macroeconomic stability and unlock sustainable growth.

A central feature of this Strategy is the creation of a coherent national pipeline of priority investments, coordinated under the leadership of the Ministry of Finance and Economic Affairs in collaboration with key sector Ministries,

agencies, and development partners. By bringing together projects across agriculture, energy, industry, coastal protection, urban resilience, and nature-based solutions within one framework, the Strategy addresses a long-standing challenge: the fragmentation of climate and development financing.

Through this integrated approach, The Gambia can more effectively leverage catalytic public finance—including grants, concessional resources, guarantees, and risk-sharing instruments—to crowd in private investment and reduce the cost of capital. Clear prioritisation of projects and financing instruments enables us to direct resources toward initiatives that generate the greatest economic, social and environmental dividends.

Importantly, the Strategy is grounded in rigorous analytical evidence. The Green Economy Model for Climate Prosperity Plans (GEM-CPP) provides macroeconomic simulations and cost-benefit analysis that inform national decision-making and guide the sequencing of investments. This evidence-based approach strengthens our ability to manage external financing inflows responsibly while ensuring that climate investments contribute to fiscal stability, job creation and long-term development outcomes.

The Strategy also recognises that The Gambia's economic future cannot be viewed in isolation. Our geographic position along the West African coast offers significant opportunities to strengthen regional trade and cooperation. By linking climate-resilient infrastructure, renewable energy systems, agro-processing industries, and sustainable industrial zones with regional markets under ECOWAS and the African Continental Free Trade Area, The Gambia can position itself as a gateway for sustainable trade and investment within the region.

The Government of The Gambia remains committed to working with our citizens, private sector partners, development institutions and the international community to translate this Strategy into tangible investments and transformative outcomes.

Together, we can turn climate vulnerability into an opportunity for sustainable growth and shared prosperity.

Honourable Seedy K.M. KEITA
Minister of Finance and Economic Affairs
Republic of The Gambia

ACKNOWLEDGEMENTS

Acknowledgements

The Ministry of Finance and Economic Affairs extends its sincere appreciation to all institutions and individuals who contributed to the preparation of the Gambia Climate Prosperity Investment and Financing Strategy. The development of this Strategy reflects a collaborative national effort to strengthen The Gambia's capacity to align climate action with economic transformation, fiscal resilience, and sustainable development.

The Ministry expresses its gratitude to the Honourable Minister of Finance and Economic Affairs for his leadership and strategic guidance throughout the preparation of this framework. We also acknowledge the valuable contributions of the Ministry of Environment, Climate Change and Natural Resources, as well as other sector Ministries, Departments, and national stakeholders whose expertise and insights helped shape this Strategy.

Special recognition is extended to the Climate Finance Directorate of the Ministry of Finance and Economic Affairs for its leadership and for coordinating the development of this Strategy. The Directorate played a central role in bringing together sector Ministries, technical experts, and development partners to consolidate national priorities, develop the investment framework, and ensure coherence across climate and development financing initiatives. The Directorate will continue to play a pivotal role in supporting the Ministry in coordinating implementation, mobilising climate finance, and managing the national climate investment pipeline under this Strategy.

We further acknowledge the technical partnership of the Climate Vulnerable Forum—V20 Secretariat, whose collaboration and analytical support contributed to the development of the Climate Prosperity Plan approach and the application of the Green Economy Model for Climate Prosperity Plans, thereby strengthening the evidence base for investment prioritisation and policy decision-making.

As the lead coordinating institution for this Strategy, the Ministry of Finance and Economic Affairs remains committed to working closely with all stakeholders to translate this framework into concrete investments and measurable outcomes.

The Ministry looks forward to continued collaboration with national and international partners as we advance The Gambia's pathway toward climate-resilient growth, economic transformation, and shared prosperity for all Gambians.

Mod A.K. SECKA
Permanent Secretary
Ministry of Finance and Economic Affairs
Republic of The Gambia

EXECUTIVE SUMMARY

Executive Summary

The Gambia's Climate Prosperity Investment and Financing Strategy provides a national roadmap to shift the country from climate vulnerability to a resilient, inclusive, and competitive economy. Anchored in NDC-2, The Gambia`s Long-Term Climate-Neutral Development Strategy 2050, and national sectoral plans, it unifies adaptation, food security, energy security, green industrialisation, environmental protection, macro-stability, and sustainable finance into a coherent investment architecture. The Strategy responds to intensifying climate and economic pressures, coastal erosion, saltwater intrusion, flooding, heat stress, high borrowing costs, and fragmented climate finance, by positioning climate resilience as a core driver of long-term prosperity. As a 2025–2050 framework, the Strategy will be executed through medium-term implementation plans that are updated periodically to reflect evolving economic conditions, investment priorities, and emerging climate impacts.

A central organising feature is the clustering of keystone projects under each strategic aim to create coherent, investable programmes. Climate-smart agriculture is advanced through Agro-Ecological Resilience Clusters, a Groundnut and Staple Crop Quality Programme, the Integrated Livestock Climate Adaptation Programme, and biochar-based soil restoration systems. Renewable energy and transport transitions are driven by the National Renewable Energy and Storage Programme, Clean Cooking Acceleration Initiative, Mini-Grid Expansion, the Eastern Backbone Transmission, and biogas systems. Sustainable industrialisation is shaped around Industrial Parks, Cooling Efficiency and HFC Substitution, Green Cement, and national industrial standards. Nature-based solutions are mobilised through coastal restoration, mangrove regeneration, eco-tourism networks, living shorelines, and inland re-greening. Urban resilience emerges through waste-to-energy, circular-economy hubs, water and wastewater upgrades, and improved drainage in the Greater Banjul Area.

Delivering these ambitions requires substantial capital, far beyond public resources alone. The Strategy explicitly recognises that private finance must become a major engine of investment, and that concessional and catalytic capital such as grants, first-loss equity, guarantees, and risk-sharing facilities, is essential to reduce the cost of capital, correct the mismatch between real and perceived risk, and crowd in long-term private participation. The CPP therefore embeds de-risking tools such as political risk insurance, partial credit guarantees, viability-gap funding, performance-based payments, and structured FX hedging where feasible. It further promotes regional cooperation, leveraging the West Africa Power Pool for more affordable energy imports,

exploring future solar exports, and working through OMVG and the Senegalo-Mauritanian Aquifer Basin mechanisms for shared water security, flowing benefits, and cross-border resilience.

A three-phase financing approach sequences these investments in line with fiscal constraints and market readiness. Phase 1 (2025–2030) prioritises stability and grant-led acceleration under the IMF Extended Credit Facility and the newly approved IMF Resilience and Sustainability Facility, which supports climate-aligned reforms and strengthens climate-informed public financial management. With no non-concessional borrowing allowed, Phase 1 focuses on grants, equity, guarantees, carbon finance, and technical assistance, launching a USD 100 million Revolving Project Preparation Fund and bringing more than 20 keystone projects to feasibility. Phase 1 deepens carbon-market readiness, strengthens MRV systems, expands disaster-risk financing, and accelerates MSME and youth enterprise participation.

The Strategy also incorporates a comprehensive risk-management system. Climate and disaster-risk financing and insurance instruments, including ARC facilities, sovereign risk pools, adaptive social protection, and market-wide insurance for agriculture and MSMEs to reduce vulnerability to shocks and create rapid liquidity after extreme events. The Fund for Responding to Loss and Damage (FRLD) provides a dedicated channel for addressing climate-induced losses in agriculture, infrastructure, and livelihoods, complementing risk-sharing instruments that lower sovereign and private-sector exposure. By integrating risk financing into the investment strategy, the CPP reduces volatility, safeguards development gains, and improves investor confidence.

Phase 2 (2030–2040) scales concessional and blended finance for large-infrastructure investments across energy, water, agriculture, coastal systems, mobility, and industrial parks, while integrating domestic capital markets, pension funds, and banks. Phase 3 (2040–2050) deepens private participation through carbon-revenue recycling, sustainable bond markets, asset-backed green securitisation, and broader regional trade and energy integration.

Implementation is coordinated through a government-led Country Platform, chaired by the Ministry of Finance and co-chaired by the Ministry of Environment, with sector clusters, Area Councils, academia, civil society, youth and women's groups. A digital climate-finance and results-tracking platform, integrated with IFMIS, improves transparency and investment discipline, while the Gambia Climate Change Fund aligns financing flows with national priorities.

Results from the Green Economy Model of the CPP show significant gains: poverty declines from 35.8% to 16.7% by 2050; creating more that 25 thousand

green jobs of which 14 thousands are in sustainable agriculture; the national energy bill falls from 6% to under 1% of GDP; agricultural emissions drop by 81%; and resilience strengthens across food systems, coasts, water, industry, and cities. By clustering keystone projects, lowering the cost of capital, mitigating risk, mobilising private finance, and embedding disaster-risk financing and loss-and-damage solutions, The Gambia charts a credible pathway to a more resilient, inclusive, and prosperous future.

INTRODUCTION

Introduction

The Gambia's Climate Prosperity Investment and Financing Strategy is designed as a multi-phase adaptation-focused national investment and technology access framework that recognises that the country's prosperity hinges on its capacity to withstand and thrive in the face of climate shocks. Given The Gambia's acute exposure to coastal flooding, drought, saltwater intrusion, and extreme heat, the Strategy prioritises adaptation and resilience as the primary drivers of investment, job creation, and economic stability. Although The Gambia's emissions are increasing, its total emissions are only 0.016% of global GHG emissions.[1] Consistent with the country's NDC-2 commitments, The Gambia will continue to implement mitigation actions where they reinforce resilience, strengthen energy security, and deliver co-benefits in health (cleaner air, fewer respiratory illnesses and reduced heat stress); and ecosystem services such as improved soil and productivity from agroforestry, flood regulation from wetland conservation etc.

The Strategy, which positions economic, social, climate, health, and environmental objectives within a unified investment framework will:

- Prioritise growth-guided climate and development investments, technology transfer and new jobs generation, while lowering climate fiscal risk.
- Accelerate adaptation responses to climate-induced health and labour productivity risks[2].
- Position climate resilience-building as a catalyst for industrial transformation, food sovereignty, and trade competitiveness. This includes green economic development zones (GEZs) that are net-zero-compatible and climate resilient in order to:

  (i) support export-oriented growth and boost trade competitiveness.
  (ii) co-design robust policies that attract foreign and domestic investment; and
  (iii) map supply and value-chain expansion to enable sustainable, inclusive industrial development and targeted financing.

- Unlock new forms of capital through lower transaction costs, faster disbursements, and more responsive financing solutions, including the strategic use of carbon finance and strengthened policy coherence.

[1] https://1p5ndc-pathways.climateanalytics.org/countries/the-gambia/current-situation?utm_source=chatgpt.com

[2] Drawing from ILO findings, which show that heat stress could result in the loss of up to 2% of total working hours globally by 2030 - particularly in agriculture and construction - the strategy prioritizes early warning systems, shade and cooling technologies, and labour protections to safeguard productivity, human capital, and economic resilience in climate-vulnerable sectors.

- Strengthen the regulatory environment through green taxonomies, standards, and policy reforms to make sustainable investment the default rather than the exception.
- Develop climate and disaster-risk financing and insurance solutions, ensuring that vulnerable households, farmers, and enterprises have pre-arranged financial protection against shocks.
- Empower national institutions and MSMEs with early-stage capital and first-loss guarantees, recognising their central role in economic resilience.
- Co-develop innovative financing instruments, including access to carbon markets, debt-for-climate and debt-for-resilience swaps, Payments for Adaptation Benefits (PAB), and cross-border capital-market mobilisation.
- Build and accelerate capacity in domestic financial markets, including through the proposed National Development Bank, to mobilise private capital and drive sustainable development.
- Co-develop innovative financing solutions, including fair access to carbon markets, debt-for-climate/ resilience swaps, payments for adaptation benefits, and leveraging capital markets across borders.
- Build and accelerate capacity for local financial markets into national investment plans and open an opportunity for a National Development Bank to mobilize domestic private capital and drive sustainable development.

Moreover, the Strategy seeks to shift from fragmented coordination to mission-driven, government-led platforms that crowd in capital, pool resources, and align financing with national priorities. The objective is not merely to attract more finance, but to deploy capital more effectively.

To achieve these goals within current fiscal constraints, the Strategy adopts a phased financing approach. This sequencing allows The Gambia to front-load grants, equity, and guarantees during the IMF programme period while strengthening institutions and building a credible pipeline, before progressively scaling concessional and private capital as project readiness and market confidence deepen. This approach is fully aligned with the country's Debt Sustainability Analysis (DSA) and the IMF-supported programme, ensuring strict adherence to the zero non-concessional borrowing ceiling in the early years and responsible expansion of concessional borrowing as fiscal space improves.

At the heart of implementation is the private sector and community participation. National institutions and partners can crowd in private finance by building credible, investable pipelines, supported by guarantees and structured de-

risking. This includes improving the regulatory environment and enabling blended finance approaches that make participation viable for commercial actors.

The Strategy aims to expand access to upstream project-development support while serving as a credible interface between government and investors. In parallel, it will leverage international and regional trade frameworks, such as ECOWAS, AfCFTA, and other trade corridors to attract financing and foreign-exchange inflows.

By linking emerging industrial and agro-processing parks to market-access mechanisms, The Gambia can enhance export competitiveness, diversify revenue sources, and strengthen investor confidence in the bankability of CPP projects. Its success will depend not only on institutional architecture, but on the government's leadership and ability to shape markets, drive reforms, and catalyse private investment.

Cost of capital remains high due to foreign-exchange volatility, the mismatch between real and perceived risk, inadequate global safety nets, limited use of guarantees, and systemic distortions in global credit ratings. These factors inflate the cost of debt financing, as evidenced in the GEMS Risk Database.

Achieving lower financing costs requires long-term, affordable capital from multilateral institutions that is priced below the medium-term GDP growth rate, coupled with strong public–private partnerships to prepare bankable projects. Such investments send clear market signals that improve risk perception and gradually reduce the overall cost of capital.

Key interventions include improving data systems to reduce perceived risk, establishing a national green taxonomy, mobilising catalytic capital, deploying hedging mechanisms, and deepening domestic capital markets to broaden the investor base. Scaling impact-finance vehicles and project-aggregation SPVs will further accelerate capital mobilisation for climate-resilient growth.

The Gambia Climate Prosperity Investment and Financing Strategy is aligned with, and operationalises, the World Bank's Country Climate and Development Report (CCDR) for The Gambia. While the CCDR provides a high-level diagnostic of climate-related macroeconomic risks and long-term investment needs, the GEM-CPP translates these considerations into investment-led growth pathways, linking climate risks, value-engineering and green industrialization opportunities, economic structure, and fiscal realities to a sequenced pipeline of bankable investments and financing instruments. Accordingly, this Strategy advances the CCDR's diagnostic findings into an actionable investment and financing framework designed to mobilise private capital at scale, leverage catalytic public finance, and deliver climate-resilient growth through implementable projects and programmes, delivery platforms, and market-enabling instruments.

Women and youth are central to The Gambia's social and economic fabric, forming the majority of the agricultural labour force, the informal economy, and emerging green enterprise sectors. Recognising this, the Strategy embeds gender equality and youth empowerment as foundational enablers of climate-resilient prosperity. Their inclusion ensures that the transition to a low-carbon, climate-resilient economy delivers equitable access to finance, jobs, skills, and decision-making.

Women and youth are therefore presented not only as beneficiaries but as innovators, entrepreneurs, and agents of transformation whose leadership will drive inclusive, climate-resilient prosperity.

CONTEXT

Context

The Strategy is formulated against the backdrop of a deepening polycrisis, a convergence of economic, climatic, and geopolitical shocks in an increasingly fragmented global environment. These overlapping crises have exposed structural weaknesses in global financial governance and underscored the urgency for countries like The Gambia to strengthen domestic resilience through coordinated national mechanisms.

Despite relatively modest default-spread estimates (e.g. 4% - 6% in some country-risk datasets), The Gambia faces borrowing costs aligned with elevated risk premiums reflecting systemic distortions in credit ratings. This persistent mismatch between real and perceived risk discourages private investment and significantly constrains fiscal space for climate-resilient development. At the same time, declining Official Development Assistance (9-17% drop in net ODA in 2025)[3] flows and tighter global liquidity conditions heighten the need to mobilize innovative concessional and blended-finance instruments that can de-risk climate-aligned investments.

Climate Vulnerability and Geographic Exposure

Situated along the West African coast, The Gambia, a Least Developed Country (LDC) with a population of about 2.4 million, is among the most climate-vulnerable nations in the world. Its low-lying topography and geographic location make it particularly susceptible to sea-level rise, coastal erosion, saltwater intrusion, drought, and flooding. According to the Intergovernmental Panel on Climate Change (IPCC, AR6 WGII), The Gambia is among the top ten countries globally most vulnerable to sea-level rise and coastal erosion, and one of the top 100 most climate-vulnerable countries overall.

In recent years, extreme weather events, floods, droughts, and storms, have increased in both frequency and intensity, damaging critical infrastructure, displacing communities, threatening food security, and undermining tourism revenues. This convergence of climate-related shocks exposes the interconnected nature of The Gambia's economic, social, and environmental risks.

Ecosystem degradation and coastal vulnerability: As highlighted by the Intergovernmental Panel on Climate Change (IPCC) in its Sixth Assessment Report (AR6), "The Gambia's coastal zone, consisting of 80 km of open ocean coast and 200 km sheltered coast, is prone to flooding and erosion. The predicted sea level rise threatens to inundate Banjul and its port, groundwater resources and ecosystems." These impacts threaten the livelihoods dependent on tourism and fisheries, and harm biodiversity. Wetland and mangrove degradation weakens natural flood defences, reduces carbon-sequestration capacity, and threatens essential infrastructure in

[3] https://www.oecd.org/en/publications/2025/06/cuts-in-official-development-assistance_e161f0c5/full-report.html?

economically strategic regions such as Banjul.

Fragility in the Agriculture Sector: Although agriculture remains the backbone of The Gambia's economy and employs a significant portion of the rural population, climate-induced stresses like erratic rainfall, higher temperatures, droughts and floods threaten crop yields and livestock productivity, while saltwater intrusion endangers rice production in low lying areas. as well as other major Gambian crops such as millet, sorghum, groundnuts and maize. These stressors increase poverty and food insecurity risks especially with approximately 75% of the poor and 91% of the extremely poor being farmers.[4]

The Gambia remains heavily dependent on imported staple goods such as rice, sugar, flour, edible oil, and onions, which exposes the economy to price shocks, currency fluctuations, and supply chain disruptions. This reliance also represents a missed opportunity for domestic value creation and employment. Reducing import dependency through climate-smart domestic production and processing, such as expanding irrigated horticulture, oilseed processing, and grain milling capacity, can strengthen food sovereignty, retain foreign exchange, and reduce emissions associated with long-distance transport.

Subsequent sections of this Strategy outline how targeted investments in irrigation, climate-smart technologies, agro-processing zones, and resilient value-chain systems can deliver these outcomes.

Limited industrial capacity: The Gambia's small industrial base constrains economic diversification and value addition, with most exports remaining in raw or semi-processed form. Weak infrastructure, unreliable energy, limited finance, and skills shortages keep manufacturing underdeveloped and uncompetitive. Strategic investment in climate-resilient infrastructure, affordable energy, and workforce skills is vital to unlock industrial growth and enhance regional competitiveness.

Urban Environmental Challenges (Water, Waste and Sanitation): With an urban population growth rate of about 3.2% annually, and currently over 65% of the total population living in urban areas, rapid urbanisation in The Gambia has significantly increased waste generation and placed pressure on urban environmental management systems. This rapid growth, especially concentrated in areas like Greater Banjul, leads to acute challenges such as unmanaged waste disposal, low recycling rates, and insufficient wastewater treatment, which degrade urban living conditions and heighten vulnerability to climate-related hazards.

These pressures intersect with climate risks and result in flooding from extreme rainfall events, which is

[4] Newhouse, D. L., & Touray, S. (2022). The Gambia Poverty and Gender Assessment 2022: Securing a Robust and Inclusive Recovery. World Bank.

often worsened by blocked drains and unmanaged waste, while heat stress in densely built environments strains public health and infrastructure. Unmanaged dumpsites produce rising methane emissions, contributing to greenhouse gas accumulation, and the potential to contaminate water sources during floods.

Concurrently, over-extraction of groundwater to meet growing urban and industrial demand threatens long-term water security, a situation exacerbated by weak regulation and enforcement around water resources. This overuse also increases the risk of saltwater intrusion in coastal aquifers, undermining both urban and peri-urban water supplies.

Policy Initiatives

Recognizing these challenges, the Government of The Gambia has launched several policy initiatives to enhance climate resilience and steer the nation toward a low-carbon, climate-resilient pathway. Chief among these is The Gambia's Second Nationally Determined Contribution (NDC2), which reaffirms The Gambia's commitment to ambitious emission reductions consistent with a 1.5°C global warming threshold. The NDC2 underscores urgent adaptation needs in coastal protection, agriculture, water resources, energy, transport, and tourism. It estimates that adaptation costs a total of USD 315 million by 2046.

In response to these challenges, the Government of The Gambia has introduced several policy reforms to strengthen climate resilience and steer the country toward a low-carbon development pathway. The Gambia's Second Nationally Determined Contribution (NDC2) reaffirms ambitious 1.5°C-aligned emission-reduction targets and underscores urgent adaptation needs across coastal protection, agriculture, water resources, energy, transport, and tourism, with estimated adaptation costs of USD 315 million by 2046.

Complementing this, the 2050 Climate Vision, the Long-Term Strategy (LTS), and sectoral master plans provide a coherent national framework for climate-resilient growth. This Climate Prosperity Investment and Financing Strategy builds on these foundations by shifting from fragmented projects to a coordinated, investment-led system that prioritises adaptation, resilience, and sustainable economic growth.

Rather than viewing climate interventions solely as costs, the Strategy adopts a "prosperity-through-climate-action" lens, prioritizing renewable energy, climate-smart agriculture, resilient infrastructure, and green industrialisation as engines of future GDP growth, job creation, and poverty reduction.

The Gambia seeks to mobilize long-term, affordable financing for critical climate investments. By integrating adaptation and mitigation targets outlined in the NDC with a robust financing architecture, The Gambia

aims to demonstrate to its stakeholders that it has a cohesive roadmap for utilizing climate finance in ways that both enhance macroeconomic stability and reduce climate-related vulnerabilities.

The Gambia's Climate Finance Landscape

The Gambia has attracted USD 737 million in climate-related development finance during 2013-2022, with inflows peaking at USD 180 million in 2015. Between 2018 and 2022 alone, USD 377 million was mobilised. Between 2018 and 2022 alone, USD 377 million was mobilised.

However, climate finance remains fragmented. It is channelled through multiple ministries, agencies, and development partners without a unified national framework.

This fragmentation reduces efficiency, limits catalytic impact, and impedes scaling. To address this, The Gambia is establishing a national Climate Finance Framework anchored in the proposed Gambia Climate Change Fund (GCCF), housed under the Ministry of Finance and Economic Affairs.

This mechanism will align, coordinate, and scale domestic and international climate-finance flows toward high-impact, nationally owned investment pipelines.

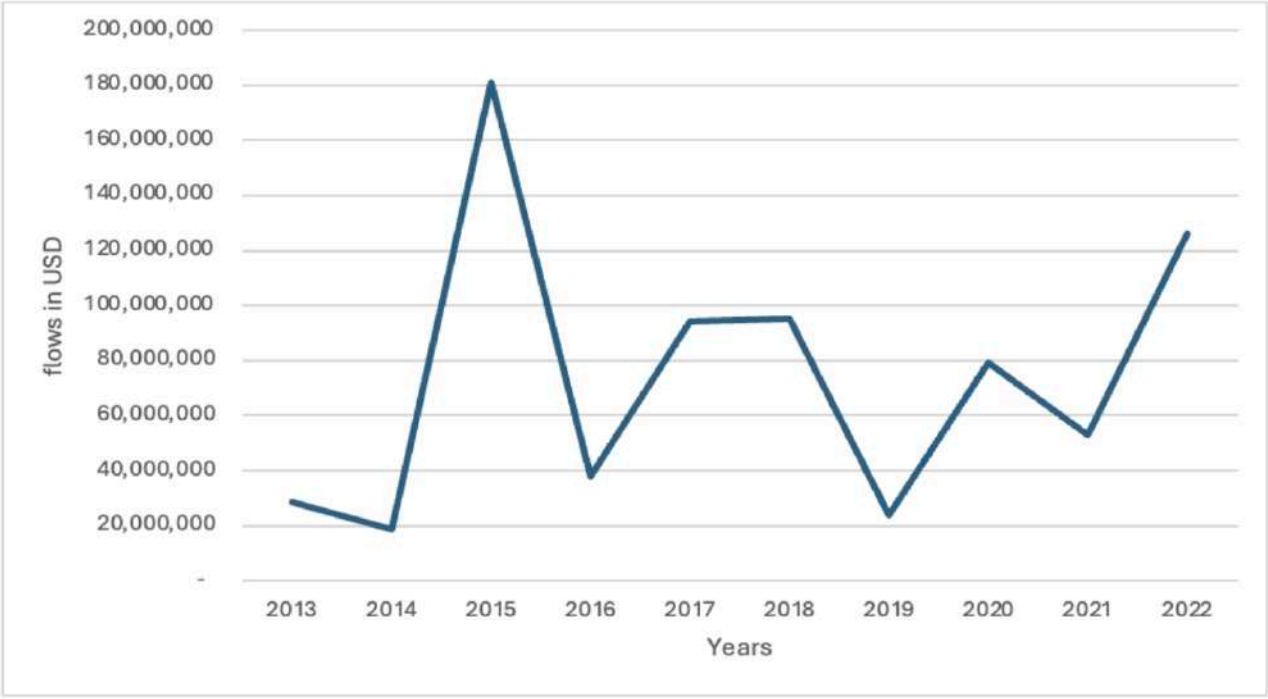


Figure 1: Funding trends over the last 10 years.

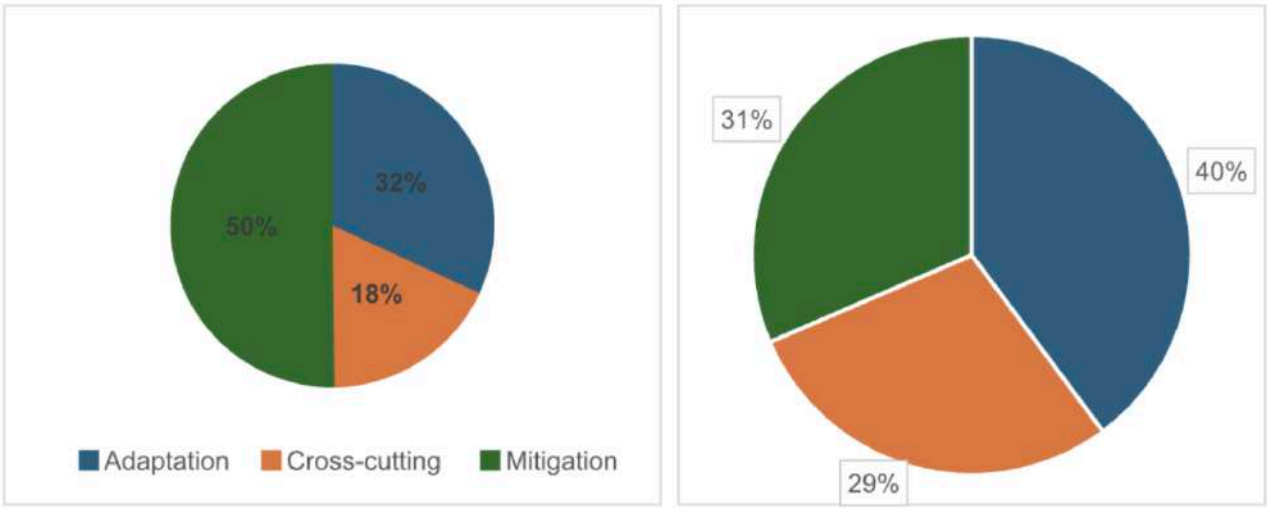


Figure 3: (a) Percentage flows by climate action category and (b) by number of projects (2013-2022).

Over the most recent five-year period (2018–2022), The Gambia mobilized approximately USD 377 million in international climate finance, with 2022 alone accounting for USD 125 million. This uptick in 2022 was partially spurred by a USD 47 million grant from the International Development Association for multi-hazard response preparedness. Despite these relatively strong inflows, climate finance remains skewed toward mitigation (50% of total flows from 2013 to 2022), whereas adaptation funding, though critical for The Gambia's resilience, accounts for roughly 32%.

While these inflows demonstrate some international confidence, they are not yet governed by a single national framework for climate finance coordination. Current funding remains largely fragmented and project-based, channelled through multiple ministries, agencies, and development partners without an overarching mechanism to align priorities, track results, or ensure complementarity. This lack of coordination reduces efficiency and limits the ability to scale transformative investments. Recognizing this gap, The Gambia is establishing a national Climate Finance Framework anchored in the proposed Gambia Climate Change Fund (GCCF) under the Ministry of Finance and Economic Affairs. This mechanism will serve as a conduit for both domestic and international resources, directing flows to high-impact, country-owned pipelines aligned with the NDC and the 2050 Climate Vision.

Climate Finance Needs and Estimates:

The Gambia's climate finance requirements are substantial, reflecting the scale of its climate vulnerabilities and ambitions. The second NDC (NDC2), submitted in 2021, outlines a comprehensive implementation plan for 2021-2030 with an estimated cost of USD 315.85 million. This figure covers adaptation and mitigation activities across critical sectors,

including energy, agriculture, forestry, water, waste, and infrastructure.

Given its limited domestic resources, The Gambia relies heavily on international climate finance. Key sources include:

Multilateral and Bilateral Donors: The Green Climate Fund (GCF) supports projects like the Climate Resilient Fishery Initiative (PROREFISH Gambia), a $25 million six-year initiative, which was designed with the assistance of the FAO, was to benefit approximately 168,000 people who depend on the fisheries value chain.[5] The project was designed to strengthen climate-resilience for the Gambia's fishery communities who are particularly vulnerable to sea-level rise and climate stressors.

In May 2025 the World Bank approved $52.6 million in financing for The Gambia to improve transport and energy infrastructure access in select areas and strengthen institutional capacity for service delivery. The project focuses on building climate-resilient infrastructure while supporting the country's ambitious goals of universal energy access and improved rural connectivity.

The European Investment Bank (EIB) co-finances renewable energy initiatives, contributing to the same solar projects.

Other funds include the Least Developed Countries Fund (LDCF), Adaptation Fund (AF), Special Climate Change Fund (SCCF), and Climate Investment Funds (CIFs), with subregional support from the African Development Bank (AfDB).

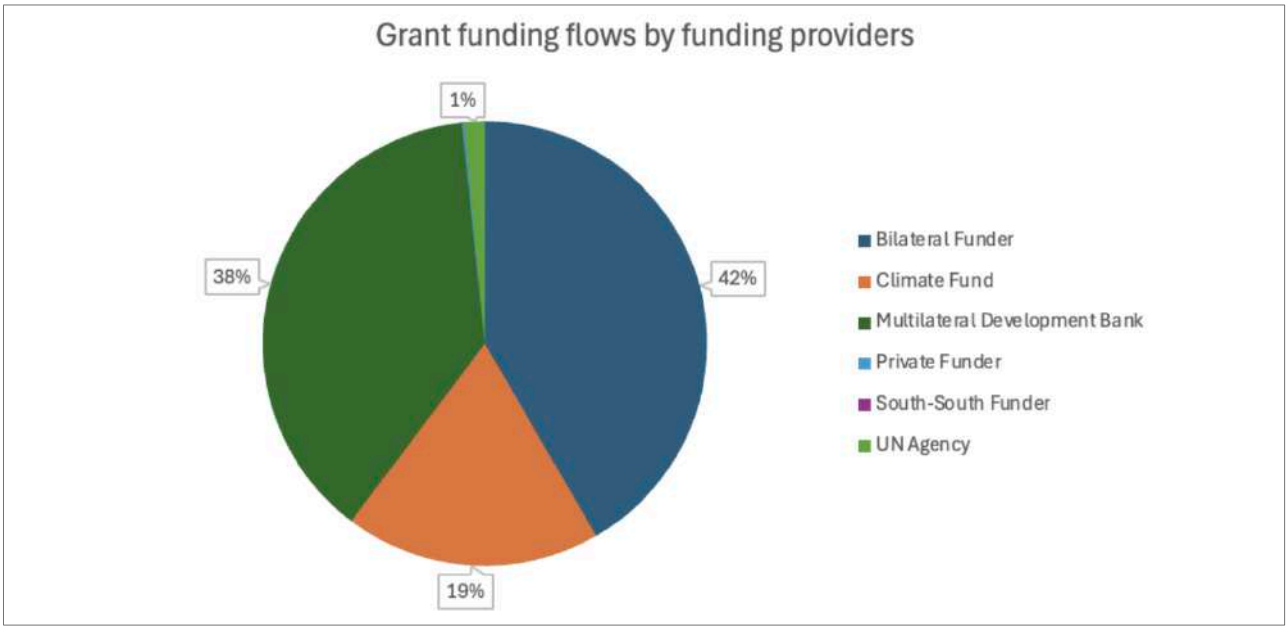


Figure 4

[5] https://www.fao.org/newsroom/detail/green-climate-fund-approves-new-projects-in-benin-and-the-gambia/en

[6] https://www.imf.org/en/News/Articles/2025/06/18/pr-25202-gambia-imf-apprv-resil-sustain-facil-arrange-completes-the-3rd-rev-under-ecf-arrange#:~:text=The%20IMF%20Executive%20Board%20approved,policy%20buffers%20against%20climate%20shocks.

In June 2025, The Gambia secured approximately US$63.55 million from the IMF's RSF to bolster climate resilience and sustainability. The IMF is also supporting The Gambia through the Extended Credit Facility, with ongoing reform reviews and disbursements around US$16.95 million.[6] The overall aim is to strengthen economic resilience, fiscal discipline, and address climate-related vulnerabilities.

The proposed Gambia Climate Change Fund (GCCF), to be housed in the Ministry of Finance and Economic Affairs (MoFEA) and governed by the National Climate Change Council (NCCC), is intended to serve as a national mechanism for integrating domestic and international climate finance. Similarly, efforts are underway to introduce climate budget coding within the national budgeting process, which will be harmonized with the Integrated Financial Management Information System (IFMIS) to enable the tracking of climate-related expenditures once implemented.

[6] https://www.imf.org/en/News/Articles/2025/06/18/pr-25202-gambia-imf-apprv-resil-sustain-facil-arrange-completes-the-3rd-rev-under-ecf-arrange#:~:text=The%20IMF%20Executive%20Board%20approved,policy%20buffers%20against%20climate%20shocks.

STRATEGIC OBJECTIVES

Strategic Objectives

This strategy aspires to:

1. **Foster inclusive, equitable growth** by prioritising strategies that boost incomes, create green jobs, and protect vulnerable populations from climate shocks

2. **Protect and enhance The Gambia's natural capital,** which includes coastal zones, wetlands, forests, and agricultural lands, as core national infrastructure for disaster risk reduction and economic stability.

3. **Coordinate and channel climate finance efficiently toward priority national initiatives,** ensuring that investments deliver measurable adaptation, resilience, and low-carbon development impacts

4. **Mainstream adaptation and resilience across all sectors,** ensuring that every public and private investment is designed to withstand projected climate impacts.

5. **Expand access to climate and disaster risk financing and insurance,** ensuring that communities and sectors have pre-arranged financial protection against droughts, floods, and other hazards.

6. **Accelerate low-carbon development** through renewable energy expansion, sustainable and inclusive industrialisation, climate resilient and efficient transport systems, climate-smart agriculture, and sustainable urban planning.

7. **Enhance climate resilience** through sustainable agriculture, coastal protection, climate proofing public infrastructure, scaling up disaster-risk financing, and mainstreaming adaptation into national and sectoral plans.

STRATEGIC AIMS

Strategic Aims

The strategic aims of The Gambia's Climate Prosperity Plan (CPP), also known as the Gambia Climate Prosperity Investment and Financing Strategy, are firmly anchored in the country's Second Nationally Determined Contribution (NDC), its Long-Term Climate Strategy (LTS), The Recovery Focused National Development Plan, and other relevant sector strategy frameworks, reflecting an integrated approach to climate resilience, sustainable development, and economic transformation. Each aim is underpinned by ambitious yet achievable targets that are informed by macroeconomic modelling, sectoral analysis, and national development priorities.

Strategic Aim A. Enhance Climate-Smart Agriculture, Food and Nutrition Security

Goal: Achieve transformational resilience in agriculture ensuring the Gambia's crop and livestock systems deliver sustained higher yields, incomes, reduce food imports, and cut agricultural GHG emissions by 81%

Key Targets

- **Climate-Smart Practices**
  - By 2030, implement water-efficient irrigation systems (e.g., drip, sprinkler) on at least 66% of cropland, and introduce shading or drainage improvements on drought- or flood-prone farmland.
  - Reduce agriculture-sector GHGs by 81%[7] vs. BAU through low-methane rice cultivation, improved grazing, and reduced food loss.
  - Increase crop yields by at least 40% above current levels for staple crops through widespread adoption of drought-resistant varieties, early maturing crop varieties, enhanced soil and water management, and climate-smart agricultural technologies by 2030.
  - Increase average livestock productivity per head (milk yield, quality meat, growth rate, egg production) by 30% by 2035, relative to 2025 baselines.
- **Livestock Adaptation and Emissions Reduction**
  - Equip 30% of cattle, and poultry farms with heat- and disease-protection measures by 2030; expand to 50% by 2040 .
  - Lower enteric methane emissions by an estimated 408 $GgCO_2e$ through improved feed quality, rotational grazing, and modern manure-management systems.

[7] According to the Second Nationally Determined Contribution of The Gambia (September 2021), the overall target for GHG emission reduction is 49.7% below a business-as-usual (BAU) scenario by 2030 (including LULUCF), the agricultural sector plays a significant role in achieving this. (Agriculture was responsible for 49.7% of The Gambia's total greenhouse gas (GHG) emissions in 2021 - Emission Index)

- Ensure at least 40% of medium- to large-scale farms adopt solar-

  powered and energy-efficient systems (e.g., solar pumps, LED lighting, efficient feed mixers) by 2035.

- Invest in community-based livestock feed production, processing and management centres (e.g. machines to chop maize and millet stuffers, grain mills and mixers, silage production technologies using crop residues) to enhance the transition from free roaming extensive production system to zero-grazing systems.

- **Reducing Post Harvest Losses**

  - Deploy modular solar-powered cold storage units at aggregation hubs to preserve horticultural produce and reduce post-harvest losses by at least 30%."

  - Invest in youth-owned agribusinesses that specialize in post-harvest processing of millet and in regional centres for large-scale processing (milling, pre-cooking), packaging and marketing of millet for increased local consumption.

  - Establish mobile processing facilities for rice milling, fruit drying, and oil pressing, prioritizing high-loss crops in rural communities.

- **Incomes and Poverty Alleviation**

  - The share of population below the poverty line from 35.8%[8] (0.84 million people)[9] (2024) to 16.7% (760,450) by 2050, leveraging the 9.2% increase in total employment under CPP

The Gambia's agricultural sector is a cornerstone of its economy, employing a large share of households and underpinning national food and nutritional security. Yet this sector faces intensifying challenges due to climate change, including erratic rainfall, higher temperatures, droughts which worsens desertification, terrestrial and aquatic weed invasion and more frequent floods. The River Gambia, serving as the primary freshwater source for irrigation, is increasingly threatened by sea-level rise and reduced rainfall, both of which accelerate saltwater intrusion into lowland areas. This intrusion adversely affects rice fields that rely on tidal irrigation, jeopardizing the livelihoods of local communities who depend on these systems.

The country's geographic position, enveloped by Senegal, both amplifies its vulnerability and offers potential for regional cooperation. Shared water resources could foster collaborative solutions. Projections indicate that

[8] For the Poverty line the model takes in consideration the World Bank estimation namely Poverty "headcount ratio at societal poverty line (% of population)", the international poverty line currently is at 3.00 USD (214 GMD). Then the model projections account for a change over time based on forecasts of the per capita income. https://databank.worldbank.org/reports.aspx?source=2&series=SI.POV.NAHC&country=

[9] https://www.gbosdata.org/downloads/142-2024-population-and-housing-census-reports

agricultural yields may decline further with climate change, intensifying stress on an already fragile sector. The largest impact on agricultural yield in the Gambia comes from extreme wet events (i.e. heavy rainfall), which consistently damages up to 15% of monthly yield, following seasonality. The heat impact is most uncommon, with 3 large heat-related impacts being forecasted by climate models throughout the simulation. As a result of these events (frequency and magnitude), the Gambia loses USD 73.9 million cumulatively in value added from crops between 2025 to 2050 due to climate impacts. This corresponds to an average annual loss of USD 2.8 million per year between 2025 and 2050. These losses are compounded by limited access to affordable credit, weak extension services, and high input costs, all of which constrain farmers' ability to adopt improved seeds, soil-management practices, and climate-smart technologies.

Higher temperatures, moisture imbalance, and poor post-harvest handling create favourable conditions for fungal growth. Groundnuts, a key cash crop, faces rising aflatoxin risks due to higher temperatures, poor post-harvest handling, and moisture-imbalance conditions that favour fungal growth. These quality and safety challenges threaten export opportunities and erode farmer incomes. To address these twin challenges of productivity and quality, The Gambia's climate-smart approach emphasises the adoption of drought-tolerant groundnut varieties, improved on-farm drying, cold storage solutions, efficient aggregation systems, climate-controlled warehousing, value-added processing into agricultural investments, and broader pest and disease management strategies.

In spite of these obstacles, The Gambia has made significant strides by integrating adaptation measures into its climate policy frameworks. The

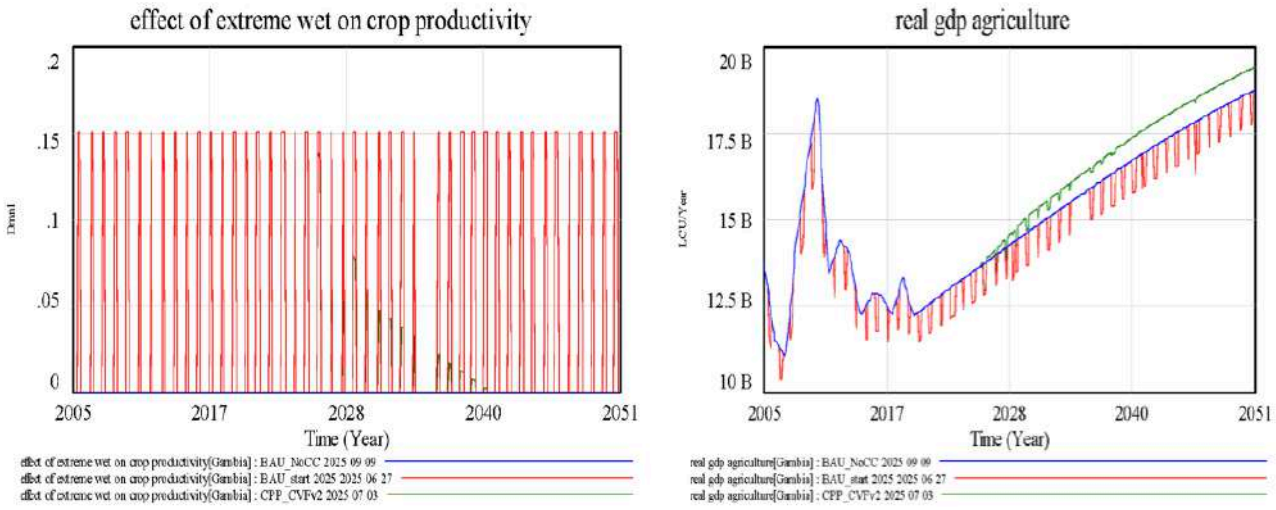


Figure 4 Climate impacts on Gambian Yield.

Second Nationally Determined Contribution (NDC) outlines strategies such as improved seed varieties, water harvesting, and resilient livestock systems. Over the past decade, the country has also attracted targeted grants and concessional loans to pilot drip irrigation and sustainable land management - achievements that highlight donor confidence and domestic commitment to resilient agriculture. In order to ensure coherence and scale in irrigation investments. The Gambia will develop a National Irrigation Master Plan that maps water resources, prioritises irrigation corridors, and integrates solar-powered and water-efficient systems into both smallholder and commercial farming zones. The Master Plan will serve as a framework for mobilizing investment, guiding regional cooperation on shared water resources, and ensuring climate resilience in the agricultural sector.

Interventions such as drought-resistant seeds, agroforestry, and solar-powered irrigation remain under-deployed, while inadequate storage and processing facilities cause high post-harvest losses.[10] Moreover, boosting value-add processing and rural enterprises could diversify livelihoods and stabilize incomes, yet both remain constrained by limited capital and technical capacity. In the case of groundnuts, improved handling and robust quality-control measures (e.g., regular testing for aflatoxins) can bolster food safety, expand market access, and elevate farmer incomes.

Saltwater intrusion is a growing threat to coastal farmland and requires a multifaceted approach. Nature-based solutions, including wetland restoration, sustainable land management, and agroforestry, bolsters soil health and reduces erosion. The application of biochar, produced from agricultural residues, can further rehabilitate salt-affected soils by improving soil structure, enhancing nutrient retention, and reducing salinity levels. When combined with saline-tolerant crop varieties, embankment construction, and improved water management systems, biochar contributes to restoring the productivity of degraded lands and increasing resilience to climate stressors. Resolving land conflicts that arise from degraded or encroached farmland calls for community-engaged policies which protect agricultural lands and champion equitable resource allocation.

The CPP GEM macro-model suggests that widespread adoption of climate-smart agriculture, coupled with measures to curb saltwater intrusion, could reduce poverty from 35.8% to 16.7% while creating over 10 thousand new jobs in sustainable agriculture by 2050. The Gambia is also working towards a reduction in rural poverty from 76.7 to 16% by 2050.

These gains would bolster food security, lift household incomes, and create positive spillover effects for the broader economy. By integrating these strategies into the Climate Prosperity Investment and Financing

[10] Second Generation National Agricultural Investment Plan-Food and Nutrition Security (GNAIP II-FNS)

Strategy, The Gambia can sustain agricultural productivity, protect livelihoods, and nurture long-term resilience.

Enhanced cooperation with Senegal offers significant resilience dividends. Joint water-resource management coordinated pest-control systems, shared research on drought-resistant crops, and harmonised agricultural-market systems can strengthen regional food security. The Senegalo-Mauritanian Aquifer Basin Agreement represents a key opportunity for evolution for advancing regional cooperation on transboundary water resource management, offering a framework for shared governance, data exchange, and sustainable utilization of groundwater resources.

Complementary to this, The Gambia is also a founding member of the Organisation pour la Mise en Valeur du fleuve Gambie (OMVG), which governs surface-water resources, hydropower generation, and multi-country energy and irrigation infrastructure along the Gambia River Basin. Given OMVG's strategic significance for water, energy, and climate resilience, the CPP seeks to strengthen synergies between OMVG and the SMAB by expanding cooperation to cover integrated water resource management that includes both surface and groundwater systems. Identifying and addressing existing gaps, such as climate-risk data integration, financing of adaptation infrastructure, and ecosystem-based approaches to river-basin management, will be critical to ensuring that regional cooperation delivers comprehensive resilience dividends for all member states.

With the right political leadership, civil society cooperation, and institutional design, this agreement could evolve into a mechanism akin to the Mekong River Commission with a governance platform, dedicated staff, joint planning and monitoring systems, equitable water allocation, and inclusive decision-making. Such a transformation would not only safeguard the aquifer but also serve as a global model for resilient, cooperative groundwater management in a climate-stressed world. In leveraging its geographical position, The Gambia can transform existing constraints into catalysts for collaborative climate action, thereby fortifying its agriculture sector against future shocks.

Enhanced Regional Cooperation Framework

Transboundary water resource management: Building on the Senegalo-Mauritanian Aquifer Basin Agreement framework, The Gambia will establish a bilateral water management commission with Senegal to address shared challenges in the Gambia River Basin. This commission will: (1) develop joint early warning systems for drought and flood management, (2) coordinate upstream-downstream water allocation during climate stress periods, (3) implement joint infrastructure projects for water storage and distribution, and (4) share climate adaptation technologies and best practices.

Regional climate finance access: The Gambia will leverage regional mechanisms to access climate finance more effectively, including: (1) participation in the West African Development Bank's climate finance facility, (2) collaboration with ECOWAS regional climate initiatives, (3) joint project development with Senegal for larger-scale infrastructure investments, and (4) participation in regional carbon market initiatives under Article 6.2 of the Paris Agreement and (5) engagement with AUDA-NEPAD programmes, including the Comprehensive Africa Agriculture Development Programme (CAADP) and the Programme for Infrastructure Development in Africa (PIDA), to align national agricultural transformation and infrastructure pipelines with continental investment platforms and financing windows.

Agricultural research and technology transfer: Regional cooperation will focus on: (1) joint research programs with Senegal's agricultural research institutions on drought-resistant crop varieties, (2) shared extension services for cross-border farming communities, (3) coordinated pest and disease management systems, and (4) joint marketing initiatives for agricultural products in regional markets. These efforts will be complemented through collaboration with regional knowledge institutions such as the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) and its AGRHYMET Regional Centre, which provide critical research, climate information, and early warning systems to strengthen climate-smart agricultural planning and technology transfer across the Sahel.

Climate information sharing: A regional climate information system will be established with Senegal, incorporating: (1) shared meteorological data and forecasting, (2) joint climate risk assessments for transboundary ecosystems, (3) coordinated disaster response protocols, and (4) shared monitoring systems for ecosystem health indicators.

Options of Keystone Projects

Agro-Ecological Resilience Clusters

The Agro-Ecological Resilience Clusters initiative under the Gambia Climate Prosperity Plan aims to establish regional hubs integrating agroforestry, sustainable irrigation, and climate-smart agricultural practices. Drawing from existing national strategies and successful pilot programs:

a) Regional Agroforestry Hubs Processing Zone

These hubs, located across The Gambia's administrative regions, will enhance biodiversity, soil health, and carbon sequestration through agroforestry systems. The project will:

- Prioritise drought-resistant native tree species (neem, mahogany, locust bean, baobab) and high-value crops (cashew, mango) for intercropping, in alignment with the National Agroforestry Strategy 2022–2032.
- Partner with research institutions such as the International Institute of

Tropical Agriculture (IITA) and the National Agricultural Research Institute (NARI) to develop and distribute climate-resilient varieties.

- Scale up moisture-retention techniques (e.g., Zai pits) to increase tree-survival rates in arid zones.
- Establish community gene banks to conserve indigenous crop varieties and local livestock breeds (e.g., N'Dama cattle Jalonkeh breed, fodder species) and support genetic resilience.
- Promote conservation agriculture and land-restoration practices including crop diversification, reduced tillage, mulching, crop rotation, composting, and community-led reforestation.

Implementation:

- Establish five agro-ecological hubs through special-purpose vehicles (SPVs) in North Bank, Central River, Upper River, Lower River, and West Coast Regions by 2027.
- Train at least 1,000 farmers in agroforestry management through the Department of Agricultural Extension Services, ensuring that at least 60% convert their skills into income-generating activities or employment within 12 months.

b) Solar-Powered Irrigation Systems

Solar-powered irrigation systems will ensure year-round water access for crops and livestock while reducing reliance on fossil-fuel pumps. The Strategy proposes to:

- Deploy solar pumps such as Futurepump SF2 systems and FAO-designed solar boreholes to irrigate at least 10,000 hectares by 2030.
- Integrate gravity-fed drip kits for high-value vegetable gardens, reducing water use by up to 40% compared to flood irrigation.

c) Climate-Smart Inputs and Practices[11]

The objective is to boost productivity[12] by enhancing the adaptive capacity of the

[11] *Work with selected banks in the financial sector, agricultural MSME hubs and other relevant stakeholders to develop agricultural pipelines that can be eligible for resources ringfenced for sustainable agriculture. Aggregation models to be considered to ensure the benefits of economies of scale. Potential to use the green finance taxonomy being developed by the central bank to mobilise sustainable and low-cost financing from DFIs for onlending to farmers and other eligible sectors.*

[12] *In The Gambia, the agricultural sector presents a significant paradox: it is the country's main employer but a relatively small contributor to its economy. While approximately 21% of the workforce is employed in agriculture, the sector accounts for only 20-25% of the national GDP. This disparity highlights a major productivity gap, largely driven by the prevalence of subsistence, rain-fed farming, which is practiced by around 62% of farming households solely for self-consumption. This economic structure stands in stark contrast to that of OECD countries, where the agriculture sector is highly mechanized and efficient. On average, it employs less than 5% of the workforce yet contributes between 1 to 4% of the total GDP.*
https://openknowledge.fao.org/server/api/core/bitstreams/9f0e318e-b55a-4280-9d81-4936d31d67b9 /content,
https://yep.gm/storage/app/uploads/public/64e/f1b/20e/64ef1b20e319a019095028.pdf
https://www.oecd.org/en/publications/serials/oecd-labour-force-statistics_g1g1200b.html

sector through sustainable practices, technology, while reducing emissions.

- Distribute drought-tolerant millet and sorghum varieties, tested by The Gambia Seed Secretariat in flood-prone regions.
- Promote and scale up circular systems using livestock manure compost and crop residue mulching to improve soil organic matter.
- Implement GPS-collared herd management on 20,000 hectares to prevent overgrazing.
- Climate smart adaptation programme of agriculture intensification through improved irrigation systems such as drip and sprinkler irrigation systems. Decentralised rainwater harvesting systems at household, farm, and community levels will be established to complement irrigation efficiency measures. These systems, ranging from rooftop collection to small reservoirs and check dams, will increase water availability for dry-season farming, reduce dependence on groundwater, and strengthen resilience against erratic rainfall. Rainwater harvesting will be prioritised in smallholder zones with limited irrigation potential and linked to agroforestry and soil-water conservation practices to maximize productivity and recharge.
- Promote and scale up integrated agroforestry systems to reduce risk of agriculture losses and increase climate change mitigation efforts through emission reduction by Trees grown as part of an agroforestry system.

Groundnut and Staple Crop Quality Improvement Program

The objective of this programme is to enhance food safety, strengthen export competitiveness, and reduce post-harvest losses by minimizing aflatoxin contamination through improved drying, storage, and testing systems. By improving quality standards for The Gambia's key cash and staple crops, the programme aims to (i) increase access to premium export markets, (ii) reduce health risks associated with aflatoxins, and (iii) expand agro-processing and job creation opportunities, especially for women and youth.

Components:

- **Climate-Resilient Aggregation Hubs for Post harvest Management:**
  - Establish ten regional aggregation hubs strategically located along transport corridors and within major production zones.
  - Each hub will integrate solar-powered cold storage, drying facilities (e.g., solar tunnel dryers for groundnuts, rice, and horticulture), and grading/packaging units.
  - Digital inventory systems will track volumes, quality, and market readiness.
- **Mobile Processing Units:**
  - Deploy modular processing units (milling, pressing, drying) that can be

relocated according to seasonal harvest peaks.

- Target remote farming clusters to reduce spoilage before products reach aggregation hubs.

- **Value Chain Coordination:**
  - Launch a farmer-buyer mobile application for real-time price discovery, demand matching, and logistics coordination. Linking smallholder farmers to processors and export-oriented buyers through digital platforms and cooperatives as part of the Sustainable Industrial and Economic Zone Programme.
  - Integrate payment gateways for faster transactions to improve farmer cashflow.
  - Diversification and intensification of high-value crop production, coupled with enhanced processing and marketing of groundnuts, cashew, maize, rice, and vegetables.

- **Quality Certification and Export Readiness:**
  - Deploy solar dryers, improved storage silos, and regular aflatoxin testing labs in high-risk regions**.** Implement aflatoxin-safe protocols, Good Agricultural Practices (GAP) certification, and standardized packaging for domestic and export markets.

National Food Security Corporation
The National Food Security Corporation (formerly the Gambia Groundnut Corporation) is positioned as a strategic anchor for value chain finance and food security. With its longstanding mandate in groundnut procurement and processing, GGC can provide a trusted platform to link smallholder farmers with structured markets, off-take agreements, and agro-processing hubs. Within the Climate Prosperity Investment and Financing Strategy, GGC's role extends beyond groundnuts to supporting climate-smart agriculture, promoting quality assurance, and ensuring the integration of smallholder farmers into higher-value markets. By aligning with the Groundnut and Staple Crop Quality Improvement Program, GGC can drive inclusive growth, improve farmer incomes, and enhance The Gambia's export competitiveness, while simultaneously strengthening national food security and resilience.
In addition to strengthening resilience in traditional crops, the Strategy will also explore opportunities for diversifying into new climate-resilient and high-value crop varieties. Examples include the potential cultivation of seaweed and mushrooms - niche products with growing demand in the gourmet, cosmetic, and nutraceutical industries. Such diversification would open new income streams for farmers, encourage innovation in agro-processing, and demonstrate how climate adaptation can simultaneously unlock emerging market opportunities.

The Integrated Livestock Climate Adaptation Programme (ILCAP)

The Integrated Livestock Climate Adaptation Programme (ILCAP) is a flagship initiative designed to strengthen The Gambia's livestock sector against climate shocks while cutting greenhouse gas emissions.

Livestock keepers face mounting challenges as communal rangelands and grazing corridors deteriorate - overgrazing, land degradation, and invasive weeds are reducing pasture quality and leaving severe fodder shortages in the dry season.

ILCAP tackles this head-on by scaling a commercially viable fodder–rangeland package that integrates seeded forage, rotational and deferred grazing, weed management, and feed conservation through haymaking, silage, and crop-residue valorisation. By transforming rangelands into productive, managed assets, the programme aims to boost livestock productivity per head, lower methane intensity, and restore ecosystem services across priority zones.

Aligned with The Gambia's Nationally Determined Contribution and the Livestock Master Plan, ILCAP combines climate-smart husbandry practices, veterinary innovation, and genetic resilience. Its integrated approach will address heat stress, disease outbreaks, methane emissions, and productivity constraints, ensuring that livestock systems not only survive but thrive under climate stress.

Through a hub-and-spoke delivery model anchored in public–private partnerships, ILCAP will create regional fodder and feed hubs, strengthen veterinary and biosecurity services, and establish market-oriented community feed banks. These interventions will generate sustainable income streams for local farmers, cooperatives, and private operators, while positioning The Gambia as a leader in resilient and low-emission livestock systems in West Africa.

A set of livestock cost and climate-relevance indicators has been compiled to support the design of the Integrated Livestock Climate Adaptation Programme. These indicators, presented in Annex 4, provide baseline cost estimates for nature-based and technology-based interventions across cattle, pigs, and poultry, as well as the unit costs of methane and nitrous oxide abatement and indicative levels of heat-stress protection. While not exhaustive, the indicators highlight the financial and technical requirements for improving climate resilience in livestock systems and underscore the importance of investing in improved husbandry, veterinary services, feed systems, and heat-stress mitigation. ILCAP builds on this evidence by proposing integrated interventions aimed at raising productivity, reducing climate-related losses, and lowering emissions intensity in the livestock sector.

a) Fodder & Rangeland Solutions

Pasture quality and dry-season fodder are declining across communal rangelands due to overgrazing, land degradation, and invasive weeds. This depresses animal productivity, raises methane intensity per kg of meat/milk, and erodes household incomes. At the same time, unmet demand for quality fodder, reliable grazing services, and feed processing creates a bankable market opportunity.

Components:

- **Rangeland Stewardship & Grazing Services**

- Community rangeland plans and stewardship agreements over delineated blocks.
- Rotational/deferred grazing managed with GPS-collared herds, stocking density controls.
- Service fees for managed grazing, charged per head/day or per hectare.

- **Fodder Hubs & Community Fodder Banks**
  - 6 regional hubs with balers, choppers, silage units; 60 community banks aggregating hay/silage and crop residues.
  - Contract farming for seeded forage plots (e.g., Andropogon + forage legumes), buy-sell arrangements.
  - Revenue**:** wholesale fodder, retail bales, silage bags, mixing/ milling fees.
- **Invasive Weed & Range Improvement Service**
  - Integrated weed control (mechanical/manual, targeted grazing windows; selective herbicide with safeguards).
  - Performance-based contracts (PBCs) paid on verified reduction in invasive cover and biomass recovery.
- **Fodder Seed & Inputs Business**
  - Localized multiplication of adapted seed mixes; retail of seed, inoculants, simple tools.
  - Revenue**:** seed sales and last-mile input distribution via hub-and-spoke agents.
- **Feed Conservation & Finishing**[13]
  - Dry-season feedlot/finishing packages (short cycles) to smooth offtake for butchers/ processors.
  - Revenue**:** finishing fees per head; bundled rations.
- **Extension & Digital Ops**
  - Lead-farmer networks, on-hub demonstrations[14]; mobile scheduling for grazing blocks[15]; e-payments.
  - Revenue enabler (reduced losses, better utilization); potential data services to buyers/insurers.

[13] This is the process of feeding livestock (often cattle) a high-energy diet for a short period just before they are sold. The goal is to maximize their weight gain and improve the quality of the meat (e.g., increasing marbling or fat cover), making them more valuable to butchers and processors. Animals usually lose weight or health during the dry season, leading to periods of low-quality or inconsistent meat supply. By running these dry-season finishing programs, the business ensures there is a steady, predictable supply of high-quality, market-ready animals for butchers and meat processors, regardless of the weather.

[14] Fodder hubs to have demonstration plots and training sessions, where farmers can see firsthand how to establish improved forage, conserve fodder, or implement rotational grazing.

[15] A simple phone-based system will help coordinate which grazing blocks are open or closed at different times, ensuring that rangelands get proper rest. Farmers can receive notifications or book access to blocks digitally.

- **MRV & Outcome Payments**
  - Simple MRV stack[16] for pasture biomass, invasive cover, rest compliance.
  - Revenue: eligibility for Performance Based Contracts (rangeland restoration), possible results-based climate funds for CH_4-intensity reduction and avoided degradation (conservation).

Business Model & Revenue Streams

- **Primary:** fodder (hay/silage) sales; grazing service fees; seed & input sales; milling/mixing services.
- **Secondary:** finishing packages; maintenance contracts with large farms; PBCs for weed reduction/ restoration; potential climate results-based payments; data/ analytics to value-chain partners.
- **Customers:** smallholders & cooperatives; medium/large farms; aggregators/processors (dairy/ meat); municipalities/projects purchasing weed-control/ restoration services.

Delivery & Governance: The programme will be implemented through a dedicated operating company, potentially structured as a public–private partnership. This entity will be responsible for managing fodder hubs, overseeing sales and service delivery, and ensuring that monitoring, reporting, and verification systems are carried out effectively.

On the public side, the Department of Livestock Services will provide regulatory oversight, establish technical protocols, and facilitate land use agreements. Local councils will play a complementary role by granting communal access to rangelands and helping to manage relationships with livestock-keeping communities.

At the community level, rangeland management committees will be formed to sign stewardship agreements. These agreements will set out responsibilities for maintaining restored pastures and complying with rotational grazing practices. Communities will also benefit directly through revenue-sharing arrangements or discounted services when compliance targets are met.

The programme will be supported by research and academic institutions, including the National Agricultural Research Institute and the West Africa Livestock Innovation Centre. These partners will provide expertise on seed varieties, the design of grazing calendars, and livestock nutrition, ensuring that interventions are tailored to local conditions and based on the best available science.

b) Climate-Smart Livestock Housing

To mitigate the effects of extreme heat and reduce livestock mortality, the program will introduce low-cost, climate-resilient shelters across key livestock-producing regions, including the North Bank, Central River, and

[16] Simple MRV stack means a combination of field plots: physical measurements of pasture biomass (how much fodder is growing), invasive weed cover (how much undesirable vegetation is present), and whether rest periods in grazing areas are respected, and satellite data: remote sensing to validate and scale up those measurements, e.g., monitoring vegetation growth, degradation, or restoration over large areas.

Upper River Regions. These open-sided structures will be constructed using locally available materials such as bamboo, thatch, and mud bricks, promoting affordability and sustainability. In addition, drought-resistant trees such as neem[17] and baobab will be planted around grazing areas to provide natural shade and supplementary fodder. To ensure consistent water access during dry spells, solar-powered boreholes and watering troughs will be installed near livestock shelters.

The implementation strategy includes partnering with local cooperatives and the Ministry of Agriculture, Livestock and Food Security in collaboration with the Department of Livestock services will train 500 masons in climate-smart construction techniques by 2026. Once trained, these masons will work as independent contractors or be hired by the local cooperatives to construct the shelters. The Strategy will emphasize women's leadership in small ruminants and poultry enterprises, while creating pathways for youth engagement in artificial insemination services, feed processing, and veterinary service networks

c) Veterinary Health and Biosecurity

Strengthening veterinary services and disease prevention is critical for livestock health and productivity. A network of Community Animal Health Workers (CAHWs) will be deployed and equipped with the FAO's EMA-i+ digital tool for real-time disease surveillance and reporting. The program will prioritize the rollout of heat-resistant vaccines, particularly for diseases such as Newcastle in poultry and key cattle infections. Livestock biosecurity and surveillance will be aligned with a One Health Public Health framework, strengthening zoonotic disease prevention, antimicrobial resistance (AMR) monitoring, and abattoir hygiene systems.
To enhance the cold chain and diagnostic capacity, ten regional veterinary clinics will be established with cold storage facilities for vaccines and laboratory services. The Department of Livestock Services (DLS), as the lead regulatory and technical authority, will supervise the operation of veterinary hubs and PPP models, ensuring accountability, quality, and equitable service delivery, particularly for pastoralists and smallholder farmers.

d) Community-based Livestock Feed Management Centres

Traditional livestock management practices such as free-roaming and transhumance systems have proven to be serious challenges to agroforestry and local vegetable growing efforts. The Large-scale Ecosystem-based Adaptation project has supported the establishment of Andropogon grass for livestock feed enterprises in the Lower River Region. These enterprises harvest wild Andropogon grass in and around community forest with benefits of reduced fuel loading during fire season and generating income from

[17] The use of neem should be carefully managed to prevent it from becoming invasive and displacing larger indigenous species such as baobab.

the sale of hay to livestock markets and farms. Investment in a network of regional livestock feed processing and marketing centres equipped with grain stuffer choppers, balers and silage production machines, will facilitate the transition from free-roaming to zero-grazing production systems.

Delivery model: Deploy Community Animal Health Workers (CAHWs) as micro-franchise providers linked to a hub-and-spoke network co-located with the six Regional Veterinary Stations and Laboratories and the Central Veterinary Laboratory in Abuko. Hubs operate under public–private partnership (PPP) contracts with the Department of Livestock Services (DLS). CAHWs and hubs will use the Food and Agriculture Organization (FAO) Event Mobile Application (EMA-i+) for real-time case reporting, e-records, inventory management, and mobile-money billing; data feed a national dashboard for early warning and contract verification.

Disease control and climate resilience:

- **Cattle:** Achieve high coverage against Contagious Bovine Pleuropneumonia (CBPP); scale vaccination for Haemorrhagic Septicaemia (HS), Black Quarter/ Blackleg (BQ), and Lumpy Skin Disease (LSD); expand anti-parasite treatment and anthelmintic use.
- **Small ruminants:** Conduct routine mass vaccination for Peste des Petits Ruminants (PPR) and pasteurellosis and routine deworming.
- **Poultry:** Vaccinate against Newcastle disease and fowl pox; expand parasite treatment; strengthen farm-level biosecurity training.

Hub-and-spoke infrastructure:

- **Hubs (six):** Solar-powered cold rooms, point-of-care diagnostics, and mobile outreach. Performance clauses include cold-chain uptime and diagnostic turnaround, with preventative-maintenance service-level agreements (SLAs) under pay-as-you-go (PAYG) service contracts.
- **Spokes:** Operationalize and upgrade district veterinary sub-stations; license community-level veterinary pharmacies/outlets to improve access to quality medicines and vaccines.

Commercial model (cost recovery first; subsidies targeted and time-bound)

- **Revenue streams:** Fee-for-service vaccination, deworming, artificial insemination (AI), herd/flock health plans; diagnostics and certification (including for trade and abattoirs); subscription packages for cooperatives; and bulk service contracts with commercial farms and input distributors.
- **Equity:** Use output-based vouchers to reach poor and vulnerable smallholders without discounting the standard price menu. Safeguards will be instituted against elite capture of veterinary and Artificial Insemination services,

guaranteeing that pastoral and mixed crop-livestock smallholders, who make up the majority of Gambian livestock keepers, can equitably access inputs and services.

- **Working capital:** Establish a Revolving Vaccine and Consumables Fund (digitally tracked) to recycle receivables and reduce stock-outs and expiry.
- **Provider incentives:** Bonuses tied to vaccination coverage, on-time EMA-i+ reporting, cold-chain uptime, and reductions in case-fatality rates - verified through the national dashboard.

Financing architecture:

- **Capital expenditures (CAPEX):** Co-finance hubs, solar cold-chain, and laboratory upgrades with the Islamic Development Bank (IsDB); add limited viability gap funding (VGF) where warranted; crowd in private co-investment from veterinary distributors and cold-chain companies.
- **Technical assistance (TA) and training:** Partner with the International Livestock Research Institute (ILRI) for clinical protocols, CAHW curricula, and monitoring and evaluation (M&E); align with regional systems of the Economic Community of West African States (ECOWAS) and the African Union – InterAfrican Bureau for Animal Resources (AU-IBAR) for cross-border disease control
- **Working capital:** Combine the Revolving Fund with local financial institutions (FIs) for receivables finance; explore risk-sharing guarantees under the Climate Prosperity Investment and Financing Strategy (CPIFS) guarantee window.
- **Insurance pilots:** Bundle herd/flock health plans with micro-insurance to stabilize farmer and provider cash flows during climate shocks.
- **Human capital and genetics:** Update technician curricula; expand training for veterinarians and laboratory technologists; establish additional veterinary pharmacies. Scale programs with the West Africa Livestock Innovation Centre (WALIC); establish one artificial insemination (AI) centre and one liquid-nitrogen facility; train 100 artificial insemination (AI) technicians; and provide smart, time-bound subsidies to catalyse private AI service roll-out.

e) Methane Reduction Initiatives

To curb methane emissions from livestock, a suite of interventions will be introduced focusing on improved feeding and waste management. Feed supplementation will include the promotion of seaweed-based additives, known to reduce enteric fermentation, alongside the intercropping of legumes such as cowpea and groundnut to enhance forage quality. A rotational grazing program will demarcate 50,000 hectares of

rangelands by 2030, using GPS-collared herds to prevent overgrazing and allow for pasture regeneration. Additionally, 5,000 composting pens will be distributed to livestock farmers to manage manure effectively, converting waste into organic fertilizer to generate additional revenue while minimizing methane leakage. Complementary to these measures, systematic feed banks, fodder seed systems, and dry-season conservation techniques (silage and haymaking) will be scaled up. Agro-industrial by-products such as rice bran and brewery waste will also be promoted as feed inputs to boost resilience and reduce costs. To encourage adoption, results-based incentives will be offered to farmers who implement these practices.

f) Genetic Improvement and breeding[18]

Enhancing livestock productivity and resilience to climate stressors will require targeted genetic improvement efforts. Breeding programs will be scaled up for indigenous, climate-resilient breeds such as N'Dama cattle and Djallonke sheep, which are well adapted to heat and drought. Crossbreeding with Boer goats will be introduced to improve meat yields without sacrificing local adaptability. In addition, the Strategy will expand dairy value chain interventions, including milk hygiene improvements, rural and peri-urban cooling chains, and feed supply systems. The poultry component will also be strengthened with interventions targeting hatchery development, disease control, and input system efficiency to reduce import dependence.

To preserve genetic diversity, three regional community gene banks will be established within a national breed conservation framework coordinated by DLS and the West Africa Livestock Innovation Centre (WALIC), with explicit links to trypanotolerance research, breed characterization, and selection indices. This will significantly contribute to the conservation of indigenous breeds and support breeding efforts for food security and improved nutrition. In collaboration with ILRI, 100 breeders will be trained in artificial insemination and advanced breeding techniques by 2028, supporting long-term improvements in livestock quality and resilience.

The Department of Livestock Services will serve as the central technical and regulatory authority to guide the livestock sector's climate resilience transition. Through partnerships with WALIC and other research institutions, DLS will oversee veterinary services, breed conservation, and One Health and Public Health integration. By strengthening feed systems, dairy and poultry value chains, and ensuring gender- and youth-responsive interventions, these measures will secure inclusive benefits for smallholders and pastoralists. This alignment will ensure livestock systems contribute effectively to The Gambia's climate resilience, food security, and prosperity agenda. Under DLS leadership, livestock-specific M&E indicators will include: (i) productivity per head (milk yields, growth rates, egg production), (ii) vaccination coverage and

[18] A number of privately owned farms have demonstrated that high yield exotic breeds such as the Montbéliarde can successfully be managed in the Gambia under the modern dairy farm system.

disease prevalence, (iii) adoption rates of methane-reducing practices, and (iv) farmer income levels and livelihood resilience.

Mainstreaming Biochar Production in The Gambia[19]

This project aims to establish biochar production units in the North Bank and Central River Regions, leveraging crop residues to improve soil fertility, reduce emissions, and create income opportunities for farmers. Below is a fully developed framework:

The initiative will focus on producing biochar from agricultural residues such as groundnut shells, rice husks, maize stalks, and sorghum stalks. Biochar will be applied to fields to enhance soil health, sequester carbon, and mitigate climate change impacts. Training programs will empower farmers with knowledge of biochar production and application techniques.

a) Establish decentralized biochar production units near agricultural areas.

- Deploy 50 small-scale pyrolysis kilns (e.g., Kon-Tiki kilns or flame curtain pits) in high-residue zones.
- Utilize locally available residues like groundnut shells and rice husks, which are abundant in these regions
- Use waste heat from pyrolysis for drying crops or powering small-scale machinery.

Biogas integration will be pursued alongside biochar production to maximize the value of agricultural residues. Digestate from biogas systems can be combined with biochar to create nutrient-rich organic fertilizers.

Solar-powered value addition infrastructure (dryers, milling, packaging) will be deployed to strengthen the biochar and briquette value chain, ensuring low-cost and climate-resilient processing.

The project will explicitly promote biochar + compost bundles as soil rehabilitation solutions, enhancing yields and farmer adoption and applications will include targeting acidic soils in swampy lowland areas, complementing efforts to address salinisation in saltwater intrusion zones.

This project includes partnering with the National Agricultural Research Institute (NARI) to optimize kiln designs for Gambian biomass types and collaborating with community cooperatives to manage production hubs and ensure equitable access. Strategic partnerships will also be developed with organisations such as the Water and Solution Management Unit (independent government agency) and Soil Solution in The Gambia (NGO) for technical expertise, farmer outreach, and governance capacity.

[19] In Liberia, biochar application increased alfalfa biomass yields by 23–35%2. Similar results are expected in the sandy soils of The Gambia. ICBA. (2024, August 12). Smallholders in sub-Saharan Africa learn biochar production to boost soil health. Retrieved April 13, 2024, from https://www.biosaline.org/news/2024-08-12-15999

Soil Rehabilitation (Solution to Soil Salinisation)[20]

Biochar presents a promising soil rehabilitation solution for farmlands degraded by saltwater intrusion - a growing threat in coastal and low-lying agricultural zones. Research demonstrates that biochar can significantly ameliorate the adverse effects of salinity on soil structure, fertility, and crop productivity. Its porous structure and high cation exchange capacity allow it to adsorb excess sodium ions, reduce soil electrical conductivity, and improve water retention and nutrient availability. Over time, biochar enhances salt leaching and facilitates vertical redistribution of salts, particularly when applied with irrigation, as observed in field studies in saline-prone regions such as Xinjiang, China. Additionally, biochar contributes to the stabilization of soil aggregates, reduces surface cracking, and fosters beneficial microbial activity - all of which are crucial for restoring the productive capacity of salinized lands. For areas affected by seawater intrusion, such as river deltas and estuarine farms, biochar application can offer a low-cost, sustainable alternative to conventional soil flushing methods that demand large volumes of fresh water. These attributes make biochar an integral component of long-term strategies for reclaiming degraded soils, securing food production, and adapting agriculture to climate-induced salinity challenges.

Farmer Training and Capacity Building

To ensure the successful adoption and application of biochar, farmers must be equipped with the appropriate knowledge and skills. This program will include a series of practical workshops focused on key aspects of biochar use, such as determining optimal application rates for improving soil fertility. Farmers will also be trained on how to integrate biochar with compost and organic fertilizers to reduce reliance on synthetic inputs.[21] Using the Farmer Field School approach, demonstration plots will be established in key agricultural zones to showcase the impact of biochar on yields of staple crops like millet, maize, rice, groundnuts and sorghum to reinforce learning and encourage widespread adoption. These field trials will serve as live case studies, enabling peer-to-peer learning and evidence-based decision-making at the community level.

Climate Benefits and Carbon Markets

The project aims to both reduce harmful greenhouse gas emissions and capitalize on the carbon sequestration benefits of

[20] Vasconcelos, A. C. F. de. (2020). Biochar effects on amelioration of adverse salinity effects in soils. In Applications of Biochar for Environmental Safety (pp. 1–...). IntechOpen. https://doi.org/10.5772/intechopen.92464; Zaib, M., U. Farooq, M. Adnan1, S. Sajjad, Z. Abbas, K. Haider, N. Khan, R. Abbas, A.S. Nasir, M.F. Muhay-Ul-Din. 2022. Remediation of Saline Soils by Application of Biochar: A Review. Journal of Environmental & Agricultural Sciences. 24(3&4): 29-36.

[21] According to Rubel and Wei ("Economic Assessment of Biochar-Based Controlled-Release Nitrogen Fertilizer Productionat Different Industrial Scales"), a cost analysis of small (500 kg/h), medium (2,000 kg/h), and large (4,000 kg/h) facilities producing a biochar–compost–urea formulation (20%–20%–60% dry weight) with pelleting and polymer coating found break-even prices of $1.24/kg, $1.02/kg, and $0.98/kg, respectively, achieving a positive NPV within one year. Feedstock costs represented 47–60% of total production costs. Economies of scale lowered unit costs, enhancing competitiveness with conventional fertilizers and supporting broader BCRNF adoption to address nutrient loss, soil degradation, and pollution.

biochar. By avoiding the open burning of crop residues, the program is expected to cut methane and carbon dioxide emissions by approximately 5 Gg every year. Furthermore, each ton of biochar has the capacity to sequester roughly 3 tons of CO_2 equivalent, with a target of trapping 15,000 tCO_2e annually by 2030.

The initiative offers significant economic opportunities. By producing biochar, there is potential to create new income streams through the development of value-added products. One such opportunity is the pilot production of biochar briquettes, which serve as a cleaner alternative to traditional wood fuel for cooking. This not only supports a shift toward sustainable energy practices but also helps reduce deforestation. Furthermore, the project seeks to establish robust market linkages by connecting biochar producers with the Sustainable Industrial Zone Programme, there by facilitating the integration of export-oriented organic farming inputs. Through these measures, the program envisions a transformative approach that bolsters both environmental sustainability and rural economic development.

Financing Instruments

Financing priorities will target interventions that directly strengthen climate resilience and agricultural competitiveness.

National Agricultural Bank, an agricultural development institution that will enhance credit access for smallholder farmers and agribusinesses as well as support the broader goal of climate-smart, commercialized agriculture in the country.

Gambia Agricultural Resilience Fund (GARF) a blended finance window under the Gambia Climate Change Fund (GCCF), which will pool resources and offer concessional loans, first-loss guarantees to incentivize lending to farmer groups and facilitate technical assistance for smallholder and MSME agribusinesses. Value chain finance will also be facilitated through off-take agreements between commercial farms and processing companies. Sustainability-linked loans will reward farmers who meet environmental and social KPIs.

Post-Harvest Climate Infrastructure Facility: combining concessional loans, partial credit guarantees, and results-based financing tied to loss-reduction targets. Farmer cooperatives and SMEs will be eligible for matching grants for investment in solar-powered cold storage, mobile processing units, and aggregation hubs. The facility will leverage blended finance from DFIs, private agribusiness investors, and climate funds such as the GCF and Adaptation Fund.

Sovereign Risk-Sharing and Agricultural Insurance Mechanisms[22]:

[22] Farmer Organisation - to unlock the full potential of these financing mechanisms, from value chain finance and off-take agreements to agricultural insurance and PES schemes, farmers must be formally and better organised. While cooperatives exist in The Gambia, they have historically been fragmented and poorly structured, limiting their ability to aggregate demand, negotiate contracts, or access affordable credit. Strengthening the governance, transparency, and operational capacity of cooperatives and farmer-based organisations will be critical to ensure that smallholders can fully benefit from these opportunities and participate in a more climate-resilient and commercialised agricultural sector.

drought and flood index insurance backed by the African Risk Capacity (ARC) and reinsured through international partners.

Green Credit Lines and Guarantee Schemes: operated by the National Development Bank to de-risk commercial lending to agriculture.

Carbon Finance and Payment for Adaptation Benefits (PAB): revenue from verified emission reductions reinvested into resilience projects.

Public-Private Partnerships (PPP) and SPVs: regional hubs and processing facilities financed through co-investment models with viability-gap funding.

Community Resilience Bonds: local-currency instruments issued through municipalities to finance irrigation, storage, and soil restoration infrastructure.

Payment for Ecosystem Services (PES) schemes and diaspora agri-bonds will support agro-processing and storage. Additional tools such as inventory-backed loans and export credit guarantees will enhance market access; matching equity and grants for agricultural mechanization for scalable climate smart agriculture.

Key financing partners include the International Fund for Agricultural Development (IFAD), the Food and Agriculture Organization of the United Nations (FAO), the International Development Association of the World Bank (World Bank IDA), the African Development Bank (AfDB), Ecobank, the African Risk Capacity (ARC), the Global Agriculture and Food Security Program (GAFSP), the European Union (EU), the Green Climate Fund (GCF), the United Nations Convention to Combat Desertification (UNCCD), and the Gambian diaspora.

Priority Investment Projects and Indicative Cost Estimates

Keystone Project	Estimated Investment (USD millions)
Agro-Ecological Resilience Clusters (Agroforestry Hubs)	41,600
Solar-Powered Irrigation Systems (10,000 ha)	67,500
Climate-Smart Inputs & Practices Programme	13,600
Groundnut & Staple Crop Quality Improvement	31,550
National Food Security Corporation Restructuring	21,000
Integrated Livestock Climate Adaptation (ILCAP) - Fodder & Rangeland	9,850
ILCAP - Climate-Smart Livestock Housing	7,450
ILCAP - Veterinary Health & Biosecurity Network	5,300
ILCAP: Community Livestock Feed Management Centres	5,180
ILCAP - Methane Reduction & Genetic Improvement	6,090
GPS-collared herd management (20,000 ha)	1,600
Biochar Production & Soil Rehabilitation	1,200
	211,920

Strategic Aim B. Unlock Domestic and Regional Energy Abundance Through Renewables, Clean Cooking, and Modernized Transportation

Goal: Increase the share of renewable energy to at least 30% by 2030 and achieve universal electrification by December 2026.

Key Targets

1. Renewable Power Deployment

- Install 115 MW of utility-scale solar photovoltaic and 3.6 MW of wind power by 2030, curbing electricity transmission losses to 15% by 2030.
- Reduce fossil fuel dependence economically through West Africa Power Pool (WAPP).

2. Clean Cooking Transition

- Replace traditional biomass in 60% of households by 2030 and reduce annual indoor-air-pollution deaths to near zero by 2050 .
- Increase LPG penetration in households from 12.6% to 50% by 2030 and to achieve a per capita consumption of at least 3.7kg.[23]
- By 2040, achieve 10% adoption of electric cooking among households.

3. Transport Electrification

- Achieve at least 47,000 low-carbon vehicles by 2050[24].
- Transitioning to 100% of electric or hybrid public transportation and Install 200 Public EV Charging systems nationwide by 2040.
- Develop and operationalize at least one integrated low-carbon mass transit system (such as electric trams or light rail) in urban and peri-urban areas; and establish river-based freight transport corridors for the low-emission movement of goods along navigable sections of the River Gambia by 2050.

The Gambia's energy sector currently faces significant sustainability and reliability challenges. The national electricity grid relies predominantly on imported fossil fuels, especially heavy fuel oil (HFO) (importing around USD 163 million in refined petroleum products)[25], to generate electricity, resulting in high operational costs, vulnerability to global oil price fluctuations, and increased greenhouse gas emissions. As of 2018, The Gambia's total effective installed electricity capacity stood at approximately 135 megawatts (MW), with the National Water and Electricity Company

[23] The Gambian Ministry of Petroleum and Energy's draft National Strategy for the Popularization of Liquefied Petroleum Gas (LPG)

[24] Achievement of this target will depend on aligning fiscal and macroeconomic policies with the transition to a low-carbon transport system. Current taxation structures on vehicle imports favour older, higher-emitting vehicles; reforms to incentivize cleaner technologies, such as reduced import duties, differentiated excise taxes, and access to green credit, will be critical to enabling uptake of low-carbon vehicles and ensuring a conducive environment for green economic transformation.

[25] https://oec.world/en/profile/country/gmb

(NAWEC) operating around 73% of this capacity.[26] Yet, rapidly rising energy demands driven by population growth, urbanization, and economic activities are projected to outstrip this existing generation capacity in coming years, underscoring the urgent need for transitioning towards cleaner, sustainable energy sources.

One major challenge is the reliability and extent of the electricity grid itself. The national transmission and distribution infrastructure experiences substantial technical losses, often exceeding 20% in various regions, which significantly raises operational costs and reduces overall system efficiency. Rural electrification remains limited, with only about 26.8% of the rural population having reliable access to electricity (MICS6-2018[27]) This leaves vast areas underserved, hindering rural development and economic growth. The government has announced plans to separate NAWEC into two distinct entities, one focusing solely on electricity and the other on water services. The government believes that decoupling NAWEC's electricity and water services will improve operational efficiency and create a level playing field to encourage private sector participation specifically in the power sector.

While renewable energy sources, particularly solar and wind, present immense potential due to The Gambia's favourable geographic and climatic conditions, substantial barriers hinder their rapid deployment. High upfront capital costs limited domestic technical capacities, and inadequate incentives and regulatory frameworks currently constrain large-scale renewable energy investments. Nevertheless, The Gambia has made notable strides to address these challenges. The energy sector has attracted significant financing, including concessional loans earmarked to strengthen and expand electricity transmission and distribution networks, thus improving overall reliability and reducing technical losses. Moreover, progressive policy frameworks demonstrate the nation's commitment to sustainable energy solutions. The Renewable Energy Act of 2013 provides the legal basis for developing and integrating renewable energy into the national energy mix.

According to the Deep Decarbonization Pathways for The Gambia (DDP), national access to clean cooking is estimated at 52%, driven primarily by rapid expansion in urban areas where access surged to 72%. Despite the progress, traditional biomass, including firewood and charcoal, continues to dominate in rural areas, contributing to indoor air pollution, forest degradation, and health burdens for women and children. Reaching the country's target of universal access to clean cooking by 2030 will depend on sustained policy commitment, increased investment in infrastructure.

The adoption of cleaner cooking technologies, such as fuel-efficient stoves and liquefied petroleum gas (LPG), has made some headway but still reaches less than 40% of Gambian households. Expanded programs and

[26] Ministry of Petroleum and Energy. (n.d.). About. Retrieved April 19, 2025, from https://www.mope.gm/about-14

[27] The Sixth round of Multiple Indicator Cluster Survey (MICS) for The Gambia

additional financing are urgently needed to scale up clean cooking interventions nationwide. Furthermore, distributed renewable energy system solutions, such as solar home systems and renewable energy mini grids, are gaining traction but require stronger policy incentives, more affordable financing, and technical support to realize their full potential. Complementing renewable expansion with targeted energy efficiency improvements, including retrofitting public buildings, incentivizing efficient household appliances, and reducing transmission losses, can substantially lower energy demand, cost, and environmental impact.

The socioeconomic benefits of modernizing and greening The Gambia's energy infrastructure are substantial. The Climate Prosperity Plan (CPP) scenario forecasts that a robust transition toward renewable energy systems, combined with widespread adoption of clean cooking and enhanced energy efficiency, could significantly reduce final energy expenditures to less than 1% of GDP by 2050 - down from around 6% currently. Lower energy costs would boost economic resilience, freeing financial resources for other critical development priorities. Moreover, reducing reliance on fossil fuel imports and traditional biomass use will mitigate environmental degradation, create new employment opportunities in green energy industries, and significantly improve public health outcomes by lowering indoor pollution. Ultimately, strategic investments in renewable energy and energy efficiency not only enhance energy security and sustainability but also create a solid foundation for sustained economic growth and improved quality of life for Gambian citizens.

Options of Keystone Projects

National Renewable Energy and Storage Programme

The National Renewable Energy and Storage Programme is a flagship initiative aimed at transforming The Gambia's power landscape by harnessing its abundant solar energy potential. It aligns with the national goals of achieving universal electricity access, reducing dependence on imported fossil fuels, lowering the national energy bill, and meeting the country's commitments under the Paris Agreement. The program also supports the productive use of energy by integrating renewable energy into the emerging network of Sustainable Industrial Parks, dedicated hubs for agro-processing, manufacturing, and other energy-intensive sectors.

a) Firm Renewable Energy Infrastructure

The Gambia's electricity strategy commits to a significant scale-up of solar energy, with an additional 383.1MW photovoltaic pipeline from 14 Solar Projects/Sites[28] finally selected for the least cost generation plan to be deployed by 2040[29]. The strategy also

[28] Deduced from Pages 22 & 23 of the Strategic Roadmap 2021-2040 (NAWEC)

[29] National Water and Electricity Company (NAWEC). (2021). Universal Access by 2025 and Transforming The Gambia Electricity Sub-sector Strategic Roadmap 2021-2040. Banjul, The Gambia: NAWEC.

commits to Lithium-ion battery storage capacity of 272MWh/68MW earmarked to be deployed by 2040. In accordance with the Strategic Electricity Sub-Sector Roadmap 2021 - 2040, domestic RES and Batteries grow to 50% of available capacity in 2040 as domestic thermal declines to 15%. The planned utility-scale solar farms - strategically distributed across regions such as the West Coast and Lower River Regions - will include battery energy storage systems (BESS) to enhance grid reliability during peak hours and fluctuations. The strategy prioritizes solar-with-storage solutions to meet growing demand sustainably and cost-effectively. Additionally, decentralized mini-grids will be developed to serve smaller industrial clusters and rural agro-processing centres, enhancing energy equity and resilience.

To ensure seamless integration, the renewable energy systems will be directly linked with infrastructure in the Sustainable Industrial Zone Programme. These industrial zones will be constructed with embedded solar-powered agro-processing units, cold storage, and energy-efficient equipment such as LED lighting, smart meters, and energy-efficient machinery, reducing total energy intensity while powering economic activity.

The programme will be delivered through public-private partnerships (PPPs)[30], leveraging private sector capital and innovation alongside state-owned utility NAWEC with a special focus placed on aligning energy generation with productive uses, ensuring that industries, especially in agriculture and food systems, benefit from stable, clean power.

Moreover, to reduce reliance on imported oil for electricity generation, The Gambia can strategically leverage its membership in the West African Power Pool (WAPP). Potentially reducing over 3,000 barrels of oil per day can improve costs over the short-term if substituted with imports from affordable hydropower through the Gambia River Basin Development Organisation (OMVG) interconnection using the Soma substation. Over the long-term, The Gambia can consider future export of excess solar capacity. National transmission upgradation, investing in energy storage, and deploying smart grid technology will be key to enabling reliable two-way trade. Regional integration will also mean aligning with WAPP's grid codes, enhancing dispatch and tariff modelling capabilities, and strengthening The Gambia's national energy company.

b) Energy Efficiency Access and Appliance Standards Programme

This component aims to reduce electricity demand and household energy costs by accelerating access to energy-efficient appliances for both households and small- and medium-sized enterprises (SMEs). Financial schemes, such as pay-as-you-save models and subsidies, will be established to make high-efficiency refrigerators, air conditioners, fans, and lighting systems affordable and widely accessible.

[30] Public Private Partnership Act, 2020 - https://mofep.gov.gh/sites/default/files/acts/PPP-ACT-1039.pdf

At the same time, national energy efficiency standards will be finalized and enforced across sectors to ensure a sustainable reduction in power consumption. These measures will help flatten demand curves, lower utility costs, and reduce the strain on generation capacity, particularly as renewable energy systems are scaled up.

c) Mini-Grid Expansion and Grid Integration Programme

To close the rural energy access gap, this programme will expand mini-grid infrastructure under The Gambia's existing concession model, while ensuring these systems are ultimately integrated into the national grid. With support from bilateral and development partners such as Norway, the programme will complete interconnections between mini-grids and the broader transmission network.

This integrated approach will support rural electrification, stimulate local economic activities (particularly in agriculture), and offer communities a pathway from isolated power systems to stable, grid-connected supply.

d) Eastern Backbone Transmission and Grid Access Project[31]

The 225 kV Eastern Backbone Transmission Line is a national infrastructure priority designed to enable large-scale renewable energy integration and extend reliable grid access to underserved regions. This high-voltage transmission corridor will be accompanied by the construction of 2 new 225/30kV Substations, medium voltage (MV) and low voltage (LV) distribution networks, ensuring last-mile connectivity for remote communities.

The project supports The Gambia's goal of universal electrification by December 2026 and forms a foundational element of the country's long-term energy infrastructure plan.

e) Clean Cooking Acceleration Initiative

With the Deep Decarbonization Pathways for The Gambia targeting 100% clean cooking by 2030. The Clean Cooking Acceleration Initiative seeks to shift households toward modern, cleaner alternatives such as liquefied petroleum gas (LPG), electric stoves, and bioethanol cookers. Investment in a 10,000MT LPG bulk storage facility, supported by a network of modern bottling plants, strengthened filling stations, and an expanded cadre of trained distributors and retailers, will accelerate the shift away from firewood and charcoal. These measures will ensure reliable supply, enhance affordability, and create a robust distribution ecosystem capable of sustaining universal access to clean cooking solutions by 2030.

This transition will be supported by a national carbon finance strategy, mobilizing resources from voluntary carbon markets to subsidize clean cooking technologies. The initiative will

[31] National Water and Electricity Company (NAWEC). (2021). Universal Access by 2025 and Transforming The Gambia Electricity Sub-sector Strategic Roadmap 2021-2040. Banjul, The Gambia: NAWEC.

also promote public-private partnerships to enhance distribution networks[32] and run behaviour change campaigns to encourage adoption.

Green Regional Express Eco Transport (GREET)

Banjul-Dakar Near Zero-Emission Maritime Corridor

The Green Regional Express Eco Transport (GREET) initiative is a catalytic sustainable transport flagship under The Gambia's Climate Prosperity Investment and Financing Strategy. It is designed to modernize maritime connectivity between Banjul and Dakar while positioning The Gambia as a regional leader in low-carbon maritime transport along the West African corridor.

GREET has three structural priorities:

1. **Regional Trade & Tourism Integration**: Strengthening connectivity between Banjul and Dakar enhances intra-regional trade flows, reduces logistics costs, supports tourism recovery, and deepens ECOWAS economic integration.
2. **Transport Sector Decarbonisation**: Maritime transport presents a scalable opportunity for emissions reduction while avoiding costly road expansion and congestion. GREET demonstrates a practical pathway for low-carbon maritime mobility in a Least Developed Country context.
3. **Blended Finance Demonstration Model**: The project is structured to crowd in concessional capital, climate finance, and private sector participation through a phased and risk-managed approach, serving as a replicable model for other Small Island and Coastal States within the CVF network.

GREET envisions the deployment of near zero-emission passenger and light-cargo maritime vessels supported by modular, future-ready port and fueling infrastructure.

Phased Technology Transition Framework

To mitigate technology and market risk, GREET adopts a conditional and sequenced transition strategy:

Phase I: Immediate Deployment (Risk-Managed Entry)

- Operations powered by certified low-carbon marine fuels (e.g., advanced biofuels or low-sulfur alternatives)
- Revenue stabilization and ridership validation
- Institutional and operational capacity building
- Establishment of safety and regulatory frameworks

Phase II: Conditional Transition

- Gradual integration of hydrogen fuel cell systems, subject to:

[32] Clean cooking distribution networks describe initiatives that coordinate actors, infrastructure, and logistics to ensure that clean cooking technologies and fuels (such as LPG, ethanol, biogas, improved biomass stoves) reach households and businesses reliably, affordably, and at scale.

- Verified cost competitiveness
- Secure and sustainable fuel supply chains
- Engineering validation
- Confirmed demand thresholds

Infrastructure Design Principle: all port and fueling infrastructure will be modular and future-proofed to avoid stranded asset risk, enable technology retrofitting and maintain operational flexibility.

Biogas from Organic Waste Programme

Given the substantial volume of organic waste generated in urban areas such as Banjul, Serrekunda, Brikama, and other towns, this programme will establish biogas plants to convert waste into renewable energy and organic fertilizer. These facilities will process agricultural and municipal organic waste, supplying clean energy for local use while producing digestate to enrich soils.

This circular economy approach not only addresses solid waste management and pollution but also contributes to climate mitigation and energy diversification. Urban areas offer steady feedstock for biogas generation.

Together, these initiatives form a cohesive and transformative strategy to unlock domestic renewable energy and build a resilient, low-carbon energy system that powers The Gambia's inclusive green growth.

Socioeconomic Outcomes Anticipated

Implementing the Strategy's energy transition measures is projected to deliver far-reaching socioeconomic benefits. The increased share of renewables to at least 30% by 2030, the widespread adoption of low-carbon and energy-efficient technologies, and the scale-up of clean cooking and transport modernization, will dramatically reduce The Gambia's national energy bill from around 6% of GDP to less than 1% by 2050. These savings, alongside lower reliance on imported fossil fuels, will strengthen macroeconomic stability and free resources for social and productive investments. The CPP scenario indicates that energy efficiency, through the deployment of efficient appliances, buildings, and transport systems, will significantly cut final energy demand, reducing strain on generation capacity while enhancing affordability for households and businesses. Widespread adoption of clean cooking solutions will nearly eliminate deaths from indoor air pollution by mid-century, while reducing deforestation and environmental degradation. Employment gains will be substantial, with new jobs created in solar power deployment, storage systems, mini-grids, biogas plants, clean cooking distribution, and electrified, energy-efficient public transport.

Financing Instruments

Financing mechanisms will include bundling solar projects into certified carbon credit portfolios, issuing green bonds backed by partial guarantees (e.g., from AfDB or EIB). Partnerships with domestic banks and pension funds will be promoted to diversify sources of capital.

Renewable Energy Blended-Finance

Facility (REBFF) under the GCCF to combine concessional loans, viability-gap grants, and private co-investment for solar and wind projects.

Carbon Finance Mechanisms monetise certified emission reductions from clean-cooking, biogas, and transport electrification under Article 6.2 and voluntary markets.

Public-Private Partnership (PPP) Framework: attract independent power producers (IPPs) through standardised PPAs and risk-sharing facilities.

Regional Integration Window: co-finance transmission and trade infrastructure with WAPP, AfDB, and ECOWAS Development Bank.

Energy-Efficiency Credit Lines: channel concessional credit through local financial institutions for household and SME retrofits.

Catalytic Floor Price Mechanism: For off-grid and rural/last mile electrification investments, which often face commercial viability challenges due to low-income populations and high capital costs, the strategy proposes the use of a Catalytic Floor Price Mechanism. This tool would guarantee a minimum price for electricity sales or energy services, backed by public or philanthropic sources, helping to de-risk revenue flows for mini-grid developers and solar home system providers. By ensuring a predictable return, the floor price can unlock private capital for underserved areas, accelerate energy access, and create local economic opportunities

Revolving Energy Payment Guarantee: A key intervention is a Revolving Energy Payment Guarantee to ensure timely payments to Independent Power Producers (IPPs) and mini-grid operators. This facility will build investor confidence and address liquidity risks in the sector. Its establishment will require coordinated efforts between the Ministry of Finance, development partners (such as AfDB and World Bank), and local banks, supported by appropriate fiscal incentives.

Proposed partners include the African Development Bank (AfDB), the Sustainable Energy Fund for Africa (SEFA), the Private Infrastructure Development Group (PIDG), GuarantCo (the guarantee arm of PIDG), the African Risk Capacity (ARC), AXA (a global insurance and asset management company), the United Nations Development Programme (UNDP).

Bilateral development finance institutions include the Agence Française de Développement (AFD), the German Development Bank (KfW), the United Kingdom's British International Investment (BII), all of whom have demonstrated strong interest in financing energy transitions in emerging markets, as well as local financial actors.

The Gambia will also target early- stage capital and project preparation financing from MDBs and philanthropy such as Bloomberg Philanthropies, Global Energy Alliance for People and Planet, ClimateWorks Foundation etc.

Priority Investment Projects and Indicative Cost Estimates

Keystone Project	Estimated Investment (USD millions)
National Renewable Energy & Storage (383 MW Solar + BESS)	459,480
Energy Efficiency & Appliance Standards Programme	6,000
Mini-Grid Expansion & Grid Integration	31,000
Eastern Backbone 225kV Transmission Line	123,000
Clean Cooking Acceleration Initiative	136,500
Biogas from Organic Waste Programme	52,500
Transport Electrification & Low-Carbon Mobility	18,500
Feed-in Tariffs & Net Metering Programme (Last-Mile Grid Connection)	42,800
GREET - Banjul-Dakar Maritime Corridor (Phase 1 + Phase 2)	115,550
	985,330

Strategic Aim C. Drive Sustainable, Inclusive Industrialisation and Value Addition

Goal: Boost value-added manufacturing/processing by 15% by 2030, align with near-zero industrial GHG emissions by 2050, and create over 25,000 green jobs through accelerated adoption of low-carbon technologies and sustainable supply chains.

Key Targets

1. HFC Phase-Out and Tech Upgrades

- Complete HFC substitution in major refrigeration and air-conditioning applications by 2030.
- Reducing IPPU emissions by ~800 $GgCO_2e$.
- Double the share of “green jobs” to 1.72% of total employment by 2050 .

2. Sustainable Industrial Parks

- Establish at least one pilot green economic zone by 2028 with access to XX% renewable power and streamlined environmental permitting.
- Attract USD 250 million in private investment for horticultural/groundnut processing, aligning with the strong synergy between resilience and industrial expansion.
- Increase agro-industrial processing capacity by 10% by 2030, prioritising rice (through SRI adoption), groundnut, cashew, and horticultural value chains to

strengthen rural incomes, reduce post-harvest losses, and replace at least 15% of raw commodity exports with value-added exports.

3. Sustainable Supply Chains and Certifications[33]

- Certify 30% of The Gambia's processed horticultural and groundnut products as organic by 2030, tapping premium export markets.
- Certify 30% of The Gambia's processed horticultural/groundnut products as fair trade by 2035. Equip 10% of agro-processing facilities with renewable energy-powered coldstorage and minimal-waste packaging by 2030.

The Gambia's economic structure remains predominantly undiversified, heavily dependent on agriculture, fisheries, tourism, and services, with limited growth in the industrial sector. This structural limitation significantly restricts the country's potential for sustained economic growth and employment creation. However, substantial untapped opportunities exist, particularly in agro-processing and value addition of primary agricultural products such as horticultural produce and groundnuts. Additionally, fisheries and forestry products offer further avenues for economic diversification and enhanced export competitiveness.

Scaling these primary commodities to meet global market demands can be effectively supported through the establishment of sustainable industrial parks. Such parks facilitate sustainable industrial processes, encourage value addition through improved processing capabilities, and streamline logistics operations. By leveraging renewable energy, circular economy opportunities, advanced infrastructure, and sustainability certifications, sustainable industrial parks can significantly enhance the competitiveness and marketability of Gambian exports.

The table below outlines key commodities with high potential for scaling and export, highlighting their primary regions of production. The AfCFTA Secretariat and the Afreximbank will be key partners in the development of these parks.

Commodity	Potential for Scaling and Export Competitiveness	Production Regions
Groundnuts (Peanuts)	High potential due to historical export significance. Value addition through processing into oil, butter, and snacks can boost competitiveness. Sustainable industrial parks can introduce aflatoxin-free processing and sustainable packaging, targeting EU and regional markets.	North Bank Region, Upper River Region, Central River Region

[33] The Gambia Standards Bureau, with support from the EbA project, has developed national standards for honey, baobab, moringa, wonjo, and bush teas (including jambakatang, mborr mborr, and kinkiliba). Integrating these products into the national certification system represents a significant step forward in strengthening quality assurance and expanding market opportunities

Cashew	Growing global demand for cashews offers export potential. Scaling requires improved cultivation and processing for kernels. Processing of cashew apples into beverages, jams and syrups etc. Green parks can support solar-powered rocessing and organic certification, enhancing appeal in premium markets like the EU.	West Coast Region, North Bank Region
Fish and Seafood	Abundant fisheries (pelagic and demersal fish, shrimp) with under-exploited potential (45,000 MT annually vs. 65,000 MT capacity). Sustainable industrial parks can enable climate-smart processing (e.g., solar-powered cold storage) and hygiene standards for EU markets.	Coastal areas (Banjul, Bakau, Tanji, Guaiuc)
Sesame Seeds	Increasing demand in Asia and the Middle East. Scaling involves better seed varieties and mechanized harvesting. Green parks can support eco-friendly processing and packaging, ensuring quality for export markets.	Upper River Region, Central River Region
Horticulture (Mangoes, Citrus, Vegetables)	Potential for fresh and processed exports (juices, dried fruits). Green parks can introduce renewable-energy-based drying and packaging, targeting regional and EU markets with organic produce. Develop aggregation centres with cold storage to extend shelf life, reduce post-harvest losses, and ensure year-round supply to local markets and food processors.	West Coast Region, North Bank Region, Upper River Region (Potential Region for vegetable production)
Rice	Domestic demand outstrips supply, but irrigation potential along River Gambia can scale production. Green parks can support upgraded rice mills and diversified processing including rice flour, parboiled rice, rice-based snacks; and biogas production from husks for bio-fertilisers, compressed gas for cooking, enhancing export potential to ECOWAS countries.	Central River Region, Upper River Region
Timber and Forestry Products	Sustainable forestry (e.g., bamboo, Gmelina) has potential for furniture and eco-friendly construction materials. Sustainable industrial parks can promote carbon-neutral processing, targeting regional and global green markets.	Lower River Region, West Coast Region

Low to Medium Equipment Manufacturing	This sector represents a critical enabler of agricultural modernization, food security, and sustainable industrialisation in The Gambia and the wider West African region. Currently, most agro-processing and post-harvest equipment is imported, creating dependency and high costs. Local production of low to medium equipment can fill this gap while creating jobs, reducing foreign exchange outflows, and boosting resilience. Key opportunities include: Agro-processing & Post-harvest Machinery - rice milling machines, groundnut oil presses, shellers, solar dryers, feed mixers, pelletizers. Locally produced equipment can be adapted to Gambian crops, farm sizes, and energy access realities (e.g., solar/diesel hybrid).	Mainly urban and peri-urban industrial clusters, including: Greater Banjul Area (access to port, trade hubs, and industrial services). West Coast Region (close to agricultural production zones, logistics corridors).
	Light Transport & Mobility - bicycles, e-bikes, motorcycle parts, and small car parts for local and regional markets. E-mobility manufacturing aligns with AfCFTA's push for sustainable industrialisation and reduces fuel dependence. Construction Equipment - block and brick-making machines, paving stone presses, and small-scale eco-friendly cement alternatives, supporting climate-resilient infrastructure. Parks can host fabrication hubs, incubation centres, and skills training for SMEs. With renewable-energy powered foundries and fabrication workshops reduce costs and emissions; and potential partnerships with universities, TVET centres, and private innovators for design and prototyping.	Central River Region (for agra-processing machinery tied to rice, groundnut, and sesame value chains) Greater Banjul Area - access to the port, logistics, and international suppliers of parts/ components. Strong base for assembly plants (knock-down kits). West Coast Region (Brikama, Kanifing) → existing small-scale auto-mechanics and workshops can be upgraded into clusters for assembly and servicing.
		Potential cross-border linkages with Senegal (Kaolack, Ziguinchor)| to supply the broader Casamance and Senegalese markets under AfCFTA. Urban Growth Zones: Banjul, Serrekunda Brikama - driven by high urbanization and construction demand. Growth corridors (Farafenni, Soma, Basse) where infrastructure development is scaling. Lower River Region -potential for eco-friendly material innovations (bamboo-based, lime-stabilized bricks) linked to forestry and agra-forestry initiatives.

The industrial sector faces structural challenges including inadequate infrastructure, limited access to reliable and affordable renewable energy, poor storage and processing facilities, and high costs associated with transitioning to low-carbon technologies. These barriers inhibit the development of sustainable, climate-resilient industrial operations and significantly limit private sector investment.

Establishing dedicated Sustainable Industrial Parks is essential to attract and concentrate investment in climate-friendly manufacturing. These parks, powered by renewable energy and designed to harness circular economy opportunities, benefit from strategically integrated transport networks and streamlined environmental permitting processes, significantly reducing operational costs and enhancing their overall competitiveness Furthermore, significant potential exists in certifying agricultural produce, particularly groundnuts and horticultural products, as organic or fair trade. Accessing premium markets through certification can notably increase export earnings and encourage sustainable agricultural practices.

Additionally, the adoption of solar-powered cold storage facilities and minimal-waste packaging can dramatically reduce emissions and waste generation.

Socioeconomic Outcomes Anticipated

Implementing the Strategy's sustainable industrialization measures is projected to deliver transformative socioeconomic benefits. Implementation will leverage existing institutional frameworks such as the Gambia Chamber of Commerce and Industry, its youth arms, and community cooperatives. These entities will act as intermediaries linking private capital, training, and regulatory support to ensure a fully inclusive industrial transformation. In addition, the Strategy will draw on the expertise of Empretec Gambia, the Gambia Investment Promotion Agency (GIPA), the Financial Reporting Oversight Board (FROB), and the Gambia Revenue Authority (GRA) to strengthen enterprise development, investment facilitation, transparent financial reporting, and fiscal compliance. Access to financing for MSMEs and youth-led enterprises will be linked to compliance and performance incentives, ensuring transparency, accountability, and effective utilization of funds. Beneficiaries will be supported with capacity-building in accounting systems, packaging, and technology adoption.

A dedicated Venture Capital Support Programme will also be introduced to catalyse investment in youth- and women-led enterprises engaged in value addition and climate-smart production. The Youth will be engaged from the very outset of project design to ensure genuine ownership, innovation, and sustainability. With nearly 70 percent of the Gambian population under the age of 30, their participation is not merely desirable but essential for the country's economic transformation. The Strategy will institutionalize youth inclusion through structured collaboration with the youth arms of the Gambia Chamber of Commerce and Industry and through targeted

capacity-building programmes under initiatives such as NEDI, YEP, ROOTS, and IOM.

To deepen this engagement, a dedicated partnership will be established with the Gambia Youth Chamber of Commerce (GYCC), local banks, and private investors to expand access to equity financing, strengthen due diligence, and support pipeline development. These efforts will bridge the gap between finance, entrepreneurship, and industrial growth, empowering young Gambians to become key drivers of sustainable, inclusive industrialization.

The ambition to boost value-added manufacturing and processing capacity by 15% by 2030 will substantially increase economic diversification and resilience. The macroeconomic modelling suggests the CPP scenario will increase GDP growth substantially, with GDP projected to be 108% higher by 2050 compared to the business-as-usual scenario, driven by higher productivity and lower climate-related costs. Moreover, this strategic aim is expected to create over 25,000 green jobs, effectively doubling the share of green jobs in total employment by 2050 to 1.72%. In order to align with AfCFTA implementation and prepare for emerging carbon border adjustment mechanisms, The Gambia will integrate its Sustainable Industrial Parks into regional green/sustainable trade corridors, embedding renewable-powered logistics, cross-border certification schemes, and MRV capacity. This will position Gambian agro-industrial exports to access premium AfCFTA, EU, and global markets, safeguard trade competitiveness, and accelerate the growth of green jobs. Financing instruments will prioritize AfCFTA-aligned climate goods and services, including certified agro-exports, renewable-powered cold chains, eco-packaging etc.

Options of Keystone Projects

Sustainable Industrial Parks

The table below summarizes the proposed locations and key raw materials for sustainable industrial zones. These zones are strategically aligned with national value addition priorities and are designed to leverage renewable energy, circular economy opportunities, and certification schemes for organic and sustainable production.

Their development aims to enhance export competitiveness by capitalizing on proximity to raw material sources and transport corridors, while also facilitating access to European markets and African markets within the AfCFTA context.

HFC Substitution and Cooling Efficiency Program

Rising temperatures and rapid urbanization in The Gambia are driving significant demand for cooling services across households, schools, commercial sectors, and

healthcare facilities. According to the IMF, average temperatures in The Gambia have increased by 1.0°C over the past 60 years, with projections of further warming in West Africa (IPCC, 2022) as a result, the need for air conditioning and refrigeration is growing, particularly to reduce heat stress, preserve medicines (healthcare facilities), and support economic activities. The use of hydrofluorocarbons (HFCs), super-pollutant refrigerants with global warming potentials (GWPs) hundreds to thousands of times higher than CO_2, is a growing threat to the country's mitigation pathway.

To support The Gambia's NDC commitment to reduce emissions from industrial processes, this program will phase out high-global-warming-potential hydrofluorocarbons (HFCs) used in refrigeration and air conditioning. The program will incentivize the import and use of low-GWP refrigerants through fiscal measures, update public procurement standards for cooling systems, and train technicians in the safe handling of alternatives such as R-32, propane, or CO_2-based systems. Technical assistance will be sought from the Clean Cooling Collaborative[34], formerly known as the Kigali Cooling Efficiency Program (K-CEP), UNEP, and bilateral partners. This initiative also improves energy efficiency and contributes to long-term

Project	Location	Key Raw Materials	
Groundnut Processing Zone	North Bank Region, near Trans-Gambia Highway	Groundnuts	Introduce aflatoxin-safe storage and processing facilities, support for certified seed production, and access to climate insurance
Rice Processing Zone	Central to western regions, near Trans-Gambia Highway	Rice	Increase rice production through SRI[34], promote upland rice varieties, and reduce import needs.
Fish Processing Zone (include aquaculture (tilapia, catfish, oyster farming)	Coastal areas, near major fishing communities (i.e. (Banjul, Bakau, Tanji, Gunjur))	Fish and other sea food	Increase the value of fish exports, reduce reliance on unprocessed exports, and access premium international markets. **Fish & Seafood Processing:** Modern facilities for cleaning, grading, packaging, and cold storage of marine catch (pelagic and demersal species), shellfish, and other seafood products. **Aquaculture Integration:** Dedicated infrastructure for farming tilapia, catfish, and oysters, providing year-round supply, reducing over-reliance on wild stocks, and supporting biodiversity restoration in coastal ecosystems. **By-Product Utilisation:** Fish meal and oil production for livestock feed and export markets.

[34] an initiative of ClimateWorks focused on transforming the cooling sector and making efficient, climate-friendly cooling accessible for all.

Millet Processing Zone	Central River Region and Upper River Region (major millet production belts)	Millet (pearl and finger varieties)	Establish dedicated millet processing and value-addition centres. These centres will provide: Modern milling, dehulling, and fortification facilities to improve product quality and nutritional value. Processing into diversified products (e.g., millet flour, porridge mixes, snacks, and beverages), boosting local consumption and creating new export opportunities. Storage and drying facilities to reduce post-harvest losses and stabilise supply. Research and extension support for improved millet varieties, in collaboration with the Gambia Seed Secretariat and agricultural research institutions.

adaptation by reducing heat stress impacts.

Green Cement and Industrial Decarbonization Feasibility Study

The construction sector is experiencing rapid growth, driven by housing demand from a 3.2% population growth rate, tourism recovery (10-15% of GDP), and public infrastructure projects like roads and ports (World Bank, 2023). While precise growth rates are unavailable, regional trends suggest annual growth may exceed 10% in high-demand areas like The Gambia. Although The Gambia has a small industrial base, emissions from construction and materials manufacturing are projected to grow due to urban expansion. This initiative proposes a national feasibility study on low-carbon cement and industrial processes, exploring the viability of alternative binders such as laterite, rice husk ash, groundnut shell ash, other agricultural waste and recycled aggregates. Beyond agricultural applications, biochar offers promising opportunities in sustainable construction. Its lightweight, porous structure and carbon-sequestering properties make it an ideal additive in green cement, bricks, and insulation materials. Integrating biochar into local construction value chains would reduce cement dependency, lower embodied carbon, and create new circular-economy enterprises. This aligns closely with the Green Cement and Industrial Decarbonization Feasibility Study and will be explored as a complementary track under that initiative. The study will inform policy design, potential public-private partnerships, and pilot demonstrations of climate-friendly construction materials. Implementing green cement technologies will reduce emissions from the construction sector while supporting green building certification and future climate-financed urban infrastructure programs.

National Sustainable Industrial Standards and Labelling Scheme

This initiative will develop national green standards and product labelling for key sectors such as construction materials, cold chain

logistics, and consumer goods to build a foundation for industrial decarbonization. The standards will set benchmarks for emissions intensity and energy efficiency and will be developed through multi-stakeholder consultations with support from institutions like UNIDO and the ISO. Compliance will be incentivized through preferential access to concessional finance, green public procurement, and fiscal rebates. A primary revenue stream for green labelling schemes would be charging companies certification fees to verify and label their products as compliant with environmental standards. This initiative will strengthen institutional capacity, attract sustainable industrial investment, and create a policy environment aligned with The Gambia's long-term mitigation strategy.

Financing Instruments

Financing priorities include public-private partnerships (PPPs) for park infrastructure, facilities for processing and packaging, investments in sustainable logistics and certification, and venture capital for agri-tech startups.

Green Industrialization Facility (GIF): a blended-finance window within the Gambia Climate Change Fund to co-finance industrial-park infrastructure, low-carbon technologies, and SME greening initiatives.

Sovereign Green and Blue Bonds: to mobilise long-term domestic and international capital for GEZs, renewable energy integration, and port-area decarbonization.

PPP and Concession Models: structured partnerships for industrial-zone development, leveraging private developers and anchor tenants under government oversight.

Export-Credit and Risk-Guarantee Schemes: through Afreximbank and ECOWAS Development Bank to secure financing for export-oriented manufacturing.

Carbon and Performance-Based Finance: certify emission reductions from industrial efficiency and refrigerant substitution for sale in Article 6.2 and voluntary carbon markets.

SME Green-Upgrade Credit Lines: channel concessional loans via local banks to modernise equipment and adopt cleaner technologies.

Youth Climate Venture Fund: To operationalize youth participation in green enterprise and value-addition, a dedicated Youth Climate Venture Fund will be established under the Country Platform, using the V20 as the Backoffice, and in partnership with the Gambia Youth Chamber of Commerce. The Fund will deploy catalytic equity investments of at least USD 20,000 per enterprise for value-addition, green industrialisation, and circular-economy ventures. A seed capital pool of USD 6 million, mobilised through philanthropy, government, development partners, and private investors, will

anchor the Facility. Philanthropic investments will convert to equity for the government after five years or cycled back into the Fund and other climate efforts, and due-diligence and pipeline support will be managed jointly by the GYCC and partner banks. Recognizing the structural financing barriers youth and small enterprises face, the government will catalyse concessional credit lines, guarantee mechanisms, and matching-grant schemes (80 percent in-kind, 20 percent cash) through institutions such as the National Enterprise Development Initiative (NEDI). Banks will be encouraged to use trust-based appraisal systems, where submissions from youth networks like the Gambia Youth Chamber of Commerce (GYCC) are evaluated collaboratively with financial institutions.

Financing partners include the UN Agencies, World Bank, Africa Development Bank, ECOWAS Bank for Investment and Development (EBID), International Finance Corporation (IFC), PROPARCO (the private sector financing arm of the Agence Française de Développement), the Netherlands Development Finance Company (FMO), the German Development Bank (Kreditanstalt für Wiederaufbau – KfW), the African Export-Import Bank (Afreximbank), the Africa Exchange Holdings (AFEX), the Gambia Investment and Export Promotion Agency (GIEPA), the vertical funds such as the Green Climate Funds, Climate Investment Fund, Global Environment Facility, Adaptation Fund etc., and regional venture capital firms.

Strategic Aim D. Scale Up Nature-Based Solutions, Ecotourism, and Coastal Protection

Goal: Position The Gambia as a leading ecotourism destination and coastal-resilience champion, safeguarding biodiversity, restoring critical habitats (wetlands, terrestrial forests, mangroves, seagrasses, coastlines), and delivering sustainable economic benefits to local communities.

Key Targets

- Expand legally protected land area, establish wildlife corridors linking coastal wetlands and

Priority Investment Projects and Indicative Cost Estimates

Keystone Project	Estimated Investment (USD millions)
Sustainable Industrial Parks (Groundnut, Rice, Fish, Millet Zones)	34,800
HFC Substitution & Cooling Efficiency Programme	4,000
Green Cement & Industrial Decarbonization Feasibility	2,500
National Sustainable Industrial Standards & Labelling	1,000
	42,300

inland habitats, and enhance marine protected zones to balance ecological conservation with responsible tourism.

- Rehabilitate thousands of hectares of wetlands; terrestrial forests, mangroves and build "green" firebelt and coastal defences (living shorelines, revegetated dunes) that reduce flood and fire risk and preserve biodiversity.
- Empower local communities to manage eco-lodges, engage in natural resource enterprises, guiding services, cultural heritage tours, and sustainable product chains, ensuring direct socio-economic benefits.
- Develop green financial instrument to encourage private sector investment.
- Capitalize on nature-based carbon credits (reforestation, coastal rehab) through a transparent and equitable strategy, unlock new revenue streams, and contribute to The Gambia's overall climate finance mobilization.
- Empower local communities to manage and own forest lands as community forests.
- Improve the co-management strategies between the Department of Parks & Wildlife Management (DPWM), Department of Forestry and local communities in protected area management schemes.
- Incentivising communities to protect mangrove forests, which reduces coastal erosion and sustains local fisheries.

The Gambia, with its rich biodiversity, unique ecosystems, and extensive coastline, holds immense potential for nature-based solutions (NbS) and ecotourism as key pillars of sustainable development. The country's natural heritage, including mangrove forests, tidal wetlands, riverine estuaries, and coastal dunes, not only supports biodiversity but also provides essential services such as carbon sequestration, flood control, and livelihoods for coastal communities. However, these ecosystems are increasingly threatened by climate change, including rising sea levels, saltwater intrusion, and extreme weather events.

The tourism sector, particularly ecotourism, is an important source of foreign exchange and employment in The Gambia, contributing approximately 20% of GDP prior to the COVID-19 pandemic. Yet, mass tourism and unregulated development have put pressure on fragile ecosystems, leading to habitat degradation and coastal erosion. Moreover, current conservation efforts are fragmented and under-resourced, limiting their ability to generate long-term ecological and economic benefits.

Despite persistent challenges, The Gambia has made notable strides in advancing nature-based solutions and ecotourism. The country's commitment to environmental

sustainability is reflected in key policy frameworks such as the National Biodiversity Strategy and Action Plan (NBSAP) and the Second Nationally Determined Contribution (NDC), both of which prioritize the protection and restoration of critical ecosystems. On-the-ground efforts have yielded tangible results, with successful mangrove rehabilitation projects in areas like the Tanbi Wetlands and Bintang Bolong contributing to improved biodiversity and strengthened natural flood defences.

The Gambia has also aligned itself with international conservation efforts by joining initiatives such as the UN Decade on Ecosystem Restoration and the Blue Carbon Initiative, signalling its intention to scale up ecosystem-based climate action. Locally, community-led models of ecotourism are already showing promise. Initiatives in Janjanbureh and Tumani Tenda have demonstrated how eco-lodges and cultural heritage tourism can be managed sustainably to generate direct socio-economic benefits for rural populations, particularly women and youth.

To build on these achievements, the Climate Prosperity Investment and Financing Strategy outlines a set of transformative interventions. These include the expansion of legally protected areas, the creation of wildlife corridors linking coastal and inland habitats, and the enhancement of marine protected zones to balance biodiversity conservation with responsible tourism development. The Strategy also prioritizes the restoration of thousands of hectares of mangroves, wetlands, and coastal dunes using nature-based approaches such as living shorelines and revegetated dune systems. In parallel, the strategy emphasizes community empowerment through training and support for managing eco-lodges, delivering guided nature and heritage tours, and developing sustainable product chains like locally sourced crafts, honey, and wild foods.

Finally, the Strategy proposes to activate a transparent carbon registry to facilitate access to carbon markets. By establishing pathways for crediting ecosystem restoration activities, including reforestation and coastal rehabilitation, The Gambia can unlock new sources of climate finance while strengthening its role as a leader in ecosystem stewardship and sustainable development.

Socioeconomic Outcomes Anticipated

The Gambia's Climate Prosperity Investment and Financing Strategy scenario, known as 'CPP', highlights the powerful and synergistic socioeconomic benefits of scaling up nature-based solutions (NbS), ecotourism, and coastal protection as part of The Gambia's climate-resilient development strategy.

First, job creation is a standout benefit. Under the CPP, total employment is projected to rise to 1.47 million by 2050, a 9.2% increase over the business-as-usual (BAU)

scenario. This job growth is largely driven by labour-intensive green sectors, including community-based ecotourism, habitat restoration, and sustainable land use, many of which are well suited to engaging women and youth in rural and coastal communities.

At the same time, the CPP scenario results in a reduction of the unemployment rate to 3.3%, compared to 7.1% in the BAU scenario. Notably, green jobs - defined as employment linked to activities like reforestation, clean energy, and conservation - more than doubled, growing from 11,293 in BAU to 25,317 by 2050 under CPP. The share of green jobs in total employment increases from 0.84% to 1.72%, highlighting how a focus on environmental stewardship can also be a powerful employment generator.

Income gains and poverty reduction are also prominent. Real disposable income per capita nearly doubles in the CPP scenario, reaching USD 1,725 per person by 2050, compared to just USD 833 in BAU. This substantial increase in income is underpinned by higher productivity and inclusive growth associated with the restoration economy and eco-entrepreneurship. Consequently, the share of the population living below the poverty line drops to 16% by 2050, compared to 28% under BAU.

The environmental dividends are equally compelling. Nature-based infrastructure, such as living shorelines and restored wetlands, plays a critical role in reducing flood and erosion risks, thereby protecting people, infrastructure, agricultural land, and biodiversity. In fact, by 2050, habitat quality and forest cover increase, reversing decades of degradation. This environmental restoration is supported by a sharp reduction in climate damages: cumulative climate-related losses under CPP are **34% lower** than under BAU, resulting in nearly USD 1 billion in avoided GDP losses.

The CPP also introduces opportunities for carbon finance. Through targeted interventions like reforestation and blue carbon initiatives in mangrove ecosystems, The Gambia is projected to generate USD 110 million in carbon credits by 2050. Establishing a transparent carbon registry will further enable the monetization of ecosystem services, providing a new and sustainable revenue stream to finance conservation and community development efforts.

Finally, the broader macroeconomic impact of these interventions is transformative. The CPP yields a Benefit-Cost Ratio (BCR) of 2.56 by 2050, with GDP 108% higher than BAU. These gains reflect a holistic development approach where investment in ecosystems and local communities serves as a catalyst for national prosperity.

Scaling up nature-based solutions and ecotourism under the CPP not only restores The Gambia's natural capital but also delivers substantial gains in employment, income, climate resilience, and fiscal sustainability, anchoring biodiversity

and environmental protection at the heart of inclusive and prosperous development.

Options of Keystone Projects

Coastal Ecosystem Restoration and Ecotourism Development Program

The Coastal Ecosystem Restoration and Ecotourism Development Program offers a comprehensive approach to safeguarding natural assets, enhancing climate resilience, and unlocking sustainable economic opportunities for coastal communities. This transformative programme integrates ecosystem restoration, Marine Protected Area enhancement, nature-based infrastructure, community-led ecotourism, and carbon finance to protect biodiversity, combat climate impacts, and generate inclusive livelihoods.

Mangrove Restoration for Coastal Protection

At the heart of the program is the rehabilitation and restoration of 10,000 hectares of degraded mangrove forests, particularly in the Western Region and estuarine zones such as Tambi, Bao Bolong, and the Niumi wetlands. These areas are critical to The Gambia's coastal ecology and play an essential role in mitigating climate-related risks.

Salt-tolerant mangrove species, including *Rhizophora* and *Avicennia*, will be planted using assisted natural regeneration techniques. To ensure long-term success and local ownership, 2,000 community members, with a strong emphasis on engaging women, will be trained in mangrove monitoring, conservation, and sustainable harvesting practices. Secure community tenure systems will be established to empower local stewards and ensure the restored areas are effectively managed.

The ecological and economic benefits are significant: mangroves not only provide natural protection against storm surges and erosion but also serve as breeding grounds for fish, helping increase fish stocks by an estimated 20%. Restoration efforts are also expected to sequester approximately 15,000 tons of CO_2 annually.

Living Shorelines and Green Infrastructure

To complement mangrove restoration, the program will deploy green infrastructure solutions to protect 50 kilometres of vulnerable coastline. Living shorelines - featuring coconut palms, salt marshes, and mangroves - will be planted in high-risk zones stretching from Senegambia to Jinack Island. These natural buffers will be reinforced with permeable barriers, such as oyster reefs, to stabilize sediment and dissipate wave energy.

In areas like Tumani Tenda, water resource management systems will be developed to further enhance local resilience. These solutions represent a sustainable alternative to traditional hard infrastructure, offering both climate protection and habitat conservation. This project will build on the success of the Global Environment facility supported UN Environment-led project titled

Adoption of an Ecosystems Approach for Integrated Implementation of Multilateral Environmental Agreements at National and Divisional Levels.

Community-Led Ecotourism Network

To translate environmental restoration into long-term economic opportunity, the program will establish a network of eco-lodges, wildlife and ecological corridors, and cultural tourism sites operated by local cooperatives. Key locations include the Bao Bolong Wetland Reserve, where new eco-lodges will be developed adjacent to restored mangrove forests.

Tourism products will include guided birdwatching excursions, oyster harvesting experiences, and heritage tours in sites like Tumani Tenda village. Training in tourism management and marketing will be provided by the Gambia Tourism and Hospitality Institute to community members, enabling them to capture the growing demand for authentic, nature-based experiences.

The ecotourism component is projected to benefit several households by generating sustainable income, particularly for women and youth, while promoting environmental stewardship and conservation awareness.

Re-greening Degraded Inland Landscapes

Beyond the coast, the program also targets inland ecosystem restoration. In regions such as the North Bank, Upper River Region and Central River, where deforestation and land degradation have depleted soil fertility, the initiative will restore 10,000 hectares of savanna landscape through the planting of drought-resistant native trees, including neem and baobab.

Agroforestry systems will be introduced to combine tree planting with food crops, improving soil health, restoring biodiversity, and diversifying incomes. These interventions are expected to sequester an additional 10,000 tons of CO_2 per year while enhancing long-term land productivity.

Ecosystem-based Adaptation or Climate Resilience

This project will harness nature-based solutions to strengthen climate resilience by conserving, restoring, and sustainably managing ecosystems such as mangroves, wetlands, forests, and coastal areas. It will integrate ecosystem-based adaptation approaches into national and local planning, address critical adaptation gaps while enhancing the resilience of vulnerable communities whose livelihoods and food security depend on healthy ecosystems.

The project will generate multiple co-benefits, including biodiversity conservation, carbon sequestration, and improved ecosystem services such as water regulation and coastal protection. With inclusive participation from local communities, traditional knowledge holders, women, and youth. It will create scalable models of ecosystem-based solutions that inform broader climate strategies and contribute to long-term adaptation and sustainable development. Including the seagrass ecosystems in the coastal waters of the Gambia, which will help with carbon

reduction and provide a base for nurseries for the fish species and serve as a source of food for the green sea turtles.

Financing Instruments

Nature-based solutions and ecotourism will be financed as productive assets that deliver both adaptation and growth returns. The CPIFS leverages blended finance, carbon markets, and community ownership to scale investment.

Sovereign Blue and Green Bond Programme: issue sovereign and sub-sovereign bonds certified under international blue-bond standards to finance NbS, coastal restoration, and eco-infrastructure with the objective of attracting impact investors, diaspora capital, and ESG funds through transparent reporting.

Public-Private Partnerships for Ecotourism (PPP-Eco): Mobilise private investment for eco-lodges, sustainable tourism infrastructure, and biodiversity parks. Government to facilitate land-tenure security, fiscal incentives, and viability-gap funding for responsible domestic investors.

Community Benefit-Sharing Mechanisms: establish Community Conservation Trust Funds at district level to manage revenue from carbon, tourism, and biodiversity services; and ensure equitable allocation: approximately 40% of benefits to women and youth-led initiatives.

Ecosystem Insurance and Risk Financing: Deploy parametric insurance for mangrove and coastal-ecosystem loss, integrated within the national disaster-risk financing framework to enable rapid recovery of tourism and coastal assets post-disaster.

Financing Partners - the financing architecture for scaling up nature-based solutions, ecotourism, and coastal protection will leverage a broad coalition of multilateral, regional, bilateral, private, and community partners. At the multilateral level, the Green Climate Fund (GCF), Global Environment Facility (GEF), Adaptation Fund, and Least Developed Countries Fund (LDCF) are expected to provide anchor grants and concessional financing for large-scale restoration, marine protection, and community-based adaptation programmes.

These will be complemented by blended-finance operations with the African Development Bank (AfDB), World Bank (IDA/PROBLUE), West African Development Bank (BOAD), European Investment Bank (EIB), and Islamic Development Bank (IsDB) to support integrated coastal infrastructure, blue-economy enterprises, and resilient tourism investments.

Bilateral cooperation will be pursued with partners such as Germany (KfW/GIZ), France (AFD/FFEM), United Kingdom (FCDO), Japan (JICA), and the Netherlands (DFCD), focusing on biodiversity finance, PPP structuring, and sustainable tourism development.

Regional and private-sector institutions, including Afreximbank, Africa Finance Corporation (AFC), and local financial institutions will be engaged to co-finance green-SME credit lines and PPPs for eco-lodges and circular-tourism infrastructure.

Priority Investment Projects and Indicative Cost Estimates

Keystone Project	Estimated Investment (USD millions)
Mangrove Restoration for Coastal Protection (10,000 ha)	54,150
Living Shorelines & Green Infrastructure (50 km)	32,400
Community-Led Ecotourism Network	4,000
Re-greening Degraded Inland Landscapes	24,250
Ecosystem-based Adaptation Programme	5,500
	120,300

Strategic Aim E. Climate-Resilient Cities, Water Security, and Circular Economies

Goal: Transform The Gambia's urban areas into climate-resilient, water-secure, and circular economy hubs that can withstand flooding, heat stress, and water scarcity. Ensuring that cities remain liveable and productive under future climate conditions by protecting critical infrastructure, securing water resources, while cutting methane emissions.

Key Targets

- Reduce methane emissions from unmanaged municipal waste by 50%, relative to the 2020 baseline.
- Establish three regional integrated waste management hubs in major municipalities, equipped with composting, recycling, and methane recovery systems.
- Create 500 new jobs in the circular economy, particularly for youth and women, through micro-enterprises and public-private partnerships.
- Divert at least 40% of organic and plastic waste from landfills, with a focus on composting and reuse.
- Rehabilitate the existing wastewater treatment plant in Banjul and construct two new treatment facilities in urban growth areas, designed to enable safe recharge of aquifers.
- Establish and enforce comprehensive groundwater and surface water extraction regulations with licensing, metering, and payment systems for 100% of industrial and commercial users.
- By 2030, increase basic sanitation access from 47% to at least 70%, with 55–60% of households using safely managed services; and by 2050, achieve universal basic sanitation and at least 95% safely managed sanitation.
- Reduce flood incidence and associated economic losses in major municipalities by 30% by

2030 through improved waste management and drainage systems.

The Gambia's rapid urbanisation is accelerating the generation of municipal solid waste, particularly in high-density areas such as the Kanifing Municipality, and the West Coast Region. However, most waste is currently disposed of in unmanaged dumpsites without being sorted or treated. This has led to severe environmental and health hazards and is a growing contributor to greenhouse gas emissions, particularly methane, a short-lived climate pollutant with a global warming potential over 80 times higher than carbon dioxide in the first 20 years after release.

According to UN Environment data (2022), waste contributes up to 7–9% of The Gambia's GHG emissions, mainly from landfill methane and open burning. Yet, the country currently lacks an integrated waste management infrastructure, and recycling rates remain negligible. The NDC Implementation Plan identifies Waste Outcome W1 as a key conditional mitigation target, aiming to establish composting, landfill gas recovery, and materials recovery systems to curb methane emissions and promote a more circular economy.

At the same time, there is untapped potential to create green jobs, foster entrepreneurship, and enhance public health through decentralised recycling, composting, and small-scale reuse initiatives. Community-level innovation and private sector investment can play a transformative role in reducing methane emissions while creating urban prosperity.

To reinforce this integrated approach, the forthcoming revision of the Water Management Bill will incorporate provisions linking water supply, sanitation, and waste management systems under a comprehensive framework. This reform will clarify institutional mandates and ensure coordinated planning and regulation of water, wastewater, and solid waste services. By embedding sanitation and waste management within the broader water governance framework, the Bill will strengthen accountability, promote circular resource use, and enhance environmental health outcomes across urban and peri-urban areas. The Global Methane Pledge, along with related donor initiatives such as the Climate and Clean Air Coalition, provides grant financing and technical assistance aimed at reducing methane emissions. Various waste management approaches, including composting, landfill gas capture, and waste-to-energy technologies, have the potential to generate voluntary carbon credits, offering an additional revenue stream.

Options for Keystone Projects:

Integrated Waste Management Infrastructure Program

Modernizing waste collection, sorting, and composting systems to capture value and reduce emissions from urban waste.

This initiative proposes the development of an integrated waste management system to reduce methane emissions, improve urban sanitation, and foster circular economy models in The Gambia. The project will establish centralized and decentralized facilities for waste collection, sorting, composting, and recycling in urban centres such as Banjul, Brikama, and Kanifing. It will also include landfill gas collection systems to mitigate emissions from unmanaged dumpsites. The initiative is designed as a public-private partnership and will seek financing from sources such as the Green Climate Fund (GCF), Blue Planet Fund, and bilateral donors. This directly supports the NDC's mitigation target for the waste sector and creates green jobs while enhancing community health outcomes.

Municipal Waste-to-Energy Projects

Generating clean energy from organic and plastic waste in urban municipalities through scalable waste-to-energy technologies

This initiative seeks to convert municipal organic and plastic waste into energy through scalable waste-to-energy (WtE) solutions such as anaerobic digestion and refuse-derived fuel (RDF). Targeting urban centres with high waste volumes, such as the Kanifing municipality, the project will reduce landfill dependency and provide clean energy to nearby communities or industrial users. The pilot phase will include feasibility assessments, technology deployment, and local capacity building. Co-benefits include methane emission reductions, improved waste management practices, and enhanced energy security. This project aligns with The Gambia's conditional NDC targets and supports innovation in sustainable urban infrastructure.

Community Circular Economy Hubs

Empowering local entrepreneurs, youth, and women's groups to build low-tech recycling and composting enterprises that support sustainable livelihoods.

This grassroots initiative will establish community-led hubs focused on low-tech waste management and upcycling. Target beneficiaries include women's groups and youth-led enterprises who will be trained and supported to operate sorting stations, engage in plastic reuse (e.g., eco-bricks, handicrafts), and compost organic waste for use in urban agriculture. By combining livelihood creation with environmental impact, the initiative contributes to local

development while complementing national climate mitigation goals.

Recommended Communities: Based on waste management needs, community engagement, and potential for impact, the following communities are recommended:

Kanifing Municipality[35]

Bakoteh: Known for the Bakoteh dumpsite, a major waste management challenge, with past community protests indicating high engagement. Ideal for addressing environmental issues while creating livelihoods.

Manjai-Kololi-Kotu Cluster: These interlinked communities within Kanifing Municipality face similar waste management challenges and opportunities for local innovation. Together, they provide an ideal location for establishing grassroots recycling and composting hubs, leveraging existing community activism, small enterprise participation, and shared drainage and waste collection systems to maximize efficiency and impact.

Serekunda: The largest urban centre with high waste generation, diverse population, and market opportunities, making it a hub for economic and environmental impact.

Barra (North Bank Region): While less urbanised than Kanifing, Barra faces waste management issues, with limited formal infrastructure.

West Coast Region: The West Coast Region is the most populated, housing close to 50% of The Gambia's population. It generates the highest volumes of waste and lacks efficiently managed dumpsites.

These recommendations leverage strategic location, high waste generation, existing community engagement, and active women's and youth groups to ensure the initiative's success and scalability.

Urban Water, Wastewater, and Groundwater Resilience Programme

This project is to secure The Gambia's urban water future by integrating wastewater rehabilitation, groundwater regulation, managed aquifer recharge, and sustainable urban water management into a single, climate-resilient programme.

Key Components:

a. Groundwater Governance and Regulation

- Enact and enforce national groundwater extraction regulations, covering licensing, metering, tariffs, and penalties for non-compliance.
- Establish water allocation plans for urban aquifers, prioritising essential uses and climate resilience.
- Create a Groundwater Monitoring and Enforcement Unit within the

[35] During the first round of project implementation, a possible addition of other Municipalities can be considered to include eventual overlooked communities.

Department of Water Resources, equipped with digital monitoring systems and satellite-based surveillance for illegal extraction detection.

b. Urban Wastewater Rehabilitation for Aquifer Recharge

- Rehabilitate Banjul's wastewater treatment plant to meet discharge and reuse standards.
- Build two decentralised wastewater treatment facilities designed for treated water reuse and aquifer recharge.
- Introduce pre-treatment requirements for industrial discharges to protect aquifers from contamination.

c. Managed Aquifer Recharge (MAR) and Rainwater Harvesting

- Develop infiltration basins and recharge wells in water-stressed zones.
- Incorporate rainwater harvesting into building codes for all new public, industrial, and commercial facilities.
- Pilot stormwater capture systems in flood-prone urban areas to reduce runoff and replenish groundwater.

d. Demand Reduction and Efficiency

- Launch industrial water efficiency programmes to cut consumption by 20% through recycling and reuse.
- Expand public awareness campaigns on groundwater conservation and the value of treated wastewater reuse.

e. Climate Resilience and Co-Benefits

- Protect urban aquifers from overexploitation and salinisation, especially in coastal zones vulnerable to sea-level rise.
- Enhance resilience to drought and population growth through diversified water sources.

Stormwater Drainage System within the Greater Banjul Area

The main drainage route in The Gambia is the River Gambia, which flows through the length of the country. In Greater Banjul drainage occurs naturally via three main systems. The first extends from the area of Bundung to the northwest and leads to the Atlantic. The second, serving the areas of Lamin, Abuko, Fajikunda and eastern plains of Serrekunda, flows east via secondary drains to the river and the Tanbi wetland area. The third system basically covers the area of Bakau and drains in old channels to the sea. agreement. The infrastructure for drainage in the Greater Banjul Area is far less developed than that in the capital city. There are numerous lined and unlined channels and roadside drains of different shapes and sizes. However, a complete primary drainage system that can effectively discharge stormwater does not exist.

In areas equipped with a stormwater drainage system, the structures identified are almost completely

clogged with deposits and garbage and do not allow the proper drainage of rainwater. During the rainy season, the various neighbourhoods are flooded by runoff, and discharge becomes difficult because of the very low gradients. In addition, the lack of outfalls from the low-lying land causes the stagnation of water and consequently the flooding of these areas. Several peri-urban settlements are being built in swampy areas where storm drainage is a menace and the almost unpaved street system barely allows access, especially during the rainy season. The pollution of stormwater can be increased by mixing with domestic wastewater from the overflow of flooded cesspits and latrines. An efficient drainage system would reduce the probability of this problem occurring. A comprehensive solution is needed for dealing with the increasing problem of wastewater and sewage. For the sustainability of the stormwater project, maintenance will be very important in terms of avoiding solid waste dumping.

Sanitation System

To ensure systemwide resilience, sanitation will be fully integrated within the national water-management framework. Water supply, wastewater, and solid-waste services will be jointly planned, recognizing their interdependence for health, resource recovery, and pollution control. Waste segregation at source will be encouraged; where not feasible, sorting will occur at collection hubs. In the City of Banjul, a sewage network exists, which leads to a pumping station that pumps the wastewater to the sea south of the city. At present wastewater is only partially treated and in only one treatment plant. The wastewater settles and is treated in a series of unlined ponds. The effluent from the plant flows to the sea via a 1 km long pipeline. Elsewhere, wastewater is largely disposed of in cesspools and pumped or hauled to the wastewater treatment plant from nearby areas where possible. It is suspected that the wastewater is already putting at risk the water quality of the groundwater - which is the main source of drinking water - on account of the shallow aquifer, but no evidence has been given in this respect. In the Bakau region raw sewage is discharged directly into the stormwater drainage system along with solid waste. This has a serious adverse effect on the inhabitants' health as it contributes to the spread of water-borne diseases

Solid Waste Collection and Disposal:
A considerable amount of solid waste is routinely disposed of into the existing uncovered stormwater drainage system, which is widely regarded as a dumping site for the disposal of solid waste It appears that the Municipality's solid waste collection does not include the collection of waste from the existing stormwater drainage system. Waste management greatly affects the quality of stormwater management since open drains and streams carrying stormwater become collecting basins for solid waste and its leachate. The current solid waste management practice is defective. A complete system needs to be in place including effective collection, transfer and final disposal. At the same time, the stormwater system must be protected in closed channels to minimize the intrusion of solid waste and wastewater into the flood stream.

Factors Contributing to Flooding

The following factors were identified as contributing to the problem of flooding:

- Clay Soil
- Very Shallow Gradients.
- Natural or Artificial Depressions.
- Urbanization
- Lack of an Urban Development Plan.
- Low Density Stormwater Infrastructure.
- Advanced Degradation of Drainage Facilities..
- Dysfunctional Bund Road Stormwater Pumping Station.

Impact of the Present Situation

- Land and Infrastructure
- Sand and debris accumulate on major roads.
- Asphalted roads gradually erode..
- Roads can be destroyed completely.
- Prevention of access to areas houses, schools, hospitals, health centres, during the rainy season.
- Houses get damaged.
- Latrines, houses, clothing and foodstuffs are damaged
- Services like Electricity and water supplies are disrupted and sewers are blocked

Water Pollution

The health risks resulting from poor stormwater drainage and flooding arise from the pollution of well water and exposure to polluted water, since flooding pollutes the ground and the subsurface water used for drinking purposes. In various areas of Greater Banjul, communities rely on private wells to supply their domestic water requirements.

Sanitation Stormwater

It has an adverse impact on the sewerage system as it enters the system, causing flooding and the overflow of sewage onto the surface. When stormwater drainage is not managed adequately, during floods obvious public health hazards occur, which are related to sanitation, when latrines and cesspools overflow and the contents mix with the stormwater stream. Since the facilities become unavailable for the residents for the period of the flood, other issues are presented that have adverse effects on health and give rise to environmental issues. This particular effect of flooding is greater outside the City of Banjul where latrines and wells are more common.

Key Components:

- Selection of suitable routes for the design of the drainage system.
- Cleaning waste and debris from the existing drains.
- Calculating the volume of excavation work required.
- Determining the extent of the network system and its connections

with the existing, rehabilitated, and new primary and secondary drains.

- Isolating sewage disposal from the stormwater drainage system

Key Benefits:

- **Flood risk reduction**: Properly designed stormwater systems capture and direct excess rainwater, helping communities adapt to more frequent and intense rainfall events linked to climate change.
- **Water quality protection**: By filtering pollutants (oil, heavy metals, sediments), stormwater systems reduce contamination of rivers and coastal areas, improving ecosystem resilience under climate stress
- **Extending the estimated life span of the roads**: The lifespan of a roadwithout a drainage system is estimated at seven to ten years, while it is estimated at about twenty years for roads with drain. This also reduces the cost of regular maintenance of the road network

Financing Instruments

Financing for this strategic aim will combine climate-mitigation, adaptation, and urban-infrastructure finance through an integrated circular-economy approach.

Urban Circular-Economy Financing Facility (UCEFF):

A window dedicated to climate-smart cities, waste management, and sanitation. The facility will provide concessional loans, grants, and guarantees for composting, recycling, wastewater rehabilitation, and flood-management infrastructure.

Green Municipal Bond Programme:

Issue sovereign and sub-sovereign green or resilience bonds for stormwater drainage, wastewater facilities, and methane-reduction systems. Structure with credit enhancement via the AfDB, World Bank, and EIB.

Public-Private Partnerships for Waste and Water Services:

Mobilise private operators for integrated waste-collection, recycling, and WtE projects, with the Government providing regulatory frameworks, tariff reforms, and viability-gap funding.

Methane and Carbon-Finance Mechanisms:

Access results-based payments through the Global Methane Pledge, Climate and Clean Air Coalition, and Article 6.2 partnerships; and generate voluntary carbon credits from composting, landfill-gas recovery, and wastewater projects, certified under Verra or Gold Standard.

Community and Private Investment Windows:

Channel micro-finance and concessional credit through local banks for SMEs in recycling, waste collection, and sanitation services. Establish Municipal Green Funds and Community Circular Trust Funds to reinvest revenues into local urban services and jobs.

Financing Partners:

Implementation of the Climate-Resilient Cities, Water Security, and Circular Economies agenda will rely on a broad partnership ecosystem spanning multilateral, bilateral, regional, private, and community actors. The Green Climate Fund (GCF), Global Environment Facility (GEF), Adaptation Fund, Blue Planet Fund, and Least Developed Countries Fund (LDCF) will serve as primary sources of concessional and grant finance for waste, water, and urban resilience infrastructure, complemented by blended operations with the African Development Bank (AfDB), World Bank (IDA/PROBLUE), West African Development Bank (BOAD), European Investment Bank (EIB), and Islamic Development Bank (IsDB).

Bilateral cooperation with Germany (KfW/GIZ), France (AFD), United Kingdom (FCDO), United States (USAID), Japan (JICA), and the Netherlands (DFCD) will support technical assistance, policy reform, and PPP structuring, particularly for wastewater and drainage projects.

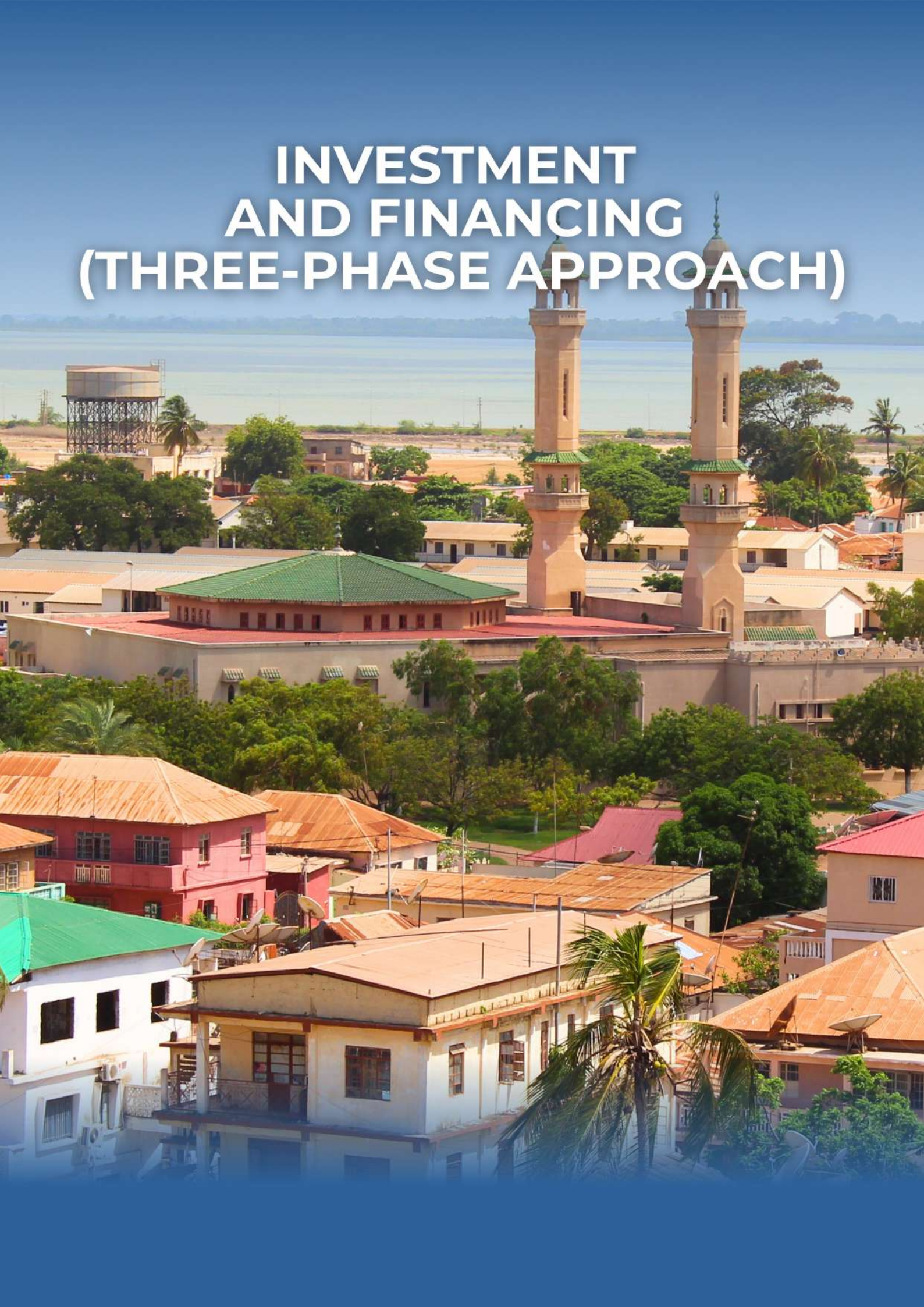
Partnerships with Afreximbank, Africa Finance Corporation (AFC), and local financial institutions such as Ecobank, Vista Bank, and Trust Bank Gambia will expand credit lines for circular-economy SMEs and private waste operators. Carbon and methane finance will be pursued through Article 6.2 bilateral partnerships (Switzerland, Sweden, Singapore), voluntary-market platforms (Verra, Gold Standard, Plan Vivo), and the Climate and Clean Air Coalition, generating results-based revenues from composting, landfill-gas recovery, and wastewater projects.

Technical implementation support will be provided by UNEP, UNDP, UN-Habitat, FAO, IUCN, and The Nature Conservancy, alongside specialized partners such as ARC and Swiss Re Foundation for parametric insurance. Domestically, the Gambia Climate Change Fund (GCCF) will anchor the financing architecture, blending international and national resources with Municipal Green Funds and Community Circular Economy Trust Funds to ensure local ownership and direct benefits to women- and youth-led enterprises.

Priority Investment Projects and Indicative Cost Estimates

Keystone Project	Estimated Investment (USD millions)
Integrated Waste Management Infrastructure	17,400
Municipal Waste-to-Energy Projects	15,000
Community Circular Economy Hubs	1,200
Urban Water, Wastewater & Groundwater Resilience	39,500
Stormwater Drainage - Greater Banjul Area	42,000
Sanitation System Integration	15,500
	130,600

INVESTMENT AND FINANCING (THREE-PHASE APPROACH)



Investment and Financing (Three-Phase Approach)

To convert long-term climate prosperity ambitions into a fiscally responsible and investable pathway, the Climate Prosperity Investment and Financing Strategy is structured into three phases. Each phase aligns with The Gambia's macro-fiscal realities, debt-sustainability constraints, and the progressive strengthening of institutional capacity and market confidence. The Strategy places greater weight on Phase 1 as a grant-led, equity-supported foundation period in which the country builds a robust investment pipeline, operationalises carbon-market readiness, establishes a Revolving Project Preparation Fund, advances early private-sector participation through guarantees and catalytic equity, and undertakes targeted turnaround financing for critical SOEs and value-chain enablers. This phased approach enables The Gambia to maintain strict IMF discipline during 2025–2026, while steadily maturing project designs, strengthening institutions, and creating the enabling conditions for large-scale concessional and blended finance in Phase 2, and eventually deep market participation in Phase 3. Phase 1 anchors stability and preparation, Phase 2 drives concessional scaling and infrastructure acceleration, and Phase 3 realises full market expansion toward sustained climate-resilient prosperity.

Phase 1: Stability, Preparation & Grant-Led Acceleration (2025-2030)

Phase 1 is designed to protect The Gambia's fiscal stability under the ongoing IMF programme while laying the structural foundations for a scaled transition to climate-resilient, inclusive growth. Although Phase 1 spans 2025–2030, its financing profile evolves across the period.

During 2025–2026, as the IMF programme remains in force, all activities will be financed through grants, equity, guarantees, and technical assistance in full compliance with the zero non-concessional borrowing ceiling. Implementation in this period will focus on strengthening the pipeline with innovative business models, raising equity, use of carbon credits and guarantees for credit enhancement.

IMF Programme and Resilience & Sustainability Facility (RST/RSF)

To reinforce macroeconomic stability and accelerate climate-aligned reforms, The Gambia has secured an arrangement under the IMF's Resilience and Sustainability Facility (RSF), approved by the IMF Executive Board in 2025. The RSF provides long-term concessional financing to support climate-informed public financial management, climate-risk integration into investment planning, water and coastal resilience, and broader institutional reforms that underpin the CPP. The RSF is fully aligned with the zero non-concessional borrowing ceiling during 2025–2026 and complements grant-

led financing by strengthening macro-fiscal discipline, improving absorptive capacity, and creating the enabling environment for concessional and blended finance in later phases.

Estimated Costs: Phase 1 is expected to cost USD 2.3 billion in total, with USD 655 million allocated to mitigation and USD 1.6 billion to adaptation.

Targets under Phase 1 include:

Revolving Project Preparation Fund: The Gambia can establish a Revolving Project Preparation Fund with USD 20 million per year for the next 5 years to generate a continuous pipeline of bankable green projects in energy, agriculture, and industrial value addition. The fund would finance early-stage activities such as feasibility studies, technical and financial designs, audits, environmental and social assessments, and community engagement — all of which are essential for meeting investor and MDB requirements but typically unaffordable for project sponsors. It can also be accessed by SOE project-preparation units and the GCCF Secretariat. By recovering preparation costs at financial close and recycling them into new project development, the facility becomes self-sustaining while steadily lowering project risks, shortening timelines, and attracting private investment at better terms. This approach strengthens domestic capacity, improves the quality and readiness of projects, and accelerates The Gambia's transition to climate-resilient, low-carbon growth. The USD 100 million envelope represents approximately 4–5% of the project-preparation investment required to unlock The Gambia's USD 2.3 billion CPP investment needs for 2025–2030 (USD 655 million in mitigation and USD 1.6 billion in adaptation). Resource mobilization will target four complementary partner groups, such as:

Vertical climate funds to optimize access to grant and concessional climate finance:

- **Global Environment Facility (GEF):** To strengthen community resilience, biodiversity conservation, land-degradation reversal, and climate-smart agriculture, while complementing The Gambia's ecosystem-based adaptation priorities.
- **Least Developed Countries Fund (LDCF):** As a core source of dedicated grant financing for LDCs, the LDCF can support The Gambia's most urgent climate adaptation needs — including early-warning systems, climate-resilient livelihoods, and local infrastructure in vulnerable rural and coastal areas.
- **Adaptation Fund (AF):** To scale community-driven adaptation initiatives aligned with national climate strategies, especially in coastal settlements, fisheries, and climate-sensitive agricultural zones.
- .**Climate Investment Funds (CIFs):** To unlock concessional financing for transformational energy and resilience investments, such as

water, renewable energy integration, mini-grids, sustainable transport, and resilient infrastructure.

- **Fund for Responding to Loss and Damage (FRLD):** Guided by the Barbados Implementation Modalities (BIM), the FRLD can finance a program emerging from the Global Shield's in-country assessment of community needs, with particular focus on climate-induced impacts on agriculture — including crop losses from flooding, salinization of farmlands from coastal intrusion, storm-related damage to agro-processing facilities, and livelihood disruptions for smallholder farmers. This support would directly target communities most affected by climate shocks and strengthen the resilience of The Gambia's food and agriculture systems.

Carbon Credit Market Access: Developing high-integrity carbon credits will enable The Gambia to monetize its mitigation and nature-based solutions, especially in community forestry, mangrove restoration, agroforestry, coastal protection, and renewable energy mini-grid projects. A carbon market access strategy can also incentivize Gambian enterprises — including agriculture, tourism, and light manufacturing — to purchase high-quality domestic credits, strengthening national value capture while accelerating low-carbon, climate-resilient development.

A major Phase 1 priority is advancing Carbon Market Readiness so The Gambia can generate climate revenues in later phases. Phase 1 will establish national MRV and baselining systems; implement clean cooking, biochar, blue carbon, methane-reduction, and agroforestry programmes; pilot project-level crediting; and prepare initial Article 6.2 engagement frameworks. While Phase 1 will not generate large-scale issuances, it will create the enabling architecture required for significant carbon revenue flows in Phase 2 and Phase 3.

Debt-for-climate swaps for long-term liabilities management and increased fiscal space: The Gambia can integrate debt-for-climate swaps into its long-term liability management strategy, enabling portions of external debt to be reduced in exchange for investments in renewable energy, mangrove and biodiversity restoration, climate-resilient agriculture, and coastal protection. This approach can create fiscal space while directly advancing the country's climate and development priorities.

Privately managed funds can play a catalytic role in accelerating youth-driven green industrialization and value addition in The Gambia. Early-stage equity funds can channel efficient capital flows into MSMEs in agro-processing zones, power cold-chain systems, expand energy storage, and electrify transport and logistics, etc. Structured as convertible debt or equity, these instruments can improve risk-sharing arrangements and attract

broader private-sector participation, while opening the door for joint ventures and domestic co-investment opportunities for young entrepreneurs. The Government of The Gambia can act as a strategic co-investor, ensuring public capital is deployed to unlock private finance at scale and accelerate the country's shift toward green value chains — from climate-resilient agriculture to sustainable manufacturing and services. Philanthropies can amplify impact by taking first-loss positions, junior equity, or subordinated debt, enabling more youth-owned businesses to participate in and benefit from the emerging green economy.

Turnaround Financing and Restructuring Strategy: Anchored with a clear green mandate, funding to rehabilitate and modernize distressed public utilities, state-owned enterprises, and value-chain enablers so they can deliver climate-resilient, low-carbon services. Green turnaround financing provides targeted capital to improve business models, use of technology, refinance high-cost liabilities, improve liquidity, and create fiscal breathing room, while paired restructuring measures strengthen governance, procurement, asset management, and revenue performance. By embedding requirements for value addition, renewable energy integration, energy efficiency, sustainable production systems, and climate-resilient operations from the outset, institutions emerge not only financially stable but aligned with the country's long-term green industrialization agenda. This approach restores bankability, attracts private co-investment, and positions critical sectors, including energy, water, agriculture, and agro-processing infrastructure, to access blended and eventually commercial finance.

Work with domestic banks and financial institutions to sell green loan portfolios at par or above par to MDBs: Gambia can partner with domestic banks and financial institutions that hold operating green assets, such as rooftop solar, mini-grids, cold-chain systems, efficient irrigation, and other climate-aligned equipment, to bundle and sell these performing green loans to multilateral development banks at par or a premium. This frees up liquidity for local lenders, enabling them to originate more affordable green loans for MSMEs, farmers, youth enterprises, and industrial processors. MDBs gain de-risked climate assets, domestic banks recycle capital more efficiently, and the overall cost of green finance declines as lending capacity expands without increasing balance-sheet exposure.

Targeted Guarantees/Currency Hedging: Guarantee tools such as from MIGA, GuarantCo, PIDG/InfraCo, AfDB PRGs, EFSD+ Guarantee, can support renewable mini-grids, distributed energy for productive use, cold-chain pilots, circular-economy systems, livestock resilience hubs, and nature-based enterprises. Examples of targeted guarantees include:

- **Catalytic Floor Price Mechanism:** For off-grid and rural/last mile electrification investments, which

often face commercial viability challenges due to low-income populations and high capital costs, the strategy proposes the use of a Catalytic Floor Price Mechanism. This tool would guarantee a minimum price for electricity sales or energy services, backed by public or philanthropic sources, helping to de-risk revenue flows for mini-grid developers and solar home system providers. By ensuring a predictable return, the floor price can unlock private capital for underserved areas, accelerate energy access, and create local economic opportunities.

- **Revolving Energy Payment Guarantee:** A key intervention is a Revolving Energy Payment Guarantee to ensure timely payments to Independent Power Producers (IPPs) and mini-grid operators. This facility will build investor confidence and address liquidity risks in the sector.

Risk Management and Financing: The Gambia must attract grants to the public sector side while managing risk for private sector investment by protecting infrastructure, services and people. As a result, adaptive social protection systems, paired with robust climate and disaster risk financing and insurance solutions, including those developed under the G7–V20 Global Shield against Climate Risks, can provide rapid liquidity in the immediate aftermath of climate shocks, protect vulnerable communities, reduce recovery times, and prevent households from falling deeper into poverty.

By 2030, Phase 1 will have delivered:

- A robust, investment-ready pipeline across all strategic aims
- At least 20 keystone projects brought to feasibility or advanced design
- Early implementation of renewable energy generation assets supported by guarantees[36] and private capital
- Strengthened institutions and regulatory reforms that reduce perceived risk
- Operational foundational systems for carbon markets
- Expanded equity and early public–private investments
- Demonstrable early gains in food security, energy access, coastal resilience, waste systems, and livelihoods
- Improved investor confidence and strengthened macro-stability

Phase 1 therefore provides the essential groundwork to responsibly scale concessional and blended finance in Phase 2 and unlock market-driven investment at national scale in Phase 3.

[36]The Gambia can use PRGs provided by AfDB, local currency guarantees from GuarantCo, political risk insurance from MIGA, first-loss capital or VGF from PIDG/InfraCo, guarantee-linked blended structures without breaching its zero-NCB ceiling.

Phase 2: Concessional Scaling & Infrastructure Acceleration (2030-2040)

Phase 2 marks the shift from a predominantly grant-led, preparatory period into a decade of accelerated concessional finance mobilisation, large-scale infrastructure implementation, and blended-finance expansion. With the IMF programme concluded by 2027 and Phase 1 having delivered a robust, investment-ready pipeline, strengthened institutions, operational SPVs, and foundational market-enabling systems, The Gambia enters Phase 2 positioned to absorb and deploy significantly larger volumes of concessional and blended capital. This period accelerates implementation, scaling catalytic investments in energy, water, agriculture, resilient infrastructure, and industrialisation.

Estimated Cost: The total estimated cost of Phase 2 is USD 3.1 billion, including USD 1.5 billion in mitigation financing and USD 1.6 billion in adaptation measures through 2040.

Concessional Finance Mobilisation: Central to Phase 2 is the mobilisation of ultra-concessional finance from IDA, the African Development Fund (ADF), the Climate Investment Funds (CIF), the Adaptation Fund, the Green Climate Fund (GCF), the Islamic Development Bank (IsDB), and the European Investment Bank (EIB). These instruments will be structured to unlock a multi-billion-dollar investment programme across renewable energy, water security, transport resilience, climate-smart agriculture, urban systems, and coastal protection.

Large-Scale Infrastructure Implementation: Building on the feasibility studies, engineering designs, MRV systems, environmental and social safeguards, and SPVs prepared in Phase 1, Phase 2 will deliver major capital projects, including medium- to large-scale solar and wind parks, battery storage systems, grid upgrading, climate-resilient water distribution, drainage and flood-management networks, and agro-industrial processing zones.

Risk Mitigation and Private Capital Mobilisation: Phase 2 will also activate blended-finance structures for commercially oriented sectors, combining concessional capital with risk-sharing instruments such as PRGs, PCGs, subordinated debt, and local-currency credit enhancement. These tools will enable private investment in utility-scale renewables, industrial parks, cold-chain logistics, climate-smart livestock systems, agri-processing corridors, and tourism infrastructure. The FX-risk mitigation systems established in Phase 1 and local-currency guarantee mechanisms, will now be fully deployed, reducing foreign-exchange exposure and improving bankability for local and international investors.

Phase 2 will scale disaster risk financing instruments, including sovereign parametric insurance, contingent credit lines, and blended-risk pools for agriculture, fisheries, and coastal infrastructure. These tools will provide predictable, rapid-disbursement financing after extreme events, reducing fiscal stress and protecting key value chains. DRFI instruments will be integrated into PPP contracts and

SPV structures to protect revenue flows and improve bankability of climate-resilient infrastructure.

Water security and resilient infrastructure take on heightened strategic importance in Phase 2. National water treatment and supply rehabilitation, aquifer management, climate-resilient irrigation, urban stormwater systems, and mangrove/coastal-zone protection will be financed through blended concessional packages. These investments lay the foundation for agricultural productivity, human capital resilience, and export-oriented agro-industries. In parallel, NAWEC's investment programme in bulk water systems, wastewater management, and renewable-powered pumping and treatment will be restructured through performance-based, guarantee-backed financing and PPPs, strengthening the utility's balance sheet and service reliability. Transport and logistics networks critical to industrialization, such as climate-proofed feeder roads, port-side infrastructure upgrades, and resilient market systems, will advance through CIF, EIB, AfDB and IsDB instruments, as well as PPP arrangements.

Carbon Market Revenues: Phase 2 also marks the beginning of revenue-generating climate instruments, including the first issuance of carbon credits under Article 6.2 and voluntary market methodologies. With Phase 1 having established MRV systems and conducted methodological pilots, Phase 2 will generate the first measurable carbon revenues from clean cooking, agroforestry, methane reduction, biochar, blue carbon, and distributed renewable-energy programmes. These revenues will be reinvested through the GCCF to expand adaptation and resilience investments.

Institutional Strengthening: Phase 2 will strengthen the Gambia Climate Change Fund, enabling it to anchor concessional funds, manage guarantees, and co-finance strategic projects. Climate Budget Tagging (CBT) and IFMIS reforms initiated in Phase 1 will now support full integration of climate spending into the national budgeting system, improving public-sector planning, transparency, and investor confidence. SPVs for keystone projects created in Phase 1 will become fully operational and begin procurement, contracting, and multi-stakeholder coordination for large projects.

Expected Outcomes: By 2040, Phase 2 will have delivered:

- Expansion of renewable energy generation capacity, including grid-connected solar, wind, and storage assets.
- Nationwide improvements in water security, stormwater management, irrigation, and climate-resilient WASH systems.
- Operational agro-industrial zones and climate-smart value-chain infrastructure supporting export competitiveness and rural livelihoods.
- Large-scale coastal and mangrove restoration programmes protecting

communities and stimulating blue-economy jobs.

- Enhanced transport and drainage networks supporting climate-resilient mobility and economic transformation.
- Significant national revenue streams from carbon credits, flowing to the GCCF.
- Mature SPVs implementing multi-million-dollar infrastructure projects.
- A functioning blended-finance ecosystem with private investment in energy, agriculture, industry, and services.
- Improved sovereign risk profile and macro-stability indicators as resilience investments reduce exposure to climate shocks.

With improved fiscal space and debt-stabilisation following the IMF programme, The Gambia can responsibly absorb higher volumes of concessional debt and scale climate-resilient public investment.

Phase 2 therefore represents the decade where the country moves from readiness to full execution, scaling concessional finance, deploying guarantees, building transformative infrastructure, and anchoring the enabling environment needed to unlock market-driven investments in Phase 3.

Phase 3: Market Expansion, Domestic Capital Markets & Nature-Positive Prosperity (2040 - 2050)

Phase 3 represents The Gambia's transition from a concessional-finance–dependent development model to a self-sustaining, market-driven, climate-resilient economy. By 2040, the foundational systems built in Phase 1 and the large-scale infrastructure delivered in Phase 2 will have positioned the country to fully unlock domestic and international private capital, expand nature-based revenue streams, and deepen its financial markets.

Estimated Cost: Phase 3 requires an estimated USD 1.9 billion, comprising USD1.4 billion for mitigation and USD 559 million for adaptation. In total, the full Climate Prosperity Plan (CPP) is projected to cost approximately USD 7.3 billion.

Strengthened Macroeconomic & Financial Foundations: At this stage, The Gambia's macroeconomic profile will be strengthened by reduced exposure to climate shocks, diversified exports, improved energy security, and continued fiscal stability. These conditions create an enabling environment for domestic capital market development, allowing the country to issue sovereign green bonds, local-currency infrastructure bonds, diaspora climate bonds, and sustainability-linked instruments. Pension funds, insurance companies, and domestic financial institutions will become active participants in financing infrastructure, renewable energy assets, industrial parks, nature reserves, climate-smart agriculture, and urban development. This expansion of domestic long-term finance will only be fully realised subject to ongoing financial-sector reforms and strengthened long-term savings instruments. Regulatory reforms initiated in Phases 1 and 2, including credit-enhancement mechanisms, risk-sharing frameworks, FX-hedging tools, and strengthened SPVs, will enable long-term private investment across strategic sectors at lower cost and lower risk.

Energy Transformation & Industrial Competitiveness: Building on the successful implementation of large-scale renewable energy projects in Phase 2, Phase 3 will deliver full national clean energy transformation. Utility-scale solar and wind parks, integrated storage, modernised grid systems, and expanded distributed energy networks will support green industrial zones, cold-chain logistics, digital services, export-oriented agro-processing, and the growing ecotourism economy. With affordable and reliable clean power, The Gambia will be positioned to attract climate-aligned manufacturing and service-sector investments, strengthening export competitiveness and creating high-quality jobs.

Nature-Positive Prosperity & Scaling Carbon Revenues: Phase 3 also accelerates The Gambia's emergence as a nature-positive economy, where ecosystems are treated as productive national assets that generate sustained economic value. Carbon markets reach full maturity during this period, enabling large-scale issuance of high-integrity credits from mangrove restoration, blue

carbon, regenerative agriculture, clean cooking, biochar, agroforestry, and methane-reduction programmes. Revenues will be reinvested through the Gambia Climate Change Fund (GCCF) to finance community-based adaptation, ecotourism development, and long-term natural capital management.

Ecotourism becomes a major driver of prosperity in Phase 3. With biodiversity parks, coastal nature corridors, marine sanctuaries, and heritage sites already built out in Phase 2, the country will deepen partnerships with global ecotourism operators, conservation finance institutions, and ESG-aligned investors. Community-owned enterprises and cooperatives will play central roles in hospitality, guiding, cultural tourism, and sustainable resource management. The Gambia's brand as a climate-resilient, low-carbon, nature-rich destination will anchor foreign-exchange earnings while supporting livelihoods across rural, coastal, and riverine communities.

Domestic Capital Market Deepening: As domestic capital markets deepen, The Gambia will scale market-facing financing mechanisms, including securitisation of infrastructure receivables, sustainability-linked loans, blended-debt platforms, private equity vehicles for climate-aligned SMEs, and PPP-structured commercial investments. Digital finance and fintech innovation will expand inclusion, enabling MSMEs to access credit, insurance, and payment solutions for climate-smart production and service delivery. Robust data and MRV systems will sustain investor confidence, and strengthened sovereign creditworthiness will lower the cost of capital over time.

Climate Disaster Risk Financing and Insurance: Phase 3 will mature domestic risk-transfer markets through the expansion of climate and disaster insurance products, index-based agricultural insurance, catastrophe bonds, resilience bonds, and insurance-linked securities. Strengthened domestic insurers and reinsurance capacity, supported by long-term savings instruments and prudential reforms, will enable private markets to take on a growing share of climate and disaster risks, reducing reliance on external support.

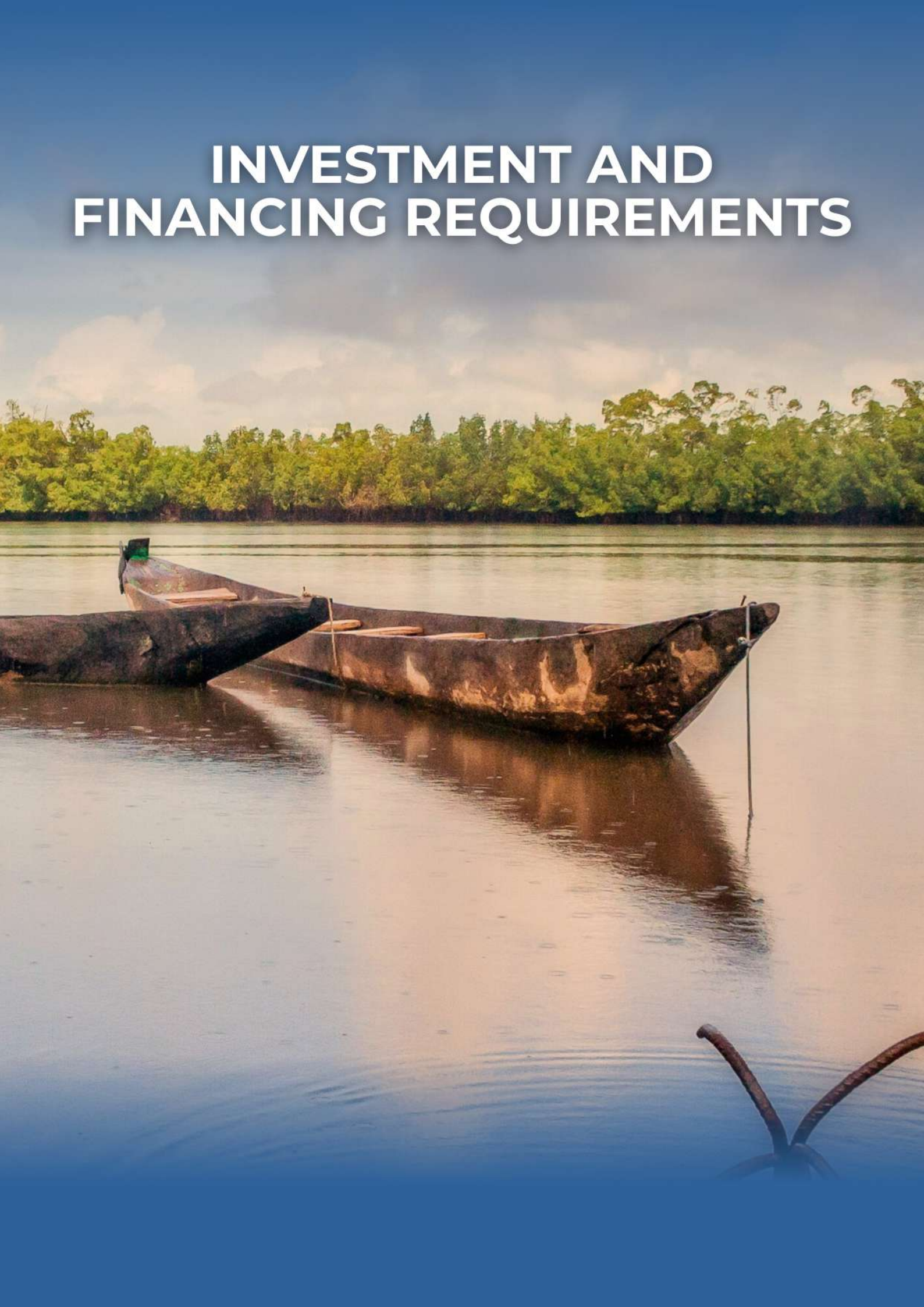
Expected Outcome: By 2050, The Gambia will have achieved:

- A self-sustaining climate finance ecosystem, driven by domestic capital markets and private investment.
- A net-zero-aligned, renewable-energy-powered economy, with universal access to affordable and reliable clean electricity.
- A thriving ecotourism and blue-economy sector, generating significant employment and foreign-exchange earnings.
- Mature and monetised nature-based and carbon-credit revenue streams, reinvested into community resilience and conservation.
- Globally competitive agro-industrial and green manufacturing clusters, powered by clean energy and climate-smart value chains.

- Resilient cities and rural systems, protected by modern water, drainage, coastal, and ecosystem-infrastructure networks.
- Elevated sovereign creditworthiness, enabling diversified financing across green bonds, diaspora bonds, sustainability-linked loans, and blended portfolios.
- A fully operational Gambia Climate Change Fund (GCCF) acting as the national anchor for climate investments, carbon revenues, and blended finance.
- A prosperous, inclusive economy where youth and women are central participants in tourism, agriculture, digital services, manufacturing, and nature-positive enterprises.

Phase 3 therefore consolidates the gains of Phases 1 and 2, positioning The Gambia as a resilient, competitive, nature-positive economy powered by clean energy, anchored in strong domestic capital markets, and driven by sustainable growth sectors that deliver long-term prosperity for all

INVESTMENT AND FINANCING REQUIREMENTS



Investment and Financing Requirements

The investment and financing strategy for The Gambia's Climate Prosperity Plan (CPP) is anchored in a clear assessment of the country's debt sustainability and solvency. An updated Debt Sustainability Analysis (DSA), prepared using a dedicated external Excel model, provides a comprehensive evaluation of The Gambia's capacity to meet its current and future debt obligations without compromising fiscal stability or climate and development priorities.

To differentiate between liquidity and solvency, the analysis presents key metrics. For long-term solvency, the assessment considers the present value of public debt-to-GDP, projected to fall from 73.5% in 2024 to below the 55% benchmark by 2026, and remain on a declining path, and the debt-to-revenue ratio. While the Green Economic Model (GEM) currently aggregates public debt without disaggregating debt service or distinguishing between external and domestic obligations, the external DSA confirms that The Gambia remains solvent under all baseline and stress scenarios, affirming that the government can honour its long-term obligations even as public investment increases in support of its climate and development ambitions emphasizing both the transition to a more sustainable and climate-resilient economy and the substantial investments in climate resilience measures to address climate change challenges. These investments play a critical role in shaping a more prosperous and resilient future.

These investments cover a wide array of initiatives, including the adoption of electric vehicles, reductions in livestock emissions, implementation of sustainable agricultural practices, investments in energy-efficient air conditioning systems, and the deployment of carbon capture and storage technologies in industrial processes.

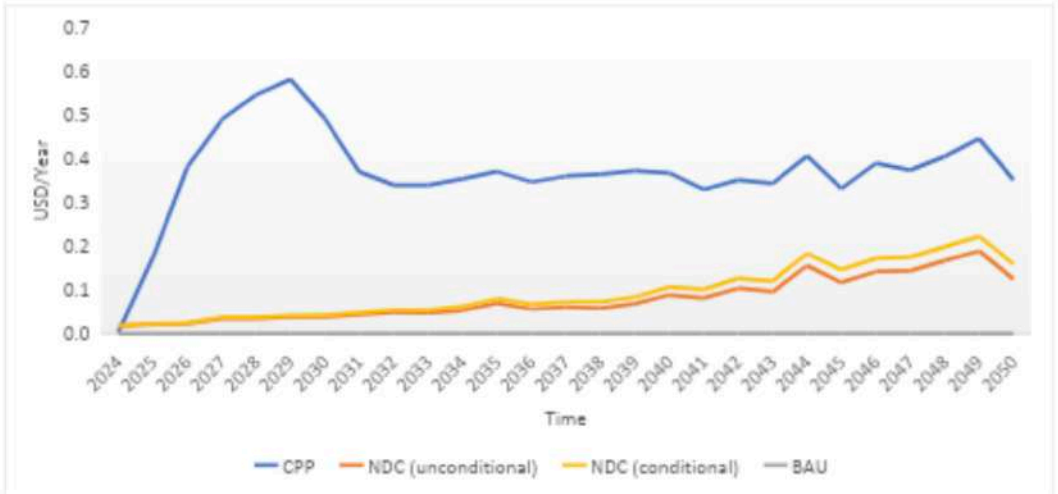


Figure 14: Additional real investment in transition and climate resilience, BAU, NDC and CPP scenarios.

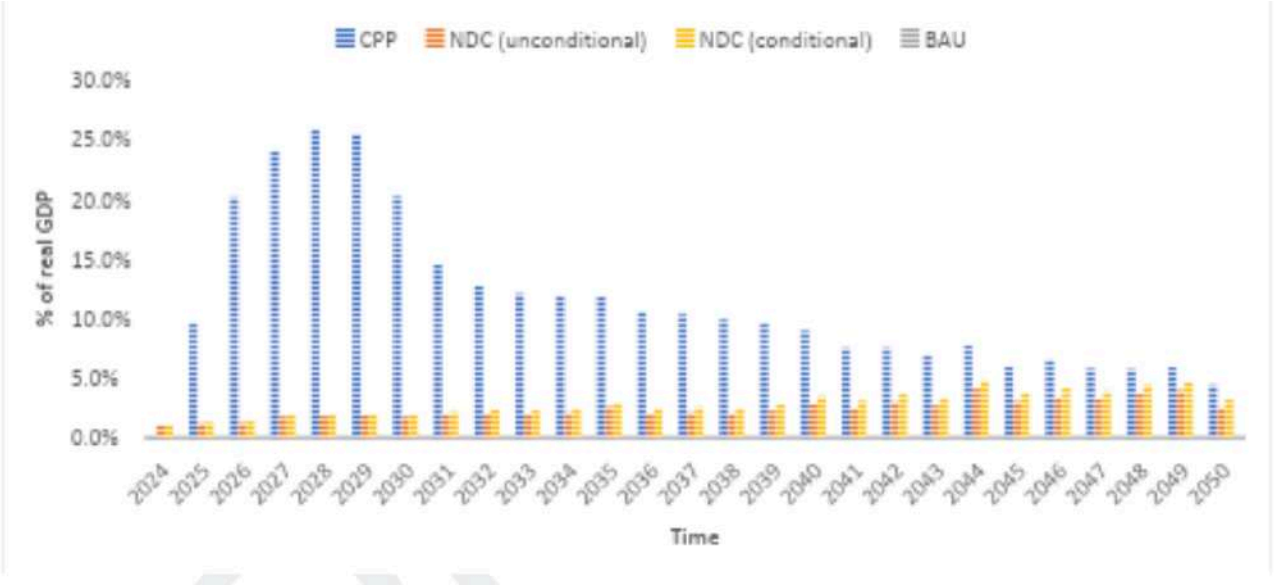


Figure 15: Additional real investment in transition and climate resilience as a share of GDP, BAU, NDC and CPP scenarios.

Additional real investment in transition and climate resilience as a share of GDP, BAU, NDC and CPP scenarios.

The CPP scenario emerges as a judicious economic development strategy, with a Benefit to Cost Ratio (BCR) of 0.5 by 2030 and Benefit-to-Investment Ratio (BIR) of 2.42 by 2050. This signifies that for every dollar invested in the CPP scenario, $0.5 and $2.42 in system-wide benefits are realized by 2030 and 2050, respectively. These figures underscore the effectiveness of the CPP in generating positive outcomes and ensuring that investments yield significant returns in terms of broader societal benefits and sustainable economic growth. The below table presents a breakdown of the various subcategories of the analysis.

The cost-benefit analysis presented for The Gambia evaluates investment needs and projected returns over two time periods: 2025–2030 and 2025–2050. In the short term (2025–2030), the total investment required amounts to USD 2.3 billion, primarily directed toward climate resilience (USD 655 million) and transition efforts (USD 1.6 billion). However, the net integrated benefits for this period are negative, at –USD1,133 million, indicating that the avoided costs and added benefits do not outweigh the investment. Specifically, the combined ratio of avoided cost and added benefits to investment stands at only 0.50, suggesting that for every dollar invested, only 50 cents are returned in terms of benefits and cost savings.

CBA Indicator	Unit	2025-2030	2025-2050
Investments in Mitigation	USD million	**655**	**3,603**
Investments in Adaptation	USD million	**1,669**	**3,831**
Contingency Payments	USD million	**2**	**29**
Total Investment Required	**USD million**	**2,326**	**7,379**
Total Avoided Cost	**USD million**	**275**	**3,149**
Total Added Benefits	**USD million**	**831**	**15,663**
Net Integrated Benefits	**USD million**	**-1,219**	**11,403**
Ratio Avoided Cost to Investment	USD/USDinvested	**0.12**	**0.43**
Ratio Added Benefits to Investment	USD/USDinvested	**0.36**	**2.12**
Ratio Avoided Cost and Added Benefits to Investment	USD/USDinvested	**0.48**	**2.55**
Net Investment	**USD million**	**2,175**	**6,714**

The long-term outlook (2025–2050) reveals a significantly more favourable scenario. With a total investment of USD 7.3 billion, The CPP shows that Gambia stands to gain substantial returns, total avoided costs of USD 4.4billion and added benefits of USD 15.5 billion. This results in a remarkable net integrated benefit of USD 12.6 billion. The ratios reflect this stark improvement, with the combined benefit-to-investment ratio jumping to 2.12. These results highlight that while the near-term investments may appear costly relative to immediate returns, the long-term socioeconomic and environmental gains significantly outweigh the costs. This analysis underscores the importance of sustained and strategic investment in climate resilience and transition measures for The Gambia's sustainable development.

IMPLEMENTATION

Implementation

Implementation is anchored in a country platform chaired by the Ministry of Finance and Economic Affairs and co-chaired by the Ministry of Environment. The platform is backed by the Gambia Climate Change Fund (GCCF) as the central financing window; the Climate Finance Directorate in MoFEA as the secretariat for the platform will facilitate pipeline development, financial structuring, mobilise climate and disaster risk finance, MRV integration, and coordination; sectoral delivery clusters led by line ministries; and regional climate action desks in Area Councils will localise projects and ensure community ownership. This architecture creates a unified mechanism that aligns policy, capital, and delivery, while keeping investor risk low and ensuring transparent, country-led execution.

Crucially, community delivery partners such as academia, civil society, and youth leaders are structurally integrated into governance. Universities co-chair technical working groups, steward open data platforms, and independently validate results. CSOs collaborate with communities to co-design interventions, manage social safeguards and grievance redress systems, and operate neighbourhood-scale services such as clean cooking outreach, circular-economy hubs, and water-user associations. Youth representatives will sit on advisory bodies and investment windows, run last-mile enterprises (biochar units, solar drying, waste sorting, digital MRV), and help power a citizen-science approach to measurement and transparency.

Effective implementation is the bridge between ambition and impact. It translates the financing architecture into tangible results on the ground through the country-led platform that unites institutions, aligns delivery mechanisms, and enforces accountability across all levels of governance. With innovative instruments like diaspora green bonds, risk sharing mechanisms[37], blended finance vehicles, carbon credits, and climate-aligned debt restructuring, and performance based financing, The Gambia is projected to make a net investment of over USD 1.7 billion by 2030 and USD 4 billion by 2050 by strengthening local financing capacity, broadening the investor base, and embedding impact measurement to position The Gambia as a viable investment location.

Operationalisation and Financing of the Country Platform: the Country Platform will be operationalised as a government-led coordination mechanism with support from the CVF/

[37]Risk sharing mechanisms refer to financing arrangements designed to distribute the potential risks of investments among multiple parties. This can include, but is not limited to, guarantees, insurance schemes, and co-financing structures, all aimed at de-risking projects and attracting a broader range of investors, particularly for initiatives related to climate resilience and sustainable development.

V20 Secretariat for project preparation and pipeline development. An initial resource envelope of USD 5 million is targeted, comprising USD 2 million for project preparation, SPV setup, and coordination, and USD 3 million for direct catalytic investments, such as the Youth Climate Fund. The Investment Committee will include the Climate Finance Directorate, the CVF-V20 Secretariat, and strategic funding partners. To ensure sustainability, the Directorate will expand its staffing from three to five professionals, co-funded by government resources, and host the Platform within shared office facilities that also serve as a deal-making and coordination space.

Coordination Protocols: Drawing on successful coordination models, particularly the norm localisation approaches demonstrated in Zambia's climate finance coordination mechanisms (Funder & Dupuy, 2022), The Gambia will establish clear protocols for information sharing, joint planning, and conflict resolution among stakeholders.

Digital Coordination Platform: A digital platform will be established to track climate finance flows, project pipelines, and implementation progress in real-time. This system will integrate with the Integrated Financial Management Information System (IFMIS) and provide transparent reporting to development partners and civil society.

The Country Platform will also manage strategic partnerships with international institutions such as the CVF-V20 Secretariat, Green Climate Fund, African Development Bank, UN agencies, and philanthropic organizations to unlock project preparation resources, first-loss capital, and long-term concessional funding.

By institutionalizing this platform, The Gambia aims to reduce fragmentation, lower transaction costs, and streamline coordination between government agencies, investors, and development partners.

Empowering Women and Youth as Agents of Climate-Resilient Transformation

Women and youth represent a significant portion of The Gambia's population and play a critical role in the success of the country's climate-resilient development agenda. Their inclusion is therefore treated as a cross-cutting priority throughout this Climate Prosperity Strategy. The Strategy integrates women and youth into the design, implementation, and monitoring of climate investments to ensure equitable access to opportunities and benefits across all sectors.

Multiple Strategic Aims specifically highlight the role of women and youth as key stakeholders and beneficiaries. For instance, in Nature-Based Solutions and Coastal Protection, women and youth are central to the development of community-managed reforestation, mangrove restoration, and ecotourism enterprises that create sustainable, local livelihoods. Similarly, under Promoting Circularity and Methane Mitigation for Urban

Prosperity, women and youth are positioned as drivers of innovation in emerging circular economy sectors, including waste valorisation, composting, and the production of low-carbon construction materials.

Beyond these sectoral roles, the Strategy promotes gender- and youth-responsive approaches to project selection and financing. Project preparation processes will be guided by inclusion criteria that incentivize the participation of women- and youth-led enterprises and ensure their active engagement in community-based adaptation and resilience-building initiatives. This will be reinforced by a dedicated Monitoring and Evaluation (M&E) framework that incorporates disaggregated indicators to track the socio-economic outcomes of climate investments on women and youth.

As The Gambia transitions toward a climate-resilient and inclusive economy, unlocking the full potential of women and youth will be essential for enhancing equity and social cohesion as well as maximizing innovation, job creation, and the long-term sustainability of the Climate Prosperity Plan.

Enhanced Gender and Social Inclusion Framework

Ensuring that climate investments deliver equitable benefits across society is central to the successful implementation of The Gambia's Climate Prosperity Investment and Financing Strategy. This framework embeds gender equality, youth empowerment, and social safeguards as core operational principles, guiding all phases of project design, financing, implementation, and monitoring.

Gender-Responsive Budgeting:

All climate investments will integrate gender-responsive budgeting practices to ensure that women and men benefit equitably from planned interventions. This will include:

1. Conducting gender analyses of proposed interventions to identify differentiated needs and opportunities.

2. Allocating specific budget lines to enable and strengthen women's participation in project activities.

3. Applying gender-disaggregated monitoring indicators to track participation, benefits, and outcomes.

4. Undertaking regular assessments of differential impacts on women and men, with corrective measures where needed.

Youth Engagement Mechanisms

Young people are critical drivers of climate resilience, innovation, and long-term prosperity. Their participation will be institutionalized through:

1. Formal youth representation within the Country Platform governance structure.

2. Dedicated youth-focused climate entrepreneurship programs to

support innovation and job creation.

3. Youth-led monitoring and evaluation activities to promote ownership and accountability.

4. Youth Climate Ambassador programs to strengthen community outreach and awareness.

Social Safeguards and Grievance Mechanisms

Climate investments will uphold the highest standards of social protection and community engagement. This will involve:

1. Securing free, prior, and informed consent (FPIC) for all community-based projects.

2. Protecting vulnerable groups, including persons with disabilities, from potential adverse impacts. Dedicated inclusion mechanisms will be introduced to support persons with disabilities in climate-resilient enterprises.

3. Establishing accessible, transparent grievance mechanisms at both community and national levels.

4. Conducting regular social impact assessments, with corrective action protocols to address identified risks.

By embedding these measures into every financed intervention, The Gambia will ensure that its Climate Prosperity Investment and Financing Strategy delivers **inclusive, equitable, and socially responsible climate action** that strengthens resilience for all citizens.

KEY MEASURES (TARGETS TABLES)

Key Measures (Targets Tables)

Aim 1: Enhance Climate-Smart Agriculture and Food Security

Key Measure	2030	2040	2050
1. Drip Irrigation & Water Management (66% by 2030)	**66%** of cropland under drip irrigation or improved drainage	**100%** of cropland under advanced irrigation (drip, drainage, net shading)	Maintain **100%** coverage & optimize climate-smart upgrades
2. Livestock Heat & Disease Protection (30% by 2030)	**30%** of livestock farms equipped with heat/ disease solutions	**50%** coverage of livestock sector	Sustain **50%+** coverage via upgraded solutions
3. GHG Emissions Reduction (81% below BAU by 2030)	**≥14%** reduction in agriculture emissions vs. BAU	**≥31%** reduction vs. BAU	**≥48%** reduction vs. BAU
4. Poverty Rate	Significantly reduce poverty rate, culminating in **≤31%**	Achieve further poverty decline to **≤24%**	**≤17%** poverty in line with higher GDP & resilience

Aim 2: Unlock Domestic Energy Abundance Through Renewables, Clean Cooking, and Modernized Infrastructure

Key Measure	2030	2040	2050
1. Renewable Electricity Share	**30%** RE in generation (install 115 MW solar & 3.6 MW wind	**65%** RE share	**~100%** RE share by 2050
2. Transmission Loss Reduction (17% by 2030)	Cut losses to **15%** of power distributed	**10%** losses	**5%** losses
3. Clean Cooking (60% households by 2030)	**60%** of households transition from biomass to cleaner fuels or stoves	**85%** of households	**≥95%** of households near-universal clean cooking
4. Transport Electrification (EV/Hybrid adoption)	At least **25%** of new vehicle sales electric or hybrid	**50%** of new vehicle sales EV/hybrid	**100%** new vehicle sales fully electric or near-zero-emission
5. Energy Bill Reduction (to <1% of GDP by 2050)	Energy bill at **4.7%** of GDP	Energy bill at **2%** of GDP	**<1%** of GDP, given higher efficiency & 100% RE supply

Aim 3: Financially Engineer a Climate-Secure Transformation

Key Measure	2030	2040	2050
1. Climate Finance Mobilization (≥USD 1B by 2030)	Mobilize **≥USD 1B** (cumulative) in new climate finance	**≥USD 2B** cumulative green/climate finance	**≥USD 4B** cumulative fuelling advanced mitigation & resilience
2. Debt-for-Climate Swaps & Carbon Markets	Launch **≥1** debt-for-climate swap, operationalize Carbon Trading Bill	**≥2** debt-for-climate swaps & carbon registry fully scaled	Maintain robust carbon credit portfolio (≥USD 110M value)
3. BCR (Benefit-to-Cost Ratio) & Economic Growth	Achieve a BCR of **~0.5**	BCR **≥1.5,** with average GDP growth ~5%	BCR **~2.42,** with sustained ~6% GDP growth (double BAU)
4. National Development Bank (NDB)	Capitalize NDB at **≥USD 100M,** channel finance into RE & adaptation	Expand NDB scope; co-finance major infra & SME climate projects	NDB stands as major catalyst for 15% of GDP in climate investment

Aim 4: Galvanize Climate Protection Against Key Risks

Key Measure	2030	2040	2050
1. Flood & Coastal Defence (80% coverage by 2030)	Protect **80%** of high-risk infrastructure (roads, energy, buildings) from floods	**100%** coverage of critical infrastructure	Maintain **100%** coverage & upgrade for sea-level rise
2. Mangrove & Coastal Restoration	Restore **30,000+** ha of mangroves/coastal wetlands	**90,000+** ha reforested/ rehabilitated	**180,000+** ha cumulative climate buffer
3. Climate Insurance Coverage (50% of farmers by 2030)	Enrol **50%** of smallholders in indexed microinsurance	**75%** coverage in key vulnerable zones	Universal insurance coverage for climate shocks (≥95%)
4. Resilient Social Safety Nets	Double adaptive social-protection coverage; 70% can access quick relief	**Full integration** of climate risk triggers in social programs	Near-universal safety net for climate disasters
5. Cumulative Climate Damages	**≥2.5%** less damage relative to BAU	**≥12%** less damage	**≥14.7%** total reduction (saves billions in avoided GDP losses)

Aim 5: Drive Sustainable, Inclusive Industrialization and Value Addition

Key Measure	2030	2040	2050
1. HFC Phase-Out (IPPU Emissions ↓800 $GgCO_2e$)	**50%** phase-out in refrigeration & A/C	**75%** completion	**100%** HFC-free industrial applications
2. Green Economic Zones	1 pilot **sustainable industrial park** fully operational by 2028	Additional zones, focusing on RE-powered & resource efficiency	National network of green zones, fuelling advanced low-carbon exports
3. Sustainable Supply Chains (30% certification by 2030)	**≥30%** horticulture & groundnut products certified fair-trade	**≥60%** under sustainability certifications	**~100%** sustainable supply chains in mainstream agro processing
4. Value-Added Processing Growth	**50%** increase in agro processing & local manufacturing	**100%** growth in processing vs. 2022 baseline	High-value exports; near-**net-zero** industrial GHG with robust job growth
5. Green Jobs (1.72% share by 2050)	Expand green jobs to **1%** of total employment	**1.3–1.5%** share of total jobs are green	**≥1.72%** green jobs in total workforce (over 25k jobs)

Key Measure	2030	2040	2050
1. Forest Area (% of land Area *(Expand Protected Land)*	Increase total land area under forest cover to 35% r Develop **5** new wildlife corridors linking wetlands/coastal zones	Increase total land area under forest cover to 40% Fully operational wildlife corridors across key biodiversity zones	Increase total land area under forest cover to 45% Integrate corridor networks with transboundary conservation initiatives
2. Mangrove, Wetland, & Shoreline Restoration *(Coastal Protection)*	Restore or rehabilitate **30,000 ha** of mangroves or coastal wetlands Build or reinforce **20 km** of "green" shoreline defenses	**90,000 ha** cumulative restoration **60 km** of reinforced/ vegetated coastal barriers (e.g., dunes, living shorelines)	**180,000+ ha** under long-term management **100 km** of green shoreline defenses aligned with carbon offset projects
3. Eco-Lodges & Sustainable Tourism Services *(Low-Impact Infrastructure)*	Construct **10** new eco-lodge sites run by local communities 30% of existing tourism facilities adopt "eco-certified" standards	**50** eco-lodges & specialized "Green Excursion" packages **60%** of hotels certified "eco-friendly"	Eco-lodges mainstreamed **80%** of hospitality sector meets recognized sustainability & climate-resilience standards

4. Community-Based Ecotourism Enterprises *(Rural Livelihoods)*	Train & equip **20** coastal/riverine communities in eco-tour guiding, artisanal crafts, sustainable fisheries	**60** communities engaged in ecotourism supply chains 2x growth in artisanal product exports	**80+** communities across all regions Ecotourism fully integrated into local economic dev't programs & livelihood resilience
5. Nature-Based Carbon Offsets *(Reforestation, Agroforestry)*	Launch **2** pilot offset programs for reforestation & coastal restoration (community-driven)	Scale to **5–7** large offset initiatives bundling biodiversity & carbon credits	National-level offset marketplace thrives, **≥USD 50 million** in cumulative revenue from nature-based carbon credits

Monitoring, Evaluation, and Adaptive Management Framework

Theory of change and results framework: The strategy's theory of change links climate investments to economic prosperity through multiple pathways: (1) reduced climate damages preserving economic assets, (2) increased productivity through climate-smart technologies, (3) new economic opportunities in green sectors, and (4) enhanced resilience reducing future costs. A comprehensive results framework tracks progress across these pathways using SMART indicators aligned with SDG targets and NDC commitments.

Multi-level monitoring system: Monitoring operates at three levels: (1) Activity monitoring - tracking implementation of specific projects and programs, (2) Outcome monitoring - measuring intermediate results such as renewable energy capacity or agricultural productivity, and (3) Impact monitoring - assessing long-term changes in economic indicators, poverty rates, and climate resilience.

Digital monitoring platform: A digital monitoring platform will integrate data from multiple sources: (1) government management information systems, (2) satellite-based monitoring for environmental indicators, (3) household surveys for socioeconomic outcomes, and (4) private sector reporting for investment tracking. The platform will provide real-time dashboards for decision-makers and public reporting for transparency.
Adaptive management protocols: Recognizing the uncertainty inherent in long-term climate planning, the strategy incorporates adaptive management approaches: (1) annual strategy reviews with stakeholder input, (2) mid-term comprehensive evaluations with external assessment, (3) trigger mechanisms for strategy adjustments based on performance indicators, and (4) learning systems to capture and disseminate lessons learned.

Independent evaluation and learning: An independent evaluation function will be established within the Country Platform, with: (1) external evaluation every three years,

(2) annual learning reviews with peer countries, (3) impact evaluations for major interventions, and (4) knowledge sharing through the CVF-V20 network and other international forums.

Enhanced Methodological Framework

Baseline data sources and validation: The GEM modelling incorporates verified baseline data from multiple authoritative sources: (1) World Bank World Development Indicators for macroeconomic variables, (2) IPCC AR6 climate projections for physical risk assessment, (3) IEA energy statistics for sectoral energy consumption, and (4) FAO statistics for agricultural productivity baselines. All baseline data has been cross validated with national statistics and adjusted for local conditions through stakeholder consultations.

Uncertainty analysis and sensitivity testing: Recognizing the inherent uncertainties in long-term projections, the modelling incorporates Monte Carlo simulation techniques to assess sensitivity to key parameters. Sensitivity analysis covers: (1) climate impact severity (±25% variation), (2) technology cost trajectories (±30% variation), (3) international climate finance availability (±40% variation), and (4) implementation timeline delays (±2 years).

Model validation and peer review: The GEM results have been validated through: (1) comparison with similar modelling exercises in comparable economies, (2) back-testing against historical data where available, and (3) external peer review by climate economics experts. Model assumptions and limitations are transparently documented in the technical appendix.

Confidence intervals and risk ranges: All quantitative projections include confidence intervals reflecting modelling uncertainty. The Benefit-Cost Ratio of 2.56 by 2050 represents the central estimate, with a 90% confidence interval of 1.8-3.4, indicating robust positive returns even under pessimistic scenarios.

The Climate Prosperity Plan (CPP) is a strategic, multiphase country-led investment and financing framework that is designed to transform climate vulnerability into climate resilient inclusive economic growth. By mobilising catalytic financing and private capital for sustainable industrialisation, sustainable agriculture, resilient infrastructure, nature-based solutions, low emission renewable transitions, it enables Climate Vulnerable Forum (CVF) and the Vulnerable 20 (V20) members to prosper in the context of climate change.

In this context, the Green Economic Model (GEM) is used to simulate the impact of a national strategy, based on different scenarios and pathways to quantify and assess the multi-dimensional impacts, and the economic viability of investments in

transition and climate resilience. The analysis is systemic and takes into consideration many variables relevant to sustainable development: economic (e.g., GDP growth or trade balance), social (e.g., employment) and environmental (e.g., air pollution) indicators. The results provide a robust perspective on the benefits associated with the implementation of the CPP at the country level.

The results of the analysis are summarized as follows:

The CPP is a competitive economic development strategy: The Gambia Climate Prosperity Investment and Financing Strategy stands out as a competitive economic development strategy at the national level and achieves a Benefit to Cost Ratio (BCR) of 2.56 by 2050. By combining climate resilience, emission reduction, and environmental sustainability with economic growth, it offers a unique approach to addressing the pressing issue of climate change. It recognizes that climate action and economic prosperity are not mutually exclusive but can be mutually reinforcing.

The CPP scenario stimulates economic growth and job creation both by reducing costs of climate change and by increasing productivity: The CPP generates economic growth and job opportunities through a dual strategy. On one hand, it mitigates the economic burdens associated with adapting to climate change, reducing the costs incurred due to climate-related disasters. On the other hand, it enhances economic productivity by accelerating the transition to a green economy, creating new opportunities in renewable energy, technology innovation, and sustainable infrastructure development. GDP in the CPP scenario is 82% higher than BAU in 2050, as a result of annual GDP growth being 6.2% higher. Employment is also 9.2% higher in the CPP scenario in 2050 when compared to BAU.

The Gambia Climate Prosperity Investment and Financing Strategy, due to high ambitions for climate resilience, creates a strong synergy with transition investments: The Strategy distinguishes itself by setting ambitious targets for climate resilience, which creates a robust synergy with transition investments. This approach recognizes that an emphasis on climate resilience can reinforce the effectiveness of investing in sustainable technologies and practices. For instance, climate-resilient infrastructure development can align seamlessly with the transition to renewable energy sources, promoting a holistic approach to climate action.

Investment levels are the highest for the CPP scenario: The Climate Prosperity Plan envisions significant investments, close to 15% of GDP by 2030, making it a comprehensive and proactive strategy to address

climate change. The plan recognizes that substantial investments are required to drive the necessary changes and achieve the desired outcomes. By earmarking substantial funds, the CPP ensures that it has the financial resources to make a significant impact.

The CPP investments are economically viable: The investments outlined in the CPP are not just ambitious but economically and financially viable as well. Through rigorous analysis and planning, this strategy ensures that the proposed initiatives are not only environmentally sound but also financially (considering only cash inflows and outflows) and economically (considering also intangible impacts, of societal nature) sound. The **CPP generates USD 104,049 in net benefits between 2023 and 2050** and stands as a credible and practical approach to climate prosperity, both from an investment and development point of view.

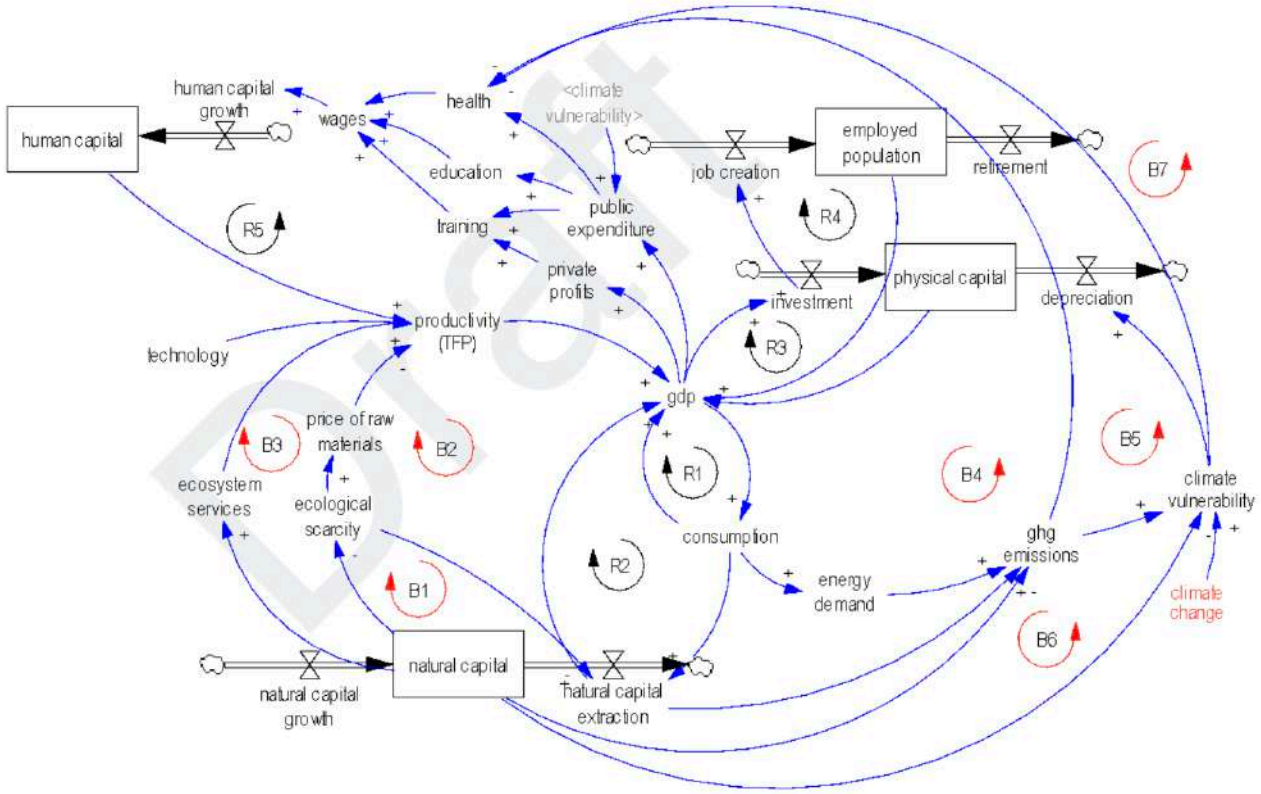
Funding options are available; a balance between public and private sources should be sought.

The Gambia Climate Prosperity Investment and Financing Strategy identifies available funding options for its implementation. While public funding plays a critical role (close to 25% of the total investment required), the CPP also advocates for a balanced approach that leverages private sector investments. Striking this balance between public and private sources can ensure the long-term sustainability of the plan and distribute the financial responsibility more equitably, fostering broad support and participation.

Overview of the GEM-CPP Model

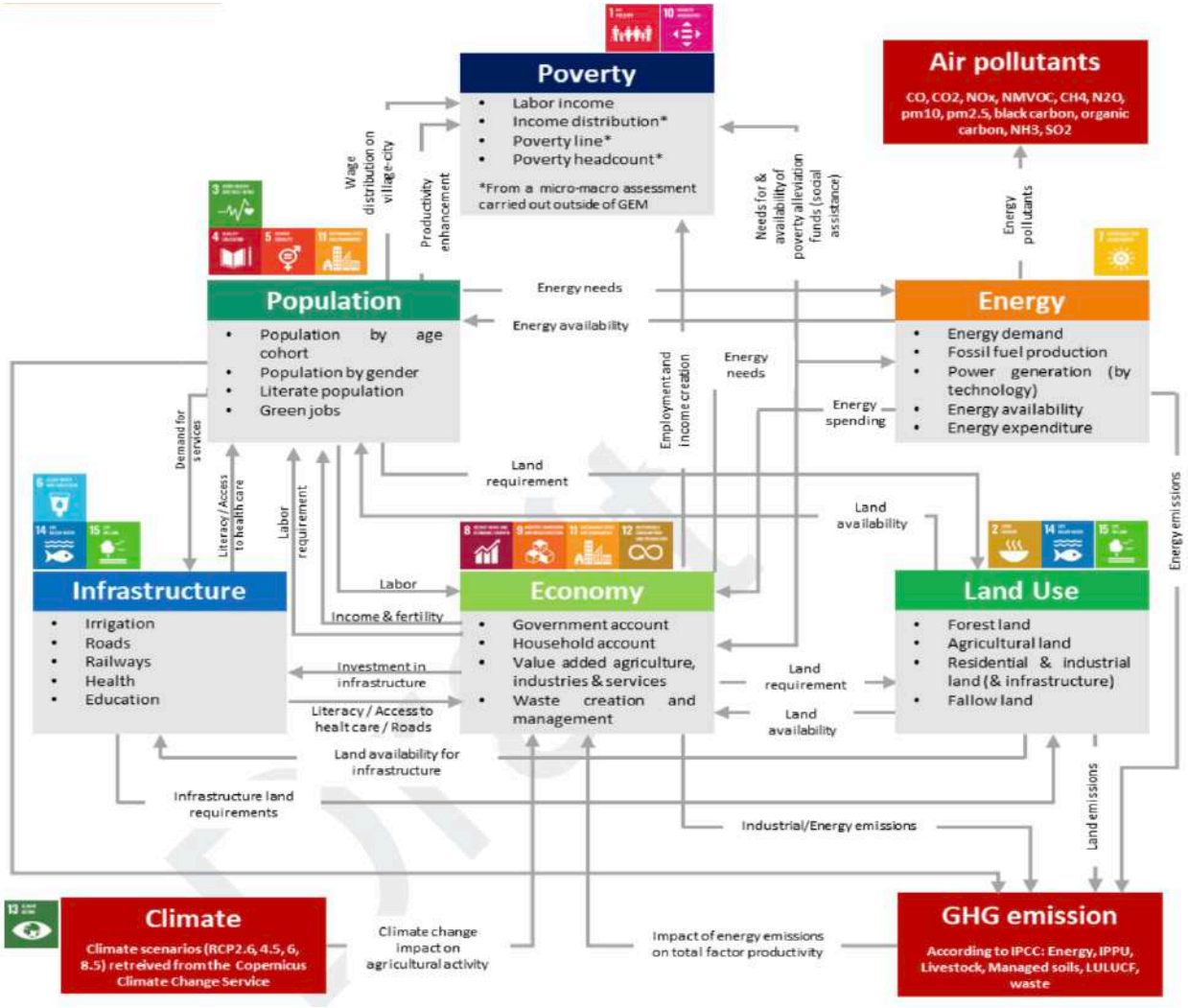
The Green Economy Model (GEM) offers an integrated representation of socio-economic and environmental dynamics, and the natural capital that supports them, at country level (Bassi, 2015; Pallaske, Bassi, Garrido, & Guzzetti, 2023). To ensure that the CPP analysis is comprehensive and accounts for several climate risks, includes relevant investment options, and produces a wide range of the avoided costs and added benefits generated by climate action, several changes and additions have been made to GEM. These can be grouped into four categories: (i) the integration of detailed climate data, (ii) the estimation of a more extended list of climate change damage and assumptions for reconstruction, (iii) the integration of a variety of co-benefits of climate action, and (iv) the addition of several policy options for climate resilience.

GEM is designed to inform policymaking towards sustainable development. It allows forecasting and assesses the outcomes of various policies and investments in relation to medium- and long-term national development targets.



Overview of GEM, built on (Bassi, 2015)

Figure above presents the generalized underlying structure of GEM. On the other hand, the Figure below presents instead a sub-system diagram of the model. The former shows how four key capitals (built, social, human and natural) are interconnected, and how they contribute to shaping future trends across social, economic and environmental indicators. Specifically, feedback loops can be identified that are reinforcing (R), in all areas about economic growth and social development. These are driven by investments and knowledge creation, and enabled by the availability of natural capital, which, if not properly managed, can constrain economic growth (hence the balancing loops -(B)- identified in the diagram). Policies can be implemented to promote sustainable consumption and production, decoupling economic growth from resource use (also through education and behavioural change), to mitigate the exploitation of natural capital and generate stronger and more resilient green growth.



Sub-system diagram presenting the key sectoral components of GEM.

GEM is built using the System Dynamics (SD) methodology, serving primarily as a knowledge integrator. SD is a form of computer simulation modelling designed to facilitate a comprehensive approach to development planning in the medium to long term (Meadows, 1980; Randers, 1980; Richardson & Pugh, 1981; Forrester, 2002). SD operates by simulating differential equations with "what if" scenarios, explicitly represents stocks and flows (critical to estimate climate change impacts on infrastructure, and how such impacts accumulate over time to affect economic productivity, among other indicators), can integrate optimization and econometrics and support model coupling (e.g. in conjunction with spatially explicit models, sectoral models for energy and the economy).

The GEM CPP framework is designed to align closely with the Sustainable Development Goals (SDGs), recognizing that climate action is intrinsically linked to broader development objectives. By integrating climate resilience and

low-carbon development pathways, the CPP aims to foster progress across multiple SDGs, including those related to poverty eradication (SDG 1), good health and well-being (SDG 3), quality education (SDG 4), gender equality (SDG 5), clean water and sanitation (SDG 6), affordable and clean energy (SDG 7), decent work and economic growth (SDG 8), industry, innovation, and infrastructure (SDG 9), reduced inequalities (SDG 10), sustainable cities and communities (SDG 11), responsible consumption and production (SDG 12), climate action (SDG 13), life below water (SDG 14), life on land (SDG 15), and partnerships for the goals (SDG 17). The model's scenarios and interventions are structured to identify synergies and co-benefits, ensuring that investments in climate prosperity also contribute to a more equitable, prosperous, and sustainable future for the country.

Scenario Overview

Business as Usual (BAU)

The BAU scenario represents the status quo and serves as the baseline for the Climate Prosperity Plan. In this scenario, no additional measures for climate resilience or transition are implemented beyond what is already legally mandated or currently in practice. It reflects a future where the nation's policies and actions remain unchanged, following historical patterns and conventional practices. This scenario essentially portrays the consequences of inaction, where existing trends and behaviours persist, potentially leading to increased vulnerability to climate change impacts and lost opportunities for sustainable development.

Nationally Determined Contribution (NDC), conditional and unconditional

The NDC scenario aligns with the country's official climate commitments as outlined in its Nationally Determined Contribution. It represents a structured approach to addressing climate change, incorporating measures to reduce sectoral emissions and enhance climate resilience. The NDC scenario demonstrates a country's dedication to meeting its international climate obligations by implementing policies and initiatives outlined in its official NDC document. This scenario emphasizes a proactive response to climate change, seeking to reduce emissions and adapt to a changing climate in accordance with globally agreed targets.

Climate Prosperity Plan (CPP)

The Climate Prosperity Plan (CPP) scenario stands out as an ambitious and transformative pathway toward climate prosperity. In this scenario, the country maximizes its utilization of domestic renewable energy resources, stimulates electrification, sustainable agriculture, nature-based solutions and fosters a transition to a greener and more sustainable economy. Simultaneously, it employs comprehensive climate resilience and nature-based solutions to safeguard the nation against the adverse impacts of climate change. The CPP scenario represents a holistic strategy, focusing on economic growth, job creation, and environmental stewardship, to ensure long-term sustainability and prosperity. It exemplifies a forward-thinking and

integrated approach to climate action, aiming to build a resilient and low-carbon future.

Key CPP Objectives

- Financing maximized renewable energy: securing investments to expand renewable energy sources and modernize the national power grid, ensuring it's efficient and interconnected. This helps reduce dependence on fossil fuels, enhance energy security, and foster a transition to cleaner and more reliable energy sources.
- Climate-smart agriculture: Climate-smart agriculture practices, such as precision farming and resilient crop varieties, are put in place to adapt to changing climate conditions. Additionally, climate resilience measures aim to protect agricultural systems from climate-related risks, ensuring food security and sustainable farming.
- Sustainable transport: promoting sustainable and eco-friendly transportation options, such as public transit, electric vehicles, and active transportation (cycling and walking). This not only reduces carbon emissions but also eases congestion and improves air quality.
- Protection of economy and livelihoods: emphasizing the importance of financial safety nets and insurance mechanisms to protect the economy and people's livelihoods from the potential impacts of climate-related disasters and unforeseen events, helping to ensure economic stability.
- Adaptation measures for heat and disease: implementing measures to prevent and respond to heat-related diseases, especially as temperatures rise due to climate change. It includes public health initiatives, early warning systems, and healthcare infrastructure improvements to protect communities from extreme heat events.

SIMULATION OUTCOMES

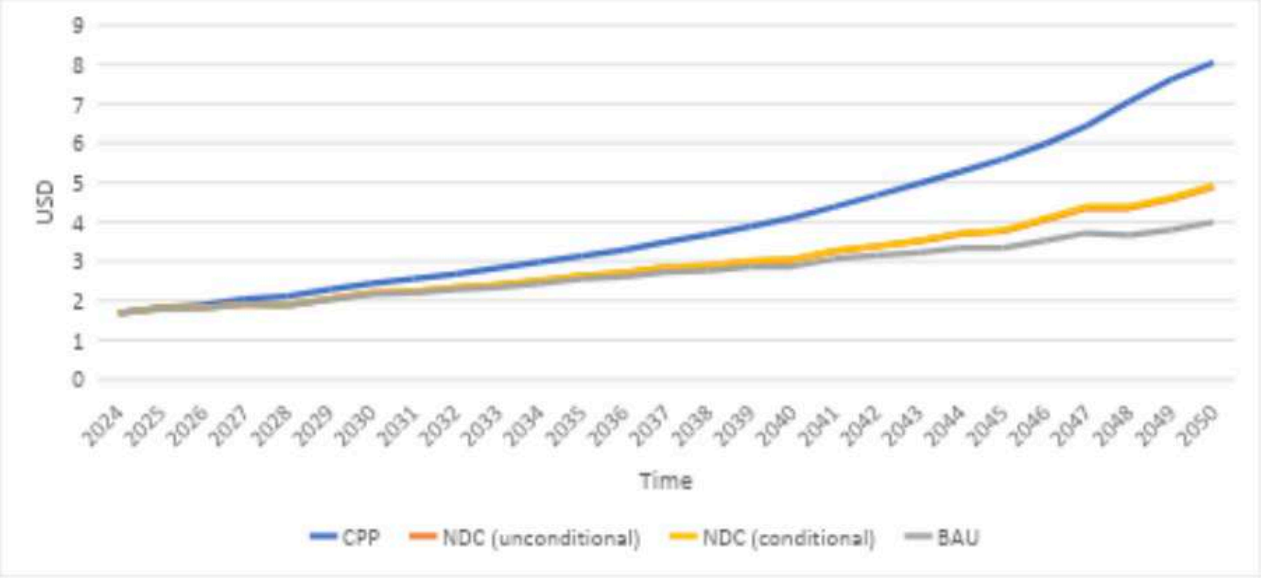
Simulation Outcomes

Economic

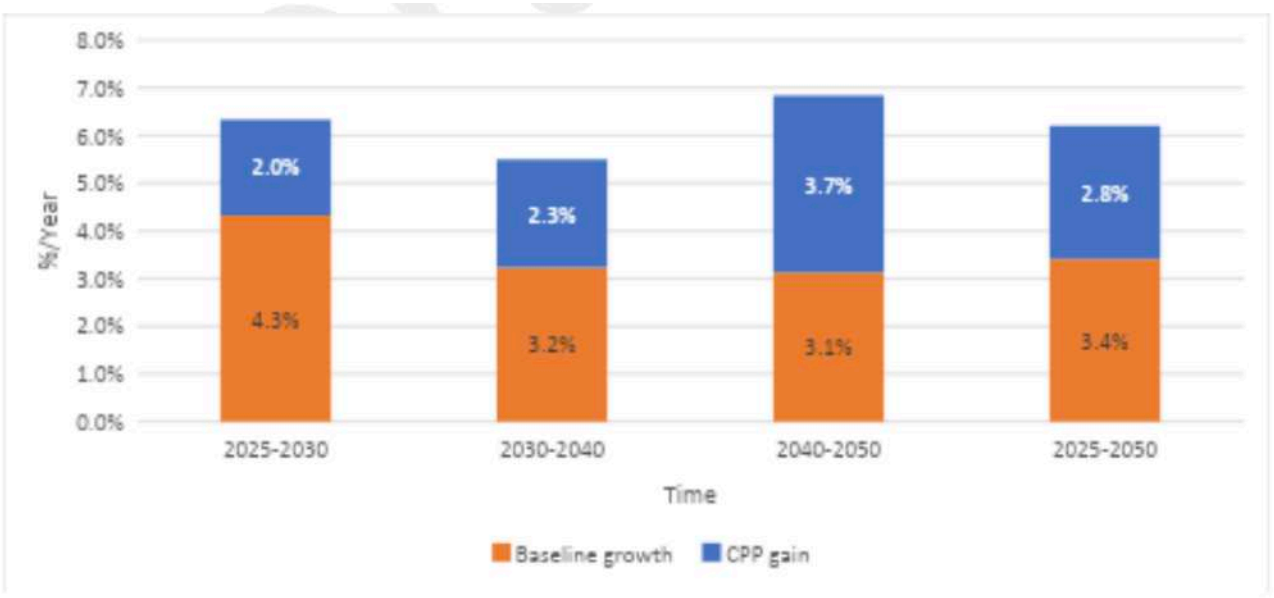
In the BAU scenario, total real GDP is projected to increase from USD 1.79 billion in 2025 to USD 3.99 billion by 2050. This scenario assumes that current policies and economic trends continue without significant changes. In contrast, under the CPP scenario, total real GDP is expected to grow much more substantially, reaching USD 8.05 billion by 2050. This represents a remarkable 101 percent increase compared to the BAU scenario, highlighting the significant economic benefits and enhanced prosperity generated by the CPP. The main factors affecting GDP, and hence the higher growth in the CPP scenario, are the reduction in energy costs and associated externalities, proactive measures to decrease climate change damages, and the promotion of increased capital accumulation through investments in sustainable and climate-resilient initiatives.

In the BAU scenario, the real GDP growth rate averages 3.4 percent over the period from 2025 to 2050. This steady growth rate reflects the continuation of existing economic activities and trends without significant interventions or policy changes. Conversely, in the CPP scenario, the real GDP growth rate averages 6.2 percent over the same period.

In the BAU scenario, real disposable income per capita grows from 603USD/person in 2025 to 833 USD/person in 2050. In contrast, in the CPP scenario, real disposable income per capita amounts to 1725



Real GDP, under different scenarios.



GDP growth rate, BAU and CPP gain

USD/person in 2050. This substantial increase is primarily driven by higher GDP growth resulting from proactive climate policies. By prioritizing investments in sustainable practices and technologies, the CPP scenario fosters greater economic growth, leading to higher incomes for individuals.

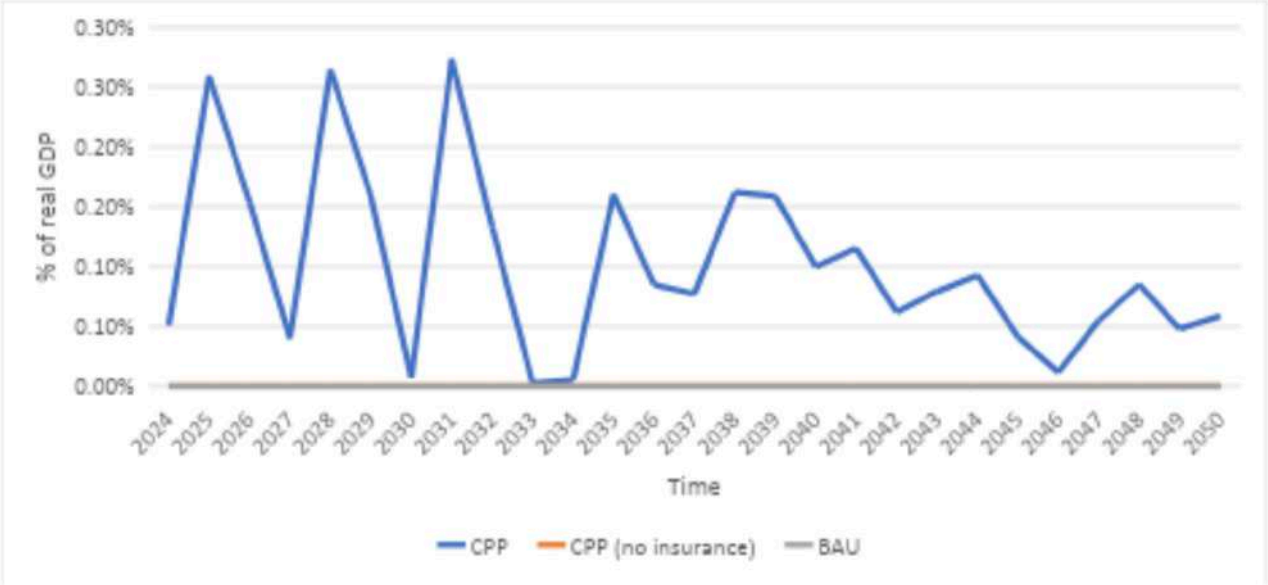
In the BAU scenario, the percentage of the population below the poverty line decreases from 35.8 percent in 2025 to 28 percent in 2050, reflecting gradual economic improvements over time. However, a significant portion of the population remains impoverished. In contrast, the CPP scenario achieves a more substantial reduction, with the percentage of the population below the poverty line dropping to 16 percent in 2045. This demonstrates the considerable impact of the Climate Prosperity Plan in alleviating poverty, as its policies and initiatives contribute to a more inclusive and economically prosperous society compared to the BAU scenario.

In the CPP scenario, Gambia is projected to transition to an upper-middle-income country by 2039, around six years earlier compared to the BAU scenario, where this shift is expected in 2045. However, based on the current results, Gambia is not projected to achieve high-income status before 2050, despite the ambitious goals outlined in the CPP.

In the BAU scenario, no carbon credits are generated, reflecting the absence of specific policies or initiatives aimed at incentivizing carbon reduction activities. However, in the CPP scenario, the value of carbon credits generated by 2050 totals USD 112 million. This significant sum is primarily driven

by two key factors: reforestation efforts and the exportation of clean energy. Reforestation projects contribute to carbon sequestration, offsetting emissions and generating carbon credits, while the exportation of clean energy sources such as renewable electricity generates additional credits by displacing fossil fuel-based energy production.

Insurance payments play a crucial role in determining the extent to which damages can be restored in the event of adverse events. In the scenario without significant climate policies (BAU), the cumulative additional premium in 2050 is estimated at USD 0.66 billion. This premium payment not only facilitates the restoration of damages but also has broader economic implications. By 2050, the payment of insurance premiums yields nearly USD 38 million per year in additional real GDP. Furthermore, the difference in damages restored through these payments results in an additional USD 1.12 billion in real GDP between 2025 and 2050. In the baseline scenario, annual insurance payments are assumed to be 0.2 percent of real GDP. This represents a standard practice for managing risks and covering potential damages within the existing economic framework. However, in the CPP scenario, the average additional premium amounts to USD 320 million per year between 2025 and 2050, equivalent to an average of 0.3 percent of GDP over the same period.



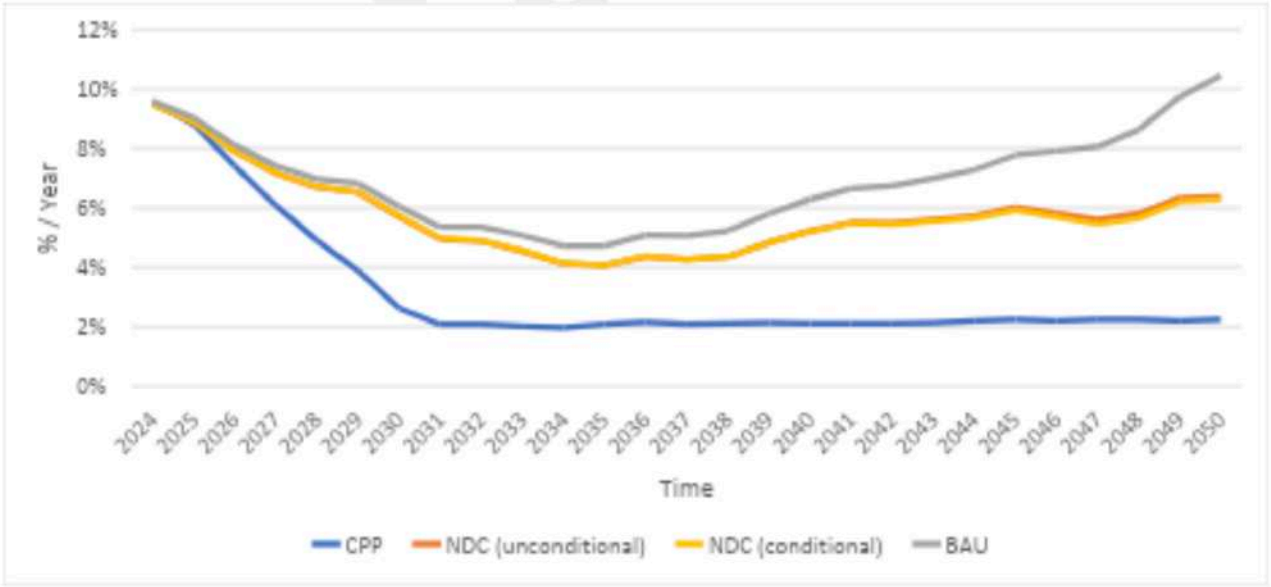
Insurance payments as share of GDP, BAU and CPP scenarios.

Society

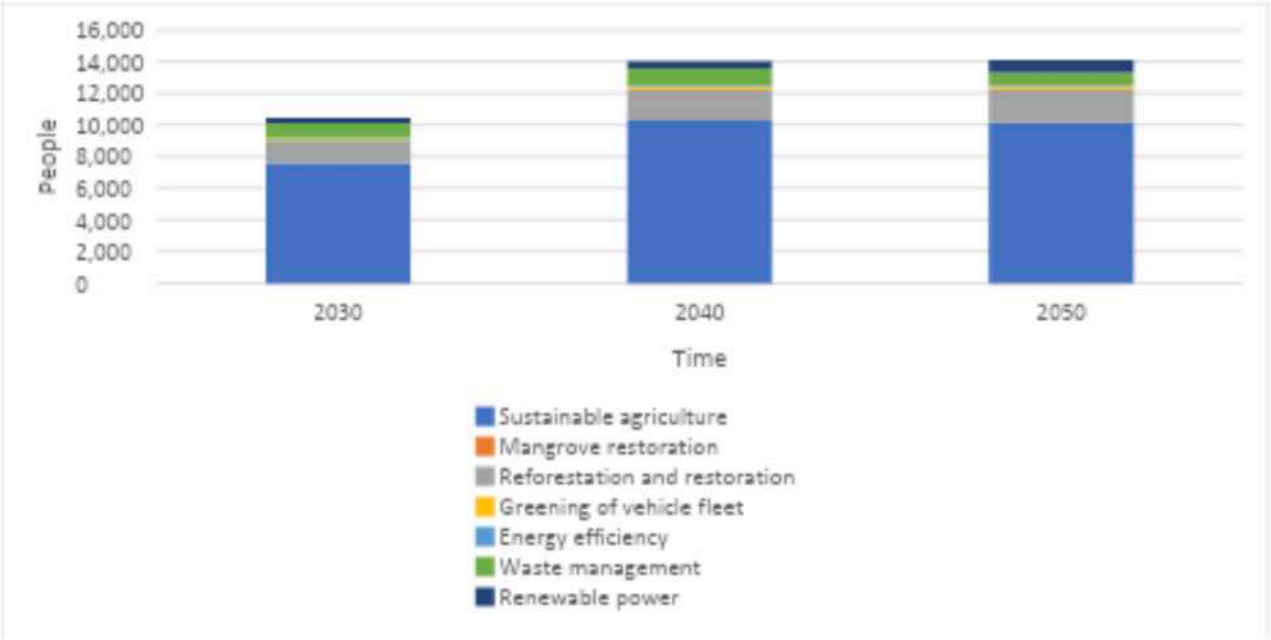
In the BAU scenario, total employment reaches 1.35 million people by 2050, reflecting the natural progression of economic activities without significant policy interventions to stimulate job creation. Conversely, under the CPP scenario, total employment increases to 1.47 million people in 2050, marking a 9.2 percent increase compared to the baseline. The driving forces behind this surge in employment within the CPP scenario include the higher GDP generated by the plan, the strategic utilization of land for agriculture, and the ambitious implementation of transition and climate resilience interventions, all of which synergistically contribute to significant job creation and economic growth.

In the BAU scenario, the unemployment rate averages 6.8 percent from 2025 to 2050, reflecting existing economic conditions without significant policy interventions to stimulate employment. Conversely, under the CPP scenario, the unemployment rate averages 2.9 percent over the same period.

In the BAU scenario, the number of green jobs increases from 6963 people in 2025 to 11,293 people in 2050. However, under the CPP scenario, green jobs amount to 25,408 people in 2050. This indicates the CPP's effectiveness in promoting environmentally sustainable employment. Additionally, the share of green jobs slightly increases from 0.83 percent in 2025 to 0.84 percent in 2050. However, under the CPP scenario, green jobs in total employment



Unemployment rate, BAU, NDC and CPP scenarios.



Green jobs by intervention option, CPP scenario.

increase to 1.72 percent in 2050, more than twice as high as in the baseline. This substantial rise in the proportion of green jobs in the CPP scenario is propelled by the ambition of transition and adaptation interventions, including measures such as energy efficiency, renewable energy, electrification, flood protection, and others.

Energy

In the BAU scenario, energy consumption will grow from 12,262TJ in 2025 to 21,694 TJ in 2050. However, in the CPP scenario, energy consumption amounts to 5,839 TJ in 2050. This remarkable reduction is driven by several key factors within the CPP, including improved energy efficiency, and increased electrification, both of which contribute to a more sustainable and energy-efficient future.

In the BAU scenario, the energy bill as a share of GDP increases from 5.7 percent in 2025 to 5.9 percent in 2050. Conversely, in the CPP scenario, the energy bill as a share of GDP amounts to 0.8 percent in 2050. This significant reduction in the energy bill as a percentage of GDP in the CPP scenario is driven by higher GDP growth and reduced total country energy expenditure resulting from more efficient energy usage and renewable energy adoption. This reduction is driven by several key factors within the CPP, including the higher GDP generated by the plan (pushing energy demand higher) and the

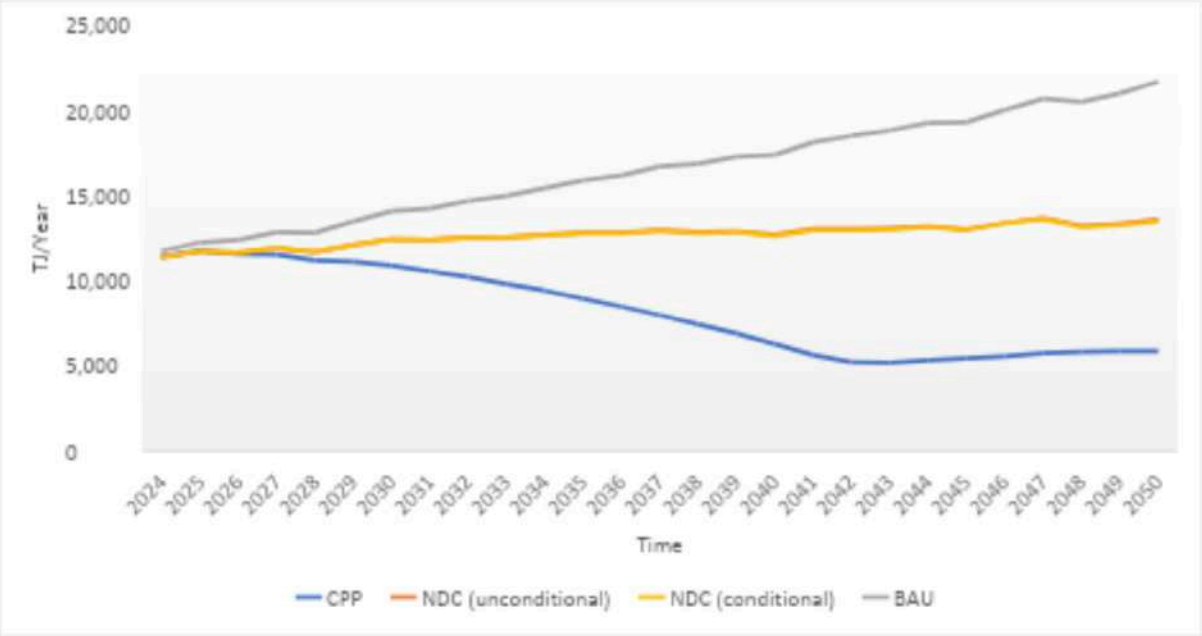


Figure 9: Final energy consumption. BAU, NDC and CPP scenarios.

comprehensive efforts to increase energy productivity (pushing energy demand lower). The indicator of the energy bill as a share of GDP reflects the efficient and sustainable utilization of energy resources in the CPP, contributing to economic prosperity and environmental responsibility. In the BAU scenario, the energy affordability index slightly declines from 0.95 in 2025 to 0.91 in 2050, indicating a decrease in the affordability of energy over time. Conversely, in the CPP scenario, the energy affordability index increases significantly to 6.96 in 2050. This indicates a substantial enhancement in energy affordability for the population within the CPP, in addition to higher access to modern and cleaner forms of energy.

In the BAU scenario, no additional vehicle electrification ambitions are assumed. However, in the CPP, the total electricity demand from the electrification of the vehicle fleet increases to 788 TJ per year by 2050. (Figure 10). This highlights the proactive approach of the CPP in promoting the adoption of electric vehicles, contributing to a more sustainable and low-carbon transportation system compared to the BAU scenario. In the NDC, the total number of low carbon vehicles will reach 16,604 vehicles by 2050. However, in the CPP, the number of low carbon vehicles totals 47,441 in the year 2050.

In the BAU scenario, the share of power generated by renewable capacity remains relatively constant at around 0 percent throughout the period from 2025 to 2050. However, in the more ambitious, the share of power generated by renewables sees a remarkable increase, reaching 100 percent by 2048.

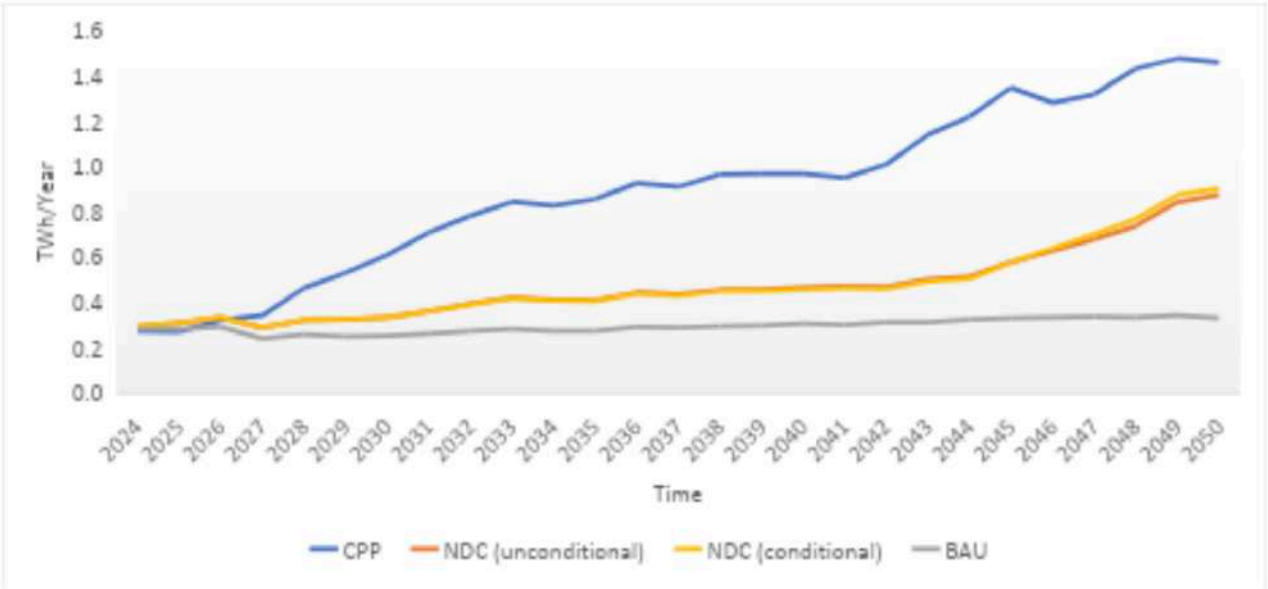


Figure 11: Annual CO2e emissions, BAU, NDC and CPP scenarios.

Environment

In the BAU, annual CO2e emissions increase from 5.6 million tons of GHG in 2025 to 7.1 million tons of GHG in 2050. This upward trend reflects the continued reliance on fossil fuels and inefficient energy practices, contributing to the accumulation of greenhouse gases in the atmosphere. However, in the CPP, annual CO2e emissions amount to -0.1 million tons of GHG in 2050. The CPP's effectiveness in achieving this significant reduction in emissions is driven by various factors, including improved energy efficiency, increased electrification, extensive adoption of renewable energy sources, reforestation and ambitious policy initiatives across various sectors, contributing to a sustainable and environmentally responsible future.

In the BAU scenario, cumulative damages from climate change total 2.1 billion USD over the period from 2025 to 2050. These damages represent a significant economic burden resulting from increased frequency and intensity of extreme weather events, impacting various sectors such as agriculture, infrastructure, and human health. However, in the CPP, cumulative damages from climate change total 1.8 billion USD over the same period, which is 14.7percent lower compared to the BAU. The drivers behind this reduction in damages within the CPP include improved climate forecasts and the strategic protection of assets and economic activities, such as agriculture and livestock, exposed to extreme weather events, contributing to a more resilient and economically prosperous future.

In the BAU scenario, total annual deaths from ambient and indoor air

pollution increase from 2,572 people in 2025 to 7,492 people in 2050. However, in the CPP scenario, the total annual deaths from indoor and ambient air pollution will decline to zero by 2050. The key drivers behind this significant reduction in air pollution-related deaths in the CPP scenario include the higher GDP, optimized population policies, improved energy efficiency, increased electrification, and the widespread adoption of renewable energy sources, all of which contribute to cleaner air and improved public health.

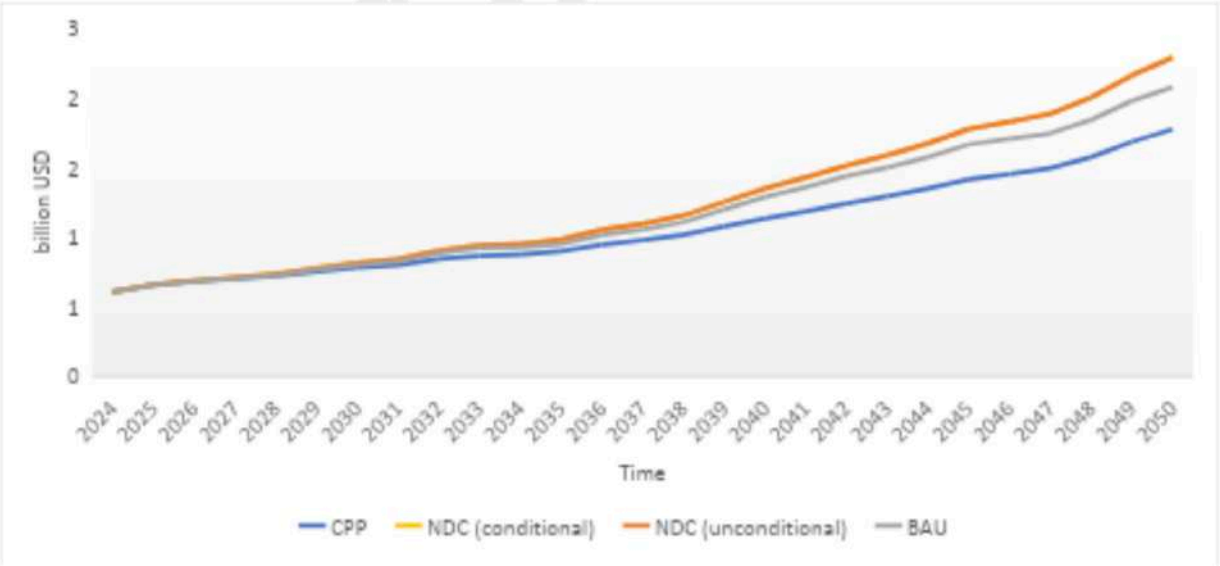


Figure 12: Cumulative climate damages, BAU, NDC and CPP scenarios.

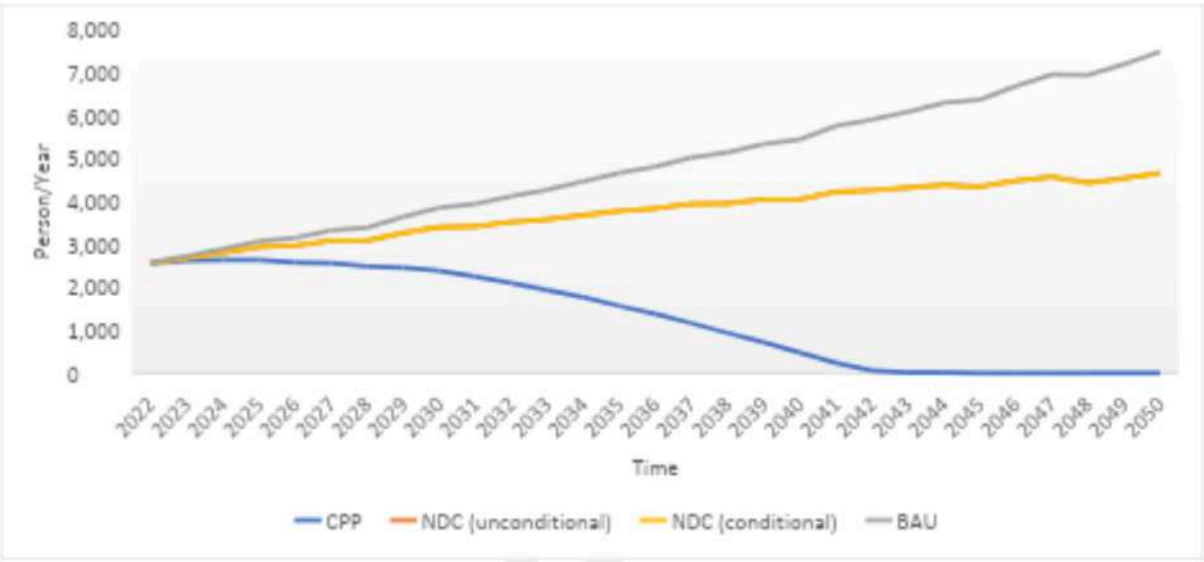


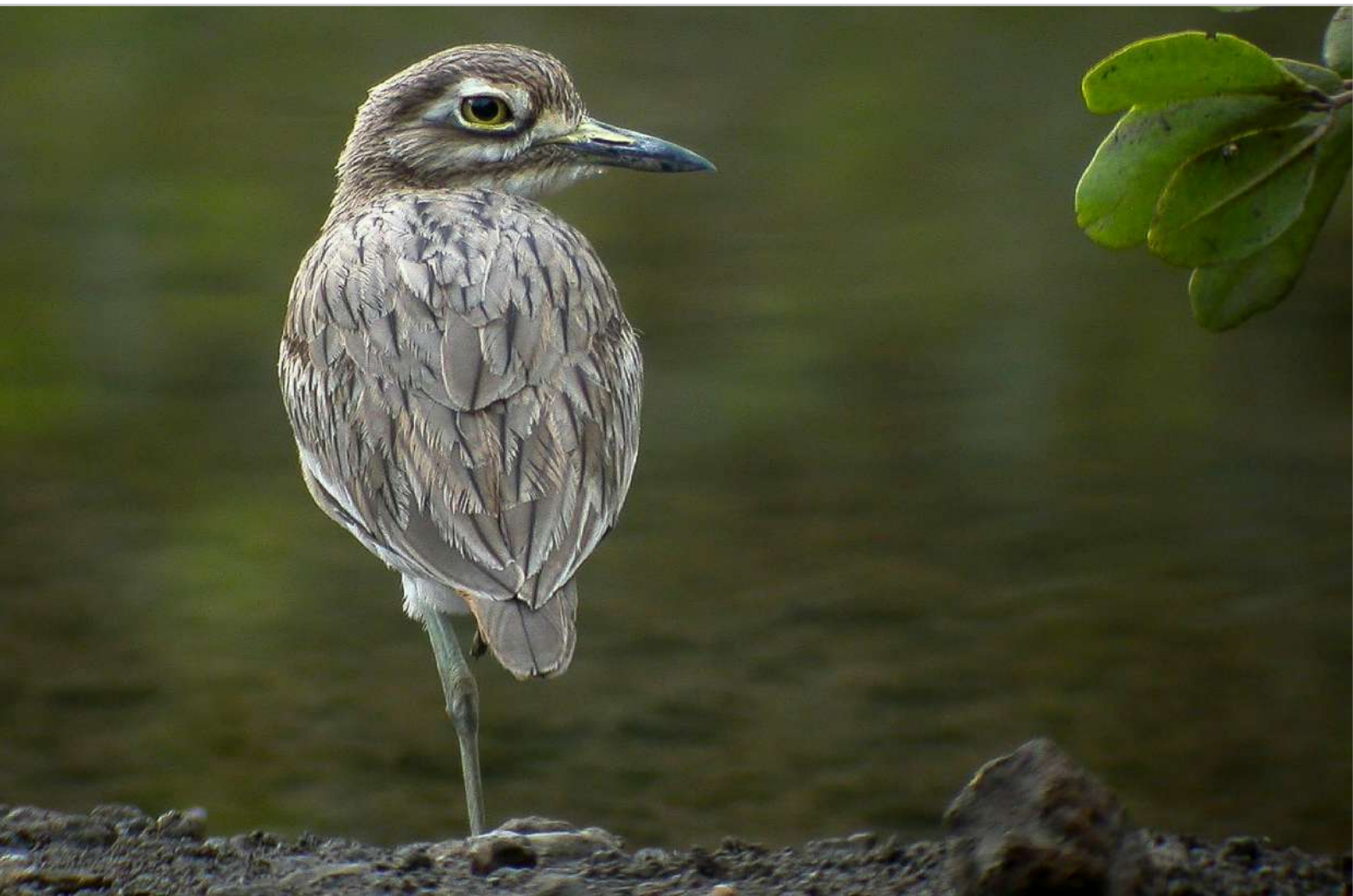
Figure 13: Annual deaths from air pollution, BAU, NDC and CPP scenarios

CONCLUSION

Conclusion

The Gambia's Climate Prosperity Investment and Financing Strategy sets out a clear, disciplined, and forward-looking pathway for transforming climate vulnerability into long-term economic opportunity. By aligning resilience, energy security, food sovereignty, industrialisation, and social inclusion within a unified investment architecture, the Strategy positions the country to mobilise affordable capital while strengthening macroeconomic stability and future competitiveness. The phased financing approach, which is anchored in grants, equity partnerships, guarantees, and concessional capital, provides the sequencing needed to build credibility, deepen institutional capacity, and unlock private-sector participation at scale.

Implementation now becomes the central task. Delivering the Strategy will require coordinated leadership across government, sustained partnership with development institutions and investors, and active engagement of communities, youth, and the private sector. With this Strategy, The Gambia demonstrates its readiness to lead a new era of resilience-driven growth, one that protects lives and livelihoods, accelerates climate-smart development, and lays the foundation for a more prosperous and climate-resilient future.



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GLOSSARY

Glossary

Climate Prosperity Plan (CPP)	A CVF-V20 initiative supporting climate-vulnerable nations to transform climate risks into bankable opportunities, serving as a national investment strategy.
Climate-smart agriculture	Agricultural practices that increase productivity, resilience to climate change, and reduce greenhouse gas emissions.
Agroforestry	Land-use management integrating trees or shrubs with crops and/or livestock.
Biochar	Charcoal-like substance made from agricultural waste, enhancing soil fertility, sequestering carbon, and improving water retention.
Enteric methane	Methane produced from livestock digestion, especially cattle.
Carbon sequestration	Capturing and storing atmospheric carbon dioxide in soils, vegetation, or geological formations.
Saltwater intrusion	Movement of saline water into freshwater aquifers, affecting agriculture and ecosystems in coastal areas.
Renewable Energy Act (2013)	Gambian legislation promoting renewable energy development and integration into the national energy mix.
Utility-scale solar photovoltaic (PV)	Large-scale solar power plants generating electricity for grid supply.
Battery energy storage systems (BESS)	Technologies storing electrical energy, particularly stabilizing renewable energy sources.
Clean cooking technologies	Efficient methods such as LPG, electric stoves, and bioethanol cookers, reducing pollution and emissions.
Sustainable industrial parks	Industrial areas foster sustainable manufacturing, renewable energy use, and circular economy practices.
Circular economy	Economic model minimizing waste and maximizing resource reuse, recycling, and recovery.
Hydrofluorocarbons (HFCs)	Super-pollutant refrigerants with high global warming potential, used in cooling systems.
Ecotourism	Environmentally responsible travel conserving the environment, benefiting local communities, with education components.
Living shorelines	Natural coastline management techniques using vegetation and barriers to stabilize shorelines and provide ecosystem services.
Mangrove restoration	Replanting and rehabilitating mangrove ecosystems for biodiversity conservation, climate resilience, and carbon sequestration.
Methane mitigation	Efforts aimed at reducing methane emissions, especially from waste and livestock sectors.
Integrated waste management	Coordinated waste management through collection, sorting, composting, recycling, and methane recovery.
Waste-to-energy (WtE)	Technologies converting waste materials into energy, such as electricity or heat.
Blended finance	Combining public, philanthropic, and private funds to finance projects, especially climate and sustainable development.
Diaspora bonds	Investment instruments targeting expatriates to finance projects in their home countries.

Sovereign carbon credits (Article 6)	Nationally achieved emission reductions tradable internationally under Article 6 of the Paris Agreement.
Development Impact Bonds (DIBs)	Outcome-based contracts where investors provide upfront capital, with returns dependent on achieving development results.
Blue bonds and biodiversity bonds	Financial instruments raising funds specifically for marine conservation and biodiversity protection.
Concessional loans	Loans offered on favourable terms, typically lower interest rates and longer repayment periods compared to market loans.
De-risking instruments	Financial tools (guarantees, insurance, first-loss capital) reducing investment risks to attract private capital.
Catalytic floor price mechanism	Financial arrangement guaranteeing minimum prices to encourage investment, especially in less commercially viable projects.
Revolving energy payment guarantee	Financial facility ensuring timely payments to energy producers, reducing financial risks for independent power producers (IPPs).
Results-Based Finance (RBF)	Funding mechanisms contingent on achieving predefined outcomes or results.
Local currency financing	Funding provided in local currency to mitigate foreign exchange risk and support domestic market development.
National Development Bank (NDB)	Proposed institution channelling concessional and affordable financing into development and climate-aligned investments.
Monitoring, Reporting, and Verification (MRV)	Processes quantifying, tracking, and reporting on greenhouse gas emissions, environmental impacts, and outcomes for transparency and accountability.

COMPLEMENTARY INFORMATION

Complementary Information

Scenario Overview Tables

- Assumptions for transition and adaptation
- Disaggregated CBA table

Mapping of Existing and Proposed Projects

- Detail ongoing initiatives that align with the CPP
- Proposed new projects to fill gaps
- Transition projects vs. resilience projects

ANNEXES

Annexes

Annex 1

GEM CPP Report - The Gambia
https://docs.google.com/document/d/1Vz-Fy_O8csdwsi9kMkuMnYMnRLzbJ0c7/edit?usp=sharing&ouid=109484271967527835996&rtpof=true&sd=true

Annex 2: Investment and Financing Summary Table

Phase 1: Stability, Preparation & Grant-Led Acceleration (2025-2030)			
Estimated Costs: Total USD 2.3 billion Mitigation: USD 655 million Adaptation: USD 1.66 billion			
Targets	Revolving Project Preparation Fund	Vertical climate funds to optimize access to grant and concessional climate finance	Carbon Credit Market Access
	Debt-for-climate swaps for long-term liabilities management and increased fiscal space	Privately managed funds can play a catalytic role in accelerating youth-driven green industrialization and value addition in The Gambia	Turnaround Financing and Restructuring Strategy
	Work with domestic banks and financial institutions to sell green loan portfolios at par or above par to MDBs (for mature portfolios only)	Targeted Guarantees/Currency Hedging	Risk Management and Financing
Deliverables	A robust investment-ready pipeline across all strategic aims	At least 20 keystone projects brought to feasibility or advanced desig	Early implementation of renewable energy generation assets supported by guarantees and private capital
	Strengthened institutions and regulatory reforms that reduce perceived risk	Operational foundational systems for carbon markets	Expanded equity and early public-private investments
	Demonstrable early gains in food security, energy access, coastal resilience, waste systems, and livelihoods		Improved investor confidence and strengthened macro-stability

Phase 2: Concessional Scaling & Infrastructure Acceleration (2030-2040)			
Estimated Costs: Total USD 3.1 billion Mitigation: USD 1.5 billion million Adaptation: USD 1.6 billion			
Targets	Concessional Finance Mobilisation	Large-Scale Infrastructure Implementation	Risk Mitigation and Private Capital Mobilisation
	Carbon Market Revenues	Institutional Strengthening	
Deliverables	Expansion of renewable energy generation capacity, including grid-connected solar, wind, and storage assets.	Nationwide improvements in water security, stormwater management, irrigation, and climate-resilient WASH systems.	Operational agro-industrial zones and climate-smart value-chain infrastructure supporting export competitiveness and rural livelihoods.
	Large-scale coastal and mangrove communties and stimulating blue-economy jobs	Enhanced transport and drainage networks supporting climate-resilient mobility and economic transformation.	Significant national revenue streams from carbon credits, flowing to the GCCF.
	Mature SPVs implementing multi-million-dollar infrastructure projects.	A functioning blended-finance ecosystem with private investment in energy, agriculture, industry, and services	Improved sovereign risk profile and macro-stability indicators as resilience investments reduce exposure to climate shocks.

Phase 3: Market Expansion, Domestic Capital Markets & Nature-Positive Prosperity (2040-2050)			
Estimated Costs: Total USD 1.9 billion, mitigation USD 1.4 million, Adaptation USD 559 million			
Targets	Strengthened Macroeconomic & Financial Foundations	Energy Transformation & Industrial Competitiveness:	Nature-Positive Prosperity & Scaling Carbon Revenues
	Domestic Capital Market Deepening		
Deliverables	A self-sustaining climate finance ecosystem, driven by domestic capital markets and private investment	A net-zero-aligned, renewable-energy-powered economy, with universal access to affordable and reliable clean electricity.	A thriving ecotourism and blue-economy sector, generating significant employment and foreign-exchange earnings.
	Mature and monetised nature-based and carbon-credit revenue streams, reinvested into community resilience and conservation.	Globally competitive agro-industrial and green manufacturing clusters, powered by clean energy and climate-smart value chains.	Resilient cities and rural systems, protected by modern water, drainage, coastal, and ecosystem-infrastructure networks.
	Elevated sovereign creditworthiness, enable bonds, da spora bonars sustainability-linked loans, and blended portfolios.	A fully operational Gambia Climate Change Fund (GCCF) acting as the national anchor for climate investments, carbon revenues, and blended finance.	A prosperous, inclusive economy where youth and women are central participants in tourism, agriculture, digital services, manufacturing, and nature-positive enterprises.

Annex 3: Detailed Investment and Financing Architecture

The Gambia's Climate Prosperity Investment and Financing Strategy is a multi-phase national investment and technology access strategy that advances sustainable industrialisation, enhances rural livelihoods and urban quality of life, improves export competitiveness and restores ecosystems. The Gambia's small size allows for agile implementation and holds significant growth potential. The Gambia Climate Prosperity Investment and Financing Strategy provides the financial architecture that underpins all Strategic Aims, translating sectoral priorities into bankable, sequenced investments.

Central to the Strategy is the deployment of innovative financial instruments that respond to the country's specific challenges and opportunities.

Priority Financing Principles

To facilitate implementation, the following core principles will guide the mobilization and deployment of finance. These principles define how capital is structured, sequenced, and governed across all strategic aims:

- **De-risk Private Investment**: Deploy a suite of risk mitigation instruments - including credit risk guarantees, insurance products, and first-loss capital - to lower perceived and actual risks for private investors, thereby catalysing capital inflows into priority sectors.
- **Blend Public and Private Capital**: Structure financing solutions that combine public, concessional, and commercial resources to reduce transaction costs, align incentives, and accelerate the delivery of transformative projects.
- **Leverage Grants and Concessional Finance Strategically**: Use public grants and concessional financing to crowd in larger volumes of private capital, particularly for high-impact and early-stage investments that may otherwise be commercially unviable.
- **Monetize Natural Capital Assets**: Harness the revenue potential of carbon markets and biodiversity credits by developing verifiable, high-integrity projects that can access voluntary and compliance-based environmental finance.
- **Promote Localized Project Origination**: Strengthen institutional and community-based platforms to originate and implement projects that reflect local needs, enhance ownership, and improve delivery effectiveness.
- **Enable Access to Domestic Capital Market**: Mitigate foreign exchange risk and diversify the sources of capital.
- **Embed Results-Based Monitoring and Evaluation**: Integrate robust, transparent M&E systems tied to performance metrics, and development and climate outcomes to ensure accountability,

drive adaptive learning, and enhance investor confidence. mprove delivery effectiveness.

Together, these principles establish a coherent, results-oriented, partnership-driven financial architecture that enables each Strategic Aim to be financed through tailored, but interoperable instruments.

Debt-Growth Pathway and Rationale for Investment-Led Resilience

The choice of financing instruments is shaped by The Gambia's macro-fiscal context. Under the IDA non-concessional borrowing policy, The Gambia's non-concessional borrowing ceiling is set at zero, which effectively limits the country to grant funding and extremely concessional finance. This constraint reinforces the need for a disciplined focus on high-impact, concessional, and blended-finance instruments that minimise additional debt vulnerability. In practice, it makes it imperative to leverage grants strategically, optimise guarantees and risk-sharing mechanisms, and mobilise private capital to expand the available financing envelope without compromising fiscal sustainability.

For climate-vulnerable economies such as The Gambia, fiscal contraction undermines resilience rather than strengthens it. The Strategy therefore adopts a debt-growth pathway that prioritizes investment-led prosperity, ensuring that climate and resilience investments expand fiscal space and long-term growth potential. This approach challenges systemic biases in the global financial system, where perceived rather than real risks inflate borrowing costs, and underscores the need to align fiscal policy with long-term growth, equity, and resilience.

By focusing on productive, low-carbon, and adaptation-driven investments, The Gambia seeks to achieve debt sustainability through resilience dividends, not austerity. Accordingly, cross-cutting tools such as guarantees, climate-aligned debt restructuring, and debt-for-climate swaps are treated as core enablers rather than add-ons.

Debt-for-Climate Swaps: The Gambia will pursue debt-for-climate swaps as a priority financing mechanism, building on successful models implemented in other Small Island Developing States and LDCs. These swaps will target approximately 15-20% of eligible external debt, potentially freeing up USD 50-75 million over the 2025-2030 period for climate investments.

Implementation will follow a three-phase approach: (1) debt sustainability analysis and creditor mapping (2025), (2) negotiation of pilot swap agreements with bilateral creditors (2026-2027), and (3) scaling to multilateral debt instruments (2028-2030). The freed fiscal space will be ring-fenced through the proposed Gambia Climate Change Fund (GCCF) to ensure additionality and transparency in climate spending.

Translating this investment-led approach into practice requires tackling structural bottlenecks in foreign exchange and domestic capital markets. Deepening these markets is not only a financial-sector priority but a macroeconomic growth imperative,

which is essential for improving liquidity, reducing currency mismatches, and expanding access to long-term financing in local currency. By mobilizing domestic savings, strengthening financial intermediation, and anchoring private investment in national instruments, The Gambia can progressively shift from externally constrained financing toward a more self-sustaining, resilient growth model.

Domestic Capital Markets and the National Development Bank

Foreign exchange (FX) risk remains one of the most critical challenges to mobilising and sustaining financing for The Gambia's Climate Prosperity Investment and Financing Strategy. The dalasi (GMD) operates under a de facto managed float, with interventions by the Central Bank of The Gambia (CBG) to smooth volatility. Reserves, covering around four months of imports, are adequate but limited for a small open economy that is highly dependent on imports. While capital convertibility and repatriation are legally guaranteed, practical liquidity constraints and sharp swings in the dollar introduce significant costs for both the public and private sectors.

To reduce FX exposure and anchor financing in local currency, domestic capital markets will be strengthened to mobilise local savings and long-term dalasi finance. Domestic capital markets offer an opportunity to diversify sources of capital by strengthening local financial systems and institutions. This includes enhancing mobile savings platforms, cooperatives and microfinance schemes that mobilise local savings; expand capacity of credit unions and Village Savings and loans; and enabling the central bank to issue long-term local currency bonds to establish benchmarks rates and potentially crowd in institutional capital. Expanding the T-bond yield curve, encouraging corporate issuance, and supporting PPPs in local currency can gradually build resilience. Coupled with global guarantee mechanisms and innovative repayment structures, local markets can reduce dependence on external hard-currency flows. Addressing FX Risks requires a multi-layered hedging strategy:

1. Global guarantee mapping to systematically deploy instruments against transfer, convertibility, and currency risk.

2. Trade-linked diversification to reduce reliance on USD and open opportunities in alternative currencies.

3. Innovative MDB/bilateral structuring, including indexed repayment and pause mechanisms.

4. Domestic market development to provide sustainable local-currency finance.

5. Taking advantage of the Pan African Payment and Settlement System (PAPSS)

By embedding these tools, The Gambia can reduce its vulnerability to dollar swings, protect fiscal sustainability, and lower financing costs for climate-resilient investment.

Risk	Impact	Mitigants	Responsible Actors
Currency mismatch (GMD revenues vs. USD/EUR debt)	Rising debt service costs; tariff hikes; reduced bankability	Local-currency lending; revenue-indexed repayment schedules; MDB flexibility on repayment pause/rollover (Matching debt profiles to revenue streams)	MoFEA, MDBs, Project Sponsors
FX availability & liquidity constraints	Delays in debt service/dividend repatriation; investor uncertainty	Global guarantee mapping (MIGA, GuarantCo, AfDB, others); FX escrow[38]/Debt Service Reserve Account in hard currency	MoFEA, CBG, MDBs
High hedging costs (e.g. TCX)	Limits use of formal hedging products; higher financing costs	Explore trade-linked currency borrowing[39]; advocate for concessional hedging facilities; diversify currency exposure	MoFEA, MDBs
Dollar dominance & volatility	Exposure to sharp USD swings; budget vulnerability	Issue debt in trade-linked currencies; embed currency diversification[40] in Strategy	MoFEA, AfDB, bilateral partners
Depreciation & inflation pass-through	Imported inflation; erosion of project returns; fiscal stress	Concessional inflows to bolster reserves; macro discipline; blended finance buffers	CBG, MoFEA, IMF, World Bank
Eurobond rollover & pricing risk	High coupons; refinancing shocks	Only issue with Partial Credit Guarantees /Partial Risk Guarantees; sustainability-linked Eurobonds; explore alternative currency listings	MoFEA, AfDB, World Bank

[38] FX escrow ensures the safe holding and conditional release of foreign exchange funds in cross-border transactions, protecting all involved stakeholders from premature or improper use of the currency. It acts as a safeguard against risks such as delays, non-payment, or failure to meet contractual milestones before releasing the foreign currency.

[39] Exploring alternative currency options linked to The Gambia's major trading partners, potentially listing debt in currencies with more stable trade linkages than USD.

[40] Currency diversification is the strategy of spreading investments across multiple currencies to reduce risk and volatility caused by fluctuations in currency exchange rates. By holding assets or making investments in different currencies, investors can mitigate the risks associated with adverse movements in any single currency.

External Facilities to Address Currency Risk: To mitigate exposure to exchange-rate volatility and strengthen the financial viability of climate investments, The Gambia will leverage regional and international facilities that provide local-currency solutions. These mechanisms are critical for scaling private sector participation and ensuring that debt sustainability is not undermined by currency mismatch risks.

- **The Currency Exchange Fund (TCX)**

  The TCX provides FX hedging instruments to enable local currency lending by international lenders. This is especially critical for climate infrastructure and MSME projects.

- **African Local Currency Bond (ALCB) Fund**

  The ALCB offers co-structuring and capital support for dalasi-denominated bond issuances by private sector actors or financial institutions. This could catalyse local currency green bonds, SME bonds, or agricultural value chain instruments.

- **International Finance Corporation (IFC)**

  The IFC offers local currency loans and swaps where viable, often backed by donor guarantees. IFC's instruments can support NAWEC, local banks, or industrial parks with dalasi-based financing solutions. IFC's local currency financing aims to mitigate currency mismatch risks and expand access to capital markets for businesses.

- **African Development Bank (AfDB)**

  AfDB supports local currency lending and bond market development through its African Financial Markets Initiative (AFMI). This includes technical assistance and regulatory strengthening for issuing climate bonds and enhancing liquidity.

- **GuarantCo**

  GuarantCo provides partial credit guarantees to support local currency borrowing for infrastructure projects. GuarantCo can help crowd in private capital into utilities, renewable energy projects, or climate-resilient infrastructure using dalasi debt.

- **Convergence Blended Finance Platform**

  It is a global network for blended finance and supports the structuring of local currency funds and financing facilities through grants and concessional capital, with a focus on sustainable development and climate resilience.

- **Pan African Payment and Settlement System (PAPSS):**

  A cross-border financial market infrastructure that enables payment transactions in local currency across Africa.

Building on external facilities that mitigate currency risk, The Gambia's financing strategy must also optimize the mix of concessional, blended, and market-based instruments to sustain fiscal stability while accelerating investment. The starting point lies in reconfiguring how concessional resources are accessed and deployed, ensuring they anchor macroeconomic resilience, reduce exposure to exchange-rate shocks, and crowd in private capital for climate prosperity.

Public Concessional Financing: MDB and bilateral flows remain essential to anchor reserves and stabilize the macroeconomic environment, but their dollar-denominated nature exposes the budget to FX swings. The Gambia should press for more flexible debt instruments, such as repayment schedules indexed to revenues or economic performance, and financing options denominated in regional or trade-linked currencies, rather than relying solely on USD-denominated concessional loans, to better align debt service obligations with the country's actual capacity to pay. While concessional finance remains the cornerstone of fiscal stability, The Gambia must also engage selectively with commercial markets to diversify its capital base. This requires a prudent approach to external borrowing, one that balances access to growth capital with safeguards against new debt vulnerabilities and market volatility.

Eurobonds and Commercial External Borrowing: Market access remains constrained for small frontier issuers. Hard currency Eurobonds would add rollover and pricing risks that could destabilize the balance of payments. When considered, they must be structured with credit enhancements (partial credit guarantees, sustainability-linked instruments) and potentially in alternative currencies that reflect The Gambia's trade structure, thereby reducing reliance on USD volatility. In the medium term, initiatives such as the African Union's proposed African Credit Rating Agency (AfCRA) could also contribute to improving sovereign credit assessments, reducing perception bias, and supporting fairer access to capital markets for African economies, including The Gambia.

Beyond sovereign borrowing, a sustainable financing architecture must extend to public service delivery, especially in sectors where resilience dividends are highest. Partnering with utilities and local financial institutions can unlock new vehicles for climate-aligned investment that combine fiscal discipline with service expansion and performance incentives.

Public-Service Financing Innovations: Partnerships with utilities such as NAWEC will pioneer innovative financing structures for renewable energy and water infrastructure, including guarantee-backed power-purchase agreements and outcome-based service delivery models. The Strategy will also explore engagement with the Global Commission on the Economics of Water (https://watercommission.org) to attract concessional resources in exchange for global public goods such as watershed protection and sustainable water management. National banks will be

encouraged to refinance existing loan portfolios with development finance institutions to free balance-sheet space for new CPP-aligned investments.

While public-service financing innovations create immediate pathways for investment in utilities and infrastructure, a more systemic solution is needed to deepen domestic capital markets and reduce foreign exchange exposure. Establishing a national financial institution with a mandate to mobilize long-term, local-currency finance would consolidate fragmented financing channels and strengthen financial intermediation. The development of a National Development Bank can play this catalytic role, anchoring efforts to channel concessional and blended resources toward climate-resilient, inclusive growth while enhancing The Gambia's capacity to finance prosperity in its own currency.

National Development Bank: The Gambia will establish a National Development Bank (NDB) as a dedicated public finance institution to accelerate the mobilisation and delivery of climate-aligned finance at scale. The Social Development Fund (SDF) is to be converted into a national development bank, serving as a catalytic institution for mobilising domestic capital, offering concessional loans, and co-financing flagship CPP projects. The NDB would serve as a central platform for channelling concessional financing into priority sectors, including agriculture, micro-, small and medium-sized enterprises (MSMEs), clean energy, nature-based solutions, and sustainable and inclusive industrial development. By providing long-term, patient, and affordable financing, the NDB would address critical gaps in access to finance that commercial banks often cannot fill, particularly for high impact but underserved market segments.

The NDB would complement the commercial banking sector by offering subsidized credit lines, first-loss instruments, and credit enhancements tailored to the needs of climate-related and development-oriented investments. In alignment with the Climate Prosperity Plan, the NDB would establish dedicated climate finance windows, such as the Gambia Agricultural Resilience Fund (GARF), and partner with international institutions, including the African Development Bank (AfDB), the Green Climate Fund, and bilateral development finance institutions such as KFW (Germany); Agence Française de Développement (AFD – France) / PROPARCO; FMO (Netherlands Development Finance Company); Swedfund (Sweden); DANIDA Investment Fund (DIF – Denmark), to co-finance projects with local currency debt. This approach would help mitigate exchange rate risk and make green investments more viable.

The NDB would also play a pivotal role in developing domestic capital markets by issuing dalasi-denominated green bonds and catalysing private sector investment through risk-sharing mechanisms. To ensure financial sustainability and governance credibility, the NDB would operate under a robust regulatory and oversight framework, in close coordination with the Central Bank and the Ministry of Finance.

Climate and Disaster Risk Financing and Insurance (CDRFI) Strategy

Climate-Related Financial Risk Assessment and Management
Physical risk assessment: The Gambia faces significant physical climate risks that could impact investment returns and project viability. Sea-level rise projections indicate potential inundation of over 50% of Banjul with a one-meter rise, directly affecting infrastructure investments and economic activities (Gomez et al., 2025). The strategy incorporates these risks through: (1) mandatory climate risk screening for all investments exceeding USD 1 million, (2) integration of climate projections into project design standards, and (3) establishment of climate risk reserves within the GCCF.

Transition risk management: As global climate policies evolve, The Gambia's economy faces transition risks, particularly in sectors dependent on fossil fuel imports. The strategy addresses these through: (1) accelerated renewable energy deployment reducing import dependency, (2) diversification of economic base through sustainable industrialization, and (3) development of carbon market participation to capture transition opportunities.

Implementation risk mitigation: Drawing on lessons from climate finance implementation challenges in LDCs (Nor & Mohamed, 2024), The Gambia will implement a comprehensive risk management framework including: (1) political risk insurance for private investments, (2) currency hedging mechanisms for foreign-denominated climate finance, (3) technical assistance programs to address capacity constraints, and (4) adaptive management approaches allowing for strategy adjustments based on implementation experience.
Financial risk monitoring: A climate-related financial risk monitoring system will be established within the Central Bank of The Gambia, aligned with emerging international standards for climate risk supervision. This system will track: (1) climate-related exposures in the financial sector, (2) physical damage costs from climate events, (3) transition costs and benefits across economic sectors, and (4) effectiveness of risk mitigation measures.

Objective

To reduce the cost of capital, enhance social protection systems, and ensure timely, predictable, and scalable financing for climate and disaster risks, this strategy establishes a comprehensive approach to climate and disaster risk financing and insurance (CDRFI). It targets vulnerable communities within priority productive sectors, particularly agriculture, fisheries, health, and infrastructure, through risk-layered instruments and enabling policy frameworks.

Pillars

1. Risk Layering for Pre-arranged Financing: the strategy adopts a risk-layered approach combining budgetary provisions, risk retention instruments, and risk transfer solutions to ensure timely response across

Risk Layer	Financing Instrument	Objective
High-frequency, low-severity	Contingency funds, budget reallocations	Rapid response and service continuity
Medium-frequency, medium-severity	Sovereign risk pools (e.g., ARC), insurance schemes	Stabilize public finances and enable recovery
Low-frequency, high-severity	Catastrophe bonds, donor support, GSSP/GSFF funds	Protect fiscal space and enable reconstruction

various levels of climate impact:

2. Adaptive Social Protection (ASP) and Livelihood Protection. In 2023, the WFP and World Bank-funded National Social Protection system reached over 50,000 households in The Gambia, providing cash transfers and in-kind support that benefited an estimated 258,875 children. This represents one of the most significant social protection interventions in the country's recent history**.** Building on this foundation, the programme will be expanded and sustained to cover additional vulnerable communities, leveraging The Gambia's national social registry and the Adaptive Social Protection (ASP) sub-window under the National Social Protection Fund:

- Enable trigger-based disbursements linked to early warning systems.
- Integrate with crop and livestock insurance to build financial buffers for farmers.
- Utilize ASP to subsidize microinsurance premiums in a phased model, transitioning to co-financing and eventual full ownership.

3. Sector-specific Solutions for Key Vulnerabilities

- **Agriculture:** Bundle index-based weather insurance with credit, climate information, and extension services through cooperatives and Micro Finance Institutions. Explore premium subsidies in collaboration with organisations such as the Global Shield against Climate Risks, the World Food programme (WFP) and the International Fund for Agricultural Development (IFAD).
- **Health:** Develop a climate-health shock financing window to address waterborne and vector-borne disease outbreaks.
- **Infrastructure:** Establish a public asset insurance scheme for flood- and windstorm-prone roads, schools, industries and water systems.
- **Fisheries and Tourism:** Design insurance instruments for asset protection and business continuity in coastal zones.

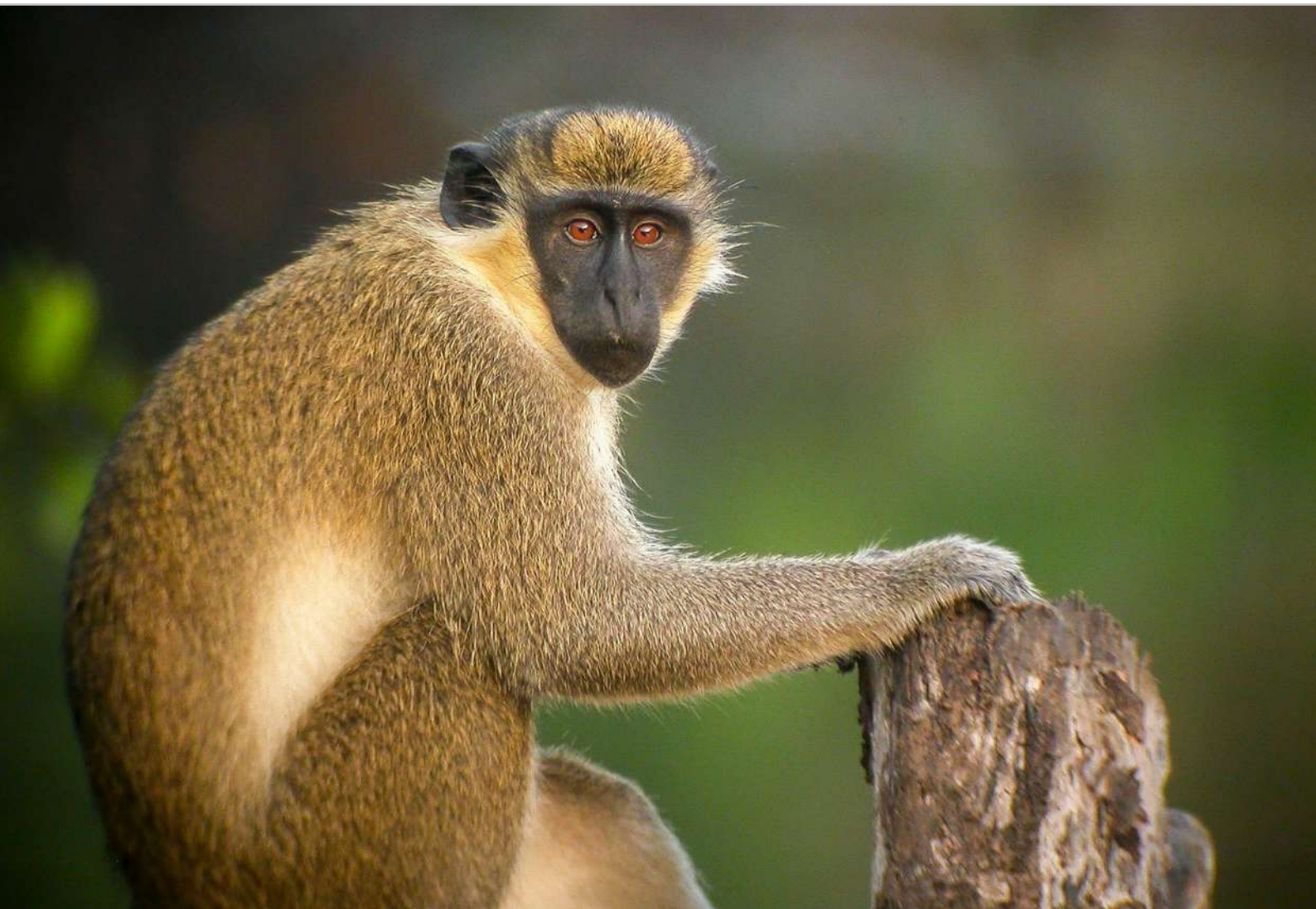
4. Institutional and Policy Frameworks To operationalize the strategy:

- Finalize and adopt a National Disaster Risk Financing and Insurance Strategy and Action Plan.
- Strengthen the Directorate of Climate Finance (MoFEA) and the Insurance Supervision Department (CBG) with technical assistance and staffing.
- Enact and enforce inclusive insurance regulations, including microinsurance and weather index insurance (drafts under review in 2024).
- Operationalize a Climate and Disaster Risk Fund (CDRF) covering at least 30% of national disaster response needs.

5. Enhancing Risk Analytics and Early Warning Systems

- Scale up risk data platforms, loss databases, and probabilistic modelling (GRMA support).

[41] CREWS (Climate Risk and Early Warning Systems) is a specialized global initiative focused on enhancing early warning systems and climate risk information in vulnerable countries, particularly Least Developed Countries (LDCs) and Small Island Developing States (SIDS). CREWS projects are implemented through a partnership involving the World Meteorological Organization (WMO), the World Bank/Global Facility for Disaster Reduction and Recovery (GFDRR), and the UN Office for Disaster Risk Reduction (UNDRR), with funding and collaboration from donor countries



Potential Sources of Financing

Source	Instruments	Purpose
Green Climate Fund (GCF)	ASP and climate-smart agriculture	Risk reduction and ASP
Global Shield Support Program (GSSP)	Premium support, e.g. for Drought Insurance via African Risk Capacity, technical assistance	Risk transfer solutions
Global Shield Financing Facility (GSFF)	Sovereign risk-layering instruments	Sovereign and contingent financing
World Bank	Catastrophe drawdown option	Liquidity for response
AfDB – ADRiFi	Risk analytics, insurance subsidies	System strengthening
Bilateral DFI, i.e. KFW	Premium subsidies, data systems	Innovation and early-stage support
Fund for Responding to Loss and Damage (FRLD)	Grants, Concessional Finance, Technical Assistance, Risk Transfer Instruments (Insurance and Guarantees), Early Response Funding	To provide financial resources specifically aimed at addressing climate-induced loss and damage, offering rapid response and recovery finance post-disaster, supporting climate risk transfer mechanisms (insurance), and building resilience among vulnerable communities and sectors.
Private insurers (via PPPs)	Meso and microinsurance schemes	(Insurance) market building

This CDRFI strategy strengthens The Gambia's ability to manage climate-related shocks by ensuring the pre-arranged availability of capital, protecting livelihoods, and attracting investment into resilient sectors, thus accelerating the implementation of the Climate Prosperity Plan.

While the Climate and Disaster Risk Financing and Insurance (CDRFI) Strategy enhances The Gambia's ability to anticipate and recover from climate shocks, the financing architecture must also enable proactive investment across all sectors. As a result, a set of cross-cutting instruments has been designed to mobilise capital at scale.

Cross-Cutting Instruments

The Gambia's financing architecture integrates a suite of cross-cutting instruments that function as market enablers, each instrument serves to deepen market confidence while accelerating climate-aligned investment across the national portfolio.

- **Debt-for-Climate/Resilience Swaps**: Engage with bilateral creditors (e.g., China, France) to

redirect debt service payments into climate-aligned investments.

- **Green Bond Issuance**: Launch sovereign and thematic green bonds through regional or global capital markets with partial guarantees to lower yields.
- **Carbon Credit Revenue Generation**: Build a pipeline of bankable projects with ability to access carbon credits under VCS/ Gold Standard, integrated with a national carbon registry.
- **CPP Project Pipeline Accelerator**: Use revolving grants to conduct feasibility studies, structure investments, and attract equity.
- **National Green Investment Facility**: Operationalize a financing vehicle under The Gambia Climate Change Fund that can blend GCF, AfDB, and reallocated SDRs to fund high-impact projects.
- **Catalytic Capital such as Junior Equity:** Junior equity can absorb first-loss risk and attract senior investors.
- **Dedicated Green Innovation Fund for Youth**: A ring-fenced financing mechanism that allocates a set percentage of its resources exclusively to young innovators, offering small grants for environmentally sustainable projects, with streamlined application and reporting procedures to ensure accessible, equitable participation. The fund will provide guarantee schemes to reduce financial risks and improve access to credit or further investment.

All financing instruments will be backed by rigorous monitoring and evaluation systems aligned with SDG outcomes and climate impact metrics, using third-party validation and digital tracking. MRV systems will track and publicly report disaggregated benefits by demographic category.

Building on these foundational instruments, The Gambia's Climate Prosperity Investment and Financing Strategy will now focus on scaling and aligning existing development finance programs. This marks the transition from design to delivery and brings together ongoing commitments by multilateral, bilateral, and domestic partners within a unified investment pipeline. By consolidating these efforts under the Climate Prosperity framework, The Gambia ensures coherence, reduces duplication, and accelerates the flow of capital toward nationally prioritised projects.

Scaling Ongoing Financing Commitments

The Climate Prosperity Investment and Financing Strategy leverages existing programmes and financing flows as a launchpad for scaling investment. Through closer coordination with partners, ranging from multilateral development banks to regional and domestic financiers, The Gambia will expand the reach and effectiveness of ongoing initiatives under a coherent Climate Prosperity framework.

- Expand World Bank IDA energy and food security programs to support industrialization
- Build on PROREFISH[42] to scale coastal resilience and NbS
- Deepen EIB and EU engagement in energy transmission and infrastructure[43]
- Broaden IsDB-supported agricultural resilience efforts to encompass value chains
- Leverage ARC, Global Shield and FRLD to expand risk protection for farmers and MSMEs
- The Climate Resilient Banjul (CLIMB) project, supported by the GEF-LDCF and UNEP, is enhancing urban resilience in the Greater Banjul Area through ecosystem-based adaptation, sustainable drainage, and integrated planning.
- O-Waste Project, led by Mbolo Association and the Gambia Women's Chamber of Commerce, is pioneering the transformation of organic waste into compost and value-added products, strengthening livelihoods and reducing methane emissions.

Financing Tools for Acceleration

To translate ambition into accelerated delivery, the Strategy introduces a suite of innovative financing tools designed to fast-track project implementation, crowd in private capital, and convert pipeline opportunities into measurable climate-resilient growth outcomes.

- **Results-Based Climate Finance (RBCF)**: **Results-Based Climate Finance (RBCF)**: To strengthen accountability, improve efficiency, and unlock greater private co-investment, the Strategy will scale the use of results-based and outcome-driven financing instruments. Mechanisms such as the World Bank's Programme-for-Results (PforR) and the GCF's Results-Based Payments will anchor disbursements to independently verified outcomes, such as hectares of restored landscapes, expanded solar generation capacity, or improved resilience services delivered to communities.

  Building on The Gambia's blended-finance and catalytic-capital pipeline, Phases 1 and 2 will introduce a structured suite of results-based financing tools, including revolving

[42] **PROREFISH Gambia** is a $25 million, six-year GCF-funded initiative that aims to enhance the climate resilience of vulnerable fishing communities by climate-proofing fisheries infrastructure, upgrading technologies, and strengthening fisheries and aquaculture value chains. The project is co-financed by FAO, the Ministry of Fisheries, and the Ministry of Agriculture.

[43] 20MW solar energy and 400km distribution project to transform energy access and cut costs. EUR 142 million initiative to harness solar power and supply clean energy across the country, backed by the European Investment Bank, World Bank and European Union - https://www.eib.org/en/press/all/2019-067-european-backing-for-eur-142-million-gambia-renewable-energy-programme

funds and special-purpose vehicles (SPVs) for aggregating and delivering projects efficiently. These instruments will ensure that every concessional and public dollar mobilised leverage significantly larger volumes of private capital, accelerates project implementation, and maintains strong transparency and fiscal discipline. Through this approach, climate finance becomes directly linked to performance, creating a predictable, accountable pathway for scaling investment across all Strategic Aims.

- **Diaspora Investment Instruments**: Tax-exempt green and agri-bonds will be issued through digital platforms targeting remittances. These instruments will channel diaspora savings toward priority climate and resilience projects, such as renewable energy, climate-smart agriculture, and community adaptation systems, whilst providing investors with transparent, impact-linked returns.
- **Crowdfunding Platforms**: Collaborations with fintech companies will mobilize capital for solar powered irrigation and rural infrastructure. i.e. ecoligo, Earth Banc, Trine, GoParity, Bettervest, Blue Forest.
- **Export Guarantees and Inventory Loans**: Financing tools will facilitate trade in certified CSA products.
- **Philanthropic Capital**: Foundations such as CIFF, Rockefeller, and IKEA will be engaged to provide catalytic grants and de-risking support.
- **Climate Clubs**: The Gambia will explore alignment with international coalitions offering concessional financing and policy support. i.e. GFANZ.
- **Special Drawing Rights (SDRs)**: The country will advocate for SDR reallocations from advanced economies to bolster macroeconomic stability and climate investment

Additional Potential Financing Sources

Complementing the above instruments, the Strategy identifies additional long-term financing partners and investor classes that can deepen capital availability and resilience. This broadened pool of financing partners

Source	Role in CPP Financing
Sovereign Wealth Funds	Long-term, climate-aligned capital for infrastructure
Pension Funds	Stable, local or regional investments in resilient assets
Impact Investors	Capital for measurable social and environmental outcomes
Venture Capital	Funding for innovation in agriculture, energy, and fintech
Foundations	Grants, first-loss and technical assistance
Special Drawing Rights (SDRs)	Reallocated SDRs to support public climate investments

anchors the sustainability of the Climate Prosperity Investment and Financing Strategy.

The financing pillars outlined above establish an integrated financial architecture that unites fiscal policy, concessional and blended finance, foreign exchange risk mitigation, domestic capital market development, and private investment within a unified delivery framework. By converting fragmented funding flows into a coherent, performance-driven investment system, the Strategy ensures that capital mobilization is predictable, transparent, and accountable across all Strategic Aims. This integrated approach aligns financing with national priorities, strengthens macroeconomic stability, and positions The Gambia to attract catalytic partnerships, preserve fiscal space, and accelerate the transition from vulnerability to sustainable, climate-resilient prosperity.

Annex 4: Livestock Baseline and Productivity Indicators

Livestock interventions		**2030**	**2040**	**2050**
Nature and technology-based heat protection	**Average %**	**30%**	**50%**	**50%**
Livestock Adaptation cost assumptions				
Nature based solution per cattle	USD/head	1.32	1.32	1.32
Nature based solution per pig	USD/head	.33	.33	.33
Nature based solution per poultry	USD/head	.08	.08	.08
Technology based solution per cattle	USD/head	39.42	39.42	39.42
Technology based solution per pig	USD/head	9.86	9.86	9.86
Technology based solution per poultry	USD/head	2.46	2.46	2.46
Livestock Mitigation cost assumption				
Livestock interventions		0%	0%	0%
Cost per ton of CH4 removed from livestock	USD/ton	88	88	88
Cost per ton of N2O removed from livestock biodigester	USD/ton	92	92	92
Cost per ton of N2O removed from livestock pasture	USD/ton	15	15	15

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